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2013

LONG-TERM ELECTRIC FORECAST REPORT

SUBMITTED BY

DUKE ENERGY OHIO, INC.

CASE NO. 13-398-EL-FOR

MAY 31, 2013

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STATEMENT
OF
JAMES P. HENNING
PRESIDENT, DUKE ENERGY OHIO, INC.

I, James P. Henning, President of Duke Energy Ohio, Inc., hereby certify that the statements and modifications set forth in DUKE ENERGY OHIO, INC. 2013 ELECTRIC LONG-TERM FORECAST REPORT AND RESOURCE PLAN as submitted to the Public Utilities Commission of Ohio are true and correct to the best of my knowledge and belief.

I further certify the requirements of paragraphs (F) to (I) of Ohio Administrative Code §4901:5-1-03 will be met.

James P. Henning
President
Duke Energy Ohio, Inc.

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CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of DUKE ENERGY OHIO, INC.'S 2013 ELECTRIC LONG-TERM FORECAST REPORT AND RESOURCE PLAN was served by hand delivery, this 31ST day of May, 2013 upon the following:

Office of the Ohio Consumers' Counsel

10 West Broad St., Suite 1800

Columbus, OH 43215-3458

Furthermore, a Letter of Notification was sent by First Class U.S. Mail to each library listed in the Report.

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Libraries Receiving a Letter of Notification Regarding Duke Energy Ohio, Inc.'s 2013 Long-Term Forecast Report and Resource Plan

County	Library	Address
Adams	Manchester Branch Library	401 Pike Street Manchester, OH 45144
Brown	Mary P. Shelton Library	200 West Grant Avenue Georgetown, OH 45121
Butler	Lane Public Library	300 North Third Street Hamilton, OH 45011
Butler	Middletown Public Library	125 South Broad Street Middletown, OH 45044
Clermont	Clermont County Public Library	180 South Third Street Batavia, OH 45103
Clinton	Wilmington Public Library	268 North South Street Wilmington, OH 45177
Hamilton	Public Library of Cincinnati & Hamilton County University of Cincinnati Library Reference Division	800 Vine Street Cincinnati, OH 45202 2600 Clifton Avenue Cincinnati, OH 45221
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SECTION I – FORECAST REPORT REQUIREMENTS AND ENERGY EFFICIENCY/DSM PROGRAMS

A. FORECAST REPORT REQUIREMENTS

Duke Energy Ohio, Inc. (Duke Energy Ohio or Company) provides electric distribution service to approximately 692,000 customers in an area covering some 2,525 square miles in Southwestern Ohio. Duke Energy Kentucky, Inc., (Duke Energy Kentucky) provides electric service in the Northern Kentucky area contiguous to the Southwestern Ohio area served by Duke Energy Ohio. Duke Energy Kentucky serves approximately 137,000 electric customers in its 700 square mile service territory. Duke Energy Ohio and Duke Energy Kentucky operate within the regional economy as defined by the Cincinnati Primary Metropolitan Statistical Area (PMSA). Therefore, the Company coordinates and prepares the forecast for the entire region encompassing both utility service areas. This consolidated forecast is then allocated to each service area. Consequently, this report covers the forecast for Duke Energy Ohio only.

As of December 2012, the transmission system of Duke Energy Ohio consisted of approximately 403 circuit miles of 345 kV lines (including Duke Energy Ohio's share of jointly-owned transmission) and 726 circuit miles of 138 kV lines. Portions of the 345 kV transmission systems are jointly owned with the American Electric Power Company (AEP) and/or the Dayton Power & Light Company (DP&L). Duke Energy Ohio is interconnected with five other transmission providers (including Duke Energy Indiana).

The electric energy and peak demand forecasts of the Duke Energy Ohio franchised service territory are prepared each year as part of the planning process. The general framework of the Electric Energy and Peak Load Forecast involves a national economic forecast, a service area economic forecast, and the electric load forecast.

The national economic forecast provides information about the prospective growth of the national economy. This involves projections of national economic and demographic concepts such as population, employment, industrial production, inflation, wage rates, and income. The national economic forecast is obtained from Moody's Analytics, a national economic consulting firm.

Similarly, the history and forecast of key economic and demographic concepts for the service area economy is obtained from Moody's Analytics. The service area economic forecast is used along with the energy and peak models to produce the electric load forecast.

Energy sales projections are prepared for the residential, commercial, industrial, and other sectors. Those components plus electric system losses are aggregated to produce a forecast of net energy. Table I-A-1 below, provides information on the Duke Energy Ohio System projected annual growth rates in energy for the major customer classes as well as net energy and peak demand before and after implementation of any new or incremental energy efficiency programs. The growth rates are consistent with the forecast presented in the FE-D forms in Section 3 and represent the full distribution forecast regardless of who supplies the energy.

