# BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc. for an Increase in Natural Gas Rates	) ) )	Case No. 22-507-GA-AIR
In the Matter of the Application of Duke Energy Ohio, Inc. for an of an Alternative Form of Regulation	) )	Case No. 22-508-GA-ALT
In the Matter of the Application of Duke Energy Ohio, Inc. for Tariff Approval	) )	Case No. 22-509-GA-ATA
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval to Change Accounting Methods	) ) )	Case No. 22-510-GA-AAM

Jenifer French, Chairman M. Beth Trombold, Commissioner Lawrence K. Friedeman, Commissioner Daniel R. Conway, Commissioner Dennis P. Deters, Commissioner

### To the Honorable Commission:

In accordance with the provisions of the Ohio Revised Code Section 4909.19 and Ohio Adm. Code 4901:1-19-07, the Staff of the Public Utilities Commission of Ohio (Staff) has conducted its investigation in the above matter and hereby submits its findings to the Commissioners of the PUCO (Commission) in this Staff Report.

The Staff Report has been jointly prepared by the Staff's Rates & Analysis Department and Service Monitoring and Enforcement Department.

Copies of the Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio (PUCO) and served by certified mail upon the mayors of all affected municipalities and other public officials deemed representative of the service

area affected by the application. A copy of this report has also been served upon the utility or its authorized representative. Interested parties are advised that written objections to any portion of the Staff Report must be filed within 30 days of the date of the filing of this report, after which time the Commission will promptly set this matter for public hearing. Written notice of the time, place, and date of such hearing will be served upon all parties to the proceeding.

The Staff Report is intended to present for the Commission's consideration the results of the Staff's investigation. It does not purport to reflect the views of the Commission nor should any party to the proceeding consider the Commission as bound in any manner by the representations or recommendations. The Staff Report, however, is legally cognizable evidence upon which the Commission may rely in reaching its decision in this matter. (See *Lindsey v. Pub. Util. Comm.*, 111 Ohio St. 6 (1924)).

Respectfully submitted,

Jamore S Jurkenton

PUCO Rates and Analysis Department

Tamara Turkenton

Director

PUCO Service Monitoring and Enforcement Department

Robert Fadley

Director

## **Table of Contents**

BACKGROUND	7
OPERATING INCOME AND RATE BASE	8
Scope of Investigation	8
Revenue Requirements	8
RATE BASE	9
Plant-In-Service	9
Depreciation	11
Construction Work In Progress (CWIP)	12
Working Capital	12
Other Rate Base Items	13
Allocations	13
OPERATING INCOME	14
Pro Forma Adjustments	14
Current Adjustments	14
RATE OF RETURN	21
RATES AND TARIFFS	24
Tariff Analysis	24
General Guidelines	26
Miscellaneous Charges	27
Cost of Service Analysis	28
Revenue Analysis	31
Rate Classes	32
Fixed Delivery Service Charges	34
Rate Design	35
Bill Impacts	39
ALTERNATIVE RATE PLAN	40
Case No. 22-508-GA-ALT Capital Expenditure Program	40

RIDERS	42
SERVICE MONITORING AND ENFORCEMENT	43
MANAGEMENT AND OPERATIONS REVIEW	44
SCHEDULES	47
Schedule A-1: Overall Financial Summary	47
Schedule A-2: Computation of Gross Revenue Conversion Factor	48
Schedule B-1: Jurisdictional Rate Base Summary	49
Schedule B-2: Plant In Service Summary by Major Property Groupings	50
Schedule B-2.1: Plant In Service by Accounts and Subaccounts	51
Schedule B-2.2: Adjustments to Plant In Service	55
Schedule B-3: Accumulated Depreciation and Amortization	56
Schedule B-3.1: Adjustments to Accumulated Depreciation and Amortization	60
Schedule B-3.2: Depreciation Accrual Rates and Jurisdictional Reserve Balances by Accounts	61
Schedule B-5: Allowance for Working Capital	65
Schedule B-6: Other Rate Base Items Summary	66
Schedule C-1: Jurisdictional Pro Forma Income Statement	68
Schedule C-2: Jurisdictional Adjusted Test Year Operating Income	69
Schedule C-3: Summary of Adjustments to Operating Income	70
Schedule C-3.1 Annualized Revenue	75
Schedule C-3.2: Annualization of Amortization of Propane Deferral	77
Schedule C-3.3: Rate Case Expense	78
Schedule C-3.4: Annualized Wage Adjustment	79
Schedule C-3.5: Annualized Depreciation Expense	80
Schedule C-3.6: Interest on Customer Service Deposits	82
Schedule C-3.7: Excise Tax Rider	83
Schedule C-3.8: Property Tax Adjustment	84
Schedule C-3.9: Eliminate PIPP Revenue and Expense	85
Schedule C-3.10: Interest Expense Deductible	86
Schedule C-3.11: Eliminate CEP Deferred Depreciation	87

Schedule C-3.12: State Tax Rider	88
Schedule C-3.13: Annualize Amortization of CEP Deferrals	89
Schedule C-3.14: Eliminate Non-Jurisdictional Expense	90
Schedule C-3.15: Annualization of PUCO and OCC Assessments	91
Schedule C-3.16: Adjust Uncollectible Expense	92
Schedule C-3.17: Eliminate GTCJA Deferred Revenue	93
Schedule C-3.18: Miscellaneous Expense	94
Schedule C-3.19: Adjust Customer Connect Expenses	95
Schedule C-3.20: Annualize Amortization of PISCC	96
Schedule C-3.21: Elimination of the Gas Surcredit Rider	97
Schedule C-3.22: Integrity Management Program	98
Schedule C-3.23: Kellogg Training Center Revenue	99
Schedule C-3.24: Customer Connect Amortization	100
Schedule C-3.25: Annualize Weatherization Program	101
Schedule C-3.26: Public Service Advertising and Customer Education	102
Schedule C-3.27: Propane and Central Corridor Pipeline	103
Schedule C-4: Adjusted Jurisdictional Federal Income Taxes	104
Schedule D-1: Rate of Return Summary	105
Schedule D-1.1: Equity Issuance Cost Adjustment	106
Schedule D-1.2: Capital Asset Pricing Model	107
Schedule D-1.3: Equity Risk Premium (ERP) Analysis	108
Schedule D-1.4: DCF Price, Dividend, and Growth Rate	112
Schedule D-1.5: AGR Non-Constant DCF Calculation	119
Schedule D-1.6: ATO Non-Constant DCF Calculation	134
Schedule D-1.7: AVA Non-Constant DCF Calculation	149
Schedule D-1.8: BKH Non-Constant DCF Calculation	164
Schedule D-1.9: CMS Non-Constant DCF Calculation	179
Schedule D-1.10: CNP Non-Constant DCF Calculation	194
Schedule D-1.11: NI Non-Constant DCF Calculation	209

Schedule D-1.12: NJR Non-Constant DCF Calculation	224
Schedule D-1.13: NWN Non-Constant DCF Calculation	239
Schedule D-1.14: OGS Non-Constant DCF Calculation	254
Schedule D-1.15: SR Non-Constant DCF Calculation	269
Schedule D-1.16: Growth in U.S. Gross National Product, 1929 to 2021	284
Schedule E-5: Typical Bill Comparisons	28

#### **BACKGROUND**

The applicant, Duke Energy Ohio, Inc. (Duke, the Applicant, or the Company), is an Ohio corporation engaged in the business of supplying natural gas service to approximately 450,000 customers in southwestern Ohio.

On May 31, 2022, in Case No. 22-507-GA-AIR, et al. the Applicant filed a notice of intent to file an application for an increase in its natural gas distribution rates applicable in its entire service area subject to the jurisdiction of the Public Utilities Commission of Ohio (PUCO or Commission) and an application for an alternative rate plan. The Company also filed a motion to set a test period and date certain and for waiver of certain filing requirements. On June 2, 2022, the Applicant filed an amended motion requesting a waiver of certain filing requirements, that its test period begin January 1, 2022, and end December 31, 2022, and that the date certain for property valuation be March 31, 2022.

By its Entry of June 29, 2022, the Commission approved the requested test period and date certain and waiver of certain filing requirements.

On June 30, 2022, the Applicant filed its application to increase natural gas distribution rates and for an alternative rate plan. On September 8, 2022, the Applicant filed an Application Addendum.

By entry dated October 19, 2022, the Commission ordered that the applications be accepted as of June 30, 2022.

The rates proposed by the Applicant for increase, when applied to test year sales volumes, would generate \$48,745,468 of additional retail base rate revenues. The total revenue increase over test year operating revenues is approximately ten percent.

#### **Summary of Staff's Recommendations**

As shown on Schedule A-1, the Staff of the PUCO (Staff) recommends a revenue increase in the range of \$23,662,353 to \$36,434,162. This represents an increase of 4.73 percent to 7.28 percent over test year operating revenue. This determination is based on Staff's examination of the accounts and records of the Applicant for the 12 months ending December 31, 2022, as summarized in this report, including schedules which incorporate Staff's recommended rate of return (ROR), rate base, and adjusted operating income.

#### **OPERATING INCOME AND RATE BASE**

## **Scope of Investigation**

The scope of the investigation was to determine if the Applicant's filed exhibits concerning test year operating income, rate base and other data are reasonable for ratemaking purposes, and if the financial and statistical records supporting the data can be relied upon. Staff interviewed the Applicant's key management personnel and reviewed both internal and published financial reports to assure understanding of the Applicant's operations and organization. Staff's investigation of test year operating income and date certain rate base included a review of the Applicant's budgeting and forecasting techniques, verification of the operating revenue computation, and an examination of the Applicant's continuing property records. In addition, Staff verified the existence and used and useful nature of the assets through physical inspections. Staff performed other independent analyses it considered necessary.

The Applicant proposed various adjustments to operating income and rate base, as summarized on the Applicant's Schedules. Staff reviewed and analyzed the Applicant's proposed adjustments to operating income and rate base and traced them to supporting workpapers and source data. As a result of its review and analysis, Staff accepted some of the proposed adjustments, changed some of the Applicant's proposed adjustments using alternative approaches, and/or proposed new adjustments. Staff's adjustments make the test year operating income and date certain rate base consistent with sound regulatory accounting practices, more representative of normal operations and appropriate for ratemaking purposes.

The purpose of Staff's investigation was to develop financial data for ratemaking purposes; it was not intended to provide a basis for expressing an opinion on the financial statements of the Company as a whole. The following sections of this report summarize the results of Staff investigation, which Staff believes are relevant to the determination of test year operating income and rate base. Staff presents these sections in the general order in which the schedules are presented at the end of this document.

#### **Revenue Requirements**

Schedule A-1 presents Staff's determination of the Applicant's revenue requirements. Staff's recommended revenue increase is shown on Staff's Schedule A-1. This determination is based on the examination of the accounts and records of the Applicant for the twelve months ending December 31, 2022, the test year in this proceeding. The results of Staff's examination are summarized in this report, and the schedules incorporating Staff's recommended ROR, rate base, and adjusted test year operating income.

#### **RATE BASE**

The rate base represents the Applicant's net investment in plant and other assets as of the date certain, March 31, 2022, which were used and useful in providing natural gas utility service to its customers and upon which its investors are entitled to the opportunity to receive a fair and reasonable ROR.

Staff's analysis of the rate base is divided into Plant-In-Service, Depreciation, Construction Work in Progress, Working Capital, and Other Rate Base Items. A comparison of rate base submitted by the Applicant and Staff's recommendation is shown on Schedule B-1. Schedules B-2 through B-6 provide additional support for Staff's rate base findings.

#### Plant-In-Service

The Plant-In-Service, as presented by the Applicant, is the surviving original cost of the plant that is used and useful as of the date certain, in providing natural gas utility service to its customers. As a result of Staff's investigation and review of the application, Staff recommends that adjustments be made to the Applicant's date certain plant investment for ratemaking purposes. These adjustments are identified below, summarized on Schedule B-2.2, and reflected in the calculation of the jurisdictional Plant-In-Service figures on Schedule B-2.1.

Staff's review of the Distribution, General and Common Plant assets of the Company included a financial audit of the fixed asset property activity as well as a used and useful field inspection of the assets as sampled by Staff from the Company's continuing property records (CPR). Staff also performed a financial audit of the CPR activity in the Plant-In-Service accounts from April 1, 2012, to date certain, March 31, 2022. The account balances per the CPR matched the balances as of date certain listed on the Company's Schedule B-2.1 per the as-filed application.

Staff recommends several adjustments for various reasons as a result of both the financial audit and the used and useful field inspection. Staff's adjustments are outlined below and are further supported by the Staff WPB-2.2 workpaper.

## Withdrawn by Company

Staff removed \$40,326 from Plant-In-Service related to transactions booked to capital projects that were sampled by Staff during transactional testing and which the Company agreed to withdraw in its responses to various Staff data requests.<sup>1</sup> These adjustments impact various accounts and are shown on the Schedule B-2.2.

## Meals, Entertainment, & Travel Expense

Staff found several instances in which the Company capitalized the cost of meals to projects. Staff recommends adjusting the cost of meals in those instances which no receipts were provided, or the employees were not traveling. These adjustments reduce Plant-In-Service by \$10,211, as shown on Schedule B-2.2.

<sup>&</sup>lt;sup>1</sup> See Staff Data Request Nos. 57, 58, 60, and 65.

#### **Erroneously Charged Sales Tax**

Staff removed \$964 related to erroneously charged sales tax on contract labor. Per ORC 5739.02(B)(42)(a) and 5739.01(B)(3)(b), contract labor involved with incorporating tangible personal property into and which will become a part of a production, transmission, transportation, or distribution system for the delivery of a public utility service, is exempt from the Ohio sales tax. Per the Company's response to a data request<sup>2</sup>, the Company holds a direct pay permit (DPP) in Ohio. A DPP allows the Company to make the majority of its purchases without having to pay sales tax directly to the vendor. If the transaction qualifies for direct pay, Duke's use tax accrual system will short pay the vendor for any sales tax erroneously issued on an invoice. The tax, if due, would be paid directly to the Ohio Department of Taxation in lieu of the vendor. The sampled transactions do not qualify for DPP and are not part of the above process. This adjustment reduces Plant-In-Service as shown on Schedule B-2.2.

### **Fitness Centers**

Staff removed \$4,077,203 from Plant-in-Service associated with fitness centers and locker rooms located at the Company's headquarters, Kellogg Training Center, and five Operations Service Centers (Queensgate, Monfort Heights, Hamlet, Brecon, and Dana). Consistent with Staff's position in prior cases,<sup>3</sup> Staff maintains these are unnecessary capital expenditures that should not be borne by rate payers, nor are they used or useful in providing gas distribution utility service. \$3,665,456 of this adjustment represents allocated building costs as calculated by the Company in response to a data request.<sup>4</sup> The remainder is related to costs Staff sampled during its transactional testing of Plant-In-Service. The adjustments for these items are shown on Schedule B-2.2.

## Missing Documentation

Staff removed an expenditure for the purchase of a tool for which the supporting documentation furnished by the Company was deemed inadequate. This adjustment reduces Plant-In-Service by \$402, as shown on Schedule B-2.2.

#### Improper Accounting

Staff removed \$790 from Plant-in-Service related to charges improperly charged to gas plant accounts that were either O&M charges or general plant related solely to electric service. The adjustments for these items are shown on Schedule B-2.2.

#### Prior Rate Case Adjustments – Common Plant

Staff removed plant balances associated with adjustments made in the Company's most recent electric base rate case (Electric Case).<sup>5</sup> Specifically, these adjustments are to Common Plant accounts, which

3 See In the Matter of the Application of The Dayton Power and Light Company to Increase its Rates for Electric Distribution, Case Nos. 15-1830-EL-AIR, et al.; In the Matter of the Application of Ohio Power Company for an Increase in Electric Distribution Rates, Case Nos. 20-585-EL-AIR, et al.; In the Matter of the Application of Columbia Gas of Ohio, Inc., for Authority to Increase the Rates and Charges for Gas Services and Related Matters, Case Nos. 21-637-GA-AIR, et al.; In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, Case Nos. 21-887-EL-AIR, et al.; In the Matter of the Annual Application of The East Ohio Gas Company d/b/a Dominion Energy Ohio, for an Adjustment to the CEP Rider Rate, Case No. 22-619-GA-RDR.

<sup>&</sup>lt;sup>2</sup> See Staff Data Request 121.

<sup>&</sup>lt;sup>4</sup> See Staff Data Request 107.

<sup>&</sup>lt;sup>5</sup> In the Matter of the Application of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, Case Nos. 21-887-EL-AIR, et al.

service both the electric and natural gas utility businesses of the Company, and that were recommended in the electric rate case, but were not processed in the Company's accounting system as of the date certain in this Application. On a total company basis, these adjustments reduce Plant-In-Service by \$745,159, as shown on Schedule B-2.2.

#### Assets No Longer in Service

During its investigation, Staff found three capital assets which the Company indicated were no longer in service. These assets consist of digital signage in the Company's headquarter building, a leak-surveying drone, and Common AMI Electric and Gas Meters. On a total company basis, these adjustments reduce Plant-In-Service by \$199,751, as shown on Schedule B-2.2.

## **Excess Propylene Glycol Coolant**

Staff inspected a regulating station which included a heater that is used to heat the gas prior to pressure reduction of the gas at the station. The heater is filled with propylene glycol, which is used to transfer heat to the pipeline gas from the heater. As part of its transactional testing, Staff obtained the invoices for both the heater and the volume of propylene glycol purchased. During the inspection of the heater, it was apparent the quoted volume of propylene glycol on the selected invoice far exceeded the volume of the heater. Since the invoice for the heater included the dimensions of the heater itself, Staff estimated the volume of the heater to be approximately 84.82 cubic feet, and the Company had purchased approximately 466.11 cubic feet of propylene glycol. Therefore, Staff recommends an adjustment to remove the estimated 381.28 cubic feet of propylene glycol more than what was needed to perform the initial filling of the heater. Using the volumetric cost of the propylene glycol, Staff's adjustment reduces Plant-In-Service by \$20,650, as shown on Schedule B-2.2.

#### Capitalized Incentive Compensation

Staff adjusted rate base to remove the portion of capitalized incentive compensation attributable to financial performance metrics capitalized from April 1, 2012, through the date certain in this rate case. This adjustment reduces gross plant in-service by \$2,337,386, as shown on Schedule B-2.2. Going forward, Staff recommends the Company exclude from rate base, including riders that recover capital investments, all capitalized incentive compensation attributable to financial performance.

### Depreciation

Depreciation is the process which distributes the original cost of depreciable assets, adjusted for net salvage, over the normal life of the property in a systematic and rational manner. Staff's investigation of depreciation is segregated into two areas: (1) Depreciation Reserve, and (2) Depreciation Accrual Rates and Depreciation Expense. These two areas are discussed in detail in the following sections.

#### **Depreciation Reserve**

The Applicant maintains its depreciation reserve, by account, on a total company basis. In order to determine if the Applicant's book reserve for depreciation is proper and adequate, Staff compared the Applicant's company-wide book reserve as of date certain, March 31, 2022, with a calculated theoretical reserve as a guide to determine if past accrual rate calculations have been appropriate. Staff determined the level of the overall booked reserve is not unreasonable as the difference between it and Staff's calculated theoretical reserve is minimal.

Staff adjusted the depreciation reserve for the amount of reserve associated with adjustments to Plant-In-Service, as discussed above in the Plant-In-Service section. The adjustments to the reserve are shown on Schedule B-3.1.

In conjunction with Staff's corrections to the Gas vs. Electric Common Plant Allocation percentages as reflected on Schedule B-2.1, Staff allocated the total book depreciation reserve related to the subaccounts within Account 1900-Structures and Improvements and Account 1970-Communication Equipment on Schedule B-3 using the best available information (sub-account reserve percentages derived from the Electric Case) for the subject Common Plant accounts.

The jurisdictional reserve for depreciation as adjusted by Staff and shown on Schedule B-3 is proper and adequate, therefore, it should be used for the purposes of this proceeding.

### <u>Depreciation Accrual Rates and Depreciation Expense</u>

The Applicant's current accrual rates were prescribed by the Commission in Case No. 12-1685-GA-AIR. The Applicant's current accrual rates had been in use for approximately nine years.

The Applicant filed a depreciation study for its Gas Production, Distribution, and General Plant-In-Service performed by Gannett Fleming Valuation and Rate Consultants, LLC. The Applicant's accrual rates were developed using the straight-line method, average service life procedure and applied on a whole life basis except as to certain General Plant accounts which were developed using amortization accounting.

Staff conducted an independent analysis of the depreciation study provided by the Applicant. Staff generally agrees with the average service lives, net salvages, and curve forms developed through the depreciation study. Additionally, Staff recommends a depreciation study be conducted and filed within five years of the date of the final Opinion and Order in this case or upon filing of the next base rate case, whichever comes first.

Staff's recommended accrual rates are shown on Staff Schedule B-3.2. Staff recommends that the Applicant be ordered to use the accrual rates shown on Staff Schedule B-3.2 for book depreciation purposes, effective concurrent with the customer rates from this proceeding.

## **Construction Work In Progress (CWIP)**

The Applicant did not request an allowance for CWIP in its filing and Staff, as shown on Schedule B-4, did not recommend an allowance.

## **Working Capital**

Working capital has been generally defined as the average amount of capital provided by investors in the Company, over and above the investments in plant and other specifically identified rate base items, to bridge the gap between the time that expenditures are required to provide service and the time collections are received for the service. The Company requested a working capital allowance of \$31,710,429 based on a 13-month average of materials and supplies. The Company did not request an allowance for cash working capital, as it did not perform a lead-lag study for this case. A lead-lag study determines cash working capital needs by measuring the average amount of day-to-day operating cash

<sup>&</sup>lt;sup>6</sup> In the Matter of the Application of the Cincinnati Gas and Electric Co. for an increase in Electric Rates in its Service Area, Case No. 91-410-EL-AIR, Opinion and Order at 32 (May 12, 1992).

that investors must supply if revenue lags exceed expense leads, or operating cash available for other working capital needs if the expense leads exceed revenue lags. Staff finds that the overall working capital allowance is a *single* allowance, consisting of multiple components, including cash working capital.<sup>7</sup> Staff concludes that by not requesting cash working capital, the Company's requested allowance for working capital is fundamentally deficient. The failure to include the cash component of working capital results in an allowance for working capital that does not reasonably represent the operating needs of the Company. Therefore, Staff cannot recommend an allowance for working capital in this case.

#### **Other Rate Base Items**

The Company proposed various adjustments to the date certain balances of Accumulated Deferred Income Taxes (ADIT), with certain balances eliminated or adjusted to reflect the ratemaking treatment of these or related items in the Application. This adjustment is based primarily on the assertion that the ADIT balances are associated with assets and liabilities not included in rate base. Historically, adjustments to ADIT balances have been limited to amounts attributable to non-jurisdictional functions of a utility. Given that the Company is 100 percent jurisdictional, Staff rejects all proposed adjustments with one exception: Staff accepts the Company's proposal to remove the deferred tax asset associated with its Manufactured Gas Plant (MGP) site. Staff finds this adjustment appropriate because the deferred tax asset is associated with estimated future MGP remediation costs, and as a result of the Commission Order in the Company's MGP cases, 8 ratepayers are no longer obligated to pay for future MGP remediation.

In addition to rejecting the Company's proposed adjustments to ADIT, Staff made separate adjustments to certain ADIT balances based on information reviewed during its investigation. The Company informed Staff ADIT associated with certain deferral accounts for 2021 was inadvertently not recorded on the Company's books as of the date certain. Given the ADIT amounts should have been recorded as of the date certain, Staff recommends an adjustment to ADIT to reflect inclusion of the erroneously omitted ADIT amounts. This adjustment, along with the adjustment to remove the MGP deferred tax asset, results in a net decrease to rate base of \$14,901,712, as shown on Schedule B-6.

## **Allocations**

Staff reviewed the Company's jurisdictional allocation factors (Schedule B-7) applied to rate base and operating income. Based upon Staff's investigation of the original Application filed in this case, Staff notes the Company did not propose any allocation factors in Schedule B-7, stating the Schedule B-7 was not applicable because everything was "100% jurisdictional". However, during the investigation, Staff found in the case that an allocation factor was applied to certain distribution plant accounts based on the allocation of common plant to utility departments from the Company's FERC Form 1 (as of December 31, 2021). This allocation methodology is inconsistent with the three-factor allocation applied to the same accounts in Case No. 21-0887-EL-AIR, which was based on an equal weighting of the following ratios for the jurisdiction: property, plant, and equipment (PPE), labor, and gross margin. In the Company's response to Staff's data request (STAFF-DR-80-002), the Company stated that the updated methodology was inadvertently not applied in the current case. Staff requested updated Schedules B-2.1 and B-7 to reflect

-

<sup>&</sup>lt;sup>7</sup> R.C. 4909.15(A)(1); *Cincinnati Gas & Elec. Co. v. Pub. Util. Comm.*, 67 Ohio St.3d 517, 520, 1993-Ohio-66 (Nov. 3, 1993).

<sup>&</sup>lt;sup>8</sup> In the Matter of the Application of Duke Energy Ohio, Inc. for an Adjustment to Rider MGP Rates, Case Nos. 20-53-GA-RDR, et al., Opinion and Order (April 20, 2022).

the corrected methodology. Staff recommends the corrected Schedules B-2.1 and B-7 be utilized for calculating the revenue requirement in the current case.

## **OPERATING INCOME**

The Applicant's test year operating income combined three months of actual data for the period of January 1, 2022, through March 31, 2022, with nine months of forecast data for the period April 1, 2022, through December 31, 2022. Staff adjusted the Applicant's test year operating income as required to render it appropriate as a basis for setting rates.

Staff's proforma operating income is Staff's adjusted test year operating income modified to reflect the Applicant's proposed increase in revenues and the associated increases in state and municipal taxes, and federal income taxes. The Staff's proforma operating income also includes a Staff proposed adjustment in other revenues related to various miscellaneous tariff charges.

Schedules C-1 and C-2 present Staff's determination of operating income. The calculations, methodologies, and rationale used to develop Staff's adjusted pro forma operating income are detailed on Schedules A1.1, C-1, C-3.1 through C-3.27, and C-4.

## **Pro Forma Adjustments**

Schedule C-1 sets forth the Applicant's proposed increase in operating revenues and affected expenses that include uncollectible accounts expense, state and municipal taxes, and federal income taxes. The increase in revenues is the combined result of the increase in base revenues created by the Applicant's proposed tariffs, and an increase for reconnection charges.

## **Current Adjustments**

#### Annualize Revenue Schedule C-3.1

Staff accepted the Company's elimination of unbilled revenue and the Company's test year billing determinants as calculated on Schedule E-4. Staff further accepted the Company's adjustment to purchase gas cost. Staff's adjustment decreases test year revenue by \$67,977 and decreases test year expenses by \$140,168, as shown on Schedule C-3.1.

#### Annualization of Amortization of Propane Deferral, Schedule C-3.2

In Case No. 21-1035-GA-AAM, the Company requested deferral of costs associated with the retirement of its propane caverns. A stipulation was filed in the case, which established a regulatory asset that included the remaining net book value of the propane caverns located in Ohio, the cost to decommission the caverns, and the delta between the propane inventory cost and the amount the Company charged to customers through the Gas Cost Recovery mechanism for the remaining propane inventory (Propane Delta). Additionally, the Stipulation required the Company to include an independent engineering study that analyzed the necessity and prudency of the incremental investments made at the propane caverns since March 31, 2012. On October 5, 2022, the Commission approved the stipulation (Propane Cavern Case). In the current Application, the Company has requested recovery of the deferral, totaling \$28,942,547, which will be amortized over a period of ten years.

<sup>&</sup>lt;sup>9</sup> In the Matter of the Application of Duke Energy Ohio, Inc. for Authority to Change Accounting Methods, Case Nos. 21-1035-GA-AAM, et al. Opinion and Order (October 5, 2022).

During its investigation, Staff reviewed the independent engineering study, which was provided in accordance with the Commission order in the Propane Cavern Case. The study detailed 22 capital projects at the East Works Propane/Air Peaking Plant and evaluated whether the capital projects were necessary and judicious for the continued safe operation of the East Works Plant prior to retirement. The overall conclusion of the study was "all projects were necessary and judicious uses of capital funds based on regulatory, safety, and reliability." Staff avers this study provides sufficient justification for the capital spending after March 31, 2012.

In addition to the areas reviewed above, Staff reviewed the decommissioning study, the Propane Delta, and the Company's calculation of the offset for O&M expenses included in rates from when the propane caverns were retired, until new base rates take effect.

As part of the Plant-In-Service audit, Staff conducted an on-site inspection at the location of the former propane caverns at the Company's East Work's facility. In addition, Staff performed transactional testing of the capital expenditures made at the propane caverns after March 31, 2012. As part of the transactional testing, Staff found transactions totaling \$725.82 associated with meals, entertainment, and a registration fee. It is Staff's position that these costs are not rate-payers responsibility. The adjusted annual amortization amount is \$2,894,182 as shown on Schedule C-3.2.

### Rate Case Expense, Schedule C-3.3

The Applicant proposed a rate case expense of \$1,198,500 and used a three-year amortization period to determine its increase of \$399,500 to base rates. Staff recalculated the Applicant's increase by utilizing a five-year amortization period. Staff's adjustment increases test year expenses by \$239,700 as shown on Schedule C-3.3.

Staff recommends the Commission review the most recent updated information regarding the Applicant's rate case expense before issuing its final Order. The Applicant should submit this information as a late filed exhibit.

## Annualize Test Year Wages, Payroll Taxes, and Pension and Benefits, Schedule C-3.4

Schedule C-3.4 summarizes adjustments made to annualized test year wages (WPC-3.4a), incentive compensation and FERC Account 912 Demonstrating and Selling (WPC-3.4c), annualized pension and benefits (WPC-1.4d), and payroll taxes (WPC-3.4e). Staff's adjustments decrease test year compensation by \$6,069,429 and test year payroll taxes by \$301,759. These adjustments are detailed below.

The Applicant adjusted test year operating income to reflect annualized O&M wage expense as of December 31, 2022. Staff adjusted test year operating income by calculating the latest known 12 months of salaries and wages using data from November 2021 through October 2022 for labor and unproductive labor (union and non-union). Staff added a 2.5 percent union pay increase for November and December. Staff calculated a three-year average for premium pay and for overtime pay (union and non-union). Staff's adjustment decreases test year annualized wages by \$2,115,858 as shown on Schedule WPC-3.4a.

Staff adjusted test year operating income by removing certain incentive compensation based on financial metrics such as earnings per share, advertising for new business, and limited availability to a few highly

<sup>&</sup>lt;sup>10</sup> See Duke Energy East Works Plant Gas Engineering Study provided in response to Staff Data Request 13.

compensated individuals. Staff's adjustment decreases test year expenses by \$2,397,808 as shown on Schedule WPC-3.4c.

The Company included in its filing costs associated with FERC Account 912 Demonstrating and Selling. Staff normally removes these costs from base rates because expenses in this account involve promotion, demonstration, and sales activities, and are not appropriate to include for ratemaking purposes. During the investigation, Duke indicated it had erroneously included certain labor and non-labor expense in FERC Account 912 Demonstrating and Selling, stating:

... the Company realizes that these types of costs are more accurately reflected in Account 908 'Customer Assistance Expenses' and Account 910 'Miscellaneous customer service and informational expenses'. The Company is planning a comprehensive review of all labor and non-labor charges recorded to Account 912 to determine which costs are more appropriately recorded to Account 908 and 910. The Company plans to implement the results of this review effective January 1, 2023<sup>11</sup>

Based on the Company's error and its commitment to change this accounting going forward, Staff removed 17 percent of non-labor costs and 17 percent of labor costs and associated payroll taxes from rate base. Staff's adjustment decreases test year expenses by \$213,641 as shown on Schedule WPC-3.4c.

Staff adjusted test year pension and benefits by calculating the latest know 12 months of salaries and wages and applied updated ratios for Duke Energy Ohio, Duke Business Services, and Duke Other business units. Staff then applied the Company's as-filed pension and benefit loading rates to these updated costs. Staff removed Executive Benefits which included Duke's Supplemental Executive Retirement Plan (SERP) as well as other services for executives from allocated executive benefits in the test period and from *Non Service Costs (ASU 2017-07)*. SERP expense is a form of nonqualified retirement plan only available to highly compensated executives receive in addition to their participation in normal, qualified pension and retirement plans. Staff's adjustment decreases test year pension and benefits by \$1,342,122 as shown on Schedule WPC-3.4d.

Staff adjusted test year payroll taxes by calculating the latest know 12 months of salaries and wages and then applying the Company's as-filed payroll tax rate. Staff removed payroll tax associated with 17 percent of labor costs from FERC ACCT 912 Demonstrating Selling, consistent with adjustments made in Schedule WPC-3.4c. Staff also updated taxable incentive compensation consistent with Staff's adjustment in Schedule WPC-3.4c. Staff's adjustment decreases test year payroll tax expenses by \$301,759 as shown on Schedule WPC-3.4e.

## Annualized Depreciation Expense, Schedule C-3.5

Staff adjusted annual depreciation expense based upon Staff's recommended depreciable plant-in-service as of the date certain and proposed accrual rates as shown on Staff Schedule B-3.2. Staff's adjustment to annualize depreciation results in a \$4,767,224 increase to test year depreciation expense as shown on Schedule C-3.5, with supporting calculations provided on Schedule B-3.2. Additionally, Staff agrees with the \$1,001,117 Deferred Tax Adjustment, as adjusted in line with Staff's annualization of depreciation

\_

<sup>&</sup>lt;sup>11</sup> See Staff Data Request 21.

expense to recognize and adjust for the federal income tax impact in the schedule. These adjustments are shown on Schedule C-3.5.

## Interest on Customer Service Deposits, Schedule C-3.6

The Applicant adjusted the test year to include customer deposit interest expense at the statutory rate based on the date certain balance of customer deposits. The Applicant allocated their customer service deposits to gas and electric based upon their residential customer counts as of the date certain. Staff further adjusted the customer deposit interest expense calculation to remove customer deposit interest expense on balances that were held less than six months per R.C. 4933.17. This adjustment increases test year operating expenses by \$277,270, as shown on Schedule C-3.6.

### Ohio Excise Tax Rider, Schedule C-3.7

Staff accepted the Company's methodology to compute adjusted test year operating income to eliminate revenues and corresponding expenses for the Ohio Excise Tax Rider to conform to standard practices of removing rider revenues and expenses from base rates. Staff's adjustments which are shown on Schedule C-3.7, increase test year operating income by \$3,521,454.

#### Property Tax Expense, Schedule C-3.8

Staff adjusted property tax expense to reflect the latest available property rates and valuation percentages. Staff applied those rates and percentages to Plant-In-Service as of March 31, 2022. Staff's adjustment decreases the test year expense by \$2,291,571, as shown on Schedule C-3.8.

## Elimination PIPP Revenue and Expense, Schedule C-3.9

Staff accepted the Company's methodology to remove from the test year the Percentage of Income Payment Plan (PIPP) revenues and expenses. The adjustments, which are shown on Schedule C-3.9, reduces test year operating income by \$12,503.

#### Interest Expense Deductible, Schedule C-3.10

Staff accepted the Company's methodology to compute adjusted operating income to reflect the interest expense deductible for federal income tax purposes. This methodology is consistent with the approach Staff typically uses in rate cases. It establishes the interest expense deductible in the test year equal to the product of Staff's recommended rate base and weighted cost of debt of 1.94 percent. The adjustment reflects the difference between the actual interest expense deductible in the test year and the interest expense as calculated based on the aforementioned methodology. Staff's adjustments, which are shown on Schedule C-3.10, increases test year operating income by \$1,101,703.

#### Eliminate CEP Deferred Depreciation, Schedule C-3.11

Staff accepted the Company's methodology to eliminate the amortization in the test period for Capital Expenditure Program (CEP) deferred depreciation related to CEP assets "rolled into base rates". The deferred depreciation in question is for January 1, 2022, to March 31, 2022, and for which there is currently no recovery mechanism via the CEP rider. The adjustment increases depreciation expense by \$2,801,046, as shown on Schedule C-3.11.

#### Elimination of State Tax Rider, Schedule C-3.12

Staff accepted the Company's methodology to remove from the test year, the Ohio State Tax Rider revenue, and expenses. Staff's adjustment, which are shown on Schedule C-3.12, increases test year operating income by \$170,416.

#### Annualize Amortization of CEP Deferrals, Schedule C-3.13

Staff accepted the company's methodology to annualize the amortization of CEP deferrals for the deferred depreciation, Post in Service Carrying Costs (PISCC) and property taxes on CEP related assets. These adjustments increase test year operating expenses by \$2,117,762, as shown on Schedule C-3.13.

#### Eliminate Non-Jurisdictional Expense, Schedule C-3.14

Both the Applicant and Staff adjusted the test year to eliminate non-jurisdictional operating expenses. Staff's adjustment decreases test year expenses by \$997,985, as shown on Schedule C-3.14.

#### Annualization of PUCO and OCC Assessments, Schedule C-3.15

Both the Applicant and the Staff adjusted the PUCO and Ohio Consumer Council (OCC) assessments to annualize them to the latest known level. Staff's adjustment increases test year expenses by \$15,558, as shown on Schedule C-3.15.

#### Adjust Uncollectible Expense, Schedule C-3.16

Both the Applicant and Staff annualized the test year uncollectible expense to reflect the adjustments to operating revenues. The adjustment reduces test year expenses by \$4,784,169, eliminates revenues collected from the Company's uncollectible expense rider by \$4,246,968, and eliminates the regulatory asset deferral of \$10,963, as shown on Schedule C-3.16.

#### Eliminate GTCJA Deferred Revenue, Schedule C-3.17

Staff accepted the Company's methodology to remove from the test year revenue related to the Gas Tax Cuts and Jobs Act Rider (Rider GTCJA). This adjustment increases test year revenues by \$3,034,524, as shown on Schedule C-3.17.

#### Miscellaneous Expenses, Schedule C-3.18

Staff adjusted test year expenses to remove costs that were not appropriate to include for ratemaking purposes. Staff's adjustment decreases test year expenses by \$19,770 as shown on Schedule C-3.18.

#### Adjust Customer Connect Expenses, Schedule C-3.19

The Applicant proposed an adjustment to eliminate one-time costs associated with the startup of the new customer information system Customer Connect, and to annualize support costs for the system going forward. The adjustment as filed reduces test year expenses by \$1,050,236. However, based upon an update provided by the Applicant, Staff recalculated the adjustment to reflect the revised information. Staff's adjustment reduces test year expenses by \$1,512,354 as shown on Schedule C-3.19.

#### Annualize Amortization of PISCC, Schedule C-3.20

Staff accepted the Company's methodology to eliminate annualized amortization of PISCC accrued as of March 31, 2022. This adjustment increases test year expenses by \$741,936, as shown on Schedule C-3.20.

## Elimination of the Gas Surcredit Rider, Schedule C-3.21

Staff adjusted base and miscellaneous revenue associated with the elimination of the Gas Surcredit Rider (GSR) as proposed by Staff. This adjustment increases test year revenue by \$157,400, as shown on Schedule C-3.21.

## Integrity Management Program, Schedule C-3.22

The Company proposed to amortize the total Integrity Management deferral over the next ten years, in the amount of \$2,188,809 per year. Staff adjusted the amortized balance to remove \$41,061 associated with invoices Staff deemed ineligible for recovery, such as invoices charged to Duke Kentucky and for door prizes and gift cards for a Damage Prevention Contractor Exposition. This adjustment increases test year expenses by \$2,188,809, as shown on Schedule C-3.22.

Further, the Company proposes to discontinue the deferral of the costs associated with the Gas Integrity Management deferral and include these ongoing annual costs in base rates for the distribution and transmission integrity initiatives the Company has to implement due to the new PHMSA rules for its distribution and transmission systems. Staff accepted the Company's proposal to discontinue the deferral of costs associated with the Gas Integrity Management deferral and include the ongoing annual costs in base rates.

Additionally, Staff accepted the Company's proposal to increase the annual normalized Integrity Management Program amount by \$468,000 from \$4,000,000 to \$4,468,000, as shown on Schedule C-3.22.

## Kellogg Training Center Rent Revenue, Schedule C-3.23

Staff adjusted the test year to reflect rent revenue associated with payments received from Duke Energy Kentucky. Staff's adjustment increases test year revenue by \$359,796, as shown on Schedule C-3.23.

### Customer Connect Amortization, Schedule C-3.24

The Applicant proposed an increase to the test year of \$2,549,825 for recovery of deferred expenses related to the development of Customer Connect. The deferred expense total is \$12,749,123, which the Applicant amortized over a five-year period.

During Staff's investigation, it was discovered that the Applicant has not received formal approval from the Commission to recover the deferred expenses. Therefore, Staff adjusted the Applicant's proposed amortization expense. Staff's adjustment removes the \$2,549,825 test year increase as shown on Schedule C-3.24.

Staff recommends that should the Commission grant deferral authority requested in Case No. 19-1751-GE-AAM, the Applicant may seek recovery in a future proceeding.

<sup>&</sup>lt;sup>12</sup> The Applicant has requested authority to recover the deferred expenses in the pending Case No. 19-1751-GE-AAM; however, the Commission has not issued an order to date.

#### Annualize Weatherization Program, Schedule C-3.25

Staff accepted the Company's methodology to adjust test year expenses for the cost of weatherization of programs administered by People Working Cooperatively. This jurisdictional adjustment increases test year expenses by \$49,603 as shown on Schedule C-3.25.

## Public Service Advertising & Customer Education, Schedule C-3.26

Staff adjusted the test year to eliminate expenses related to the proposed public service advertising and customer education campaign. Staff's adjustment removes the Applicant's proposed \$245,500 increase to operating expenses as shown on Schedule C-3.26.

### Propane and Central Corridor Pipeline, Schedule C-3.27

Staff accepted adjustments to account for the operation and maintenance expenses associated with the retired Propane facilities, and the inclusion of expenses related to the Central Corridor Pipeline. These jurisdictional adjustments result in a decrease in production expense for the propane facilities of \$1,770,421, a decrease in expense of \$2,219,259 for liquified petroleum gas, and an increase in expense of \$76,000 for the recently placed-in-service Central Corridor Pipeline not included in the test year.

#### Adjusted Jurisdictional Federal and State Income Taxes, Schedule C-4

Staff adjusted federal and state income tax expense to reflect the flow-through effect of Staff's proposed adjustments to test year revenues and expenses. In total, Staff's adjustments decrease the test year income tax expense by \$397,565, as shown on Schedule C-4.

#### RATE OF RETURN

The Staff recommends an ROR in the range of 6.66 percent to 7.19 percent. The recommended ROR was developed using a cost of capital approach which reflects a market-derived cost of equity and Duke Ohio's actual cost of debt.

## **Capital Structure**

Duke Ohio is a wholly owned subsidiary of Duke Energy Corporation, which is a utility holding company that is publicly traded. Staff used the capital structure of Duke Ohio which was 47.68 percent debt and 52.32 percent equity as of the date certain on March 31, 2022.<sup>13</sup>

## **Cost of Long-Term Debt**

Staff used the embedded cost of long-term debt of Duke Ohio as of March 31, 2022, as shown on the Applicant's Schedule D-3A. Duke Ohio's embedded cost of long-term debt is 4.07 percent.

#### **Cost of Equity**

Staff used Value Line, Inc.'s (Value Line) Stock Screener tool to compile a list of comparable companies to use as a proxy group for the purpose of calculating a cost of equity estimate. Staff's initial criteria for the Stock Screener was industry type. Value Line provided a group of 13 companies that met the criteria of being a natural gas utility. Due to the limited size of the natural gas company group and variability within the group, Staff expanded the industry group to include electric utilities. The expanded group provided 50 companies from which to select a comparable group. Staff sorted the 50 companies according to its Safety Rank, <sup>14</sup> Financial Strength Rating, <sup>15</sup> market capitalization, beta <sup>16</sup> values from Value Line, and whether the company's revenues came from natural gas operations. For a company listed as an electric utility by Value Line to be considered, a minimum of 25 percent of the company's revenues for 2021 needed to come from natural gas operations. <sup>17</sup> As shown in the table below, Staff selected Avangrid, Inc., Atmos Energy Corporation, Avista Corporation, Black Hills Corporation, CMS Energy Corporation, CenterPoint Energy, Inc., NiSource Inc., New Jersey Resources Corporation, Northwest Natural Holding Company, ONE Gas, Inc., and Spire Inc. as the peer group (Peer Group).

<sup>&</sup>lt;sup>13</sup> Capital Structure was revised as part of Duke Ohio's response to Staff data request DR-112.

<sup>&</sup>lt;sup>14</sup> Value Line's Safety Rank measures the total risk of a stock relative to the approximately 1,700 other stocks covered by the Value Line Investment Survey.

<sup>&</sup>lt;sup>15</sup> Value Line classifies 1,700 companies' Financial Strength ratings from A++ to C, in nine steps. The lowest grade is reserved for companies experiencing serious financial difficulty. Balance sheet leverage, business risk, the level and direction of profits, cash flow, earned returns, cash, corporate size, and stock price, all contribute to a company's relative position on the scale. The amount of cash on hand, net of debt, is also an important consideration.

<sup>&</sup>lt;sup>16</sup> Beta is a measure of the volatility of a security or portfolio compared to the market.

<sup>&</sup>lt;sup>17</sup> 2021 Revenues for each company sourced from S&P Capital IQ.

Company Name	Ticker	Safety™	Financial Strength Rating	Market Cap (\$ 000)	Beta	Moody's Rating	S&P Rating	Natural Gas Revenues (\$ 000)	(%) of Total Revenues
AVANGRID	AGR	2	B++	16,361,928	0.85	Baa2	BBB+	1,516,000	27.4%
Atmos Energy	АТО	1	A+	14,641,097	0.8	A1	A-	3,241,973	100.0%
Avista	AVA	2	B++	2,814,723	0.9	Baa2	BBB	473,313	31.0%
Black Hills	ВКН	2	А	4,500,282	0.95	Baa2	BBB+	1,051,610	55.5%
CMS Energy	CMS	2	А	17,333,407	0.8	Baa2	BBB+	2,063,000	29.4%
CenterPoint Energy	CNP	3	B+	18,154,867	1.15	Baa2	BBB+	4,336,000	53.5%
NiSource	NI	3	B+	10,542,599	0.85	Baa2	BBB+	3,183,500	65.2%
New Jersey Resources	NJR	2	A+	3,821,214	0.95	A1	NR	731,796	100.0%
Northwest Natural	NWN	3	А	1,563,631	0.8	WR	A+	816,887	100.0%
ONE Gas	OGS	2	B++	3,911,471	0.8	А3	A-	1,771,058	100.0%
Spire	SR	2	B++	3,360,602	0.8	Baa2	A-	2,118,200	100.0%

Staff employed a cost of equity estimate for the Peer Group that used the capital asset pricing model (CAPM) and the discounted cash flow (DCF) model.

Staff used the following formula to calculate the CAPM cost of common equity estimate:

In making this calculation, Staff used a composite beta of 0.88, which is an average of the betas sourced from Value Line for the Peer Group. In calculating an Equity Risk Premium, Staff used a historical risk premium approach. As shown on Staff Schedule D-1.3, Staff used an equity risk premium of 5.87 percent using returns data published in the SBBI 2022 Annual Yearbook. For a risk-free rate, Staff calculated a 30-day average yield for 30-year U.S. Treasury Bonds as of October 31, 2022. The factors, as detailed above, produce the following calculation:

$$9.19 = 4.04 + (0.88 * 5.87)^{19}$$

In calculating its DCF cost of common equity estimate for each company in the Peer Group, Staff used an average stock price, the sum of the last four quarterly dividends, and estimates of the expected growth rate of earnings for each company. The average stock price was determined by averaging the adjusted

<sup>&</sup>lt;sup>18</sup> See Staff Schedule D-1.3.

<sup>&</sup>lt;sup>19</sup> See Staff Schedule D-1.2.

daily closing price for the period from October 1, 2021, through September 30, 2022. The DCF model assumes that earnings growth and dividends growth are the same. Staff averaged earnings per share growth estimates from Yahoo Finance, Seeking Alpha, Zacks and Value Line to determine DCF growth estimates for each company in the Peer Group. The Value Line average incorporates both the explicit long-range earnings estimate shown in the boxed area of investor sheets and the implicit continuous growth rate calculated from the estimates of earnings per share. For its determination of DCF cost of equity, Staff assumed a non-constant DCF growth rate. Staff assumed dividends grow at a rate derived from financial analysts' growth estimates for the first five years (i.e., long-term growth rate). Staff's DCF growth estimates were used for the first five years, as they are averages of estimates from various investor news services. From the twenty-fifth year on, the growth rate was assumed to equal the long-term growth rate in Gross National Product (GNP). For the sixth through twenty-fourth years, assumed dividend growth rates changed incrementally from the average growth used in the first five years towards the GNP rate in a linear fashion. The long-term growth rate in GNP was the average annual change in GNP from the U.S. Department of Commerce for 1929 through 2021.<sup>20</sup> Staff calculated a stream of annual dividends based upon each Peer Group company's most recent annual dividend amount and DCF growth estimates along with long-term GNP growth. Staff used the internal ROR derived from the dividend stream and the stock price for its non-constant growth DCF cost of equity estimate. The Peer Group's non-constant DCF cost of equity estimates average 9.63 percent.<sup>21</sup>

**ROE Summary** 

CAPM	9.15%
DCF	9.63%
Combined Average	9.41%

Staff averaged the results of calculations of the CAPM and DCF to arrive at Staff's cost of equity estimate of 9.41 percent. When applying a one-hundred basis point range of reasonableness, the estimated cost of equity range becomes 8.91 percent to 9.91 percent. To provide for this return, an allowance must be made for issuance and other costs. Therefore, an adjustment factor of 1.01329<sup>22</sup> was applied resulting in a cost of equity estimate of 9.54 percent and a reasonable cost of common equity range recommendation of 9.03 percent to 10.04 percent, as shown on Staff's Schedule D-1.

<sup>&</sup>lt;sup>20</sup> See Staff Schedule D-1.16.

<sup>&</sup>lt;sup>21</sup> See Staff Schedule D-1.4.

<sup>&</sup>lt;sup>22</sup> See Staff Schedule D-1.1.

#### RATES AND TARIFFS

By its application in Case No. 22-507-GA-AIR, the Company requests authority to increase rates to be charged and collected for gas service within its service territory. Staff investigated the rate and tariff matters proposed by the Applicant and reports the results of its investigation in these sections. Each section addresses a distinct facet of the review with any Staff recommendations specifically delineated. However, it's important to note that these issues are not distinct. Staff applies General Guidelines to provide analysis with regard to the acceptability and reasonableness of the Applicant's rate and tariff proposals.

Staff's Tariff Analysis addresses changes specific to individual rate schedules, changes which apply to more than one specific rate class, and tariff additions and deletions. Cost of Service Study (COSS) addresses the Applicant's cost of service model and its results. Revenue Analysis depicts the impact of the rate schedule proposals on revenue distribution amongst the proposed rate classes. Rate Classes analyzes the existing separation of the current rate classes. Rate Design addresses the current and Applicant-proposed base rates and rider impacts on the effective customer charges currently born by the rate classes. Finally, Bill Impacts represents the possible effect on rates of the Staff rate design recommendations. These rates are based on the specific assumptions outlined in that section. The assumptions may diverge from specific Staff recommendations in this report; therefore, this section should not be used as a proxy for Staff proposed rates

#### **Tariff Analysis**

The Applicant is proposing changes to its tariffs. Unless noted, Staff recommends approval of these changes as proposed by the Applicant.

<u>Service Regulations Supplement A (Rules and Regulations governing the establishment of Credit for Residential Utility Service)</u>

The tariffs of the Company reprint the Ohio Administrative Code Section 4901:1-17, as has been the custom of the Company. Staff recommends that the Company provide a reference to the Ohio Administrative Code with a provision stating that the Company adopts the most current version of the rules in this tariff instead of reprinting the Administrative Code. Staff recommends that the Company add to the Deposit provision of Section VI the following: "The Company may require a residential customer to satisfactorily secure an account in accordance with the provisions and procedures of Ohio Revised Code Section 4933.17 and Ohio Administrative Code Section 4901:1-17. If the Company determines that a residential customer must demonstrate financial responsibility, the Company will fully inform each customer of all available options for establishing financial responsibility pursuant to Ohio Revised Code Section 4933.17 and Ohio Administrative Code Section 4901:1-17. Copies of the statue and rule shall be made available for inspection upon the request of any customer or applicant for service and are available at <a href="https://codes.ohio.gov/ohio-revised-code/section-4933.17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a> and at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a> and at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a> and at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a> and at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a> and at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-17">https://codes.ohio.gov/ohio-revised-code/section-4933.17</a>

<u>Service Regulations Supplement B (Rules, Regulations and Practices governing the disconnection of Gas, Natural Gas, or Electric Service to Residential Customers)</u>

The tariffs of the Company reprint the Ohio Administrative Code Section 4901:1-18, as has been the custom of the Company. Staff recommends that the Company provide a reference to the Ohio

Administrative Code with a provision stating that the Company adopts the most current version of the rules in this tariff instead of reprinting the Administrative Code. Staff recommends that the Company replace its current provision to the Disconnection for Nonpayment: Residential Customers of Section VI with the following: "The Company will comply with the provisions of the disconnection rules and procedures set forth in Ohio Administrative Code Section 4901:1-18 as amended, which section is incorporated herein by reference. Copies of the rule shall be made available for inspection upon the request of any customer or applicant for service and are available at <a href="https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-18">https://codes.ohio.gov/ohio-administrative-code/chapter-4901:1-18</a>."

## <u>Definition of "Mercantile Customer" PUCO Gas No. 18, Sheet No. 44.13 and Addendum Sheet No. 4 Page</u> 1 of 12

The Company's definition of Mercantile Customer is a customer that consumers more than 5,000 CCF of natural gas per year, which differs from the definition provided by Section 4929.01 of the Ohio Revised Code. Staff recommends that the Company change its definition of Mercantile Customer from 5,000 to 500,000 CCF in order to conform with Ohio Revised Code Section 4929.01.

## Rider UE-G Uncollectible Expense Rider PUCO Gas No. 18, Sheet No. 67.12 and Testimony of Company Witness Colley

The Company is proposing to include convenience fees for credit and debit cards as a recoverable expense in Rider UE-G. Staff recommends denial of this proposal. Staff recommends that convenience fees remain the responsibility of the customers utilizing the service.

#### Rider GSR Gas Surcredit Rider PUCO Gas No. 18, Sheet No. 66.2

Staff recommends eliminating Rider GSR. The PUCO and OCC assessments paid today by the Company are distribution expenses to be paid by all distribution customers whether the customers receive their gas supply from a Competitive Retail Natural Gas Service (CRNGS) provider or not.

### Charge for Reconnection of Service PUCO Gas No. 18, Sheet No. 82.5

The Company has included a provision for a seasonal soft close of customers gas service. Staff recommends that the Company include language in its tariff that it will provide written confirmation to the customer. Staff recommends the following changes to the Company's tariff language (Staff additions are underlined below): The Company may charge and collect in advance a reconnection charge of sixty dollars (\$60.00) in the following situations:

A. For gas service which has been disconnected due to enforcement of the provisions specified on Sheet No. 20, Paragraph 34(g) or 34(h) of the Company's Gas Service Regulations; In the event Sheet No. 20, Paragraph 34(d) of the Company's Gas Service Regulations is violated to the extent the customer is responsible for the unsafe or dangerous condition.

B. For gas service which has been disconnected within the preceding twelve months at the request of the customer pursuant to Sheet No. 20, Paragraph 34(a), <u>unless the customer has a meter that can be read remotely</u>. For eligible customers with a meter that can be read remotely who desire to disconnect on a seasonal basis the company will utilize a soft close process in which the meter will be read remotely, and billing will be discontinued until the customer uses more than 40 CCF for residential customers, 100 CCF for nonresidential customers or October 15<sup>th</sup>, whichever comes first. The soft-close process will be

discontinued for a residential customer who uses more than 20 CCF prior to July 15<sup>th</sup> or a nonresidential customer who uses more than 50 CCF prior to July 15<sup>th</sup>, and the customer will be returned to the service under which the customer was served prior to initialization of the soft close process. Since the meter will not be physically disconnected or reconnected, there will be no reconnection fee for this service. Gas only customers are not eligible for the soft close process.

The Company will send written confirmation to customers who elect to utilize a "soft close" process that explains the tariff provisions, including that gas service will remain on at the premise.

#### **General Guidelines**

Customers are divided into rate classes for purposes of allocating costs of service and designing rates. A rate class is defined by characteristics that are common to members of a class. Factors used to define a rate class include customer type, for example residential customers; cost causation, which refers to the cost to serve each customer; size, which refers to the total volume of use over a time period; load factor, which refers to a customer's consumption pattern and is a ratio of the customer's consumption to peak consumption; and firm or interruptibility of service, which refers to the commitment to serve up to a customer's peak demand.

Cost of service studies approximate the costs incurred by a utility in providing service to rate classes and identify the cause of the costs. These are determined by assigning the costs to the customer class relative to what each class imposes on the system. There are several steps involved: functionalization, classification, and allocation.

Generally, there are three capacity allocations that are commonly used for natural gas distribution utilities: coincident demand, non-coincident demand, and average and excess demand. The standard filing requirements allow the selection of any of these approaches, or alternatives, when, in the utility's opinion, the procedure best represents the utility's system characteristics.

The applicable rate schedules should provide the utility the opportunity of recovering an authorized revenue. The various schedules should represent a reasonable distribution of revenue between and among the various customer groups. The particular schedules should be equitable and reasonable, should provide for customer understanding and continuity of rates, and should cause minimal customer impact.

Rate design criteria are to be viewed as a package, in that they are interrelated. Although each item can be separately identified and applied to rate schedule determinations, no single standard is overriding in determining proper rate design. The rate schedules which comprise a particular utility's tariffs should provide for recovery of expenses found proper in the course of a regulatory proceeding. Normally, and to the extent sufficient information is available, cost of service studies and related expense analyses are necessary to determine the appropriate level of revenue to be generated and the appropriate recovery of such revenue.

From a practicable rate design standpoint, absolute equality between costs and revenues may be difficult to achieve in the short term. While it may be viewed as equitable to set rates at cost, if there is a substantial divergence in the current rates, the resulting impact on individual customers may be viewed as unreasonable. While desiring cost supported charges, Staff considers such items as resulting typical customer billings and resulting revenue increases which would necessarily occur. These tests help provide benchmarks with regard to reasonableness of charges in rate forms. While it is Staff's position that rate

schedules reflect costs, it is also important to consider the continuity associated with current and proposed pricing structures. This may result in movement towards more closely aligning revenue with costs rather than an absolute match at a particular time period.

In summary, gas rates should:

- Be predicated on costs.
- Be fair, equitable, and reasonable.
- Cause minimal impact (sometimes called "gradualism") when changed.
- Provide continuity in pricing structures.
- Provide the utility the opportunity to recover the authorized revenue by providing for the recovery of costs found proper in a regulatory proceeding.

The preceding standards are important, and each has value. They are, however, subjective, and it is generally impossible to fully accomplish them all. Sometimes one standard (the most obvious being that the rates must provide the utility with the opportunity to recover its authorized revenue requirement) supersedes, to a degree, the others. Sometimes the standards are in conflict and to accomplish one, another might be set aside (e.g., in this application, the need for rates to be predicated on costs may cause changes in pricing structures, resulting in greater than minimal impacts on some customers).

#### **Miscellaneous Charges**

Miscellaneous charges refer to costs recovered from customers who cause expenses to occur beyond the scope of regular business activities. Recovery of these charges should come from customers causing the expense(s), rather than from customers in general. Staff has historically supported cost-based miscellaneous charges, in that they are incidental costs imposed by individual customers on the Applicant and, ultimately the rest of the customers. Staff believes the provisions and resulting charges should reflect the actual cost(s) incurred by the Applicant. The collection of these charges generally manifests as a reasonable approximation of cost rather than dollar-for dollar.

Staff investigates tariffs in a proposed application when the Company proposes modifications. The Company proposed the below changes.

#### Charge for Reconnection Service, Sheet No. 82

The Applicant has proposed a reconnection charge of \$100 to reconnect service in the Company's entire service area where gas service has been disconnected due to the enforcement of the provisions specified on Sheet No. 20, Paragraph 4, of the Company's Gas Service Regulations.

Staff analyzed the support provided by the Applicant, including work papers showing fully loaded hourly labor rate, travel time and equipment costs. Staff also compared the proposal to similar Gas industry benchmark. Staff recommends that the Commission approve a Reconnection Service charge of \$60.

## Collection Charge (Field Visit), Sheet No.82

The Applicant has proposed to increase the collection charge from \$15 to \$50, when a Company employee, whose original purpose was to disconnect the service, has provided the customer a means to avoid disconnection, service which otherwise would have been disconnected shall remain intact and no reconnection charge shall be assessed. Staff used the same methodology as proposed by the Applicant, which is half of the reconnection charge and recommends a collection charge of \$30.

#### Meter Pulse Service, Sheet No. 80

Customers may request that the Company install gas meter pulse equipment, which is a meter related service not otherwise provided by the Company. The Applicant proposed to increase the installation of the Meter Pulse equipment from \$500 to \$1,000 and the replacement of the Meter Index from \$155 to \$750. In Staff DR 134 the Applicant identified a correction to the labor hourly rate used in calculating the replacement Meter Index charge; the new Meter Index charge should be \$730.

## **Cost of Service Analysis**

Initially, Staff noted in its September 9, 2022 filing that the COSS submitted with this application does not separate residential customers into heating and non-heating classes as required by Case No. 12-1685-GA-AIR.

The COSS filed by the Applicant is an embedded fully allocated cost of service study by rate class for the test period ending December 31, 2022, as adjusted. The COSS functionalized costs as either production, functional storage, or distribution; classifies distribution related cost items such as plant investment, operating expenses and taxes as either demand, commodity, or customer-related; and then allocates the same items to the various customer classes. Finally, the COSS calculates the revenue responsibility of each class that is required to generate the recommended ROR. The Applicant based its allocations on the cost causation guidelines established by the National Association of Regulatory Utility Commissioners (NARUC) Gas Distribution Rate Design Manual, Chapter 7 - Cost Allocation Studies of the American Gas Association (AGA) Gas Rate Fundamentals (fourth edition), utility company experience, and knowledge of COSS. The Applicant filed a peak and average demand method allocating cost to the various classes. This method assumes the minimum capacity is necessary to deliver the total gas used and is equal to average daily deliveries. The remainder of the capacity is allocated based upon the difference between the average daily capacity and the peak day capacity.

During Staff's investigation, the Applicant identified an error within the COSS relating to the Federal Income Tax (FIT) rate. The Company provided a corrected COSS in Staff DR 132.

The Company provides service to customers who would be eligible for service under the IT rate class, but whose unique characteristics make them eligible for special contract rates. The costs of providing service to customers under special contracts were included in the Company's filed COSS within the IT rate class. The revenues associated with these customers were included in the miscellaneous revenues. The magnitude of the special contract revenues in this case distorts the current ROR for the IT rate class. Staff finds that the revenues and costs associated with special contract customers should be treated consistently within the COSS. In response to Staff DR 135, the Company provided an updated COSS that corrects the FIT rate and reflects both the revenues and costs of serving special contract customers within the IT rate class. Table 1 below compares the current ROR from Staff DR 132 corrected COSS compared to the COSS provided in Staff DR 135.

\_

<sup>&</sup>lt;sup>23</sup> Company Witness Ziolkowski Direct testimony at 9.

Table 1

Rate Class		nt ROR 2 COSS		ent ROR 35 COSS
	%	Index	%	Index
Rate RS / RFT / RSLI	5.41%	1.02	5.16%	0.97
Rate GS / FT Small	11.28%	2.12	11.08%	2.08
Rate GS / FT Large	4.24%	0.80	4.04%	0.76
Rate IT	0.33%	0.06	3.76%	0.71
Total Distribution	5.32%	1.00	5.32%	1.00

The COSS revealed differences among rate classes when comparing the actual return earned by each rate class to the 7.33 percent return on rate base requested by the Applicant in this proceeding. Rate disparities exist mostly due to the fact that over the years, rates have not been set based on the cost to serve customers, as determined by a COSS. In order to mitigate the rate shock that may come from eliminating the rate disparities among the rate classes, the Company is proposing to use a two-step process to distribute the proposed revenue increase. The first step eliminated 15 percent of the subsidy/excess revenues between customer classes based on present values. The second step allocated the rate increase to customer classes based on original cost depreciated (OCD) rate base.

Staff finds the results of the COSS provided in response to Staff DR 135 to be a reasonable presentation of the costs to serve each rate class and should be used as a starting point for designing rates within this case. After evaluating several analyses moving each class toward the cost to serve on an index's basis, Staff finds the Company's methodology, as it is presented within Staff DR 135, reflects a reasonable movement toward the cost to serve each class. Staff's proposed ROR by rate class, as accepted from Staff DR 135, is compared to the current ROR by rate class in DR 135 in Table 2 below.

Table 2

	Current	ROR	Staff Proposed		
Rate Class	DR 135	coss	ROR		
	% Index		%	Index	
Rate RS / RFT / RSLI	5.16%	0.97	7.19%	0.98	
Rate GS / FT Small	11.08%	2.08	12.23%	1.67	
Rate GS / FT Large	4.04%	0.76	6.25%	0.85	
Rate IT	3.76%	0.71	6.01%	0.82	
Total Distribution	5.32%	1.00	7.33%	1.00	

#### Recommendations for the Next Filed COSS

With Staff's recommendations above, Staff found that it is appropriate to use the COSS provided in Staff DR 135 as a starting point for designing rates within this case. While the study follows the minimum requirements, Staff believes that the following recommendations related to the mains allocation and minimum system study would lead to more precise results in future cases. Therefore, Staff recommends that the Commission direct the Applicant to incorporate Staff's recommendations in its next COSS.

The Applicant's COSS model allocates both the demand and customer portion of the mains account to customer rate classes using a Weighted Customer & Demand Allocation Factor (K415). For future cases,

Staff recommends that the minimum size mains portion (customer component) should be allocated to the classes of service based on average number of customers (in this case, the allocator was identified as K401) and the remaining residual investment or demand component should be allocated based on Class Peak & Avg. (K203). The Company has agreed within Staff DR 109 that changing this allocation would be more in line with the NARUC manual and the AGA Gas Rate Fundamentals.

Staff's review of the Applicant's minimum system study within the COSS resulted in the three below areas of improvement.

1. The Applicant used only plastic mains within the study. Staff identified non-plastic mains represents about 43 percent of total mains as shown below in Table 3. For future COSS, Staff recommends using all types of mains within the minimum system study.