TABLE I-A-1
Duke Energy Ohio System

ELECTRIC ENERGY AND PEAK LOAD

FORECAST: ANNUAL GROWTH RATES

2013 to 2023

	Before EE	After EE
Residential MWH	2.1%	0.9%
Commercial MWH	1.9%	0.3%
Industrial MWH	1.7%	0.2%
Net Energy MWH	1.7%	0.4%
Summer Peak MW	1.7%	0.5%
Winter Peak MW	1.6%	0.8%

Growth rates are computed as the compound annual rate of growth in total distribution loads for the years 2013-2023.

The forecast of energy is graphically depicted on Figure I-A-1, and the summer and winter peak forecasts are shown on Figure I-A-2. Please note that the FE-T forms in Section II represent the load supplied by the regulated utility for customers physically located in the Duke Energy Ohio service territory ("wires" customers). These forecasts of energy and peak demand provide the starting point for the development of the Integrated Resource Plan.

Figure I-A-1: Total Energy Forecast (Before Implementation of Energy Efficiency Programs)

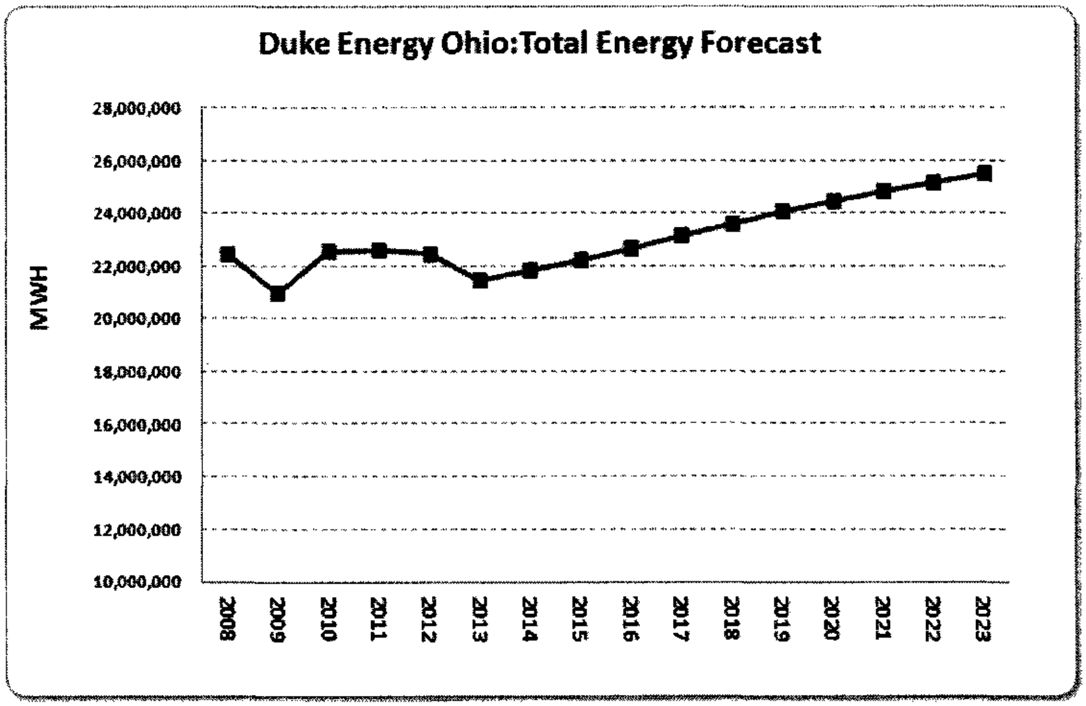
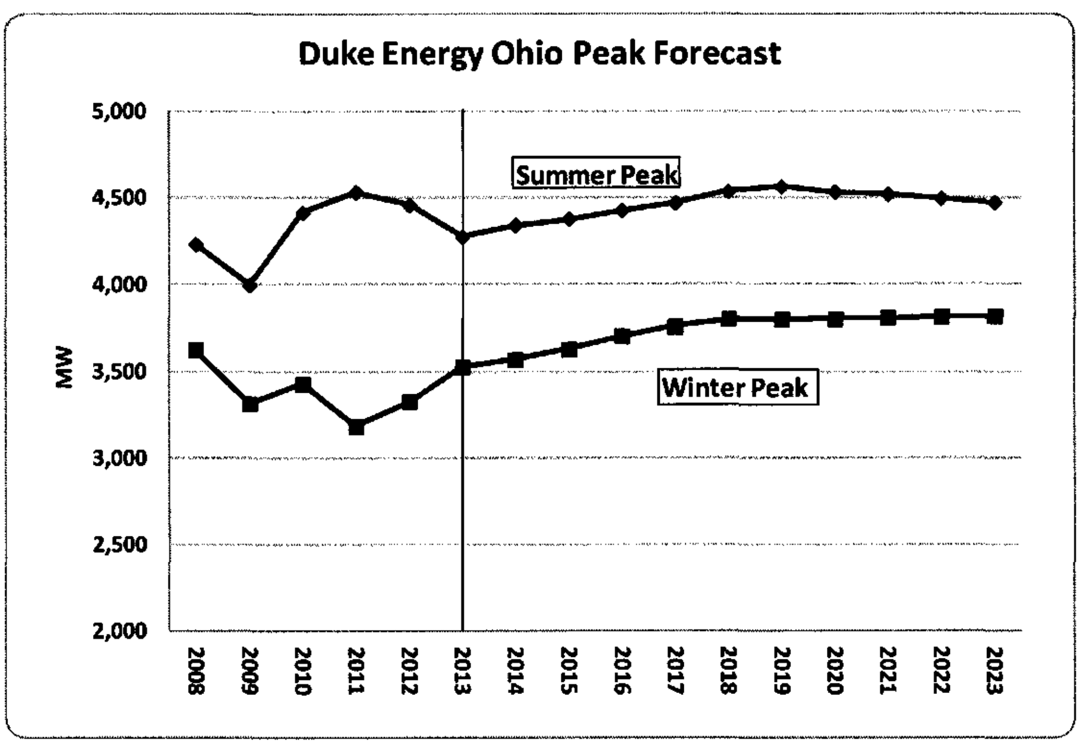


Figure 1-A-2: Peak Forecast (Before Implementation of Energy Efficiency Programs)



The electric energy and peak demand forecasts of the Duke Energy Ohio service territory are prepared each year as part of the planning process by a staff that is shared with the other Duke Energy affiliated utilities, using the same methodology. Duke Energy Ohio does not perform joint load forecasts with non-affiliated utility companies, and the forecast is prepared independently of the forecasting efforts of non-affiliated utilities.

B. FORECAST SUMMARY & ASSUMPTIONS

Energy is a key commodity linked to the overall level of economic activity. As residential, commercial, and industrial economic activity increases or decreases, the use of energy, or more specifically electricity, should increase or decrease, respectively. It is this linkage to economic activity that is important to the development of long-range energy forecasts. For that reason, forecasts of the national and local economies are key ingredients to energy forecasts.

The general framework of the Electric Energy and Peak Load Forecast involves a national economic forecast, a service area economic forecast, and the electric load forecast. The national economic forecast provides information about the prospective growth of the national economy. This involves projections of national economic and demographic concepts such as population, employment, industrial production, inflation, wage rates, and income. The national economic forecast is obtained from Moody's Analytics, a nationally recognized vendor of economic forecasts. In conjunction with the forecast of the national economy, the Company also obtains a forecast of the service area economy from Moody's Analytics.

The Duke Energy Ohio service area is located in southwestern Ohio adjacent to the service area of Duke Energy Kentucky. The economy of southwestern Ohio is contained within the Cincinnati PMSA and is an integral part of the regional economy. The service area economic forecast is used along with the energy and peak models to produce the electric load forecast.

1. Service Area Economy

There are several sectors to the service area economy: employment, income, inflation, manufacturing activity, and population. Income for the local economy is forecasted in several categories including wages, rents, proprietors' income, personal contributions for social insurance, and transfer payments. The forecasts of these items are summed to produce the forecast of income less personal contributions for social insurance. Inflation is measured by changes in the Consumer Price Index (CPI). Manufacturing activity is measured by real GDP indicators for each industry. Population projections are aggregated from forecasts by age-cohort. This information serves as input into the energy and peak load forecast models.

2. Electric Energy Forecast

The forecast methodology follows economic theory in that the use of energy is dependent upon key economic factors such as income, industrial production, energy prices, and the weather. The projected energy requirements for Duke Energy Ohio's retail electric customers are determined through econometric analysis. Econometric models are a means of representing economic behavior through the use of statistical methods, such as regression analysis.