Table 3

Types of Mains	Linear Feet	Percentage of Total
Plastic	18,437,729	56.44%
Cast Iron	189,226	0.58%
Copper	7,325	0.02%
Steel	14,033,149	42.96%
Total	32,667,429	100.00%

- 2. The Applicant's minimum system study did not trend the original cost to current cost. This analysis is done by converting the historical nominal data to current money values by applying either the Handy-Whitman plant costs indices or, if available, an inflation index particular to the utility. For future COSS, Staff recommends the Company utilize the Handy-Whitman Index of Public Utility Construction Costs to adjust historic book cost to current cost.
- 3. The Applicant calculated but rejected the zero-intercept method in favor of the minimum system method. In order to make the zero-intercept method a viable option and useful comparable in the future, Staff recommends the following enhancements:
  - a. When the ordinary least squares (OLS) regression analysis gives a negative value as the zero intercept or shows an upward curve in the data, Staff recommends that the Company use a regression analysis based on the diameter squared instead of the diameter since the data in those cases would appear to exhibit a cost increasing at a faster rate than the diameter increases.
  - b. Perform regression analyses on all pipe types to get a cost of all zero intercept mains, then weigh the zero intercepts for each by length of each pipe type.
  - c. Analyze the diameter costs weighted by length of pipe for that diameter (weighted regression studies) to avoid:
    - i. Eliminating pipe sizes with just a few feet as outliers, thus eliminating meaningful data points.
    - ii. Allowing pipe sizes with just a few feet to have the same impact on the zero intercept as pipe sizes with lengths many times longer.

#### **Revenue Analysis**

The COSS filed with the application shows the allocation of total distribution related revenue based on the Applicant's current total distribution revenue and the Applicant's proposed increase in total distribution revenue, which are embedded in Tables 4 and 5. Table 4 provides the Applicant's current and proposed distribution of revenue and the Applicant's proposed revenue increase excluding gas cost. Table 5 also shows the Current and Applicant Proposed distribution of revenue and the Applicant's proposed revenue increase, but it includes gas related costs at \$7.020 per MCF.

Table 4
Total Revenue Excluding Gas Cost

Rate Class	Applicant Currer	nt Revenues*	Applicant Propos	sed Revenues**	Applicant Proposed Increase		
	\$	% of Total	\$	% of Total	\$	% Increase	% of Total
Rate RS / RFT / RSLI / RFT-LI	228,094,887	66.91%	260,986,677	66.98%	32,891,790	14.42%	67.48%
Rate GS / FT Small	36,400,733	10.68%	40,144,497	10.30%	3,743,764	10.28%	7.68%
Rate GS / FT Large	53,825,674	15.79%	62,768,651	16.11%	8,942,977	16.61%	18.35%
Rate IT	12,398,052	3.64%	13,580,758	3.49%	1,182,706	9.54%	2.43%
Special Contracts	5,740,028	1.68%	7,697,062	1.98%	1,957,035	34.09%	4.01%
Miscellaneous Revenue	4,439,093	1.30%	4,466,290	1.15%	27,197	0.61%	0.06%
Total	340,898,468	100.00%	389,643,935	100.00%	48,745,468	14.30%	100.00%

<sup>\*</sup> Current revenues pulled from the Applicant's as filed Sch E-4 Current

Table 5
Total Revenue Including Gas Cost

Rate Class	Applicant Currer	nt Revenues*	Applicant Propos	sed Revenues**	Applicant Proposed Increase		
	\$	% of Total	\$	% of Total	\$	% Increase	% of Total
Rate RS / RFT / RSLI / RFT-LI	349,605,942	69.97%	382,497,732	69.75%	32,891,790	9.41%	67.48%
Rate GS / FT Small	48,567,158	9.72%	52,310,922	9.54%	3,743,764	7.71%	7.68%
Rate GS / FT Large	78,779,668	15.77%	87,722,645	16.00%	8,942,977	11.35%	18.35%
Rate IT	12,398,052	2.48%	13,580,758	2.48%	1,182,706	9.54%	2.43%
Special Contracts	5,740,028	1.15%	7,697,062	1.40%	1,957,035	34.09%	4.01%
Miscellaneous Revenue	4,578,019	0.92%	4,605,216	0.84%	27,197	0.59%	0.06%
Total	499,668,868	100.00%	548,414,335	100.00%	48,745,468	9.76%	100.00%

<sup>\*</sup> Current revenues pulled from the Applicant's as file Sch E-4 Current

The COSS results in Staff DR 135 show the allocation of total distribution related revenue based on the Staff's calculated current total distribution revenue and Staff's midpoint increase in total distribution revenue are embedded in Tables 6 and 7. Table 6 provides Staff's current and proposed distribution of revenue and Staff's proposed revenue increase excluding gas cost; Table 7 also shows the Current and Staff's proposed distribution of revenue and Staff's proposed revenue increase, but it includes gas related costs at \$7.020 per MCF.

<sup>\*\*</sup> Proposed revenues pulled from the Applicant's as filed Sch E-4 Proposed

<sup>\*\*</sup> Proposed revenues pulled from the Applicant's as file Sch E-4 Proposed

Table 6
Total Revenue Excluding Gas Cost

Rate Class	Staff Current	Revenues**	Staff Propose	ed Revenues**	Staff Proposed Increase			
	\$	% of Total	\$	% of Total	\$	% Increase	% of Total	
Rate RS / RFT / RSLI / RFT-LI	228,140,436	66.82%	248,641,645	66.94%	20,501,209	8.99%	68.23%	
Rate GS / FT Small	36,405,683	10.66%	37,721,252	10.15%	1,315,569	3.61%	4.38%	
Rate GS / FT Large	53,875,906	15.78%	59,892,433	16.12%	6,016,527	11.17%	20.02%	
Rate IT	12,430,694	3.64%	12,971,841	3.49%	541,147	4.35%	1.80%	
Special Contracts	5,764,055	1.69%	7,421,300	2.00%	1,657,245	28.75%	5.52%	
Miscellaneous Revenue	4,798,889	1.41%	4,815,246	1.30%	16,357	0.34%	0.05%	
Total	341,415,664	100.00%	371,463,717	100.00%	30,048,053	8.80%	100.00%	

<sup>\*</sup> Current revenues pulled from Sch E-4 Current within Staff's Rate Calculator WP

Table 7
Total Revenue Including Gas Cost

Rate Class	Staff Current	: Revenues**	Staff Propose	ed Revenues**	Staff Proposed Increase			
	\$	% of Total	\$	% of Total	\$	% Increase	% of Total	
Rate RS / RFT / RSLI / RFT-LI	349,651,491	69.90%	370,152,700	69.81%	20,501,209	5.86%	68.23%	
Rate GS / FT Small	48,572,108	9.71%	49,887,677	9.41%	1,315,569	2.71%	4.38%	
Rate GS / FT Large	78,829,900	15.76%	84,846,427	16.00%	6,016,527	7.63%	20.02%	
Rate IT	12,430,694	2.49%	12,971,841	2.45%	541,147	4.35%	1.80%	
Special Contracts	5,764,055	1.15%	7,421,300	1.40%	1,657,245	28.75%	5.52%	
Miscellaneous Revenue	4,937,815	0.99%	4,954,172	0.93%	16,357	0.33%	0.05%	
Total	500,186,064	100.00%	530,234,117	100.00%	30,048,053	6.01%	100.00%	

<sup>\*</sup> Current revenues pulled from Sch E-4 Current within Staff's Rate Calculator WP

#### **Rate Classes**

The Applicant has proposed to add an Interruptible Sales Service (Rate IS) rate class. The rates for this new rate class will be the same as Rate IT, however, the customers on Rate IS will be able to purchase gas from the Company and pay the Rider Gas Cost Recovery Rate (GCRR) rather than purchasing gas from a third party. Staff finds this to be not unreasonable.

The Application maintains the other rate classes. Currently, the rate schedules are designed as residential and general service in nature. The residential schedules are made up of residential customers within the Residential Service, Residential Firm Transportation Service, Residential Service Low Income and Residential Firm Transportation Service – Low Income (Rate RS/RFT/RSLI/RFT-LI). Non-residential customers are eligible for a 1) General Service – Small and Firm Transportation Service – Small class (Rate GS/FT – Small) for non-residential customers using 4,000 CCF or less during the prior calendar year or 2) General Service – Large and Firm Transportation Service – Large class (Rate GS/FT – Large) for customers using more than 4,000 CCF during the prior calendar year. There is also an Interruptible Transportation rate class (Rate IT) for customers who utilize a minimum of 10,000 CCF per month during each of the seven consecutive billing periods, along with other requirements.

<sup>\*\*</sup> Proposed revenues pulled from Sch E-4 Proposed within Staff's Rate Calculator WP

<sup>\*\*</sup> Proposed revenues pulled from Sch E-4 Proposed within Staff's Rate Calculator WP

In Case No. 07-589-GA-AIR (2007 Rate Case), Staff recommended a rate design primarily based on a fixed distribution service charge, <sup>24</sup> also referred to as a modified straight fixed variable rate design (MSFV). Staff also found in the 2007 Rate Case that, "the traditional "residential/general service" schedules may not be the appropriate mechanisms to reflect cost causation through rates. A more appropriate mechanism for rate differentials may be a more "facilities-based" approach." In Case No. 12-1685-GA-AIR, Staff reiterated its concerns with the existing rate class structure. Staff noted that general service customers are much less homogeneous than residential customers and a simple fixed charge may not be the appropriate cost recovery mechanism. In this rate case, the Application continues to maintain the current rate structure for general service customers. Therefore, while the MSFV rate design has been implemented, the rate classes have not been restructured to reflect cost causation characteristics. Different classes of customers may have different cost characteristics, but an equitable rate structure recognizes these differences.

Under the MSFV rate design customers' bills include a large, fixed portion called a Fixed Delivery Service Charge. When establishing rate classes, customers with similar characteristics are divided into different rate groups. As discussed above within the general guidelines, several different customer characteristics can be taken under consideration. Under a MSFV rate design a higher consideration should be paid to the cost causation characteristics to avoid intraclass subsidies within individual rate classes. If low use customers within a rate class are going to bear the substantially similar cost increases as the high use customers within a rate class, then the rate classes should be set up so that the costs to the utility to serve the customers within that rate class vary only slightly, if at all. Creating homogeneous cost drivers within a customer class is a first step towards reducing misallocations among customers within a class. Staff again reiterates its recommendation to the Commission that the Company perform an analysis of the general service rate classes addressing this issue. If the analysis indicates a change is appropriate, the Applicant should so reflect that change in its next distribution rate case.

#### Rate Class Analysis

In reviewing the COSS, Staff found that the costs to the utility of several different plant assets vary significantly within each general service rate class. Staff analyzed three separate cost drivers or facilities: house regulators, service lines and meters. The cost of the various types of equipment that are found within each account and are used to provide service to customers within the GS/FT-Small and GS/FT-Large rate classes differ materially.<sup>27</sup> In the GS/FT-Small rate class, a customer could have a meter that costs around \$82 or \$2,925, a service line that costs around \$80 or \$8,515 and a house regulator that costs around \$97 or \$647. A similar variance in costs exists in the GS/FT-Large rate class.

The COSS allocates the various types of assets within the house regulators, service lines and meter accounts to the rate classes and utilizes a weighted average to develop a cost to serve the class as a whole. This methodology is not unreasonable when developing the cost to serve each class. However, the result of this allocation methodology coupled with the rate design methodology is that many customers who use smaller facilities that cost less are paying substantially similar rates as the few customers who use facilities that cost many times more.

<sup>&</sup>lt;sup>24</sup> Case No. 07-589-GA-AIR, Staff Report at 31 (December 20, 2007).

<sup>&</sup>lt;sup>25</sup> Case No. 07-589-GA-AIR, Staff Report at 33 (December 20, 2007).

<sup>&</sup>lt;sup>26</sup> Case No. 12-1685-GA-AIR, Staff Report at 27 (January 4, 2013).

<sup>&</sup>lt;sup>27</sup> Staff GS Rate Class Cost Comparison WP.

Based on this review, Staff finds that the cost to serve customers within each of the current GS/FT -Small and GS/FT- Large rate classes are not the same. The rate structure should be analyzed and general service customers should be separated into rate classes with similar cost causation characteristics to achieve fair and equitable rates under the MSFV rate design. Customers within a non-homogenous rate class should not be billed such that customers who place a small cost on the system may be subsidizing the larger cost causers within their own rate class.

Staff recommended that the Commission require the Applicant to perform an analysis addressing this issue before the next distribution rate case. The analysis should evaluate each of the existing GS/FT small and GS/FT large customer classes and break down the cost drivers within each; it should identify whether the cost characteristics for the existing rate classes are homogenous; and it should develop recommendations to structure rate classes such that customers are grouped into rate classes with uniform cost to serve. The goal of the analysis should be to verify that no significant measurable distinction exists within each of the existing GS/FT small and GS/FT large customer classes arising from variation in plant and equipment used or usage demand variations. If the analysis indicates a change in rate classes is appropriate, the Applicant should reflect that change in its next rate case, including within the COSS and rate design proposals. If the Company is unable to perform this analysis to confirm the general service rate classes have similar cost causation characteristics, Staff recommends that the Company move away from the MSFV rate design in its next rate case.

#### **Fixed Delivery Service Charges**

#### Residential Fixed Delivery Service Charges

In Case No. 07-589-GA-AIR, the Commission authorized a rate design change for the residential class to recover most fixed costs up front through a flat monthly fee, also referred to as a MSFV. The Applicant's proposal maintains this rate design.

## GS/FT -Small and GS/FT- Large Rate Classes Fixed Delivery Service Charge

The Applicant derived its proposed fixed delivery service charge for GS/FT -Small and GS/FT- Large rate classes by first adding the current fixed charges for Rider AMRP and Rider CEP to the current fixed delivery service charges per month, which calculates an effective fixed delivery service charge. The result was then increased by ten percent. Based on Staff's recommendations in the Rate Classes section, Staff recommends removing the additional ten percent increase to the proposed fixed delivery service charges. Staff finds that the fixed delivery service charge should not increase above the effective fixed delivery service charge until the rate class analysis is complete. Table 8 below compares the current fixed delivery service charge, rider rates as of the filing of the application, Applicant-proposed fixed delivery service charge, and Staff calculated fixed delivery service charge for GS/FT-Small and GS/FT-Large rate classes.

Table 8

	Current Fixed Delivery	Monthly Fixed Riders		Total Effective Applicant		Staff		
	Service Charge	AMRP	CEP	Charge	Proposed	Increase	Proposed	Increase
	\$	\$	\$	\$	\$	%	\$	%
Rate GS-S	86.73	26.10	19.63	132.46	145.71	10.00	132.46	0.00
Rate FT-S	86.73	26.10	19.63	132.46	145.71	10.00	132.46	0.00
Rate GS-L	214.50	26.10	98.22	338.82	372.70	10.00	338.82	0.00
Rate FT-L	214.50	26.10	98.22	338.82	372.70	10.00	338.82	0.00

#### **Rate Design**

The Applicant has proposed changes specific to various schedules in its tariff. The following analysis provides Staff's recommendations regarding those proposals. A summary of the current rates, Applicant proposed rates, and Staff calculated rates is provided for each schedule. The current rates are the rates in effect at the time of the application filing. The Applicant proposed rates are the rates proposed by the Applicant to generate the Applicant's requested revenue increase. The Staff calculated rates reflect the approximate midpoint of Staff's proposed base distribution revenue requirement, \$366,648,679, excluding other miscellaneous revenues and Gas Cost Revenue. These are presented for illustrative purposes to show the impact Staff's recommended changes to the base distribution revenue requirement, class revenue distribution and rate design may have on rate increases. The increases reflect changes to the base rates and do not represent the total bill impact. Typical bills at the end of this report reflect these rates and include rider rates as proposed by the Applicant in its Application. The rates calculated by Staff will require adjustments based on the revenue, revenue allocation and rate design authorized by the Commission and any additional changes that cannot be foreseen by Staff.

### Rate RS - Residential Service

Applicable to gas service required for residential purposes when supplied at one point of delivery where distribution mains are adjacent to the premises to be served.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$31.26 to \$43.29 Table 9 compares the current, Applicant-proposed, and Staff calculated rates for customers.

**Applicant** Staff Current **Proposed Increase Calculated Increase** \$ % % \$ Fixed Delivery Service Charge 31.26 43.29 43.29 38.48 38.48 First 400 CCF (Per CCF) 0.30975 1.32814 328.78 0.94962 206.58 Additional CCF (Per CCF) 0.92068 1.44432 56.88 1.06561 15.74

Table 9 - Rate RS

#### Rate RFT – Residential Firm Transportation Service

Applicable to firm transportation service for residential purposes, which is provided from the Company's city gate receipt points to the outlet side of Company's meter.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$31.26 to \$43.29. Table 10 compares the current, Applicant-proposed, and Staff calculated rates for customers.

Table 10 - Rate RFT

		Applicant		Staff	
	Current	Proposed	Increase	Calculated	Increase
	\$	\$	%	\$	%
Fixed Delivery Service Charge	31.26	43.29	38.48	43.29	38.48
First 400 CCF (Per CCF)	0.30975	1.32814	328.78	0.94962	206.58
Additional CCF (Per CCF)	0.92068	1.44432	56.88	1.06561	15.74

#### Rate RSLI – Residential Service Low Income

Applicable to gas service required for residential purposes when supplied at one point of delivery where distribution mains are adjacent to the premises to be served. Eligible customers are non-PIPP, low usage residential customers verified at or below 175 percent of poverty level.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$27.48 to \$39.29. Table 11 compares the current, Applicant-proposed, and Staff calculated rates for customers.

Table 11 - Rate RSLI

		Applicant		Staff	
	Current	Proposed	Increase	Calculated	Increase
	\$	\$	%	\$	%
Fixed Delivery Service Charge	27.48	39.29	42.98	39.29	42.98
All CCF (Per CCF)	0.30975	1.32814	328.78	0.94962	206.58

## Rate RFTLI – Residential Firm Transportation Service - Low Income

Applicable to firm transportation service for residential purposes, which is provided from the Company's city gate receipt points to the outlet side of Company's meter. Eligible customers are non-PIPP, low usage residential customer verified at or below 175 percent of poverty level.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$27.48 to \$39.29. Table 12 compares the current, Applicant-proposed, and Staff calculated rates for customers.

**Table 12 - Rate RFTLI** 

		Applicant		Staff	
	Current	Proposed Increase		Calculated Increas	
	\$	\$	%	\$	%
Fixed Delivery Service Charge	27.48	39.29	42.98	39.29	42.98
All CCF (Per CCF)	0.30975	1.32814	328.78	0.94962	206.58

#### Rate GS-S - General Service - Small

Applicable to gas service required for any purpose by an individual non-residential customer using 4,000 CCF or less during the prior calendar year at one premises when supplied at one point of delivery where distribution mains are adjacent to the premises to be served.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$86.73 to \$145.71. Table 13 compares the current, Applicant-proposed, and Staff calculated rates for customers.

Table 13 - Rate GS - Small

		Appli	icant	Staff		
	Current	Proposed	Increase	Calculated	Increase	
	\$	\$	%	\$	%	
Fixed Delivery Service Charge	86.73	145.71	68.00	132.46	52.73	
All CCF (Per CCF)	0.94126	1.06536	13.18	1.32713	41.00	

#### Rate FT-S – Firm Transportation Service – Small

Applicable to firm full requirements transportation service for an individual non-residential customer using 4,000 CCF or less during the prior calendar year at one premise, which is provided from the Company's city gate receipt points to the outlet side of Company's meter used to serve the customer.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$86.73 to \$145.71. Table 14 compares the current, Applicant-proposed, and Staff calculated rates for customers.

Table 14 - Rate FT-S

		Appli	icant	Staff		
	Current	Proposed	Increase	Calculated Increase		
	\$	\$	%	\$	%	
Fixed Delivery Service Charge	86.73	145.71	68.00	132.46	52.73	
All CCF (Per CCF)	0.94126	1.06536	13.18	1.32713	41.00	

#### Rate GS-L – General Service – Large

Applicable to gas service required for any purpose by an individual non-residential customer using more than 4,000 CCF during the prior calendar year at one premises when supplied at one point of delivery where distribution mains are adjacent to the premises to be served.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$214.50 to \$372.70. Table 15 compares the current, Applicant-proposed, and Staff calculated rates for customers.

Table 15 - Rate GS - L

		Appli	icant	Staff		
	Current	Proposed	Increase	Calculated	Increase	
	\$	\$	%	\$	%	
Fixed Delivery Service Charge	214.50	372.70	73.75	338.82	57.96	
All CCF (Per CCF)	0.99216	1.26427	27.43	1.28472	29.49	

#### Rate FT-L – Firm Transportation Service – Large

Applicable to firm full requirements transportation service for an individual non-residential customer using more than 4,000 CCF during the prior calendar year at one premises, which is provided from the Company's city gate receipt points to the outlet side of Company's meter used to serve the customer.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$214.50 to \$372.70. Table 16 compares the current, Applicant-proposed, and Staff calculated rates for customers.

**Applicant** Staff **Current Proposed Increase Calculated Increase** \$ \$ % \$ 57.96 Fixed Delivery Service Charge 214.50 372.70 73.75 338.82 All CCF (Per CCF) 1.26427 0.99216 27.43 1.28472 29.49

Table 16 - Rate FT-L

### Rate IT – Interruptible Transportation Service

Applicable to curtailable natural gas local delivery service available to any customer that: (1) signs a contract with the Company for service under Rate IT; (2) utilizes a minimum of 10,000 CCF per month during each of the seven consecutive billing periods commencing with customer's first meter reading taken on or after April 1; (3) has arranged for the delivery of gas into the Company's system, for customer's sole use at one point of delivery where distribution mains are adjacent to the premises to be served; and (4) has become a member of a pool under Rate AS and elected Interruptible Monthly Balancing Service under Rate IMBS.

The Applicant maintains the same block structure. The Applicant proposes to increase the Customer Charge from \$565.81 to \$622.39. Table 17 compares the current, Applicant-proposed, and Staff calculated rates for customers.

		Appl	icant	Staff		
	Current	Proposed	Increase	Calculated	Increase	
	\$	\$	%	\$	%	
Fixed Delivery Service Charge	565.81	622.39	10.00	622.39	10.00	
All CCF (Per CCF)	0.65958	1.16625	76.82	1.10821	68.02	

Table 17 - Rate IT

#### Rate IS – Interruptible Transportation Service

Applicable to curtailable natural gas local delivery service available to any customer that: (1) signs a contract with the Company for service under Rate IS; (2) utilizes a minimum of 10,000 CCF per month during each of the seven consecutive billing periods commencing with customer's first meter reading taken on or after April 1.

The Applicant has proposed the same block structure as Rate IT. The Applicant proposes for the Customer Charge to be consistent with Rate IT at \$622.39. Table 18 compares the Applicant-proposed, and Staff calculated rates for customers.

Table 18 - Rate IS

		Appli	icant	Staff		
	Current	Proposed	Increase	Calculated	Increase	
	\$	\$	%	\$	%	
Fixed Delivery Service Charge	N/A	622.39	N/A	622.39	N/A	
All CCF (Per CCF)	N/A	1.16625	N/A	1.10821	N/A	

### **Bill Impacts**

Staff prepared illustrative typical bills; these should not be taken as a recommendation by the Staff as to the overall revenue requirement recommended, which was conducted through a separate analysis and reflected in other sections of this report. The typical bills reflect the rates and charges calculated by Staff in the Rate Design section's tables and are shown in the Schedule E-5 at the end of this report. Calculation of the typical bills uses a gas cost of \$7.020 per Mcf, consistent with the Application.

#### **ALTERNATIVE RATE PLAN**

In conjunction with its application for a base rate increase, the Company filed an application for an alternative rate plan.

#### R.C. 4929.05 states:

- (A) A natural gas company may request approval of an alternative rate plan by filing an application under section 4909.18 of the Revised Code, regardless of whether the application is for an increase in rates. After investigation, which may include a hearing at the discretion of the public utilities commission, the commission shall authorize the applicant to implement an alternative rate plan if the natural gas company has made a showing and the commission finds that all of the following conditions are met:
  - (1) The natural gas company is in compliance with section 4905.35 of the Revised Code and is in substantial compliance with the policy of this state specified in section 4929.02 of the Revised Code;
  - (2) The natural gas company is expected to continue to be in substantial compliance with the policy of this state specified in section 4929.02 of the Revised Code after implementation of the alternative rate plan; and
  - (3) The alternative rate plan is just and reasonable.
- (B) The applicant shall have the burden of proof under this section.

Ohio Adm.Code 4901:1-19-07(C) states that "[t]he commission staff will file a written report which addresses, at a minimum, the justness and reasonableness of the proposed alternative rate plan."

Staff's determination of whether the components of the alternative rate plan is just and reasonable is outlined below.

#### Case No. 22-508-GA-ALT Capital Expenditure Program

The Company proposes to continue its CEP and to extend the program until the Company's next base rate proceeding. The Company proposes to adjust Rider CEP by setting the annual rate to a maximum of \$3.00 for the first nine months of the new rider (for assets invested between April 1 through December 31, 2022) and allowing up to \$5.00 per year for the remaining years. The Company does not propose a timeframe for the next base rate case filing or renewal/resetting of the CEP.

The Company proposed to change the IT Class CEP rate design from a fixed, per-bill, per-month rate design to a volumetric, per CCF rate design. The Company states that "Usage in Rate IT varies greatly with a few large users of natural gas making up over 40 percent of the annual usage within the rate class and many smaller companies each having very little usage. As a result of the current rate design, the smaller companies' total bills have been impacted to a much larger degree, with some seeing an increase of over 20 percent, whereas the larger companies in Rate IT have experienced an increase of less than 1 percent<sup>28</sup>."

\_

<sup>&</sup>lt;sup>28</sup> Company Witness Jay Brown's Direct Testimony at 7.

The Company proposes to modify the current formula by removing the depreciation offset. The Company also proposes to allow for automatic approval of the rider on November 1<sup>st</sup> with a reconciliation to take place in a future filing. The Company proposes a transition between the filing of the rider in 2023 and implementation of the rate case. The Company proposes prorate the rider cap for every month the base rate implementation is "delayed" after April 2023.

Staff recommends that the program be established for five years and then terminate with the rider rate being set to \$0.00 or until and unless the Company files a new rate case. The Company could recover the rider for assets invested from April 1, 2022, through December 31, 2022, and for assets invested in 2023 through 2027. The \$0.00 rate would take effect after collection of the 2027 assets by October 31, 2029, and all deferrals would cease for investments starting January 1, 2028, and beyond.

Staff accepts the Company's proposal to remove the depreciation offset from the formula. However, if the Commission does not accept Staff's recommendation to require the Company to file a rate case concurrent with a renewal of the CEP alternative regulation, and if the CEP rider is permitted to continue beyond assets invested in 2027, then Staff recommends the depreciation offset be added back to the formula and re-incorporated into the determination of the revenue requirement consistent with the current formula for CEP assets invested in 2028.

Staff accepts the Company's proposal for a November automatic approval process for the rider contingent upon reconciliation of changes that may take place as a result of a Commission Order, including immediate reimbursements if necessary.

Staff agrees with the Company that the customers in Rate IT are less homogenous and that a fixed charge may not be appropriate. Staff also agrees that switching to a volumetric charge would spread the costs more fairly across the class and avoid intraclass subsidies. In the next CEP rider, Staff recommends that the Company prepare a thorough review of the total bill impacts under this rate design change. Staff finds this proposal to be not unreasonable.

For the overlapping period of assets for 2022 and 2023 and their respective audits, staff proposes that the if the rate case is approved by the Commission prior November 1, 2023, the rate should be prorated to remove three months of assets. If the rate case is approved on or after November 1, 2023, then the rider should be updated to incorporate all changes approved by the Commission in the rate case.

Finally, Staff proposes alternative rate caps with no further deferrals on plant that exceeds the rate caps. Staff recommends a cap of \$1.50 increase per year for the next five years.

Staff finds that the proposal would be just and reasonable as modified by Staff's recommendations herein.

#### **RIDERS**

#### Gas Cost Recovery

The Applicant is proposing to calculate the Storage Inventory Carrying Charges (SICC) utilizing the pre-tax rate of return approved in this natural gas base rate case. During its investigation, Staff reviewed the December 18, 2019 Opinion and Order in Case No. 18-218-GA-GCR in conjunction with the Company's Application in this case. Staff determined that the Company's calculation meets the requirements of the December 18, 2019 Opinion and Order in Case No. 18-218-GA-GCR and accepts the Company's proposed change to the SICC.

#### Rider Gas Tax Cuts and Jobs Act

The Applicant is proposing to continue its existing Rider Gas Tax Cuts and Jobs Act as currently approved. Staff recommends approval of this proposal.

### Accelerated Mains Replacement Program

The Applicant has concluded the Accelerated Mains Replacement Program (AMRP) and is proposing to end Rider AMRP in this proceeding once the costs have been rolled into base rates. The Company is proposing to roll into base rates the net rate base which was included in Rider AMRP, including net capital placed in service and the associated ADIT and excessive deferred income taxes (EDIT) balances as of March 31, 2022, along with the related depreciation expense and property taxes. Upon implementation of new base rates in this proceeding, Rider AMRP will be reset to zero, the rider will be terminated, and the Company will file a revised tariff canceling and withdrawing the Rider AMRP tariff. Staff accepts the Company's proposal to terminate Rider AMRP, reset the rider to zero and roll the Rider AMRP costs into base rates.

#### SERVICE MONITORING AND ENFORCEMENT

The Service Monitoring and Enforcement Department (SMED), inspects utility facilities to ensure regulated utility service providers operate and maintain their systems to allow safe, reliable and quality service. SMED also investigates consumer inquiries and complaints to identify areas of customer concerns and confirm compliance with Commission rules and conducts Customer Service Audits. Below is a summary of SMED Staff's investigations and findings:

#### **Customer Service Audit**

Customer Service Audit Staff completed a customer service audit in 2019 regarding the customer service performance, practices, and procedures of the company. As a result of the audit, Staff determined that the overall customer service practices and policies of the Applicant, as reviewed and observed by SMED, generally comply with the applicable rules and regulations set forth by the Commission.

Staff reviewed the customer contacts to the PUCO's call center for the period of January 2022 through October 2022. The call center received 458 contacts during this period. Billing Inquiry constituted the largest number of contacts, with 105 for the period. This included customers with questions about the \$133 credit, high bills, meter issues, account balance inquiries, and other general questions about their bills. The next largest category of contacts involved billing dispute with 86 contacts. This included contacts regarding switching fees and supplier billing. It also included billing system issues such as erroneous bills, incorrect bill credits, soft close, and some customers who did not receive their bills. Contacts regarding Call Company First and Energy CHOICE Matrix Requests were the next highest category of contacts with 43 each. Most of the Call Company First contacts thought they were contacting the Company or had not yet contacted the Company to resolve issues or make payments. The PUCO call center also received contacts from 31 customers who voiced concerns about rates and tariffs. These contacts were mostly customers inquiring about the \$133 credit or wanting information about riders.

In addition to a review of the PUCO's customer contacts, Staff has monitored the Company's replacement of its central information system (CIS) during 2022. The Company's transition to the new CIS, Customer Connect, caused a significant amount of billing issues for customers and suppliers, including metering issues, bill amounts outside of thresholds, invoicing errors, and printing issues. In addition, the transition caused technical issues with the budget billing program, autopay drafting errors, pricing errors leading to corrected bills, seasonal gas turn off customers unable to establish installment plans, gas rider configuration issues resulting in overcharges and corrected bills, erroneous connection fees applied to canceled orders requiring refunds, duplicate billings, and a coding issue resulting in erroneous gas aggregation switching fees. Furthermore, customers received an increased number of estimated bills beginning with the transition and customers received an increased number of cancel/rebills reaching a monthly high in July.

The Company has and continues to identify and resolved the billing and technical issues associated with the transition to Customer Connect.

The PUCO call center also received contacts from Duke seasonal gas customers whose service began billing without notice from the Company. It is imperative that Duke thoroughly educate their customers on the program. While billing is stopped, a customer must know that even though billing has paused, the gas remains flowing.

#### MANAGEMENT AND OPERATIONS REVIEW

R.C. 4909.154 states that the Commission shall consider the management policies, practices, and organization of public utilities in fixing the just, reasonable, and compensatory rates, joint rates, tolls, classification, charges, or rentals to be observed and charged for service by any public utility.

Ohio Adm.Code 4901-7-01, Appendix A requires medium and large utilities to include in their rate filings a concisely written summary of their management policies, practices, and organization. Among other things, the summary is to include a discussion of policy and goal setting, strategic and long-range planning, organization structure, decision making and controlling, and communications for the Company's executive management process (Schedule S-4.1) as well as for functional areas common to most electric utility companies (Schedule S-4.2).

On June 14, 2022, Staff selected the following functional areas that Duke must include in the application to be filed in the above referenced case:

- 1. Finance and accounting: internal auditing, including an evaluation of the Company's internal controls, processes, and procedures to comply with applicable laws and to ensure the integrity of financial and accounting information.
- 2. Budgeting and forecasting, including policies and procedures for how jurisdictional allocation factors are calculated, including the statistics used and an explanation for any recent changes in allocation procedures. The review should specifically address how costs associated with shared plant is allocated between Duke Energy Ohio and Duke Energy Kentucky.
- 3. Plant operations and construction: A summary and review of the Company's transmission pipeline system in Ohio and estimates of the scope of work associated with material verification, maximum allowable operating pressure (MAOP) reconfirmation, and other requirements of the Pipeline and Hazardous Materials Safety Administration's "Safety of Gas Transmission Pipelines" rule, issued on October 1, 2019.

<u>Internal auditing, including an evaluation of the Company's internal controls, processes, and procedures to comply with applicable laws and to ensure the integrity of financial and accounting information</u>

During its investigation, Staff requested support for the Company's internal audit control processes including process mapping, internal control manual, level of signatory authority, as well as list and results of recently performed internal audits of FERC/regulatory accounts. Additionally, Staff interviewed Company personnel, which included a demonstration of the Company's internal auditing software known as Optical Character Recognition (OCR) that the Company utilizes to analyze invoices to identify risks.

Based upon Staff's review, Staff found the Company's internal control audit processes to be reasonable and adequate. Staff determined that there are no findings in its review. In particular, Staff appreciates the Company utilizing the OCR tool in the context of ratemaking to assist in identifying expenses that would not otherwise be recoverable from ratepayers, such as charitable contributions, and ensuring the expenses have been recorded properly.

Budgeting and forecasting, including policies and procedures for how jurisdictional allocation factors are calculated, including the statistics used and an explanation for any recent changes in allocation procedures. The review should specifically address how costs associated with shared plant is allocated between Duke Energy Ohio and Duke Energy Kentucky.

Staff selected the functional area of budgeting and forecasting, to include policies and procedures for how the Company's jurisdictional allocation factors are calculated, that included statistics used and an explanation for any changes to the allocation procedures, with a primary focus on how costs associated with shared plant is allocated between Duke Energy Ohio and Duke Energy Kentucky.

The Company described how it conducts a facility study annually for utility owned headquarter buildings in each jurisdiction. As explained by the Company, the purpose of the facility study was to determine intercompany rent to charge non-utility employees using space in the headquarter buildings, with the rent charge developed based on a return on net book value of the facilities, depreciation, property taxes, and insurance. Staff obtained the most recently conducted facilities study and found that it represented a reasonable process to determine the costs of headquarter buildings that serve multiple jurisdictions, and ultimately charge affiliates for the use of such buildings.

As part of the Company's most recent electric distribution rate case, Staff discovered the Company's Electric System Operations (ESO) Facility was used in-part to provide service to Duke Energy Kentucky's distribution functions. As part of the Stipulation in that case, the Company agreed to directly charge Duke Energy Kentucky for the distribution-related services performed at the ESO Facility for Duke Energy Kentucky. Separately, during the annual audit of the Company's CEP, Blue Ridge Consulting Services, Inc. discovered the Company's Kellogg Training Center was used to train both Ohio and Kentucky employees, and recommended the Company track the facility's usage and non-jurisdictional companies be required to pay rent for their use. Although these two facilities were not included in the Company's facility study for headquarter buildings, the Company informed Staff they will conduct annual studies for each of these buildings annually. In addition, the Company advised Staff there are no additional facility studies for non-headquarter buildings, such as the ESO Facility and Kellogg Training Center, being performed at this time.

Staff notes the Company's development of facilities studies to determine intercompany rent to charge for the two identified non-headquarter ESO Facility and Kellogg Training Center was in response to specific recommendations during proceedings before the Commission. Given these studies were reactionary, Staff recommends the Company take a proactive approach to identify facilities that provide significant functions to non-jurisdictional affiliates, including facilities outside of Ohio that provide significant jurisdictional functions to Ohio. Staff recommends at the time such facilities are identified, the Company develop studies to determine intercompany rent to charge in a similar manner as the rent charges for the ESO Facility and Kellogg Training Center.

A summary and review of the Company's transmission pipeline system in Ohio and estimates of the scope of work associated with material verification, maximum allowable operating pressure (MAOP) reconfirmation, and other requirements of the Pipeline and Hazardous Materials Safety Administration's "Safety of Gas Transmission Pipelines" rule, issued on October 1, 2019.

<sup>30</sup> In the Matter of the Application of Duke Energy Ohio, Inc. for an Adjustment to the Capital Expenditure Program Rider Rate, Case No. 21-618-GA-RDR, Opinion and Order (July 22, 2022).

<sup>&</sup>lt;sup>29</sup> In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, Case Nos. 21-887-EL-AIR, et al. Corrected Stipulation and Recommendation (September 19, 2022).

Duke's most recent annual report to PHMSA shows they have 5,898 miles of distribution main and 412,014 customer services. All of the Duke system is composed of plastic or cathodically protected steel except for 0.091 miles of distribution main and 190 service lines. Duke reports 68 known system leaks scheduled for repair, which is a very low number for a system of its size. Staff believe this data shows Duke's AMRP program was generally effective and support Duke's proposal to withdraw the AMRP rider.

Duke's annual report also shows they maintain 46.781 miles of protected steel transmission lines. Of these, 13.151 miles are located in a High Consequence Area subject to transmission integrity management requirements, an additional 16.305 miles of transmission lines are subject to new assessment, material verification, and/or MAOP reverification requirements required by new Federal regulations. The implications of these new requirements and details on major construction projects designed to meet these requirements are described in the testimony of Company witness Brian Weisker filed July 14, 2022. Duke proposes to meet these requirements through a combination of piping replacement, lowering of operational pressure, hydrostatic testing, and adapting existing piping to accommodate in-line assessment tools. Duke estimates this program will cost 4.468 million per year. Based on Staff's knowledge of Duke's system and costs associated with the proposed work, Staff believes these proposed costs are reasonable.

All Duke proposals regarding the disconnection and reconnection of gas service comply with the Pipeline Safety Regulations and portions of the Ohio Administrative Code related to pipeline safety.

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR OVERALL FINANCIAL SUMMARY FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE A-1 PAGE 1 OF 1

LINE	D-CODIN-TION	SUPPORTING	SUPPORTING JURISDICTIONAL SCHEDULE PROPOSED TEST REFERENCE YEAR			STAFF			
NO	DESCRIPTION				LOWER BOUND		UPPER BOUND		
1	Rate Base B-1 \$ 1,911,461,483			\$	1,895,500,693	\$	1,895,500,693		
2	Current Operating Income	C-1	\$	101,767,522	\$	107,627,819	\$	107,627,819	
3	Earned Rate of Return (Line 2 / Line 1)			5.32%		5.68%		5.68%	
4	Requested Rate of Return	D-1A	7.33%			6.66%		7.19%	
5	Required Operating Income (Line 1 x Line 4)		\$	140,110,127	\$	126,240,346	\$	136,286,500	
6	Operating Income Deficiency (Line 5 - Line 2)		\$	38,342,605	\$	18,612,527	\$	28,658,681	
7	Gross Revenue Conversion Factor	A-2		1.2713133		1.2713133		1.2713133	
8	Revenue Deficiency (Line 6 x Line 7)		\$	48,745,464	\$	23,662,353	\$	36,434,162	
9	Revenue Increase Requested	E-4	\$	48,745,468	\$	23,662,353	\$	36,434,162	
10	Adjusted Operating Revenues	C-1	\$	499,668,871	\$	500,186,067	\$	500,186,067	
11	Revenue Requirements (Line 9 + Line 10)		\$	548,414,339	\$	523,848,420	\$	536,620,229	

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR COMPUTATION of GROSS REVENUE CONVERSION FACTOR FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPA-2a

SCHEDULE A-2 PAGE 1 OF 1

LINE NO.	DESCRIPTION		PERCENT OF INCREMENTAL GROSS REVENUE
1 2	Operating Revenues		100.0000%
3	Less:		
4 5	Uncollectible Accounts Expenses	0.4319%	0.4319%
6 7	Income before Federal Income Tax (Line 1 - Line 4)		99.5681%
8	Federal Income Tax (21.00% x 99.568%)		20.9093%
9 10	Operating Income Percentage (Line 6 - Line 8)		78.6588%
11			
12	Gross Revenue Conversion Factor (100% / 78.659%)		1.2713

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR JURISDICTIONAL RATE BASE SUMMARY AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).: SEE BELOW

SCHEDULE B-1 PAGE 1 OF 1

LINE NO.	RATE BASE COMPONENT	SUPPORTING COMPANY SCHEDULE PROPOSED TE BASE COMPONENT REFERENCE AMOUNT				
1	Plant In Service	B-2	\$ 3,001,403,133	\$ 2,998,348,282		
2	Reserve for Accumulated Depreciation	B-3	(859,685,975)	(859,356,980)		
3	Net Plant In Service (Line 1+ Line 2)		2,141,717,158	2,138,991,302		
4	Construction Work in Progress	B-4	0	0		
5	Cash Working Capital Allowance	B-5	0	0		
6	Material and Supplies	B-5	3,666,084	0		
7	Other Items:					
8	Customer Advances for Construction	B-6	(5,308,995)	(5,308,995)		
9	Customer Service Deposits	B-6	(11,080,519)	(11,080,519)		
10	Contributions in Aid of Construction (a)	B-6	0	0		
11	Postretirement Benefits	B-6	(16,100,816)	(16,100,816)		
12	Investment Tax Credits	B-6	(287)	(287)		
13	Excess Deferred Income Taxes	B-6	(109,030,054)	(109,030,054)		
14	Deferred Income Taxes	B-6	(279,302,767)	(288,871,617)		
15	Other Rate Base Adjustments	B-6	186,901,679	186,901,679		
16	Jurisdictional Rate Base (Line 3 thru Line 15)		\$ 1,911,461,483	\$ 1,895,500,693		

<sup>(</sup>a) Contributions in aid of construction are already netted against gross plant per FPC Order No. 490.

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR PLANT IN SERVICE SUMMARY BY MAJOR PROPERTY GROUPINGS AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE B-2 PAGE 1 OF 1

LINE NO.	MAJOR PROPERTY GROUPINGS	TOTAL ALLOCATION NGS COMPANY %		ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTION
		\$		\$	\$	\$
1	Production	536,762	100.00	536,762	0	536,762
2	Distribution	2,747,232,479	100.00	2,747,232,479	(24,729,788)	2,722,502,691
3	General	152,680,306	100.00	152,680,306	(1,080,436)	151,599,870
4	Common (Allocated to Gas)	381,133,404	32.86%	125,231,900	(1,522,941)	123,708,959
5	Other (specify)					
6	TOTAL	3,281,582,951		3,025,681,447	(27,333,165)	2,998,348,282

#### MANUFACTURED GAS PRODUCTION PLANT

WORK PAPER REFERENCE NO(S).: Schedule B-2,2

SCHEDULE B-2.1 PAGE 1 OF 4

LINE NO.	F.E.R.C. ACCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTION
				\$		\$	\$	\$
1	304	2040	Land and Land Rights	501,805	100.00%	501,805		501,805
2	304	2041	Rights of Way	6,024	100.00%	6,024		6,024
3	305	2050	Structures & Improvements	28,932	100.00%	28,932		28,932
4	311	2110	Liquefied Petroleum Gas Equipment	1	100.00%	1		1
5	320	2200	Other Equipment	0	100.00%	0		0
6			Total Manufactured Gas Production Plant	536,762		536,762	0	536,762

#### DISTRIBUTION PLANT

WORK PAPER REFERENCE NO(S).: Schedule B-2,2

SCHEDULE B-2.1 PAGE 2 OF 4

LINE	F.E.R.C.	COMPANY		TOTAL	ALL 0047'0'	ALLOCATES		AD IIIOTES
LINE NO.	ACCT. NO.	ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTION
140.	140.	110.	ACCOUNT THEE	OOMI AITI	70	TOTAL	ADOOOTHILITO	OUNIODIOTION
				\$		\$	\$	\$
1	374	2740	Land and Land Rights	35,585,511	100.00%	35,585,511	(130)	35,585,381
2	374	2741	Rights of Way	16,762,110	100.00%	16,762,110	(9)	16,762,101
3	374	2742	City Gate Check Station	3,663	100.00%	3,663	0	3,663
4	375	2750	Structures & Improvements	22,044,936	100.00%	22,044,936	0	22,044,936
5	376	2761, 2764	Mains - Cast Iron & Copper	4,681,894	100.00%	4,681,894	0	4,681,894
6	376	2762, 65, 67, 69	Mains - Steel	756,293,744	100.00%	756,293,744	(8,426)	756,285,318
7	376	2763, 2768	Mains - Plastic	847,733,970	100.00%	847,733,970	(197)	847,733,773
8	378	2780	System Meas. & Reg. Station Equipment	108,994,981	100.00%	108,994,981	(38,019)	108,956,962
9	378	2781	System Meas. & Reg. Station Equip-Electronic	12,136,493	100.00%	12,136,493	0	12,136,493
10	378	2782	District Regulating Equipment	6,400,398	100.00%	6,400,398	0	6,400,398
11	379	2790	Meas. & Reg City Gate	68,586,556	100.00%	68,586,556	(4,875)	68,581,681
12	380	2801	Services- Cast Iron & Copper	2,814,738	100.00%	2,814,738	0	2,814,738
13	380	2802, 2804, 2808	Services-Steel	26,469,841	100.00%	26,469,841	0	26,469,841
14	380	2803, 05, 06, 07	Services-Plastic	659,249,870	100.00%	659,249,870	(638)	659,249,232
15	381	2810,2811	Meters	86,171,397	100.00%	86,171,397	(534)	86,170,863
16	381	2812	Utility of the Future Meters	0	100.00%	0	, O	0
17	382	2820,2821	Meter Installations	25,939,454	100.00%	25,939,454	0	25,939,454
18	383	2830,2831	House Regulators	22,866,772	100.00%	22,866,772	(0)	22,866,772
19	384	2840,2841	House Regulator Installations	16,791,088	100.00%	16,791,088	0	16,791,088
20	385	2850	Large Industrial Meas. & Reg. Equipment	3,070,037	100.00%	3,070,037	0	3,070,037
21	385	2851	Large Industrial Meas. & Reg. Equipment - Comm	728,946	100.00%	728,946	0	728,946
22	387	2870	Other Equipment - Other	76,252	100.00%	76,252	0	76,252
23	387	2871	Street Lighting Equipment	1,109,971	100.00%	1,109,971	0	1,109,971
24	Multiple	Multiple	Capitalized Financial Incentives	0	100.00%	0	(1,957,103)	(1,957,103)
25	388	•	Gas ARO	22,719,857	100.00%	22,719,857	(22,719,857)	0
26			Total Distribution Plant	2,747,232,479		2,747,232,479	(24,729,788)	2,722,502,691

#### GENERAL PLANT

WORK PAPER REFERENCE NO(S).: Schedule B-2,2

SCHEDULE B-2.1 PAGE 3 OF 4

LINE NO.	F.E.R.C. ACCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTION
				\$		\$	\$	\$
1 2 3 4 5 6 7 8 9 10 11	000 389 390 391 391 392 392 394 395 396 397	2030 2890 2900 2910 2911 2920 2921 2940 2950 2960 2970 2972	Miscellaneous Intangible Plant Land Structures & Improvements Office Furniture & Equipment Electronic Data Processing Equipment Transportation Equipment Trailers Tools, Shop & Garage Equipment Laboratory Equipment Power Operated Equipment Communication Equipment Rider AU Gas Comm Nodes	64,962,560 0 13,085,488 568,700 6,990,938 0 764,474 13,296,524 0 4,011,755 35,214,909 13,742,988	100.00% 100.00% 100.00% 100.00% 100.00% 100.00% 100.00% 100.00% 100.00% 100.00%	64,962,560 0 13,085,488 568,700 6,990,938 0 764,474 13,296,524 0 4,011,75 35,214,909 13,742,988	(941) 0 (933,918) (18) (465) 0 (19,886) 0 (16,439)	64,961,619 0 12,151,570 568,682 6,990,473 0 764,474 13,276,638 0 4,011,755 35,198,470 13,742,988
13 14	398	2980	Miscellaneous Equipment Capitalized Financial Incentives	41,970 0	100.00% 100.00%	41,970 0	0 (108,768)	41,970 (108,768)
15			Total General Plant	152,680,306		152,680,306	(1,080,436)	151,599,870
16			Total Gas Plant	2,900,449,547		2,900,449,547	(25,810,224)	2,874,639,323

#### COMMON PLANT

WORK PAPER REFERENCE NO(S).: Schedule B-2,2

SCHEDULE B-2.1 PAGE 4 OF 4

LINE	F.E.R.C. ACCT.	COMPANY ACCT.		TOTAL		ALL COATION	ALLOCATES		AD IIIOTED
LINE NO.	NO.	NO.	ACCOUNT TITLE	COMPANY		ALLOCATION % <sup>1</sup>	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTION
NO.	NO.	NO.	ACCOUNT TITLE	COWIFANT		/0	IOTAL	ADJUSTMENTS	JUNISDICTION
				\$			\$	\$	\$
1		1030	Miscellaneous Intangible Plant	51,082,840	A3O1	30.44%	15,550,020	0	15,550,020
2		1701	Common AMI Meters	78,659	ACO3	37.65%	29,615	(29,615)	(0)
3		1890	Land 4th & Main	1,378,245	APO1	36.09%	497,474	0	497,474
4		1890	Land and Land Rights	941,246	A3O1	30.44%	286,523	(59,535)	226,988
5		1890	Land and LR - Micro	287,863	A3O2	30.44%	87,628	0	87,628
6		1891	Rights of Way	37,969	A3O2	30.44%	11,558	(11,558)	(0)
7		1900	Structures & Improvements - 4th & Main	130,680,690	APO1	36.09%	47,168,846	(847,527)	46,321,319
8		1900	Structures & Improvements - Micro	286,295	A3O2	30.44%	87,150	(23,528)	63,622
9		1900	Structures and Improvements	92,295,008	A3O1	30.44%	28,095,329	(220,999)	27,874,330
10		1910	Office Furniture & Equipment	10,264,275	APO1	36.09%	3,704,863	(62,933)	3,641,930
11		1911	Electronic Data Processing	45,925	A3O1	30.44%	13,980	0	13,980
12		1920	Transportation Equipment	773,632	A3O1	30.44%	235,500	0	235,500
13		1921	Trailers	(683,289)	A3O1	30.44%	(207,999)	0	(207,999)
14		1930	Stores Equipment	469,805	A3O1	30.44%	143,012	0	143,012
15		1940	Tools, Shop & Garage Equipment	2,554,254	A3O1	30.44%	777,535	0	777,535
16		1950	Laboratory Equipment	0	A3O1	30.44%	0	0	0
17		1960	Power Operated Equipment	111.853	A3O1	30.44%	34,049	0	34,049
18		1970	Communication Equipment - Micro	5,535,988	A3O2	30.44%	1,685,198	(74,059)	1,611,139
19		1970	Comm Common Equip - Node	740,255	ACO3	37.65%	278,707	0	278,707
20		1970	Common Communication Equipment	33,256,800	A3O1	30.44%	10,123,633	(57,754)	10,065,879
21		1971	Comm. Nodes	33,332,951	DNON	0.00%	0	0.,	0
22		1972	Rider AU Common Comm Nodes	16,177,275	DALL	100.00%	16,177,275	0	16.177.275
23		1980	Miscellaneous Equipment	1,333,068	A3O1	30.44%	405,796	(11)	405,785
24		.000	Capitalized Financial Incentives	0	DIRECT <sup>2</sup>	32.86%	0	(89,214)	(89,214)
2 <del>4</del> 25		1990, 1991	ARO Common General plant	151,797	A3O1	30.44%	46,208	(46,208)	(0)
								(10,=00)	(-)
26			Total Common Plant Allocated to Gas	381,133,404			125,231,900	(1,522,941)	123,708,959
27			Total Gas Plant Including Allocated Common	3,281,582,951			3,025,681,447	(27,333,165)	2,998,348,282

<sup>&</sup>lt;sup>1</sup>Allocation of Common Plant is based on updated allocation codes provided by Company response to DR 122

<sup>&</sup>lt;sup>2</sup>Allocation % of Common Plant between Gas/Electric is based on Total Allocated Gas divided by Total Company: ∑(Allocated Gas Lines 1 through 24) ÷ ∑(Total Company Lines 1 through 24)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ADJUSTMENTS TO PLANT IN SERVICE AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).: Staff WPB-2.2, WPB-2.2PG, WPB-2.2CI

SCHEDULE B-2.2 PAGE 1 OF 1

LINE	FUNCTION	COMPANY ACCT.		TOTAL COMPANY	ALLOCATION	JURISDICTIONAL
NO.	DESCRIPTION	NO.	ACCOUNT TITLE	ADJUSTMENT	%	ADJUSTMENT
				\$		\$
1	DISTRIBUTION PLANT					
2		27400	Land and Land Rights	(130)	100.00%	(130)
3		27401	Rights of Way	(9)	100.00%	(9)
8		27602	Mains - Steel	(6)	100.00%	(6)
9		27605	Mains - Steel	(8,420)	100.00%	(8,420)
12		27603	Mains - Plastic	(197)	100.00%	(197)
14		27800	System Meas. & Reg. Station Equipment	(38,019)	100.00%	(38,019)
17		27900	Meas. & Reg City Gate	(4,875)	100.00%	(4,875)
22		28003	Services-Plastic	(638)	100.00%	(638)
26		28100	Meters	(534)	100.00%	(534)
31		28300	House Regulators	(0)	100.00%	(0)
39		Multiple	Capitalized Financial Incentives	(1,957,103)	100.00%	(1,957,103)
40		NA	Gas ARO	(22,719,857)	100.00%	(22,719,857)
41			Total Distribution Plant	(24,729,788)		(24,729,788)
42	OENEDAL DI ANT					
43	GENERAL PLANT	20200	Missellaneaus Intensible Plant	(472)	100.000/	(472)
44 45		20300 20310	Miscellaneous Intangible Plant	(473) (467)	100.00% 100.00%	(473)
45 47		29000	Miscellaneous Intangible Plant Structures & Improvements	(933,918)	100.00%	(467)
48		29100	Office Furniture & Equipment		100.00%	(933,918)
49		29101	Electronic Data Processing Equipment	(18) (465)	100.00%	(18) (465)
52		29400	Tools, Shop & Garage Equipment	(19,886)	100.00%	(19,886)
55		29700	Communication Equipment	(16,439)	100.00%	(16,439)
58		Multiple	Capitalized Financial Incentives	(108,768)	100.00%	(108,768)
59		Manipic	Total General Plant	(1,080,436)	100.0070	(1,080,436)
60			Total Colloral Flam	(1,000,100)		(1,000,100)
61	COMMON PLANT <sup>1</sup>					
63		1701	Common AMI Meters	(78,659)	37.65%	(29,615)
65		1890	Land and Land Rights	(195,578)	30.44%	(59,535)
67		1891	Rights of Way	(37,969)	30.44%	(11,558)
68		1900	Structures & Improvements - 4th & Main	(2,348,063)	36.09%	(847,527)
69		1900	Structures & Improvements - Micro	(77,290)	30.44%	(23,528)
70		1900	Structures and Improvements	(725,996)	30.44%	(220,999)
71		1910	Office Furniture & Equipment	(174,354)	36.09%	(62,933)
79		1970	Communication Equipment - Micro	(243,289)	30.44%	(74,059)
81		1970	Common Communication Equipment	(189,725)	30.44%	(57,754)
84		1980	Miscellaneous Equipment	(35)	30.44%	(11)
85		Multiple	Capitalized Financial Incentives <sup>2</sup>	(271,516)	32.86%	(89,214)
86		1990, 1991	ARO Common General plant	(151,797)	30.44%	(46,208)
87			Total Common Plant	(4,494,271)		(1,522,941)
88			Total Adjustments including Allocated Common	(30,304,495)		(27,333,165)

<sup>&</sup>lt;sup>1</sup>Allocation of Common Plant is described in footnote [1] on Schedule B-2.1

<sup>&</sup>lt;sup>2</sup>Allocation % of Common Plant between Gas/Electric is described in footnote [2] on Schedule B-2.1.

#### MANUFACTURED GAS PRODUCTION PLANT

WORK PAPER REFERENCE NO(S).: Staff WPB-3

SCHEDULE B-3 PAGE 1 OF 4

LINE NO.	F.E.R.C. ACCCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY PLANT INVESTMENT	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTIONAL
				\$	\$		\$	\$	\$
1	304	2040	Land and Land Rights	501,805	(2,319)	100.00%	(2,319)		(2,319)
2	304	2041	Rights of Way	6,024	155	100.00%	155		155
3	305	2050	Structures & Improvements	28,932	298,248	100.00%	298,248		298,248
4	311	2110	Liquefied Petroleum Gas Equipment	1	(462,007)	100.00%	(462,007)		(462,007)
5		2200	Other Equipment	0	(1,529)	100.00%	(1,529)		(1,529)
6		108	Retirement Work in Progress		0	100.00%	0		0
7			Total Manufactured Gas Production Plant	536,762	(167,452)		(167,452)	0	(167,452)

#### DISTRIBUTION PLANT

WORK PAPER REFERENCE NO(S).: Staff WPB-3

SCHEDULE B-3 PAGE 2 OF 4

LINE NO.	F.E.R.C. ACCCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY PLANT INVESTMENT	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTIONAL
				\$	\$		\$	\$	\$
1	374	2740	Land and Land Rights	35,585,511	(125,100)	100.00%	(125,100)	0	(125,100)
2	374	2741	Rights of Way	16,762,110	2,891,099	100.00%	2,891,099	(0)	2,891,099
3	374	2742	City Gate Check Station	3,663	46,198	100.00%	46,198	0	46,198
4	375	2750	Structures & Improvements	22,044,936	1,673,732	100.00%	1,673,732	0	1,673,732
5	376	2761, 2764	Mains - Cast Iron & Copper	4,681,894	(14,379)	100.00%	(14,379)	0	(14,379)
6	376	2762, 65, 67, 69	Mains - Steel	756,293,744	222,919,746	100.00%	222,919,746	(119)	222,919,627
7	376	2763, 2766, 2768	B Mains - Plastic	847,733,970	227,361,888	100.00%	227,361,888	(29)	227,361,859
8	378	2780	System Meas. & Reg. Station Equipment	108,994,981	7,406,793	100.00%	7,406,793	(1,202)	7,405,591
9	378	2781	System Meas. & Reg. Station Equipment-Elec	12,136,493	8,026,680	100.00%	8,026,680	0	8,026,680
10	378	2782	District Regulating Equipment	6,400,398	3,085,448	100.00%	3,085,448	0	3,085,448
11	379	2790	Meas. & Reg City Gate Station	68,586,556	3,106,681	100.00%	3,106,681	(788)	3,105,893
12	380	2801	Services- Cast Iron & Copper	2,814,738	916,411	100.00%	916,411	0	916,411
13	380	2802,2804, 2804	Services-Steel	26,469,841	9,159,492	100.00%	9,159,492	0	9,159,492
14	380	2803,05, 06, 07	Services-Plastic	659,249,870	238,558,286	100.00%	238,558,286	(34)	238,558,252
15	381	2810,2811	Meters	86,171,397	(1,842,400)	100.00%	(1,842,400)	(7)	(1,842,407)
16	381	2812	Utility of the Future Meters	0	0	100.00%	0	0	0
17	382	2820,2821	Meter Installations	25,939,454	11,883,692	100.00%	11,883,692	0	11,883,692
18	383	2830,2831	House Regulators	22,866,772	5,460,344	100.00%	5,460,344	(0)	5,460,344
19	384	2840,2841	House Regulator Installations	16,791,088	7,107,192	100.00%	7,107,192	0	7,107,192
20	385	2850	Large Industrial Meas. & Reg. Equipment	3,070,037	2,225,715	100.00%	2,225,715	0	2,225,715
21	385	2851	Large Industrial Meas. & Reg. Equipment - Comm	728,946	711,615	100.00%	711,615	0	711,615
22	387	2870	Other Equipment - Other	76,252	298,816	100.00%	298,816	0	298,816
23	387	2871	Street Lighting Equipment	1,109,971	559,963	100.00%	559,963	0	559,963
24		108	Retirement Work in Progress		(17,657,774)	100.00%	(17,657,774)	0	(17,657,774)
			Capitalized Financial Incentives			100.00%		(171,186)	(171,186)
25	388		Gas ARO	22,719,857	6,140,202	100.00%	6,140,202	(6,140,202)	0
26			Total Distribution Plant	2,747,232,479	739,900,340		739,900,340	(6,313,567)	733,586,773

#### GENERAL PLANT

WORK PAPER REFERENCE NO(S).: Staff WPB-3

SCHEDULE B-3 PAGE 3 OF 4

LINE NO.	F.E.R.C. ACCCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY PLANT INVESTMENT	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTIONAL
				\$	\$		\$	\$	\$
1	000	2030	Miscellaneous Intangible Plant	64,962,560	36,138,334	100.00%	36,138,334	(561)	36,137,773
2	389	2890	Land	0	0	100.00%	0	0	0
3	390	2900	Structures & Improvements	13,085,488	997,559	100.00%	997,559	(74,345)	923,214
4	391	2910	Office Furniture & Equipment	568,700	77,462	100.00%	77,462	(2)	77,460
5	391	2911	Electronic Data Processing Equipment	6,990,938	3,566,106	100.00%	3,566,106	(232)	3,565,874
6	392	2920	Transportation Equipment	0	6,380	100.00%	6,380	0	6,380
7	392	2921	Trailers	764,474	489,382	100.00%	489,382	0	489,382
8	394	2940	Tools, Shop & Garage Equipment	13,296,524	5,854,412	100.00%	5,854,412	(3,582)	5,850,830
9	395	2950	Laboratory Equipment	0	(44,037)	100.00%	(44,037)	0	(44,037)
10	396	2960	Power Operated Equipment	4,011,755	1,193,105	100.00%	1,193,105	0	1,193,105
11	397	2970	Communication Equipment	35,214,909	22,157,228	100.00%	22,157,228	(8,579)	22,148,649
12	397	2972	Rider AU Gas Comm Nodes	13,742,988	4,771,405	100.00%	4,771,405	0	4,771,405
13	398	2980	Miscellaneous Equipment	41,970	11,664	100.00%	11,664	0	11,664
			Capitalized Financial Incentives					(9,514)	(9,514)
14		108	Retirement Work in Progress		4,867	100.00%	4,867	0	4,867
15			Total General Plant	152,680,306	75,223,867		75,223,867	(96,816)	75,127,051
16			Total Gas Plant	2,900,449,547	814,956,755		814,956,755	(6,410,383)	808,546,372

#### COMMON PLANT

Staff WPB-3 WORK PAPER REFERENCE NO(S).: SCHEDULE B-3 PAGE 4 OF 4

LINE NO.	F.E.R.C. ACCCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL COMPANY PLANT INVESTMENT	TOTAL COMPANY	ALLOCATION %	ALLOCATED TOTAL	ADJUSTMENTS	ADJUSTED JURISDICTIONAL
				\$	\$		\$	\$	\$
1		1030	Miscellaneous Intangible Plant	51,082,840	50,431,440	30.44%	15,351,729	0	15,351,729
2		1701	Common AMI Meters	78,659	64,828	37.65%	24,408	(19,424)	4,984
		1890	Land 4th & Main	1,378,245	82,196	36.09%	29,668	0	29,668
3		1890	Land and Land Rights	941,246	16,576	30.44%	5,046	(1,480)	3,566
		1890	Land and LR - Micro	287,863	7,228	30.44%	2,200	0	2,200
4		1891	Rights of Way	37,969	0	30.44%	0	0	0
		1900	Structures & Improvements - 4th & Main	130,680,690 (1)		36.09%	17,814,110	(258,037)	17,556,073
		1900	Structures & Improvements - Micro	286,295 (1)		30.44%	14,964	(4,015)	10,949
5		1900	Structures and Improvements	92,295,008 (1)		30.44%	1,643,708	(8,888)	1,634,820
6		1910	Office Furniture & Equipment	10,264,275	3,186,819	36.09%	1,150,274	(9,590)	1,140,684
7		1911	Electronic Data Processing	45,925	32,403	30.44%	9,864	0	9,864
8		1920	Transportation Equipment	773,632	360,821	30.44%	109,837	0	109,837
9		1921	Trailers	(683,289)	(86,818)		(26,428)	0	(26,428)
10		1930	Stores Equipment	469,805	255,423	30.44%	77,753	0	77,753
11		1940	Tools, Shop & Garage Equipment	2,554,254	1,079,376	30.44%	328,571	0	328,571
12		1950	Laboratory Equipment	0	0	30.44%	0	0	0
13		1960	Power Operated Equipment	111,853	82,853	30.44%	25,221	0	25,221
		1970	Communication Equipment - Micro	5,535,988 (1)		30.44%	939,166	(53,670)	885,496
		1970	Comm Commun Equip - Node	740,255 (1)		37.65%	178,721	0	178,721
14		1970	Common Communication Equipment	33,256,800 (1)		30.44%	6,536,607	(16,051)	6,520,556
15		1971	Comm. Nodes	33,332,951	16,699,353	0.00%	0	0	0
16		1972	Rider AU Common Comm Nodes	16,177,275	6,949,018	100.00%	6,949,018	0	6,949,018
17		1980	Miscellaneous Equipment	1,333,068	415,055	30.44%	126,346	(1)	126,345
			Capitalized Financial Incentives					(7,803)	(7,803)
18		1990, 1991	Retirement Work in Progress - ARO	151,797	381,157	30.44%	116,027	(116,027)	0
19		108	Retirement Work in Progress		(332,500)	30.44%	(101,216)		(101,216)
20			Total Common Plant	381,133,404					
			Common Plant Allocated to Gas						
21			Original Cost	125,231,900					
22			Reserve		159,460,934		51,305,594	(494,986)	50,810,608
23			Total Gas Plant Including Allocated Common	3,025,681,447	974,417,689		866,262,349	(6,905,369)	859,356,980

<sup>(1) -</sup> STAFF ALLOCATED THE TOTAL COMPANY RESERVE FOR THIS ACCOUNT TO EACH SUB-ACCOUNT IN LINE WITH THE PERCENT RESERVES REPORTED IN CASE 21-887-EL-AIR. REFER TO STAFF WPB-3.