The Duke Energy Ohio forecast of energy requirements is included within the overall forecast of energy requirements of the Greater Cincinnati and Northern Kentucky region. The Duke Energy Ohio sales forecast is developed by allocating percentages of the total regional forecast for each customer group. These groups include the residential, commercial, industrial, governmental or other public authority (OPA), and street lighting energy sectors. In addition, forecasts are also prepared for three minor categories: interdepartmental use (Gas Department), Company use, and losses. In a similar fashion, the Duke Energy Ohio peak load forecast is developed by allocating a share from the regional total. Historical percentages and judgment are used to develop the allocations of sales and peak demands.

With respect to energy-price relationships, the forecast methodology described below includes discussion on the incorporation of energy price variables in the model specification. The price variables are explicitly included in the forecast models to account for the effect that changes in real prices can have on the level of energy usage. The econometric models presented in the report include estimates of price elasticity for specific customer groups. Load impacts from rising real prices are also examined relative to projected load impacts from energy efficiency programs to ascertain how much of the price elasticity impacts are already reflected through impacts from energy efficiency programs.

The following sections provide the specifications of the econometric equations developed to forecast electricity sales for the franchised service territory.

Residential Sector - There are two components to the residential sector energy forecast: the number of residential customers and kWh energy usage per customer. The forecast of total residential sales is developed by multiplying the forecasts of the two components. That is:

(1) Residential Sales =

Number of Residential Customers * Use per Residential Customer.

Econometric relationships are developed for each of the component pieces of total residential sales.

Customers - The number of electric residential customers (households) is affected by real per capita income. This is represented as follows:

(2) Residential Customers =

f (Real Per Capita Income)

Where: Real Per Capita Income = (Personal Income/Population/CPI).

While changes in per capita income are expected to alter the number of residential customers, the adjustment relating to real per capita income is not immediate. The number of customers will change gradually over time as a result of a change in real per capita income. This adjustment process is modeled using a lag structure.

Residential Use per Customer - The key ingredients that impact energy use per customer are per capita income, real electricity prices and the combined impact of numerous other determinants. These include the saturation of air conditioners, electric space heating, other appliances, the efficiency of those appliances, and weather.

(3) Energy usage per Customer =

f (Real Income per Capita * Efficient Appliance Stock,

Real Electricity Price * Efficient Appliance Stock, Saturation of Electric Heating Customers,

Saturation of Customers with Central Air Conditioning,

Saturation of Window Air Conditioning Units,

Efficiency of Space Conditioning Appliances,

Billed Cooling and Heating Degree Days).

The derivation of the efficient appliance stock variable and the forecast of appliance saturations are discussed in the data section.

Commercial Sector - Commercial electricity usage changes with the level of local commercial employment, real electricity price, and the impact of weather. The model is formulated as follows:

(4) Commercial Sales =

f (Commercial Employment,

Real Electricity Price, Billed Cooling and Heating Degree Days).

Industrial Sector - Electricity use by industrial customers is primarily dependent upon the level of industrial production and the impacts of real electricity prices, electric price relative to alternate fuels, and weather. The general model of industrial sales is formulated as follows:

(5) Industrial Sales =

f (Manufacturing GDP, Real Electricity Price,

Billed Cooling and Heating Degree Days).

Governmental Sector - The Company uses the term OPA to indicate those customers involved and/or affiliated with federal, state or local government. The general model of governmental sales is formulated as follows:

(6) Governmental Sales =

f (Government Employment, Real Electricity Price, Real Electricity Price / Real Price of Alternate Fuel, Billed Cooling and Heating Degree Days).

Street Lighting Sector - For the street lighting sector, electricity usage varies with the number of street lights and the efficiency of the lighting fixtures used. The number of street lights is associated with the population of the service area. The efficiency of the street lights is related to the saturation of different types of lighting fixtures. That is:

(7) Street Lighting Sales =

f (Population, Lighting intensity index).

Total Retail Electric Sales - Once these separate components have been projected - Residential sales, Commercial sales, Industrial sales, OPA sales, and Street Lighting sales - they can be summed along with Inter-department sales to produce the projection of total retail electric sales.

Total System Sendout - Upon completion of the total electric sales forecast, the forecast of total energy can be prepared. This requires that all the individual sector forecasts be combined along with forecasts of Company use and system losses. After the system sendout forecast is completed, the peak load forecast can be prepared.

Peak Load - Forecasts of summer and winter peak demands are developed using econometric models. The peak forecasting model is designed to closely represent the relationship of weather to peak loads. Only days when the temperature equaled or exceeded 90 degrees are included in the summer peak model. For the winter, only those days with a temperature at or below 10 degrees are included in the winter peak model.

Summer Peak - Summer peak loads are influenced by the current level of economic activity and the weather conditions. The primary weather factors are temperature and humidity; however, not only are the temperature and humidity at the time of the peak important, but also the morning low temperature and high temperature from the day before. These other temperature variables are important to capture effect of thermal buildup. The summer equation can be specified as follows:

(9) Peak = f (Weather Normalized Sendout, Weather Factors).

Winter Peak - Winter peak loads are also influenced by the current level of economic activity and the weather conditions. The selection of winter weather factors depends upon whether the peak occurs in the morning or evening. For a morning peak, the primary weather factors are morning low temperature, wind speed, and the prior evening's low temperature. For an evening peak, the primary weather factors are the evening low temperature, wind speed, and the morning low temperature. The winter equation is specified in a similar fashion as the summer:

(10) Peak = f (Weather Normalized Sendout, Weather Factors).

The summer and winter peak equations are estimated separately for the respective seasonal periods. Peak load forecasts are produced under specific assumptions regarding the type of weather conditions typically expected to cause a peak.

Weather-Normalized Sendout - The level of peak demand is related to economic activity. The best indicator of the combined influences of economic variables on peak demand is the level of base load demand exclusive of aberrations caused by non-normal weather. Thus, the first step in developing the peak equations is to weather normalize historical monthly sendout.

The procedure used to develop historical weather normalized sendout data involves two steps. First, instead of weather normalizing sendout in the aggregate, each component is weather normalized. In other words, residential, commercial, industrial, and OPA, are individually adjusted for the difference between actual and normal weather. Street lighting sales are not weather normalized because they are not weather sensitive. Using the equations previously discussed, the adjustment process is performed as follows:

Let: $KWH(N) = f(W(N))g(E)$

$KWH(A) = f(W(A))g(E)$

Where: KWH(N) = electric sales - normalized

W(N) = weather variables - normal

E = economic variables

KWH(A) = electric sales - actual

W(A) = weather variables - actual

Then: KWH(N) = KWH(A) * f(W(N))g(E)/f(W(A))g(E)

=KWH(A) * f(W(N))/f(W(A))

With this process, weather normalized sales are computed by scaling actual sales for each class by a factor from the forecast equation that accounts for the impact of deviation from normal weather. Industrial sales are weather normalized using a factor from an aggregate industrial equation developed for that purpose.

Second, weather normalized sendout is computed by summing the weather normalized sales with non-weather sensitive sector sales. This weather adjusted sendout is then used as a variable in the summer and winter peak equations.

Peak Forecast Procedure - The summer peak usually occurs in July or August in the afternoon and the winter peak occurs in January in the morning or evening. Since the energy model produces forecasts under the assumption of normal weather, the forecast of sendout is "weather normalized" by design. Thus, the forecast of sendout drives the forecast of the peaks. In the forecast, the weather variables are set to values determined to be normal peak-producing conditions. These values are derived using historical data on the worst weather conditions in each year (summer and winter).

National Economy - It is generally assumed that the Duke Energy Ohio service area economy will tend to react much like the national economy over the forecast period. Duke Energy Ohio uses a long-term forecast of the national and service area economy prepared by Moody's Analytics.

A major risk to the national and regional economic forecasts and hence the electric load forecast is the continued economic growth in the U.S. economy. 2013 represents the 4th year of a modest economic recovery. Employment, income and industrial production have increased steadily, but their rate of growth is below that of comparable recovery cycles. The ultimate outcome in the near term is dependent upon the success of the economy moving forward out of this slow growth period as well as managing recent increases in energy prices.

With extensive economic diversity, the Cincinnati area economy, including Northern Kentucky, is well positioned to continue its recent growth trajectory. In the manufacturing sector, its major industries are food products, paper, printing, chemicals, steel, fabricated metals, machinery, and automotive and aircraft transportation equipment. In the non-manufacturing sector, its major industries are education, health-care, life insurance and finance. In addition, the Cincinnati area is the headquarters for major international and national market-oriented retailing establishments. Unemployment levels in the greater Cincinnati area are below the national average and housing activity is improving. Home prices in the Cincinnati MSA area did not decline as much as in other parts of the country during the recession.

Local Economy - Forecasts of employment, local population, industrial production, and inflation are key indicators of economic and demographic trends for the Duke Energy Ohio service area. The majority of the employment growth over the forecast period occurs in the non-manufacturing sector. This reflects a continuation of the trend toward the service industries and the fundamental change that is occurring in manufacturing and other basic industries. The rate of growth in local employment expected over the forecast will be below the national level: 1.0 percent locally versus 1.2 percent nationally (2013-2023).

Duke Energy Ohio is also affected by national population trends. The portion of the population of the Duke Energy Ohio service area that is “age 65 and older” increases over the forecast period. Over the period 2013 to 2023, Duke Energy Ohio's population is expected to increase at an annual average rate of 0.6 percent. Nationally, population is expected to grow at an annual rate of 0.9 percent over the same period.