WORK PAPER REFERENCE NO(S).: Staff WPB-3.1

SCHEDULE B-3.1 PAGE 1 OF 1

LINE NO.	FUNCTION DESCRIPTION	COMPANY ACCT. NO.	ACCOUNT TITLE	TOTAL STAFF ADJUSTMENT	ALLOCATION %	JURISDICTIONAL ADJUSTMENT
				\$		\$
1	DISTRIBUTION PLANT					
2		27401	Rights of Way	(0)	100.00%	(0)
3		27602	Mains - Steel	(1)	100.00%	(1)
4		27605	Mains - Steel	(118)	100.00%	(118)
5		27603	Mains - Plastic	(29)	100.00%	(29)
6		27800	System Meas. & Reg. Station Equipment	(1,202)	100.00%	(1,202)
7		27900	Meas. & Reg City Gate Station	(788)	100.00%	(788)
8		28003	Services-Plastic	(34)	100.00%	(34)
9		28100	Meters	(7)	100.00%	(7)
10		28300	House Regulators	(0)	100.00%	(0)
11			Capitalized Financial Incentives	(171,186)	100.00%	(171,186)
12			Gas ARO	(6,140,202)	100.00%	(6,140,202)
13	OFNEDAL BLANT		Total Distribution Plant	(6,313,567)		(6,313,567)
14 15	GENERAL PLANT 5 Year	20300	Missellens and Intermible Diset	(0.47)	400.000/	(0.47)
16	5 Year 10- Year	20300	Miscellaneous Intangible Plant Miscellaneous Intangible Plant	(347) (214)	100.00%	(347)
17	TO- Year	29000	Structures & Improvements	(74,345)	100.00% 100.00%	(214)
18		29100	Office Furniture & Equipment	, , ,	100.00%	(74,345)
19		29100	Electronic Data Processing Equipment	(2) (232)	100.00%	(2) (232)
20		29400	Tools, Shop & Garage Equipment	(3,582)	100.00%	(3,582)
21		29700	Communication Equipment	(8,579)	100.00%	(8,579)
22		23700	Capitalized Financial Incentives	(9,514)	100.00%	(9,514)
23			Total General Plant	(96,816)	100.0070	(96,816)
24			Total Colloral Flam	(00,010)		(00,010)
25	COMMON PLANT					
26		1701	Common AMI Meters	(51,591)	37.65%	(19,424)
27		1890	Land and Land Rights	(4,863)	30.44%	(1,480)
28		1900	Structures & Improvements - 4th & Main	(714,888)	36.09%	(258,037)
29		1900	Structures & Improvements - Micro	(13,189)	30.44%	(4,015)
30		1900	Structures and Improvements	(29,198)	30.44%	(8,888)
31		1910	Office Furniture & Equipment	(26,569)	36.09%	(9,590)
32		1970	Communication Equipment - Micro	(176,309)	30.44%	(53,670)
33		1970	Common Communication Equipment	(52,728)	30.44%	(16,051)
34		1980	Miscellaneous Equipment	(2)	30.44%	(1)
35			Capitalized Financial Incentives	(23,749)	32.86%	(7,803)
36		1990, 1991	Retirement Work in Progress - ARO	(381,157)	30.44%	(116,027)
37 38			Total Common Plant	(1,474,243)		(494,986)
39 40 41			Total Adjustments including Allocated Common	(7,884,626)		(6,905,369)

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR DEPRECIATION ACCRUAL RATES AND JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS, FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP AS OF MARCH 31, 2022

#### MANUFACTURED GAS PRODUCTION PLANT

WORK PAPER REFERENCE NO(S).: NA

SCHEDULE B-3.2 PAGE 1 OF 4

LINE NO. (A)	F.E.R.C. ACCT. NO. (B-1)	COMPANY ACCT. NO. (B-2)	ACCOUNT TITLE OR MAJOR PROPERTY GROUPING (C)	ADJUSTED JU PLANT INVESTMENT (D)	IRISDICTION  ACCUMULATED  BALANCE (E)	PROPOSED ACCRUAL RATE (F)		CALCULATED DEPR. EXPENSE (G=DxF)	% NET SALVAGE (H)	AVERAGE SERVICE LIFE (I)	CURVE FORM (J)
				\$	\$	%		\$			
1	304	2040	Land and Land Rights	501,805	(2,319)				Perpetual Life		
2	304	2041	Rights of Way	6,024	155	1.54	(a)	93	. 0	65	R4
3	305	2050	Structures & Improvements	28,932	298,248	1.83	(a)	529	-10.00%	60	R2
4	311	2110	Liquefied Petroleum Gas Equipment	1	(462,007)	0.00	(b)	0	-15.00%	55	R1.5
5	320	2200	Other Equipment	0	(1,529)	0.00	(b)	0	0.00%	17	L1.5
6		108	Retirement Work in Progress		0						
7			Total Manufactured Gas Production Plant	536,762	(167,452)			622			

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR DEPRECIATION ACCRUAL RATES AND JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS, FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP AS OF MARCH 31, 2022

#### DISTRIBUTION PLANT

WORK PAPER REFERENCE NO(S).: NA

SCHEDULE B-3.2 PAGE 2 OF 4

LINE	F.E.R.C. ACCT.	COMPANY ACCT.	ACCOUNT TITLE OR MAJOR	ADJUSTED JU	ACCUMULATED	PROPOSED ACCRUAL	CALCULATED DEPR.	% NET	AVERAGE SERVICE	CURVE
NO. (A)	NO. (B-1)	NO. (B-2)	PROPERTY GROUPING (C)	INVESTMENT (D)	BALANCE (E)	RATE (F)	EXPENSE (G=DxF)	SALVAGE (H)	LIFE (I)	FORM (J)
(1-)	(5 1)	(5 2)	(3)	(5)	(=)	(.)	(O-DAI)	()		(0)
				\$	\$	%	\$			
1	374	2740	Land and Land Rights	35,585,381	(125,100)	0.00	0	Perpetual Life		
2	374	2741	Rights of Way	16,762,101	2,891,099	1.33	222,936	0	75	R4
3	374	2742	City Gate Check Station	3,663	46,198	0.00	0	Perpetual Life		
4	375	2750	Structures & Improvements	22,044,936	1,673,732	2.44	537,896	-10.00%	45	S0
5	376	2761, 2764	Mains - Cast Iron & Copper	4,681,894	(14,379)	2.64	123,602	-40.00%	53	S2.5
6	376	2762, 65, 67, 69	Mains - Steel	756,285,318	222,919,627	2.00	15,125,706	-40.00%	70	R2.5
7	376	2763, 2766, 2768	Mains - Plastic	847,733,773	227,361,859	2.33	19,752,197	-40.00%	60	R3
8	378	2780	System Meas. & Reg. Station Equipment	108,956,962	7,405,591	2.40	2,614,967	-20.00%	50	R1
9	378	2781	System Meas. & Reg. Station Equipment-Elec	12,136,493	8,026,680	5.25	637,166	-5.00%	20	L2
10	378	2782	District Regulating Equipment	6,400,398	3,085,448	2.31	147,849	-20.00%	52	R2
11	379	2790	Meas. & Reg City Gate	68,581,681	3,105,893	7.67	5,260,215	-15.00%	15	L2
12	380	2801	Services- Cast Iron & Copper	2,814,738	916,411	3.25	91,479	-30.00%	40	R1.5
13	380	2802,2804, 2804	Services-Steel	26,469,841	9,159,492	3.10	820,565	-30.00%	42	R1.5
14	380	2803,05, 06, 07	Services-Plastic	659,249,232	238,558,252	3.25	21,425,600	-30.00%	40	R2
15	381	2810,2811	Meters	86,170,863	(1,842,407)	3.13	2,697,148	0.00%	32	L1.5
16	382	2820,2821	Meter Installations	25,939,454	11,883,692	2.08	539,541	0.00%	48	R2.5
17	383	2830	House Regulators	22,866,772	5,460,344	2.00	457,335	0.00%	50	R1
18	384	2840	House Regulator Installations	16,791,088	7,107,192	1.82	305,598	0.00%	55	R2.5
19	385	2850	Large Industrial Meas. & Reg. Equipment	3,070,037	2,225,715	2.33	71,532	-5.00%	45	R1.5
20	385	2851	Large Industrial Meas. & Reg. Equipment - Comm	728,946	711,615	3.50	25,513	-5.00%	30	S2.5
21	387	2870	Other Equipment - Other	76,252	298,816	5.00	3,813	0.00%	20	S0.5
22	387	2871	Street Lighting Equipment	1,109,971	559,963	2.33	25,862	-5.00%	45	S0
23		108	Retirement Work In Progress		(17,657,774)		0			
24			Gas ARO	0	0					
25			Total Distribution Plant	2,724,459,793	733,757,959		70,886,520			

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR DEPRECIATION ACCRUAL RATES AND JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS, FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP AS OF MARCH 31, 2022

GENERAL PLANT

WORK PAPER REFERENCE NO(S).: NA

SCHEDULE B-3.2 PAGE 3 OF 4

LINE NO. (A)	F.E.R.C. ACCT. NO. (B-1)	COMPANY ACCT. NO. (B-2)	ACCOUNT TITLE OR MAJOR PROPERTY GROUPING (C)	ADJUSTED JU PLANT INVESTMENT (D)	JRISDICTION  ACCUMULATED  BALANCE (E)	PROPOSED ACCRUAL RATE (F)		CALCULATED DEPR. EXPENSE (G=DxF)	% NET SALVAGE (H)	AVERAGE SERVICE LIFE (I)	CURVE FORM (J)
				\$	\$	%		\$			
1	000	2030	Miscellaneous Intangible Plant	64,961,619	36,137,773	Various		7,907,652		3-5 years	
2	389	2890	Land	0	0			0	Perpetual Life		
3	390	2900	Structures & Improvements	12,151,570	923,214	3.33		404,647	0	30	S01
4	391	2910	Office Furniture & Equipment	568,682	77,460	5.00		28,434	0	20	SQ
5	391	2911	Electronic Data Processing Equipment	6,990,473	3,565,874	20.00		1,398,095	0	5	SQ
6	392	2920	Transportation Equipment	0	6,380		(b)		Depr. Charged	to Transp. Exp.	
7	392	2921	Trailers	764,474	489,382	4.05	(c)		Depr. Charged	to Transp. Exp.	
8	394	2940	Tools, Shop & Garage Equipment	13,276,638	5,850,830	3.99		529,738	15	25	SQ
9	395	2950	Laboratory Equipment	0	(44,037)	6.67		0	0	15	SQ
10	396	2960	Power Operated Power Equipment	4,011,755	1,193,105	6.67	(c)		Depr. Charged	to Transp. Exp.	
11	397	2970	Communication Equipment	35,198,470	22,148,649	6.67		2,347,738	. 0	15	SQ
12	397	2972	Rider AU Gas Comm Nodes	13,742,988	4,771,405			897,158	Amortization	10 years	
13	398	2980	Miscellaneous Equipment	41,970	11,664	5.00		2,099	0	20	SQ
14		108	Retirement Work in Progress	·	4,867			0			
15			Total General Plant	151,708,638	75,136,565			13,515,561			
16			Total Gas Plant	2,876,705,194	808,727,072			84,402,703			

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR

#### DEPRECIATION ACCRUAL RATES AND JURISDICTIONAL ACCUMULATED BALANCES BY ACCOUNTS, FUNCTIONAL CLASS OR MAJOR PROPERTY GROUP

#### AS OF MARCH 31, 2022

COMMON PLANT

WORK PAPER REFERENCE NO(S).:

SCHEDULE B-3.2 PAGE 4 OF 4

LINE NO.	F.E.R.C. ACCT. NO.	COMPANY ACCT. NO.	ACCOUNT TITLE OR MAJOR PROPERTY GROUPING	ADJUSTED JU PLANT INVESTMENT	ACCUMULATED BALANCE	PROPOSED ACCRUAL RATE	CALCULATED DEPR. EXPENSE	% NET SALVAGE	AVERAGE SERVICE LIFE	CURVE FORM
(A)	(B-1)	(B-2)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I)	(J)
				\$	\$	%	\$			
1		1030	Miscellaneous Intangible Plant	15,550,020	15,351,729	Various	62,921	Amortization		
2		1701	Common AMI Meters	(0)	4,984	6.67	0	0	15	S2.5
3		1890	Land and Land Rights	812,090	3,566			Perpetual Life		
4		1891	Rights of Way	(0)	0			Perpetual Life		
5		1900	Structures & Improvements	74,259,271	1,634,820	3.29	2,443,130			
6		1910	Office Furniture & Equipment	3,641,930	1,140,684	5.00	182.097	0.00%	20	SQ
7		1911	Electronic Data Processing	13,980	9,864	20.00	2.796	0.00%	5	SQ
8		1920	Transportation Equipment	235,500	109.837		(c)		to Transp. Exp.	
9		1921	Trailers	(207,999)	(26,428)		(c)		to Transp. Exp.	
10		1930	Stores Equipment	143,012	77.753	5.00	7,151	0.00%	20	SQ
11		1940	Tools, Shop & Garage Equipment	777,535	328,571	4.00	31,101	0.00%	25	SQ
12		1950	Laboratory Equipment	0	020,071		(b) 0	0.0070	20	OQ
13		1960	Power Operated Equipment	34,049	25,221		(c)	Depr. Charged	to Transn Evn	
14		1970	Communication Equipment	11,955,725	6,520,556	6.67	797.447	0.00%	15	SQ
15		1971	Comm. Nodes	11,955,725	0,320,330		(b) 0	0.0070	13	OQ
16		1972	Rider AU Common Comm Nodes	16,177,275	6,949,018	0.00	922,826	Amortization	10 years	
17		1980	Miscellaneous Equipment	405,785	126,345	5.00	20,289	0.00%	20	SQ
18		1990, 1991	Retirement Work in Progress - ARO	(0)	120,545	3.00	20,203	0.0070	20	OQ
19		108	Retirement Work in Progress	(0)	(101,216)					
		106	Retilement work in Progress		(101,216)					
20			Total Common Plant	381,133,404						
21			Common Plant Allocated to Gas							
22			Original Cost	123,798,173						
23			Reserve	-,,	32,155,304					
24			Annual Provision		02,100,004		4.469.758			
			Allitual Flovision				4,403,730			
25			Total Gas Plant Including Allocated Common	3,000,503,367	840,882,376		88,872,461			

<sup>(1)</sup> Fully Amortized

<sup>(2)</sup> Assets are depreciated individually by lease period

<sup>(</sup>a) Natifs proposed rate reflects ongoing usage of the remaining assets in the account while Company's proposed rate is accelerated as based upon retirement and decommissioning of Propane Cavern Deferred Assets. See Sch C-3.2.

<sup>(</sup>b) No depreciable property; Staff proposes no rate
(c) Depreciation Charged to Transportation Expense

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ALLOWANCE FOR WORKING CAPITAL AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).: SEE BELOW

SCHEDULE B-5 PAGE 1 OF 1

LINE		DESCRIPTION of METHODOLGY USED to DETERMINE	WORK PAPER REFERENCE	
NO.	WORKING CAPITAL COMPONENT	JURISDICTIONAL REQUIREMENT	NUMBER	JURISDICTIONAL (A)
	Cook Washing Conited	Naga Parwastad		(\$)
1	Cash Working Capital	None Requested		0
2 3				
4				
5	Material and Supplies:			
6	• •			
7	Gas Enricher Liquids (B)	13 month average balance	SCH B-5.1, WPB-5.1b	0
8	0.1	40 41 1	00115 = 4	
9 10	Other	13 month average balance less allowance for new	SCH B-5.1, WPB-5.1c	0
11		construction based on	VVPD-3.10	
12		withdrawals		
13				
14				
15	Gas Stored - Current (C)	13 month average balance		0
16				_
17	Prepayments for Gas - Undelivered	13 month average balance		0
18 19	Total Material and Supplies			0
20	Total Material and Supplies			
21				
22				
23	PIPP Uncollectibles - Balance	13 month average balance		0

<sup>(</sup>A) Total Utility is 100% Jurisdictional.

<sup>(</sup>B) Adjustment to propane inventory per stipulation in Case No. 21-0986-GA-ABN (abandonment of facilities).

<sup>(</sup>C) Excluded per Order approved in Case No. 07-589-GA-AIR.

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR OTHER RATE BASE ITEMS SUMMARY AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).: Staff WPB-6

SCHEDULE B-6 PAGE 1 OF 2

LINE NO.	ACCOUNT NUMBER	DESCRIPTION	TOTAL COMPANY (A)	ADJUSTMENTS	ADJUSTED JURISDICTION
			\$	\$	\$
1	252	Customers' Advances for Construction	(5,308,995)	0	(5,308,995)
2	235	Customer Service Deposits	(11,080,519)	0	(11,080,519)
4 5	271	Contributions in Aid of Construction	0	0	0
6 7	253	Post Retirement Benefits	0	(16,100,816)	(16,100,816)
8 9 10 11 12 13	255	Investment Tax Credits: (B) Pre-1971 3% Credit 1971 4% Credit 1975 6% Credit 1981 10% Credit Total Investment Tax Credits	0 (287) 0 (921,030) (921,317)	0 0 0 921,030 921,030	0 (287) 0 0 (287)
15 16 17 18 19 20	254	Excess Deferred Income Taxes: Excess Deferred Income Taxes Federal Excess Deferred Income Taxes - Common Allocation from Electric Total Excess Deferred Income Taxes	(104,684,653) (4,345,401) (109,030,054)	0 0 0	(104,684,653) (4,345,401) (109,030,054)
21 22 23 24	190 190 190	Deferred Income Taxes: 401(k) Incentive Plan ARO Cumulative Effect Cares Act Reserve	1,306 9,063,113 (76,585)	0 0 0	1,306 9,063,113 (76,585)
25 26 27 28	190 190 190 190	Property Tax on Propane Electric Meters FAS 106 OPEB FAS 87 Non-Qualified Pension	97,699 (85,705) 828,338 192,489	0 0 0 0	97,699 (85,705) 828,338 192,489
29 30 31	190 190 190	FAS 87 Qualified Pension R&D Credits Incentive Plan	3,505,983 1,499,269 (111,337)	0 0	3,505,983 1,499,269 (111,337)
32 33 34	190 190 190	ITC FAS 109 Unbilled Revenue - Fuel Loss on Reacquired Debt	252,010 (2,403,287) 5,098	0 0 0	252,010 (2,403,287) 5,098
35 36 37	190 190 190	MGP Site Post Retirement Benefits - SFAS 112 State Deferred Tax Receivable	6,991,101 (6,761) 841,905	(6,991,101) 0 0	0 (6,761) 841,905
38 39 40	190 190 190	Uncollectible Accounts Vacation Pay Accruals Offsite Gas Storage	(153,230) 422,106 2,533,561	0	(153,230) 422,106 2,533,561
41	190	Total Account 190	23,397,073	(6,991,101)	16,405,972

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR OTHER RATE BASE ITEMS SUMMARY AS OF MARCH 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE B-6 PAGE 2 OF 2

LINE NO.	ACCOUNT NUMBER	DESCRIPTION	TOTAL COMPANY (A)	ADJUSTMENTS	ADJUSTED JURISDICTION
		Defended because Toward (Continued)	\$	\$	\$
		Deferred Income Taxes (Continued)			
1	282	263A	(31,697,036)	0	(31,697,036)
2	282	AFUDC Debt	(5,413,426)	0	(5,413,426)
3	282	CIAC	9,117,350	0	9,117,350
4	282	CWIP Differences	1,460,201	0	1,460,201
5	282	EDIT Balance - TCJA	104,684,653	0	104,684,653
6	282	EDIT Balance - TCJA Common Allocation from Electric	4,345,401	0	4,345,401
7	282	Miscellaneous	(1,495,877)	0	(1,495,877)
8	282	Non-Cash Overheads	5,342,197	0	5,342,197
9	282	Section 174	(427,376)	0	(427,376)
10	282	Tax Depreciation	(268,142,679)	0	(268,142,679)
11	282	Tax Expensing	(74,719,530)	0	(74,719,530)
12	282	Tax Interest Capitalized	9,829,643	0	9,829,643
13		Total Account 282	(247,116,479)	0	(247,116,479)
14					
15	283	ARO Cumulative Effect	(5,565,280)	0	(5,565,280)
16	283	Gas Capital Expenditure Program Deferral	(15,228,827)	(4,131,052)	(19,359,879)
17	283	FAS 106 OPEB	359,034	0	359,034
18	283	FAS 87 Non-Qualified Pension	(3,949)	0	(3,949)
19	283	FAS 87 Qualified Pension	(9,823,599)	0	(9,823,599)
20	283	Loss on Reacquired Debt	(67,352)	0	(67,352)
21	283	Covid-19 Deferral	(70,265)	0	(70,265)
22	283	Post In-Service Carrying Costs	(16,000,772)	(3,745,739)	(19,746,511)
23	283	Deferred Gas Integrity Costs	(4,769,715)	0	(4,769,715)
24	283	Smart Grid	(838,250)	(33,820)	(872,070)
25	283	Uncollectible Accounts	2,029,405	0	2,029,405
26	283	Vacation Carryover Deferral	(270,929)	0	(270,929)
27	200	Total Account 283	(50,250,499)	(7,910,611)	(58,161,110)
28		Total / loodal ii 200	(00,200, 100)	(1,010,011)	(00,101,110)
29		Total Deferred Income Taxes	(273,969,905)	(14,901,712)	(288,871,617)
30		Total Botolica Illoullo Taxes	(213,309,303)	(17,501,712)	(200,071,017)
31		Other Rate Base Adjustments			
32	182	Smart Grid. AMRP and CEP	0	100 001 070	100 001 070
32	182	Smart Grid, AMRP and CEP  Total Other	0	186,901,679 186,901,679	186,901,679
33		i otal Other	0	186,901,679	186,901,679

<sup>(</sup>A) Total Company is 100% Jurisdictional.

(B) The company elected the immediate flow through option under Section 46(e)(3) in regards to the 1971 election and the ratable flow through option provided under Section 46(f)(2) in regards to the 1975 election.

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR JURISDICTIONAL PRO FORMA INCOME STATEMENT FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-1a

SCHEDULE C-1 PAGE 1 OF 1

LINE NO.	DESCRIPTION	REVENIIE &		PROPOSED INCREASE		PROFORMA REVNUE & EXPENSES	
		(A)		(B)		(C)	
1 2	Operating Revenues	\$ 500,186,0	)67 \$	48,745,468	\$	548,931,535	
3	Operating Expenses						
4	Operation & Maintenance	241,328,3	363	210,519		241,538,882	
5	Depreciation	88,872,4	161	0		88,872,461	
6	Taxes - Other	43,520,1	154	0		43,520,154	
7 8	Operating Expenses before Income Taxes	373,720,9	978	210,519		373,931,497	
9 10	Federal Income Taxes	18,837,2	270	10,192,339		29,029,609	
11 12	Total Operating Expenses	392,558,2	248	10,402,858		402,961,106	
13 14	Net Operating Income	\$ 107,627,8	<u>\$</u>	38,342,610	\$	145,970,429	
15	Rate Base	\$ 1,895,500,6	693		\$	1,895,500,693	
16 17	Rate of Return	5.6	68%_			7.70%	

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ADJUSTED TEST YEAR OPERATING INCOME FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: SCH. C-2.1, SCH. C-3, WPC-2a through WPC-2h

SCHEDULE C-2 PAGE 1 OF 1

LINE NO.	DESCRIPTION	UNADJUSTED REVENUE & EXPENSES		ADJUSTED REVENUE & EXPENSES
1	OPERATING REVENUES			
2	Base Revenue	\$ 336,334,930	\$ (5,482,207)	\$ 330,852,723
3	Rider Revenue	29,928,197	(29,928,197)	φ 330,032,723 -
4	Gas Costs Revenue	158,962,825	(192,425)	158,770,400
5	Other Operating Revenue	4,439,093	6,123,851	10,562,944
6	Total Operating Revenues	529,665,045	(29,478,978)	500,186,067
7			(==, :: =,=:=)	
8	OPERATING EXPENSES			
9	Operation and Maintenance Expenses			
10	Production Expenses			
11	Liquefied Petroleum Gas	2,219,259	(2,219,259)	-
12	Other	1,770,421	(1,770,421)	
13	Total Production Expense	3,989,680	(3,989,680)	
14				
15	Other Gas Supply Expenses			
16	Purchased Gas	158,910,568	(140,168)	158,770,400
17	Other	1,886,187	- (1.12.122)	1,886,187
18	Total Other Gas Supply Expense	160,796,755	(140,168)	160,656,587
19		47.005		47.005
20 21	Transmission Expense	17,695	4 504 000	17,695
22	Distribution Expense Customer Accounts Expense	31,038,218	4,524,230	35,562,448
23	Customer Service & Information Expense	20,469,859	(7,817,058) 49,603	12,652,801
23 24	Sales Expense	2,753,025 1,264,803	(8,089)	2,802,628 1,256,714
25	Administrative & General Expense	26,185,831	(6,804,067)	19,381,764
26	Amortization of Deferred Expense	(1,756,972)	10,754,698	8,997,726
27	Total Operation and Maintenance Expense	244,758,894	(3,430,531)	241,328,363
28	Total operation and maintenance Expense	2 : 1,1 00,00 :	(0,100,001)	211,020,000
29	Depreciation Expense	84,105,237	4,767,224	88,872,461
30	1			
31	Taxes Other Than Income Taxes			
32	Other Federal Taxes	2,362,226	(301,759)	2,060,467
33	State and Other Taxes	75,326,634	(33,866,947)	41,459,687
34	Total Taxes Other Than Income Taxes	77,688,860	(34,168,706)	43,520,154
35				
36	Federal Income Taxes			
37	Normal and Surcharge	8,442,229	603,551	9,045,780
38	Provision for Deferred Income Taxes	10,792,607	(1,001,117)	9,791,490
39	Total Federal Income Tax Expense	19,234,836	(397,566)	18,837,270
40				
41	Total Operating Expenses and Taxes	425,787,827	(33,229,579)	392,558,248
42	Not Occasion because	A 400 077 040	ф 0.750.004	Ф 407.007.040
43	Net Operating Income	\$ 103,877,218	\$ 3,750,601	\$ 107,627,819

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR SUMMARY OF JURISDICTIONAL ADJUSTMENTS TO OPERATING INCOME FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3 PAGE 1 OF 5

LINE		TOTAL SCHEDULE	ANNUALIZE / NORMALIZE	PROPANE CAVERN	RATE CASE	ANNUALIZE TEST YEAR	ANNUALIZE
NO.	TITLE OF ACCOUNT	C-3	REV & EXP	AMORTIZATION	EXPENSE	WAGES	DEPRECIATION
1	OPERATING REVENUE		C-3.1	C-3.2	C-3.3	C-3.4	C-3.5
2	Base	(5,482,207)	(E 61E E90)				
3	Rider	(5,462,207)	(5,615,580)				
3 4	Gas Costs	(192,425)	(192,425)				
5	Other		5,740,028				
6	Total Revenue	6,123,851 (29,478,978)	(67,977)	0	0	0	0
7	Total Revenue	(29,470,970)	(67,977)	<u> </u>		<u> </u>	<u> </u>
8	OPERATING EXPENSES						
9	Operation and Maintenance Expenses						
10	Production Expenses						
11	Liquified Petroleum Gas	(2,219,259)					
12	Other	(1,770,421)					
13	Total Production Expense	(3,989,680)	0	0	0	0	0
14		(5,555,555)					
15	Other Gas Supply Expenses						
16	Purchased Gas	(140,168)	(140,168)				
17	Other	(1.10,100)	(1.0,100)				
18	Total Other Gas Supply Expense	(140,168)	(140,168)	0	0	0	0
19	Total Other Gue Gupply Expenses	(1.10,100)	(1.10,100)				
20	Transmission Expense	0					
21	Distribution Expense	4,524,230					
22	Customer Accounts Expense	(7,817,058)					
23	Customer Serv & Info Expense	49,603					
24	Sales Expense	(8,089)					
25	Administrative & General Expense	(6,804,067)			239,700	(6,069,429)	
26	Amortization of Deferred Expense	10,754,698		2,894,182	,	(=,===,	
27	Total Operation and Maintenance Expenses	(3,430,531)	(140,168)	2,894,182	239,700	(6,069,429)	0
28	Total Operation and maintenance Expenses	(0,100,001)	(1.10,100)	2,001,102	200,100	(0,000,120)	
29	Depreciation Expense	4,767,224	0	0	0	0	4,767,224
30							., ,
31	Taxes Other Than Income Taxes						
32	Other Federal Taxes	(301,759)				(301,759)	
33	State and Other Taxes	(33,866,947)				( , ,	
34	Total Taxes Other Than Income Tax	(34,168,706)	0	0	0	(301,759)	0
35		(- //				(,,	
36	Federal Income Taxes						
37	Normal and Surtax	603,551	15,160	(607,778)	(50,337)	1,337,949	0
38	Prov Deferred Inc Tax (Deferrals)	(1,001,117)	-,	( , -,	(,,	, ,-	(1,001,117)
39	Prov Deferred Inc Tax (Writebacks)	0					(1,001,111)
40	Total Federal Inc Tax Expense	(397,566)	15,160	(607,778)	(50,337)	1,337,949	(1,001,117)
41		(55.,500)	.5,.00	(55.,.76)	(55,567)	.,00.,010	(.,00.,117)
42	Total Oper. Expenses and Tax	(33,229,579)	(125,008)	2,286,404	189,363	(5,033,239)	3,766,107
43	Total Oper. Expenses and Tax	(55,223,573)	(120,000)	2,200,404	103,303	(3,033,233)	3,700,107
44	Net Operating Income	3,750,601	57,031	(2,286,404)	(189,363)	5,033,239	(3,766,107)
• •	F-:	-11.86%	21.00%	21.00%	21.00%	21.00%	21.00%
		-11.00/0	21.00/0	21.00/0	21.00/0	21.00/0	21.00/0

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR SUMMARY OF JURISDICTIONAL ADJUSTMENTS

### TO OPERATING INCOME FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3 PAGE 2 OF 5

LINE		CUSTOMER SERVICE	EXCISE TAX	ANNUALIZE PROPERTY	ELIMINATE PIPP REVENUE	INTEREST EXPENSE	ELIMINATE CEP DEFERRED
NO.	TITLE OF ACCOUNT	DEPOSITS	RIDER	TAX	AND EXPENSE	DEDUCTIBLE	DEPRECIATION
	ELEMENT of OPERATING INCOME	C-3.6	C-3.7	C-3.8	C-3.9	C-3.10	C-3.11
1	OPERATING REVENUE						
2	Base						
3	Rider		(18,698,879)		(1,813,631)		
4	Gas Costs						
5	Other	·					
6	Total Revenue	0	(18,698,879)	0	(1,813,631)	0	0
7							
8	OPERATING EXPENSES						
9	Operation and Maintenance Expenses						
10	Production Expenses						
11 12	Liquified Petroleum Gas Other						
13	Total Production Expense		0	0		0	0
14	Total Floudction Expense		<u> </u>	U		<u> </u>	<u>U</u>
15	Other Gas Supply Expenses						
16	Purchased Gas						
17	Other						
18	Total Other Gas Supply Expense	0	0	0	0	0	0
19					,		
20	Transmission Expense						
21	Distribution Expense						
22	Customer Accounts Expense	277,270			(1,797,805)		
23	Customer Serv & Info Expense						
24	Sales Expense						
25	Administrative & General Expense						
26	Amortization of Deferred Expense				(4.707.005)		2,801,046
27	Total Operation and Maintenance Expenses	277,270	0	0	(1,797,805)	0	2,801,046
28 29	Depreciation Expense	0	0	0	0	0	0
30	Depreciation Expense		<u> </u>	U		<u> </u>	<u>U</u>
31	Taxes Other Than Income Taxes						
32	Other Federal Taxes						
33	State and Other Taxes		(23,156,416)	(2,291,571)			
34	Total Taxes Other Than Income Tax	0	(23,156,416)	(2,291,571)	0	0	0
35							
36	Federal Income Taxes						
37	Normal and Surtax	(58,227)	936,083	481,230	(3,323)	(1,101,703)	(588,220)
38	Prov Deferred Inc Tax (Deferrals)						
39	Prov Deferred Inc Tax (Writebacks)						
40	Total Federal Inc Tax Expense	(58,227)	936,083	481,230	(3,323)	(1,101,703)	(588,220)
41	Total Ones Funences and Tree	040.040	(00.000.000)	(4.040.044)	(4.004.400)	(4.404.700)	0.040.000
42	Total Oper. Expenses and Tax	219,043	(22,220,333)	(1,810,341)	(1,801,128)	(1,101,703)	2,212,826
43 44	Net Operating Income	(219,043)	3,521,454	1,810,341	(12,503)	1,101,703	(2,212,826)
44	Net Operating income	21.00%	21.00%	21.00%	21.00%	1,101,703	21.00%
		∠1.00%	∠1.00%	∠1.00%	21.00%		∠1.00%

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR

### SUMMARY OF JURISDICTIONAL ADJUSTMENTS TO OPERATING INCOME

FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3 PAGE 3 OF 5

ELEMENT of OPERATING INCOME   C-3.12   C-3.13   C-3.14   C-3.15   C-3.16   C-3.17	LINE NO.	TITLE OF ACCOUNT	STATE TAX RIDER	CEP AMORTIZATION	ELIMINATE NON JURIS. EXPENSES	ADJUST PUCO/OCC ASSESSMENTS	UNCOLLECTIBLE REVENUE & EXPENSE	ELIMINATE GTCJA DEFERRED REV
Base   (8,203,243)			C-3.12	C-3.13	C-3.14	C-3.15	C-3.16	C-3.17
Rider								
A Gas Costs   Cotton			/ /- /					
Other			(8,203,243)				(4,246,968)	3,034,524
Total Revenue								
Perating Expenses			(8 203 243)				(4 246 968)	3 034 524
OPERATING EXPENSES   OPERA		Total Nevellue	(0,203,243)				(4,240,300)	3,034,324
9 Operation and Maintenance Expenses 11 Liquified Petroleum Gas 12 Other 13 Total Production Expense 16 Purchased Gas 17 Other Gas Supply Expenses 18 Total Other Gas Supply Expenses 19 Other 20 Transmission Expense 21 Distribution Expense 22 Customer Accounts Expense 23 Estexpense 24 Sales Expense 25 Administrative & General Expense 26 Administrative & General Expense 27 Total Operation and Maintenance Expenses 28 Amortization of Deferred Expense 29 Depreciation Expense 20 Depreciation Expense 21 Total Oreation and Maintenance Expenses 22 Customer Accounts Expense 24 Sales Expense 25 Administrative & General Expense 26 Amortization of Deferred Expense 27 Total Operation and Maintenance Expenses 28 Ober Fabran Income Taxes 29 Depreciation Expense 30 Quit Transmissor Expense 40 Quit Transmissor Expense 50 Quit Transmissor Expense 60 Quit Transmissor Expense 60 Quit Transmissor Expense 60 Quit Transmissor Expense 61 Quit Transmissor Expense 62 Administrative & General Expense 63 Quit Transmissor Expense 64 Quit Transmissor Expense 65 Quit Transmissor Expense 66 Quit Transmissor Expense 67 Quit Transmissor Expense 68 Quit Transmissor Expense 69 Quit Transmissor Expense 70 Quit Transmissor Expense 71 Quit Transmissor Ex		OPERATING EXPENSES						
Production Expenses								
Liquifled Petroleum Gas								
Total Production Expense   0	11							
14	12							
Other Gas Supply Expenses	13	Total Production Expense	0	0	0	0	0	0
Purchased Gas   Other   Other								
Total Other   Count								
Total Other Gas Supply Expense   0   0   0   0   0   0   0   0   0								
Transmission Expense Transmission Expense Distribution Expense Customer Accounts Expense Customer Accounts Expense Customer Accounts Expense Administrative & General					0	0		
Transmission Expense		Total Other Gas Supply Expense		<u> </u>	0_			<u> </u>
Distribution Expense   Customer Accounts Expense   (4,784,169)   (4,884,189)   (4,88		Transmission Evnense						
Customer Accounts Expense   Customer Serv & Info Expense   Customer Serv & Customer Serv & Info Expense   Customer Serv & Customer & Customer Serv & Customer &					0			
24     Sales Expense     (8,089)     (989,896)     15,558       25     Administrative & General Expense     2,117,762     10,963       26     Amortization of Deferred Expense     0     2,117,762     (997,985)     15,558     (4,773,206)     0       27     Total Operation and Maintenance Expenses     0     0     0     0     0     0       28     Depreciation Expense     0     0     0     0     0     0       31     Taxes Other Than Income Taxes       32     Other Federal Taxes     (8,418,960)     0     0     0     0     0       33     State and Other Taxes     (8,418,960)     0     0     0     0     0       34     Total Taxes Other Than Income Tax     (8,418,960)     0     0     0     0     0       35     Federal Income Taxes     45,301     (444,730)     209,577     (3,267)     110,510     637,250       36     Federal Inc Tax (Writebacks)     7     10tal Federal Inc Tax (Writebacks)     1     110,510     637,250       39     Prov Deferred Inc Tax (Writebacks)     7     110,510     637,250       41     Total Oper. Expenses and Tax     (8,373,659)     1,673,032     (788,408)     12,291     (4,662,							(4,784,169)	
Administrative & General Expense 2,117,762 15,558 10,963 15,558 2 10,963	23	Customer Serv & Info Expense					, , , ,	
Amortization of Deferred Expense   2,117,762   10,963	24				(8,089)			
Total Operation and Maintenance Expenses   0   2,117,762   (997,985)   15,558   (4,773,206)   0					(989,896)	15,558		
Depreciation Expense 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
Depreciation Expense   0   0   0   0   0   0   0   0   0		Total Operation and Maintenance Expenses	0	2,117,762	(997,985)	15,558	(4,773,206)	0
30		Depreciation Evaces	0	0	0	0	0	0
Taxes Other Than Income Taxes   Cother Federal Taxes		Depreciation Expense		<u> </u>	<u> </u>			<u> </u>
Other Federal Taxes (8,418,960)  34 Total Taxes Other Than Income Tax (8,418,960) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Taxes Other Than Income Taxes						
Total Taxes Other Than Income Tax  (8,418,960) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
35   Sederal Income Taxes   Sederal Income Taxes   Sederal Income Taxes   Sederal Income Taxes   Sederal Income Taxe   Sederal Income Tax (Deferrals)   Sederal Inc Tax (Deferrals)   Sederal Inc Tax (Writebacks)   Sederal Inc Tax Expense   Sederal Inc T	33	State and Other Taxes	(8,418,960)					
36         Federal Income Taxes         45,301         (444,730)         209,577         (3,267)         110,510         637,250           38         Prov Deferred Inc Tax (Deferrals)         8         Prov Deferred Inc Tax (Writebacks)         8         10,510         637,250           40         Total Federal Inc Tax Expense         45,301         (444,730)         209,577         (3,267)         110,510         637,250           41         Total Oper. Expenses and Tax         (8,373,659)         1,673,032         (788,408)         12,291         (4,662,696)         637,250           43         Net Operating Income         170,416         (1,673,032)         788,408         (12,291)         415,728         2,397,274		Total Taxes Other Than Income Tax	(8,418,960)	0	0	0	0	0
37         Normal and Surtax         45,301         (444,730)         209,577         (3,267)         110,510         637,250           38         Prov Deferred Inc Tax (Deferrals)         Prov Deferred Inc Tax (Writebacks)         40         10 Total Federal Inc Tax Expense         45,301         (444,730)         209,577         (3,267)         110,510         637,250           41         Total Oper. Expenses and Tax         (8,373,659)         1,673,032         (788,408)         12,291         (4,662,696)         637,250           43         Net Operating Income         170,416         (1,673,032)         788,408         (12,291)         415,728         2,397,274								
Prov Deferred Inc Tax (Deferrals)       39     Prov Deferred Inc Tax (Writebacks)       40     Total Federal Inc Tax Expense     45,301     (444,730)     209,577     (3,267)     110,510     637,250       41     Total Oper. Expenses and Tax     (8,373,659)     1,673,032     (788,408)     12,291     (4,662,696)     637,250       43       44     Net Operating Income     170,416     (1,673,032)     788,408     (12,291)     415,728     2,397,274								
9 Prov Deferred Inc Tax (Writebacks) 40 Total Federal Inc Tax Expense 45,301 (444,730) 209,577 (3,267) 110,510 637,250 41 42 Total Oper. Expenses and Tax (8,373,659) 1,673,032 (788,408) 12,291 (4,662,696) 637,250 43 Net Operating Income 170,416 (1,673,032) 788,408 (12,291) 415,728 2,397,274			45,301	(444,730)	209,577	(3,267)	110,510	637,250
40 Total Federal Inc Tax Expense 45,301 (444,730) 209,577 (3,267) 110,510 637,250 41 42 Total Oper. Expenses and Tax (8,373,659) 1,673,032 (788,408) 12,291 (4,662,696) 637,250 43 Vet Operating Income 170,416 (1,673,032) 788,408 (12,291) 415,728 2,397,274								
41       42     Total Oper. Expenses and Tax     (8,373,659)     1,673,032     (788,408)     12,291     (4,662,696)     637,250       43       44     Net Operating Income     170,416     (1,673,032)     788,408     (12,291)     415,728     2,397,274			45 201	(444 720)	200 577	(2.267)	110.510	627.250
42     Total Oper. Expenses and Tax     (8,373,659)     1,673,032     (788,408)     12,291     (4,662,696)     637,250       43       44     Net Operating Income     170,416     (1,673,032)     788,408     (12,291)     415,728     2,397,274		Total i ederal ilic Tax Expense	45,501	(444,730)	209,511	(3,201)		037,230
43 44 Net Operating Income 170,416 (1,673,032) 788,408 (12,291) 415,728 2,397,274		Total Oper, Expenses and Tax	(8.373,659)	1.673.032	(788.408)	12,291	(4.662.696)	637,250
44 Net Operating Income 170,416 (1,673,032) 788,408 (12,291) 415,728 2,397,274		1 - 1	(-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,	, ,	( , . 30)	,	. ,,0/	,
21.00%         21.00%         21.00%         21.00%         21.00%         21.00%         21.00%		Net Operating Income	170,416	(1,673,032)	788,408	(12,291)	415,728	2,397,274
			21.00%	21.00%	21.00%	21.00%	21.00%	21.00%

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR SUMMARY OF JURISDICTIONAL ADJUSTMENTS TO OPERATING INCOME

#### FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3 PAGE 4 OF 5

LINE NO.	TITLE OF ACCOUNT	MISCELLANEOUS EXPENSE	CUSTOMER CONNECT EXPENSE	ANNUALIZE AMORTIZATION OF PISCC	ELIMINATE GAS SUR CREDIT RIDER	INTEGRITY MANAGEMENT	KELLOGG TRAINING CENTER REVENUE
	ELEMENT of OPERATING INCOME	C-3.18	C-3.19	C-3.20	C-3.21	C-3.22	C-3.23
1	OPERATING REVENUE						
2	Base				133,373		
3	Rider						
4	Gas Costs						
5	Other				24,027		359,796
6	Total Revenue	0	0	0	157,400	0	359,796
7							
8	OPERATING EXPENSES						
9	Operation and Maintenance Expenses						
10	Production Expenses						
11	Liquified Petroleum Gas						
12	Other						
13	Total Production Expense	0	0	0	0	0	0
14 15	Other Gas Supply Expenses						
16	Purchased Gas						
17	Other						
18	Total Other Gas Supply Expense		0	0	0	0	0
19	Total Other Gas Supply Expense		0	U		0	
20	Transmission Expense						
21	Distribution Expense	(19,770)				4,468,000	
22	Customer Accounts Expense	(13,770)	(1,512,354)			4,400,000	
23	Customer Serv & Info Expense		(1,512,554)				
24	Sales Expense						
25	Administrative & General Expense						
26	Amortization of Deferred Expense			741,936		2,188,809	
27	Total Operation and Maintenance Expenses	(19,770)	(1.512.354)	741.936		6,656,809	0
28		(10)1107	(1,01=,001)	, ,	· · · · · · · · · · · · · · · · · · ·	-,,	
29	Depreciation Expense	0	0	0	0	0	0
30	·				-,		
31	Taxes Other Than Income Taxes						
32	Other Federal Taxes						
33	State and Other Taxes						
34	Total Taxes Other Than Income Tax	0	0	0	0	0	0
35							
36	Federal Income Taxes						
37	Normal and Surtax	4,152	317,594	(155,807)	33,054	(1,397,930)	75,557
38	Prov Deferred Inc Tax (Deferrals)						
39	Prov Deferred Inc Tax (Writebacks)						
40	Total Federal Inc Tax Expense	4,152	317,594	(155,807)	33,054	(1,397,930)	75,557
41							
42	Total Oper. Expenses and Tax	(15,618)	(1,194,760)	586,129	33,054	5,258,879	75,557
43	N . O	45.5	4 404 ====	/E00 :	4045:5	/= o=o	00/
44	Net Operating Income	15,618	1,194,760	(586,129)		(5,258,879)	284,239
		21.00%	21.00%	21.00%	21.00%	21.00%	21.00%

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR SUMMARY OF JURISDICTIONAL ADJUSTMENTS

#### TO OPERATING INCOME

#### FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3 PAGE 5 OF 5

		CUSTOMER	ANNUALIZE	PUBLIC SERVICE	PROPANE	RESERVED	RESERVED
LINE NO.	TITLE OF ACCOUNT	CONNECT DEFERRAL AMORT	WEATHERIZATION PROGRAM	ADVERTISING & CUSTOMER EDUC	AND CENTRAL CORRIDOR	FOR FUTURE USE	FOR FUTURE USE
NO.	ELEMENT of OPERATING INCOME	C-3.24	C-3.25	C-3.26	C-3.27	C-3.28	C-3.29
1	OPERATING REVENUE	0 0.24	0 0.20	0 0.20	0 0.21	0 0.20	0 0.20
2	Base						
3	Rider						
4	Gas Costs						
5	Other						
6	Total Revenue	0	0	0	0	0	0
7							
8	OPERATING EXPENSES						
9	Operation and Maintenance Expenses						
10	Production Expenses						
11	Liquified Petroleum Gas				(2,219,259)		
12	Other	0		0	(1,770,421) (3,989,680)	0	0
13 14	Total Production Expense			<u> </u>	(3,989,680)	<u> </u>	0
15	Other Gas Supply Expenses						
16	Purchased Gas						
17	Other						
18	Total Other Gas Supply Expense			0	0	0	0
19	Total Other Gas Gupply Expense					<u> </u>	<u> </u>
20	Transmission Expense						
21	Distribution Expense				76,000		
22	Customer Accounts Expense				-,		
23	Customer Serv & Info Expense		49,603	0			
24	Sales Expense						
25	Administrative & General Expense						0
26	Amortization of Deferred Expense	0				0	
27	Total Operation and Maintenance Expenses	0	49,603	0	(3,913,680)	0	0
28							
29	Depreciation Expense	0	0_	0	0	0	0
30	Towns Others There Is seen a Towns						
31 32	Taxes Other Than Income Taxes Other Federal Taxes						
33	State and Other Taxes						
34	Total Taxes Other Than Income Tax	0	0	0	0	0	0
35	Total Taxes Other Than Income Tax			<u> </u>		<u>_</u>	<u> </u>
36	Federal Income Taxes						
37	Normal and Surtax	0	(10,417)	0	821,873	0	0
38	Prov Deferred Inc Tax (Deferrals)		(12,111)				
39	Prov Deferred Inc Tax (Writebacks)						
40	Total Federal Inc Tax Expense	0	(10,417)	0	821,873	0	0
41	·						
42	Total Oper. Expenses and Tax	0	39,186	0	(3,091,807)	0	0
43							
44	Net Operating Income	0	(39,186)	0	3,091,807	0	0
			21.00%		21.00%		

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZED REVENUE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.1 PAGE 1 OF 2

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To reflect adjustments to operating revenues to reclassify and annualize base and gas cost recovery revenue, to eliminate unbilled revenues and to adjust other operating revenues.		
Base Revenue	To Sch C-3 Summary <	\$ (5,615,580)
Gas Cost Revenue	To Sch C-3 Summary <	(192,425)
Other Revenue	To Sch C-3 Summary <	 5,740,028
Total		\$ (67,977)
Jurisdictional allocation percentage		 100%
Jurisdictional amount		\$ (67,977)

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZED GAS COST FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.1 PAGE 2 OF 2

0

I	PURPOSE and DESCRIPTION	AMOUNT

PURPOSE and DESCRIPTION: To reflect the change in purchased gas cost which would result from the annualization of purchased gas cost and the elimination of gas costs associated with unbilled revenues.

Gas Cost Expense Adjustment \$ (140,168)

Jurisdictional allocation percentage 100%

Jurisdictional amount To Sch C-3 Summary <--- \$ (140,168)

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZATION OF AMORTIZATION OF PROPANE DEFERRAL FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

**WORK PAPER REFERENCE NO(S).:** 

SCHEDULE C-3.2 PAGE 1 OF 1

PURPOSE and DESCRIPTION		,	AMOUNT
PURPOSE and DESCRIPTION: To reflect the adjustment to annualize amortization of Propane Cavern deferral accrued as of March 31, 2022.			
Amortization of Expense Over 3 Years		\$	2,894,182
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	2,894,182

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR RATE CASE EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.3a SCHEDULE C-3.3 PAGE 1 OF 1

PURPOSE and DESCRIPTION		A	MOUNT
PURPOSE and DESCRIPTION: To adjust test year expenses to of presenting this case as reflected on Schedule C-8.	reflect the estimated cost		
Total		\$	239,700
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	239,700

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZED WAGE ADJUSTMENT

#### WORK PAPER REFERENCE NO(S).: STAFF WPC-3.4a through STAFF WPC-3.4e

SCHEDULE C-3.4 PAGE 1 OF 1

PURPOSE and DESCRIPTION	SCHEDULE / WORK PAPER REFERENCE	AMOUNT
PURPOSE and DESCRIPTION: To annualize test year payroll costs using 12 months actual ending October 2022.	,	
Total Annualized Test Year Wages	Staff WPC-3.4a	\$ (2,115,858)
Total Incentive Compensation Adjustment	Staff WPC-3.4c	\$ (2,397,808)
Total FERC 912 Demonstrating and Selling Adjusment	Staff WPC-3.4c	\$ (213,641)
Total Annualized Pension and Benefits Adjustment	Staff WPC-3.4d	\$ (1,342,122)
Jurisdictional allocation percentage		 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (6,069,429)
Total Annualized Payroll Taxes Adjustment	Staff WPC-3.4e	\$ (301,759)
Jurisdictional allocation percentage		 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (301,759)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZED DEPRECIATION EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

**WORK PAPER REFERENCE NO(S).:** 

SCHEDULE C-3.5 PAGE 1 OF 2

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To reflect the adjustment to annualize depreciation expense as calculated on Schedule B-3.2 based on plant at March 31, 2022.		
Total		\$ 4,767,224
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ 4,767,224

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZED DEPRECIATION EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

SCHEDULE C-3.5 PAGE 2 OF 2

PURPOSE and DESCRIPTION	AMOUNT

PURPOSE and DESCRIPTION: To reflect the adjustment to deferred income taxes as a result of the annualization of book depreciation based on plant at March 31, 2022.

Total \$ (1,001,117)

Jurisdictional allocation percentage \_\_\_\_\_\_100%

Jurisdictional amount To Sch C-3 Summary <--- \$ (1,001,117)

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR INTEREST ON CUSTOMER SERVICE DEPOSITS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.6 PAGE 1 OF 1

PURPOSE and DESCRIPTION	SCHEDULE/ WORK PAPER REFERENCE	Α	MOUNT
PURPOSE and DESCRIPTION: To reflect the interest on Customer Service Deposits as an operating expense.			
Company proposed Interest On Customer Service Deposits	Company C-3.6	\$	332,416
Staff's Exclusion of Interest on Balances under 6 months	Staff WPC-3.6	\$	(55,146)
Staff's Adjusted Interest on Customer Service Deposits	To Sch C-3 Summary <	\$	277,270

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR EXCISE TAX RIDER FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.7 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To eliminate Ohio Excise Tax re	evenue and expense.	
Excise Tax Rider Revenue		\$ (18,698,879)
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (18,698,879)
Excise Tax Rider Expense		\$ (23,156,416)
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (23,156,416)

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR PROPERTY TAX ADJUSTMENT FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.8 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To reflect the change in expense if property taxes were calculated based on plant-in-service as of March 31, 2022.		
Total		\$ (2,291,571)
Jurisdictional allocation percentage		 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (2,291,571)

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ELIMINATE PIPP REVENUE AND EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

**WORK PAPER REFERENCE NO(S).:** 

SCHEDULE C-3.9 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To eliminate PIPP revenue and exper	nse.	
PIPP Uncollectible Revenue		\$ (1,813,631)
Jurisdictional allocation percentage		 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (1,813,631)
PIPP Uncollectible Expense  Jurisdictional allocation percentage		\$ (1,797,805) 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (1,797,805)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR INTEREST EXPENSE DEDUCTIBLE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

**WORK PAPER REFERENCE NO(S).:** 

WPC-3.10a, SCHEDULE B-1, SCHEDULE D-1

SCHEDULE C-3.10 PAGE 1 OF 1

#### PURPOSE and DESCRIPTION

**AMOUNT** 

PURPOSE and DESCRIPTION: To reflect federal income taxes at 21% due to interest deductible for tax purposes being based on rate base at March 31, 2022 as shown on Schedule B-1 and the weighted cost of debt of 1.94% as shown on Schedule D-1.

Total \$ (1,101,703)

Jurisdictional allocation percentage \_\_\_\_\_\_100%

Jurisdictional amount To Sch C-3 Summary <--- \$ (1,101,703)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ELIMINATE CEP DEFERRED DEPRECIATION FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.11 PAGE 1 OF 1

WPC-3.11a

PURPOSE and DESCRIPTION	AMOUNT

PURPOSE and DESCRIPTION: To eliminate amortization in test period for deferred depreciation related to CEP.

Total \$ 2,801,046

Jurisdictional allocation percentage \_\_\_\_\_\_100%

Jurisdictional amount To Sch C-3 Summary <--- \$ 2,801,046

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR STATE TAX RIDER FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.12 PAGE 1 OF 1

WPC-3.12a

PURPOSE and DESCRIPTION			AMOUNT
PURPOSE and DESCRIPTION: To eliminate the State Tax	Rider revenue and expense.		
Revenue		\$	(8,203,243)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	_\$_	(8,203,243)
Taxes Other Than Income Taxes		\$	(8,418,960)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	(8,418,960)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZE AMORTIZATION OF CEP DEFERRALS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.13 PAGE 1 OF 1

WPC-3.13a, WPC-3.13b

PURPOSE and DESCRIPTION	AMOUNT
-------------------------	--------

PURPOSE and DESCRIPTION: To reflect the adjustment to annualize amortization of CEP deferrals accrued as of March 31, 2022.

Total \$ 2,117,762

Jurisdictional allocation percentage 100%

Jurisdictional amount To Sch C-3 Summary <--- \$ 2,117,762

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ELIMINATE NON-JURISDICTIONAL EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.14a, WPC-3.14b

SCHEDULE C-3.14 PAGE 1 OF 1

PURPOSE and DESCRIPTION		A	MOUNT
PURPOSE and DESCRIPTION: To eliminate non-	-jurisdictional operating expenses.		
Distribution Expense Sales Expense Administrative & General Expense		\$	(8,089) (989,896)
Total Adjustment		\$	(997,985)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	(997,985)

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZATION OF PUCO AND OCC ASSESSMENTS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.15a, WPC-3.15b

SCHEDULE C-3.15 PAGE 1 OF 1

PURPOSE and DESCRIPTION		A	AMOUNT
PURPOSE and DESCRIPTION: To annualize the level OCC, and Division of Forecasting assessments to the	•		
Total		\$	15,558
Jurisdictional allocation percentage			100.000%
Jurisdictional amount	To Sch C-3 Summary <	\$	15.558

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ADJUST UNCOLLECTIBLE EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.16a

SCHEDULE C-3.16 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE AND DESCRIPTION: To eliminate Rider UE-G revenues and annualize uncollectible expense not being recovered via Rider UE-C	<b>3</b> .	
Eliminate Rider Revenue		\$ (4,246,968)
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ (4,246,968)
Annualize Uncollectible Expense (A)  Jurisdictional allocation percentage  Jurisdictional amount	To Sch C-3 Summary <	\$ (4,784,169) 100% \$ (4,784,169)
Eliminate Regulatory Asset Deferral Accounting  Jurisdictional allocation percentage		10,963 100%
Jurisdictional amount	To Sch C-3 Summary <	\$ 10,963

<sup>(</sup>A) Expenses not being recovered via Rider UE-G.

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ELIMINATE GTCJA DEFERRED REVENUE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.17a

SCHEDULE C-3.17 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: Eliminate GTCJA deferred revenue.		
Total Deferred Revenue		\$ 3,034,524
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ 3,034,524

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR MISCELLANEOUS EXPENSE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.18a, PPC-3.18b, WPC-3.18c

SCHEDULE C-3.18
PAGE 1 OF 1

PURPOSE and DESCRIPTION		Al	MOUNT
PURPOSE and DESCRIPTION: To remove miscelllaneous	items from test year.		
Total Miscellanous Expense		\$	(19,770)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	(19,770)

# DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ADJUST CUSTOMER CONNECT EXPENSES FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.19a, WPC-3.19b, WPC-3.19c

SCHEDULE C-3.19 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT	
PURPOSE and DESCRIPTION: Adjust O&M expenses related to the customer information system, Customer Con	nnect.		
Eliminate O&M Expenses, Customer Connect		\$	(2,294,961)
Annualized Production Support Costs			782,607
Total		\$	(1,512,354)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	(1,512,354)

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZE AMORTIZATION OF PISCC FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.20a, WPC-3.20b

SCHEDULE C-3.20 PAGE 1 OF 1

PURPOSE and DESCRIPTION	AMOUNT
-------------------------	--------

PURPOSE and DESCRIPTION: To reflect the adjustment to annualize amortization of Post In Service Carrying Costs accrued as of March 31, 2022.

Total \$ 741,936

Jurisdictional allocation percentage \_\_\_\_\_\_100%

Jurisdictional amount To Sch C-3 Summary <--- \$ 741,936

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ELIMINATION OF THE GAS SURCREDIT RIDER FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.21, SCH E-4

SCHEDULE C-3.21 PAGE 1 OF 1

PURPOSE and DESCRIPTION		A	MOUNT
PURPOSE and DESCRIPTION: Adjust base and miscellanous of the Gas Surcredit Rider (GSR).	revenue associated with elimination		
Base Revenue		\$	133,373
Other Revenue (Special Contracts)			24,027
Total		\$	157,400
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	157,400

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR INTEGRITY MANAGEMENT PROGRAM FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.22a, WPC-3.22b

SCHEDULE C-3.22 PAGE 1 OF 1

PURPOSE and DESCRIPTION		AMOUNT
PURPOSE and DESCRIPTION: To reflect the adjustment to annualize amortization of the Integrity Management deferral accrued as of March 31, 2022 and normalize the Integrity Management Program into base rates.		
Amortize Integrity Management Deferral Total		\$ 2,188,809
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ 2,188,809
Normalize Integrity Management Program		4,468,000
Jurisdictional allocation percentage		100%
Jurisdictional amount	To Sch C-3 Summary <	\$ 4,468,000

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR KELLOGG TRAINING CENTER REVENUE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.23 PAGE 1 OF 1

PURPOSE and DESCRIPTION		A	MOUNT
PURPOSE and DESCRIPTION: To reflect rent revenue ass	sociated with the Kellogg Training Center		
Total Revenue			\$359,796
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	359,796

### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR CUSTOMER CONNECT AMORTIZATION FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.24a	SCHEDULE C-3.24 PAGE 1 OF 1
PURPOSE and DESCRIPTION	AMOUNT
PURPOSE and DESCRIPTION: Amortization of Customer Connect Deferral accrued as of March 31, 2022.	
Total Deferral	\$ -
Jurisdictional allocation percentage	100%

To Sch C-3 Summary <---

Jurisdictional amount

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ANNUALIZE WEATHERIZATION PROGRAM FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).:

SCHEDULE C-3.25 PAGE 1 OF 1

WPC-3.25a

PURPOSE and DESCRIF	PTION
---------------------	-------

**AMOUNT** 

PURPOSE and DESCRIPTION: To adjust test year expenses for the cost of the weatherization programs administered by People Working Cooperatively per Case No. 12-1685-GA-AIR

Total Weatherization Expense

\$ 49,603

Jurisdictional allocation percentage

100%

Jurisdictional amount

To Sch C-3 Summary <---

49,603

## DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR PUBLIC SERVICE ADVERTISING & CUSTOMER EDUCATION FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.26a

Jurisdictional amount

SCHEDULE C-3.26 PAGE 1 OF 1

PURPOSE and DESCRIPTION	AMOU	NT
PURPOSE and DESCRIPTION: To adjust test year expenses for cost of public service advertising & customer education.		
Total Expense	\$	-
Jurisdictional allocation percentage		100%

To Sch C-3 Summary <---

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR PROPANE AND CENTRAL CORRIDOR PIPELINE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: WPC-3.27a

SCHEDULE C-3.27 PAGE 1 OF 1

PURPOSE and DESCRIPTION		,	AMOUNT
PURPOSE and DESCRIPTION: Adjustments for the removal of retired Propane facilities and inclusion of expenses related to the Pipeline			
Total Propane Adjustment - Liquified Petroleum Gas		\$	(2,219,259)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	_\$	(2,219,259)
Total Propane Adjustment - Other		\$	(1,770,421)
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	(1,770,421)
Total Central Corridor Pipeline		\$	76,000
Jurisdictional allocation percentage			100%
Jurisdictional amount	To Sch C-3 Summary <	\$	76,000

#### DUKE ENERGY OHIO, INC. CASE NO. 22-507-GA-AIR ADJUSTED JURISDICTIONAL FEDERAL INCOME TAXES FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2022

WORK PAPER REFERENCE NO(S).: SCHEDULE C-4.1, WPC-4.1a

SCHEDULE C-4 PAGE 1 OF 1

		A	AT CURRENT RATES			AT PROPOSED RATES		
LINE			SCHEDULE C-3		PROFORMA			
NO.	DESCRIPTION	UNADJUSTED	ADJUSTMENTS	ADJUSTED	<b>ADJUSTMENTS</b>	PROFORMA		
		(1)	(2)	(3)	(4)	(5)		
		(\$)	(\$)	(\$)	(\$)	(\$)		
1	Operating Income before Federal							
2	and State Income Taxes	123,112,054	3,353,035	126,465,089	48,534,949	175,000,038		
3								
4	Reconciling Items:							
5	Interest Charges	(31,523,202)	(5,246,207)	(36,769,409)	0	(36,769,409)		
6	Net Interest Charges	(31,523,202)	(5,246,207)	(36,769,409)	0	(36,769,409)		
7					_			
8	Tax Depreciation	(91,200,056)		(91,200,056)	0	(91,200,056)		
9	Book Depreciation	87,327,893	4,767,224	92,095,117	0	92,095,117		
10	Excess of Tax over Book Depreciation	(3,872,163)	4,767,224	895,061	0	895,061		
11								
12	Other Reconciling Items:		_		_			
13	Permanent Differences	1,095,474	0	1,095,474	0	1,095,474		
14	Temporary Differences	(48,611,071)	0	(48,611,071)	0	(48,611,071)		
15	Total Other Reconciling Items	(47,515,597)	0	(47,515,597)	0	(47,515,597)		
16	Total Reconciling Items	(82,910,962)	(478,983)	(83,389,945)	0	(83,389,945)		
17	Federal Taxable Income	40,201,092	2,874,052	43,075,144	48,534,949	91,610,093		
18								
19	Federal Taxable Income (Line 17)	40,201,092	2,874,052	43,075,144	48,534,949	91,610,093		
20								
21	Federal Income Taxes @ 21% (A)	8,442,229	603,552	9,045,781	10,192,339	19,238,120		
22	Federal Income Taxes - Current	8,442,229	603,552	9,045,781	10,192,339	19,238,120		
23								
24	Provision Deferred Federal Income Taxes - Net							
25	Deferred Income Tax on Depreciation	950,098	(1,001,117)	(51,019)		(51,019)		
26	Other Deferred Income Taxes - Net	10,208,325	0	10,208,325		10,208,325		
27	Deferred Income Tax Adjustment - ARAM	(148,826)		(148,826)		(148,826)		
28	Amortization of Investment Tax Credit	(216,990)		(216,990)		(216,990)		
29	Total Deferred Income Taxes	10,792,607	(1,001,117)	9,791,490	0	9,791,490		
30								
31	Total Federal Income Taxes	19,234,836	(397,565)	18,837,271	10,192,339	29,029,610		

#### DUKE ENERGY OHIO CASE NO. 22-507-GA-AIR RATE of RETURN SUMMARY AS OF MARCH 31, 2022

#### SCHEDULE D-1 PAGE 1 OF 1

LINE NO	CLASS OF CAPITAL	AMOUNT \$	% OF TOTAL	% COST	WEIGHTED COST %	NOTE
		·				
1	Long Term Debt	\$2,464,974,568	47.68%	4.07%	1.94%	
2	Long Tom Book	Ψ2, 10 1,07 1,000	17.0070	1.01 70	1.0 170	
3	Preferred Stock	\$0	0.00%	0.00%	0.00%	
	Treferred Stock	ΨΟ	0.0076	0.0076	0.0076	
4	Common Equity	¢0.705.447.446	EO 200/	10.040/	E 0E0/	Danga Unnar Paund
5	Common Equity	\$2,705,147,446	52.32%	10.04%	5.25%	Range Upper Bound
6				9.54%	4.99%	Staff's Calculated Equity Cost Estimate
7				9.03%	4.72%	Range Lower Bound
8						<b>G</b>
9						
10	Total Capital	\$5,170,122,014	100.00%		7.19%	Range Upper Bound
11	. ota: oapita:	φο, ο, ,	100.0070		6.93%	Midpoint using Staff's Calculated Cost Estimate
						,
12					6.66%	Range Lower Bound

#### DUKE ENERGY OHIO CASE NO. 22-507-GA-AIR EQUITY ISSUANCE COST ADJUSTMENT

SCHEDULE D-1.1 PAGE 1 OF 1

LINE NO	ADJUSTMENT	AMOUNT
1 2	Ratio of Internally Generated Equity <sup>1</sup>	0.63357
3 4	Generic Issuance Cost, f	3.50%
5 6	External Equity Ratio, w [1.0 - (3)]	0.36643
7 8	Net Adjustment Factor, (w/(1 - f)) + (1 - w)	1.01329
9 10	Low End Equity Cost [8.91 x Line (7)]	9.03%
11	High End Equity Cost [9.91% x Line (7)]	10.04%

#### Notes:

<sup>&</sup>lt;sup>1</sup> Same ratio used in Duke Energy Ohio, Inc.'s most recent rate case, Case No. 21-0887-EL-AIR

#### DUKE ENERGY OHIO CASE NO. 22-507-GA-AIR

#### **CAPITAL ASSET PRICING MODEL**

#### **SCHEDULE D-1.2**

LINE NO	Comparable Peer Group	Value Line Beta	Daily Yields o	of U.S. 30-Y	ear Treasury	Bonds
1	AGR	0.85	10/03/22	3.73%	10/18/22	4.04%
2	ATO	0.80	10/04/22	3.70%	10/19/22	4.15%
3	AVA	0.90	10/05/22	3.78%	10/20/22	4.24%
4	BKH	0.95	10/06/22	3.81%	10/21/22	4.33%
5	CMS	0.80	10/07/22	3.86%	10/24/22	4.40%
6	CNP	1.15	10/11/22	3.92%	10/25/22	4.26%
7	NI	0.85	10/12/22	3.90%	10/26/22	4.19%
8	NJR	0.95	10/13/22	3.97%	10/27/22	4.12%
9	NWN	0.80	10/14/22	3.99%	10/28/22	4.15%
10	OGS	0.80	10/17/22	4.04%	10/31/22	4.22%
11	SR	0.80				
12	Average Betas:	0.88		30-Da	ay Average:	4.04%
13						
14						
15						
16	$ERP^1 =$	5.87%				
17	$R_f^2 =$	4.04%				
18	$\beta^3 =$	0.88				
19	CAPM =	9.19%				

#### Notes:

<sup>&</sup>lt;sup>1</sup> See Staff Schedule D-1.3 for calculation of Equity Risk Premium

<sup>&</sup>lt;sup>2</sup> Risk-free rate based on the 30-day average par yield of 30-year U.S. Treasury Bonds as of 10/31/2022.