For the forecast period, local real manufacturing GDP is expected to increase at a 3.0 percent annual rate, while the expected growth rate for the nation is 2.7 percent.

The residential sector is the largest in terms of total existing customers and total new customers per year. Within the Duke Energy Ohio service area, many commercial customers serve local markets. Therefore, there is a close relationship between the growth in local residential customers and the growth in commercial customers. The number of new industrial customers added per year is relatively small.

3. Specific

Commercial Fuels - Natural gas and oil prices are expected to increase over the forecast period. The projected annual growth rate from 2013 to 2023, in nominal terms, is 1.5 percent for the price of electricity and 2.9% percent for the price of natural gas.

Year End Residential Customers - In the following table, historical and projected total year-end residential customers for the entire Ohio service area are provided.

TABLE I-B-1

NUMBER OF YEAR-END RESIDENTIAL CUSTOMERS

Year	Customers
2008	610,603
2009	610,482
2010	611,494
2011	610,416
2012	614,721
2013	618,857
2014	624,053
2015	630,261
2016	637,027
2017	643,357
2018	650,586
2019	656,597
2020	662,901
2021	669,239
2022	675,740
2023	682,251

Appliance Efficiencies - Trends in appliance efficiencies, saturations, and usage patterns have an impact on the projected use per residential customer. Overall, the forecast incorporates a projection of increasing saturation for many appliances including heat pumps, air conditioners, electric space heating equipment, electric water heaters, electric clothes dryers, dish washers, and freezers. In addition, the forecast embodies trends of increasing appliance efficiency, including lighting, consistent with standards established by the federal government.

C. FORECAST DOCUMENTATION

In the following sections, information on forecast related databases is provided for Duke Energy Ohio.

The first step in the forecasting process is the collection of relevant information and data. The database discussion is broken into three parts:

a) Economic Data,

b) Energy and Peak Data, and

c) Forecast Data.

1. Economic Data

The major groups of data in the economic forecast are employment, demographics, income, production, inflation and prices. National and local values for these concepts are available from Moody's Analytics and Company data.

Employment - Employment numbers are required on both a national and service area basis. Quarterly national and local employment series by industry are obtained from Moody's Analytics. Employment series are available for manufacturing and non-manufacturing sectors.

Population - National and local values for total population and population by age-cohort groups are obtained from Moody's Analytics.

Income - Local income data series are obtained from Moody's Analytics. The data is available on a county level and summed to a service area level.

Consumer Price Index - The local CPI is equivalent to the national CPI obtained from Moody's Analytics.

Electricity and Natural Gas Prices - The average price of electricity and natural gas is available from Company financial reports.

2. Energy and Peak Models

The majority of data required to develop the electricity sales and peak forecasts is obtained from the Duke Energy Ohio service area economic data provided by Moody's Analytics, from Duke Energy Ohio financial reports and research groups, and from national sources. With regard to the national sources of information, generally all national information is obtained from Moody's Analytics. However, local weather data are obtained from the National Oceanic and Atmospheric Administration (NOAA).

The major groups of data that are used in developing the energy forecasts are: kilowatt-hour sales by customer class, number of customers, use-per-customer, electricity prices, natural gas prices, appliance saturations, and local weather data. The following are descriptions of the adjustments performed on various groups of data to develop the final data series actually used in regression analysis.

Kilowatt hour Sales and Revenue - Duke Energy Ohio collects sales and revenue data monthly by rate class. For forecast purposes this information is aggregated into the following categories: residential, commercial, industrial, OPA, and the other sales categories. In the industrial sector, sales and revenues are collected. From the sales and revenue information, average electricity prices by sector can be calculated.

The OPA sales category is analyzed in two parts: water pumping and OPA less water-pumping sales.

Number of Customers - The number of customers by class is obtained on a monthly basis from Company records.

Use Per Customer - Average use per customer is computed on a monthly basis by dividing residential sales by total customers.

Local Weather Data - Local climatologic data are provided by NOAA for the Cincinnati/Covington airport reporting station. Cooling degree days and heating degree days are calculated on a monthly basis using temperature data. The degree day series are required on a billing cycle basis for use in regression analysis.

Appliance Stock - To account for the impact of appliance saturations and federal efficiency standards, an appliance stock variable is created. This variable is composed of three parts: appliance efficiencies, appliance saturations, and appliance energy consumption values.