<sup>&</sup>lt;sup>3</sup> Betas pulled from most recent Value Line Report as of October 21, 2022

#### DUKE ENERGY OHIO CASE NO. 22-507-GA-AIR

#### **EQUITY RISK PREMIUM (ERP) ANALYSIS**

#### **SCHEDULE D-1.3**

	SBBI <sup>1</sup> ANNUAL RETURNS (1926 - 2021)					
		APPENDIX A-1	APPENDIX A-7			
LINE NO	Year	LARGE-CAP STOCKS (TOTAL RETURN)	LONG-TERM GOV'T BONDS (INCOME RETURNS')			
4	1926	11.620%	3.730%			
1						
2 3	1927	37.490%	3.410%			
	1928	43.610%	3.220%			
4	1929	-8.420%	3.470%			
5	1930	-24.900%	3.320%			
6	1931	-43.340%	3.330%			
7	1932	-8.190%	3.690%			
8	1933	53.990%	3.120%			
9	1934	-1.440%	3.180%			
10	1935	47.670%	2.810%			
11	1936	33.920%	2.770%			
12	1937	-35.030%	2.660%			
13	1938	31.120%	2.640%			
14	1939	-0.410%	2.400%			
15	1940	-9.780%	2.230%			
16	1941	-11.590%	1.940%			
17	1942	20.340%	2.460%			
18	1943	25.900%	2.440%			
19	1944	19.750%	2.460%			
20	1945	36.440%	2.340%			
21	1946	-8.070%	2.040%			
22	1947	5.710%	2.130%			
23	1948	5.500%	2.400%			
24	1949	18.790%	2.250%			
25	1950	31.710%	2.120%			
26	1951	24.020%	2.380%			
27	1952	18.370%	2.660%			
28	1953	-0.990%	2.840%			
29	1954	52.620%	2.790%			
30	1955	31.560%	2.750%			
31	1956	6.560%	2.990%			
32	1957	-10.780%	3.440%			
5 <i>L</i>	1001	10110070	3.1.1070			

## **EQUITY RISK PREMIUM (ERP) ANALYSIS**

	5	BBBI <sup>1</sup> ANNUAL RETURNS (192	26 - 2021)
		APPENDIX A-1	APPENDIX A-7
LINE NO	Year	LARGE-CAP STOCKS (TOTAL RETURN)	LONG-TERM GOV'T BONDS (INCOME RETURNS')
00	4050	40.0000/	0.0700/
33	1958	43.360%	3.270%
34	1959	11.960%	4.010%
35	1960	0.470%	4.260%
36	1961	26.890%	3.830%
37	1962	-8.730%	4.000%
38	1963	22.800%	3.890%
39	1964	16.480%	4.150%
40	1965	12.450%	4.190%
41	1966	-10.060%	4.490%
42	1967	23.980%	4.590%
43	1968	11.060%	5.500%
44	1969	-8.500%	5.950%
45	1970	3.860%	6.740%
46	1971	14.300%	6.320%
47	1972	19.000%	5.870%
48	1973	-14.690%	6.510%
49	1974	-26.470%	7.270%
50	1975	37.230%	7.990%
51	1976	23.930%	7.890%
52	1977	-7.160%	7.140%
53	1978	6.570%	7.900%
54	1979	18.610%	8.860%
55	1980	32.500%	9.970%
56	1981	-4.920%	11.550%
57	1982	21.550%	13.500%
58	1983	22.560%	10.380%
59	1984	6.270%	11.740%
60	1985	31.730%	11.250%
61	1986	18.670%	8.980%
62	1987	5.250%	7.920%
63	1988	16.610%	8.970%
64	1989	31.690%	8.810%
<del>0 +</del>	1000	01.00070	0.01070

## **EQUITY RISK PREMIUM (ERP) ANALYSIS**

		SBBI <sup>1</sup> ANNUAL RETURNS (192	26 - 2021)
_		APPENDIX A-1	APPENDIX A-7
LINE NO	Year	LARGE-CAP STOCKS (TOTAL RETURN)	LONG-TERM GOV'T BONDS (INCOME RETURNS')
65	1990	-3.100%	8.190%
66	1991	30.470%	8.220%
67	1992	7.620%	7.260%
68	1992	10.080%	7.200 <i>%</i> 7.170%
69	1993	1.320%	6.590%
70	1995	37.580%	7.600%
71	1996	22.960%	6.180%
72	1997	33.360%	6.640%
73	1998	28.580%	5.830%
74	1999	21.040%	5.570%
75	2000	-9.100%	6.500%
76	2001	-11.890%	5.530%
77	2002	-22.100%	5.590%
78	2003	28.680%	4.800%
79	2004	10.880%	5.020%
80	2005	4.910%	4.690%
81	2006	15.790%	4.680%
82	2007	5.490%	4.860%
83	2008	-37.000%	4.450%
84	2009	26.460%	3.470%
85	2010	15.060%	4.250%
86	2011	2.110%	3.820%
87	2012	16.000%	2.470%
88	2013	32.390%	2.900%
89	2014	13.690%	3.410%
90	2015	1.380%	2.470%
91	2016	11.960%	2.300%
92	2017	21.830%	2.670%
93	2018	-4.380%	2.820%
94	2019	31.490%	2.550%
95	2020	18.400%	1.530%
96	2021	28.710%	1.730%
90	2021	28.710%	1.730%

## **EQUITY RISK PREMIUM (ERP) ANALYSIS**

	S	BBI <sup>1</sup> ANNUAL RETURNS (1926	6 - 2021)
		APPENDIX A-1	APPENDIX A-7
LINE NO	Year	LARGE-CAP STOCKS (TOTAL RETURN)	LONG-TERM GOV'T BONDS (INCOME RETURNS')
	-		
97	Averages:	12.330%	4.874%
98	-		
99		Historical ERP =	7.46%
100			
101			
	Observed Returns of	only for Annual Periods Before, D	During and After Economic
102		Downturns (Downturn ERP	$)^2$
103	Averages:	9.194%	4.904%
104	· ·		
105		Downturn ERP =	4.29%
105			7.23/0
100		Combined Average -	5.87%
107		Combined Average =	J.01 70

<sup>&</sup>lt;sup>1</sup> Stock, Bonds, Bills, and Inflation® (SBBI®) 2022 Annual Yearbook Appendix A-1 and Appendix A-7

<sup>&</sup>lt;sup>2</sup> Years included in the Downturn ERP include: 1928-1942, 1952- 1954, 1956-1958, 1961-1963, 1965-1970, 1972- 1982, 1989-1991, 1999-2003, 2007-2009, 2017-2019, and 2021

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE						STOC	K PRICES <sup>1</sup>	(\$).				
NO	DATE	AGR	ATO	AVA	ВКН	CMS	CNP	NI	NJR	NWN	OGS	SR
		71011	71.0	71171		<u> </u>	<u> </u>		11011			J.K
1	10/1/2021	46.97	86.54	37.40	61.08	58.10	24.32	23.52	34.39	44.53	62.98	59.68
2	10/4/2021	47.75	88.27	38.30	62.34	59.20	24.89	23.80	35.33	45.37	65.27	60.73
3	10/5/2021	47.68	87.74	38.96	62.72	58.72	24.87	23.60	35.35	45.26	65.18	60.87
4	10/6/2021	48.72	87.89	39.67	63.95	59.55	25.19	23.85	35.73	45.46	65.25	61.03
5	10/7/2021	48.86	87.50	39.09	62.89	58.91	24.97	23.77	35.89	45.18	65.38	61.42
6	10/8/2021	48.97	87.69	38.75	61.89	58.50	24.94	23.64	35.74	45.00	65.60	61.27
7	10/11/2021	50.11	86.87	37.12	61.05	57.73	24.94	23.55	35.88	44.79	66.15	61.01
8	10/12/2021	50.24	86.74	37.44	61.57	58.11	25.43	23.57	36.45	44.91	66.41	61.60
9	10/13/2021	50.55	89.88	37.82	62.04	58.97	25.29	23.89	36.75	45.24	66.52	62.79
10	10/14/2021	51.09	91.57	38.88	62.64	59.27	25.95	24.10	37.38	45.61	66.81	63.42
11	10/15/2021	49.16	90.66	39.20	62.45	58.65	26.12	24.08	36.42	45.55	65.76	61.82
12	10/18/2021	48.67	88.81	38.16	61.77	57.92	25.58	23.72	35.79	44.80	64.29	60.64
13	10/19/2021	49.69	90.54	37.62	62.44	58.59	25.55	23.84	36.32	45.09	64.94	60.76
14	10/20/2021	50.89	92.14	38.07	63.11	59.13	26.01	24.11	36.75	45.63	66.01	62.00
15	10/21/2021	50.24	91.10	37.93	63.64	59.14	25.89	24.10	36.50	45.22	65.41	61.60
16	10/22/2021	50.49	91.67	37.91	64.15	59.39	25.92	24.24	36.65	44.96	65.83	61.75
17	10/25/2021	50.22	91.83	38.37	64.26	58.60	26.14	24.16	36.77	45.30	66.88	62.58
18	10/26/2021	50.48	91.66	38.25	64.14	58.94	26.06	24.15	37.06	45.00	66.34	62.70
19	10/27/2021	50.63	89.47	38.93	63.96	58.70	25.70	24.04	36.19	44.43	65.14	61.33
20	10/28/2021	51.36	90.55	38.87	64.60	59.06	25.68	24.10	36.42	44.04	65.27	60.95
21	10/29/2021	50.78	89.80	38.22	64.20	58.70	25.43	24.09	36.52	43.79	65.20	60.32
22	11/1/2021	50.67	90.70	39.03	65.29	58.64	25.68	24.24	37.48	44.76	67.24	61.59
23	11/2/2021	50.71	91.43	38.53	64.22	58.79	25.58	24.16	36.96	44.32	66.51	60.84
24	11/3/2021	49.72	91.01	38.93	65.39	58.50	25.68	24.69	37.56	45.03	66.85	60.73
25	11/4/2021	49.30	91.27	38.13	63.51	58.80	25.88	24.48	37.23	44.86	67.14	60.39
26	11/5/2021	49.58	91.62	38.68	63.93	59.29	26.05	24.71	37.79	45.67	67.11	60.89
27	11/8/2021	48.38	90.63	38.23	62.62	58.36	25.90	24.48	37.39	44.41	66.79	59.02
28	11/9/2021	48.44	90.79	38.53	62.50	58.85	25.90	24.44	37.39	43.89	66.35	59.24
29	11/10/2021	48.99	91.70	39.15	64.25	59.66	25.96	24.71	37.52	44.40	66.62	60.72
30	11/11/2021	48.67	92.38	38.91	63.41	58.86	26.14	24.50	37.68	44.34	65.56	60.49
31	11/12/2021	48.60	93.03	38.62	62.91	58.78	25.98	24.49	37.52	44.74	65.36	59.61
32	11/15/2021	49.17	93.79	38.92	63.95	59.93	26.32	24.94	37.85	45.52	67.40	61.14
33	11/16/2021	49.09	92.19	38.68	63.04	59.30	26.15	24.68	36.58	44.90	66.53	59.91
34 35	11/17/2021	49.46 49.19	91.49	38.31	62.99 62.95	59.70 59.22	26.24	24.69 24.53	36.67	44.64 44.46	66.63 65.68	59.50
36	11/18/2021		90.28	37.81			25.97		36.84			58.91
37	11/19/2021 11/22/2021	49.29 49.80	92.51	37.65 38.35	63.67	59.67	26.10 26.16	24.62	36.92	44.29 44.53	66.40	59.25 60.24
38		50.12	93.21 92.91		64.86 65.54	60.39 60.07	26.16	24.87 24.94	37.68 37.52		66.38 66.42	60.24
39	11/23/2021 11/24/2021	50.12	92.91	38.25 38.29	65.23	59.80	26.13	24.94	37.32	44.26 44.30	67.01	60.26
40	11/26/2021	49.79	91.68	37.68	63.42	58.91	25.78	24.67	36.28	42.97	64.52	59.10
41	11/29/2021	50.38	92.10	38.01	64.53	59.89	26.13	24.40	36.44	43.20	65.18	59.55
42	11/30/2021	48.78	88.68	37.36	62.58	57.66	25.47	23.93	35.53	41.88	63.36	57.53
43	12/1/2021	49.00	87.81	37.74	62.73	57.80	25.32	23.82	36.10	41.99	63.03	57.32
44	12/2/2021	47.62	89.03	37.93	63.80	58.35	25.77	24.23	36.88	42.52	64.73	58.35
45	12/3/2021	48.56	91.08	38.11	64.23	59.53	26.49	24.51	37.13	43.23	65.07	59.34
46	12/6/2021	48.85	92.84	39.12	65.47	60.32	27.25	25.07	38.35	44.71	68.01	61.38
47	12/7/2021	49.16	93.16	38.91	65.31	60.77	27.40	25.22	38.28	44.73	68.08	60.56
48	12/8/2021	49.12	92.70	39.26	65.57	60.63	27.16	25.20	38.90	45.04	68.93	61.15
49	12/9/2021	47.40	93.50	39.10	65.47	60.89	27.07	25.24	38.40	45.17	69.09	60.89
	12/0/2021	17.40	00.00	00.10	00.17	00.00	21.01	20.27	00.10	10.17	00.00	00.00

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE			STOCK PRICES <sup>1</sup> (\$):									
NO	DATE	AGR	ATO	AVA	BKH	CMS	CNP	NI	NJR	NWN	OGS	SR
		AGN	AIU	AVA	БКП	CIVIS	CINE	INI	NJK	IAAAIA	003	JN
50	12/10/2021	46.88	94.00	39.62	65.66	61.26	27.39	25.32	38.44	45.61	70.86	61.36
51	12/13/2021	46.95	95.58	40.20	66.81	62.45	27.52	25.65	38.70	45.79	71.51	61.25
52	12/14/2021	46.86	95.38	39.81	66.80	62.18	27.34	25.59	38.29	45.01	70.90	60.53
53	12/15/2021	47.11	96.73	40.41	68.28	63.56	27.61	25.97	39.32	46.27	72.67	61.73
54	12/16/2021	47.14	98.53	40.96	67.56	64.08	27.50	26.27	38.80	47.03	73.49	61.57
55	12/17/2021	46.58	97.03	39.83	66.35	62.88	26.52	26.24	39.33	46.31	73.74	62.13
56	12/20/2021	46.73	97.53	39.53	66.23	63.21	26.54	26.39	39.31	46.66	73.70	62.63
57	12/21/2021	46.61	97.65	39.19	66.68	62.44	26.83	26.19	39.13	46.46	72.73	61.71
58	12/22/2021	47.02	100.27	40.00	67.30	62.42	27.01	26.28	39.41	46.94	73.21	62.30
59	12/23/2021	47.47	100.86	40.07	67.04	62.23	27.05	26.23	39.45	46.89	73.98	62.40
60	12/27/2021	47.12	102.17	40.09	67.49	62.61	27.11	26.43	39.80	46.96	74.52	62.69
61	12/28/2021	47.98	101.55	40.08	67.86	63.23	27.37	26.71	39.60	46.95	74.01	62.63
62	12/29/2021	48.55	102.93	40.62	68.63	63.87	27.47	27.05	40.13	47.33	75.07	63.04
63	12/30/2021	48.86	102.59	41.10	69.01	63.78	27.35	26.90	39.94	47.34	75.69	63.13
64	12/31/2021	48.50	102.87	41.23	68.87	63.73	27.43	26.96	40.03	47.37	75.82	63.37
65	1/3/2022	48.27	103.10	41.02	68.22	63.40	27.15	26.87	39.84	47.36	75.37	63.38
66	1/4/2022	48.22	104.33	41.48	68.76	63.29	26.98	26.97	39.64	47.93	75.85	63.54
67	1/5/2022	48.55	104.66	41.35	68.71	64.07	26.92	27.11	38.46	48.14	76.50	63.76
68	1/6/2022	48.29	103.85	41.38	67.87	63.35	27.18	27.00	38.67	48.11	77.08	64.21
69	1/7/2022	48.75	103.38	41.70	68.70	63.76	27.19	27.21	39.03	48.36	77.17	64.60
70	1/10/2022	47.02	103.24	41.67	67.74	63.47	27.22	27.11	38.59	47.96	77.50	64.67
71	1/11/2022	46.83	102.74	41.23	66.20	62.58	26.93	27.15	37.70	46.86	77.42	64.03
72	1/12/2022	46.90	102.31	41.41	66.31	62.82	26.95	27.29	37.66	46.44	76.47	63.07
73	1/13/2022	47.20	104.06	41.91	66.74	63.06	27.08	27.66	37.74	47.02	77.51	64.17
74	1/14/2022	46.71	104.12	42.35	66.84	62.46	27.14	27.66	38.22	48.38	78.60	64.84
75	1/18/2022	45.98	103.50	42.60	66.10	61.90	26.87	27.49	38.15	47.44	78.38	64.71
76	1/19/2022	45.96	103.43	42.27	65.60	62.15	26.88	27.28	37.60	47.14	77.82	63.94
77	1/20/2022	44.95	103.11	42.76	65.30	62.24	26.74	27.18	37.71	46.90	76.17	62.65
78	1/21/2022	44.85	102.69	42.46	65.32	62.45	26.87	26.88	37.32	46.17	75.56	62.44
79	1/24/2022	44.29	100.46	42.76	65.24	61.33	26.69	26.40	37.88	45.75	73.38	61.47
80	1/25/2022	43.84	102.03	43.01	65.82	61.30	26.81	26.50	37.72	45.98	74.17	62.30
81	1/26/2022	43.61	101.77	42.82	65.19	61.09	26.83	26.68	38.10	45.96	74.51	61.83
82	1/27/2022	44.07	102.93	42.67	65.04	61.91	26.90	27.31	38.38	45.95	75.01	62.95
83	1/28/2022	44.66	104.18	43.24	65.94	62.55	27.38	28.58	38.91	46.62	75.73	63.82
84	1/31/2022	45.43	105.27	43.14	66.11	63.07	27.87	28.49	39.20	46.45	76.11	64.05
85	2/1/2022	44.93	104.35	43.02	65.34	62.05	27.60	28.15	39.04	46.71	75.92	64.43
86	2/2/2022	45.26	104.85	42.76	65.13	62.67	27.84	28.90	38.90	46.75	76.09	62.35
87	2/3/2022	44.76	104.84	42.94	64.72	63.34	27.67	29.04	39.22	46.66	76.50	62.84
88	2/4/2022	44.24	103.84	42.87	63.40	63.37	27.41	28.66	38.98	46.09	75.30	61.90
89	2/7/2022	44.34	104.02	43.00	66.12	63.60	27.60	28.34	39.23	46.06	74.85	61.85
90	2/8/2022	44.45	104.63	42.97	64.74	63.62	27.71	28.44	38.92	46.22	74.96	62.02
91	2/9/2022	44.53	106.87	42.96	65.32	63.51	27.77	28.56	39.47	46.55	74.50	62.31
92	2/10/2022	43.39	104.03	41.80	65.17	61.65	27.15	28.05	38.69	45.23	72.71	62.00
93	2/11/2022	43.32	104.74	41.88	65.64	62.26	26.93	28.31	39.15	45.95	73.58	63.29
94	2/14/2022	42.90	104.06	41.66	65.28	61.56	26.45	27.96	39.28	45.75	73.27	62.71
95	2/15/2022	42.67	103.61	41.80	65.63	61.03	26.43	27.81	39.33	45.56	72.62	62.19
96	2/16/2022	42.68	104.16	41.52	66.23	61.10	26.59	27.95	39.39	45.86	73.47	62.87
97	2/17/2022	42.92	105.40	41.95	67.19	61.57	26.52	28.12	39.39	46.35	75.22	62.03
98	2/18/2022	42.63	104.79	41.80	67.96	61.68	26.32	28.00	38.98	45.43	75.20	61.11

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE NO		STOCK PRICES <sup>1</sup> (\$):										
140	DATE	AGR	ATO	AVA	BKH	CMS	CNP	NI	NJR	NWN	OGS	SR
99	2/22/2022	42.31	105.00	41.66	68.09	61.86	26.90	27.91	39.49	46.19	75.60	62.03
100	2/23/2022	42.39	104.14	41.56	66.06	61.19	26.20	27.77	39.15	45.72	74.33	61.07
101	2/24/2022	42.19	103.51	42.55	66.99	61.15	26.26	27.88	40.41	46.09	76.46	62.72
102	2/25/2022	43.69	107.80	43.54	68.82	63.29	27.08	28.52	42.39	48.76	80.01	64.29
103	2/28/2022	44.06	108.51	43.75	68.92	63.16	27.05	28.47	42.52	51.03	81.86	65.21
104	3/1/2022	43.33	108.63	43.16	67.44	62.79	26.59	28.20	41.53	51.24	81.13	64.14
105	3/2/2022	43.29	109.83	43.67	68.88	63.62	27.42	28.73	42.43	52.88	82.90	65.23
106	3/3/2022	44.60	112.39	44.36	70.45	64.41	27.93	29.20	43.63	53.85	84.51	67.02
107	3/4/2022	44.22	114.78	45.55	71.67	66.11	28.67	30.00	44.11	54.93	86.07	68.78
108	3/7/2022	44.85	114.64	45.55	71.66	66.09	28.42	29.64	44.29	54.76	87.56	69.52
109	3/8/2022	44.50	112.06	44.47	70.36	65.05	28.23	29.14	44.40	55.21	87.16	68.22
110	3/9/2022	44.36	110.85	44.25	69.26	64.35	28.07	29.18	42.90	54.35	82.60	66.65
111	3/10/2022	43.83	111.95	44.77	69.82	65.17	28.39	29.45	43.50	55.34	84.80	66.96
112	3/11/2022	43.91	112.39	44.58	69.96	65.08	28.14	29.32	42.92	53.96	84.88	67.36
113	3/14/2022	43.55	111.52	44.63	70.08	65.29	28.10	29.14	42.44	53.53	84.56	66.67
114	3/15/2022	43.92	112.76	44.56	71.35	66.36	28.57	29.38	42.69	52.10	83.84	66.53
115	3/16/2022	43.94	113.00	44.09	70.49	65.59	28.56	29.62	42.83	52.18	82.22	65.84
116	3/17/2022	44.17	113.12	43.39	71.06	65.93	28.76	29.66	42.75	51.76	82.63	66.11
117	3/18/2022	43.85	111.40	42.83	70.78	65.32	28.73	29.62	42.72	51.69	81.28	65.12
118	3/21/2022	44.41	113.88	43.62	71.29	66.10	29.15	29.88	43.52	52.34	83.23	66.41
119	3/22/2022	44.21	112.81	43.31	71.10	66.12	29.15	29.74	43.43	51.65	82.33	66.02
120	3/23/2022	44.06	112.96	42.97	70.82	66.74	29.30	29.77	43.05	51.67	82.04	65.64
121	3/24/2022	44.10	114.30	42.73	71.40	67.15	29.46	30.06	43.51	52.14	82.96	65.88
122	3/25/2022	44.92	117.12	43.97	73.26	68.01	30.08	30.65	44.75	54.01	85.56	67.91
123	3/28/2022	45.55	116.40	44.11	73.51	68.20	30.05	30.56	45.11	53.56	85.91	68.18
124	3/29/2022	45.80	117.77	44.49	74.58	68.49	30.47	30.93	45.59	54.44	86.41	69.66
125	3/30/2022	45.98	118.95	44.66	75.57	69.06	30.45	31.11	45.57	50.37	87.19	70.43
126	3/31/2022	45.90	118.08	44.26	75.84	69.01	30.31	31.30	45.08	50.75	86.94	70.43
127	4/1/2022	46.63	119.97	44.85	77.24	70.16	30.81	31.57	46.37	50.93	88.21	71.28
128	4/4/2022	46.16	117.77	44.55	75.19	69.65	30.59	31.22	45.30	50.76	87.07	70.80
129	4/5/2022	46.32	118.81	45.01	75.63	70.17	30.69	31.36	45.10	50.32	87.79	71.84
130	4/6/2022	46.94	120.61	45.52	77.19	72.58	31.42	31.95	45.91	50.75	90.02	73.17
131	4/7/2022	46.53	119.43	45.14	76.54	71.40	31.66	31.60	45.23	50.60	89.12	73.23
132	4/8/2022	47.33	120.27	45.03	77.44	71.55	32.14	31.54	45.38	50.44	90.52	74.64
133	4/11/2022	47.61	119.08	43.86	76.13	71.28	31.88	31.39	45.05	49.77	89.23	74.39
134	4/12/2022	47.90	118.78	44.29	76.76	71.86	31.90	31.60	44.93	49.42	89.56	74.44
135	4/13/2022	47.61	118.48	43.63	77.11	70.95	31.97	31.18	44.49	48.83	88.18	73.43
136	4/14/2022	48.05	118.32	43.68	77.45	70.60	32.05	31.25	45.01	48.94	87.70	74.09
137	4/18/2022	47.65	118.19	43.65	77.24	70.49	31.93	31.24	45.04	49.25	87.12	75.13
138	4/19/2022	47.78	119.18	43.86	77.97	71.35	31.82	31.27	45.55	49.86	87.44	76.64
139	4/20/2022	48.33	121.24	43.97	78.77	72.07	32.39	31.59	45.99	50.53	87.88	76.62
140	4/21/2022	47.95	119.73	43.83	78.43	71.87	31.91	30.90	45.30	50.58	87.62	76.54
141	4/22/2022	46.74	117.30	43.86	77.82	70.81	31.48	30.38	45.07	50.12	87.08	75.57
142	4/25/2022	46.14	116.31	42.36	74.94	69.65	31.40	30.10	43.90	48.94	86.43	73.90
143	4/26/2022	45.58	115.67	42.02	75.17	69.45	30.95	29.72	43.87	48.71	86.47	73.83
144	4/27/2022	44.60	114.69	41.35	74.75	69.28	30.99	29.64	43.34	48.24	86.06	73.24
145	4/28/2022	44.47	115.43	41.33	74.38	69.93	31.10	29.82	43.41	48.30	86.28	73.28
146	4/29/2022	43.55	112.06	39.77	72.12	67.78	30.28	28.89	42.43	47.40	83.12	71.40
147	5/2/2022	43.04	110.44	39.26	71.27	66.90	29.89	28.50	42.06	46.86	81.41	71.44

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

MAGN   AGR   ATO   AVA   Bith   Citis   City   Ci	LINE						STOCK PRICES <sup>1</sup> (\$):								
148		DATE	AGR	ATO	AVA	вкн			<b>.</b> . ,	NJR	NWN	OGS	SR		
149			7.0.1	71.10	7,,,,		<u> </u>	<u> </u>					- OII		
149	148	5/3/2022	42.81	111.28	39.36	72.28	66.59	30.21	28.73	43.08	46.84	81.76	70.80		
150															
151	150								29.08						
152	151		43.84	113.54	40.89	74.46	67.30		29.25	43.02	48.89	83.87	72.58		
154	152														
155	153	5/10/2022	43.32	111.77	41.44	74.13	67.83	30.15	29.08	43.10	48.79	83.43	73.07		
186	154	5/11/2022	42.82	111.29	41.97	74.12	68.13	30.07	29.43	43.03	49.37	83.34	72.75		
157	155	5/12/2022	43.28	110.76	41.75	73.37	68.13	30.06	29.37	42.92	49.68	84.08	73.36		
158         5/17/2022         44.93         112.40         42.82         75.18         68.85         31.03         30.50         44.63         50.64         86.89         75.59           159         5/18/2022         46.22         110.05         42.46         73.07         68.75         30.49         30.07         44.74         51.05         85.49         74.43           161         5/20/2022         46.79         113.02         42.56         73.75         69.17         30.67         30.41         51.01         85.99         74.11           163         5/24/2022         47.73         115.36         42.61         76.18         71.23         31.67         31.95         54.04         87.89         74.48         76.73           165         5/26/2022         47.03         116.07         43.25         76.75         70.07         31.67         31.9         45.40         54.20         87.26           166         5/27/2022         47.23         116.96         43.58         76.73         71.07         31.87         34.40         54.40         54.04         87.54         76.87           166         5/27/2022         47.23         116.64         43.01         76.08         70.	156	5/13/2022	43.73	111.62	42.05	74.82	68.99	30.69	30.08	43.27	50.17	84.26	73.12		
159	157	5/16/2022	44.03	111.82	42.53	75.41	68.62	30.63	30.19	43.87	50.32	85.31	73.99		
160	158	5/17/2022	44.93	112.40	42.82	75.18	68.85	31.03	30.50	44.63	50.64	86.89	75.59		
161	159	5/18/2022	45.79	110.53	42.94	73.87	68.44	30.50	30.31	44.77	50.61	86.71	75.30		
162   5/23/2022   46.79   113.02   42.56   73.76   69.17   30.67   30.50   44.59   52.00   85.99   74.11     163   5/24/2022   47.60   115.25   43.22   76.75   70.07   31.67   31.19   45.39   54.04   87.48   76.37     164   5/25/2022   47.03   116.07   43.25   76.19   70.34   31.80   31.29   45.40   54.23   87.54   76.87     166   5/27/2022   47.25   116.96   43.58   76.73   71.00   32.24   31.51   45.49   53.76   87.33   77.38     167   5/31/2022   46.73   115.64   43.01   76.08   70.57   31.87   31.20   45.14   53.80   86.36   76.85     168   6/1/2022   46.86   115.76   42.79   75.80   70.36   31.89   31.92   45.14   53.80   86.36   76.85     169   6/2/2022   47.17   115.93   42.72   75.35   70.81   31.92   31.16   45.78   55.21   86.08   76.73     170   6/3/2022   47.22   116.09   42.68   75.73   70.67   31.50   31.17   45.89   55.20   86.78   76.73     171   6/6/2022   47.22   116.09   42.68   75.73   70.73   31.37   31.51   45.90   54.95   86.78   76.20     173   6/8/2022   45.91   112.30   44.86   76.26   69.79   31.14   30.78   45.65   54.20   85.88   76.24     174   6/9/2022   44.86   106.39   40.82   70.42   64.27   29.99   45.26   52.93   84.36   75.24     176   6/13/2022   44.86   106.39   40.82   70.42   64.27   27.84   28.31   43.28   51.04   79.55   72.25     178   6/16/2022   43.28   105.48   40.44   69.22   62.24   27.97   27.50   42.54   50.35   78.22     178   6/16/2022   43.28   105.48   40.44   69.22   62.24   27.97   27.50   42.54   50.35   78.20     177   6/14/2022   43.32   102.91   39.50   66.31   60.75   27.25   26.45   40.96   51.22   76.85   69.91     181   6/21/2022   43.32   102.91   39.50   66.31   60.75   27.25   26.45   40.96   51.22   77.68   69.91     181   6/21/2022   45.54   110.01   42.90   72.55   66.75   29.42   29.59   41.45   50.95   78.40   71.52     183   6/23/2022   45.54   110.01   42.90   72.55   66.75   29.45   29.45   50.35   78.40   71.52     183   6/23/2022   45.54   110.01   42.90   72.55   66.75   29.45   29.45   40.96   51.22   77.68   69.94     184   6/24/				110.05		73.07		30.49	30.07	44.74		85.49			
163		5/20/2022	46.76	111.06	42.32	72.64	68.37	30.41	30.04	44.15	51.31	85.04	73.96		
164         5/25/2022         47.60         115.25         43.22         76.75         70.07         31.67         31.19         45.39         54.04         87.48         76.73           165         5/26/2022         47.03         116.07         43.25         76.19         70.34         31.80         31.29         45.40         54.23         87.54         76.87           166         5/27/2022         46.73         115.64         43.01         76.08         70.57         31.87         31.20         45.14         53.80         86.36         76.85           168         61/12022         46.71         115.56         42.79         75.80         70.36         31.88         31.09         45.12         86.10         76.86           169         6/2/2022         47.17         115.93         42.72         75.35         70.81         31.92         31.16         45.78         55.21         86.08         76.75           170         6/3/2022         47.22         116.09         42.68         75.73         70.73         31.37         31.51         45.90         84.95         86.78         76.83           172         6/7/2022         47.17         116.75         42.28         75.26<		5/23/2022	46.79	113.02	42.56	73.75	69.17	30.67	30.50	44.59	52.00	85.99	74.11		
165         5/26/2022         47.03         116.07         43.25         76.19         70.34         31.80         31.29         45.40         54.23         87.54         76.87           166         5/27/2022         47.25         116.96         43.58         76.73         71.00         32.24         31.51         45.49         53.76         87.33         77.38           167         5/31/2022         46.73         115.64         43.01         76.08         70.57         31.87         31.20         45.14         53.80         86.36         76.85           168         61/12022         46.86         115.76         42.72         75.35         70.81         31.92         31.16         45.78         55.21         86.00         76.53           170         6/3/2022         46.95         115.44         42.62         74.99         70.67         31.50         31.17         45.36         54.88         86.49         76.17           171         6/6/2022         47.22         116.09         42.85         76.49         71.33         31.51         45.30         45.42         86.49         76.17           173         6/8/2022         45.99         114.56         42.85         76.49<															
166															
167															
168         6/1/2022         46.86         115.76         42.79         75.80         70.36         31.88         31.09         45.12         54.12         86.00         76.36           169         6/2/2022         47.17         115.93         42.72         75.35         70.81         31.92         31.16         45.78         55.21         86.08         76.75           170         6/3/2022         46.95         115.44         42.62         74.99         70.67         31.50         31.17         45.36         54.88         86.49         76.17           171         6/6/2022         47.21         116.09         42.68         75.73         70.73         31.51         45.90         54.95         86.78         76.37           173         6/8/2022         45.99         114.56         42.28         75.26         69.79         31.14         30.78         45.65         54.20         85.88         76.26           174         6/9/2022         45.91         112.30         41.93         73.63         67.42         30.44         29.99         45.26         52.93         84.36         75.24           175         6/10/2022         44.86         106.39         40.82         70.42 <td></td>															
169         6/2/2022         47,17         115,93         42,72         75,35         70,81         31,92         31,16         45,78         55,21         86,08         76,75           170         6/3/2022         46,95         115,44         42,62         74,99         70,67         31,50         31,17         45,36         54,68         86,49         76,17           171         6/6/2022         47,22         116,09         42,68         75,73         70,73         31,37         31,51         45,90         54,95         86,78         76,18           172         6/7/2022         47,17         116,75         42,85         76,49         71,34         31,89         31,51         46,07         54,82         87,49         77,21           173         6/8/2022         45,91         112,30         41,93         73,63         67,42         30,44         29,99         45,26         52,93         84,36         75,24           175         6/10/2022         42,87         104,93         40,82         70,42         62,21         27,45         23,8         42,23         50,35         78,22           176         6/13/2022         43,13         103,98         40,98         68,22 <td></td>															
170         6/3/2022         46.95         115.44         42.62         74.99         70.67         31.50         31.17         45.36         54.68         86.49         76.17           171         6/6/2022         47.17         116.09         42.68         75.73         70.73         31.57         45.90         54.95         86.78         76.89           172         6/7/2022         45.91         116.75         42.85         76.49         71.34         31.89         31.52         46.07         54.82         87.49         77.21           173         6/8/2022         45.91         112.30         41.93         73.63         67.24         30.44         29.99         45.26         52.93         84.36         75.24           175         6/10/2022         46.37         111.33         42.46         73.84         67.26         29.95         29.81         45.26         52.93         84.36         75.29           176         6/13/2022         44.86         106.33         40.82         70.42         64.27         28.48         28.31         43.28         51.04         79.55         72.93           177         6/14/2022         43.28         105.48         40.44         69.22<															
171         6/6/2022         47.22         116.09         42.68         75.73         70.73         31.37         31.51         45.90         54.95         86.78         76.83           172         6/7/2022         45.99         114.56         42.28         76.49         71.34         31.69         31.52         46.07         54.82         87.49         77.21           173         6/8/2022         45.91         112.30         41.93         73.63         67.42         30.44         29.99         45.26         52.93         84.36         75.24           175         6/10/2022         46.37         111.33         42.46         73.84         67.26         29.95         29.81         45.26         53.60         84.47         76.20           176         6/13/2022         44.86         106.39         40.82         70.42         64.27         28.48         28.31         43.28         51.04         49.75         72.23           177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.31         103.98         39.89															
172         6/7/2022         47.17         116.75         42.85         76.49         71.34         31.89         31.52         46.07         54.82         87.49         77.21           173         6/8/2022         45.91         114.56         42.28         75.26         69.79         31.14         30.78         45.65         54.20         85.88         76.26           175         6/9/2022         46.37         111.33         42.46         73.84         67.26         29.95         29.81         45.26         53.60         84.47         76.20           176         6/13/2022         44.86         106.39         40.82         70.42         64.27         28.48         28.31         43.28         51.04         79.55         72.93           177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.28         105.48         40.44         69.22         62.24         27.97         27.50         42.54         50.35         78.40         71.55           179         6/16/2022         43.31         103.98         39.89															
173 6/8/2022 45.99 114.56 42.28 75.26 69.79 31.14 30.78 45.65 54.20 85.88 76.26 174 6/9/2022 45.91 112.30 41.93 73.63 67.42 30.44 29.99 45.26 52.93 84.36 75.24 175 6/10/2022 46.37 111.33 42.46 73.84 67.26 29.95 29.81 45.26 53.60 84.47 76.20 176 6/13/2022 44.86 106.39 40.82 70.42 64.27 28.48 28.31 43.28 51.04 79.55 72.93 177 6/14/2022 42.87 104.93 40.08 68.72 62.11 27.45 27.38 42.23 50.35 78.22 72.25 178 6/15/2022 43.28 105.48 40.44 69.22 62.24 27.97 27.50 42.54 50.35 78.40 71.55 179 6/16/2022 43.13 103.98 39.89 67.91 61.09 27.29 26.95 41.98 50.40 77.49 70.98 180 6/17/2022 43.32 102.91 39.50 66.31 60.75 27.25 26.45 40.96 51.22 76.85 69.97 181 6/21/2022 44.38 105.05 40.02 68.54 62.31 27.65 27.17 42.31 51.61 77.79 71.22 183 6/23/2022 45.34 106.42 40.58 69.64 63.69 28.10 27.59 42.29 51.65 77.60 71.42 184 6/24/2022 45.71 108.61 41.04 70.95 64.76 28.89 28.39 43.32 51.91 77.87 71.22 185 6/27/2022 45.61 11.01 42.90 72.55 65.75 28.83 28.93 44.17 52.99 80.49 74.25 186 6/29/2022 45.61 11.00 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 11.00 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.76 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 11.01 42.90 72.65 66.76 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.91 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 187 6/29/2022 45.61 110.01 42.90 72.65 66.12 28.93 29.11 44.32 52.66 80.32 73.66 188 6/30/2022 45.61 111.00 42.90 72.65 66.10 28.93 29.11 44.32 52.62 80.58 73.64 189 71/12/2022 45.54 110.55															
174         6/9/2022         45.91         112.30         41.93         73.63         67.42         30.44         29.99         45.26         52.93         84.36         75.24           175         6/10/2022         46.37         111.33         42.46         73.84         67.26         29.95         29.81         45.26         53.60         84.47         76.20           176         6/13/2022         44.86         106.39         40.82         70.42         64.27         28.48         28.31         43.28         51.04         79.55         72.93           177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.28         105.48         40.44         69.22         62.24         27.97         27.50         42.54         50.35         78.40         71.55           179         6/16/2022         43.32         102.91         39.50         66.31         60.92         26.25         41.98         50.40         77.49         70.98           180         6/17/2022         43.78         104.86         39.19         67.															
175         6/10/2022         46.37         111.33         42.46         73.84         67.26         29.95         29.81         45.26         53.60         84.47         76.20           176         6/13/2022         44.86         106.39         40.82         70.42         64.27         28.48         28.81         43.28         51.04         79.55         72.93           177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.28         105.48         40.44         69.22         62.24         27.97         27.50         42.54         50.35         78.20         71.55           179         6/16/2022         43.13         103.98         39.89         67.91         61.09         27.29         26.95         41.98         50.40         77.49         70.98           180         6/17/2022         43.78         104.86         39.19         67.26         61.52         27.60         26.75         41.84         51.27         76.85         69.97           181         6/21/2022         45.34         106.42         40															
176         6/13/2022         44.86         106.39         40.82         70.42         64.27         28.48         28.31         43.28         51.04         79.55         72.93           177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.28         105.48         40.44         69.22         62.24         27.97         27.50         42.54         50.35         78.40         71.55           179         6/16/2022         43.13         103.98         39.89         67.91         61.09         27.29         26.95         41.98         50.40         77.49         70.98           180         6/17/2022         43.32         102.91         39.50         66.31         60.75         27.25         26.45         40.96         51.22         76.85         69.97           181         6/21/2022         43.78         104.86         39.19         67.26         61.52         27.60         26.76         41.84         51.29         77.83         71.18           182         6/22/2022         45.34         106.42         40															
177         6/14/2022         42.87         104.93         40.08         68.72         62.11         27.45         27.38         42.23         50.35         78.22         72.25           178         6/15/2022         43.28         105.48         40.44         69.22         62.24         27.97         27.50         42.54         50.35         78.40         71.55           179         6/16/2022         43.13         103.98         39.89         67.91         61.09         27.29         26.95         41.98         50.40         77.49         70.98           180         6/17/2022         43.32         102.91         39.50         66.31         60.75         27.25         26.45         40.96         51.22         76.85         69.97           181         6/21/2022         44.38         105.05         40.02         68.54         62.31         27.65         27.17         42.31         51.61         77.79         71.22           183         6/22/2022         45.34         106.42         40.58         69.64         63.69         28.10         27.59         42.29         51.65         77.60         71.42           184         6/24/2022         45.51         110.61         41															
178       6/15/2022       43.28       105.48       40.44       69.22       62.24       27.97       27.50       42.54       50.35       78.40       71.55         179       6/16/2022       43.13       103.98       39.89       67.91       61.09       27.29       26.95       41.98       50.40       77.49       70.98         180       6/17/2022       43.32       102.91       39.50       66.31       60.75       27.25       26.45       40.96       51.22       76.85       69.97         181       6/21/2022       43.78       104.86       39.19       67.26       61.52       27.60       26.76       41.84       51.29       77.83       71.18         182       6/22/2022       44.38       105.05       40.02       68.54       62.31       27.65       27.17       42.31       51.61       77.79       71.22         183       6/23/2022       45.34       106.42       40.58       69.64       63.69       28.10       27.59       42.29       51.65       77.60       71.42         184       6/24/2022       45.61       110.01       42.90       72.55       65.75       28.83       28.93       43.32       51.91       77.87															
179       6/16/2022       43.13       103.98       39.89       67.91       61.09       27.29       26.95       41.98       50.40       77.49       70.98         180       6/17/2022       43.32       102.91       39.50       66.31       60.75       27.25       26.45       40.96       51.22       76.85       69.97         181       6/21/2022       43.78       104.86       39.19       67.26       61.52       27.60       26.76       41.84       51.29       77.83       71.18         182       6/22/2022       44.38       105.05       40.02       68.54       62.31       27.65       27.17       42.31       51.61       77.79       71.22         183       6/23/2022       45.34       106.42       40.58       69.64       63.69       28.10       27.59       42.29       51.65       77.60       71.72         184       6/24/2022       45.71       108.61       41.04       70.95       64.76       28.69       28.39       43.32       51.91       77.87       72.53         185       6/27/2022       45.61       110.01       42.09       72.65       66.72       28.93       29.11       44.32       52.66       80.32															
180         6/17/2022         43.32         102.91         39.50         66.31         60.75         27.25         26.45         40.96         51.22         76.85         69.97           181         6/21/2022         43.78         104.86         39.19         67.26         61.52         27.60         26.76         41.84         51.29         77.83         71.18           182         6/22/2022         44.38         105.05         40.02         68.54         62.31         27.65         27.17         42.31         51.61         77.79         71.22           183         6/23/2022         45.34         106.42         40.58         69.64         63.69         28.10         27.59         42.29         51.65         77.60         71.42           184         6/24/2022         45.71         108.61         41.04         70.95         64.76         28.69         28.39         43.32         51.91         77.87         72.53           185         6/27/2022         45.61         110.01         42.09         72.65         65.75         28.83         28.93         44.17         52.99         80.49         74.25           186         6/28/2022         45.61         110.01         42															
181       6/21/2022       43.78       104.86       39.19       67.26       61.52       27.60       26.76       41.84       51.29       77.83       71.18         182       6/22/2022       44.38       105.05       40.02       68.54       62.31       27.65       27.17       42.31       51.61       77.79       71.22         183       6/23/2022       45.34       106.42       40.58       69.64       63.69       28.10       27.59       42.29       51.65       77.60       71.42         184       6/24/2022       45.71       108.61       41.04       70.95       64.76       28.69       28.39       43.32       51.91       77.87       72.53         185       6/27/2022       45.61       110.01       42.09       72.55       65.75       28.83       28.93       44.17       52.99       80.49       74.25         186       6/28/2022       45.61       110.01       42.90       72.65       66.12       28.93       29.11       44.32       52.66       80.32       73.66         187       6/29/2022       45.65       110.26       42.41       71.89       66.06       28.96       29.22       43.81       52.47       80.20															
182       6/22/2022       44.38       105.05       40.02       68.54       62.31       27.65       27.17       42.31       51.61       77.79       71.22         183       6/23/2022       45.34       106.42       40.58       69.64       63.69       28.10       27.59       42.29       51.65       77.60       71.42         184       6/24/2022       45.71       108.61       41.04       70.95       64.76       28.69       28.39       43.32       51.91       77.87       72.53         185       6/27/2022       45.53       110.11       42.09       72.55       65.75       28.83       28.93       44.17       52.99       80.49       74.25         186       6/28/2022       45.61       110.01       42.90       72.65       66.12       28.93       29.11       44.32       52.66       80.32       73.66         187       6/29/2022       45.65       110.26       42.41       71.89       66.06       28.96       29.22       43.81       52.47       80.20       73.46         188       6/30/2022       47.40       114.49       44.36       75.02       68.57       30.33       29.81       45.09       54.08       83.51															
183       6/23/2022       45.34       106.42       40.58       69.64       63.69       28.10       27.59       42.29       51.65       77.60       71.42         184       6/24/2022       45.71       108.61       41.04       70.95       64.76       28.69       28.39       43.32       51.91       77.87       72.53         185       6/27/2022       45.63       110.11       42.09       72.55       65.75       28.83       28.93       44.17       52.99       80.49       74.25         186       6/28/2022       45.61       110.01       42.90       72.65       66.12       28.93       29.11       44.32       52.66       80.32       73.66         187       6/29/2022       45.65       110.26       42.41       71.89       66.06       28.96       29.22       43.81       52.47       80.20       73.46         188       6/30/2022       45.71       111.45       43.08       72.22       67.05       29.42       29.25       44.14       52.62       80.58       73.64         189       7/1/2022       47.40       114.49       44.36       75.02       68.57       30.33       29.81       45.09       54.08       83.51															
184         6/24/2022         45.71         108.61         41.04         70.95         64.76         28.69         28.39         43.32         51.91         77.87         72.53           185         6/27/2022         45.53         110.11         42.09         72.55         65.75         28.83         28.93         44.17         52.99         80.49         74.25           186         6/28/2022         45.61         110.01         42.90         72.65         66.12         28.93         29.11         44.32         52.66         80.32         73.66           187         6/29/2022         45.65         110.26         42.41         71.89         66.06         28.96         29.22         43.81         52.47         80.20         73.46           188         6/30/2022         45.71         111.45         43.08         72.22         67.05         29.42         29.25         44.14         52.62         80.58         73.64           189         7/1/2022         47.40         114.49         44.36         75.02         68.57         30.33         29.81         45.09         54.08         83.51         75.57           190         7/5/2022         45.94         112.35         42.4															
185         6/27/2022         45.53         110.11         42.09         72.55         65.75         28.83         28.93         44.17         52.99         80.49         74.25           186         6/28/2022         45.61         110.01         42.90         72.65         66.12         28.93         29.11         44.32         52.66         80.32         73.66           187         6/29/2022         45.65         110.26         42.41         71.89         66.06         28.96         29.22         43.81         52.47         80.20         73.46           188         6/30/2022         45.71         111.45         43.08         72.22         67.05         29.42         29.25         44.14         52.62         80.58         73.64           189         7/1/2022         47.40         114.49         44.36         75.02         68.57         30.33         29.81         45.09         54.08         83.51         75.57           190         7/5/2022         45.24         109.97         41.89         70.85         65.67         28.93         28.32         42.74         51.38         78.70         71.65           191         7/6/2022         45.94         112.35         42.47															
186         6/28/2022         45.61         110.01         42.90         72.65         66.12         28.93         29.11         44.32         52.66         80.32         73.66           187         6/29/2022         45.65         110.26         42.41         71.89         66.06         28.96         29.22         43.81         52.47         80.20         73.46           188         6/30/2022         45.71         111.45         43.08         72.22         67.05         29.42         29.25         44.14         52.62         80.58         73.64           189         7/1/2022         47.40         114.49         44.36         75.02         68.57         30.33         29.81         45.09         54.08         83.51         75.57           190         7/5/2022         45.24         109.97         41.89         70.85         65.67         28.93         28.32         42.74         51.38         78.70         71.65           191         7/6/2022         45.94         112.35         42.47         71.81         66.92         29.18         28.84         43.57         52.48         80.24         72.09           192         7/7/2022         45.62         111.69         42.19<															
187         6/29/2022         45.65         110.26         42.41         71.89         66.06         28.96         29.22         43.81         52.47         80.20         73.46           188         6/30/2022         45.71         111.45         43.08         72.22         67.05         29.42         29.25         44.14         52.62         80.58         73.64           189         7/1/2022         47.40         114.49         44.36         75.02         68.57         30.33         29.81         45.09         54.08         83.51         75.57           190         7/5/2022         45.24         109.97         41.89         70.85         65.67         28.93         28.32         42.74         51.38         78.70         71.65           191         7/6/2022         45.94         112.35         42.47         71.81         66.92         29.18         28.84         43.57         52.48         80.24         72.09           192         7/7/2022         45.62         111.69         42.19         70.74         65.94         29.15         28.27         43.47         52.24         79.70         71.19           193         7/8/2022         45.54         111.40         41.74 </td <td></td>															
188         6/30/2022         45.71         111.45         43.08         72.22         67.05         29.42         29.25         44.14         52.62         80.58         73.64           189         7/1/2022         47.40         114.49         44.36         75.02         68.57         30.33         29.81         45.09         54.08         83.51         75.57           190         7/5/2022         45.24         109.97         41.89         70.85         65.67         28.93         28.32         42.74         51.38         78.70         71.65           191         7/6/2022         45.94         112.35         42.47         71.81         66.92         29.18         28.84         43.57         52.48         80.24         72.09           192         7/7/2022         45.62         111.69         42.19         70.74         65.94         29.15         28.27         43.47         52.24         79.70         71.19           193         7/8/2022         45.54         111.40         41.74         70.60         65.58         29.21         28.27         43.47         52.24         79.70         70.69           194         7/11/2022         45.30         111.47         42.10 </td <td></td>															
189     7/1/2022     47.40     114.49     44.36     75.02     68.57     30.33     29.81     45.09     54.08     83.51     75.57       190     7/5/2022     45.24     109.97     41.89     70.85     65.67     28.93     28.32     42.74     51.38     78.70     71.65       191     7/6/2022     45.94     112.35     42.47     71.81     66.92     29.18     28.84     43.57     52.48     80.24     72.09       192     7/7/2022     45.62     111.69     42.19     70.74     65.94     29.15     28.27     43.47     52.24     79.70     71.19       193     7/8/2022     45.54     111.40     41.74     70.60     65.58     29.21     28.24     43.31     51.59     79.07     70.69       194     7/11/2022     45.30     111.47     42.10     71.36     65.82     29.37     28.57     43.40     51.96     79.22     70.28       195     7/12/2022     45.04     111.21     41.93     70.76     65.47     29.28     28.45     43.10     51.68     79.19     69.68															
190     7/5/2022     45.24     109.97     41.89     70.85     65.67     28.93     28.32     42.74     51.38     78.70     71.65       191     7/6/2022     45.94     112.35     42.47     71.81     66.92     29.18     28.84     43.57     52.48     80.24     72.09       192     7/7/2022     45.62     111.69     42.19     70.74     65.94     29.15     28.27     43.47     52.24     79.70     71.19       193     7/8/2022     45.54     111.40     41.74     70.60     65.82     29.21     28.24     43.31     51.59     79.07     70.69       194     7/11/2022     45.30     111.47     42.10     71.36     65.82     29.37     28.57     43.40     51.96     79.22     70.28       195     7/12/2022     45.04     111.21     41.93     70.76     65.47     29.28     28.45     43.10     51.68     79.19     69.68															
191     7/6/2022     45.94     112.35     42.47     71.81     66.92     29.18     28.84     43.57     52.48     80.24     72.09       192     7/7/2022     45.62     111.69     42.19     70.74     65.94     29.15     28.27     43.47     52.24     79.70     71.19       193     7/8/2022     45.54     111.40     41.74     70.60     65.58     29.21     28.24     43.31     51.59     79.07     70.69       194     7/11/2022     45.30     111.47     42.10     71.36     65.82     29.37     28.57     43.40     51.96     79.22     70.28       195     7/12/2022     45.04     111.21     41.93     70.76     65.47     29.28     28.45     43.10     51.68     79.19     69.68															
192     7/7/2022     45.62     111.69     42.19     70.74     65.94     29.15     28.27     43.47     52.24     79.70     71.19       193     7/8/2022     45.54     111.40     41.74     70.60     65.58     29.21     28.24     43.31     51.59     79.07     70.69       194     7/11/2022     45.30     111.47     42.10     71.36     65.82     29.37     28.57     43.40     51.96     79.22     70.28       195     7/12/2022     45.04     111.21     41.93     70.76     65.47     29.28     28.45     43.10     51.68     79.19     69.68															
193     7/8/2022     45.54     111.40     41.74     70.60     65.58     29.21     28.24     43.31     51.59     79.07     70.69       194     7/11/2022     45.30     111.47     42.10     71.36     65.82     29.37     28.57     43.40     51.96     79.22     70.28       195     7/12/2022     45.04     111.21     41.93     70.76     65.47     29.28     28.45     43.10     51.68     79.19     69.68															
195 7/12/2022 45.04 111.21 41.93 70.76 65.47 29.28 28.45 43.10 51.68 79.19 69.68	193	7/8/2022	45.54	111.40	41.74	70.60	65.58	29.21	28.24	43.31	51.59	79.07	70.69		
	194	7/11/2022	45.30	111.47	42.10	71.36	65.82	29.37	28.57	43.40	51.96	79.22	70.28		
	195	7/12/2022	45.04	111.21	41.93	70.76	65.47	29.28	28.45	43.10	51.68	79.19	69.68		
	196	7/13/2022	44.46	110.44	41.82	70.63	65.50	28.92	28.38	43.15	52.10	79.41	69.28		

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE						STOC	K PRICES <sup>1</sup>	<b>(\$)</b> ·				
NO	DATE	AGR	ATO	AVA	BKH	CMS	CNP	NI	NJR	NWN	OGS	SR
110		AGN	AIU	AVA	БКП	CIVIS	CINE	INI	NUN	IAAAIA	003	JN.
197	7/14/2022	44.57	110.28	41.46	70.89	65.35	28.96	28.48	43.13	52.75	79.79	69.12
198	7/15/2022	45.11	111.26	41.78	71.83	65.76	29.45	28.55	43.67	53.56	81.24	70.01
199	7/18/2022	44.14	111.26	41.32	71.00	64.38	29.40	28.16	42.97	52.68	80.63	69.47
200	7/19/2022	44.94	112.82	41.60	71.95	64.53	29.59	28.27	43.70	53.14	81.64	70.22
201	7/20/2022	44.48	111.06	40.94	70.08	63.46	29.22	28.06	42.85	52.42	80.48	69.19
202	7/21/2022	44.57	111.97	40.37	69.94	63.50	29.16	27.86	42.53	51.44	79.10	68.89
203	7/22/2022	44.94	112.70	40.42	71.00	64.75	29.54	28.21	42.81	51.73	79.69	69.40
204	7/25/2022	45.22	114.11	40.79	72.98	65.43	29.93	28.80	43.95	52.38	81.05	70.68
205	7/26/2022	46.03	115.58	41.09	74.23	66.24	30.33	28.97	44.32	52.59	81.77	71.17
206	7/27/2022	46.47	115.82	40.88	73.83	66.27	30.38	29.08	44.79	52.67	81.71	71.46
207	7/28/2022	48.24	119.24	41.89	75.83	68.08	31.33	29.93	45.94	53.65	84.18	73.67
208	7/29/2022	48.30	120.69	41.85	76.62	68.27	31.52	30.40	45.78	53.67	84.30	74.50
209	8/1/2022	48.39	120.47	42.28	75.64	68.57	31.46	30.34	45.36	53.56	83.46	74.38
210	8/2/2022	48.28	119.41	42.54	75.15	68.44	31.53	30.10	45.31	53.61	82.34	73.40
211	8/3/2022	49.06	118.59	41.66	75.56	68.88	31.52	30.27	44.80	53.32	81.52	72.96
212	8/4/2022	49.31	115.16	42.60	74.46	68.61	31.22	29.85	45.36	53.41	80.31	72.44
213	8/5/2022	48.40	113.23	41.66	73.84	67.61	31.30	29.47	44.29	52.56	79.96	71.60
214	8/8/2022	48.74	113.94	42.12	74.10	68.21	31.41	29.90	44.48	52.33	80.41	72.70
215	8/9/2022	49.34	114.62	42.55	75.61	68.69	31.90	30.34	44.76	52.30	81.63	74.00
216	8/10/2022	49.47	113.81	42.79	76.28	68.76	31.89	30.43	45.06	51.72	81.49	73.93
217	8/11/2022	49.36	114.61	42.53	75.36	68.68	31.74	30.42	45.11	51.61	81.29	73.43
218	8/12/2022	50.44	116.28	43.39	77.21	69.67	32.32	31.14	46.09	52.65	82.61	74.89
219	8/15/2022	50.65	116.71	43.74	77.73	70.11	32.51	31.36	46.42	53.11	83.14	75.53
220	8/16/2022	51.17	116.90	44.46	78.24	70.26	32.65	31.58	46.74	53.67	83.17	76.64
221	8/17/2022	51.05	116.98	44.46	78.74	70.42	32.51	31.69	46.65	53.16	82.89	75.82
222	8/18/2022	50.84	117.40	44.60	79.00	70.52	32.59	31.71	46.58	52.86	83.42	75.95
223	8/19/2022	50.50	118.01	44.63	79.16	70.94	32.65	31.54	46.77	52.76	83.71	75.72
224	8/22/2022	49.64	116.15	43.60	78.60	70.08	32.03	31.21	45.83	51.38	82.06	73.84
225	8/23/2022	49.31	116.22	43.12	77.73	69.35	31.91	30.77	45.48	50.41	81.57	73.39
226	8/24/2022	49.64	116.72	42.74	77.42	69.34	32.27	30.94	45.09	49.62	80.91	72.80
227	8/25/2022	50.22	117.58	42.83	78.41	69.64	32.37	30.73	45.85	50.15	81.52	73.73
228	8/26/2022	49.64	115.99	42.64	78.02	68.76	31.75	30.18	45.26	49.89	80.77	72.26
229	8/29/2022	49.58	116.36	42.19	77.92	69.44	32.09	30.34	45.14	49.70	80.84	71.74
230	8/30/2022	49.73	114.43	41.29	76.50	68.11	31.65	29.74	44.31	48.13	79.00	69.94
231	8/31/2022	48.96	113.38	40.63	75.48	67.54	31.53	29.51	43.75	47.61	78.27	69.20
232	9/1/2022	48.97	114.78	41.26	76.42	68.10	31.95	29.73	44.34	47.67	79.35	69.15
233	9/2/2022	49.08	114.55	40.66	75.80	67.14	31.78	29.55	44.11	47.49	79.12	68.33
234 235	9/6/2022	48.60	114.21	40.29	75.67	67.37	31.70	29.52	44.26	48.29	79.18	68.05
236	9/7/2022 9/8/2022	49.46 49.46	117.64 117.95	40.88 40.75	77.58 77.37	69.72 69.51	32.67 32.70	30.44 30.24	45.58	49.41 48.30	80.83 80.08	69.37 68.90
236	9/8/2022						32.70 32.85		45.24			
238	9/9/2022	49.65 50.29	118.09 119.44	41.13 41.74	78.26	69.85 70.23	32.85	30.46	43.90 45.06	48.67 49.73	80.73	70.29 71.70
239	9/13/2022	49.35	116.46	40.75	78.73 77.00	68.04	32.35	30.58 29.73	43.65	49.73 47.84	81.92 79.59	69.14
239	9/13/2022	49.35 49.96	117.03	40.75 40.74	77.00	68.69	32.35 32.75	29.73 29.86	44.62	47.84	79.59 80.56	69.14
240 241	9/15/2022	49.96 49.23	117.03	40.74	76.32	66.64	32.75 32.18	29.86 28.96	43.90	48.70 47.93	79.00	68.83
241	9/16/2022	49.23 49.32	114.12	40.22	76.32 76.41	66.84	32.18	28.83	43.90	47.93 47.92	79.00 79.44	69.26
242	9/19/2022	50.26	115.22	40.80	76.41	67.20	32.46	28.83 29.29	44.34 44.99	47.92 48.45	79.44 80.47	70.60
243	9/20/2022	49.24	113.22	40.82	77.38 75.92	66.75	32.46 31.99	29.29 28.86	44.99	48.45 47.91	79.87	69.49
245	9/21/2022	48.61	112.63	40.40	74.77	65.90	31.95	28.41	43.50	47.91	79.67 78.94	68.62
240	3/21/2022	40.01	112.03	40.14	14.11	65.90	31.95	∠0.41	43.50	47.20	10.94	00.02

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE	DATE	STOCK PRICES <sup>1</sup> (\$):										
NO	0		ATO	AVA	BKH	CMS	CNP	NI	NJR	NWN	OGS	SR
246	9/22/2022	46.71	113.33	40.33	74.82	65.78	31.66	28.62	43.73	47.26	79.84	69.43
247	9/23/2022	45.28	111.53	41.42	73.28	65.26	31.56	28.04	42.77	46.89	78.60	67.94
248	9/26/2022	44.33	109.17	40.02	71.68	63.52	30.51	27.37	42.35	46.32	76.91	66.67
249	9/27/2022	43.68	107.57	38.95	69.48	61.75	29.89	26.86	41.11	45.58	74.05	64.91
250	9/28/2022	44.26	109.06	39.47	71.20	62.41	30.15	27.22	41.51	46.39	75.81	65.87
251	9/29/2022	42.32	104.66	38.57	69.15	59.73	28.84	25.97	39.71	44.91	72.25	64.02
252	9/30/2022	41.70	101.85	37.05	67.73	58.24	28.18	25.19	38.70	43.38	70.39	62.33
253	AVERAGE STOCK PRICE (\$)	46.78	106.94	41.41	70.38	64.81	28.87	28.14	41.62	48.90	77.87	67.59

#### DCF PRICE, DIVIDEND, AND GROWTH RATE

LINE		STOCK PRICES <sup>1</sup> (\$):										
NO	DATE	AGR	ATO	AVA	ВКН	CMS	CNP	NI NI	NJR	NWN	OGS	SR
							• • • • • • • • • • • • • • • • • • • •		11011			0.11
254		_										
255	QUARTERLY DIV.2 (\$)	0.4400	0.6800	0.4225	0.5950	0.4350	0.1700	0.2200	0.3625	0.4830	0.5800	0.6500
256	<b>、</b> ,,	0.4400	0.6800	0.4400	0.5950	0.4600	0.1700	0.2200	0.3625	0.4830	0.6200	0.6850
257		0.4400	0.6800	0.4400	0.5950	0.4600	0.1700	0.2350	0.3625	0.4830	0.6200	0.6850
258		0.4400	0.6800	0.4400	0.5950	0.4600	0.1800	0.2350	0.3625	0.4830	0.6200	0.6850
259		. =										
260 261	ANNUAL DIVIDEND (\$)	1.7600	2.7200	1.7425	2.3800	1.8150	0.6900	0.9100	1.4500	1.9320	2.4400	2.7050
262	YIELD	3.76%	2.54%	4.21%	3.38%	2.80%	2.39%	3.23%	3.48%	3.95%	3.13%	4.00%
263	HELD	3.7076	2.54 /6	4.21/0	3.30 /6	2.00 /6	2.3370	3.23/0	3.4070	3.3376	3.13/0	4.00 /6
264	Analyst Growth Estimates											
265	Seeking Alpha <sup>3</sup>	5.80%	7.50%	4.79%	5.98%	7.95%	6.10%	6.77%	6.85%	4.70%	6.00%	4.77%
266	Cooking / lipha	0.0070	7.0070	1.1 0 70	0.0070	1.0070	0.1070	0.7770	0.0070	1.1 0 / 0	0.0070	1.1170
267	Zacks <sup>4</sup>	5.90%	7.50%	5.38%	6.21%	8.26%	3.89%	7.19%	6.00%	4.30%	5.00%	5.00%
268	24010	0.0070	7.0070	0.0070	0.2170	0.2070	0.0070	1.1070	0.0070	1.0070	0.0070	0.0070
269	YAHOO1	3.92%	8.39%	5.40%	4.67%	8.80%	-0.40%	7.30%	6.00%	4.30%	5.00%	4.30%
270	174100	0.0270	0.0070	0.1070	1.07 70	0.0070	0.1070	1.0070	0.0070	1.0070	0.0070	1.0070
271	DCF GROWTH FACTOR	5.21%	7.80%	5.19%	5.62%	8.34%	3.20%	7.09%	6.28%	4.43%	5.33%	4.69%
272												
273	VALUE LINE <sup>2</sup>											
274	23 EARNINGS (EPS)	2.15	6.00	2.45	4.30	3.10	1.50	1.60	2.50	2.85	4.20	4.35
275	25-27 EARNINGS (EPS)	2.55	7.30	2.75	5.20	3.75	1.80	2.40	2.90	3.45	5.30	5.50
276		4.27%	4.90%	2.89%	4.75%	4.76%	4.56%	10.14%	3.71%	4.78%	5.82%	5.86%
277	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0.000/	7.500/	0.000/	0.000/	0.500/	0.500/	0.500/	F 000/	0.500/	0.500/	0.000/
278 279	VALUE LINE "BOXED" (Earnings)	3.00%	7.50%	3.00%	6.00%	6.50%	6.50%	9.50%	5.00%	6.50%	6.50%	9.00%
280	VALUE LINE GROWTH ESTIMATE	3.63%	6.20%	2.94%	5.38%	5.63%	5.53%	9.82%	4.36%	5.64%	6.16%	7.43%
281	VALUE EINE GROWTH EGTIMENTE	0.0070	0.2070	2.0170	0.0070	0.0070	0.0070	0.0270	1.0070	0.0170	0.1070	7.1070
282	DCF GROWTH ESTIMATE	4.42%	7.00%	4.07%	5.50%	6.98%	4.36%	8.45%	5.32%	5.04%	5.75%	6.06%
283												
284	DCF COST OF EQUITY ESTIMATE	9.55%	9.21%	9.81%	9.58%	9.49%	8.30%	10.58%	9.62%	9.96%	9.42%	10.44%
285												
286	DCF AVERAGE	9.63%										
287 288	CAPM RATE	9.19%										
289	CAPININATE	3.1370										
	DOE 0 04 DM 4 VED 4 0 E	0.440/										
290 291	DCF & CAPM AVERAGE	9.41%										
292												
293												
294	Sources:											
295	1 finance.yahoo.com											
296	2 ValueLine.com											
297	3 SeekingAlpha.com											
298	4 zacks.com											

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
1	1	4.42%	\$	1.84
2	2	4.42%	\$	1.92
3	3	4.42%	\$	2.00
4	4	4.42%	\$	2.09
5	5	4.42%	\$	2.18
6	6	4.51%	\$	2.28
7	7	4.61%	\$	2.39
8	8	4.70%	\$	2.50
9	9	4.79%	\$	2.62
10	10	4.88%	\$	2.75
11	11	4.98%	\$	2.89
12	12	5.07%	\$	3.03
13	13	5.16%	\$	3.19
14	14	5.26%	\$	3.36
15	15	5.35%	\$	3.54
16	16	5.44%	\$	3.73
17	17	5.53%	\$	3.93
18	18	5.63%	\$	4.16
19	19	5.72%	\$	4.39
20	20	5.81%	\$	4.65
21	21	5.91%	\$	4.92
22	22	6.00%	\$	5.22
23	23	6.09%	\$	5.54
24	24	6.18%	\$	5.88
25	25	6.28%	\$	6.25
26	26	6.28%	\$	6.64
27	27	6.28%	\$	7.06
28	28	6.28%	********************************	7.50

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
29	29	6.28%	\$ 7.97
30	30	6.28%	\$ 8.47
31	31	6.28%	\$ 9.00
32	32	6.28%	\$ 9.57
33	33	6.28%	\$ 10.17
34	34	6.28%	\$ 10.80
35	35	6.28%	\$ 11.48
36	36	6.28%	\$ 12.20
37	37	6.28%	\$ 12.97
38	38	6.28%	\$ 13.78
39	39	6.28%	\$ 14.65
40	40	6.28%	\$ 15.57
41	41	6.28%	\$ 16.55
42	42	6.28%	\$ 17.58
43	43	6.28%	\$ 18.69
44	44	6.28%	\$ 19.86
45	45	6.28%	\$ 21.11
46	46	6.28%	\$ 22.43
47	47	6.28%	\$ 23.84
48	48	6.28%	\$ 25.34
49	49	6.28%	\$ 26.93
50	50	6.28%	\$ 28.62
51	51	6.28%	\$ 30.41
52	52	6.28%	\$ 32.32
53	53	6.28%	34.35
54	54	6.28%	\$ 36.51
55	55	6.28%	\$ 38.80
56	56	6.28%	\$ 41.23

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
57	57	6.28%	\$ 43.82
58	58	6.28%	\$ 46.57
59	59	6.28%	\$ 49.49
60	60	6.28%	\$ 52.60
61	61	6.28%	\$ 55.90
62	62	6.28%	\$ 59.41
63	63	6.28%	\$ 63.14
64	64	6.28%	\$ 67.10
65	65	6.28%	\$ 71.31
66	66	6.28%	\$ 75.79
67	67	6.28%	\$ 80.55
68	68	6.28%	\$ 85.60
69	69	6.28%	\$ 90.98
70	70	6.28%	\$ 96.69
71	71	6.28%	\$ 102.75
72	72	6.28%	\$ 109.20
73	73	6.28%	\$ 116.06
74	74	6.28%	\$ 123.34
75	75	6.28%	\$ 131.08
76	76	6.28%	\$ 139.31
77	77	6.28%	\$ 148.06
78	78	6.28%	\$ 157.35
79	79	6.28%	\$ 167.22
80	80	6.28%	\$ 177.72
81	81	6.28%	188.88
82	82	6.28%	\$ 200.73
83	83	6.28%	\$ 213.33
84	84	6.28%	\$ 226.72

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	\$	240.95
86	86	6.28%	\$	256.07
87	87	6.28%	\$	272.14
88	88	6.28%	\$	289.23
89	89	6.28%	\$	307.38
90	90	6.28%	\$	326.67
91	91	6.28%	\$	347.18
92	92	6.28%	\$	368.97
93	93	6.28%	\$	392.12
94	94	6.28%	\$	416.74
95	95	6.28%	\$	442.89
96	96	6.28%	\$	470.69
97	97	6.28%	\$	500.23
98	98	6.28%	\$	531.63
99	99	6.28%	\$	565.00
100	100	6.28%	\$	600.46
101	101	6.28%	\$	638.15
102	102	6.28%	\$	678.21
103	103	6.28%	\$	720.77
104	104	6.28%	\$	766.01
105	105	6.28%	\$	814.09
106	106	6.28%	\$	865.19
107	107	6.28%	\$	919.49
108	108	6.28%	\$	977.21
109	109	6.28%	\$	1,038.54
110	110	6.28%	\$	1,103.72
111	111	6.28%	\$	1,173.00
112	112	6.28%	\$	1,246.62

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
113	113	6.28%	\$	1,324.87
114	114	6.28%	\$	1,408.02
115	115	6.28%	\$	1,496.40
116	116	6.28%	\$	1,590.32
117	117	6.28%	\$	1,690.14
118	118	6.28%	\$	1,796.22
119	119	6.28%	\$	1,908.96
120	120	6.28%	\$	2,028.78
121	121	6.28%	\$	2,156.12
122	122	6.28%	\$	2,291.45
123	123	6.28%	\$	2,435.27
124	124	6.28%	\$	2,588.12
125	125	6.28%	\$	2,750.57
126	126	6.28%	\$	2,923.21
127	127	6.28%	\$	3,106.68
128	128	6.28%	\$	3,301.68
129	129	6.28%	\$	3,508.91
130	130	6.28%	\$	3,729.15
131	131	6.28%	\$	3,963.21
132	132	6.28%	\$	4,211.96
133	133	6.28%	\$	4,476.33
134	134	6.28%	\$	4,757.28
135	135	6.28%	\$	5,055.88
136	136	6.28%	\$	5,373.21
137	137	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	5,710.47
138	138	6.28%	\$	6,068.89
139	139	6.28%	\$	6,449.80
140	140	6.28%	\$	6,854.63

## AGR NON-CONSTANT DCF CALCULATION

\$ 46.78
\$ 1.76
4.42%
6.28%
9.55%
8.35%
Ψ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
141	141	6.28%	\$	7,284.86
142	142	6.28%	\$	7,742.10
143	143	6.28%	\$	8,228.04
144	144	6.28%	\$	8,744.47
145	145	6.28%	\$	9,293.32
146	146	6.28%	\$	9,876.62
147	147	6.28%	\$	10,496.53
148	148	6.28%	\$	11,155.35
149	149	6.28%	\$	11,855.52
150	150	6.28%	\$	12,599.64
151	151	6.28%	\$	13,390.47
152	152	6.28%	\$	14,230.92
153	153	6.28%	\$	15,124.14
154	154	6.28%	\$	16,073.41
155	155	6.28%	\$	17,082.26
156	156	6.28%	\$	18,154.44
157	157	6.28%	\$	19,293.91
158	158	6.28%	\$	20,504.90
159	159	6.28%	\$	21,791.90
160	160	6.28%	\$	23,159.68
161	161	6.28%	\$	24,613.31
162	162	6.28%	\$	26,158.18
163	163	6.28%	\$	27,800.01
164	164	6.28%	\$	29,544.89
165	165	6.28%	\$	31,399.29
166	166	6.28%	\$	33,370.08
167	167	6.28%	\$	35,464.57
168	168	6.28%	\$	37,690.52

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
110				
169	169	6.28%	\$	40,056.19
170	170	6.28%	\$	42,570.33
171	171	6.28%	\$	45,242.28
172	172	6.28%	\$	48,081.93
173	173	6.28%	\$	51,099.82
174	174	6.28%	\$	54,307.12
175	175	6.28%	\$	57,715.74
176	176	6.28%	\$	61,338.29
177	177	6.28%	\$	65,188.22
178	178	6.28%	\$	69,279.79
179	179	6.28%	\$	73,628.17
180	180	6.28%	\$	78,249.48
181	181	6.28%	\$	83,160.85
182	182	6.28%	\$	88,380.48
183	183	6.28%	\$	93,927.72
184	184	6.28%	\$	99,823.14
185	185	6.28%	\$	106,088.59
186	186	6.28%	\$	112,747.29
187	187	6.28%	\$	119,823.93
188	188	6.28%	\$	127,344.73
189	189	6.28%	\$	135,337.59
190	190	6.28%	\$	143,832.12
191	191	6.28%	\$	152,859.81
192	192	6.28%	\$	162,454.13
193	193	6.28%	\$	172,650.64
194	194	6.28%	\$	183,487.14
195	195	6.28%	\$	195,003.80
196	196	6.28%	\$	207,243.31

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
197	197	6.28%	\$ 220,251.03
198	198	6.28%	\$ 234,075.20
199	199	6.28%	\$ 248,767.04
200	200	6.28%	\$ 264,381.02
201	201	6.28%	\$ 280,975.03
202	202	6.28%	\$ 298,610.56
203	203	6.28%	\$ 317,352.99
204	204	6.28%	\$ 337,271.81
205	205	6.28%	\$ 358,440.84
206	206	6.28%	\$ 380,938.55
207	207	6.28%	\$ 404,848.34
208	208	6.28%	\$ 430,258.84
209	209	6.28%	\$ 457,264.25
210	210	6.28%	\$ 485,964.66
211	211	6.28%	\$ 516,466.47
212	212	6.28%	\$ 548,882.74
213	213	6.28%	\$ 583,333.63
214	214	6.28%	\$ 619,946.84
215	215	6.28%	\$ 658,858.11
216	216	6.28%	\$ 700,211.66
217	217	6.28%	\$ 744,160.78
218	218	6.28%	\$ 790,868.39
219	219	6.28%	\$ 840,507.63
220	220	6.28%	\$ 893,262.49
221	221	6.28%	\$ 949,328.55
222	222	6.28%	1,008,913.61
223	223	6.28%	\$ 1,072,238.56
224	224	6.28%	\$ 1,139,538.14

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
225	225	6.28%	\$	1,211,061.80
226	226	6.28%	\$	1,287,074.68
227	227	6.28%	\$	1,367,858.54
228	228	6.28%	\$	1,453,712.85
229	229	6.28%	\$	1,544,955.84
230	230	6.28%	\$	1,641,925.74
231	231	6.28%	\$	1,744,982.00
232	232	6.28%	\$	1,854,506.64
233	233	6.28%	\$	1,970,905.65
234	234	6.28%	\$	2,094,610.49
235	235	6.28%	\$	2,226,079.74
236	236	6.28%	\$	2,365,800.71
237	237	6.28%	\$	2,514,291.33
238	238	6.28%	\$	2,672,102.05
239	239	6.28%	\$	2,839,817.82
240	240	6.28%	\$	3,018,060.36
241	241	6.28%	\$	3,207,490.38
242	242	6.28%	\$	3,408,810.07
243	243	6.28%	\$	3,622,765.68
244	244	6.28%	\$	3,850,150.32
245	245	6.28%	\$	4,091,806.87
246	246	6.28%	\$	4,348,631.11
247	247	6.28%	\$	4,621,575.04
248	248	6.28%	\$	4,911,650.44
249	249	6.28%	\$	5,219,932.55
250	250	6.28%	* * * * * * * * * * * * * * * * * * * *	5,547,564.15
251	251	6.28%	\$	5,895,759.69
252	252	6.28%	\$	6,265,809.90

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
253	253	6.28%	\$	6,659,086.49
254	254	6.28%	\$	7,077,047.28
255	255	6.28%	\$	7,521,241.58
256	256	6.28%	\$	7,993,315.94
257	257	6.28%	\$	8,495,020.29
258	258	6.28%	\$	9,028,214.34
259	259	6.28%	\$	9,594,874.59
260	260	6.28%	\$	10,197,101.53
261	261	6.28%	\$	10,837,127.54
262	262	6.28%	\$	11,517,325.10
263	263	6.28%	\$	12,240,215.58
264	264	6.28%	\$	13,008,478.63
265	265	6.28%	\$	13,824,962.09
266	266	6.28%	\$	14,692,692.52
267	267	6.28%	\$	15,614,886.48
268	268	6.28%	\$	16,594,962.38
269	269	6.28%	\$	17,636,553.23
270	270	6.28%	\$	18,743,520.02
271	271	6.28%	\$	19,919,966.13
272	272	6.28%	\$	21,170,252.44
273	273	6.28%	\$	22,499,013.58
274	274	6.28%	\$	23,911,175.05
275	275	6.28%	\$	25,411,971.52
276	276	6.28%	\$	27,006,966.21
277	277	6.28%	\$	28,702,071.51
278	278	6.28%	\$	30,503,570.92
279	279	6.28%	\$	32,418,142.31
280	280	6.28%	\$	34,452,882.70

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

NO         RATE           281         281         6.28%         \$ 36,615,334.55           282         282         6.28%         \$ 38,913,513.74           283         283         6.28%         \$ 41,355,939.26           284         284         6.28%         \$ 43,951,664.79           285         285         6.28%         \$ 46,710,312.30           286         286         6.28%         \$ 49,642,107.65           287         287         6.28%         \$ 52,757,918.56           288         288         6.28%         \$ 56,069,294.85           289         289         6.28%         \$ 59,588,511.27           290         290         6.28%         \$ 63,328,613.01           291         291         6.28%         \$ 67,303,464.05           292         292         6.28%         \$ 71,527,798.53           293         293         6.28%         \$ 76,017,275.42           294         294         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 80,788,536.49           296         296         6.28%         \$ 96,975,508.18	LINE	VEAD	GROWTH	DIVIDEND
281         281         6.28%         \$ 36,615,334.55           282         282         6.28%         \$ 38,913,513.74           283         283         6.28%         \$ 41,355,939.26           284         284         6.28%         \$ 46,710,312.30           285         285         6.28%         \$ 46,710,312.30           286         286         6.28%         \$ 49,642,107.65           287         287         6.28%         \$ 52,757,918.56           288         288         6.28%         \$ 56,069,294.85           289         289         6.28%         \$ 59,588,511.27           290         290         6.28%         \$ 63,328,613.01           291         291         6.28%         \$ 67,303,464.05           292         292         6.28%         \$ 71,527,798.53           293         293         6.28%         \$ 76,017,275.42           294         294         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 91,248,266.57           297         297         6.28%         \$ 96,975,508.18           298         298	NO	YEAR	RATE	DIVIDEND
281         281         6.28%         \$ 36,615,334.55           282         282         6.28%         \$ 38,913,513.74           283         283         6.28%         \$ 41,355,939.26           284         284         6.28%         \$ 43,951,664.79           285         285         6.28%         \$ 46,710,312.30           286         286         6.28%         \$ 49,642,107.65           287         287         6.28%         \$ 52,757,918.56           288         288         6.28%         \$ 56,069,294.85           289         289         6.28%         \$ 59,588,511.27           290         290         6.28%         \$ 63,328,613.01           291         291         6.28%         \$ 67,303,464.05           292         292         6.28%         \$ 71,527,798.53           293         293         6.28%         \$ 76,017,275.42           294         294         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 80,788,536.49           295         295         6.28%         \$ 96,975,508.18           298         296         6.28%         \$ 96,975,508.18           299         299				
282       282       6.28%       \$ 38,913,513.74         283       283       6.28%       \$ 41,355,939.26         284       284       6.28%       \$ 43,951,664.79         285       285       6.28%       \$ 46,710,312.30         286       286       6.28%       \$ 49,642,107.65         287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 80,788,536.49         295       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       302				\$ ·
283       283       6.28%       \$ 41,355,939.26         284       284       6.28%       \$ 43,951,664.79         285       285       6.28%       \$ 46,710,312.30         286       286       6.28%       \$ 49,642,107.65         287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 131,476,843.68         301       301       6.28%				\$ ·
284       284       6.28%       \$ 43,951,664.79         285       285       6.28%       \$ 46,710,312.30         286       286       6.28%       \$ 49,642,107.65         287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 80,788,536.49         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 131,476,843.68         301       301       6.28%       \$ 133,712,000.13         302       302       6.28%			6.28%	\$ ·
285       285       6.28%       \$ 46,710,312.30         286       286       6.28%       \$ 49,642,107.65         287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 131,476,843.68         303       303       304       304       6.28%       \$ 139,729,051.39         304				\$ ·
286       286       6.28%       \$ 49,642,107.65         287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 139,729,051.39         304       304       6.28% <td>285</td> <td>285</td> <td>6.28%</td> <td>\$ 46,710,312.30</td>	285	285	6.28%	\$ 46,710,312.30
287       287       6.28%       \$ 52,757,918.56         288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       6.28%       \$ 157,	286	286	6.28%	\$ 49,642,107.65
288       288       6.28%       \$ 56,069,294.85         289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28% </td <td>287</td> <td>287</td> <td>6.28%</td> <td>\$ 52,757,918.56</td>	287	287	6.28%	\$ 52,757,918.56
289       289       6.28%       \$ 59,588,511.27         290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 178,252,847.02	288	288	6.28%	\$ 56,069,294.85
290       290       6.28%       \$ 63,328,613.01         291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21			6.28%	\$ 59,588,511.27
291       291       6.28%       \$ 67,303,464.05         292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	290		6.28%	\$ 
292       292       6.28%       \$ 71,527,798.53         293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	291	291	6.28%	\$ 67,303,464.05
293       293       6.28%       \$ 76,017,275.42         294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21			6.28%	\$ 
294       294       6.28%       \$ 80,788,536.49         295       295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       6.28%       \$ 189,440,973.21			6.28%	\$ 76,017,275.42
295       6.28%       \$ 85,859,268.07         296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,476.34         307       307       6.28%       \$ 178,252,847.02         308       6.28%       \$ 189,440,973.21	294	294	6.28%	\$ 80,788,536.49
296       296       6.28%       \$ 91,248,266.57         297       297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 131,476,843.68         302       302       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	295	295	6.28%	\$ 85,859,268.07
297       6.28%       \$ 96,975,508.18         298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       6.28%       \$ 189,440,973.21	296	296	6.28%	\$ 91,248,266.57
298       298       6.28%       \$ 103,062,222.87         299       299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	297	297	6.28%	\$
299       6.28%       \$ 109,530,973.16         300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       6.28%       \$ 189,440,973.21	298	298	6.28%	\$ 103,062,222.87
300       300       6.28%       \$ 116,405,737.68         301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       6.28%       \$ 189,440,973.21	299	299	6.28%	\$ 109,530,973.16
301       301       6.28%       \$ 123,712,000.13         302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440.973.21	300	300	6.28%	\$ 116,405,737.68
302       302       6.28%       \$ 131,476,843.68         303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440.973.21	301	301	6.28%	\$ 123,712,000.13
303       303       6.28%       \$ 139,729,051.39         304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	302	302	6.28%	\$ 131,476,843.68
304       304       6.28%       \$ 148,499,212.91         305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440.973.21	303	303	6.28%	\$ 139,729,051.39
305       305       6.28%       \$ 157,819,837.86         306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440,973.21	304	304	6.28%	\$ 148,499,212.91
306       306       6.28%       \$ 167,725,476.34         307       307       6.28%       \$ 178,252,847.02         308       308       6.28%       \$ 189,440.973.21	305	305	6.28%	\$ · · · · · · · · · · · · · · · · · · ·
307 307 6.28% \$ 178,252,847.02 308 308 6.28% \$ 189,440,973.21	306	306	6.28%	\$ 167,725,476.34
308 308 6.28% \$ 189.440.973.21	307	307	6.28%	\$ · · · · · · · · · · · · · · · · · · ·
φ 100, 110,010.2.	308	308	6.28%	\$ 189,440,973.21

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
309	309	6.28%	\$	201,331,327.56
310	310	6.28%	\$	213,967,985.75
311	311	6.28%	\$	227,397,789.90
312	312	6.28%	\$	241,670,522.22
313	313	6.28%	\$	256,839,089.48
314	314	6.28%	\$	272,959,719.20
315	315	6.28%	\$	290,092,168.05
316	316	6.28%	\$	308,299,943.34
317	317	6.28%	\$	327,650,538.46
318	318	6.28%	\$	348,215,683.04
319	319	6.28%	\$	370,071,608.87
320	320	6.28%	\$	393,299,332.46
321	321	6.28%	\$	417,984,955.36
322	322	6.28%	\$	444,219,983.33
323	323	6.28%	\$	472,101,665.53
324	324	6.28%	\$	501,733,354.99
325	325	6.28%	\$	533,224,891.78
326	326	6.28%	\$	566,693,010.12
327	327	6.28%	\$	602,261,771.10
328	328	6.28%	\$	640,063,022.57
329	329	6.28%	\$	680,236,887.88
330	330	6.28%	\$	722,932,285.28
331	331	6.28%	\$	768,307,479.96
332	332	6.28%	\$	816,530,670.69
333	333	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	867,780,613.32
334	334	6.28%	\$	922,247,283.40
335	335	6.28%	\$	980,132,580.38
336	336	6.28%	\$	1,041,651,076.03

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
337	337	6.28%	\$	1,107,030,809.82
338	338	6.28%	\$	1,176,514,134.25
339	339	6.28%	\$	1,250,358,613.15
340	340	6.28%	\$	1,328,837,976.49
341	341	6.28%	\$	1,412,243,135.05
342	342	6.28%	\$	1,500,883,258.75
343	343	6.28%	\$	1,595,086,922.69
344	344	6.28%	\$	1,695,203,325.19
345	345	6.28%	\$	1,801,603,582.13
346	346	6.28%	\$	1,914,682,102.68
347	347	6.28%	\$	2,034,858,051.28
348	348	6.28%	\$	2,162,576,901.45
349	349	6.28%	\$	2,298,312,087.04
350	350	6.28%	\$	2,442,566,757.24
351	351	6.28%	\$	2,595,875,641.61
352	352	6.28%	\$	2,758,807,032.28
353	353	6.28%	\$	2,931,964,890.53
354	354	6.28%	\$	3,115,991,085.53
355	355	6.28%	\$	3,311,567,773.71
356	356	6.28%	\$	3,519,419,927.35
357	357	6.28%	\$	3,740,318,021.98
358	358	6.28%	\$	3,975,080,892.40
359	359	6.28%	\$	4,224,578,767.98
360	360	6.28%	\$	4,489,736,498.44
361	361	6.28%	* * * * * * * * * * * * * * * * * * * *	4,771,536,982.15
362	362	6.28%	\$	5,071,024,809.57
363	363	6.28%	\$	5,389,310,135.39
364	364	6.28%	\$	5,727,572,793.69

## AGR NON-CONSTANT DCF CALCULATION

\$ 46.78
\$ 1.76
4.42%
6.28%
9.55%
8.35%
Ψ.

LINE	VEAD	GROWTH	DIVIDEND
NO	YEAR	RATE	DIVIDEND
365	365	6.28%	\$ 6,087,066,671.40
366	366	6.28%	\$ 6,469,124,356.30
367	367	6.28%	\$ 6,875,162,076.64 \$ 7,306,684,950.97 \$ 7,765,292,567.30 \$ 8,252,684,912.57 \$ 8,770,668,674.22 \$ 9,321,163,937.30 \$ 9,906,211,301.92
368	368	6.28%	\$ 7,306,684,950.97
369	369	6.28%	\$ 7,765,292,567.30
370	370	6.28%	\$ 8,252,684,912.57
371	371	6.28%	\$ 8,770,668,674.22
372	372	6.28%	\$ 9,321,163,937.30
373	373	6.28%	\$ 9,906,211,301.92
374	374	6.28%	\$ 10,527,979,447.47
375	375	6.28%	\$ 11,188,773,171.51
376	376	6.28%	\$ 11,891,041,933.38
377	377	6.28%	\$ 12,637,388,933.88
378	378	6.28%	\$ 13,430,580,764.99
379	379	6.28%	\$ 14,273,557,665.17
380	380	6.28%	\$ 15,169,444,418.37
381	381	6.28%	\$ 16,121,561,937.11
382	382	6.28%	\$ 17,133,439,572.61
383	383	6.28%	\$ 18,208,828,197.50
384	384	6.28%	\$ 19,351,714,109.77
385	385	6.28%	\$ 20,566,333,809.31
386	386	6.28%	\$ 21,857,189,701.99
387	387	6.28%	\$ 23,229,066,789.37
388	388	6.28%	\$ 24,687,050,405.92
389	389	6.28%	\$ 26,236,545,069.63
390	390	6.28%	\$ 27,883,294,515.63
391	391	6.28%	\$ 29,633,402,987.40
392	392	6.28%	\$ 31,493,357,864.21

## AGR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 46.78
Annual Dividend =	\$ 1.76
DCF Growth Estimate =	4.42%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.55%
Constant DCF =	8.35%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 33,470,053,708.80
394	394	6.28%	\$ 35,570,817,824.52
395	395	6.28%	\$ 37,803,437,416.42
396	396	6.28%	\$ 40,176,188,457.28
397	397	6.28%	\$ 42,697,866,365.29
398	398	6.28%	\$ 45,377,818,607.33
399	399	6.28%	\$ 48,225,979,348.54
400	400	6.28%	\$ 51,252,906,276.78

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH	DIVIDEND	
NO	IEAR	RATE		DIVIDEND
1	1	7.00%	\$	2.91
2	2	7.00%	\$	3.11
3	3	7.00%	\$	3.33
4	4	7.00%	\$	3.57
5	5	7.00%	\$	3.81
6	6	6.96%	\$	4.08
7	7	6.93%	\$	4.36
8	8	6.89%	\$	4.66
9	9	6.85%	\$	4.98
10	10	6.82%	\$	5.32
11	11	6.78%	\$	5.68
12	12	6.75%	\$	6.07
13	13	6.71%	\$	6.47
14	14	6.67%	\$	6.91
15	15	6.64%	\$	7.37
16	16	6.60%	\$	7.85
17	17	6.57%	\$	8.37
18	18	6.53%	\$	8.91
19	19	6.49%	\$	9.49
20	20	6.46%	\$	10.11
21	21	6.42%	\$	10.75
22	22	6.38%	\$	11.44
23	23	6.35%	\$	12.17
24	24	6.31%	\$	12.94
25	25	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	13.75
26	26	6.28%	\$	14.61
27	27	6.28%	\$	15.53
28	28	6.28%	\$	16.50

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH	DIVIDEND	
NO	ILAN	RATE	DIV	IDLIND
29	29	6.28%	\$	17.54
30	30	6.28%	\$	18.64
31	31	6.28%	\$	19.81
32	32	6.28%	\$	21.05
33	33	6.28%	\$	22.37
34	34	6.28%	\$	23.78
35	35	6.28%	\$	25.27
36	36	6.28%	\$	26.85
37	37	6.28%	\$	28.54
38	38	6.28%	\$	30.33
39	39	6.28%	\$	32.24
40	40	6.28%	\$	34.26
41	41	6.28%	\$	36.41
42	42	6.28%	\$	38.69
43	43	6.28%	\$	41.12
44	44	6.28%	\$	43.70
45	45	6.28%	\$	46.45
46	46	6.28%	\$	49.36
47	47	6.28%	\$	52.46
48	48	6.28%	\$	55.75
49	49	6.28%	\$	59.25
50	50	6.28%	\$	62.97
51	51	6.28%	\$	66.92
52	52	6.28%	\$	71.12
53	53	6.28%	\$	75.59
54	54	6.28%	\$	80.33
55	55	6.28%	\$	85.37
56	56	6.28%	\$	90.73

## ATO NON-CONSTANT DCF CALCULATION

\$ 106.94
\$ 2.72
7.00%
6.28%
9.21%
9.72%

LINE	YEAR	GROWTH	DIVIDEND	
NO	ILAN	RATE		TAIDEIND
57	57	6.28%	\$	96.43
58	58	6.28%	\$	102.48
59	59	6.28%	\$	108.91
60	60	6.28%	\$	115.75
61	61	6.28%	\$	123.01
62	62	6.28%	\$	130.73
63	63	6.28%	\$	138.94
64	64	6.28%	\$	147.66
65	65	6.28%	\$	156.93
66	66	6.28%	\$	166.78
67	67	6.28%	\$	177.25
68	68	6.28%	\$	188.37
69	69	6.28%	\$	200.19
70	70	6.28%	\$	212.76
71	71	6.28%	\$	226.11
72	72	6.28%	\$	240.31
73	73	6.28%	\$	255.39
74	74	6.28%	\$	271.42
75	75	6.28%	\$	288.45
76	76	6.28%	\$	306.56
77	77	6.28%	\$	325.80
78	78	6.28%	\$	346.25
79	79	6.28%	\$	367.98
80	80	6.28%	\$	391.08
81	81	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	415.62
82	82	6.28%	\$	441.71
83	83	6.28%	\$	469.44
84	84	6.28%	\$	498.90

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR G	ROWTH	DIV	IDEND
NO		RATE		
			_	
85	85	6.28%	\$	530.21
86	86	6.28%	\$	563.49
87	87	6.28%	\$	598.86
88	88	6.28%	\$	636.45
89	89	6.28%	\$	676.39
90	90	6.28%	\$	718.85
91	91	6.28%	\$	763.97
92	92	6.28%	\$	811.92
93	93	6.28%	\$	862.88
94	94	6.28%	\$	917.04
95	95	6.28%	\$	974.60
96	96	6.28%	\$	1,035.77
97	97	6.28%	\$	1,100.78
98	98	6.28%	\$	1,169.87
99	99	6.28%	\$	1,243.30
100	100	6.28%	\$	1,321.33
101	101	6.28%	\$	1,404.27
102	102	6.28%	\$	1,492.41
103	103	6.28%	\$	1,586.08
104	104	6.28%	\$	1,685.63
105	105	6.28%	\$	1,791.43
106	106	6.28%	\$	1,903.87
107	107	6.28%	\$	2,023.37
108	108	6.28%	* \$	2,150.36
109	109	6.28%	* \$	2,285.33
110	110	6.28%	\$	2,428.77
111	111	6.28%	\$	2,581.21
112	112	6.28%	***************************	2,743.23

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	ROWTH	DI	IVIDEND
NO		RATE		
			_	
113	113	6.28%	\$	2,915.41
114	114	6.28%	\$	3,098.39
115	115	6.28%	\$	3,292.86
116	116	6.28%	\$	3,499.54
117	117	6.28%	\$	3,719.19
118	118	6.28%	\$	3,952.63
119	119	6.28%	\$	4,200.72
120	120	6.28%	\$	4,464.38
121	121	6.28%	\$	4,744.59
122	122	6.28%	\$	5,042.38
123	123	6.28%	\$	5,358.87
124	124	6.28%	\$	5,695.22
125	125	6.28%	\$	6,052.69
126	126	6.28%	\$	6,432.59
127	127	6.28%	\$	6,836.33
128	128	6.28%	\$	7,265.42
129	129	6.28%	\$	7,721.43
130	130	6.28%	\$	8,206.07
131	131	6.28%	\$	8,721.13
132	132	6.28%	\$	9,268.52
133	133	6.28%	\$	9,850.26
134	134	6.28%	\$	10,468.52
135	135	6.28%	\$	11,125.58
136	136	6.28%	\$	11,823.88
137	137	6.28%	\$	12,566.01
138	138	6.28%	<b>\$</b>	13,354.73
139	139	6.28%	\$	14,192.94
140	140	6.28%		15,083.77
-			r	-,

## ATO NON-CONSTANT DCF CALCULATION

\$ 106.94
\$ 2.72
7.00%
6.28%
9.21%
9.72%
÷

LINE	YEAR	GROWTH	D	IVIDEND
NO		RATE		
			_	
141	141	6.28%	\$	16,030.51
142	142	6.28%	\$	17,036.67
143	143	6.28%	\$	18,105.99
144	144	6.28%	\$	19,242.42
145	145	6.28%	\$	20,450.18
146	146	6.28%	\$	21,733.74
147	147	6.28%	\$	23,097.87
148	148	6.28%	\$	24,547.62
149	149	6.28%	\$	26,088.36
150	150	6.28%	\$	27,725.81
151	151	6.28%	\$	29,466.04
152	152	6.28%	\$	31,315.49
153	153	6.28%	\$	33,281.02
154	154	6.28%	\$	35,369.92
155	155	6.28%	\$	37,589.93
156	156	6.28%	\$	39,949.28
157	157	6.28%	\$	42,456.71
158	158	6.28%	\$	45,121.53
159	159	6.28%	\$	47,953.60
160	160	6.28%	\$	50,963.43
161	161	6.28%	\$	54,162.18
162	162	6.28%	\$	57,561.69
163	163	6.28%	\$	61,174.58
164	164	6.28%	\$	65,014.23
165	165	6.28%	\$	69,094.88
166	166	6.28%	\$	73,431.66
167	167	6.28%	\$	78,040.63
168	168	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	82,938.89
			<b>*</b>	,

## ATO NON-CONSTANT DCF CALCULATION

\$ 106.94
\$ 2.72
7.00%
6.28%
9.21%
9.72%

LINE	YEAR	ROWTH		DIVIDEND
NO	ILAN	RATE		DIVIDLIND
169	169	6.28%	\$	88,144.59
170	170	6.28%	\$	93,677.02
171	171	6.28%	\$	99,556.71
172	172	6.28%	\$	105,805.43
173	173	6.28%	\$	112,446.36
174	174	6.28%	\$	119,504.11
175	175	6.28%	\$	127,004.84
176	176	6.28%	\$	134,976.37
177	177	6.28%	\$	143,448.22
178	178	6.28%	\$	152,451.82
179	179	6.28%	\$	162,020.53
180	180	6.28%	\$	172,189.83
181	181	6.28%	\$	182,997.41
182	182	6.28%	\$	194,483.33
183	183	6.28%	\$	206,690.17
184	184	6.28%	\$	219,663.18
185	185	6.28%	\$	233,450.44
186	186	6.28%	\$	248,103.07
187	187	6.28%	\$	263,675.38
188	188	6.28%	\$	280,225.09
189	189	6.28%	\$	297,813.56
190	190	6.28%	\$	316,505.97
191	191	6.28%	\$	336,371.62
192	192	6.28%	\$	357,484.15
193	193	6.28%	\$	379,921.81
194	194	6.28%	\$	403,767.79
195	195	6.28%	\$	429,110.47
196	196	6.28%	\$	456,043.79

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
40=	4.0=	0.000/	•	40.4.00=.00
197	197	6.28%	\$	484,667.60
198	198	6.28%	\$	515,088.00
199	199	6.28%	\$	547,417.75
200	200	6.28%	\$	581,776.69
201	201	6.28%	\$	618,292.18
202	202	6.28%	\$	657,099.59
203	203	6.28%	\$	698,342.77
204	204	6.28%	\$	742,174.59
205	205	6.28%	\$	788,757.53
206	206	6.28%	\$	838,264.28
207	207	6.28%	\$	890,878.35
208	208	6.28%	\$	946,794.76
209	209	6.28%	\$	1,006,220.79
210	210	6.28%	\$	1,069,376.72
211	211	6.28%	\$	1,136,496.67
212	212	6.28%	\$	1,207,829.43
213	213	6.28%	\$	1,283,639.43
214	214	6.28%	\$	1,364,207.68
215	215	6.28%	\$	1,449,832.84
216	216	6.28%	\$	1,540,832.30
217	217	6.28%	\$	1,637,543.38
218	218	6.28%	\$	1,740,324.58
219	219	6.28%	\$	1,849,556.90
220	220	6.28%	\$	1,965,645.23
221	221	6.28%	\$	2,089,019.91
222	222	6.28%	\$	2,220,138.25
223	223	6.28%	\$	2,359,486.30
224	224	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2,507,580.60
	·	,-	<b>*</b>	, ,

## ATO NON-CONSTANT DCF CALCULATION

\$ 106.94
\$ 2.72
7.00%
6.28%
9.21%
9.72%
÷

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
225	225	6.28%	\$	2,664,970.11
226	226	6.28%	\$	2,832,238.25
227	227	6.28%	\$	3,010,005.05
228	228	6.28%	\$	3,198,929.48
229	229	6.28%	\$	3,399,711.83
230	230	6.28%	\$	3,613,096.39
231	231	6.28%	\$	3,839,874.14
232	232	6.28%	\$	4,080,885.69
233	233	6.28%	\$	4,337,024.46
234	234	6.28%	\$	4,609,239.90
235	235	6.28%	\$	4,898,541.07
236	236	6.28%	\$	5,206,000.37
237	237	6.28%	\$	5,532,757.50
238	238	6.28%	\$	5,880,023.70
239	239	6.28%	\$	6,249,086.24
240	240	6.28%	\$	6,641,313.16
241	241	6.28%	\$	7,058,158.39
242	242	6.28%	\$	7,501,167.12
243	243	6.28%	\$	7,971,981.50
244	244	6.28%	\$	8,472,346.78
245	245	6.28%	\$	9,004,117.72
246	246	6.28%	\$	9,569,265.53
247	247	6.28%	\$	10,169,885.11
248	248	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10,808,202.87
249	249	6.28%	\$	11,486,584.95
250	250	6.28%	\$	12,207,546.02
251	251	6.28%	\$	12,973,758.55
252	252	6.28%	\$	13,788,062.78

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
253	253	6.28%	\$	14,653,477.21
254	254	6.28%	\$	15,573,209.80
255	255	6.28%	\$	16,550,669.85
256	256	6.28%	\$	17,589,480.65
257	257	6.28%	\$	18,693,492.91
258	258	6.28%	\$	19,866,799.04
259	259	6.28%	\$	21,113,748.30
260	260	6.28%	\$	22,438,962.92
261	261	6.28%	\$	23,847,355.29
262	262	6.28%	\$	25,344,146.08
263	263	6.28%	\$	26,934,883.67
264	264	6.28%	\$	28,625,464.68
265	265	6.28%	\$	30,422,155.82
266	266	6.28%	\$	32,331,617.15
267	267	6.28%	\$	34,360,926.75
268	268	6.28%	\$	36,517,606.94
269	269	6.28%	\$	38,809,652.21
270	270	6.28%	\$	41,245,558.81
271	271	6.28%	\$	43,834,356.26
272	272	6.28%	\$	46,585,640.84
273	273	6.28%	\$	49,509,611.13
274	274	6.28%	\$	52,617,105.83
275	275	6.28%	\$	55,919,643.93
276	276	6.28%	\$	59,429,467.44
277	277	6.28%	\$	63,159,586.72
278	278	6.28%	\$	67,123,828.74
279	279	6.28%	\$	71,336,888.33
280	280	6.28%	\$	75,814,382.65

## ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH		DIVIDEND	
NO	ILAN	RATE		DIVIDLIAD	
281	281	6.28%	\$	80,572,909.06	
282	282	6.28%	\$	85,630,106.68	
283	283	6.28%	\$	91,004,721.76	
284	284	6.28%	\$ \$ \$ \$ \$	96,716,677.15	
285	285	6.28%	\$	102,787,146.19	
286	286	6.28%	\$	109,238,631.15	
287	287	6.28%	\$	116,095,046.69	
288	288	6.28%	\$	123,381,808.47	
289	289	6.28%	\$	131,125,927.38	
290	290	6.28%	\$	139,356,109.66	
291	291	6.28%	\$	148,102,863.31	
292	292	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	157,398,611.19	
293	293	6.28%	\$	167,277,811.18	
294	294	6.28%	\$	177,777,083.93	
295	295	6.28%	\$	188,935,348.62	
296	296	6.28%	\$	200,793,967.20	
297	297	6.28%	\$	213,396,897.70	
298	298	6.28%	\$	226,790,857.24	
299	299	6.28%	\$	241,025,495.13	
300	300	6.28%	\$	256,153,576.95	
301	301	6.28%	\$ \$ \$	272,231,180.15	
302	302	6.28%	\$	289,317,901.90	
303	303	6.28%	\$	307,477,080.00	
304	304	6.28%	\$ \$	326,776,027.70	
305	305	6.28%	\$	347,286,283.19	
306	306	6.28%	\$	369,083,874.79	
307	307	6.28%	\$ \$ \$	392,249,602.77	
308	308	6.28%	\$	416,869,338.88	

### ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
309	309	6.28%	\$	443,034,344.64
310	310	6.28%	\$	470,841,609.65
311	311	6.28%	\$	500,394,211.10
312	312	6.28%	\$	531,801,695.88
313	313	6.28%	\$	565,180,486.64
314	314	6.28%	\$	600,654,313.35
315	315	6.28%	\$	638,354,671.95
316	316	6.28%	\$	678,421,311.81
317	317	6.28%	\$	721,002,753.70
318	318	6.28%	\$	766,256,840.40
319	319	6.28%	\$	814,351,321.75
320	320	6.28%	\$	865,464,476.49
321	321	6.28%	\$	919,785,773.11
322	322	6.28%	\$	977,516,572.21
323	323	6.28%	\$	1,038,870,872.84
324	324	6.28%	\$	1,104,076,105.83
325	325	6.28%	\$	1,173,373,976.83
326	326	6.28%	\$	1,247,021,362.23
327	327	6.28%	\$	1,325,291,261.41
328	328	6.28%	\$	1,408,473,808.68
329	329	6.28%	\$	1,496,877,348.78
330	330	6.28%	\$	1,590,829,579.85
331	331	6.28%	\$	1,690,678,768.16
332	332	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,796,795,039.09
333	333	6.28%	\$	1,909,571,749.11
334	334	6.28%	\$	2,029,426,943.90
335	335	6.28%	\$	2,156,804,907.99
336	336	6.28%	\$	2,292,177,811.62

### ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH		DIVIDEND
NO	ILAN	RATE		DIVIDEND
337	337	6.28%	\$	2,436,047,461.05
338	338	6.28%	\$	2,588,947,158.64
339	339	6.28%	\$	2,751,443,679.73
340	340	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2,924,139,373.59
341	341	6.28%	\$	3,107,674,396.23
342	342	6.28%	\$	3,302,729,083.38
343	343	6.28%	\$	3,510,026,472.34
344	344	6.28%	\$	3,730,334,982.23
345	345	6.28%	\$	3,964,471,262.33
346	346	6.28%	\$	4,213,303,219.34
347	347	6.28%	\$	4,477,753,234.54
348	348	6.28%	\$	4,758,801,582.89
349	349	6.28%	\$	5,057,490,066.81
350	350	6.28%	\$	5,374,925,877.95
351	351	6.28%	\$	5,712,285,701.37
352	352	6.28%	\$	6,070,820,077.34
353	353	6.28%	\$	6,451,858,036.90
354	354	6.28%	\$	6,856,812,028.36
355	355	6.28%	\$	7,287,183,153.03
356	356	6.28%	\$	7,744,566,729.57
357	357	6.28%	\$ \$ \$	8,230,658,207.61
358	358	6.28%	\$	8,747,259,452.46
359	359	6.28%		9,296,285,424.41
360	360	6.28%	\$ \$	9,879,771,277.14
361	361	6.28%	\$	10,499,879,901.73
362	362	6.28%	\$	11,158,909,944.19
363	363	6.28%	\$	11,859,304,326.15
364	364	6.28%	\$	12,603,659,300.37

### ATO NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 106.94
Annual Dividend =	\$ 2.72
DCF Growth Estimate =	7.00%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.21%
Constant DCF =	9.72%

LINE	YEAR	GROWTH	DIVIDEND
NO	TEAN	RATE	DIVIDEND
365	365	6.28%	\$ 13,394,734,074.71
366	366	6.28%	\$ 14,235,461,040.03
367	367	6.28%	\$ 15,128,956,640.12
368	368	6.28%	\$ 16,078,532,923.88
369	369	6.28%	\$ 17,087,709,822.54
370	370	6.28%	\$ 18,160,228,197.54
371	371	6.28%	\$ 19,300,063,707.29
372	372	6.28%	\$ 20,511,441,544.33
373	373	6.28%	\$ 21,798,852,097.44
374	374	6.28%	\$ 23,167,067,596.84
375	375	6.28%	\$ 24,621,159,804.08
376	376	6.28%	\$ 26,166,518,812.28
377	377	6.28%	\$ 27,808,873,026.36
378	378	6.28%	\$ 29,554,310,397.35
379	379	6.28%	\$ 31,409,300,989.47
380	380	6.28%	\$ 33,380,720,963.65
381	381	6.28%	\$ 35,475,878,066.39
382	382	6.28%	\$ 37,702,538,718.44
383	383	6.28%	\$ 40,068,956,803.70
384	384	6.28%	\$ 42,583,904,265.09
385	385	6.28%	\$ 45,256,703,620.76
386	386	6.28%	\$ 48,097,262,521.24
387	387	6.28%	\$ 51,116,110,475.53
388	388	6.28%	\$ 54,324,437,882.36
389	389	6.28%	\$ 57,734,137,511.25
390	390	6.28%	\$ 61,357,848,587.15
391	391	6.28%	\$ 65,209,003,642.08
392	392	6.28%	\$ 69,301,878,307.44

### ATO NON-CONSTANT DCF CALCULATION

\$ 106.94
\$ 2.72
7.00%
6.28%
9.21%
9.72%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 73,651,644,231.54
394	394	6.28%	\$ 78,274,425,318.51
395	395	6.28%	\$ 83,187,357,497.18
396	396	6.28%	\$ 88,408,652,241.18
397	397	6.28%	\$ 93,957,664,076.15
398	398	6.28%	\$ 99,854,962,323.86
399	399	6.28%	\$ 106,122,407,349.54
400	400	6.28%	\$ 112,783,231,594.79

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%
Υ.

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		DIVIDEND
1	1	4.07%	\$	1.81
2	2	4.07%	\$	1.89
3	3	4.07%	\$	1.96
4	4	4.07%	\$	2.04
5	5	4.07%	\$	2.13
6	6	4.18%	\$	2.22
7	7	4.29%	\$	2.31
8	8	4.40%	\$	2.41
9	9	4.51%	\$	2.52
10	10	4.62%	\$	2.64
11	11	4.73%	\$	2.76
12	12	4.84%	\$	2.90
13	13	4.95%	\$	3.04
14	14	5.06%	\$	3.19
15	15	5.17%	\$	3.36
16	16	5.28%	\$	3.54
17	17	5.39%	\$	3.73
18	18	5.50%	\$	3.93
19	19	5.61%	\$	4.15
20	20	5.72%	\$	4.39
21	21	5.83%	\$	4.65
22	22	5.95%	\$	4.92
23	23	6.06%	\$	5.22
24	24	6.17%	\$	5.54
25	25	6.28%	\$	5.89
26	26	6.28%	\$	6.26
27	27	6.28%	\$	6.65
28	28	6.28%	\$	7.07

### **AVA NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 41.41
Annual Dividend =	\$ 1.74
DCF Growth Estimate =	4.07%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.81%
Constant DCF =	8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
00	00	0.000/	•	7.54
29	29	6.28%	\$	7.51
30	30	6.28%	\$	7.99
31	31	6.28%	\$	8.49
32	32	6.28%	\$	9.02
33	33	6.28%	\$	9.59
34	34	6.28%	\$	10.19
35	35	6.28%	\$	10.83
36	36	6.28%	\$	11.51
37	37	6.28%	\$	12.23
38	38	6.28%	\$	13.00
39	39	6.28%	\$	13.81
40	40	6.28%	\$	14.68
41	41	6.28%	\$	15.60
42	42	6.28%	\$	16.58
43	43	6.28%	\$	17.62
44	44	6.28%	\$	18.73
45	45	6.28%	\$	19.90
46	46	6.28%	\$	21.15
47	47	6.28%	\$	22.48
48	48	6.28%	\$	23.89
49	49	6.28%	\$	25.39
50	50	6.28%	\$	26.98
51	51	6.28%	\$	28.67
52	52	6.28%	\$	30.47
53	53	6.28%	\$	32.39
54	54	6.28%	\$	34.42
55	55	6.28%	\$	36.58
56	56	6.28%	\$	38.88

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
<b>C</b> 7	F-7	0.000/	ф	44.00
57 50	57	6.28%	<b>5</b>	41.32
58	58	6.28%	<b>5</b>	43.91
59	59	6.28%	<b>5</b>	46.67
60	60	6.28%	<b>5</b>	49.59
61	61	6.28%	\$	52.71
62	62	6.28%	\$	56.02
63	63	6.28%	\$	59.53
64	64	6.28%	\$	63.27
65	65	6.28%	\$	67.24
66	66	6.28%	\$	71.46
67	67	6.28%	\$	75.94
68	68	6.28%	\$	80.71
69	69	6.28%	\$	85.78
70	70	6.28%	\$	91.16
71	71	6.28%	\$	96.88
72	72	6.28%	\$	102.96
73	73	6.28%	\$	109.43
74	74	6.28%	\$	116.29
75	75	6.28%	\$	123.59
76	76	6.28%	\$	131.35
77	77	6.28%	\$	139.59
78	78	6.28%	\$	148.36
79	79	6.28%	\$	157.67
80	80	6.28%	\$	167.56
81	81	6.28%	\$	178.08
82	82	6.28%	\$	189.26
83	83	6.28%	\$	201.14
84	84	6.28%		213.76

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
0.5	2-	0.0001	•	007.40
85	85	6.28%	\$	227.18
86	86	6.28%	\$	241.44
87	87	6.28%	\$	256.59
88	88	6.28%	\$	272.70
89	89	6.28%	\$	289.81
90	90	6.28%	\$	308.00
91	91	6.28%	\$	327.33
92	92	6.28%	\$	347.88
93	93	6.28%	\$	369.71
94	94	6.28%	\$	392.92
95	95	6.28%	\$	417.58
96	96	6.28%	\$	443.79
97	97	6.28%	\$	471.65
98	98	6.28%	\$	501.25
99	99	6.28%	\$	532.71
100	100	6.28%	\$	566.15
101	101	6.28%	\$	601.68
102	102	6.28%	\$	639.45
103	103	6.28%	\$	679.58
104	104	6.28%	\$	722.24
105	105	6.28%	\$	767.57
106	106	6.28%	\$	815.74
107	107	6.28%	\$	866.94
108	108	6.28%	\$	921.36
109	109	6.28%	\$	979.19
110	110	6.28%	\$	1,040.65
111	111	6.28%	\$	1,105.96
112	112	6.28%	\$	1,175.38

### **AVA NON-CONSTANT DCF CALCULATION**

74
7%
28%
1%
5%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
113	113	6.28%	\$	1,249.15
114	114	6.28%		1,327.56
115	115	6.28%	\$	1,410.88
116	116	6.28%	\$	1,499.44
117	117	6.28%	\$	1,593.55
118	118	6.28%	\$	1,693.57
119	119	6.28%	\$	1,799.87
120	120	6.28%	\$	1,912.84
121	121	6.28%	\$	2,032.90
122	122	6.28%	\$	2,160.49
123	123	6.28%	\$	2,296.10
124	124	6.28%	\$	2,440.21
125	125	6.28%	\$	2,593.37
126	126	6.28%	\$	2,756.15
127	127	6.28%	\$	2,929.14
128	128	6.28%	\$	3,112.99
129	129	6.28%	\$	3,308.38
130	130	6.28%	\$	3,516.03
131	131	6.28%	\$	3,736.71
132	132	6.28%	\$	3,971.25
133	133	6.28%	\$	4,220.51
134	134	6.28%	\$	4,485.41
135	135	6.28%	\$	4,766.94
136	136	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	5,066.14
137	137	6.28%	\$	5,384.12
138	138	6.28%	\$	5,722.05
139	139	6.28%	\$	6,081.20
140	140	6.28%	\$	6,462.89

### **AVA NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 41.41
Annual Dividend =	\$ 1.74
DCF Growth Estimate =	4.07%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.81%
Constant DCF =	8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
NO		KAIE		
4 4 4	4 4 4	0.000/	Φ.	0.000.54
141	141	6.28%	\$	6,868.54
142	142	6.28%	\$	7,299.64
143	143	6.28%	\$	7,757.81
144	144	6.28%	\$	8,244.73
145	145	6.28%	\$	8,762.21
146	146	6.28%	\$	9,312.18
147	147	6.28%	\$	9,896.66
148	148	6.28%	\$	10,517.83
149	149	6.28%	\$	11,177.99
150	150	6.28%	\$	11,879.58
151	151	6.28%	\$	12,625.21
152	152	6.28%	\$	13,417.63
153	153	6.28%	\$	14,259.80
154	154	6.28%	\$	15,154.82
155	155	6.28%	\$	16,106.02
156	156	6.28%	\$	17,116.92
157	157	6.28%	\$	18,191.28
158	158	6.28%	\$	19,333.06
159	159	6.28%	\$	20,546.51
160	160	6.28%	\$	21,836.12
161	161	6.28%	\$	23,206.68
162	162	6.28%	\$	24,663.25
163	163	6.28%	\$	26,211.26
164	164	6.28%	\$	27,856.42
165	165	6.28%	\$	29,604.84
166	166	6.28%	\$	31,463.00
167	167	6.28%	\$	33,437.79
168	168	6.28%	\$	35,536.53
- <del>-</del>			•	,

### **AVA NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 41.41
Annual Dividend =	\$ 1.74
DCF Growth Estimate =	4.07%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.81%
Constant DCF =	8.45%

169         169         6.28%         \$ 37,767.00           170         170         6.28%         \$ 40,137.46           171         171         6.28%         \$ 42,656.71           172         172         6.28%         \$ 45,334.08           173         173         6.28%         \$ 48,179.49           174         174         6.28%         \$ 51,203.50           175         175         6.28%         \$ 54,417.32           176         176         6.28%         \$ 57,832.84           177         177         6.28%         \$ 61,462.75           178         178         6.28%         \$ 65,320.49           179         179         6.28%         \$ 69,420.36           180         180         6.28%         \$ 73,777.57           181         181         6.28%         \$ 73,777.57           181         181         6.28%         \$ 83,329.58           183         183         6.28%         \$ 83,329.58           184         184         6.28%         \$ 88,559.80           184         184         6.28%         \$ 94,118.30           185         185         6.28%         \$ 106,303.84	LINE NO	YEAR	GROWTH RATE		DIVIDEND
170       170       6.28%       \$ 40,137.46         171       171       6.28%       \$ 42,656.71         172       172       6.28%       \$ 45,334.08         173       173       6.28%       \$ 48,179.49         174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 73,777.57         181       181       6.28%       \$ 83,329.58         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 94,118.30         185       185       6.28%       \$ 94,118.30         185       185       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190 <t< th=""><th>140</th><th></th><th>NAIL</th><th></th><th></th></t<>	140		NAIL		
170       170       6.28%       \$ 40,137.46         171       171       6.28%       \$ 42,656.71         172       172       6.28%       \$ 45,334.08         173       173       6.28%       \$ 48,179.49         174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 73,777.57         181       181       6.28%       \$ 83,329.58         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 94,118.30         185       185       6.28%       \$ 94,118.30         185       185       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190 <t< td=""><td>160</td><td>160</td><td>6 200/</td><td>¢</td><td>27 767 00</td></t<>	160	160	6 200/	¢	27 767 00
170       170       6.28%       \$ 40,137,46         171       171       6.28%       \$ 42,656.71         172       172       6.28%       \$ 45,334.08         173       173       6.28%       \$ 48,179.49         174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 73,777.57         181       181       6.28%       \$ 83,329.58         182       182       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 94,118.30         185       185       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190 <t< td=""><td></td><td></td><td></td><td>Ф Ф</td><td>•</td></t<>				Ф Ф	•
171       171       6.28%       \$ 42,856.71         172       172       6.28%       \$ 45,334.08         173       173       6.28%       \$ 48,179.49         174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 12,976.06         189       189       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 127,603.12         191				<b>Ф</b>	•
172       172       6.28%       \$ 48,179.49         173       173       6.28%       \$ 51,203.50         175       175       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 153,169.97         193       193       6.28%       \$ 153,169.97         194				Ф Ф	•
173       173       6.28%       \$ 48,179.49         174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 94,118.30         186       186       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 153,169.97         193				<b>\$</b>	•
174       174       6.28%       \$ 51,203.50         175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195				\$	•
175       175       6.28%       \$ 54,417.32         176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 83,329.58         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 195,399.47				\$	•
176       176       6.28%       \$ 57,832.84         177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 94,118.30         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 195,399.47				\$	
177       177       6.28%       \$ 61,462.75         178       178       6.28%       \$ 65,320.49         179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         189       189       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 195,399.47				\$	
178       178       6.28%       \$       65,320.49         179       179       6.28%       \$       69,420.36         180       180       6.28%       \$       73,777.57         181       181       6.28%       \$       78,408.25         182       182       6.28%       \$       83,329.58         183       183       6.28%       \$       88,559.80         184       184       6.28%       \$       94,118.30         185       185       6.28%       \$       100,025.68         186       186       6.28%       \$       100,025.68         187       187       6.28%       \$       112,976.06         188       188       6.28%       \$       120,067.05         189       189       6.28%       \$       127,603.12         190       190       6.28%       \$       135,612.19         191       191       6.28%       \$       153,169.97         193       193       6.28%       \$       162,783.75         194       194       6.28%       \$       183,859.44         196       196       6.28%       \$       195,399.47				\$	•
179       179       6.28%       \$ 69,420.36         180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 83,329.58         182       182       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 120,067.05         188       188       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 195,399.47				\$	•
180       180       6.28%       \$ 73,777.57         181       181       6.28%       \$ 78,408.25         182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 173,000.95         195       196       6.28%       \$ 195,399.47				\$	
181       181       6.28%       \$       78,408.25         182       182       6.28%       \$       83,329.58         183       183       6.28%       \$       88,559.80         184       184       6.28%       \$       94,118.30         185       185       6.28%       \$       100,025.68         186       186       6.28%       \$       106,303.84         187       187       6.28%       \$       112,976.06         188       188       6.28%       \$       120,067.05         189       189       6.28%       \$       127,603.12         190       190       6.28%       \$       135,612.19         191       191       6.28%       \$       144,123.96         192       192       6.28%       \$       153,169.97         193       193       6.28%       \$       173,000.95         195       195       6.28%       \$       183,859.44         196       196       6.28%       \$       195,399.47				\$	•
182       182       6.28%       \$ 83,329.58         183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 195,399.47				\$	•
183       183       6.28%       \$ 88,559.80         184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       6.28%       \$ 195,399.47				\$	
184       184       6.28%       \$ 94,118.30         185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       6.28%       \$ 195,399.47	183	183	6.28%	\$	88,559.80
185       185       6.28%       \$ 100,025.68         186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,339.47	184	184	6.28%	\$	94,118.30
186       186       6.28%       \$ 106,303.84         187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	185	185	6.28%	\$	100,025.68
187       187       6.28%       \$ 112,976.06         188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	186	186	6.28%	\$	106,303.84
188       188       6.28%       \$ 120,067.05         189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	187	187	6.28%	\$	112,976.06
189       189       6.28%       \$ 127,603.12         190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	188	188	6.28%	\$	120,067.05
190       190       6.28%       \$ 135,612.19         191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	189	189	6.28%	\$	127,603.12
191       191       6.28%       \$ 144,123.96         192       192       6.28%       \$ 153,169.97         193       193       6.28%       \$ 162,783.75         194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47	190	190	6.28%	\$	135,612.19
192       192       6.28%       \$       153,169.97         193       193       6.28%       \$       162,783.75         194       194       6.28%       \$       173,000.95         195       195       6.28%       \$       183,859.44         196       196       6.28%       \$       195,399.47	191	191	6.28%	\$	144,123.96
193       193       6.28%       \$       162,783.75         194       194       6.28%       \$       173,000.95         195       195       6.28%       \$       183,859.44         196       196       6.28%       \$       195,399.47	192	192	6.28%	\$	
194       194       6.28%       \$ 173,000.95         195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47				\$	•
195       195       6.28%       \$ 183,859.44         196       196       6.28%       \$ 195,399.47				\$	
196 196 6.28% \$ 195,399.47				\$	
				\$	•

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
197	197	6.28%	\$	207,663.81
198	198	6.28%	\$	220,697.93
199	199	6.28%	\$	234,550.14
200	200	6.28%	\$	249,271.80
201	201	6.28%	\$	264,917.46
202	202	6.28%	\$	281,545.13
203	203	6.28%	\$	299,216.45
204	204	6.28%	\$	317,996.92
205	205	6.28%	\$	337,956.15
206	206	6.28%	\$	359,168.13
207	207	6.28%	\$	381,711.49
208	208	6.28%	\$	405,669.79
209	209	6.28%	\$	431,131.85
210	210	6.28%	\$	458,192.05
211	211	6.28%	\$	486,950.70
212	212	6.28%	\$	517,514.40
213	213	6.28%	\$	549,996.44
214	214	6.28%	\$	584,517.23
215	215	6.28%	\$	621,204.74
216	216	6.28%	\$	660,194.95
217	217	6.28%	\$	701,632.41
218	218	6.28%	\$	745,670.71
219	219	6.28%	\$	792,473.09
220	220	6.28%	\$	842,213.05
221	221	6.28%	\$	895,074.96
222	222	6.28%	\$	951,254.77
223	223	6.28%	\$	1,010,960.73
224	224	6.28%	\$	1,074,414.17

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
225	225	6.28%	\$	1,141,850.30
226	226	6.28%	\$	1,213,519.09
227	227	6.28%	\$	1,289,686.20
228	228	6.28%	\$	1,370,633.98
229	229	6.28%	\$	1,456,662.48
230	230	6.28%	\$	1,548,090.61
231	231	6.28%	\$	1,645,257.26
232	232	6.28%	\$	1,748,522.63
233	233	6.28%	\$	1,858,269.50
234	234	6.28%	\$	1,974,904.68
235	235	6.28%	\$	2,098,860.53
236	236	6.28%	\$	2,230,596.53
237	237	6.28%	\$	2,370,601.00
238	238	6.28%	\$	2,519,392.92
239	239	6.28%	\$	2,677,523.83
240	240	6.28%	\$	2,845,579.91
241	241	6.28%	\$	3,024,184.11
242	242	6.28%	\$	3,213,998.49
243	243	6.28%	\$	3,415,726.66
244	244	6.28%	\$	3,630,116.40
245	245	6.28%	\$	3,857,962.41
246	246	6.28%	\$	4,100,109.29
247	247	6.28%	\$	4,357,454.63
248	248	6.28%	\$	4,630,952.38
249	249	6.28%	\$	4,921,616.35
250	250	6.28%	\$	5,230,523.98
251	251	6.28%	\$	5,558,820.34
252	252	6.28%	\$	5,907,722.39

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
110				
253	253	6.28%	\$	6,278,523.45
254	254	6.28%	\$	6,672,598.01
255	255	6.28%	\$	7,091,406.85
256	256	6.28%	\$	7,536,502.44
257	257	6.28%	\$	8,009,534.66
258	258	6.28%	\$	8,512,256.98
259	259	6.28%	\$	9,046,532.90
260	260	6.28%	\$	9,614,342.92
261	261	6.28%	\$	10,217,791.80
262	262	6.28%	\$	10,859,116.45
263	263	6.28%	\$	11,540,694.15
264	264	6.28%	\$	12,265,051.40
265	265	6.28%	\$	13,034,873.29
266	266	6.28%	\$	13,853,013.41
267	267	6.28%	\$	14,722,504.50
268	268	6.28%	\$	15,646,569.62
269	269	6.28%	\$	16,628,634.14
270	270	6.28%	\$	17,672,338.40
271	271	6.28%	\$	18,781,551.27
272	272	6.28%	\$	19,960,384.43
273	273	6.28%	\$	21,213,207.61
274	274	6.28%	\$	22,544,664.85
275	275	6.28%	\$	23,959,691.65
276	276	6.28%	\$	25,463,533.29
277	277	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	27,061,764.28
278	278	6.28%	\$	28,760,309.01
279	279	6.28%	\$	30,565,463.72
280	280	6.28%	\$	32,483,919.84

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
281	281	6.28%	\$	34,522,788.79
282	282	6.28%	\$	36,689,628.33
283	283	6.28%	\$	38,992,470.60
284	284	6.28%	\$	41,439,851.89
285	285	6.28%	\$	44,040,844.24
286	286	6.28%	\$	46,805,089.14
287	287	6.28%	\$	49,742,833.21
288	288	6.28%	\$	52,864,966.20
289	289	6.28%	\$	56,183,061.38
290	290	6.28%	\$	59,709,418.41
291	291	6.28%	\$	63,457,108.95
292	292	6.28%	\$	67,440,025.10
293	293	6.28%	\$	71,672,930.91
294	294	6.28%	\$	76,171,517.09
295	295	6.28%	\$	80,952,459.22
296	296	6.28%	\$	86,033,479.49
297	297	6.28%	\$	91,433,412.46
298	298	6.28%	\$	97,172,274.83
299	299	6.28%	\$	103,271,339.68
300	300	6.28%	\$	109,753,215.29
301	301	6.28%	\$	116,641,928.95
302	302	6.28%	\$	123,963,016.06
303	303	6.28%	\$	131,743,614.74
304	304	6.28%	\$	140,012,566.46
305	305	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	148,800,522.94
306	306	6.28%	\$	158,140,059.76
307	307	6.28%	\$	168,065,797.13
308	308	6.28%	\$	178,614,528.21

### **AVA NON-CONSTANT DCF CALCULATION**

74
7%
28%
1%
5%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
	000	0.000/	•	400 005 055 50
309	309	6.28%	\$	189,825,355.50
310	310	6.28%	\$	201,739,835.78
311	311	6.28%	\$	214,402,134.19
312	312	6.28%	\$	227,859,187.88
313	313	6.28%	\$	242,160,880.06
314	314	6.28%	\$	257,360,224.87
315	315	6.28%	\$	273,513,563.90
316	316	6.28%	\$	290,680,775.08
317	317	6.28%	\$	308,925,494.58
318	318	6.28%	\$	328,315,352.72
319	319	6.28%	\$	348,922,224.69
320	320	6.28%	\$	370,822,496.95
321	321	6.28%	\$	394,097,350.40
322	322	6.28%	\$	418,833,061.28
323	323	6.28%	\$	445,121,321.03
324	324	6.28%	\$	473,059,576.12
325	325	6.28%	\$	502,751,389.31
326	326	6.28%	\$	534,306,823.52
327	327	6.28%	\$	567,842,849.82
328	328	6.28%	\$	603,483,781.05
329	329	6.28%	\$	641,361,732.56
330	330	6.28%	\$	681,617,112.03
331	331	6.28%	\$	724,399,139.87
332	332	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	769,866,402.39
333	333	6.28%	\$	818,187,439.64
334	334	6.28%	\$	869,541,370.18
335	335	6.28%	\$	924,118,555.01
336	336	6.28%	\$	982,121,303.26

### **AVA NON-CONSTANT DCF CALCULATION**

.1
4
′%
%
%
%
9

LINE	YEAR	GROWTH	DI/	/IDEND
NO	ILAN	RATE	Div	IDEND
337	337	6.28%		3,764,622.06
338	338	6.28%	\$ 1,10	9,277,013.59
339	339	6.28%	\$ 1,17	8,901,322.08
340	340	6.28%	\$ 1,25	2,895,633.98
341	341	6.28%	\$ 1,33	1,534,234.67
342	342	6.28%	\$ 1,41	5,108,625.18
343	343	6.28%	\$ 1,50	3,928,602.75
344	344	6.28%	\$ 1,59	8,323,409.18
345	345	6.28%	\$ 1,69	8,642,951.32
346	346	6.28%	\$ 1,80	5,259,098.06
347	347	6.28%	\$ 1,91	8,567,058.83
348	348	6.28%	\$ 2,03	8,986,848.59
349	349	6.28%	\$ 2,16	6,964,844.72
350	350	6.28%	\$ 2,30	2,975,441.70
351	351	6.28%	\$ 2,44	7,522,809.60
352	352	6.28%	\$ 2,60	1,142,762.99
353	353	6.28%	\$ 2,76	4,404,747.09
354	354	6.28%	\$ 2,93	7,913,948.62
355	355	6.28%	\$ 3,12	2,313,539.13
356	356	6.28%	\$ 3,31	8,287,059.16
357	357	6.28%	\$ 3,52	6,560,952.00
358	358	6.28%	\$ 3,74	7,907,256.50
359	359	6.28%	\$ 3,98	3,146,468.91
360	360	6.28%	\$ 4,23	3,150,584.30
361	361	6.28%	\$ 4,49	8,846,328.95
362	362	6.28%	\$ 4,78	1,218,595.58
363	363	6.28%	\$ 1,10 \$ 1,17 \$ 1,25 \$ 1,33 \$ 1,41 \$ 1,50 \$ 1,69 \$ 1,69 \$ 1,80 \$ 1,91 \$ 2,03 \$ 2,16 \$ 2,30 \$ 2,16 \$ 2,30 \$ 2,44 \$ 2,60 \$ 2,76 \$ 2,93 \$ 3,12 \$ 3,31 \$ 3,52 \$ 3,74 \$ 3,98 \$ 4,23 \$ 4,49 \$ 4,78 \$ 5,08 \$ 5,08 \$ 5,40	1,314,094.16
364	364	6.28%	\$ 5,40	0,245,231.90

### **AVA NON-CONSTANT DCF CALCULATION**

74
7%
28%
1%
5%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
365	365	6.28%	\$ 5,739,194,236.82
366	366		\$ 6,099,417,540.04
367	367	6.28%	\$ 6,482,250,433.18
368	368	6.28%	\$ 6,482,250,433.18 \$ 6,889,112,018.09 \$ 7,321,510,467.25 \$ 7,781,048,614.28 \$ 8,269,429,895.46 \$ 8,788,464,664.06 \$ 9,340,076,901.05
369	369	6.28%	\$ 7,321,510,467.25
370	370	6.28%	\$ 7,781,048,614.28
371	371	6.28%	\$ 8,269,429,895.46
372	372	6.28%	\$ 8,788,464,664.06
373	373	6.28%	\$ 9,340,076,901.05
374	374	6.28%	\$ 9,926,311,347.00
375	375	6.28%	\$ 10,549,341,081.60
376	376	6.28%	\$ 11,211,475,578.95
377	377	6.28%	\$ 11,915,169,268.40
378	378	6.28%	\$ 12,663,030,632.75
379	379	6.28%	\$ 13,457,831,877.50
380	380	6.28%	\$ 14,302,519,206.95
381	381	6.28%	\$ 15,200,223,745.33
382	382		\$ 16,154,273,143.42
383	383		\$ 17,168,203,913.61
384	384		\$ 18,245,774,539.18
385	385	6.28%	\$ 19,390,979,406.46
386	386		\$ 20,608,063,611.35
387	387		\$ 21,901,538,695.25
388	388	6.28%	\$ 23,276,199,368.65
389	389		\$ 24,737,141,284.35
390	390		\$ 26,289,779,926.27
391	391	6.28%	\$ 27,939,870,683.81
392	392	6.28%	\$ 29,693,530,186.15

### **AVA NON-CONSTANT DCF CALCULATION**

\$ 41.41
\$ 1.74
4.07%
6.28%
9.81%
8.45%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 31,557,258,975.68
394	394	6.28%	\$ 33,537,965,604.45
395	395	6.28%	\$ 35,642,992,243.16
396	396	6.28%	\$ 37,880,141,897.38
397	397	6.28%	\$ 40,257,707,332.10
398	398	6.28%	\$ 42,784,501,811.73
399	399	6.28%	\$ 45,469,891,769.48
400	400	6.28%	\$ 48,323,831,527.26

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
<b>.</b>

LINE NO	YEAR	GROWTH RATE	DIVIDEND	
		_		
1	1	5.50%	\$	2.51
2	2	5.50%	\$	2.65
3	3	5.50%	\$	2.79
4	4	5.50%	\$	2.95
5	5	5.50%	\$	3.11
6	6	5.54%	\$	3.28
7	7	5.58%	\$	3.47
8	8	5.61%	\$	3.66
9	9	5.65%	\$	3.87
10	10	5.69%	\$	4.09
11	11	5.73%	\$	4.32
12	12	5.77%	\$	4.57
13	13	5.81%	\$	4.84
14	14	5.85%	\$	5.12
15	15	5.89%	\$	5.42
16	16	5.93%	\$	5.74
17	17	5.97%	\$	6.08
18	18	6.00%	\$	6.45
19	19	6.04%	\$	6.84
20	20	6.08%	\$	7.26
21	21	6.12%	\$	7.70
22	22	6.16%	\$	8.17
23	23	6.20%	\$	8.68
24	24	6.24%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9.22
25	25	6.28%	\$	9.80
26	26	6.28%	\$	10.42
27	27	6.28%	\$	11.07
28	28	6.28%	\$	11.76

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Υ.