The appliance stock variable is calculated as follows:

(11) Appliance Stock_t=

$$\text{SUM } (K_i * SAT_{i,t} * EFF_{i,t}) \text{ for all i}$$

Where: t = time period

i = end-use appliance

K_i = fixed energy consumption value for appliance i,

$SAT_{i,t}$ = saturation of appliance i in period t, and

$EFF_{i,t}$ = efficiency of appliance i in period t.

The appliances included in the calculation of the Appliance Stock variable are: electric range, frost-free refrigerator, manual-defrost refrigerator, food freezer, dish washer, clothes washer, clothes dryer, water heater, microwave, color television, black and white television, room air conditioner, central air conditioner, electric resistance heat, electric heat pump, and miscellaneous uses including lighting.

Appliance Saturation and Efficiency - In general, information on historical appliance saturations for all appliances is obtained from Company Appliance Saturation Surveys.

Data on historical appliance efficiencies and saturations are obtained from Itron, Inc., a forecast consulting firm.

Peak Weather Data - The weather conditions associated with the monthly peak load are collected from the hourly and daily data recorded by NOAA. The weather variables that influence the summer peak are maximum temperature on the peak day and the day before, morning low temperature, and humidity on the peak day. The weather influence on the winter peak is measured by the low temperatures and the associated wind speed. The variables selected are dependent upon whether it is a morning or evening winter peak load.

An average of extreme weather conditions is used as the basis for the weather component in the preparation of the peak load forecast. Using historical data for the single worst summer weather occurrence and the single worst winter weather occurrence in each year, an average extreme weather condition can be computed.

3. Forecast Data

Projections of exogenous variables in Duke Energy Ohio's models are required in the following areas: national and local employment, income, industrial production, and population, as well as natural gas and electricity prices.

Employment - The forecast of employment by industry is provided by Moody's Analytics.

Income -The forecast of income is provided by Moody's Analytics.

Real Manufacturing GDP - The forecast of real manufacturing GDP is also provided by Moody's Analytics.

Population - Duke Energy Ohio's population forecast is derived from data provided by Moody's Analytics. Population projections for the service area are prepared by first collecting county-level population forecasts for the counties in the Company's service area and then summing.

Prices - The projected change in electricity and natural gas prices over the forecast interval is derived from the Company's Financial Planning and Analysis internal records, by the Company's Fundamental Forecasting Department studies and by Moody's Analytics projections.

D. MODELS

Specific analytical techniques have been employed for development of the forecast models.

1. Specific Analytical Techniques

Regression Analysis - Ordinary least squares is the principle regression technique employed to estimate economic/behavioral relationships among the relevant variables. This econometric technique provides a method to perform quantitative analysis of economic behavior.

Ordinary least-squares techniques were used to model electric sales. Based upon their relationship with the dependent variable, several independent variables were tested in the regression models. The final models were chosen based upon their statistical strength and logical consistency.

Logarithmic Transformations - The projection of economic relationships over time requires the use of techniques that can account for non-linear relationships. By transforming the dependent variable and independent variables into their "natural logarithm", a non-linear relationship can be transformed into a linear relationship for model estimation purposes.

Polynomial Distributed Lag Structure - One method of accounting for the lag between a change in one variable and its ultimate impact on another variable is through the use of polynomial distributed lags. This technique is also referred to as Almon lags. Polynomial Distributed Lag Structures derive their name from the fact that the lag weights follow a polynomial of specified degree. That is, the lag weights all lie on a line, parabola, or higher order polynomial as required. This technique is employed in developing econometric models for most of the energy equations.

Serial Correlation - It is often the case in forecasting an economic time series that residual errors in one period are related to those in a previous period. This is known as serial correlation. By correcting for this serial correlation of the estimated residuals, forecast error is reduced and the estimated coefficients are more efficient. The Marquardt algorithm is employed to correct for the existence of autocorrelation.

Qualitative Variables - In several equations, qualitative variables are employed. In estimating an econometric relation using time series data, it is quite often the case that "outliers" are present in the historic data. These unusual shifts or deviations in the data can be the result of problems such as errors in the reporting of data by particular companies and agencies, labor-management disputes, severe energy shortages or restrictions, and other perturbations that do not repeat with predictability. Therefore, in order to identify the true underlying economic relationship between the dependent variable and the other independent variables, qualitative variables are employed to account for the impact of the outliers. The coefficient for the qualitative variable must be statistically significant, have a sign in the expected direction, and make an improvement to model fit statistics.

2. Relationships Between the Specific Techniques

The manner in which specific methodologies for forecasting components of the total load are related is explained in the discussion of specific analytical techniques above.