LINE NO	YEAR	GROWTH RATE	DIVIDEND	
20	20	C 200/	Φ	40.50
29	29	6.28%	<b>Þ</b>	12.50
30	30	6.28%	<b>Þ</b>	13.29
31	31	6.28%	<b>5</b>	14.12
32	32	6.28%	\$	15.01
33	33	6.28%	\$	15.95
34	34	6.28%	\$	16.95
35	35	6.28%	\$	18.01
36	36	6.28%	\$	19.14
37	37	6.28%	\$	20.35
38	38	6.28%	\$	21.62
39	39	6.28%	\$	22.98
40	40	6.28%	\$	24.42
41	41	6.28%	\$	25.96
42	42	6.28%	\$	27.59
43	43	6.28%	\$	29.32
44	44	6.28%	\$	31.16
45	45	6.28%	\$	33.11
46	46	6.28%	\$	35.19
47	47	6.28%	\$	37.40
48	48	6.28%	\$	39.75
49	49	6.28%	\$	42.24
50	50	6.28%	\$	44.89
51	51	6.28%	\$	47.71
52	52	6.28%	\$	50.70
53	53	6.28%	\$	53.89
54	54	6.28%	, \$	57.27
55	55	6.28%	, \$	60.86
56	56	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	64.68

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	GROWTH RATE	DIVIDEND
57	57	6.28%	\$ 68.74
58	58	6.28%	\$ 73.06
59	59	6.28%	\$ 77.64
60	60	6.28%	\$ 82.52
61	61	6.28%	\$ 87.70
62	62	6.28%	\$ 93.20
63	63	6.28%	\$ 99.05
64	64	6.28%	\$ 105.27
65	65	6.28%	\$ 111.88
66	66	6.28%	\$ 118.90
67	67	6.28%	\$ 126.36
68	68	6.28%	\$ 134.29
69	69	6.28%	\$ 142.72
70	70	6.28%	\$ 151.68
71	71	6.28%	\$ 161.20
72	72	6.28%	\$ 171.32
73	73	6.28%	\$ 182.07
74	74	6.28%	\$ 193.50
75	75	6.28%	\$ 205.64
76	76	6.28%	\$ 218.55
77	77	6.28%	\$ 232.27
78	78	6.28%	\$ 246.84
79	79	6.28%	\$ 262.34
80	80	6.28%	\$ 278.80
81	81	6.28%	\$ 296.30
82	82	6.28%	\$ 314.90
83	83	6.28%	\$ 334.66
84	84	6.28%	355.67

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	\$	377.99
86	86	6.28%	\$	401.72
87	87	6.28%	\$	426.93
88	88	6.28%	\$	453.73
89	89	6.28%	\$	482.21
90	90	6.28%	\$	512.47
91	91	6.28%	\$	544.64
92	92	6.28%	\$	578.82
93	93	6.28%	\$	615.15
94	94	6.28%	\$	653.76
95	95	6.28%	\$	694.80
96	96	6.28%	\$	738.41
97	97	6.28%	\$	784.75
98	98	6.28%	\$	834.01
99	99	6.28%	\$	886.35
100	100	6.28%	\$	941.99
101	101	6.28%	\$	1,001.11
102	102	6.28%	\$	1,063.95
103	103	6.28%	\$	1,130.73
104	104	6.28%	\$	1,201.70
105	105	6.28%	\$	1,277.12
106	106	6.28%	\$	1,357.28
107	107	6.28%	\$	1,442.47
108	108	6.28%	\$	1,533.01
109	109	6.28%	\$	1,629.23
110	110	6.28%	\$	1,731.49
111	111	6.28%	\$	1,840.17
112	112	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,955.66

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Υ.

LINE NO	YEAR	GROWTH RATE	DI	VIDEND
113	113	6.28%	\$	2,078.41
114	114	6.28%	\$	2,208.86
115	115	6.28%	\$	2,347.51
116	116	6.28%	\$	2,494.85
117	117	6.28%	\$	2,651.44
118	118	6.28%	\$	2,817.86
119	119	6.28%	\$	2,994.72
120	120	6.28%	\$	3,182.69
121	121	6.28%	\$	3,382.45
122	122	6.28%	\$	3,594.75
123	123	6.28%	\$	3,820.38
124	124	6.28%	\$	4,060.16
125	125	6.28%	\$	4,315.00
126	126	6.28%	\$	4,585.83
127	127	6.28%	\$	4,873.67
128	128	6.28%	\$	5,179.56
129	129	6.28%	\$	5,504.66
130	130	6.28%	\$	5,850.17
131	131	6.28%	\$	6,217.35
132	132	6.28%	\$	6,607.59
133	133	6.28%	\$	7,022.32
134	134	6.28%	\$	7,463.08
135	135	6.28%	\$	7,931.50
136	136	6.28%	\$	8,429.33
137	137	6.28%	\$	8,958.40
138	138	6.28%	\$	9,520.67
139	139	6.28%	\$	10,118.24
140	140	6.28%		10,753.32

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	GROWTH RATE	Dľ	VIDEND
4.44	4.44	0.000/	Φ.	44 400 00
141	141	6.28%	\$	11,428.26
142	142	6.28%	\$	12,145.56
143	143	6.28%	\$	12,907.88
144	144	6.28%	\$	13,718.05
145	145	6.28%	\$	14,579.07
146	146	6.28%	\$	15,494.13
147	147	6.28%	\$	16,466.63
148	148	6.28%	\$	17,500.16
149	149	6.28%	\$	18,598.57
150	150	6.28%	\$	19,765.92
151	151	6.28%	\$	21,006.54
152	152	6.28%	\$	22,325.02
153	153	6.28%	\$	23,726.26
154	154	6.28%	\$	25,215.45
155	155	6.28%	\$	26,798.11
156	156	6.28%	\$	28,480.11
157	157	6.28%	\$	30,267.68
158	158	6.28%	\$	32,167.44
159	159	6.28%	\$	34,186.45
160	160	6.28%	\$	36,332.18
161	161	6.28%	\$	38,612.58
162	162	6.28%	\$	41,036.12
163	163	6.28%	\$	43,611.77
164	164	6.28%	\$	46,349.08
165	165	6.28%	\$	49,258.21
166	166	6.28%	\$	52,349.92
167	167	6.28%	\$	55,635.69
168	168	6.28%	\$	59,127.69

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	ROWTH RATE		DIVIDEND
400	4.00	0.000/	•	22.222.27
169	169	6.28%	\$	62,838.87
170	170	6.28%	\$	66,782.98
171	171	6.28%	\$	70,974.65
172	172	6.28%	\$	75,429.41
173	173	6.28%	\$	80,163.77
174	174	6.28%	\$	85,195.29
175	175	6.28%	\$	90,542.61
176	176	6.28%	\$	96,225.56
177	177	6.28%	\$	102,265.21
178	178	6.28%	\$	108,683.93
179	179	6.28%	\$	115,505.53
180	180	6.28%	\$	122,755.29
181	181	6.28%	\$	130,460.09
182	182	6.28%	\$	138,648.48
183	183	6.28%	\$	147,350.82
184	184	6.28%	\$	156,599.36
185	185	6.28%	\$	166,428.40
186	186	6.28%	\$	176,874.35
187	187	6.28%	\$	187,975.96
188	188	6.28%	\$	199,774.36
189	189	6.28%	\$	212,313.29
190	190	6.28%	\$	225,639.24
191	191	6.28%	\$	239,801.60
192	192	6.28%	\$	254,852.86
193	193	6.28%	* * * * * * * * * * * * * * * * * * * *	270,848.82
194	194	6.28%	\$	287,848.78
195	195	6.28%	\$	305,915.75
196	196	6.28%	\$	325,116.70

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Υ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
407	407	0.000/	Φ.	0.45 500 0.4
197	197	6.28%	\$	345,522.81
198	198	6.28%	\$	367,209.71
199	199	6.28%	\$	390,257.81
200	200	6.28%	\$	414,752.53
201	201	6.28%	\$	440,784.67
202	202	6.28%	\$	468,450.73
203	203	6.28%	\$	497,853.27
204	204	6.28%	\$	529,101.27
205	205	6.28%	\$	562,310.57
206	206	6.28%	\$	597,604.26
207	207	6.28%	\$	635,113.19
208	208	6.28%	\$	674,976.37
209	209	6.28%	\$	717,341.59
210	210	6.28%	\$	762,365.88
211	211	6.28%	\$	810,216.15
212	212	6.28%	\$	861,069.75
213	213	6.28%	\$	915,115.21
214	214	6.28%	\$	972,552.86
215	215	6.28%	\$	1,033,595.61
216	216	6.28%	\$	1,098,469.74
217	217	6.28%	\$	1,167,415.73
218	218	6.28%	\$	1,240,689.14
219	219	6.28%	\$	1,318,561.60
220	220	6.28%	\$	1,401,321.75
221	221	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,489,276.39
222	222	6.28%	\$	1,582,751.54
223	223	6.28%	\$	1,682,093.71
224	224	6.28%	\$	1,787,671.14

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
225	225	6.28%	\$	1,899,875.18
226	226	6.28%	\$	2,019,121.76
227	227	6.28%	\$	2,145,852.92
228	228	6.28%	\$	2,280,538.42
229	229	6.28%	\$	2,423,677.51
230	230	6.28%	\$	2,575,800.80
231	231	6.28%	\$	2,737,472.19
232	232	6.28%	\$	2,909,290.96
233	233	6.28%	\$	3,091,894.01
234	234	6.28%	\$	3,285,958.23
235	235	6.28%	\$	3,492,202.99
236	236	6.28%	\$	3,711,392.80
237	237	6.28%	\$	3,944,340.17
238	238	6.28%	\$	4,191,908.59
239	239	6.28%	\$	4,455,015.76
240	240	6.28%	\$	4,734,636.98
241	241	6.28%	\$	5,031,808.76
242	242	6.28%	\$	5,347,632.67
243	243	6.28%	\$	5,683,279.42
244	244	6.28%	\$	6,039,993.20
245	245	6.28%	\$	6,419,096.30
246	246	6.28%	\$	6,821,993.98
247	247	6.28%	\$	7,250,179.74
248	248	6.28%	\$	7,705,240.78
249	249	6.28%	\$	8,188,863.94
250	250	6.28%	\$	8,702,841.95
251	251	6.28%	\$	9,249,080.04
252	252	6.28%	\$	9,829,603.02

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Υ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
253	253	6.28%	\$	10,446,562.81
254	254	6.28%	\$	11,102,246.38
255	255	6.28%	\$	11,799,084.24
256	256	6.28%	\$	12,539,659.48
257	257	6.28%	\$	13,326,717.27
258	258	6.28%	\$	14,163,175.13
259	259	6.28%	\$	15,052,133.67
260	260	6.28%	\$	15,996,888.12
261	261	6.28%	\$	17,000,940.54
262	262	6.28%	\$	18,068,012.80
263	263	6.28%	\$	19,202,060.37
264	264	6.28%	\$	20,407,286.98
265	265	6.28%	\$	21,688,160.22
266	266	6.28%	\$	23,049,428.09
267	267	6.28%	\$	24,496,136.60
268	268	6.28%	\$	26,033,648.46
269	269	6.28%	\$	27,667,663.00
270	270	6.28%	\$	29,404,237.26
271	271	6.28%	\$	31,249,808.44
272	272	6.28%	\$	33,211,217.79
273	273	6.28%	\$	35,295,735.94
274	274	6.28%	\$	37,511,089.88
275	275	6.28%	\$	39,865,491.59
276	276	6.28%	\$	42,367,668.46
277	277	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	45,026,895.67
278	278	6.28%	\$	47,853,030.56
279	279	6.28%	\$	50,856,549.18
280	280	6.28%	\$	54,048,585.10

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Υ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
281	281	6.28%	\$	57,440,970.69
282	282	6.28%	\$	61,046,281.01
283	283	6.28%	\$	64,877,880.38
284	284	6.28%	\$	68,949,971.93
285	285	6.28%	\$	73,277,650.28
286	286	6.28%	\$	77,876,957.46
287	287	6.28%	\$	82,764,942.37
288	288	6.28%	\$	87,959,724.03
289	289	6.28%	\$	93,480,558.67
290	290	6.28%	\$	99,347,911.16
291	291	6.28%	\$	105,583,530.88
292	292	6.28%	\$	112,210,532.28
293	293	6.28%	\$	119,253,480.63
294	294	6.28%	\$	126,738,483.04
295	295	6.28%	\$	134,693,285.25
296	296	6.28%	\$	143,147,374.48
297	297	6.28%	\$	152,132,088.70
298	298	6.28%	\$	161,680,732.85
299	299	6.28%	\$	171,828,702.28
300	300	6.28%	\$	182,613,613.92
301	301	6.28%	\$	194,075,445.76
302	302	6.28%	\$	206,256,685.02
303	303	6.28%	\$	219,202,485.65
304	304	6.28%	\$	232,960,835.72
305	305	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	247,582,735.30
306	306	6.28%	\$	263,122,385.47
307	307	6.28%	\$	279,637,389.31
308	308	6.28%	\$	297,188,965.35

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
309	309	6.28%	\$	315,842,174.56
310	310	6.28%	\$	335,666,161.47
311	311	6.28%	\$	356,734,410.51
312	312	6.28%	\$	379,125,018.39
313	313	6.28%	\$	402,920,983.61
314	314	6.28%	\$	428,210,514.10
315	315	6.28%	\$	455,087,354.21
316	316	6.28%	\$	483,651,132.20
317	317	6.28%	\$	514,007,729.53
318	318	6.28%	\$	546,269,673.38
319	319	6.28%	\$	580,556,553.74
320	320	6.28%	\$	616,995,466.74
321	321	6.28%	\$	655,721,485.75
322	322	6.28%	\$	696,878,162.08
323	323	6.28%	\$	740,618,057.11
324	324	6.28%	\$	787,103,307.82
325	325	6.28%	\$	836,506,227.78
326	326	6.28%	\$	889,009,945.91
327	327	6.28%	\$	944,809,085.32
328	328	6.28%	\$	1,004,110,484.71
329	329	6.28%	\$	1,067,133,965.13
330	330	6.28%	\$	1,134,113,144.79
331	331	6.28%	\$	1,205,296,305.07
332	332	6.28%	\$	1,280,947,310.85
333	333	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,361,346,588.61
334	334	6.28%	\$	1,446,792,165.94
335	335	6.28%	\$	1,537,600,776.27
336	336	6.28%	\$	1,634,109,032.97

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

NO YEAR RATE		DIVIDEND
	_	
337 337 6.28%	\$	1,736,674,677.10
338 338 6.28%	\$	1,845,677,903.51
339 339 6.28%	\$	1,961,522,770.16
340 340 6.28%	\$	2,084,638,695.93
341 341 6.28%	\$	2,215,482,052.34
342 342 6.28%	\$	2,354,537,855.33
343 343 6.28%	\$	2,502,321,563.08
344 344 6.28%	\$	2,659,380,986.75
345 345 6.28%	\$	2,826,298,321.14
346 346 6.28%	\$	3,003,692,302.79
347 347 6.28%	\$	3,192,220,503.53
348 348 6.28%	\$	3,392,581,768.00
349 349 6.28%	\$	3,605,518,804.19
350 350 6.28%	\$	3,831,820,936.49
351 351 6.28%	\$	4,072,327,031.62
352 352 6.28%	\$	4,327,928,608.18
353 353 6.28%	\$	4,599,573,141.36
354 354 6.28%	\$	4,888,267,575.11
355 355 6.28%	\$	5,195,082,054.68
356 356 6.28%	\$	5,521,153,893.52
357 357 6.28%	\$	5,867,691,789.09
358 358 6.28%	\$	6,235,980,303.35
359 359 6.28%	\$	6,627,384,624.40
360 360 6.28%	\$	7,043,355,627.05
361 361 6.28%	*****************	7,485,435,250.95
362 362 6.28%	\$	7,955,262,216.35
363 363 6.28%	\$	8,454,578,098.56
364 364 6.28%	\$	8,985,233,783.71

### **BKH NON-CONSTANT DCF CALCULATION**

\$ 70.38
\$ 2.38
5.50%
6.28%
9.58%
9.07%
Τ.

LINE	YEAR	GROWTH	D	IVIDEND
NO		RATE		
005	0.05	0.000/		- 40 400 000 <del>-</del> 4
365	365	6.28%		549,196,329.71
366	366	6.28%		148,556,257.78
367	367	6.28%	·	785,535,301.74
368	368	6.28%	\$ 11,4	162,494,643.59
369	369	6.28%	• • • • • • • • • • • • • • • • • • • •	181,943,666.10
370	370	6.28%	\$ 12,9	946,549,254.60
371	371	6.28%	\$ 13,7	759,145,682.83
372	372	6.28%		622,745,119.06
373	373	6.28%	\$ 15,5 \$ 16,5 \$ 17,5	540,548,791.76
374	374	6.28%	\$ 16,5	515,958,856.06
375	375	6.28%	\$ 17,5	552,591,005.01
376	376	6.28%		554,287,872.36
377	377	6.28%	\$ 19,8	325,133,276.66
378	378	6.28%	\$ 21,0	069,467,359.28
379	379	6.28%	\$ 22,3	391,902,672.67
380	380	6.28%		797,341,278.38
381	381	6.28%	\$ 25,2	290,992,918.20
382	382	6.28%	\$ 26,8	378,394,325.91
383	383	6.28%	\$ 25,2 \$ 26,8 \$ 28,5 \$ 30,3	65,429,751.04
384	384	6.28%	\$ 30,3	358,352,770.92
385	385	6.28%	\$ 32,2	263,809,471.66
386	386	6.28%	\$ 32,2 \$ 34,2	288,863,084.18
387	387	6.28%		141,020,166.53
388	388	6.28%		728,258,429.48
389	389	6.28%		159,056,308.71
390	390	6.28%		742,424,392.98
391	391	6.28%		187,938,825.04
392	392	6.28%		105,776,798.85
			, -,	, ,

### **BKH NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 70.38
Annual Dividend =	\$ 2.38
DCF Growth Estimate =	5.50%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.58%
Constant DCF =	9.07%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	20	3 6.28%	¢ 52 506 754 294 04
	39:		\$ 52,506,754,284.91
394	394	4 6.28%	\$ 55,802,366,123.31
395	39	6.28%	\$ 59,304,828,633.35
396	390	6.28%	\$ 63,027,124,897.51
397	39	7 6.28%	\$ 66,983,052,887.75
398	398	6.28%	\$ 71,187,276,612.40
399	399	6.28%	\$ 75,655,380,473.36
400	400	6.28%	\$ 80,403,927,035.08

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO	TEAR	RATE		DIVIDEND
1	1	6.98%	\$	1.94
2	2	6.98%	\$	2.08
3	3	6.98%	\$	2.22
4	4	6.98%	\$	2.38
5	5	6.98%	\$	2.54
6	6	6.95%	\$	2.72
7	7	6.91%	\$	2.91
8	8	6.88%	\$	3.11
9	9	6.84%	\$	3.32
10	10	6.81%	\$	3.55
11	11	6.77%	\$	3.79
12	12	6.74%	\$	4.04
13	13	6.70%	\$	4.31
14	14	6.67%	\$	4.60
15	15	6.63%	\$	4.91
16	16	6.59%	\$	5.23
17	17	6.56%	\$	5.57
18	18	6.52%	\$	5.94
19	19	6.49%	\$	6.32
20	20	6.45%	\$	6.73
21	21	6.42%	\$	7.16
22	22	6.38%	\$	7.62
23	23	6.35%	\$	8.10
24	24	6.31%	\$	8.61
25	25	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9.15
26	26	6.28%	\$	9.73
27	27	6.28%	\$	10.34
28	28	6.28%	\$	10.99

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
29	29	6.28%	¢	11.68
			Ф Ф	
30 31	30 31	6.28% 6.28%	Ф Ф	12.41 13.19
32	32	6.28%	Φ Φ	14.02
			Φ Φ	
33	33	6.28%	<b>Ф</b>	14.90
34	34	6.28%	<b>ቅ</b>	15.83
35	35	6.28%	<b>D</b>	16.82
36	36	6.28%	<b>\$</b>	17.88
37	37	6.28%	<b>\$</b>	19.00
38	38	6.28%	\$	20.20
39	39	6.28%	\$	21.46
40	40	6.28%	\$	22.81
41	41	6.28%	\$	24.24
42	42	6.28%	\$	25.76
43	43	6.28%	\$	27.38
44	44	6.28%	\$	29.10
45	45	6.28%	\$	30.93
46	46	6.28%	\$	32.87
47	47	6.28%	\$	34.93
48	48	6.28%	\$	37.12
49	49	6.28%	\$	39.45
50	50	6.28%	\$	41.93
51	51	6.28%	\$	44.56
52	52	6.28%	\$	47.36
53	53	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	50.33
54	54	6.28%	\$	53.49
55	55	6.28%	\$	56.84
56	56	6.28%	\$	60.41

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
NO		NAIL		
<b>5</b> 7	<b>-</b> 7	6.28%	Φ.	64.00
57	57 50		\$	64.20
58 50	58 50	6.28%	<b>4</b>	68.23
59 60	59	6.28%	D C	72.52
60	60	6.28%	<b>\$</b>	77.07
61	61	6.28%	\$	81.91
62	62	6.28%	\$	87.05
63	63	6.28%	\$	92.51
64	64	6.28%	\$	98.32
65	65	6.28%	\$	104.49
66	66	6.28%	\$	111.05
67	67	6.28%	\$	118.02
68	68	6.28%	\$	125.42
69	69	6.28%	\$	133.30
70	70	6.28%	\$	141.66
71	71	6.28%	\$	150.55
72	72	6.28%	\$	160.00
73	73	6.28%	\$	170.05
74	74	6.28%	\$	180.72
75	75	6.28%	\$	192.06
76	76	6.28%	\$	204.12
77	77	6.28%	\$	216.93
78	78	6.28%	\$	230.54
79	79	6.28%	\$	245.01
80	80	6.28%	\$	260.39
81	81	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	276.74
82	82	6.28%	\$	294.10
83	83	6.28%	\$	312.56
84	84	6.28%	\$	332.18

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	\$	353.03
86	86	6.28%	\$	375.19
87	87	6.28%	\$	398.74
88	88	6.28%	\$	423.77
89	89	6.28%	\$	450.36
90	90	6.28%	\$	478.63
91	91	6.28%	\$	508.67
92	92	6.28%	\$	540.60
93	93	6.28%	\$	574.53
94	94	6.28%	\$	610.59
95	95	6.28%	\$	648.92
96	96	6.28%	\$	689.65
97	97	6.28%	\$	732.93
98	98	6.28%	\$	778.94
99	99	6.28%	\$	827.83
100	100	6.28%	\$	879.78
101	101	6.28%	\$	935.00
102	102	6.28%	\$	993.69
103	103	6.28%	\$	1,056.06
104	104	6.28%	\$	1,122.34
105	105	6.28%	\$	1,192.79
106	106	6.28%	\$	1,267.65
107	107	6.28%	\$	1,347.22
108	108	6.28%	\$	1,431.78
109	109	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,521.64
110	110	6.28%	\$	1,617.15
111	111	6.28%	\$	1,718.65
112	112	6.28%	\$	1,826.53

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
440	440	0.000/	Φ.	4 0 4 4 4 7
113	113	6.28%	\$	1,941.17
114	114	6.28%	\$	2,063.01
115	115	6.28%	\$	2,192.49
116	116	6.28%	\$	2,330.10
117	117	6.28%	\$	2,476.35
118	118	6.28%	\$	2,631.78
119	119	6.28%	\$	2,796.97
120	120	6.28%	\$	2,972.52
121	121	6.28%	\$	3,159.09
122	122	6.28%	\$	3,357.38
123	123	6.28%	\$	3,568.10
124	124	6.28%	\$	3,792.06
125	125	6.28%	\$	4,030.07
126	126	6.28%	\$	4,283.02
127	127	6.28%	\$	4,551.84
128	128	6.28%	\$	4,837.54
129	129	6.28%	\$	5,141.17
130	130	6.28%	\$	5,463.86
131	131	6.28%	\$	5,806.80
132	132	6.28%	\$	6,171.27
133	133	6.28%	\$	6,558.61
134	134	6.28%	\$	6,970.27
135	135	6.28%	\$	7,407.76
136	136	6.28%	\$	7,872.71
137	137	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	8,366.84
138	138	6.28%	\$	8,891.99
139	139	6.28%	\$	9,450.10
140	140	6.28%	\$ \$	10,043.24

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
140		MAIL		
141	141	6.28%	¢	10,673.61
141	141	6.28%	φ •	11,343.55
142	143	6.28%	Φ Φ	•
	143		Φ	12,055.53
144		6.28%	<b>D</b>	12,812.20
145	145	6.28%	<b>5</b>	13,616.36
146	146	6.28%	\$	14,471.00
147	147	6.28%	\$	15,379.28
148	148	6.28%	\$	16,344.57
149	149	6.28%	\$	17,370.45
150	150	6.28%	\$	18,460.71
151	151	6.28%	\$	19,619.40
152	152	6.28%	\$	20,850.83
153	153	6.28%	\$	22,159.54
154	154	6.28%	\$	23,550.39
155	155	6.28%	\$	25,028.54
156	156	6.28%	\$	26,599.47
157	157	6.28%	\$	28,269.00
158	158	6.28%	\$	30,043.32
159	159	6.28%	\$	31,929.00
160	160	6.28%	\$	33,933.04
161	161	6.28%	\$	36,062.87
162	162	6.28%	\$	38,326.37
163	163	6.28%	\$	40,731.94
164	164	6.28%	\$	43,288.50
165	165	6.28%	\$	46,005.53
166	166	6.28%	\$	48,893.09
167	167	6.28%	\$	51,961.88
168	168	6.28%	\$	55,223.30
. 30	. 50	5.25,5	Ψ	23,223.30

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
169	169	6.28%	\$	58,689.41
170	170	6.28%	\$	62,373.08
171	171	6.28%	\$	66,287.96
172	172	6.28%	\$	70,448.56
173	173	6.28%	\$	74,870.29
174	174	6.28%	\$	79,569.56
175	175	6.28%	\$	84,563.79
176	176	6.28%	\$	89,871.47
177	177	6.28%	\$	95,512.30
178	178	6.28%	\$	101,507.17
179	179	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$	107,878.32
180	180	6.28%	\$	114,649.36
181	181	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	121,845.38
182	182	6.28%	\$	129,493.06
183	183	6.28%	\$	137,620.76
184	184	6.28%	\$	146,258.59
185	185	6.28%	\$	155,438.58
186	186	6.28%	\$	165,194.76
187	187	6.28%	\$	175,563.29
188	188	6.28%	\$	186,582.60
189	189	6.28%	\$	198,293.55
190	190	6.28%	\$	210,739.54
191	191	6.28%	\$	223,966.71
192	192	6.28%	\$	238,024.09
193	193	6.28%	\$ \$	252,963.79
194	194	6.28%	\$	268,841.18
195	195	6.28%	\$	285,715.13
196	196	6.28%	\$ \$	303,648.18
		· ·	•	<b>,</b>

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
407	407	0.000/	•	000 700 00
197	197	6.28%	\$ \$	322,706.80
198	198	6.28%	\$	342,961.65
199	199	6.28%	\$ \$ \$	364,487.80
200	200	6.28%	\$	387,365.06
201	201	6.28%	\$	411,678.21
202	202	6.28%	\$	437,517.40
203	203	6.28%	\$ \$ \$	464,978.39
204	204	6.28%	\$	494,162.98
205	205	6.28%	\$	525,179.36
206	206	6.28%	\$ \$ \$	558,142.50
207	207	6.28%	\$	593,174.58
208	208	6.28%	\$	630,405.47
209	209	6.28%	\$	669,973.17
210	210	6.28%	\$	712,024.36
211	211	6.28%	\$	756,714.92
212	212	6.28%	\$	804,210.49
213	213	6.28%	\$	854,687.16
214	214	6.28%	\$	908,332.01
215	215	6.28%	\$	965,343.91
216	216	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,025,934.18
217	217	6.28%	\$	1,090,327.44
218	218	6.28%	\$ \$ \$	1,158,762.37
219	219	6.28%	\$	1,231,492.65
220	220	6.28%	\$	1,308,787.88
221	221	6.28%	\$ \$ \$	1,390,934.59
222	222	6.28%	\$	1,478,237.27
223	223	6.28%	\$	1,571,019.55
224	224	6.28%	\$ \$	1,669,625.35

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO	ILAN	RATE		DIVIDEND
225	225	6.28%	\$	1,774,420.19
226	226	6.28%	\$	1,885,792.53
227	227	6.28%	\$	2,004,155.21
228	228	6.28%	\$ \$ \$	2,129,946.98
229	229	6.28%	\$	2,263,634.14
230	230	6.28%	\$	2,405,712.23
231	231	6.28%	\$ \$	2,556,707.92
232	232	6.28%	\$	2,717,180.93
233	233	6.28%	\$ \$	2,887,726.11
234	234	6.28%	\$	3,068,975.63
235	235	6.28%	\$	3,261,601.37
236	236	6.28%	\$	3,466,317.36
237	237	6.28%	\$	3,683,882.45
238	238	6.28%	\$	3,915,103.11
239	239	6.28%	\$	4,160,836.46
240	240	6.28%	\$	4,421,993.37
241	241	6.28%	\$	4,699,541.92
242	242	6.28%	\$	4,994,510.94
243	243	6.28%	\$	5,307,993.84
244	244	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	5,641,152.64
245	245	6.28%	\$	5,995,222.32
246	246	6.28%	\$	6,371,515.35
247	247	6.28%	\$	6,771,426.59
248	248	6.28%	\$	7,196,438.46
249	249	6.28%	\$ \$	7,648,126.40
250	250	6.28%	\$	8,128,164.75
251	251	6.28%	\$ \$	8,638,332.95
252	252	6.28%	\$	9,180,522.09

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO	ILAR	RATE		DIVIDEND
253	253	6.28%	\$	9,756,742.00
254	254	6.28%	\$	10,369,128.64
255	255	6.28%	\$ \$ \$	11,019,952.01
256	256	6.28%	\$	11,711,624.63
257	257	6.28%	\$	12,446,710.42
258	258	6.28%	\$	13,227,934.22
259	259	6.28%	\$ \$	14,058,191.91
260	260	6.28%	\$	14,940,561.13
261	261	6.28%	\$ \$	15,878,312.68
262	262	6.28%	\$	16,874,922.66
263	263	6.28%	\$	17,934,085.34
264	264	6.28%	\$	19,059,726.89
265	265	6.28%	\$ \$ \$	20,256,019.87
266	266	6.28%	\$	21,527,398.76
267	267	6.28%	\$ \$ \$ \$ \$ \$	22,878,576.36
268	268	6.28%	\$	24,314,561.27
269	269	6.28%	\$	25,840,676.47
270	270	6.28%	\$	27,462,579.04
271	271	6.28%	\$	29,186,281.10
272	272	6.28%	\$	31,018,172.15
273	273	6.28%	\$	32,965,042.74
274	274	6.28%	\$	35,034,109.59
275	275	6.28%	\$	37,233,042.43
276	276	6.28%	\$	39,569,992.36
277	277	6.28%	\$ \$	42,053,622.07
278	278	6.28%	\$	44,693,138.01
279	279	6.28%	\$ \$	47,498,324.44
280	280	6.28%	\$	50,479,579.76

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
281	281	6.28%	\$	53,647,955.01
282	282	6.28%	\$	57,015,194.86
283	283	6.28%	\$	60,593,781.15
284	284	6.28%	\$ \$ \$	64,396,979.15
285	285	6.28%	\$	68,438,886.70
286	286	6.28%	\$ \$ \$	72,734,486.54
287	287	6.28%	\$	77,299,701.78
288	288	6.28%	\$	82,151,454.97
289	289	6.28%	\$ \$ \$	87,307,730.79
290	290	6.28%	\$	92,787,642.75
291	291	6.28%	\$	98,611,504.05
292	292	6.28%	\$ \$ \$	104,800,902.81
293	293	6.28%	\$	111,378,782.18
294	294	6.28%	\$	118,369,525.34
295	295	6.28%	\$	125,799,045.87
296	296	6.28%	\$ \$	133,694,883.85
297	297	6.28%	\$	142,086,307.93
298	298	6.28%	\$ \$	151,004,423.79
299	299	6.28%	\$	160,482,289.52
300	300	6.28%	\$	170,555,038.07
301	301	6.28%	\$ \$	181,260,007.56
302	302	6.28%	\$	192,636,879.64
303	303	6.28%	\$	204,727,826.60
304	304	6.28%	\$ \$	217,577,667.69
305	305	6.28%	\$	231,234,035.28
306	306	6.28%	\$	245,747,551.39
307	307	6.28%	\$	261,172,015.36
308	308	6.28%	\$	277,564,603.27

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		2.1132113
309	309	6.28%	\$	294,986,079.90
310	310	6.28%	\$	313,501,023.93
311	311	6.28%	\$ \$	333,178,067.39
312	312	6.28%	\$	354,090,150.00
313	313	6.28%	\$	376,314,789.59
314	314	6.28%	\$ \$	399,934,369.44
315	315	6.28%	\$	425,036,443.65
316	316	6.28%	\$	451,714,061.69
317	317	6.28%	\$ \$	480,066,113.34
318	318	6.28%	\$	510,197,695.23
319	319	6.28%	\$	542,220,500.43
320	320	6.28%	\$	576,253,232.50
321	321	6.28%	\$	612,422,045.46
322	322	6.28%	\$	650,861,011.47
323	323	6.28%	\$	691,712,617.77
324	324	6.28%	\$	735,128,294.92
325	325	6.28%	\$	781,268,978.04
326	326	6.28%	\$ \$	830,305,703.47
327	327	6.28%	\$	882,420,242.70
328	328	6.28%	\$	937,805,776.20
329	329	6.28%	\$	996,667,609.50
330	330	6.28%	\$	1,059,223,934.26
331	331	6.28%	\$	1,125,706,637.00
332	332	6.28%	\$	1,196,362,158.75
333	333	6.28%	\$	1,271,452,408.51
334	334	6.28%	\$	1,351,255,734.13
335	335	6.28%	\$	1,436,067,954.10
336	336	6.28%	\$	1,526,203,454.09

### **CMS NON-CONSTANT DCF CALCULATION**

\$ 64.81
\$ 1.82
6.98%
6.28%
9.49%
9.98%
Ť

LINE NO	YEAR	GROWTH RATE		DIVIDEND
		0.000/	•	4 004 000 050 05
337	337	6.28%	\$	1,621,996,352.35
338	338	6.28%	\$	1,723,801,738.22
339	339	6.28%	\$	1,831,996,988.39
340	340	6.28%	\$	1,946,983,165.79
341	341	6.28%	\$	2,069,186,506.25
342	342	6.28%	\$	2,199,059,998.50
343	343	6.28%	\$	2,337,085,063.33
344	344	6.28%	\$	2,483,773,338.14
345	345	6.28%	\$	2,639,668,573.50
346	346	6.28%	\$	2,805,348,648.74
347	347	6.28%	\$	2,981,427,714.06
348	348	6.28%	\$	3,168,558,467.11
349	349	6.28%	\$	3,367,434,572.43
350	350	6.28%	\$	3,578,793,232.72
351	351	6.28%	\$	3,803,417,921.59
352	352	6.28%	\$	4,042,141,287.75
353	353	6.28%	\$	4,295,848,241.49
354	354	6.28%	\$	4,565,479,234.93
355	355	6.28%	\$	4,852,033,748.15
356	356	6.28%	\$	5,156,573,994.04
357	357	6.28%	\$	5,480,228,855.81
358	358	6.28%	\$	5,824,198,071.59
359	359	6.28%	\$	6,189,756,681.62
360	360	6.28%	\$	6,578,259,754.70
361	361	6.28%	\$	6,991,147,411.13
362	362	6.28%	\$	7,429,950,161.10
363	363	6.28%	\$	7,896,294,577.99
364	364	6.28%	\$	8,391,909,327.84

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE	YEAR	GROWTH	DIVIDEND
NO	,	RATE	21112
365	365	6.28%	\$ 8,918,631,577.28
366	366	6.28%	\$ 9,478,413,803.56
367	367	6.28%	\$ 10,073,331,032.13
368	368	6.28%	\$ 10,705,588,528.40
369	369	6.28%	\$ 11,377,529,972.35
370	370	6.28%	\$ 12,091,646,146.15
371	371	6.28%	\$ 12,850,584,167.12
372	372	6.28%	\$ 13,657,157,300.21
373	373	6.28%	\$ 14,514,355,386.25
374	374	6.28%	\$ 15,425,355,924.92
375	375	6.28%	\$ 16,393,535,853.20
376	376	6.28%	\$ 17,422,484,063.14
377	377	6.28%	\$ 18,516,014,705.33
378	378	6.28%	\$ 19,678,181,327.40
379	379	6.28%	\$ 20,913,291,899.82
380	380	6.28%	\$ 22,225,924,784.93
381	381	6.28%	\$ 23,620,945,708.20
382	382	6.28%	\$ 25,103,525,794.71
383	383	6.28%	\$ 26,679,160,737.71
384	384	6.28%	\$ 28,353,691,170.28
385	385	6.28%	\$ 30,133,324,315.68
386	386	6.28%	\$ 32,024,656,996.55
387	387	6.28%	\$ 34,034,700,088.25
388	388	6.28%	\$ 36,170,904,507.18
389	389	6.28%	\$ 38,441,188,830.09
390	390	6.28%	\$ 40,853,968,647.00
391	391	6.28%	\$ 43,418,187,756.57
392	392	6.28%	\$ 46,143,351,319.26

### **CMS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 64.81
Annual Dividend =	\$ 1.82
DCF Growth Estimate =	6.98%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.49%
Constant DCF =	9.98%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 49,039,561,091.54
394	394	6.28%	\$ 52,117,552,871.54
395	395	6.28%	\$ 55,388,736,294.91
396	396	6.28%	\$ 58,865,237,128.63
397	397	6.28%	\$ 62,559,942,219.30
398	398	6.28%	\$ 66,486,547,262.69
399	399	6.28%	\$ 70,659,607,571.55
400	400	6.28%	\$ 75,094,592,029.85

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE	DIVI	DEND
		IVAIL		
1	1	4.36%	¢	0.72
2	2	4.36% 4.36%	Φ	0.72
3	3		Φ	
		4.36%	Φ	0.78
4	4	4.36%	<b>D</b>	0.82
5	5	4.36%	<b>\$</b>	0.85
6	6	4.46%	\$	0.89
7	7	4.55%	\$	0.93
8	8	4.65%	\$	0.98
9	9	4.75%	\$	1.02
10	10	4.84%	\$	1.07
11	11	4.94%	\$	1.13
12	12	5.03%	\$	1.18
13	13	5.13%	\$	1.24
14	14	5.22%	\$	1.31
15	15	5.32%	\$	1.38
16	16	5.42%	\$	1.45
17	17	5.51%	\$	1.53
18	18	5.61%	\$	1.62
19	19	5.70%	\$	1.71
20	20	5.80%	\$	1.81
21	21	5.89%	\$	1.92
22	22	5.99%	\$	2.03
23	23	6.09%	\$	2.15
24	24	6.18%	\$	2.29
25	25	6.28%	\$ \$	2.43
26	26	6.28%	<b>\$</b>	2.58
27	27	6.28%	Ψ <b>\$</b>	2.74
28	28	6.28%	Ψ Φ	2.74
20	20	0.20/0	Ψ	2.32

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
29	29	6.28%	\$	3.10
30	30	6.28%	\$	3.29
31	31	6.28%	\$	3.50
32	32	6.28%	\$	3.72
33	33	6.28%	\$	3.95
34	34	6.28%	\$	4.20
35	35	6.28%	\$	4.47
36	36	6.28%	\$	4.75
37	37	6.28%	\$	5.04
38	38	6.28%	\$	5.36
39	39	6.28%	\$	5.70
40	40	6.28%	\$	6.06
41	41	6.28%	\$	6.44
42	42	6.28%	\$	6.84
43	43	6.28%	\$	7.27
44	44	6.28%	\$	7.73
45	45	6.28%	\$	8.21
46	46	6.28%	\$	8.73
47	47	6.28%	\$	9.27
48	48	6.28%	\$	9.86
49	49	6.28%	\$	10.47
50	50	6.28%	\$	11.13
51	51	6.28%	\$	11.83
52	52	6.28%	\$	12.57
53	53	6.28%	\$	13.36
54	54	6.28%	\$	14.20
55	55	6.28%	\$	15.09
56	56	6.28%	\$	16.04

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
57	57	6.28%	\$	17.04
58	58	6.28%	\$	18.11
59	59	6.28%	\$	19.25
60	60	6.28%	\$	20.46
61	61	6.28%	\$	21.74
62	62	6.28%	\$	23.11
63	63	6.28%	\$	24.56
64	64	6.28%	\$	26.10
65	65	6.28%	\$	27.74
66	66	6.28%	\$	29.48
67	67	6.28%	\$	31.33
68	68	6.28%	\$	33.30
69	69	6.28%	\$	35.39
70	70	6.28%	\$	37.61
71	71	6.28%	\$	39.97
72	72	6.28%	\$	42.48
73	73	6.28%	\$	45.14
74	74	6.28%	\$	47.98
75	75	6.28%	\$	50.99
76	76	6.28%	\$	54.19
77	77	6.28%	\$	57.59
78	78	6.28%	\$	61.20
79	79	6.28%	\$	65.05
80	80	6.28%	\$	69.13
81	81	6.28%	\$	73.47
82	82	6.28%	\$	78.08
83	83	6.28%	\$	82.98
84	84	6.28%	\$	88.19

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			•	
85	85	6.28%	\$	93.72
86	86	6.28%	\$	99.60
87	87	6.28%	\$	105.86
88	88	6.28%	\$	112.50
89	89	6.28%	\$	119.56
90	90	6.28%	\$	127.07
91	91	6.28%	\$	135.04
92	92	6.28%	\$	143.52
93	93	6.28%	\$	152.53
94	94	6.28%	\$	162.10
95	95	6.28%	\$	172.27
96	96	6.28%	\$	183.09
97	97	6.28%	\$	194.58
98	98	6.28%	\$	206.79
99	99	6.28%	\$	219.77
100	100	6.28%	\$	233.56
101	101	6.28%	\$	248.22
102	102	6.28%	\$	263.80
103	103	6.28%	\$	280.36
104	104	6.28%	\$	297.96
105	105	6.28%	\$	316.66
106	106	6.28%	\$	336.53
107	107	6.28%	\$	357.66
108	108	6.28%	\$	380.11
109	109	6.28%	\$	403.96
110	110	6.28%	\$	429.32
111	111	6.28%	\$	456.26
112	112	6.28%	\$	484.90

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
113	113	6.28%	\$	515.34
114	114	6.28%	\$	547.68
115	115	6.28%	\$	582.06
116	116	6.28%	\$	618.59
117	117	6.28%	\$	657.42
118	118	6.28%	\$	698.68
119	119	6.28%	\$	742.53
120	120	6.28%	\$	789.14
121	121	6.28%	\$	838.67
122	122	6.28%	\$	891.31
123	123	6.28%	\$	947.25
124	124	6.28%	\$	1,006.71
125	125	6.28%	\$	1,069.89
126	126	6.28%	\$	1,137.05
127	127	6.28%	\$	1,208.41
128	128	6.28%	\$	1,284.26
129	129	6.28%	\$	1,364.87
130	130	6.28%	\$	1,450.53
131	131	6.28%	\$	1,541.58
132	132	6.28%	\$	1,638.33
133	133	6.28%	\$	1,741.16
134	134	6.28%	\$	1,850.45
135	135	6.28%	\$	1,966.59
136	136	6.28%	\$	2,090.03
137	137	6.28%	\$	2,221.21
138	138	6.28%	\$	2,360.63
139	139	6.28%	\$	2,508.79
140	140	6.28%	\$	2,666.26

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
141	141	6.28%	\$	2,833.61
142	142	6.28%	\$	3,011.46
143	143	6.28%	\$	3,200.47
144	144	6.28%	\$	3,401.35
145	145	6.28%	\$	3,614.84
146	146	6.28%	\$	3,841.73
147	147	6.28%	\$	4,082.86
148	148	6.28%	\$	4,339.12
149	149	6.28%	\$	4,611.46
150	150	6.28%	\$	4,900.91
151	151	6.28%	\$	5,208.51
152	152	6.28%	\$	5,535.43
153	153	6.28%	\$	5,882.86
154	154	6.28%	\$	6,252.10
155	155	6.28%	\$	6,644.52
156	156	6.28%	\$	7,061.57
157	157	6.28%	\$	7,504.79
158	158	6.28%	\$	7,975.83
159	159	6.28%	\$	8,476.44
160	160	6.28%	\$	9,008.46
161	161	6.28%	\$	9,573.88
162	162	6.28%	\$	10,174.79
163	163	6.28%	\$	10,813.42
164	164	6.28%	\$	11,492.13
165	165	6.28%	\$	12,213.44
166	166	6.28%	\$	12,980.02
167	167	6.28%	\$	13,794.72
168	168	6.28%	\$	14,660.55

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
169	169	6.28%	\$	15,580.73
170	170	6.28%	\$	16,558.66
171	171	6.28%	\$	17,597.97
172	172	6.28%	\$	18,702.52
173	173	6.28%	\$	19,876.39
174	174	6.28%	\$	21,123.94
175	175	6.28%	\$	22,449.79
176	176	6.28%	\$	23,858.87
177	177	6.28%	\$	25,356.38
178	178	6.28%	\$	26,947.88
179	179	6.28%	\$	28,639.28
180	180	6.28%	\$	30,436.84
181	181	6.28%	\$	32,347.22
182	182	6.28%	\$	34,377.51
183	183	6.28%	\$	36,535.23
184	184	6.28%	\$	38,828.38
185	185	6.28%	\$	41,265.47
186	186	6.28%	\$	43,855.51
187	187	6.28%	\$	46,608.13
188	188	6.28%	\$	49,533.51
189	189	6.28%	\$	52,642.50
190	190	6.28%	\$	55,946.64
191	191	6.28%	\$	59,458.15
192	192	6.28%	\$	63,190.07
193	193	6.28%	\$	67,156.23
194	194	6.28%	\$	71,371.32
195	195	6.28%	\$	75,850.98
196	196	6.28%	\$	80,611.80

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
197	197	6.28%	\$	85,671.44
198	198	6.28%	\$	91,048.65
199	199	6.28%	\$	96,763.36
200	200	6.28%	\$	102,836.76
201	201	6.28%	\$	109,291.36
202	202	6.28%	\$	116,151.08
203	203	6.28%	\$	123,441.36
204	204	6.28%	\$	131,189.22
205	205	6.28%	\$	139,423.37
206	206	6.28%	\$	148,174.35
207	207	6.28%	\$	157,474.58
208	208	6.28%	\$	167,358.55
209	209	6.28%	\$	177,862.89
210	210	6.28%	\$	189,026.54
211	211	6.28%	\$	200,890.89
212	212	6.28%	\$	213,499.90
213	213	6.28%	\$	226,900.33
214	214	6.28%	\$	241,141.83
215	215	6.28%	\$	256,277.22
216	216	6.28%	\$	272,362.58
217	217	6.28%	\$	289,457.55
218	218	6.28%	\$	307,625.49
219	219	6.28%	\$	326,933.76
220	220	6.28%	\$	347,453.91
221	221	6.28%	\$	369,262.03
222	222	6.28%	\$	392,438.93
223	223	6.28%	\$	417,070.55
224	224	6.28%	\$	443,248.19

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
225	225	6.28%	\$	471,068.88
226	226	6.28%	\$	500,635.74
227	227	6.28%	\$	532,058.39
228	228	6.28%	\$	565,453.29
229	229	6.28%	\$	600,944.24
230	230	6.28%	\$	638,662.79
231	231	6.28%	\$	678,748.77
232	232	6.28%	\$	721,350.77
233	233	6.28%	\$	766,626.70
234	234	6.28%	\$	814,744.39
235	235	6.28%	\$	865,882.22
236	236	6.28%	\$	920,229.74
237	237	6.28%	\$	977,988.40
238	238	6.28%	\$	1,039,372.32
239	239	6.28%	\$	1,104,609.02
240	240	6.28%	\$	1,173,940.34
241	241	6.28%	\$	1,247,623.28
242	242	6.28%	\$	1,325,930.96
243	243	6.28%	\$	1,409,153.65
244	244	6.28%	\$	1,497,599.87
245	245	6.28%	\$	1,591,597.45
246	246	6.28%	\$	1,691,494.83
247	247	6.28%	\$	1,797,662.32
248	248	6.28%	\$	1,910,493.47
249	249	6.28%	\$	2,030,406.51
250	250	6.28%	\$	2,157,845.96
251	251	6.28%	\$	2,293,284.21
252	252	6.28%	\$	2,437,223.30

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

		GROWTH		
LINE NO	YEAR	RATE		DIVIDEND
253	253	6.28%	\$	2,590,196.80
254	254	6.28%	\$	2,752,771.75
255	255	6.28%	\$	2,925,550.80
256	256	6.28%	\$	3,109,174.42
257	257	6.28%	\$	3,304,323.25
258	258	6.28%	\$	3,511,720.70
259	259	6.28%	\$	3,732,135.55
260	260	6.28%	\$	3,966,384.84
261	261	6.28%	\$	4,215,336.91
262	262	6.28%	\$	4,479,914.57
263	263	6.28%	\$	4,761,098.57
264	264	6.28%	\$	5,059,931.23
265	265	6.28%	\$	5,377,520.26
266	266	6.28%	\$	5,715,042.92
267	267	6.28%	\$	6,073,750.35
268	268	6.28%	\$	6,454,972.23
269	269	6.28%	\$	6,860,121.69
270	270	6.28%	\$	7,290,700.55
271	271	6.28%	\$	7,748,304.90
272	272	6.28%	\$	8,234,631.00
273	273	6.28%	\$	8,751,481.60
274	274	6.28%	\$	9,300,772.58
275	275	6.28%	\$	9,884,540.07
276	276	6.28%	\$	10,504,948.01
277	277	6.28%	\$	11,164,296.15
278	278	6.28%	\$	11,865,028.60
279	279	6.28%	\$	12,609,742.86
280	280	6.28%	\$	13,401,199.48

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
Τ.

LINE NO	YEAR	GROWTH RATE		DIVIDEND
281	281	6.28%	\$	14,242,332.25
282	282	6.28%	\$	15,136,259.12
283	283	6.28%	\$	16,086,293.75
284	284	6.28%	\$	17,095,957.76
285	285	6.28%	\$	18,168,993.82
286	286	6.28%	\$	19,309,379.51
287	287	6.28%	\$	20,521,342.05
288	288	6.28%	\$	21,809,374.02
289	289	6.28%	\$	23,178,249.93
290	290	6.28%	\$	24,633,044.00
291	291	6.28%	\$	26,179,148.93
292	292	6.28%	\$	27,822,295.88
293	293	6.28%	\$	29,568,575.74
294	294	6.28%	\$	31,424,461.70
295	295	6.28%	\$	33,396,833.25
296	296	6.28%	\$	35,493,001.65
297	297	6.28%	\$	37,720,737.07
298	298	6.28%	\$	40,088,297.38
299	299	6.28%	\$	42,604,458.76
300	300	6.28%	\$	45,278,548.23
301	301	6.28%	\$	48,120,478.22
302	302	6.28%	\$	51,140,783.32
303	303	6.28%	\$	54,350,659.33
304	304	6.28%	\$	57,762,004.76
305	305	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	61,387,464.94
306	306	6.28%	\$	65,240,478.88
307	307	6.28%	\$	69,335,329.10
308	308	6.28%	\$	73,687,194.58

### **CNP NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 28.87
Annual Dividend =	\$ 0.69
DCF Growth Estimate =	4.36%
GNP Growth Rate =	6.28%
Non-Constant DCF =	8.30%
Constant DCF =	6.86%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
309	309	6.28%	\$	78,312,207.00
310	310	6.28%	\$	83,227,510.56
311	311	6.28%	\$	88,451,325.53
312	312	6.28%	\$ \$ \$ \$ \$	94,003,015.78
313	313	6.28%	\$	99,903,160.55
314	314	6.28%	\$	106,173,630.76
315	315	6.28%	\$	112,837,670.07
316	316	6.28%	\$	119,919,981.03
317	317	6.28%	\$	127,446,816.66
318	318	6.28%	\$	135,446,077.77
319	319	6.28%	\$	143,947,416.38
320	320	6.28%	\$	152,982,345.62
321	321	6.28%	\$	162,584,356.56
322	322	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	172,789,042.37
323	323	6.28%	\$	183,634,230.22
324	324	6.28%	\$	195,160,121.53
325	325	6.28%	\$ \$ \$	207,409,440.99
326	326	6.28%	\$	220,427,594.91
327	327	6.28%	\$	234,262,839.56
328	328	6.28%	\$ \$ \$	248,966,460.03
329	329	6.28%	\$	264,592,960.36
330	330	6.28%	\$	281,200,265.54
331	331	6.28%	\$	298,849,936.27
332	332	6.28%	\$	317,607,397.12
333	333	6.28%	\$ \$ \$	337,542,179.08
334	334	6.28%	\$	358,728,177.27
335	335	6.28%	\$	381,243,924.89
336	336	6.28%	\$	405,172,884.30

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
\$ \$

LINE NO	YEAR	GROWTH RATE		DIVIDEND
337	337	6.28%	\$	430,603,756.43
338	338	6.28%	\$	457,630,809.55
339	339	6.28%	\$	486,354,228.74
340	340	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	516,880,487.23
341	341	6.28%	\$	549,322,741.11
342	342	6.28%	\$	583,801,248.75
343	343	6.28%	\$	620,443,816.60
344	344	6.28%	\$	659,386,272.96
345	345	6.28%	\$	700,772,971.43
346	346	6.28%	\$	744,757,326.05
347	347	6.28%	\$	791,502,379.98
348	348	6.28%	\$	841,181,409.83
349	349	6.28%	\$	893,978,568.03
350	350	6.28%		950,089,565.40
351	351	6.28%	\$	1,009,722,396.68
352	352	6.28%	\$	1,073,098,111.47
353	353	6.28%	\$	1,140,451,633.66
354	354	6.28%	\$	1,212,032,632.26
355	355	6.28%	\$	1,288,106,446.88
356	356	6.28%	\$	1,368,955,071.27
357	357	6.28%	\$	1,454,878,198.70
358	358	6.28%	\$	1,546,194,332.79
359	359	6.28%	\$	1,643,241,968.23
360	360	6.28%	\$	1,746,380,845.45
361	361	6.28%	\$	1,855,993,284.22
362	362	6.28%	\$	1,972,485,600.73
363	363	6.28%	\$	2,096,289,613.86
364	364	6.28%	\$	2,227,864,245.78

### **CNP NON-CONSTANT DCF CALCULATION**

\$ 28.87
\$ 0.69
4.36%
6.28%
8.30%
6.86%
Τ.

LINE NO	YEAR	GROWTH RATE	DIVIDEND
365	365	6.28%	\$ 2,367,697,223.13
366	366	6.28%	\$ 2,516,306,884.96
367	367	6.28%	\$ 2,674,244,104.13
368	368	6.28%	\$ 2,842,094,329.27
369	369	6.28%	\$ 3,020,479,755.01
370	370	6.28%	\$ 3,210,061,628.31
371	371	6.28%	\$ 3,411,542,699.62
372	372	6.28%	\$ 3,625,669,827.86
373	373	6.28%	\$ 3,853,236,748.91
374	374	6.28%	\$ 4,095,087,017.86
375	375	6.28%	\$ 4,352,117,135.97
376	376	6.28%	\$ 4,625,279,873.81
377	377	6.28%	\$ 4,915,587,803.06
378	378	6.28%	\$ 5,224,117,049.95
379	379	6.28%	\$ 5,552,011,284.31
380	380	6.28%	\$ 5,900,485,958.95
381	381	6.28%	\$ 6,270,832,815.14
382	382	6.28%	\$ 6,664,424,670.97
383	383	6.28%	\$ 7,082,720,510.06
384	384	6.28%	\$ 7,527,270,889.89
385	385	6.28%	\$ 7,999,723,689.41
386	386	6.28%	\$ 8,501,830,217.49
387	387	6.28%	\$ 9,035,451,704.75
388	388	6.28%	\$ 9,602,566,202.86
389	389	6.28%	\$ 10,205,275,916.84
390	390	6.28%	\$ 10,845,814,997.64
391	391	6.28%	\$ 11,526,557,823.78
392	392	6.28%	\$ 12,250,027,802.78

### **CNP NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 28.87
Annual Dividend =	\$ 0.69
DCF Growth Estimate =	4.36%
GNP Growth Rate =	6.28%
Non-Constant DCF =	8.30%
Constant DCF =	6.86%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 13,018,906,725.08
394	394	6.28%	\$ 13,836,044,704.95
395	395	6.28%	\$ 14,704,470,745.51
396	396	6.28%	\$ 15,627,403,966.70
397	397	6.28%	\$ 16,608,265,538.08
398	398	6.28%	\$ 17,650,691,360.58
399	399	6.28%	\$ 18,758,545,544.22
400	400	6.28%	\$ 19,935,934,731.74

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINENO	VEAD	ROWTH	DIVI	DEND
LINE NO	YEAR	RATE	וואוט	DEND
1	1	8.45%	\$	0.99
2	2	8.45%	\$	1.07
3	3	8.45%	\$	1.16
4	4	8.45%	\$	1.26
5	5	8.45%	\$	1.37
6	6	8.34%	\$	1.48
7	7	8.23%	\$	1.60
8	8	8.13%	\$	1.73
9	9	8.02%	\$	1.87
10	10	7.91%	\$	2.02
11	11	7.80%	\$	2.18
12	12	7.69%	\$	2.34
13	13	7.58%	\$	2.52
14	14	7.47%	\$	2.71
15	15	7.36%	\$	2.91
16	16	7.26%	\$	3.12
17	17	7.15%	\$	3.34
18	18	7.04%	\$	3.58
19	19	6.93%	\$	3.82
20	20	6.82%	\$	4.09
21	21	6.71%	\$	4.36
22	22	6.60%	\$	4.65
23	23	6.49%	\$	4.95
24	24	6.39%	\$	5.27
25	25	6.28%	\$	5.60
26	26	6.28%	\$	5.95
27	27	6.28%	\$	6.32

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

RATE         28       28       6.28%       \$       6.72         29       29       6.28%       \$       7.14         30       30       6.28%       \$       7.59         31       31       6.28%       \$       8.06         32       32       6.28%       \$       8.57         33       33       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       11.62         38       38       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       17.79         45       6.28%	LINE NO	YEAR	GROWTH	DIVIDEND
28       28       6.28%       \$       7.14         30       30       6.28%       \$       7.59         31       31       6.28%       \$       8.06         32       32       6.28%       \$       8.57         33       33       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       10.74         47       47       6.28%       \$       10.10         47       47       6.28%       \$       20.10 <th></th> <th>. =,</th> <th>RATE</th> <th></th>		. =,	RATE	
28       28       6.28%       \$ 7.14         30       30       6.28%       \$ 7.14         30       30       6.28%       \$ 7.59         31       31       6.28%       \$ 8.06         32       32       6.28%       \$ 9.11         34       34       6.28%       \$ 9.68         35       35       6.28%       \$ 10.29         36       36       6.28%       \$ 10.93         37       37       6.28%       \$ 11.62         38       38       6.28%       \$ 12.35         39       39       6.28%       \$ 13.12         40       40       40       6.28%       \$ 13.95         41       41       6.28%       \$ 14.82         42       42       6.28%       \$ 16.74         44       44       6.28%       \$ 17.79         45       45       6.28%       \$ 20.10         47       47       6.28%       \$ 21.36         48       48       6.28%       \$ 22.70         49       49       6.28%       \$ 22.70         49       49       6.28%       \$ 22.70         49       49 <td></td> <td></td> <td></td> <td></td>				
29       29       6.28%       \$ 7.14         30       30       6.28%       \$ 7.59         31       31       6.28%       \$ 8.06         32       32       6.28%       \$ 9.11         34       34       6.28%       \$ 9.68         35       35       6.28%       \$ 10.29         36       36       6.28%       \$ 10.93         37       37       6.28%       \$ 11.62         38       38       6.28%       \$ 12.35         39       39       6.28%       \$ 13.12         40       40       6.28%       \$ 13.95         41       41       6.28%       \$ 14.82         42       42       6.28%       \$ 15.75         43       43       6.28%       \$ 16.74         44       44       6.28%       \$ 17.79         45       45       6.28%       \$ 20.10         47       47       6.28%       \$ 21.36         48       48       6.28%       \$ 22.70         49       49       6.28%       \$ 25.64         51       51       6.28%       \$ 25.64         51       51       51 </td <td></td> <td></td> <td></td> <td>\$</td>				\$
30       30       6.28%       \$       7.59         31       31       6.28%       \$       8.06         32       32       6.28%       \$       8.57         33       33       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       22.70 <td></td> <td>29</td> <td>6.28%</td> <td>\$ 7.14</td>		29	6.28%	\$ 7.14
31       31       6.28%       \$       8.06         32       32       6.28%       \$       8.57         33       33       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       22.70         49       49       6.28%       \$       22.70         49       49       6.28%       \$       25.64				\$
32       32       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       15.75         43       43       6.28%       \$       15.75         43       43       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       22.70         49       49       6.28%       \$       22.70         49       49       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77	31	31	6.28%	\$ 8.06
33       33       6.28%       \$       9.11         34       34       6.28%       \$       9.68         35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       22.70         49       49       6.28%       \$       22.70         49       49       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77	32	32	6.28%	\$ 8.57
34       34       6.28%       \$ 9.68         35       35       6.28%       \$ 10.29         36       36       6.28%       \$ 10.93         37       37       6.28%       \$ 11.62         38       38       6.28%       \$ 12.35         39       39       6.28%       \$ 13.12         40       40       6.28%       \$ 13.95         41       41       6.28%       \$ 14.82         42       42       6.28%       \$ 15.75         43       43       6.28%       \$ 16.74         44       44       6.28%       \$ 17.79         45       45       6.28%       \$ 20.10         47       47       6.28%       \$ 20.10         47       47       6.28%       \$ 22.70         49       49       6.28%       \$ 24.12         50       50       6.28%       \$ 25.64         51       51       6.28%       \$ 27.24         52       52       6.28%       \$ 30.77	33	33	6.28%	\$ 9.11
35       35       6.28%       \$       10.29         36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       28.95         53       53       6.28%       \$       30.	34	34	6.28%	\$ 9.68
36       36       6.28%       \$       10.93         37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       22.70         49       49       6.28%       \$       25.64         51       51       6.28%       \$       25.64         51       51       6.28%       \$       28.95         53       53       6.28%       \$       30.	35	35	6.28%	\$ 10.29
37       37       6.28%       \$       11.62         38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       25.64         51       51       6.28%       \$       25.64         51       51       6.28%       \$       28.95         53       53       6.28%       \$       30.77	36	36	6.28%	\$ 10.93
38       38       6.28%       \$       12.35         39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77         53       53       6.28%       \$       30.77	37	37	6.28%	\$ 11.62
39       39       6.28%       \$       13.12         40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	38	38	6.28%	\$ 12.35
40       40       6.28%       \$       13.95         41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77         53       53       6.28%       \$       30.77	39	39	6.28%	\$ 13.12
41       41       6.28%       \$       14.82         42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	40	40	6.28%	\$ 13.95
42       42       6.28%       \$       15.75         43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77         53       53       6.28%       \$       30.77	41	41	6.28%	\$ 14.82
43       43       6.28%       \$       16.74         44       44       6.28%       \$       17.79         45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       30.77         53       53       6.28%       \$       30.77	42	42	6.28%	\$ 15.75
44       44       6.28%       \$ 17.79         45       45       6.28%       \$ 20.10         46       46       6.28%       \$ 21.36         47       47       6.28%       \$ 22.70         48       48       6.28%       \$ 24.12         50       50       6.28%       \$ 25.64         51       51       6.28%       \$ 27.24         52       52       6.28%       \$ 30.77         53       53       6.28%       \$ 30.77	43	43	6.28%	\$ 16.74
45       45       6.28%       \$       18.91         46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	44	44	6.28%	\$ 17.79
46       46       6.28%       \$       20.10         47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	45	45	6.28%	\$ 18.91
47       47       6.28%       \$       21.36         48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	46	46	6.28%	\$ 20.10
48       48       6.28%       \$       22.70         49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	47	47	6.28%	\$ 21.36
49       49       6.28%       \$       24.12         50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	48	48	6.28%	\$ 22.70
50       50       6.28%       \$       25.64         51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	49	49	6.28%	\$ 24.12
51       51       6.28%       \$       27.24         52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	50	50	6.28%	\$ 25.64
52       52       6.28%       \$       28.95         53       53       6.28%       \$       30.77	51	51	6.28%	\$ 27.24
53 53 6.28% \$ 30.77	52	52	6.28%	\$ 28.95
		53	6.28%	\$ 30.77
54 54 6.28% \$ 32.70	54	54	6.28%	\$ 32.70

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH		DIVIDEND
		RATE		=
55	55	6.28%	\$	34.76
56	56	6.28%	\$	36.94
57	57	6.28%	\$	39.26
58	58	6.28%	\$	41.72
59	59	6.28%	\$	44.34
60	60	6.28%	\$	47.12
61	61	6.28%	\$	50.08
62	62	6.28%	\$	53.22
63	63	6.28%	\$	56.56
64	64	6.28%	\$	60.11
65	65	6.28%	\$	63.89
66	66	6.28%	\$	67.90
67	67	6.28%	\$	72.16
68	68	6.28%	\$	76.69
69	69	6.28%	\$	81.50
70	70	6.28%	\$	86.61
71	71	6.28%	\$	92.05
72	72	6.28%	\$	97.83
73	73	6.28%	\$	103.97
74	74	6.28%	\$	110.49
75	75	6.28%	\$	117.43
76	76	6.28%	\$	124.80
77	77	6.28%	\$	132.63
78	78	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	140.96
79	79	6.28%	\$	149.80
80	80	6.28%	\$	159.21
81	81	6.28%	\$	169.20

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			_	
82	82	6.28%	\$	179.82
83	83	6.28%	\$	191.11
84	84	6.28%	\$	203.10
85	85	6.28%	\$	215.85
86	86	6.28%	\$	229.40
87	87	6.28%	\$	243.80
88	88	6.28%	\$	259.10
89	89	6.28%	\$	275.36
90	90	6.28%	\$	292.64
91	91	6.28%	\$	311.01
92	92	6.28%	\$	330.53
93	93	6.28%	\$	351.28
94	94	6.28%	\$	373.33
95	95	6.28%	\$	396.76
96	96	6.28%	\$	421.66
97	97	6.28%	\$	448.13
98	98	6.28%	\$	476.25
99	99	6.28%	\$	506.14
100	100	6.28%	\$	537.91
101	101	6.28%	\$	571.68
102	102	6.28%	\$	607.56
103	103	6.28%	\$	645.69
104	104	6.28%	\$	686.22
105	105	6.28%	\$	729.29
106	106	6.28%	\$	775.06
107	107	6.28%	\$	823.71
108	108	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	875.41

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

109       109       6.28%       \$ 930.36         110       110       6.28%       \$ 988.75         111       111       6.28%       \$ 1,050.81         112       112       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,261.35         114       114       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,618.70         128       128       6.28%       \$ 3,340.69         131       131       6.28%	LINE NO	YEAR	GROWTH RATE	DIVIDEND
110       110       6.28%       \$ 988.75         111       111       6.28%       \$ 1,050.81         112       112       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,186.86         114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,318.52         126       126       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,783.06         128       128       6.2				
110       110       6.28%       \$ 988.75         111       111       6.28%       \$ 1,050.81         112       112       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,186.86         114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,340.69         131       131       6.2		109	6.28%	\$ 930.36
111       111       6.28%       \$ 1,050.81         112       112       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,186.86         114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,783.06         128       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6	110	110	6.28%	\$ 988.75
112       112       6.28%       \$ 1,116.76         113       113       6.28%       \$ 1,186.86         114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,783.06         128       128       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,773.21         133       133       6	111	111	6.28%	\$ 1,050.81
113       113       6.28%       \$ 1,186.86         114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,931.52         121       121       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,783.06         128       128       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 4,010.03         134       134       6	112	112	6.28%	\$ 1,116.76
114       114       6.28%       \$ 1,261.35         115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,931.52         122       121       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6	113	113	6.28%	\$ 1,186.86
115       115       6.28%       \$ 1,340.52         116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,931.52         121       121       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,783.06         128       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,261.72	114	114	6.28%	\$ 1,261.35
116       116       6.28%       \$ 1,424.66         117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	115	115	6.28%	\$ 1,340.52
117       117       6.28%       \$ 1,514.08         118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	116	116	6.28%	\$ 1,424.66
118       118       6.28%       \$ 1,609.11         119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	117	117	6.28%	\$ 1,514.08
119       119       6.28%       \$ 1,710.11         120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       6.28%       \$ 4,529.21	118	118	6.28%	\$ 1,609.11
120       120       6.28%       \$ 1,817.44         121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       6.28%       \$ 4,529.21	119	119	6.28%	\$ 1,710.11
121       121       6.28%       \$ 1,931.52         122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	120	120	6.28%	\$ 1,817.44
122       122       6.28%       \$ 2,052.75         123       123       6.28%       \$ 2,181.59         124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       6.28%       \$ 4,529.21	121	121	6.28%	\$ 1,931.52
123       123       6.28%       \$       2,181.59         124       124       6.28%       \$       2,318.52         125       125       6.28%       \$       2,464.04         126       126       6.28%       \$       2,618.70         127       127       6.28%       \$       2,783.06         128       128       6.28%       \$       2,957.74         129       129       6.28%       \$       3,143.39         130       130       6.28%       \$       3,340.69         131       131       6.28%       \$       3,550.37         132       132       6.28%       \$       3,773.21         133       133       6.28%       \$       4,010.03         134       134       6.28%       \$       4,261.72         135       135       6.28%       \$       4,529.21	122	122	6.28%	\$
124       124       6.28%       \$ 2,318.52         125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,750.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	123	123	6.28%	\$ 2,181.59
125       125       6.28%       \$ 2,464.04         126       126       6.28%       \$ 2,618.70         127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	124	124	6.28%	\$ 2,318.52
126       126       6.28%       \$       2,618.70         127       127       6.28%       \$       2,783.06         128       128       6.28%       \$       2,957.74         129       129       6.28%       \$       3,143.39         130       130       6.28%       \$       3,340.69         131       131       6.28%       \$       3,550.37         132       132       6.28%       \$       3,773.21         133       133       6.28%       \$       4,010.03         134       134       6.28%       \$       4,261.72         135       135       6.28%       \$       4,529.21	125	125	6.28%	\$ 2,464.04
127       127       6.28%       \$ 2,783.06         128       128       6.28%       \$ 2,957.74         129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	126	126	6.28%	\$ 2,618.70
128       128       6.28%       \$       2,957.74         129       129       6.28%       \$       3,143.39         130       130       6.28%       \$       3,340.69         131       131       6.28%       \$       3,550.37         132       132       6.28%       \$       3,773.21         133       133       6.28%       \$       4,010.03         134       134       6.28%       \$       4,261.72         135       135       6.28%       \$       4,529.21	127	127	6.28%	\$ 2,783.06
129       129       6.28%       \$ 3,143.39         130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	128	128	6.28%	\$ 2,957.74
130       130       6.28%       \$ 3,340.69         131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	129	129	6.28%	\$ 3,143.39
131       131       6.28%       \$ 3,550.37         132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	130	130	6.28%	\$ 3,340.69
132       132       6.28%       \$ 3,773.21         133       133       6.28%       \$ 4,010.03         134       134       6.28%       \$ 4,261.72         135       135       6.28%       \$ 4,529.21	131	131	6.28%	\$ 3,550.37
133       133       6.28%       \$       4,010.03         134       134       6.28%       \$       4,261.72         135       135       6.28%       \$       4,529.21			6.28%	\$
134 134 6.28% \$ 4,261.72 135 135 6.28% \$ 4.529.21	133	133	6.28%	\$ •
135 135 6.28% \$ 4.529.21	134		6.28%	\$
,	135	135	6.28%	\$

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
		3.0.0.0		
136	136	6.28%	\$	4,813.49
137	137	6.28%	\$	5,115.61
138	138	6.28%	\$	5,436.70
139	139	6.28%	\$	5,777.93
140	140	6.28%	\$	6,140.59
141	141	6.28%	\$	6,526.01
142	142	6.28%	\$	6,935.61
143	143	6.28%	\$	7,370.93
144	144	6.28%	\$	7,833.57
145	145	6.28%	\$	8,325.25
146	146	6.28%	\$	8,847.79
147	147	6.28%	\$	9,403.12
148	148	6.28%	\$	9,993.31
149	149	6.28%	\$	10,620.55
150	150	6.28%	\$	11,287.15
151	151	6.28%	\$	11,995.60
152	152	6.28%	\$	12,748.51
153	153	6.28%	\$	13,548.67
154	154	6.28%	\$	14,399.06
155	155	6.28%	\$	15,302.83
156	156	6.28%	\$	16,263.31
157	157	6.28%	\$	17,284.09
158	158	6.28%	\$	18,368.93
159	159	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	19,521.87
160	160	6.28%	\$	20,747.17
161	161	6.28%	\$	22,049.37
162	162	6.28%	\$	23,433.31

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

163       163       6.28%       \$ 24,904.1         164       164       6.28%       \$ 26,467.2         165       165       6.28%       \$ 29,893.9         166       166       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 70,098.3         181       181       81       80,28%       \$ 79,173.9         183       183       6.28%       \$ 95,037.4         186       186       6.28%       \$ 101,002.5         187
163       163       6.28%       \$ 24,904.1         164       164       6.28%       \$ 26,467.2         165       165       6.28%       \$ 29,893.9         166       166       6.28%       \$ 29,893.9         167       167       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 70,098.3         180       180       6.28%       \$ 70,098.3
164       164       6.28%       \$ 26,467.2         165       165       6.28%       \$ 28,128.4         166       166       6.28%       \$ 29,893.9         167       167       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 51,703.5         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
165       165       6.28%       \$ 28,128.4         166       166       6.28%       \$ 29,893.9         167       167       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
166       166       6.28%       \$ 29,893.9         167       167       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 40,529.4         171       171       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 70,098.3         180       180       6.28%       \$ 70,098.3
167       167       6.28%       \$ 31,770.2         168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 40,529.4         171       171       6.28%       \$ 43,073.3         172       172       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 70,098.3         180       180       6.28%       \$ 70,098.3
168       168       6.28%       \$ 33,764.3         169       169       6.28%       \$ 35,883.5         170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 70,098.3         180       180       6.28%       \$ 70,098.3
169       169       6.28%       \$       35,883.5         170       170       6.28%       \$       38,135.8         171       171       6.28%       \$       40,529.4         172       172       6.28%       \$       43,073.3         173       173       6.28%       \$       45,776.8         174       174       6.28%       \$       48,650.0         175       175       6.28%       \$       51,703.5         176       176       6.28%       \$       54,948.7         177       177       6.28%       \$       58,397.6         178       178       6.28%       \$       62,063.0         179       179       6.28%       \$       65,958.4         180       180       6.28%       \$       70,098.3
170       170       6.28%       \$ 38,135.8         171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
171       171       6.28%       \$ 40,529.4         172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
172       172       6.28%       \$ 43,073.3         173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
173       173       6.28%       \$ 45,776.8         174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
174       174       6.28%       \$ 48,650.0         175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
175       175       6.28%       \$ 51,703.5         176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3         181       184       6.28%       \$ 70,098.3
176       176       6.28%       \$ 54,948.7         177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
177       177       6.28%       \$ 58,397.6         178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3
178       178       6.28%       \$ 62,063.0         179       179       6.28%       \$ 65,958.4         180       180       6.28%       \$ 70,098.3         181       184       6.28%       \$ 74,400.0
179       179       6.28%       \$       65,958.4         180       180       6.28%       \$       70,098.3         184       6.28%       \$       74,400.0
180 180 6.28% \$ 70,098.3
404 404 6 2007 Ф 74 400 0
181 181 6.28% \$ 74,498.0
182 182 6.28% \$ 79,173.9
183 183 6.28% \$ 84,143.3
184 184 6.28% \$ 89,424.6
185 185 6.28% \$ 95,037.4
186 186 6.28% \$ 101,002.5
187 187 6.28% \$ 107,342.0
188 188 6.28% \$ 114,079.3
189 189 6.28% \$ 121,239.6

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
190	190	6.28%	\$	128,849.30
191	191	6.28%	\$	136,936.59
192	192	6.28%	\$	145,531.48
193	193	6.28%	\$	154,665.83
194	194	6.28%	\$	164,373.51
195	195	6.28%	\$	174,690.49
196	196	6.28%	\$	185,655.02
197	197	6.28%	\$	197,307.75
198	198	6.28%	\$	209,691.86
199	199	6.28%	\$	222,853.28
200	200	6.28%	\$	236,840.77
201	201	6.28%	\$	251,706.19
202	202	6.28%	\$	267,504.66
203	203	6.28%	\$	284,294.72
204	204	6.28%	\$	302,138.61
205	205	6.28%	\$	321,102.49
206	206	6.28%	\$	341,256.64
207	207	6.28%	\$	362,675.78
208	208	6.28%	\$	385,439.30
209	209	6.28%	\$	409,631.58
210	210	6.28%	\$	435,342.31
211	211	6.28%	\$	462,666.78
212	212	6.28%	\$	491,706.28
213	213	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	522,568.46
214	214	6.28%	\$	555,367.73
215	215	6.28%	\$	590,225.65
216	216	6.28%	\$	627,271.45

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
		NAIL		
217	047	6 200/	Φ	CCC C10 15
	217	6.28%	Ф	666,642.45
218	218	6.28%	\$	708,484.58
219	219	6.28%	\$	752,952.96
220	220	6.28%	\$	800,212.42
221	221	6.28%	\$	850,438.13
222	222	6.28%	\$	903,816.30
223	223	6.28%	\$	960,544.76
224	224	6.28%	\$	1,020,833.82
225	225	6.28%	\$	1,084,906.95
226	226	6.28%	\$	1,153,001.66
227	227	6.28%	\$	1,225,370.36
228	228	6.28%	\$	1,302,281.33
229	229	6.28%	\$	1,384,019.65
230	230	6.28%	\$	1,470,888.31
231	231	6.28%	\$	1,563,209.33
232	232	6.28%	\$	1,661,324.92
233	233	6.28%	\$	1,765,598.78
234	234	6.28%	\$	1,876,417.44
235	235	6.28%	\$	1,994,191.69
236	236	6.28%	\$	2,119,358.09
237	237	6.28%	\$	2,252,380.63
238	238	6.28%	\$	2,393,752.39
239	239	6.28%	\$	2,543,997.42
240	240	6.28%	\$	2,703,672.65
241	241	6.28%	\$	2,873,369.97
242	242	6.28%	\$	3,053,718.42
243	243	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3,245,386.54
= .0	= .0	0.2070	Ψ	0,2 .0,000.0 .

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINENO	VEAD	GROWTH		DIVIDEND
LINE NO	YEAR	RATE		DIVIDEND
244	244	6.28%	\$	3,449,084.79
245	245	6.28%	\$	3,665,568.27
246	246	6.28%	\$	3,895,639.44
247	247	6.28%	\$	4,140,151.13
248	248	6.28%	\$	4,400,009.72
249	249	6.28%	\$	4,676,178.46
250	250	6.28%	\$	4,969,681.06
251	251	6.28%	\$	5,281,605.50
252	252	6.28%	\$	5,613,108.02
253	253	6.28%	\$	5,965,417.46
254	254	6.28%	\$	6,339,839.78
255	255	6.28%	\$	6,737,762.89
256	256	6.28%	\$	7,160,661.84
257	257	6.28%	\$	7,610,104.24
258	258	6.28%	\$	8,087,756.12
259	259	6.28%	\$	8,595,388.04
260	260	6.28%	\$	9,134,881.73
261	261	6.28%	\$	9,708,237.00
262	262	6.28%	\$	10,317,579.20
263	263	6.28%	\$	10,965,167.05
264	264	6.28%	\$	11,653,401.06
265	265	6.28%	\$	12,384,832.42
266	266	6.28%	\$	13,162,172.42
267	267	6.28%	\$	13,988,302.54
268	268	6.28%	\$	14,866,285.12
269	269	6.28%	\$	15,799,374.69
270	270	6.28%	\$	16,791,030.09

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINENO	VEAD	GROWTH		DIVIDEND
LINE NO	YEAR	RATE		DIVIDEND
				_
271	271	6.28%	\$	17,844,927.22
272	272	6.28%	\$	18,964,972.71
273	273	6.28%	\$	20,155,318.40
274	274	6.28%	\$	21,420,376.71
275	275	6.28%	\$	22,764,837.02
276	276	6.28%	\$	24,193,683.03
277	277	6.28%	\$	25,712,211.25
278	278	6.28%	\$	27,326,050.63
279	279	6.28%	\$	29,041,183.42
280	280	6.28%	\$	30,863,967.35
281	281	6.28%	\$	32,801,159.19
282	282	6.28%	\$	34,859,939.82
283	283	6.28%	\$	37,047,940.81
284	284	6.28%	\$	39,373,272.74
285	285	6.28%	\$	41,844,555.26
286	286	6.28%	\$	44,470,949.01
287	287	6.28%	\$	47,262,189.65
288	288	6.28%	\$	50,228,623.85
289	289	6.28%	\$	53,381,247.73
290	290	6.28%	\$	56,731,747.57
291	291	6.28%	\$	60,292,543.16
292	292	6.28%	\$	64,076,833.80
293	293	6.28%	\$	68,098,647.28
294	294	6.28%	\$	72,372,891.82
295	295	6.28%	\$	76,915,411.40
296	296	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	81,743,044.41
297	297	6.28%	\$	86,873,686.14

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

VEAD	GROWTH		DIVIDEND
YEAR	RATE		DIVIDEND
298	6.28%	\$	92,326,355.09
299	6.28%	\$	98,121,263.44
300	6.28%	\$	104,279,892.02
301	6.28%	\$	110,825,069.90
302	6.28%	\$	117,781,059.03
303	6.28%	\$	125,173,644.19
304	6.28%	\$	133,030,228.53
305	6.28%	\$	141,379,935.19
306	6.28%	\$	150,253,715.23
307	6.28%	\$	159,684,462.37
308	6.28%	\$	169,707,134.92
309	6.28%	\$	180,358,885.35
310	6.28%	\$	191,679,198.06
311	6.28%	\$	203,710,035.67
312	6.28%	\$	216,495,994.63
313	6.28%	\$	230,084,470.48
314	6.28%	\$	244,525,833.60
315	6.28%	\$	259,873,615.86
316	6.28%	\$	276,184,709.10
317	6.28%	\$	293,519,576.00
318	6.28%	\$	311,942,474.21
319	6.28%	\$	331,521,694.54
320	6.28%	\$	352,329,814.11
321	6.28%	\$	374,443,965.37
322	6.28%	\$	397,946,122.03
323	6.28%	\$	422,923,402.93
324	6.28%	\$	449,468,394.95
	298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323	298 6.28% 299 6.28% 300 6.28% 301 6.28% 302 6.28% 303 6.28% 304 6.28% 305 6.28% 306 6.28% 307 6.28% 308 6.28% 309 6.28% 310 6.28% 311 6.28% 311 6.28% 312 6.28% 313 6.28% 314 6.28% 315 6.28% 316 6.28% 317 6.28% 317 6.28% 318 6.28% 319 6.28% 319 6.28% 320 6.28% 321 6.28% 322 6.28% 323 6.28%	YEAR       RATE         298       6.28%       \$         300       6.28%       \$         301       6.28%       \$         302       6.28%       \$         303       6.28%       \$         304       6.28%       \$         305       6.28%       \$         306       6.28%       \$         309       6.28%       \$         310       6.28%       \$         311       6.28%       \$         312       6.28%       \$         313       6.28%       \$         314       6.28%       \$         315       6.28%       \$         316       6.28%       \$         319       6.28%       \$         320       6.28%       \$         321       6.28%       \$         322       6.28%       \$         323       6.28%       \$

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
325	325	6.28%	\$	477,679,496.24
326	326	6.28%	\$	507,661,280.94
327	327	6.28%	\$	539,524,886.88
328	328	6.28%	\$	573,388,427.46
329	329	6.28%	\$	609,377,429.54
330	330	6.28%	\$	647,625,298.76
331	331	6.28%	\$	688,273,813.99
332	332	6.28%	\$	731,473,652.95
333	333	6.28%	\$	777,384,950.71
334	334	6.28%	\$	826,177,893.28
335	335	6.28%	\$	878,033,348.50
336	336	6.28%	\$	933,143,536.46
337	337	6.28%	\$	991,712,742.04
338	338	6.28%	\$ 1	,053,958,072.14
339	339	6.28%	\$ 1	,120,110,260.50
340	340	6.28%	\$ 1	,190,414,522.97
341	341	6.28%	\$ 1	,265,131,466.50
342	342	6.28%	\$ 1	,344,538,055.13
343	343	6.28%	\$ 1	,428,928,636.72
344	344	6.28%	\$ 1	,518,616,034.00
345	345	6.28%	\$ 1	,613,932,704.17
346	346	6.28%	\$ 1	,715,231,971.26
347	347	6.28%	\$	,822,889,335.86
348	348	6.28%	\$ 1	,937,303,867.04
349	349	6.28%	\$ 2	,058,899,681.63
350	350	6.28%	\$ 2	,188,127,516.36
351	351	6.28%		,325,466,398.66

### NI NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 28.14
Annual Dividend =	\$ 0.91
DCF Growth Estimate =	8.45%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.58%
Constant DCF =	11.96%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
352	352	6.28%	\$	2,471,425,422.37
353	353	6.28%	\$	2,626,545,634.81
354	354	6.28%		2,791,402,042.45
355	355	6.28%	\$ \$	2,966,605,742.28
356	356	6.28%	\$	3,152,806,187.11
357	357	6.28%	\$	3,350,693,592.95
358	358	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	3,561,001,497.56
359	359	6.28%	\$	3,784,509,479.57
360	360	6.28%	\$	4,022,046,048.21
361	361	6.28%	\$	4,274,491,714.52
362	362	6.28%	\$	4,542,782,255.21
363	363	6.28%	\$	4,827,912,181.52
364	364	6.28%	\$	5,130,938,425.60
365	365	6.28%	\$	5,452,984,258.52
366	366	6.28%	\$	5,795,243,453.97
367	367	6.28%	\$	6,158,984,713.42
368	368	6.28%	\$	6,545,556,369.02
369	369	6.28%	\$	6,956,391,381.62
370	370	6.28%	\$	7,393,012,652.58
371	371	6.28%		7,857,038,668.87
372	372	6.28%	\$ \$ \$	8,350,189,502.60
373	373	6.28%	\$	8,874,293,187.02
374	374	6.28%	\$	9,431,292,492.78
375	375	6.28%	\$	10,023,252,129.48
376	376	6.28%	\$	10,652,366,399.20
377	377	6.28%	\$	11,320,967,330.45
378	378	6.28%	\$	12,031,533,322.67

### NI NON-CONSTANT DCF CALCULATION

\$ 28.14
\$ 0.91
8.45%
6.28%
10.58%
11.96%
Ť

LINE NO	YEAR	GROWTH RATE	DIVIDEND
379	379	6.28%	\$ 12,786,698,333.19
380	380	6.28%	\$ 13,589,261,640.99
381	381	6.28%	\$ 14,442,198,223.14
382	382	6.28%	\$ 15,348,669,782.55
383	383	6.28%	\$ 16,312,036,468.00
384	384	6.28%	\$ 17,335,869,329.59
385	385	6.28%	\$ 18,423,963,556.13
386	386	6.28%	\$ 19,580,352,543.27
387	387	6.28%	\$ 20,809,322,844.72
388	388	6.28%	\$ 22,115,430,061.78
389	389	6.28%	\$ 23,503,515,730.29
390	390	6.28%	\$ 24,978,725,267.42
391	391	6.28%	\$ 26,546,527,044.93
392	392	6.28%	\$ 28,212,732,659.60
393	393	6.28%	\$ 29,983,518,475.88
394	394	6.28%	\$ 31,865,448,520.72
395	395	6.28%	\$ 33,865,498,815.41
396	396	6.28%	\$ 35,991,083,234.59
397	397	6.28%	\$ 38,250,080,988.30
398	398	6.28%	\$ 40,650,865,829.06
399	399	6.28%	\$ 43,202,337,091.99
400	400	6.28%	\$ 45,913,952,683.27

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
1	1	5.32%	\$ 1.53
2	2	5.32%	\$ 1.61
3	3	5.32%	\$ 1.69
4	4	5.32%	\$ 1.78
5	5	5.32%	\$ 1.88
6	6	5.37%	\$ 1.98
7	7	5.42%	\$ 2.09
8	8	5.46%	\$ 2.20
9	9	5.51%	\$ 2.32
10	10	5.56%	\$ 2.45
11	11	5.61%	\$ 2.59
12	12	5.65%	\$ 2.74
13	13	5.70%	\$ 2.89
14	14	5.75%	\$ 3.06
15	15	5.80%	\$ 3.23
16	16	5.85%	\$ 3.42
17	17	5.89%	\$ 3.63
18	18	5.94%	\$ 3.84
19	19	5.99%	\$ 4.07
20	20	6.04%	\$ 4.32
21	21	6.09%	\$ 4.58
22	22	6.13%	\$ 4.86
23	23	6.18%	\$ 5.16
24	24	6.23%	\$ 5.48
25	25	6.28%	5.83
26	26	6.28%	\$ 6.19
27	27	6.28%	\$ 6.58
28	28	6.28%	\$ 6.99

### NJR NON-CONSTANT DCF CALCULATION

<pre>&lt; Price =</pre>		\$ 41.62
al Dividend =		\$ 1.45
<b>Growth Estimate</b>	<del>:</del> =	5.32%
Growth Rate =		6.28%
Constant DCF =		9.62%
tant DCF =		8.99%
Growth Rate = Constant DCF =	· =	6.28% 9.62%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
29	29	6.28%	\$	7.43
30	30	6.28%	\$	7.90
31	31	6.28%	\$	8.39
32	32	6.28%	\$	8.92
33	33	6.28%	\$	9.48
34	34	6.28%	\$	10.08
35	35	6.28%	\$	10.71
36	36	6.28%	\$	11.38
37	37	6.28%	\$	12.10
38	38	6.28%	\$	12.85
39	39	6.28%	\$	13.66
40	40	6.28%	\$	14.52
41	41	6.28%	\$	15.43
42	42	6.28%	\$	16.40
43	43	6.28%	\$	17.43
44	44	6.28%	\$	18.52
45	45	6.28%	\$	19.68
46	46	6.28%	\$	20.92
47	47	6.28%	\$	22.23
48	48	6.28%	\$	23.63
49	49	6.28%	\$	25.11
50	50	6.28%	\$	26.69
51	51	6.28%	\$	28.36
52	52	6.28%	\$	30.14
53	53	6.28%	\$	32.04
54	54	6.28%	\$	34.05
55	55	6.28%	\$	36.18
56	56	6.28%	\$	38.45

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
57	57	6.28%	\$	40.87
58	58	6.28%	\$	43.43
59	59	6.28%	\$	46.16
60	60	6.28%	\$	49.06
61	61	6.28%	\$	52.14
62	62	6.28%	\$	55.41
63	63	6.28%	\$	58.89
64	64	6.28%	\$	62.58
65	65	6.28%	\$	66.51
66	66	6.28%	\$	70.68
67	67	6.28%	\$	75.12
68	68	6.28%	\$	79.84
69	69	6.28%	\$	84.85
70	70	6.28%	\$	90.17
71	71	6.28%	\$	95.83
72	72	6.28%	\$	101.85
73	73	6.28%	\$	108.24
74	74	6.28%	\$	115.03
75	75	6.28%	\$	122.25
76	76	6.28%	\$	129.93
77	77	6.28%	\$	138.08
78	78	6.28%	\$	146.75
79	79	6.28%	\$	155.96
80	80	6.28%	\$	165.75
81	81	6.28%	\$	176.15
82	82	6.28%	\$	187.21
83	83	6.28%	\$	198.96
84	84	6.28%	\$	211.44

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	\$	224.71
86	86	6.28%	\$	238.82
87	87	6.28%	\$	253.81
88	88	6.28%	\$	269.74
89	89	6.28%	\$	286.67
90	90	6.28%	\$	304.66
91	91	6.28%	\$	323.78
92	92	6.28%	\$	344.11
93	93	6.28%	\$	365.71
94	94	6.28%	\$	388.66
95	95	6.28%	\$	413.05
96	96	6.28%	\$	438.98
97	97	6.28%	\$	466.53
98	98	6.28%	\$	495.81
99	99	6.28%	\$	526.93
100	100	6.28%	\$	560.01
101	101	6.28%	\$	595.16
102	102	6.28%	\$	632.51
103	103	6.28%	\$	672.21
104	104	6.28%	\$	714.40
105	105	6.28%	\$	759.24
106	106	6.28%	\$	806.90
107	107	6.28%	\$	857.54
108	108	6.28%	\$	911.37
109	109	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	968.57
110	110	6.28%	\$	1,029.36
111	111	6.28%	\$	1,093.97
112	112	6.28%	\$	1,162.63

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
113	113	6.28%	\$ 1,235.61
114	114	6.28%	\$ 1,313.16
115	115	6.28%	\$ 1,395.58
116	116	6.28%	\$ 1,483.17
117	117	6.28%	\$ 1,576.27
118	118	6.28%	\$ 1,675.20
119	119	6.28%	\$ 1,780.35
120	120	6.28%	\$ 1,892.09
121	121	6.28%	\$ 2,010.85
122	122	6.28%	\$ 2,137.06
123	123	6.28%	\$ 2,271.20
124	124	6.28%	\$ 2,413.75
125	125	6.28%	\$ 2,565.25
126	126	6.28%	\$ 2,726.26
127	127	6.28%	\$ 2,897.37
128	128	6.28%	\$ 3,079.23
129	129	6.28%	\$ 3,272.50
130	130	6.28%	\$ 3,477.90
131	131	6.28%	\$ 3,696.19
132	132	6.28%	\$ 3,928.18
133	133	6.28%	\$ 4,174.73
134	134	6.28%	\$ 4,436.76
135	135	6.28%	\$ 4,715.24
136	136	6.28%	\$ 5,011.19
137	137	6.28%	5,325.72
138	138	6.28%	\$ 5,660.00
139	139	6.28%	\$ 6,015.25
140	140	6.28%	\$ 6,392.80

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
		KAIE		
4.44	4.4.4	0.000/	•	0.704.04
141	141	6.28%	\$	6,794.04
142	142	6.28%	\$	7,220.48
143	143	6.28%	\$	7,673.67
144	144	6.28%	\$	8,155.31
145	145	6.28%	\$	8,667.19
146	146	6.28%	\$	9,211.19
147	147	6.28%	\$	9,789.33
148	148	6.28%	\$	10,403.76
149	149	6.28%	\$	11,056.76
150	150	6.28%	\$	11,750.74
151	151	6.28%	\$	12,488.28
152	152	6.28%	\$	13,272.12
153	153	6.28%	\$	14,105.15
154	154	6.28%	\$	14,990.47
155	155	6.28%	\$	15,931.35
156	156	6.28%	\$	16,931.29
157	157	6.28%	\$	17,993.99
158	158	6.28%	\$	19,123.39
159	159	6.28%	\$	20,323.68
160	160	6.28%	\$	21,599.30
161	161	6.28%	\$	22,955.00
162	162	6.28%	\$	24,395.78
163	163	6.28%	\$	25,926.99
164	164	6.28%	\$	27,554.31
165	165	6.28%	\$	29,283.77
166	166	6.28%	\$	31,121.78
167	167	6.28%	\$	33,075.15
168	168	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	35,151.13
			·	•

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
169	169	6.28%	\$	37,357.41
170	170	6.28%	\$	39,702.16
171	171	6.28%	\$	42,194.09
172	172	6.28%	\$	44,842.42
173	173	6.28%	\$	47,656.98
174	174	6.28%	\$	50,648.19
175	175	6.28%	\$	53,827.15
176	176	6.28%	\$	57,205.64
177	177	6.28%	\$	60,796.18
178	178	6.28%	\$	64,612.08
179	179	6.28%	\$	68,667.49
180	180	6.28%	\$	72,977.43
181	181	6.28%	\$	77,557.90
182	182	6.28%	\$	82,425.86
183	183	6.28%	\$	87,599.36
184	184	6.28%	\$	93,097.57
185	185	6.28%	\$	98,940.89
186	186	6.28%	\$	105,150.96
187	187	6.28%	\$	111,750.81
188	188	6.28%	\$	118,764.90
189	189	6.28%	\$	126,219.24
190	190	6.28%	\$	134,141.45
191	191	6.28%	\$	142,560.91
192	192	6.28%	\$	151,508.81
193	193	6.28%	\$	161,018.33
194	194	6.28%	\$	171,124.73
195	195	6.28%	\$	181,865.45
196	196	6.28%	\$	193,280.33

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH		DIVIDEND
LINE NO	ILAN	RATE		DIVIDLIND
197	197	6.28%	\$	205,411.66
198	198	6.28%	\$	218,304.42
199	199	6.28%	\$	232,006.40
200	200	6.28%	\$	246,568.40
201	201	6.28%	\$	262,044.38
202	202	6.28%	\$	278,491.73
203	203	6.28%	\$	295,971.39
204	204	6.28%	\$	314,548.18
205	205	6.28%	\$	334,290.95
206	206	6.28%	\$	355,272.88
207	207	6.28%	\$	377,571.76
208	208	6.28%	\$	401,270.23
209	209	6.28%	\$	426,456.15
210	210	6.28%	\$	453,222.88
211	211	6.28%	\$	481,669.63
212	212	6.28%	\$	511,901.86
213	213	6.28%	\$	544,031.63
214	214	6.28%	\$	578,178.04
215	215	6.28%	\$	614,467.66
216	216	6.28%	\$	653,035.02
217	217	6.28%	\$	694,023.08
218	218	6.28%	\$	737,583.77
219	219	6.28%	\$	783,878.58
220	220	6.28%	\$	833,079.10
221	221	6.28%	\$	885,367.71
222	222	6.28%	\$	940,938.24
223	223	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	999,996.68
224	224	6.28%	\$	1,062,761.96

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

CDOWITH		
GROWTH RATE	D	IVIDEND
6.28%	\$	1,129,466.73
6.28%	\$	1,200,358.26
6.28%	\$	1,275,699.32
6.28%	\$	1,355,769.21
6.28%	\$	1,440,864.72
6.28%	\$	1,531,301.29
6.28%	\$	1,627,414.15
6.28%	\$	1,729,559.59
6.28%	\$	1,838,116.24
6.28%	\$	1,953,486.49
6.28%	\$	2,076,098.02
6.28%	\$	2,206,405.31
6.28%	\$	2,344,891.41
6.28%	\$	2,492,069.65
6.28%	\$	2,648,485.61
6.28%	\$	2,814,719.09
6.28%	\$	2,991,386.30
6.28%	\$	3,179,142.11
6.28%	\$	3,378,682.50
6.28%	\$	3,590,747.14
6.28%	\$	3,816,122.12
6.28%	\$	4,055,642.87
6.28%	\$	4,310,197.26
6.28%	\$	4,580,728.88
6.28%	\$	4,868,240.54
6.28%	\$	5,173,798.01
6.28%	\$	5,498,533.95
6.28%	\$	5,843,652.09
	6.28% 6.28%	6.28% \$ 6.28%

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
253	253	6.28%	\$	6,210,431.75
254	254	6.28%	\$	6,600,232.50
255	255	6.28%	\$	7,014,499.28
256	256	6.28%	\$	7,454,767.73
257	257	6.28%	\$	7,922,669.83
258	258	6.28%	\$	8,419,940.04
259	259	6.28%	\$	8,948,421.65
260	260	6.28%	\$	9,510,073.66
261	261	6.28%	\$	10,106,978.03
262	262	6.28%	\$	10,741,347.40
263	263	6.28%	\$	11,415,533.27
264	264	6.28%	\$	12,132,034.74
265	265	6.28%	\$	12,893,507.77
266	266	6.28%	\$	13,702,775.02
267	267	6.28%	\$	14,562,836.33
268	268	6.28%	\$	15,476,879.79
269	269	6.28%	\$	16,448,293.64
270	270	6.28%	\$	17,480,678.75
271	271	6.28%	\$	18,577,862.01
272	272	6.28%	\$	19,743,910.51
273	273	6.28%	\$	20,983,146.61
274	274	6.28%	\$	22,300,163.96
275	275	6.28%	\$	23,699,844.54
276	276	6.28%	\$	25,187,376.75
277	277	6.28%	\$	26,768,274.64
278	278	6.28%	\$	28,448,398.34
279	279	6.28%	\$	30,233,975.83
280	280	6.28%	\$	32,131,625.95

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
281	281	6.28%	\$	34,148,383.00
282	282	6.28%	\$	36,291,722.79
283	283	6.28%	\$	38,569,590.33
284	284	6.28%	\$	40,990,429.33
285	285	6.28%	\$	43,563,213.46
286	286	6.28%	\$	46,297,479.63
287	287	6.28%	\$	49,203,363.34
288	288	6.28%	\$	52,291,636.24
289	289	6.28%	\$	55,573,746.09
290	290	6.28%	\$	59,061,859.16
291	291	6.28%	\$	62,768,905.32
292	292	6.28%	\$	66,708,626.04
293	293	6.28%	\$	70,895,625.23
294	294	6.28%	\$	75,345,423.45
295	295	6.28%	\$	80,074,515.41
296	296	6.28%	\$	85,100,431.11
297	297	6.28%	\$	90,441,800.85
298	298	6.28%	\$	96,118,424.24
299	299	6.28%	\$	102,151,343.64
300	300	6.28%	\$	108,562,922.16
301	301	6.28%	\$	115,376,926.49
302	302	6.28%	\$	122,618,615.11
303	303	6.28%	\$	130,314,831.82
304	304	6.28%	\$	138,494,105.29
305	305	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	147,186,754.82
306	306	6.28%	\$	156,425,002.70
307	307	6.28%	\$	166,243,093.69
308	308	6.28%	\$	176,677,421.90

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

		ODOWELL	
LINE NO	YEAR	GROWTH RATE	DIVIDEND
309	309	6.28%	\$ 187,766,665.77
310	310	6.28%	\$ 199,551,931.40
311	311	6.28%	\$ 212,076,904.93
312	312	6.28%	\$ 225,388,014.48
313	313	6.28%	\$ 239,534,602.26
314	314	6.28%	\$ 254,569,107.48
315	315	6.28%	\$ 270,547,260.68
316	316	6.28%	\$ 287,528,290.40
317	317	6.28%	\$ 305,575,142.67
318	318	6.28%	\$ 324,754,714.36
319	319	6.28%	\$ 345,138,101.14
320	320	6.28%	\$ 366,800,861.05
321	321	6.28%	\$ 389,823,294.58
322	322	6.28%	\$ 414,290,742.28
323	323	6.28%	\$ 440,293,901.17
324	324	6.28%	\$ 467,929,160.92
325	325	6.28%	\$ 497,298,961.12
326	326	6.28%	\$ 528,512,171.03
327	327	6.28%	\$ 561,684,493.17
328	328	6.28%	\$ 596,938,892.16
329	329	6.28%	\$ 634,406,050.56
330	330	6.28%	\$ 674,224,853.28
331	331	6.28%	\$ 716,542,902.43
332	332	6.28%	\$ 761,517,064.40
333	333	6.28%	809,314,051.41
334	334	6.28%	\$ 860,111,039.44
335	335	6.28%	\$ 914,096,325.00
336	336	6.28%	\$ 971,470,023.13

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
007	207	0.000/	Φ.	4 000 444 000 40
337	337	6.28%	\$	1,032,444,809.18
338	338	6.28%	<b>\$</b>	1,097,246,707.19
339	339	6.28%	\$	1,166,115,927.67
340	340	6.28%	\$	1,239,307,758.10
341	341	6.28%	\$	1,317,093,509.19
342	342	6.28%	\$	1,399,761,520.58
343	343	6.28%	\$	1,487,618,229.70
344	344	6.28%	\$	1,580,989,307.68
345	345	6.28%	\$	1,680,220,866.54
346	346	6.28%	\$	1,785,680,742.22
347	347	6.28%	\$	1,897,759,858.02
348	348	6.28%	\$	2,016,873,673.75
349	349	6.28%	\$	2,143,463,725.76
350	350	6.28%	\$	2,277,999,263.63
351	351	6.28%	\$	2,420,978,989.64
352	352	6.28%	\$	2,572,932,907.32
353	353	6.28%	\$	2,734,424,286.18
354	354	6.28%	\$	2,906,051,749.57
355	355	6.28%	\$	3,088,451,493.74
356	356	6.28%	\$	3,282,299,646.11
357	357	6.28%	\$	3,488,314,771.56
358	358	6.28%	\$	3,707,260,536.04
359	359	6.28%	\$	3,939,948,537.37
360	360	6.28%	\$	4,187,241,313.68
361	361	6.28%	\$	4,450,055,540.76
362	362	6.28%	\$	4,729,365,429.96
363	363	6.28%	\$	5,026,206,339.50
364	364	6.28%	\$	5,341,678,612.36

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

		ODOMETI		
LINE NO	YEAR	GROWTH RATE		DIVIDEND
365	365	6.28%	\$	5,676,951,655.07
366	366	6.28%	\$	6,033,268,272.52
367	367	6.28%	\$	6,411,949,274.88
368	368	6.28%	\$ \$ \$ \$ \$ \$	6,814,398,373.58
369	369	6.28%	\$	7,242,107,384.68
370	370	6.28%	\$	7,696,661,758.82
371	371	6.28%	\$	8,179,746,458.19
372	372	6.28%	\$	8,693,152,202.46
373	373	6.28%	\$	9,238,782,106.68
374	374	6.28%	\$	9,818,658,735.84
375	375	6.28%	\$	10,434,931,602.21
376	376	6.28%	\$	11,089,885,133.23
377	377	6.28%	\$	11,785,947,139.52
378	378	6.28%	\$	12,525,697,814.44
379	379	6.28%	\$	13,311,879,298.39
380	380	6.28%	\$	14,147,405,843.59
381	381	6.28%	\$	15,035,374,616.67
382	382	6.28%	\$	15,979,077,179.44
383	383	6.28%	\$	16,982,011,690.18
384	384	6.28%	\$	18,047,895,870.76
385	385	6.28%	\$	19,180,680,787.67
386	386	6.28%	\$	20,384,565,497.99
387	387	6.28%	\$	21,664,012,614.67
388	388	6.28%	\$	23,023,764,848.69
389	389	6.28%	\$	24,468,862,589.60
390	390	6.28%	\$	26,004,662,589.44
391	391	6.28%	\$	27,636,857,819.38
392	392	6.28%	\$	29,371,498,572.67

### NJR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 41.62
Annual Dividend =	\$ 1.45
DCF Growth Estimate =	5.32%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.62%
Constant DCF =	8.99%

LINE NO	YEAR G	ROWTH RATE	DIVIDEND
393	393	6.28%	\$ 31,215,014,892.15
394	394	6.28%	\$ 33,174,240,405.43
395	395	6.28%	\$ 35,256,437,656.03
396	396	6.28%	\$ 37,469,325,024.55
397	397	6.28%	\$ 39,821,105,339.47
398	398	6.28%	\$ 42,320,496,283.78
399	399	6.28%	\$ 44,976,762,710.05
400	400	6.28%	\$ 47,799,750,983.82

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
4	•	5.040/	<b>A</b>	0.00
1	1	5.04%	\$	2.03
2	2	5.04%	\$	2.13
3	3	5.04%	\$	2.24
4	4	5.04%	\$	2.35
5	5	5.04%	\$	2.47
6	6	5.10%	\$	2.60
7	7	5.16%	\$	2.73
8	8	5.22%	\$	2.87
9	9	5.28%	\$	3.02
10	10	5.35%	\$	3.19
11	11	5.41%	\$	3.36
12	12	5.47%	\$	3.54
13	13	5.53%	\$	3.74
14	14	5.59%	\$	3.95
15	15	5.66%	\$	4.17
16	16	5.72%	\$	4.41
17	17	5.78%	\$	4.66
18	18	5.84%	\$	4.94
19	19	5.90%	\$	5.23
20	20	5.97%	\$	5.54
21	21	6.03%	\$	5.87
22	22	6.09%	\$	6.23
23	23	6.15%	\$	6.61
24	24	6.21%	\$	7.03
25	25	6.28%	\$	7.47
26	26	6.28%	\$	7.93
27	27	6.28%	\$	8.43
28	28	6.28%	***************************************	8.96

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
\$

LINE	YEAR	GROWTH		DIVIDEND
NO	ILAK	RATE		DIVIDEND
29	29	6.28%	\$	9.52
30	30	6.28%	\$	10.12
31	31	6.28%	\$	10.76
32	32	6.28%	\$	11.43
33	33	6.28%	\$	12.15
34	34	6.28%	\$	12.91
35	35	6.28%	\$	13.72
36	36	6.28%	\$	14.58
37	37	6.28%	\$	15.50
38	38	6.28%	\$	16.47
39	39	6.28%	\$	17.51
40	40	6.28%	\$	18.61
41	41	6.28%	\$	19.77
42	42	6.28%	\$	21.01
43	43	6.28%	\$	22.33
44	44	6.28%	\$	23.74
45	45	6.28%	\$	25.23
46	46	6.28%	\$	26.81
47	47	6.28%	\$	28.49
48	48	6.28%	\$	30.28
49	49	6.28%	\$	32.18
50	50	6.28%	\$	34.20
51	51	6.28%	\$	36.35
52	52	6.28%	\$	38.63
53	53	6.28%	\$	41.05
54	54	6.28%	\$	43.63
55	55	6.28%	\$	46.37
56	56	6.28%	\$	49.28

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
\$

LINE NO	YEAR	GROWTH RATE	DIVIDEND
57	57	6.28%	\$ 52.37
58	58	6.28%	\$ 55.66
59	59	6.28%	\$ 59.15
60	60	6.28%	\$ 62.86
61	61	6.28%	\$ 66.81
62	62	6.28%	\$ 71.00
63	63	6.28%	\$ 75.46
64	64	6.28%	\$ 80.20
65	65	6.28%	\$ 85.23
66	66	6.28%	\$ 90.58
67	67	6.28%	\$ 96.26
68	68	6.28%	\$ 102.31
69	69	6.28%	\$ 108.73
70	70	6.28%	\$ 115.55
71	71	6.28%	\$ 122.80
72	72	6.28%	\$ 130.51
73	73	6.28%	\$ 138.70
74	74	6.28%	\$ 147.41
75	75	6.28%	\$ 156.66
76	76	6.28%	\$ 166.49
77	77	6.28%	\$ 176.94
78	78	6.28%	\$ 188.05
79	79	6.28%	\$ 199.85
80	80	6.28%	\$ 212.40
81	81	6.28%	225.73
82	82	6.28%	\$ 239.90
83	83	6.28%	\$ 254.95
84	84	6.28%	\$ 270.96

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
_				
85	85	6.28%	\$	287.96
86	86	6.28%	\$	306.04
87	87	6.28%	\$	325.24
88	88	6.28%	\$	345.66
89	89	6.28%	\$	367.35
90	90	6.28%	\$	390.41
91	91	6.28%	\$	414.92
92	92	6.28%	\$	440.96
93	93	6.28%	\$	468.64
94	94	6.28%	\$	498.05
95	95	6.28%	\$	529.31
96	96	6.28%	\$	562.53
97	97	6.28%	\$	597.84
98	98	6.28%	\$	635.36
99	99	6.28%	\$	675.24
100	100	6.28%	\$	717.62
101	101	6.28%	\$	762.67
102	102	6.28%	\$	810.54
103	103	6.28%	\$	861.41
104	104	6.28%	\$	915.48
105	105	6.28%	\$	972.94
106	106	6.28%	\$	1,034.00
107	107	6.28%	\$	1,098.90
108	108	6.28%	\$	1,167.88
109	109	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,241.18
110	110	6.28%	\$	1,319.08
111	111	6.28%	\$	1,401.87
112	112	6.28%	\$	1,489.86

### NWN NON-CONSTANT DCF CALCULATION

48.90
1.93
5.04%
6.28%
9.96%
9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
113	113	6.28%	¢	1 502 20
113	114	6.28%	Φ	1,583.38 1,682.76
114	115	6.28%	Φ	1,788.38
116	116	6.28%	Φ	1,766.36
117	117	6.28%	φ ¢	2,019.92
117	118	6.28%	φ ¢	2,019.92
119	119	6.28%	ψ <b>¢</b>	2,140.70
120	120	6.28%	Ψ \$	2,424.63
121	120	6.28%	Ψ \$	2,576.82
122	122	6.28%	Ψ \$	2,738.55
123	123	6.28%	\$	2,910.44
124	124	6.28%	\$ \$	3,093.11
125	125	6.28%	\$ \$	3,287.25
126	126	6.28%	\$	3,493.58
127	127	6.28%	\$	3,712.86
128	128	6.28%	\$	3,945.89
129	129	6.28%	\$	4,193.56
130	130	6.28%	\$	4,456.77
131	131	6.28%	\$	4,736.50
132	132	6.28%	\$	5,033.79
133	133	6.28%	\$	5,349.74
134	134	6.28%	\$	5,685.52
135	135	6.28%	\$	6,042.37
136	136	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	6,421.63
137	137	6.28%	\$	6,824.68
138	138	6.28%	\$	7,253.04
139	139	6.28%	\$	7,708.28
140	140	6.28%	\$	8,192.09

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
110		707112	
141	141	6.28%	\$ 8,706.27
142	142	6.28%	\$ 9,252.73
143	143	6.28%	\$ 9,833.48
144	144	6.28%	\$ 10,450.68
145	145	6.28%	\$ 11,106.62
146	146	6.28%	\$ 11,803.74
147	147	6.28%	\$ 12,544.60
148	148	6.28%	\$ 13,331.97
149	149	6.28%	\$ 14,168.76
150	150	6.28%	\$ 15,058.07
151	151	6.28%	\$ 16,003.19
152	152	6.28%	\$ 17,007.64
153	153	6.28%	\$ 18,075.13
154	154	6.28%	\$ 19,209.63
155	155	6.28%	\$ 20,415.33
156	156	6.28%	\$ 21,696.71
157	157	6.28%	\$ 23,058.51
158	158	6.28%	\$ 24,505.79
159	159	6.28%	\$ 26,043.91
160	160	6.28%	\$ 27,678.57
161	161	6.28%	\$ 29,415.83
162	162	6.28%	\$ 31,262.13
163	163	6.28%	\$ 33,224.31
164	164	6.28%	\$ 35,309.65
165	165	6.28%	37,525.88
166	166	6.28%	\$ 39,881.21
167	167	6.28%	\$ 42,384.37
168	168	6.28%	\$ 45,044.64

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
169	169	6.28%	\$	47,871.89
170	170	6.28%	\$	50,876.60
171	171	6.28%	\$	54,069.89
172	172	6.28%	\$	57,463.61
173	173	6.28%	\$	61,070.34
174	174	6.28%	\$	64,903.45
175	175	6.28%	\$	68,977.15
176	176	6.28%	\$	73,306.53
177	177	6.28%	\$	77,907.66
178	178	6.28%	\$	82,797.57
179	179	6.28%	\$	87,994.40
180	180	6.28%	\$	93,517.41
181	181	6.28%	\$	99,387.07
182	182	6.28%	\$	105,625.15
183	183	6.28%	\$	112,254.76
184	184	6.28%	\$	119,300.49
185	185	6.28%	\$	126,788.44
186	186	6.28%	\$	134,746.38
187	187	6.28%	\$	143,203.80
188	188	6.28%	\$	152,192.06
189	189	6.28%	\$	161,744.46
190	190	6.28%	\$	171,896.43
191	191	6.28%	\$	182,685.60
192	192	6.28%	\$	194,151.95
193	193	6.28%	\$	206,337.99
194	194	6.28%	\$	219,288.89
195	195	6.28%	\$	233,052.66
196	196	6.28%	\$	247,680.33

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
Ť

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
			•	
197	197	6.28%	\$	263,226.10
198	198	6.28%	\$	279,747.62
199	199	6.28%	\$	297,306.11
200	200	6.28%	\$	315,966.67
201	201	6.28%	\$	335,798.47
202	202	6.28%	\$	356,875.03
203	203	6.28%	\$	379,274.46
204	204	6.28%	\$	403,079.81
205	205	6.28%	\$	428,379.31
206	206	6.28%	\$	455,266.74
207	207	6.28%	\$	483,841.78
208	208	6.28%	\$	514,210.34
209	209	6.28%	\$	546,485.00
210	210	6.28%	\$	580,785.40
211	211	6.28%	\$	617,238.67
212	212	6.28%	\$	655,979.96
213	213	6.28%	\$	697,152.86
214	214	6.28%	\$	740,909.99
215	215	6.28%	\$	787,413.57
216	216	6.28%	\$	836,835.96
217	217	6.28%	\$	889,360.38
218	218	6.28%	\$	945,181.51
219	219	6.28%	\$	1,004,506.29
220	220	6.28%	\$	1,067,554.61
221	221	6.28%	\$	1,134,560.19
222	222	6.28%	\$	1,205,771.41
223	223	6.28%	\$	1,281,452.24
224	224	6.28%	\$	1,361,883.20

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			_	
225	225	6.28%	\$	1,447,362.46
226	226	6.28%	\$	1,538,206.87
227	227	6.28%	\$	1,634,753.17
228	228	6.28%	\$	1,737,359.24
229	229	6.28%	\$	1,846,405.43
230	230	6.28%	\$	1,962,295.96
231	231	6.28%	\$	2,085,460.42
232	232	6.28%	\$	2,216,355.35
233	233	6.28%	\$	2,355,465.97
234	234	6.28%	\$	2,503,307.93
235	235	6.28%	\$	2,660,429.26
236	236	6.28%	\$	2,827,412.39
237	237	6.28%	\$	3,004,876.30
238	238	6.28%	\$	3,193,478.81
239	239	6.28%	\$	3,393,919.06
240	240	6.28%	\$	3,606,940.03
241	241	6.28%	\$	3,833,331.36
242	242	6.28%	\$	4,073,932.26
243	243	6.28%	\$	4,329,634.59
244	244	6.28%	\$	4,601,386.20
245	245	6.28%	\$	4,890,194.43
246	246	6.28%	\$	5,197,129.85
247	247	6.28%	\$	5,523,330.22
248	248	6.28%	\$	5,870,004.72
249	249	6.28%	\$	6,238,438.40
250	250	6.28%	\$	6,629,997.01
251	251	6.28%	\$	7,046,131.98
252	252	6.28%	\$	7,488,385.86

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
Ť

LINE NO	YEAR	GROWTH RATE		DIVIDEND
253	253	6.28%	\$	7,958,398.02
254	254	6.28%	\$	8,457,910.73
255	255	6.28%	\$	8,988,775.59
256	256	6.28%	\$	9,552,960.44
257	257	6.28%	\$	10,152,556.62
258	258	6.28%	\$	10,789,786.75
259	259	6.28%	\$	11,467,012.93
260	260	6.28%	\$	12,186,745.55
261	261	6.28%	\$	12,951,652.53
262	262	6.28%	\$	13,764,569.27
263	263	6.28%	\$	14,628,509.12
264	264	6.28%	\$	15,546,674.57
265	265	6.28%	\$	16,522,469.12
266	266	6.28%	\$	17,559,509.89
267	267	6.28%	\$	18,661,641.03
268	268	6.28%	\$	19,832,947.95
269	269	6.28%	\$	21,077,772.53
270	270	6.28%	\$	22,400,729.12
271	271	6.28%	\$	23,806,721.72
272	272	6.28%	\$	25,300,962.13
273	273	6.28%	\$	26,888,989.26
274	274	6.28%	\$	28,576,689.68
275	275	6.28%	\$	30,370,319.44
276	276	6.28%	\$	32,276,527.23
277	277	6.28%	*****	34,302,379.08
278	278	6.28%	\$	36,455,384.50
279	279	6.28%	\$	38,743,524.35
280	280	6.28%	\$	41,175,280.40

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
NO		KAIE		
281	281	6.28%	\$	43,759,666.80
282	282	6.28%	\$	46,506,263.46
283	283	6.28%	Ψ Φ	49,425,251.58
284	284	6.28%	ዓ ድ	52,527,451.41
28 <del>4</del> 285	285	6.28%	φ	55,824,362.32
286	286	6.28%	φ Φ	· · · · · · · · · · · · · · · · · · ·
287	287	6.28%	Ф Ф	59,328,205.43 63,051,968.95
288	288		Φ Φ	·
		6.28%	<b>P</b>	67,009,456.29
289	289	6.28%	<b>D</b>	71,215,337.24
290	290	6.28%	<b>Þ</b>	75,685,202.34
291	291	6.28%	<b>Þ</b>	80,435,620.68
292	292	6.28%	\$	85,484,201.33
293	293	6.28%	\$	90,849,658.59
294	294	6.28%	\$	96,551,881.37
295	295	6.28%	\$	102,612,006.92
296	296	6.28%	\$	109,052,499.19
297	297	6.28%	\$	115,897,232.06
298	298	6.28%	\$	123,171,577.91
299	299	6.28%	\$	130,902,501.60
300	300	6.28%	\$	139,118,660.45
301	301	6.28%	\$	147,850,510.48
302	302	6.28%	\$	157,130,419.31
303	303	6.28%	\$	166,992,786.11
304	304	6.28%	\$	177,474,169.13
305	305	6.28%	\$	188,613,421.23
306	306	6.28%	\$	200,451,833.87
307	307	6.28%	\$	213,033,290.21
308	308	6.28%	\$	226,404,427.75

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
110		NAIL		
309	309	6.28%	\$	240,614,811.21
310	310	6.28%	\$	255,717,116.25
311	311	6.28%	Ψ	271,767,324.79
312	312	6.28%	Ψ	288,824,932.42
313	313	6.28%	Ψ Φ	306,953,169.06
314	314	6.28%	Ψ	326,219,233.23
315	315	6.28%	<b>9</b>	346,694,541.25
316	316	6.28%	Ψ	368,454,991.88
317	317	6.28%	φ Φ	391,581,247.73
317	318	6.28%	<b>ም</b>	416,159,034.21
319	319	6.28%	ው ተ	442,279,457.35
			<b>ወ</b>	
320	320	6.28%	<b>ቅ</b>	470,039,341.49
321	321	6.28%	<b>\$</b>	499,541,588.19
322	322	6.28%	<b>\$</b>	530,895,557.68
323	323	6.28%	\$	564,217,474.24
324	324	6.28%	\$	599,630,857.01
325	325	6.28%	\$	637,266,977.88
326	326	6.28%	\$	677,265,348.09
327	327	6.28%	\$	719,774,235.37
328	328	6.28%	\$	764,951,213.52
329	329	6.28%	\$	812,963,746.56
330	330	6.28%	\$	863,989,809.47
331	331	6.28%	\$	918,218,547.91
332	332	6.28%	\$	975,850,979.35
333	333	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,037,100,738.24
334	334	6.28%	\$	1,102,194,867.89
335	335	6.28%		1,171,374,662.07
336	336	6.28%	\$	1,244,896,559.51

### NWN NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 48.90
Annual Dividend =	\$ 1.93
DCF Growth Estimate :	5.04%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.96%
Constant DCF =	9.19%

LINE	YEAR	GROWTH	D	IVIDEND
NO		RATE		
227	227	6 200/	Φ 4.0	22 022 004 42
337	337	6.28%	· · · · · · · · · · · · · · · · · · ·	23,033,094.42
338	338	6.28%		06,073,906.75
339	339	6.28%		94,326,815.84
340	340	6.28%	•	88,118,961.48
341	341	6.28%	\$ 1,6	87,798,016.52
342	342	6.28%	•	93,733,475.68
343	343	6.28%	\$ 1,9	06,318,025.19
344	344	6.28%		25,968,998.42
345	345	6.28%		53,129,922.88
346	346	6.28%		88,272,164.30
347	347	6.28%	\$ 2,4	31,896,673.88
348	348	6.28%		84,535,845.31
349	349	6.28%	\$ 2,7	46,755,488.18
350	350	6.28%		19,156,925.43
351	351	6.28%		02,379,222.31
352	352	6.28%		97,101,555.30
353	353	6.28%		04,045,729.74
354	354	6.28%		23,978,855.42
355	355	6.28%		57,716,190.15
356	356	6.28%		06,124,161.79
357	357	6.28%	\$ 4,4	70,123,579.96
358	358	6.28%	•	50,693,049.35
359	359	6.28%		48,872,597.25
360	360	6.28%		65,767,528.74
361	361	6.28%		02,552,523.94
362	362	6.28%		60,475,992.32
363	363	6.28%		40,864,700.37
364	364	6.28%		45,128,689.74
	201	0.2070	Ψ 0,0	.5,.25,555.7

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
Ť

LINE NO	YEAR	GROWTH RATE	DIVIDEND
NO		NAIL	
365	365	6.28%	\$ 7,274,766,504.01
366	366	6.28%	\$ 7,731,370,743.58
367	367	6.28%	\$ 8,216,633,969.17
368	368	6.28%	\$ 8,732,354,975.91
369	369	6.28%	\$ 9,280,445,461.17
370	370	6.28%	\$ 9,862,937,110.94
371	371	6.28%	\$ 10,481,989,130.95
372	372	6.28%	\$ 11,139,896,250.53
373	373	6.28%	\$ 11,839,097,228.80
374	374	6.28%	\$ 12,582,183,894.78
375	375	6.28%	\$ 13,371,910,754.90
376	376	6.28%	\$ 14,211,205,203.51
377	377	6.28%	\$ 15,103,178,374.28
378	378	6.28%	\$ 16,051,136,672.71
379	379	6.28%	\$ 17,058,594,032.41
380	380	6.28%	\$ 18,129,284,940.75
381	381	6.28%	\$ 19,267,178,282.02
382	382	6.28%	\$ 20,476,492,049.43
383	383	6.28%	\$ 21,761,708,980.59
384	384	6.28%	\$ 23,127,593,174.29
385	385	6.28%	\$ 24,579,207,750.29
386	386	6.28%	\$ 26,121,933,617.54
387	387	6.28%	\$ 27,761,489,420.29
388	388	6.28%	\$ 29,503,952,736.32
389	389	6.28%	\$ 31,355,782,605.48
390	390	6.28%	\$ 33,323,843,472.39
391	391	6.28%	\$ 35,415,430,631.87
392	392	6.28%	\$ 37,638,297,271.45

### NWN NON-CONSTANT DCF CALCULATION

\$ 48.90
\$ 1.93
5.04%
6.28%
9.96%
9.19%
\$

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 40,000,683,211.21
394	394	6.28%	\$ 42,511,345,447.53
395	395	6.28%	\$ 45,179,590,613.91
396	396	6.28%	\$ 48,015,309,479.20
397	397	6.28%	\$ 51,029,013,611.16
398	398	6.28%	\$ 54,231,874,341.15
399	399	6.28%	\$ 57,635,764,174.59
400	400	6.28%	\$ 61,253,300,800.42

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ

LINE NO	YEAR	GROWTH RATE		DIVIDEND
		,	•	
1	1	5.75%	\$	2.58
2	2	5.75%	\$	2.73
3	3	5.75%	\$	2.89
4	4	5.75%	\$	3.05
5	5	5.75%	\$	3.23
6	6	5.77%	\$	3.41
7	7	5.80%	\$	3.61
8	8	5.83%	\$	3.82
9	9	5.85%	\$	4.04
10	10	5.88%	\$	4.28
11	11	5.90%	\$	4.53
12	12	5.93%	\$	4.80
13	13	5.96%	\$	5.09
14	14	5.98%	\$	5.39
15	15	6.01%	\$	5.72
16	16	6.04%	\$	6.06
17	17	6.06%	\$	6.43
18	18	6.09%	\$	6.82
19	19	6.12%	\$	7.24
20	20	6.14%	\$	7.69
21	21	6.17%	\$	8.16
22	22	6.20%	\$	8.67
23	23	6.22%	\$	9.21
24	24	6.25%	\$	9.78
25	25	6.28%	<u>\$</u>	10.39
26	26	6.28%	\$	11.05
27	27	6.28%	\$ \$	11.74
28	28	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	12.48

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
00	00	0.000/	Ф	40.00
29	29	6.28%	\$	13.26
30	30	6.28%	\$	14.09
31	31	6.28%	\$	14.98
32	32	6.28%	\$	15.92
33	33	6.28%	\$	16.92
34	34	6.28%	\$	17.98
35	35	6.28%	\$	19.11
36	36	6.28%	\$	20.31
37	37	6.28%	\$	21.58
38	38	6.28%	\$	22.93
39	39	6.28%	\$	24.37
40	40	6.28%	\$	25.90
41	41	6.28%	\$	27.53
42	42	6.28%	\$	29.26
43	43	6.28%	\$	31.09
44	44	6.28%	\$	33.05
45	45	6.28%	\$	35.12
46	46	6.28%	\$	37.32
47	47	6.28%	\$	39.67
48	48	6.28%	\$	42.16
49	49	6.28%	\$	44.80
50	50	6.28%	\$	47.61
51	51	6.28%	\$	50.60
52	52	6.28%	\$	53.78
53	53	6.28%	\$	57.15
54	54	6.28%	\$	60.74
55	55	6.28%	\$	64.55
56	56	6.28%	\$	68.61

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
57	57	6.28%	\$	72.91
58	58	6.28%	\$	77.49
59	59	6.28%	\$	82.35
60	60	6.28%	\$	87.52
61	61	6.28%	\$	93.01
62	62	6.28%	\$	98.85
63	63	6.28%	\$	105.06
64	64	6.28%	\$	111.65
65	65	6.28%	\$	118.66
66	66	6.28%	\$	126.11
67	67	6.28%	\$	134.02
68	68	6.28%	\$	142.43
69	69	6.28%	\$	151.37
70	70	6.28%	\$	160.87
71	71	6.28%	\$	170.97
72	72	6.28%	\$	181.70
73	73	6.28%	\$	193.11
74	74	6.28%	\$	205.23
75	75	6.28%	\$	218.11
76	76	6.28%	\$	231.80
77	77	6.28%	\$	246.35
78	78	6.28%	\$	261.81
79	79	6.28%	\$	278.24
80	80	6.28%	\$	295.71
81	81	6.28%	\$	314.27
82	82	6.28%	\$	333.99
83	83	6.28%	\$	354.96
84	84	6.28%	\$	377.23

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	\$	400.91
86	86	6.28%	\$	426.07
87	87	6.28%	\$	452.82
88	88	6.28%	\$	481.24
89	89	6.28%	\$	511.44
90	90	6.28%	\$	543.55
91	91	6.28%	\$	577.66
92	92	6.28%	\$	613.92
93	93	6.28%	\$	652.45
94	94	6.28%	\$	693.40
95	95	6.28%	\$	736.92
96	96	6.28%	\$	783.18
97	97	6.28%	\$	832.33
98	98	6.28%	\$	884.58
99	99	6.28%	\$	940.10
100	100	6.28%	\$	999.10
101	101	6.28%	\$	1,061.81
102	102	6.28%	\$	1,128.46
103	103	6.28%	\$	1,199.28
104	104	6.28%	\$	1,274.56
105	105	6.28%	\$	1,354.56
106	106	6.28%	\$	1,439.58
107	107	6.28%	\$	1,529.93
108	108	6.28%	\$	1,625.96
109	109	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,728.01
110	110	6.28%	\$	1,836.47
111	111	6.28%	\$	1,951.74
112	112	6.28%	\$	2,074.24

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ

LINE NO	YEAR	GROWTH RATE		DIVIDEND
113	113	6.28%	\$	2,204.43
114	114	6.28%	\$	2,342.79
115	115	6.28%	\$	2,489.84
116	116	6.28%	\$	2,646.12
117	117	6.28%	\$	2,812.20
118	118	6.28%	\$	2,988.71
119	119	6.28%	\$	3,176.30
120	120	6.28%	\$	3,375.66
121	121	6.28%	\$	3,587.54
122	122	6.28%	\$	3,812.71
123	123	6.28%	\$	4,052.02
124	124	6.28%	\$	4,306.34
125	125	6.28%	\$	4,576.63
126	126	6.28%	\$	4,863.89
127	127	6.28%	\$	5,169.17
128	128	6.28%	\$	5,493.62
129	129	6.28%	\$	5,838.43
130	130	6.28%	\$	6,204.88
131	131	6.28%	\$	6,594.33
132	132	6.28%	\$	7,008.23
133	133	6.28%	\$	7,448.10
134	134	6.28%	\$	7,915.58
135	135	6.28%	\$	8,412.41
136	136	6.28%	\$	8,940.42
137	137	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,501.57
138	138	6.28%	\$	10,097.94
139	139	6.28%	\$	10,731.74
140	140	6.28%	\$	11,405.32

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
141	141	6.28%	\$	12,121.18
142	142	6.28%	\$	12,881.98
143	143	6.28%	\$	13,690.52
144	144	6.28%	\$	14,549.81
145	145	6.28%	\$	15,463.04
146	146	6.28%	\$	16,433.58
147	147	6.28%	\$	17,465.04
148	148	6.28%	\$	18,561.25
149	149	6.28%	\$	19,726.25
150	150	6.28%	\$	20,964.38
151	151	6.28%	\$	22,280.22
152	152	6.28%	\$	23,678.65
153	153	6.28%	\$	25,164.85
154	154	6.28%	\$	26,744.33
155	155	6.28%	\$	28,422.96
156	156	6.28%	\$	30,206.94
157	157	6.28%	\$	32,102.89
158	158	6.28%	\$	34,117.84
159	159	6.28%	\$	36,259.26
160	160	6.28%	\$	38,535.09
161	161	6.28%	\$	40,953.77
162	162	6.28%	\$	43,524.25
163	163	6.28%	\$	46,256.07
164	164	6.28%	\$	49,159.36
165	165	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	52,244.87
166	166	6.28%	\$	55,524.04
167	167	6.28%	\$	59,009.04
168	168	6.28%	\$	62,712.77

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
169	169	6.28%	\$	66,648.96
170	170	6.28%	\$	70,832.22
171	171	6.28%		75,278.04
172	172	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	80,002.90
173	173	6.28%	\$	85,024.32
174	174	6.28%	\$	90,360.91
175	175	6.28%	\$	96,032.46
176	176	6.28%	\$	102,059.98
177	177	6.28%	\$	108,465.83
178	178	6.28%	\$	115,273.74
179	179	6.28%	\$	122,508.95
180	180	6.28%	\$	130,198.28
181	181	6.28%	\$	138,370.24
182	182	6.28%	\$	147,055.12
183	183	6.28%	\$	156,285.10
184	184	6.28%	\$	166,094.41
185	185	6.28%	\$	176,519.41
186	186	6.28%	\$	187,598.73
187	187	6.28%	\$	199,373.46
188	188	6.28%	\$	211,887.23
189	189	6.28%	\$	225,186.43
190	190	6.28%	\$	239,320.37
191	191	6.28%	\$	254,341.43
192	192	6.28%	\$	270,305.29
193	193	6.28%	\$ \$ \$	287,271.13
194	194	6.28%	\$	305,301.85
195	195	6.28%	\$	324,464.26
196	196	6.28%	\$	344,829.42

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ.

LINE		GROWTH		
NO	YEAR	RATE		DIVIDEND
197	197	6.28%	\$	366,472.81
198	198	6.28%	\$	389,474.65
199	199	6.28%	\$	413,920.21
200	200	6.28%	\$	439,900.12
201	201	6.28%	\$	467,510.66
202	202	6.28%	\$	496,854.19
203	203	6.28%	\$	528,039.49
204	204	6.28%	\$	561,182.14
205	205	6.28%	\$	596,405.01
206	206	6.28%	\$	633,838.66
207	207	6.28%	\$	673,621.85
208	208	6.28%	\$	715,902.05
209	209	6.28%	\$	760,835.99
210	210	6.28%	\$	808,590.23
211	211	6.28%	\$	859,341.78
212	212	6.28%	\$	913,278.79
213	213	6.28%	\$	970,601.17
214	214	6.28%	\$	1,031,521.43
215	215	6.28%	\$	1,096,265.37
216	216	6.28%	\$	1,165,072.99
217	217	6.28%	\$	1,238,199.36
218	218	6.28%	\$	1,315,915.54
219	219	6.28%	\$	1,398,509.62
220	220	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,486,287.75
221	221	6.28%	\$	1,579,575.32
222	222	6.28%	\$	1,678,718.13
223	223	6.28%	\$	1,784,083.69
224	224	6.28%	\$	1,896,062.56

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ.

LINE	VEAD	GROWTH		DIVIDEND
NO	YEAR	RATE		DIVIDEND
225	225	6.28%	\$	2,015,069.85
226	226	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	2,141,546.68
227	227	6.28%	\$	2,275,961.90
228	228	6.28%	\$	2,418,813.75
229	229	6.28%	\$	2,570,631.76
230	230	6.28%	\$	2,731,978.71
231	231	6.28%	\$	2,903,452.67
232	232	6.28%	\$	3,085,689.29
233	233	6.28%	\$	3,279,364.07
234	234	6.28%	\$	3,485,194.94
235	235	6.28%	\$	3,703,944.89
236	236	6.28%	\$	3,936,424.78
237	237	6.28%	\$	4,183,496.38
238	238	6.28%	\$	4,446,075.56
239	239	6.28%	\$	4,725,135.64
240	240	6.28%	\$	5,021,711.07
241	241	6.28%	\$	5,336,901.19
242	242	6.28%	\$	5,671,874.38
243	243	6.28%	\$	6,027,872.32
244	244	6.28%	\$	6,406,214.64
245	245	6.28%	\$	6,808,303.80
246	246	6.28%	\$	7,235,630.29
247	247	6.28%	\$	7,689,778.12
248	248	6.28%	\$	8,172,430.77
249	249	6.28%	\$	8,685,377.34
250	250	6.28%	\$	9,230,519.25
251	251	6.28%	\$ \$ \$	9,809,877.26
252	252	6.28%	\$	10,425,598.95

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
252	050	6 200/	<b>r</b>	11 070 066 71
253	253	6.28%	\$	11,079,966.71
254	254	6.28%	\$	11,775,406.18
255	255	6.28%	\$	12,514,495.25
256	256	6.28%	\$	13,299,973.60
257	257	6.28%	\$	14,134,752.88
258	258	6.28%	\$	15,021,927.48
259	259	6.28%	\$	15,964,786.03
260	260	6.28%	\$	16,966,823.55
261	261	6.28%	\$	18,031,754.44
262	262	6.28%	\$	19,163,526.23
263	263	6.28%	\$	20,366,334.22
264	264	6.28%	\$	21,644,637.05
265	265	6.28%	\$	23,003,173.16
266	266	6.28%	\$	24,446,978.46
267	267	6.28%	\$	25,981,404.89
268	268	6.28%	\$	27,612,140.34
269	269	6.28%	\$	29,345,229.68
270	270	6.28%	\$	31,187,097.22
271	271	6.28%	\$	33,144,570.47
272	272	6.28%	\$	35,224,905.48
273	273	6.28%	\$	37,435,813.71
274	274	6.28%	\$	39,785,490.67
275	275	6.28%	\$	42,282,646.24
276	276	6.28%	\$	44,936,537.00
277	277	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	47,757,000.48
278	278	6.28%	\$	50,754,491.73
279	279	6.28%	\$	53,940,121.96
280	280	6.28%	\$	57,325,699.81

### **OGS NON-CONSTANT DCF CALCULATION**

4
4
%
8%
2%
8%
3

LINE NO	YEAR	GROWTH RATE		DIVIDEND
NO		IVATE		
281	281	6.28%	\$	60,923,775.10
282	282	6.28%	\$	64,747,685.32
283	283	6.28%	Ψ ¢	68,811,605.12
284	284	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	73,130,598.81
285	285	6.28%	Ψ Φ	77,720,676.22
286	286	6.28%	Ψ	82,598,852.07
287	287	6.28%	Ψ	87,783,208.99
287 288	288	6.28%	Φ	93,292,964.58
			Φ	, ,
289	289	6.28%	Ф	99,148,542.64
290	290	6.28%	<b>Þ</b>	105,371,648.89
291	291	6.28%	\$	111,985,351.42
292	292	6.28%	\$	119,014,166.18
293	293	6.28%	\$	126,484,147.91
294	294	6.28%	\$	134,422,986.65
295	295	6.28%	\$	142,860,110.45
296	296	6.28%	\$	151,826,794.41
297	297	6.28%	\$	161,356,276.62
298	298	6.28%	\$ \$	171,483,881.40
299	299	6.28%	\$	182,247,150.19
300	300	6.28%	\$	193,685,980.75
301	301	6.28%	\$	205,842,775.05
302	302	6.28%	\$ \$ \$	218,762,596.42
303	303	6.28%	\$	232,493,336.64
304	304	6.28%	\$	247,085,893.40
305	305	6.28%	\$ \$ \$	262,594,359.06
306	306	6.28%	\$	279,076,221.06
307	307	6.28%	\$	296,592,575.11
308	308	6.28%	\$	315,208,351.59

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ.

LINE	YEAR	GROWTH		DIVIDEND
NO	. =,	RATE		- : <b>: : : :</b>
			_	
309	309	6.28%	\$	334,992,556.30
310	310	6.28%	\$	356,018,526.18
311	311	6.28%	\$ \$ \$	378,364,201.24
312	312	6.28%	\$	402,112,413.40
313	313	6.28%	\$	427,351,193.60
314	314	6.28%	\$ \$ \$	454,174,098.04
315	315	6.28%	\$	482,680,555.06
316	316	6.28%	\$	512,976,233.64
317	317	6.28%	\$	545,173,435.15
318	318	6.28%	\$	579,391,509.60
319	319	6.28%	\$ \$ \$ \$	615,757,298.04
320	320	6.28%	\$	654,405,602.79
321	321	6.28%	\$	695,479,687.08
322	322	6.28%	\$	739,131,806.16
323	323	6.28%	\$	785,523,771.60
324	324	6.28%	\$ \$ \$	834,827,551.21
325	325	6.28%	\$	887,225,906.39
326	326	6.28%	\$	942,913,069.70
327	327	6.28%	\$	1,002,095,464.75
328	328	6.28%	\$	1,064,992,471.47
329	329	6.28%	\$	1,131,837,239.24
330	330	6.28%	\$	1,202,877,551.21
331	331	6.28%	\$	1,278,376,742.73
332	332	6.28%	\$	1,358,614,677.54
333	333	6.28%	\$	1,443,888,785.15
334	334	6.28%	\$	1,534,515,163.38
335	335	6.28%	\$	1,630,829,750.10
336	336	6.28%	\$	1,733,189,568.45
	230		Ψ	, , ,

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE	YEAR	GROWTH		DIVIDEND
NO		RATE		
007	007	0.000/	•	4 0 44 0 74 0 50 00
337	337	6.28%	\$	1,841,974,050.32
338	338	6.28%	\$	1,957,586,442.84
339	339	6.28%	\$	2,080,455,303.12
340	340	6.28%	\$	2,211,036,086.86
341	341	6.28%	\$	2,349,812,836.67
342	342	6.28%	\$	2,497,299,976.34
343	343	6.28%	\$	2,654,044,217.69
344	344	6.28%	\$	2,820,626,587.19
345	345	6.28%	\$	2,997,664,579.71
346	346	6.28%	\$	3,185,814,447.49
347	347	6.28%	\$	3,385,773,632.76
348	348	6.28%	\$	3,598,283,353.05
349	349	6.28%	\$	3,824,131,348.75
350	350	6.28%	\$	4,064,154,803.19
351	351	6.28%	\$	4,319,243,445.87
352	352	6.28%	\$	4,590,342,850.65
353	353	6.28%	\$	4,878,457,940.73
354	354	6.28%	\$	5,184,656,713.85
355	355	6.28%	\$	5,510,074,201.12
356	356	6.28%	\$	5,855,916,674.44
357	357	6.28%	\$	6,223,466,117.93
358	358	6.28%	\$	6,614,084,980.08
359	359	6.28%	\$	7,029,221,224.12
360	360	6.28%	\$	7,470,413,695.39
361	361	6.28%	\$	7,939,297,825.58
362	362	6.28%	\$	8,437,611,695.08
363	363	6.28%	\$	8,967,202,475.71
364	364	6.28%	\$	9,530,033,277.93

### **OGS NON-CONSTANT DCF CALCULATION**

Stock Price =	\$ 77.87
Annual Dividend =	\$ 2.44
DCF Growth Estimate =	5.75%
GNP Growth Rate =	6.28%
Non-Constant DCF =	9.42%
Constant DCF =	9.06%

LINE NO	YEAR	ROWTH RATE	DIVIDEND
365	365	6.28%	\$ 10,128,190,427.79
366	366	6.28%	\$ 10,763,891,200.57
367	367	6.28%	\$ 11,439,492,039.95
368	368	6.28%	\$ 12,157,497,292.90
369	369	6.28%	\$ 12,920,568,492.97
370	370	6.28%	\$ 13,731,534,226.12
371	371	6.28%	\$ 14,593,400,615.91
372	372	6.28%	\$ 15,509,362,466.67
373	373	6.28%	\$ 16,482,815,106.19
374	374	6.28%	\$ 17,517,366,971.64
375	375	6.28%	\$ 18,616,852,985.49
376	376	6.28%	\$ 19,785,348,771.00
377	377	6.28%	\$ 21,027,185,759.87
378	378	6.28%	\$ 22,346,967,248.22
379	379	6.28%	\$ 23,749,585,460.27
380	380	6.28%	\$ 25,240,239,683.06
381	381	6.28%	\$ 26,824,455,539.41
382	382	6.28%	\$ 28,508,105,470.51
383	383	6.28%	\$ 30,297,430,504.18
384	384	6.28%	\$ 32,199,063,389.37
385	385	6.28%	\$ 34,220,053,182.71
386	386	6.28%	\$ 36,367,891,378.30
387	387	6.28%	\$ 38,650,539,677.48
388	388	6.28%	\$ 41,076,459,501.63
389	389	6.28%	\$ 43,654,643,357.34
390	390	6.28%	\$ 46,394,648,170.22
391	391	6.28%	\$ 49,306,630,710.95
392	392	6.28%	\$ 52,401,385,244.83

### **OGS NON-CONSTANT DCF CALCULATION**

\$ 77.87
\$ 2.44
5.75%
6.28%
9.42%
9.06%
Ψ.

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 55,690,383,544.44
394	394	6.28%	\$ 59,185,817,413.73
395	395	6.28%	\$ 62,900,643,881.11
396	396	6.28%	\$ 66,848,633,229.16
397	397	6.28%	\$ 71,044,420,038.89
398	398	6.28%	\$ 75,503,557,437.90
399	399	6.28%	\$ 80,242,574,753.33
400	400	6.28%	\$ 85,279,038,783.57

### SR NON-CONSTANT DCF CALCULATION

67.59
2.71
6.06%
6.28%
10.44%
10.31%

LINE NO	YEAR	GROWTH RATE		DIVIDEND
1	1	6.06%	¢	2.87
	2	6.06%	φ Φ	3.04
2	3	6.06%	φ \$	3.23
4	4	6.06%	Ψ	3.42
5	5	6.06%	Ψ	3.63
6	6	6.07%	Ψ <b>\$</b>	3.85
7	7	6.08%	Ψ \$	4.08
8	8	6.09%	\$ \$	4.33
9	9	6.10%	\$	4.60
10	10	6.11%	\$	4.88
11	11	6.13%	\$	5.18
12	12	6.14%	\$	5.50
13	13	6.15%	\$	5.83
14	14	6.16%	\$	6.19
15	15	6.17%	\$	6.58
16	16	6.18%	\$	6.98
17	17	6.19%	\$	7.41
18	18	6.20%	\$	7.87
19	19	6.21%	\$	8.36
20	20	6.22%	\$	8.88
21	21	6.23%	\$	9.44
22	22	6.24%	\$	10.03
23	23	6.26%	\$	10.65
24	24	6.27%	\$	11.32
25	25	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	12.03
26	26	6.28%	\$	12.79
27	27	6.28%	\$	13.59
28	28	6.28%	\$	14.44

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
29	29	6.28%	¢	15.35
30	30	6.28%	Φ	16.31
31	31	6.28%	Φ	17.34
32	32	6.28%	Φ	18.42
33	33	6.28%	Φ	19.58
			Φ •	
34 25	34	6.28%	Φ •	20.81
35	35	6.28%	Φ •	22.12
36	36	6.28%	<b>Ф</b>	23.50
37	37	6.28%	<b>Ф</b>	24.98
38	38	6.28%	<b>Ф</b>	26.55
39	39	6.28%	<b>Ф</b>	28.21
40	40	6.28%	<b>\$</b>	29.98
41	41	6.28%	<b>\$</b>	31.87
42	42	6.28%	<b>Ф</b>	33.87
43	43	6.28%	<b>\$</b>	35.99
44	44	6.28%	\$	38.25
45	45	6.28%	\$	40.65
46	46	6.28%	\$	43.20
47	47	6.28%	\$	45.91
48	48	6.28%	\$	48.80
49	49	6.28%	\$	51.86
50	50	6.28%	\$	55.11
51	51	6.28%	\$	58.57
52	52	6.28%	\$	62.25
53	53	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	66.16
54	54	6.28%	\$	70.31
55	55	6.28%	\$	74.72
56	56	6.28%	\$	79.41

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
57	57	6.28%	<b>c</b>	84.40
57 58	58	6.28%	φ •	89.69
59	59	6.28%	φ •	95.32
60	60	6.28%	φ •	101.31
61	61	6.28%	φ	107.66
62	62	6.28%	φ •	114.42
63	63	6.28%	Φ	121.60
64	64	6.28%	φ •	121.00
65	65	6.28%	φ •	137.35
66	66	6.28%	Φ	145.97
67	67	6.28%	Φ	155.13
68	68	6.28%	φ •	164.87
69	69	6.28%	Φ	175.22
70	70	6.28%	Φ	186.21
70 71	70 71	6.28%	Φ	197.90
7 1 72	7 1 72	6.28%	Φ	210.32
72 73	73	6.28%	Φ	210.32
73 74	73 74	6.28%	Φ	223.52 237.55
74 75	74 75		Φ	
		6.28%	Φ	252.46
76	76 77	6.28%	Φ	268.31
77 78	77 78	6.28%	Φ •	285.15
76 79	76 79	6.28%	Φ	303.05
		6.28%	Φ	322.07
80 81	80 81	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	342.28
	81	6.28%	Φ	363.77
82	82	6.28%	<b>\$</b>	386.60
83	83	6.28%	<b>\$</b>	410.86
84	84	6.28%	\$	436.65

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
85	85	6.28%	¢	464.06
86	86	6.28%	φ	493.18
87	87	6.28%	φ	524.14
88	88	6.28%	φ	557.04
89	89	6.28%	φ	592.00
90	90	6.28%	φ	629.16
91	91	6.28%	φ	668.65
92	92	6.28%	Ψ	710.62
93	93	6.28%	Ψ	710.02 755.22
93 94	94	6.28%	Ψ	802.62
9 <del>5</del>	95	6.28%	Ψ \$	853.00
96	96	6.28%	Ψ \$	906.53
97	97	6.28%	\$ \$	963.43
98	98	6.28%	\$	1,023.90
99	99	6.28%	\$	1,088.17
100	100	6.28%	\$	1,156.47
101	101	6.28%	\$	1,229.06
102	102	6.28%	\$	1,306.20
103	103	6.28%	\$	1,388.18
104	104	6.28%	\$	1,475.31
105	105	6.28%	\$	1,567.91
106	106	6.28%	\$	1,666.32
107	107	6.28%	\$	1,770.91
108	108	6.28%	\$	1,882.06
109	109	6.28%	\$	2,000.19
110	110	6.28%	\$	2,125.73
111	111	6.28%	\$	2,259.15
112	112	6.28%	\$	2,400.95

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
440	440	0.000/	ф	0.554.05
113	113	6.28%	\$	2,551.65
114	114	6.28%	\$	2,711.80
115	115	6.28%	\$	2,882.01
116	116	6.28%	\$	3,062.90
117	117	6.28%	\$	3,255.15
118	118	6.28%	\$	3,459.46
119	119	6.28%	\$	3,676.59
120	120	6.28%	\$	3,907.35
121	121	6.28%	\$	4,152.60
122	122	6.28%	\$	4,413.24
123	123	6.28%	\$	4,690.24
124	124	6.28%	\$	4,984.63
125	125	6.28%	\$	5,297.49
126	126	6.28%	\$	5,629.99
127	127	6.28%	\$	5,983.36
128	128	6.28%	\$	6,358.90
129	129	6.28%	\$	6,758.02
130	130	6.28%	\$	7,182.19
131	131	6.28%	\$	7,632.99
132	132	6.28%	\$	8,112.08
133	133	6.28%	\$	8,621.23
134	134	6.28%	\$	9,162.35
135	135	6.28%	\$	9,737.43
136	136	6.28%	\$	10,348.60
137	137	6.28%	\$	10,998.14
138	138	6.28%	\$	11,688.44
139	139	6.28%	\$	12,422.07
140	140	6.28%	\$	13,201.75

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
4.44	4.44	0.000/	r.	44.020.27
141	141	6.28%	\$	14,030.37
142	142	6.28%	\$	14,910.99
143	143	6.28%	\$	15,846.88
144	144	6.28%	\$	16,841.52
145	145	6.28%	\$	17,898.59
146	146	6.28%	\$	19,022.00
147	147	6.28%	\$	20,215.93
148	148	6.28%	\$	21,484.79
149	149	6.28%	\$	22,833.29
150	150	6.28%	\$	24,266.43
151	151	6.28%	\$	25,789.53
152	152	6.28%	\$	27,408.22
153	153	6.28%	\$	29,128.51
154	154	6.28%	\$	30,956.78
155	155	6.28%	\$	32,899.79
156	156	6.28%	\$	34,964.76
157	157	6.28%	\$	37,159.34
158	158	6.28%	\$	39,491.67
159	159	6.28%	\$	41,970.38
160	160	6.28%	\$	44,604.67
161	161	6.28%	\$	47,404.31
162	162	6.28%	\$	50,379.66
163	163	6.28%	\$	53,541.77
164	164	6.28%	\$	56,902.34
165	165	6.28%	\$	60,473.84
166	166	6.28%	\$	64,269.51
167	167	6.28%	\$	68,303.42
168	168	6.28%	\$	72,590.52

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
400	400	0.000/	•	
169	169	6.28%	\$	77,146.70
170	170	6.28%	\$	81,988.85
171	171	6.28%	\$	87,134.92
172	172	6.28%	\$	92,603.98
173	173	6.28%	\$	98,416.32
174	174	6.28%	\$	104,593.46
175	175	6.28%	\$	111,158.32
176	176	6.28%	\$	118,135.23
177	177	6.28%	\$	125,550.04
178	178	6.28%	\$	133,430.25
179	179	6.28%	\$	141,805.07
180	180	6.28%	\$	150,705.53
181	181	6.28%	\$	160,164.64
182	182	6.28%	\$	170,217.45
183	183	6.28%	\$	180,901.23
184	184	6.28%	\$	192,255.58
185	185	6.28%	\$	204,322.60
186	186	6.28%	\$	217,147.00
187	187	6.28%	\$	230,776.34
188	188	6.28%	\$	245,261.13
189	189	6.28%	\$	260,655.06
190	190	6.28%	\$	277,015.20
191	191	6.28%	\$	294,402.20
192	192	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	312,880.49
193	193	6.28%	\$	332,518.59
194	194	6.28%	\$	353,389.28
195	195	6.28%	\$	375,569.93
196	196	6.28%	\$	399,142.76

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			•	
197	197	6.28%	\$	424,195.14
198	198	6.28%	\$	450,819.96
199	199	6.28%	\$	479,115.89
200	200	6.28%	\$	509,187.83
201	201	6.28%	\$	541,147.25
202	202	6.28%	\$	575,112.62
203	203	6.28%	\$	611,209.84
204	204	6.28%	\$	649,572.72
205	205	6.28%	\$	690,343.47
206	206	6.28%	\$	733,673.21
207	207	6.28%	\$	779,722.57
208	208	6.28%	\$	828,662.23
209	209	6.28%	\$	880,673.62
210	210	6.28%	\$	935,949.52
211	211	6.28%	\$	994,694.85
212	212	6.28%	\$	1,057,127.35
213	213	6.28%	\$	1,123,478.46
214	214	6.28%	\$	1,193,994.13
215	215	6.28%	\$	1,268,935.75
216	216	6.28%	\$	1,348,581.11
217	217	6.28%	\$	1,433,225.46
218	218	6.28%	\$	1,523,182.55
219	219	6.28%	\$	1,618,785.84
220	220	6.28%	\$	1,720,389.72
221	221	6.28%	\$	1,828,370.81
222	222	6.28%	\$	1,943,129.39
223	223	6.28%	\$	2,065,090.84
224	224	6.28%	\$	2,194,707.27

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			_	
225	225	6.28%	\$	2,332,459.13
226	226	6.28%	\$	2,478,857.06
227	227	6.28%	\$	2,634,443.72
228	228	6.28%	\$	2,799,795.86
229	229	6.28%	\$	2,975,526.40
230	230	6.28%	\$	3,162,286.75
231	231	6.28%	\$	3,360,769.21
232	232	6.28%	\$	3,571,709.52
233	233	6.28%	\$	3,795,889.59
234	234	6.28%	\$	4,034,140.44
235	235	6.28%	\$	4,287,345.22
236	236	6.28%	\$	4,556,442.51
237	237	6.28%	\$	4,842,429.83
238	238	6.28%	\$	5,146,367.29
239	239	6.28%	\$	5,469,381.52
240	240	6.28%	\$	5,812,669.90
241	241	6.28%	\$	6,177,504.93
242	242	6.28%	\$	6,565,239.02
243	243	6.28%	\$	6,977,309.42
244	244	6.28%	\$	7,415,243.63
245	245	6.28%	\$	7,880,664.98
246	246	6.28%	\$	8,375,298.73
247	247	6.28%	\$	8,900,978.41
248	248	6.28%		9,459,652.62
249	249	6.28%	\$	10,053,392.30
250	250	6.28%	\$	10,684,398.33
251	251	6.28%	\$	11,355,009.76
252	252	6.28%	\$	12,067,712.44

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
252	252	6 200/	¢	10 005 140 05
253 254	253	6.28%	\$	12,825,148.25
	254	6.28%	Φ	13,630,124.89
255 256	255	6.28%	Φ	14,485,626.27
256 257	256	6.28%	Φ	15,394,823.62
257	257	6.28%	Φ	16,361,087.17
258	258	6.28%	<b>Ф</b>	17,387,998.72
259	259	6.28%	<b>D</b>	18,479,364.87
260	260	6.28%	<b>5</b>	19,639,231.15
261	261	6.28%	<b>\$</b>	20,871,897.00
262	262	6.28%	<b>\$</b>	22,181,931.71
263	263	6.28%	<b>\$</b>	23,574,191.39
264	264	6.28%	\$	25,053,836.92
265	265	6.28%	\$	26,626,353.11
266	266	6.28%	\$	28,297,569.05
267	267	6.28%	\$	30,073,679.66
268	268	6.28%	\$	31,961,268.72
269	269	6.28%	\$	33,967,333.21
270	270	6.28%	\$	36,099,309.32
271	271	6.28%	\$	38,365,099.94
272	272	6.28%	\$	40,773,104.00
273	273	6.28%	\$	43,332,247.60
274	274	6.28%	\$	46,052,017.08
275	275	6.28%	\$	48,942,494.22
276	276	6.28%	\$	52,014,393.55
277	277	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	55,279,102.13
278	278	6.28%	\$	58,748,721.72
279	279	6.28%	\$	62,436,113.66
280	280	6.28%	\$	66,354,946.55

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
			_	
281	281	6.28%	\$	70,519,746.87
282	282	6.28%	\$	74,945,952.91
283	283	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	79,649,971.91
284	284	6.28%	\$	84,649,240.93
285	285	6.28%	\$	89,962,291.50
286	286	6.28%	\$	95,608,818.25
287	287	6.28%	\$	101,609,751.99
288	288	6.28%	\$	107,987,337.24
289	289	6.28%	\$	114,765,214.71
290	290	6.28%	\$	121,968,508.94
291	291	6.28%	\$	129,623,921.42
292	292	6.28%	\$	137,759,829.57
293	293	6.28%	\$	146,406,391.93
294	294	6.28%	\$	155,595,659.96
295	295	6.28%	\$	165,361,696.84
296	296	6.28%	\$	175,740,703.75
297	297	6.28%	\$	186,771,154.06
298	298	6.28%	\$	198,493,935.91
299	299	6.28%	\$	210,952,503.84
300	300	6.28%	\$	224,193,039.81
301	301	6.28%	\$	238,264,624.44
302	302	6.28%	\$	253,219,418.87
303	303	6.28%	\$	269,112,858.22
304	304	6.28%	\$	286,003,856.98
305	305	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	303,955,027.45
306	306	6.28%	\$	323,032,911.82
307	307	6.28%	\$	343,308,228.83
308	308	6.28%	\$	364,856,135.92

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE		DIVIDEND
	000	0.000/	•	
309	309	6.28%	\$	387,756,507.83
310	310	6.28%	\$	412,094,232.66
311	311	6.28%	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	437,959,526.57
312	312	6.28%	\$	465,448,268.16
313	313	6.28%	\$	494,662,353.93
314	314	6.28%	\$	525,710,075.91
315	315	6.28%	\$	558,706,523.20
316	316	6.28%	\$	593,774,008.46
317	317	6.28%	\$	631,042,521.40
318	318	6.28%	\$	670,650,210.59
319	319	6.28%	\$	712,743,895.56
320	320	6.28%	\$	757,479,611.03
321	321	6.28%	\$	805,023,185.32
322	322	6.28%	\$	855,550,855.07
323	323	6.28%	\$	909,249,918.45
324	324	6.28%	\$	966,319,429.53
325	325	6.28%	\$	1,026,970,936.08
326	326	6.28%	\$	1,091,429,263.79
327	327	6.28%	\$	1,159,933,349.62
328	328	6.28%	\$	1,232,737,127.55
329	329	6.28%	\$ \$	1,310,110,469.83
330	330	6.28%	\$	1,392,340,187.38
331	331	6.28%	\$	1,479,731,092.93
332	332	6.28%	\$	1,572,607,130.95
333	333	6.28%	\$	1,671,312,578.44
334	334	6.28%	\$	1,776,213,321.10
335	335	6.28%	\$	1,887,698,209.63
336	336	6.28%	\$	2,006,180,501.13

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE	DIVIDEND
227	227	C 200/	¢ 2.422.000.200.00
337	337	6.28%	\$ 2,132,099,390.99
338	338	6.28%	\$ 2,265,921,640.89
339	339	6.28%	\$ 2,408,143,309.06
340	340	6.28%	\$ 2,559,291,589.05
341	341	6.28%	\$ 2,719,926,763.97
342	342	6.28%	\$ 2,890,644,283.36
343 344	343	6.28%	\$ 3,072,076,970.46
_	344	6.28%	\$ 3,264,897,367.96
345 346	345 346	6.28%	\$ 3,469,820,231.00
346 347	346 347	6.28% 6.28%	\$ 3,687,605,176.69 \$ 3,919,059,499.87
347 348	34 <i>1</i> 348	6.28%	\$ 3,919,059,499.87 \$ 4,165,041,165.64
340 349	340 349	6.28%	\$ 4,426,461,989.68
3 <del>4</del> 9 350	350	6.28%	\$ 4,420,461,969.66 \$ 4,704,291,018.23
350 351	351	6.28%	\$ 4,704,291,018.23
352	352	6.28%	\$ 5,313,357,804.67
353	353	6.28%	\$ 5,646,853,278.18
354	354	6.28%	\$ 6,001,280,756.45
355	355	6.28%	\$ 6,377,954,046.89
356	356	6.28%	\$ 6,778,269,418.65
357	357	6.28%	\$ 7,203,710,778.42
358	358	6.28%	\$ 7,655,855,170.98
359	359	6.28%	\$ 8,136,378,625.12
360	360	6.28%	\$ 8,647,062,366.36
361	361	6.28%	\$ 9,189,799,419.72
362	362	6.28%	\$ 9,766,601,626.84
363	363	6.28%	\$ 10,379,607,103.57
364	364	6.28%	\$ 11,031,088,165.66

#### **SR NON-CONSTANT DCF CALCULATION**

#### **SCHEDULE D-1.15**

LINE NO	YEAR	GROWTH RATE	DIVIDEND
365	365	6.28%	\$ 11,723,459,751.84
366	366	6.28%	\$ 12,459,288,375.63
367	367	6.28%	\$ 13,241,301,639.02
368	368	6.28%	\$ 14,072,398,343.28
369	369	6.28%	\$ 14,955,659,234.31
370	370	6.28%	\$ 15,894,358,422.54
371	371	6.28%	\$ 16,891,975,519.51
372	372	6.28%	\$ 17,952,208,536.27
373	373	6.28%	\$ 19,078,987,591.33
374	374	6.28%	\$ 20,276,489,478.98
375	375	6.28%	\$ 21,549,153,152.03
376	376	6.28%	\$ 22,901,696,176.30
377	377	6.28%	\$ 24,339,132,217.93
378	378	6.28%	\$ 25,866,789,628.22
379	379	6.28%	\$ 27,490,331,195.04
380	380	6.28%	\$ 29,215,775,133.86
381	381	6.28%	\$ 31,049,517,396.36
382	382	6.28%	\$ 32,998,355,379.23
383	383	6.28%	\$ 35,069,513,121.06
384	384	6.28%	\$ 37,270,668,080.70
385	385	6.28%	\$ 39,609,979,596.42
386	386	6.28%	\$ 42,096,119,131.31
387	387	6.28%	\$ 44,738,302,417.04
388	388	6.28%	\$ 47,546,323,615.14
389	389	6.28%	\$ 50,530,591,622.42
390	390	6.28%	\$ 53,702,168,655.13
391	391	6.28%	\$ 57,072,811,254.88
392	392	6.28%	\$ 60,655,013,868.31

### SR NON-CONSTANT DCF CALCULATION

Stock Price =	\$ 67.59
Annual Dividend =	\$ 2.71
DCF Growth Estimate :	6.06%
GNP Growth Rate =	6.28%
Non-Constant DCF =	10.44%
Constant DCF =	10.31%

LINE NO	YEAR	GROWTH RATE	DIVIDEND
393	393	6.28%	\$ 64,462,055,162.04
394	394	6.28%	\$ 68,508,047,244.64
395	395	6.28%	\$ 72,807,987,977.97
396	396	6.28%	\$ 77,377,816,571.99
397	397	6.28%	\$ 82,234,472,668.84
398	398	6.28%	\$ 87,395,959,135.54
399	399	6.28%	\$ 92,881,408,797.74
400	400	6.28%	\$ 98,711,155,362.15

### **GROWTH IN U.S. GROSS NATIONAL PRODUCT, 1929 TO 2021**

LINE NO	YEAR	GNP (\$ BILLION)	CHANGE (\$ BILLION)	GROWTH (%)
4	1000	10F 2		
1	1929	105.3	10.40	44 700/
2 3	1930	92.9	-12.40 45.00	-11.78%
	1931	77.9	-15.00	-16.15%
4	1932 1933	59.9	-18.00 -2.40	-23.11% -4.01%
5 6	1934	57.5 67.1	-2.40 9.60	16.70%
6 7	1934	74.6	9.60 7.50	11.18%
8	1936	85.1	10.50	14.08%
9	1937	93.4	8.30	9.75%
10	1937	93.4 87.7	-5.70	-6.10%
11	1939	93.8	6.10	6.96%
12	1940	103.2	9.40	10.02%
13	1940	129.7	26.50	25.68%
14	1942	166.4	36.70	28.30%
15	1942	203.4	37.00	22.24%
16	1944	224.8	21.40	10.52%
17	1945	228.3	3.50	1.56%
18	1946	228.2	-0.10	-0.04%
19	1947	250.7	22.50	9.86%
20	1948	275.9	25.20	10.05%
21	1949	273.8	-2.10	-0.76%
22	1950	301.3	27.50	10.04%
23	1951	348.8	47.50	15.77%
24	1952	369.3	20.50	5.88%
25	1953	391.1	21.80	5.90%
26	1954	392.6	1.50	0.38%
27	1955	427.9	35.30	8.99%
28	1956	452.1	24.20	5.66%
29	1957	477.1	25.00	5.53%
30	1958	483.9	6.80	1.43%
31	1959	524.4	40.50	8.37%
32	1960	545.5	21.10	4.02%
33	1961	565.7	20.20	3.70%
34	1962	608	42.30	7.48%
35	1963	641.9	33.90	5.58%

### **GROWTH IN U.S. GROSS NATIONAL PRODUCT, 1929 TO 2021**

LINE NO	YEAR	GNP (\$ BILLION)	CHANGE (\$ BILLION)	GROWTH (%)
			- <b>,</b>	
36	1964	689.4	47.50	7.40%
37	1965	747.6	58.20	8.44%
38	1966	818.5	70.90	9.48%
39	1967	865.4	46.90	5.73%
40	1968	946.7	81.30	9.39%
41	1969	1023.7	77.00	8.13%
42	1970	1,079.70	56.00	5.47%
43	1971	1,172.40	92.70	8.59%
44	1972	1,287.70	115.30	9.83%
45	1973	1,438.00	150.30	11.67%
46	1974	1,560.80	122.80	8.54%
47	1975	1,697.90	137.10	8.78%
48	1976	1,890.30	192.40	11.33%
49	1977	2,102.10	211.80	11.20%
50	1978	2,373.20	271.10	12.90%
51	1979	2,659.30	286.10	12.06%
52	1980	2,891.50	232.20	8.73%
53	1981	3,240.00	348.50	12.05%
54	1982	3,380.30	140.30	4.33%
55	1983	3,671.10	290.80	8.60%
56	1984	4,073.90	402.80	10.97%
57	1985	4,364.30	290.40	7.13%
58	1986	4,596.60	232.30	5.32%
59	1987	4,872.70	276.10	6.01%
60	1988	5,259.10	386.40	7.93%
61	1989	5,666.40	407.30	7.74%
62	1990	5,997.80	331.40	5.85%
63	1991	6,189.70	191.90	3.20%
64	1992	6,551.40	361.70	5.84%
65	1993	6,889.70	338.30	5.16%
66	1994	7,310.20	420.50	6.10%
67	1995	7,667.70	357.50	4.89%
68	1996	8,104.00	436.30	5.69%
69	1997	8,600.90	496.90	6.13%
70	1998	9,080.20	479.30	5.57%

#### **GROWTH IN U.S. GROSS NATIONAL PRODUCT, 1929 TO 2021**

#### **SCHEDULE D-1.16**

LINE NO	YEAR	GNP (\$ BILLION)	CHANGE (\$ BILLION)	GROWTH (%)
71	1999	9,662.10	581.90	6.41%
72	2000	10,289.40	627.30	6.49%
73	2001	10,632.30	342.90	3.33%
74	2002	10,974.90	342.60	3.22%
75	2003	11,514.90	540.00	4.92%
76	2004	12,293.90	779.00	6.77%
77	2005	13,114.00	820.10	6.67%
78	2006	13,862.00	748.00	5.70%
79	2007	14,569.90	707.90	5.11%
80	2008	14,915.10	345.20	2.37%
81	2009	14,628.30	-286.80	-1.92%
82	2010	15,254.60	626.30	4.28%
83	2011	15,837.70	583.10	3.82%
84	2012	16,486.70	649.00	4.10%
85	2013	17,073.50	586.80	3.56%
86	2014	17,785.90	712.40	4.17%
87	2015	18,426.40	640.50	3.60%
88	2016	18,927.10	500.70	2.72%
89	2017	19,770.30	843.20	4.45%
90	2018	20,823.40	1,053.10	5.33%
91	2019	21,659.00	835.60	4.01%
92	2020.00	21,257.40	-401.60	-1.85%
93	2021.00	23,488.20	2,230.80	10.30%
94	Average			6.28%

Source: (1) National Income and Product Accounts (NIPA) from the U. S. Bureau of Economic Analysis and Econostats; BEA Data; NIPA Index; Section 1. Domestic Product and Income Table 1.7.5 Relation of Gross Domestic Product, Gross National Product, Net National Product, National Income, and Personal Income.

(GAS SERVICE)

#### DATA: 3 MONTHS WEATHER NORMAL ACTUAL & 9 MONTHS ESTIMATED

**SCHEDULE E-5** PAGE 1 OF 5

				BILL DATA INCL ALL RIDERS LESS COST of GAS (1)				CURRENT	PROPOSED	TOTAL	TOTAL	
LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B)	CURRENT BILL & XTAX (C)	PROPOSED BILL & XTAX (D)	DOLLAR INCREASE (D - C) (E)	PERCENT INCREASE (E / C) (F)	GAS COST (2)(3) & XTAX (G1)	GAS COST (2)(4) & XTAX (G2)	CURRENT BILL (C + G) (H)	PROPOSED BILL (D + G) (I)	PERCENT INCREASE (I-H) /H (J)
		, ,	(MCF)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(%)
1 2 3	(RS) RESIDENTIAL	Not Applicable	1 3 6 8	45.54 46.66 48.34 49.44	46.21 48.67 52.37 54.81	0.67 2.01 4.03 5.37	1.5 4.3 8.3 10.9	7.36 22.09 44.18 58.91	7.36 22.09 44.18 58.91	52.90 68.75 92.52 108.35	53.57 70.76 96.55 113.72	1.3 2.9 4.4 5.0
5 6 7			10 12 16	50.56 51.67 53.90	57.27 59.73 64.63	6.71 8.06 10.73	13.3 15.6 19.9	73.63 88.36 117.81	73.63 88.36 117.81	124.19 140.03 171.71	130.90 148.09 182.44	5.4 5.8 6.2
8 9 10			20 30 40	56.14 61.71 67.29	69.56 81.85 94.13	13.42 20.14 26.84	23.9 32.6 39.9	147.27 220.90 294.53	147.27 220.90 294.53	203.41 282.61 361.82	216.83 302.75 388.66	6.6 7.1 7.4
11 12 13 14			50 60 80 100	79.29 91.26 115.24 139.21	107.65 121.14 148.15 175.17	28.36 29.88 32.91 35.96	35.8 32.7 28.6 25.8	368.16 441.80 589.06 736.33	368.16 441.80 589.06 736.33	447.45 533.06 704.30 875.54	475.81 562.94 737.21 911.50	6.3 5.6 4.7 4.1
15 16 17 18 19 20 21 22 23 24 25 26 27 28	(RFT) RESIDENTIAL FIRM TRANSPORTATION		1 3 6 8 10 12 16 20 30 40 50 60 80 100	45.54 46.66 48.34 49.44 50.56 51.67 53.90 56.14 61.71 67.29 79.29 91.26 115.24 139.21	46.21 48.67 52.37 54.81 57.27 59.73 64.63 69.56 81.85 94.13 107.65 121.14 148.15	0.67 2.01 4.03 5.37 6.71 8.06 10.73 13.42 20.14 26.84 28.36 29.88 32.91 35.96	1.5 4.3 8.3 10.9 13.3 15.6 19.9 23.9 32.6 39.9 35.8 32.7 28.6 25.8	7.32 21.97 43.94 58.59 73.24 87.89 117.18 146.48 219.72 292.96 366.20 439.44 585.92 732.40	7.34 22.01 44.02 58.70 73.37 88.04 117.39 146.74 220.11 293.48 366.85 440.22 586.96 733.71	52.86 68.63 92.28 108.03 123.80 139.56 171.08 202.62 281.43 360.25 445.49 530.70 701.16 871.61	53.53 70.64 96.31 113.40 130.51 147.62 181.81 216.04 301.57 387.09 473.85 560.58 734.07 907.57	1.3 2.9 4.4 5.0 5.4 5.8 6.3 6.6 7.2 7.5 6.4 5.6 4.7

<sup>(1)</sup> INCLUDES RIDERS AMRP,CEP, UE-G, GTCJA AND PIPP PLUS EXCISE TAX.

<sup>(2)</sup> EXPECTED GAS COST RATE EQUALS \$7.020/MCF FOR RATE RS. GAS COST FOR RFT (WHICH WOULD BE PAID TO A THIRD PARTY) ASSUMED TO BE THE SAME. (3) GAS SURCREDIT RIDER RATE EQUALS \$0.000000/MCF AND CONTRACT COMMITMENT COST RIDER EQUALS -\$0.025/MCF FOR RATE RFT.

(GAS SERVICE)

#### DATA: 3 MONTHS WEATHER NORMAL ACTUAL & 9 MONTHS ESTIMATED

SCHEDULE E-5 PAGE 2 OF 5

				BILL DATA I	NCL ALL RIDERS	S LESS COST	of GAS (1)	CURRENT	PROPOSED	TOTAL	TOTAL	
LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B)	CURRENT BILL & XTAX (C)	PROPOSED BILL & XTAX (D)	DOLLAR INCREASE (D - C) (E)	PERCENT INCREASE (E / C) (F)	GAS COST (2)(3) & XTAX (G1)	GAS COST (2)(4) & XTAX (G2)	CURRENT BILL (C + G) (H)	PROPOSED BILL (D + G) (I)	PERCENT INCREASE (I-H) /H (J)
			(MCF)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(%)
1 2 3	(RSLI) RESIDENTIAL LOW INCOME	Not Applicable	1 3 6	41.57 42.69 44.36	42.01 44.47 48.15	0.44 1.78 3.79	1.1 4.2 8.5	7.36 22.09 44.18	7.36 22.09 44.18	48.93 64.78 88.54	49.37 66.56 92.33	0.9 2.7 4.3
4 5 6			8 10 12	45.47 46.59 47.71	50.61 53.07 55.53	5.14 6.48 7.82	11.3 13.9 16.4	58.91 73.63 88.36	58.91 73.63 88.36	104.38 120.22 136.07	109.52 126.70 143.89	4.9 5.4 5.7
7 8 9			16 20 30	49.94 52.17 57.75	60.44 65.36 77.65	10.50 13.19 19.90	21.0 25.3 34.5	117.81 147.27 220.90	117.81 147.27 220.90	167.75 199.44 278.65	178.25 212.63 298.55	6.3 6.6 7.1
10 11			40 50	63.32 68.90	89.94 102.23	26.62 33.33	42.0 48.4	294.53 368.16	294.53 368.16	357.85 437.06	384.47 470.39	7.4 7.6
12 13 14			60 80 100	74.48 85.63 96.79	114.52 139.10 163.67	40.04 53.47 66.88	53.8 62.4 69.1	441.80 589.06 736.33	441.80 589.06 736.33	516.28 674.69 833.12	556.32 728.16 900.00	7.8 7.9 8.0
15 16	(RFTLI) RESIDENTIAL FIRM		1 3	41.57 42.69	42.01 44.47	0.44 1.78	1.1 4.2	7.32 21.97	7.34 22.01	48.89 64.66	49.33 66.44	0.9 2.8
17 18 19	TRANSPORTATION LOW INCOME		6 8 10	44.36 45.47 46.59	48.15 50.61 53.07	3.79 5.14 6.48	8.5 11.3 13.9	43.94 58.59 73.24	44.02 58.70 73.37	88.30 104.06 119.83	92.09 109.20 126.31	4.3 4.9 5.4
20 21 22			12 16 20	47.71 49.94 52.17	55.53 60.44 65.36	7.82 10.50 13.19	16.4 21.0 25.3	87.89 117.18 146.48	88.04 117.39 146.74	135.60 167.12 198.65	143.42 177.62 211.84	5.8 6.3 6.6
23 24 25			30 40 50	57.75 63.32 68.90	77.65 89.94 102.23	19.90 26.62 33.33	34.5 42.0 48.4	219.72 292.96 366.20	220.11 293.48 366.85	277.47 356.28 435.10	297.37 382.90 468.43	7.2 7.5 7.7
26 27 28			60 80 100	74.48 85.63 96.79	114.52 139.10 163.67	40.04 53.47 66.88	53.8 62.4 69.1	439.44 585.92 732.40	440.22 586.96 733.71	513.92 671.55 829.19	553.96 725.02 896.07	7.8 8.0 8.1

<sup>(1)</sup> INCLUDES RIDERS AMRP,CEP, UE-G, GTCJA AND PIPP PLUS EXCISE TAX.
(2) EXPECTED GAS COST RATE EQUALS \$7.020/MCF FOR RATE RSLI. GAS COST FOR RFTLI (WHICH WOULD BE PAID TO A THIRD PARTY) ASSUMED TO BE THE SAME.
(3) GAS SURCREDIT RIDER RATE EQUALS \$0.000000/MCF AND CONTRACT COMMITMENT COST RIDER EQUALS -\$0.025/MCF FOR RATE RFTLI.

(GAS SERVICE)

#### DATA: 3 MONTHS WEATHER NORMAL ACTUAL & 9 MONTHS ESTIMATED

SCHEDULE E-5 PAGE 3 OF 5

LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B) (MCF)	CURRENT BILL & XTAX (C) (\$)	PROPOSED BILL & XTAX (D) (\$)	DOLLAR INCREASE (D - C) (E) (\$)	of GAS (1) PERCENT INCREASE (E / C) (F) (%)	CURRENT GAS COST (2)(3) & XTAX (G1) (\$)	PROPOSED GAS COST (2)(4) & XTAX (G2) (\$)	TOTAL CURRENT BILL (C+G) (H) (\$)	TOTAL PROPOSED BILL (D+G) (I) (\$)	PERCENT INCREASE (I-H) /H (J) (%)
1	(GS-S)	Not	5	143.69	145.71	2.02	1.4	36.82	36.82	180.51	182.53	1.1
2 N	ON-RÈSIDEŃTIAL	Applicable	10	149.78	153.83	4.05	2.7	73.63	73.63	223.41	227.46	1.8
3			20	161.99	170.09	8.10	5.0	147.27	147.27	309.26	317.36	2.6
4			30	174.19	186.33	12.14	7.0	220.90	220.90	395.09	407.23	3.1
5			40	186.39	202.58	16.19	8.7	294.53	294.53	480.92	497.11	3.4
6			50	198.60	218.83	20.23	10.2	368.16	368.16	566.76	586.99	3.6
7			60	210.80	235.08	24.28	11.5	441.80	441.80	652.60	676.88	3.7
8			75	229.10	259.45	30.35	13.2	552.25	552.25	781.35	811.70	3.9
9			80	235.19	267.57	32.38	13.8	589.06	589.06	824.25	856.63	3.9
10			100	259.60	300.07	40.47	15.6	736.33	736.33	995.93	1,036.40	4.1
11			200	374.11	455.05	80.94	21.6	1,472.66	1,472.66	1,846.77	1,927.71	4.4
12 13			300	488.61	610.03 765.02	121.42 161.90	24.9 26.8	2,208.98 2,945.31	2,208.98	2,697.59	2,819.01	4.5 4.6
13			400	603.12	705.02	161.90	20.8	2,945.31	2,945.31	3,548.43	3,710.33	4.0
14	(GS-L)		400	836.89	959.63	122.74	14.7	2,945.31	2,945.31	3,782.20	3,904.94	3.2
	ON-RESIDENTIAL		450	896.82	1,034.91	138.09	15.4	3,313.48	3,313.48	4,210.30	4,348.39	3.3
16			500	956.73	1,110.17	153.44	16.0	3,681.64	3,681.64	4,638.37	4,791.81	3.3
17			700	1,196.42	1,411.23	214.81	18.0	5,154.29	5,154.29	6,350.71	6,565.52	3.4
18			850	1,376.20	1,637.03	260.83	19.0	6,258.79	6,258.79	7,634.99	7,895.82	3.4
19			1,000	1,555.96	1,862.83	306.87	19.7	7,363.28	7,363.28	8,919.24	9,226.11	3.4
20			2,000	2,754.41	3,368.14	613.73	22.3	14,726.56	14,726.56	17,480.97	18,094.70	3.5
21			3,000	3,903.98	4,824.58	920.60	23.6	22,089.83	22,089.83	25,993.81	26,914.41	3.5
22 23			4,000 5,000	5,053.56 6,203.13	6,281.02 7,737.46	1,227.46 1,534.33	24.3 24.7	29,453.11 36,816.39	29,453.11 36,816.39	34,506.67 43,019.52	35,734.13 44,553.85	3.6 3.6
23 24			6,000	7,352.71	9,193.90	1,841.19	24.7 25.0	44,179.67	44,179.67	51,532.38	53,373.57	3.6
25			7,000	8,502.28	10.650.34	2.148.06	25.3	51,542.95	51,542.95	60,045.23	62,193.29	3.6
26			8,000	9,651.85	12.106.78	2,454.93	25.4 25.4	58,906.22	58,906.22	68,558.07	71,013.00	3.6

<sup>(1)</sup> INCLUDES RIDERS AMRP,CEP, UE-G, GTCJA AND PIPP PLUS EXCISE TAX. (2) EXPECTED GAS COST RATE EQUALS \$7.020/MCF.

(GAS SERVICE)

#### DATA: 3 MONTHS WEATHER NORMAL ACTUAL & 9 MONTHS ESTIMATED

SCHEDULE E-5 PAGE 4 OF 5

	BILL DATA INCL ALL RIDERS LESS COST of					of GAS (1)	CURRENT	PROPOSED	TOTAL	TOTAL		
LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B)	CURRENT BILL & XTAX (C)	PROPOSED BILL & XTAX (D)	DOLLAR INCREASE (D - C) (E)	PERCENT INCREASE (E / C) (F)	GAS COST (2)(3) & XTAX (G1)	GAS COST (2)(4) & XTAX (G2)	CURRENT BILL (C + G) (H)	PROPOSED BILL (D + G) (I)	PERCENT INCREASE (I-H) /H (J)
		•	(MCF)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(%)
3 4 5 6 7 8 9 10 11	(FT-S) NON-RESIDENTIAL FIRM TRANSPORTATIC SMALL	Not Applicable N	5 10 20 30 40 50 60 75 80 100 200 300	143.69 149.78 161.99 174.19 186.39 198.60 210.80 229.10 235.19 259.60 374.11	145.71 153.83 170.09 186.33 202.58 218.83 235.08 259.45 267.57 300.07 455.05 610.03	2.02 4.05 8.10 12.14 16.19 20.23 24.28 30.35 32.38 40.47 80.94 121.42	1.4 2.7 5.0 7.0 8.7 10.2 11.5 13.2 13.8 15.6 21.6 24.9	36.62 73.24 146.48 219.72 292.96 366.20 439.44 549.30 585.92 732.40 1,464.79 2,197.19	36.69 73.37 146.74 220.11 293.48 366.85 440.22 550.28 586.96 733.71 1,467.41 2,201.12	180.31 223.02 308.47 393.91 479.35 564.80 650.24 778.40 821.11 992.00 1,838.90 2,685.80	182.33 227.07 316.57 406.05 495.54 585.03 674.52 808.75 853.49 1,032.47 1,919.84 2,807.22	1.1 1.8 2.6 3.1 3.4 3.6 3.7 3.9 3.9 4.1 4.4
13 14 15 16 17 18 19 20 21 22 23 24 25 26	(FT-L) NON-RESIDENTIAL FIRM TRANSPORTATIO LARGE	•N	400 450 500 700 850 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000	836.89 896.82 956.73 1,196.42 1,376.20 1,555.96 2,754.41 3,903.98 5,053.56 6,203.13 7,352.71 8,502.28 9,651.85	959.63 1,034.91 1,110.17 1,411.23 1,637.03 1,862.83 3,368.14 4,824.58 6,281.02 7,737.46 9,193.90 10,650.34 12,106.78	122.74 138.09 153.44 214.81 260.83 306.87 613.73 920.60 1,227.46 1,534.33 1,841.19 2,148.06 2,454.93	26.8  14.7 15.4 16.0 18.0 19.0 19.7 22.3 23.6 24.3 24.7 25.0 25.3 25.4	2,929.59  2,929.59 3,295.78 3,661.98 5,126.78 6,225.37 7,323.97 14,647.93 21,971.90 29,295.87 36,619.83 43,943.80 51,267.76 58,591.73	2,934.82 2,934.82 3,301.67 3,668.53 5,135.94 6,236.50 7,337.06 14,674.11 22,011.17 29,348.22 36,685.28 44,022.33 51,359.39 58,696.44	3,532.71  3,766.48 4,192.60 4,618.71 6,323.20 7,601.57 8,879.93 17,402.34 25,875.88 34,349.43 42,822.96 51,296.51 59,770.04 68,243.58	3,694.61 3,889.22 4,330.69 4,772.15 6,538.01 7,862.40 9,186.80 18,016.07 26,796.48 35,576.89 44,357.29 53,137.70 61,918.10 70,698.51	4.6 3.3 3.3 3.4 3.5 3.5 3.6 3.6 3.6 3.6 3.6 3.6

<sup>(1)</sup> INCLUDES RIDERS AMRP, AU, UE-G,STR, AND PIPP PLUS EXCISE TAX.

<sup>(2)</sup> GAS SURCREDIT RIDER RATE EQUALS \$0.00000/MCF AND CONTRACT COMMITMENT COST RIDER EQUALS -\$0.025/MCF FOR RATE FT-S and FT-L. GAS COST ASSUMED TO BE THE SAME AS THE EGC OF \$7.020/MCF AND WOULD BE PAID TO A THIRD PARTY.

(GAS SERVICE)

#### DATA: 3 MONTHS WEATHER NORMAL ACTUAL & 9 MONTHS ESTIMATED

SCHEDULE E-5 PAGE 5 OF 5

LINE NO.	RATE CODE	LEVEL of DEMAND (A)	LEVEL of USE (B)	BILL DATA II CURRENT BILL & XTAX (C)	NCL ALL RIDERS PROPOSED BILL & XTAX (D)	DOLLAR INCREASE (D - C) (E)	of GAS (1) PERCENT INCREASE (E / C) (F)	CURRENT GAS COST (2)(3) & XTAX (G1)	PROPOSED GAS COST (2)(4) & XTAX (G2)	TOTAL CURRENT BILL (C + G) (H)	TOTAL PROPOSED BILL (D + G) (I)	PERCENT INCREASE (I-H) /H (J)
-		, ,	(MCF)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(%)
1	(IT)	Not	100,000	86,582.89	120,155.43	33,572.54	38.8	735,018.88	736,327.80	821,601.77	855,174.31	4.1
2	INTERRUPTIBLE	Applicable	200,000	169,412.42	239,552.76	70,140.34	41.4	1,470,037.76	1,472,655.60	1,639,450.18	1,709,590.52	4.3
3	TRANSPORTATION		300,000	252,241.96	358,950.10	106,708.14	42.3	2,205,056.63	2,208,983.40	2,457,298.59	2,564,006.73	4.3
4			400,000	335,071.49	478,347.44	143,275.95	42.8	2,940,075.51	2,945,311.20	3,275,147.00	3,418,422.95	4.4
5			500,000	417,901.03	597,744.77	179,843.74	43.0	3,675,094.39	3,681,639.00	4,092,995.42	4,272,839.16	4.4
6			800,000	666,389.63	955,936.78	289,547.15	43.5	5,880,151.02	5,890,622.40	6,546,540.65	6,836,087.80	4.4
7			1,000,000	832,048.70	1,194,731.45	362,682.75	43.6	7,350,188.78	7,363,278.00	8,182,237.48	8,544,920.23	4.4
8			1,200,000	997,707.77	1,433,526.12	435,818.35	43.7	8,820,226.53	8,835,933.60	9,817,934.30	10,253,752.65	4.4
9			1,500,000	1,246,196.38	1,791,718.13	545,521.75	43.8	11,025,283.17	11,044,917.00	12,271,479.55	12,817,001.30	4.4
10			1,800,000	1,494,684.99	2,149,910.14	655,225.15	43.8	13,230,339.80	13,253,900.40	14,725,024.79	15,380,249.94	4.4
11			2,000,000	1,660,344.06	2,388,704.81	728,360.75	43.9	14,700,377.55	14,726,556.00	16,360,721.61	17,089,082.36	4.5
12			2,500,000	2,074,491.73	2,985,691.49	911,199.76	43.9	18,375,471.94	18,408,195.00	20,449,963.67	21,361,163.43	4.5

<sup>(1)</sup> INCLUDES RIDERS AMRP, AU, STR PLUS EXCISE TAX.

<sup>(2)</sup> GAS SURCREDIT RIDER RATE EQUALS \$0.000000/MCF.

GAS COST ASSUMED TO BE THE SAME AS THE EGC OF \$7.020/MCF AND WOULD BE PAID TO A THIRD PARTY.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/21/2022 1:04:35 PM

in

Case No(s). 22-0507-GA-AIR, 22-0508-GA-ALT, 22-0509-GA-ATA, 22-0510-GA-AAM

Summary: Staff Report of Investigation electronically filed by Zee Molter on behalf of PUCO Staff