3. Alternative Methodologies

The Company continues to use the current forecasting methodology as it has for the past several years. The Company considers the forecasting methods currently utilized to be adequate.

4. Changes In Methodology

The Company now relies on a calculation of average retail rates by customer segment and uses that variable as a regressor in the econometric equations used to forecast energy sales. In the past, the forecasting process used an estimate for marginal retail prices by customer segment, which captured only the components of the retail tariff that changed with the level of customer electric use. After analyzing the predictive capability of the average retail rate relative to the marginal retail rate, the forecasting team concluded that it was adequate to use the former in the regression models. There are many benefits associated with incorporating average retail rates in the forecasting process: for example, it simplifies the methodology for tracking variances between projected retail average prices and actual results, it improves the ability to collect and validate existing information, and it facilitates the comparison between the Company's projections for retail prices and the estimates from other utilities or government agencies.

E. ENERGY EFFICIENCY / DSM PROGRAMS

Overview

Duke Energy Ohio has a long history of implementing energy efficiency (EE) and peak demand reduction programs. In 1992, Duke Energy Ohio formed a Collaborative to develop and implement EE programs to help reduce the electrical demand of customers. The Company has worked effectively with its Collaborative since 1992. The Company has continuously offered EE programs for its customers.

In 2006, Duke Energy Ohio filed an application with the Public Utilities Commission of Ohio (Commission), seeking approval to implement a new expanded set of EE programs.[1] On July 11, 2007, the Commission approved the new set of EE programs for implementation.[2] As part of the proceeding on the Company's Electric Security Plan (ESP) in 2008, the Company filed an application for approval to implement its save-a-watt set of EE programs.[3] As noted earlier, the Company filed the proposed programs on July 31, 2008, and the Commission subsequently approved the save-a-watt set of programs on December 17, 2008, for implementation for the years 2009 through 2011.[4] On December 29, 2009, the Company filed an updated portfolio plan for approval.[5] The portfolio, except for pre-paid metering, was approved on December 15, 2010, for implementation through April 15, 2013.[6]

In 2011, in an earlier attempt to bridge the gap between the misalignment of its portfolio plan approved in Case No. 09-1999-EL-POR, and its expiring save-a-watt recovery model, Duke Energy Ohio submitted an energy efficiency portfolio and cost recovery mechanism to the Commission for its approval in Case No. 11-4393-EL-RDR, *et al.* The Company was able to

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[1] *In the Matter of the Application for Recovery of Costs, Lost Margin, and Performance Incentive Associated with the Implementation of Electric Residential Demand Side Management Programs by the Cincinnati Gas & Electric Company, Case No. 06-91-EL-UNC, Application (January 24, 2006)*
[2] *Id. Opinion and Order, (July 11, 2007)*
[3] *In re Duke Energy Ohio's Application for an SSO, Case No. 08-920-EL-SSO, et seq., Application, (July 31, 2008)*
[4] *In re Duke Energy Ohio's Application for an SSO, Case No. 08-920-EL-SSO, et seq., Opinion and Order, (December 17, 2008)*
[5] *In re Duke Energy Ohio's Application for a POR, Case No. 09-1999-EL-POR, Application, (December 29, 2009)*
[6] *In re Duke Energy Ohio's Application for a POR, Case No. 09-1999-EL-POR, Opinion and Order, (December 15, 2010)*

resolve most of the substantive issues in its application with most of the parties, in a Stipulation and Recommendation that was filed with the Commission in November, 2011. After receiving further direction from the Commission in its May 9, 2012 Opinion and Order, the Company requested the Commission grant it a waiver of a Rule in Chapter 4901:1-39, O.A.C., and approve its application based upon the information contained. The waiver was granted on August 15, 2012 within the Order approving the implementation of three new programs, as well as a shared savings cost recovery mechanism. The three new approved programs were, 1) Low Income Neighborhood Program, 2) Appliance Recycling, and 3) Home Energy Solutions.

1. Current Programs

The Company is reducing energy and demand on the Duke Energy Ohio system through the implementation of a broad set of EE programs. These programs are available to the "wires" customers. These programs fall into two categories for residential and non-residential customers: conservation EE programs and demand response programs. The demand response programs are further divided into programs that contain customer-specific contract curtailment options and other demand response programs, such as Power Manager® and PowerShare®, that offer more standard curtailment options to all customers.

The following are the current EE and demand response programs in place in Ohio.

a. Residential Programs

Smart $aver® Residential

The Smart $aver® Program provides incentives to customers, builders, and heating, ventilation and air conditioning (HVAC) dealers and weatherization contractors to promote and install high-efficiency air conditioners and heat pumps with electronically commutated fan motors (ECMs), as well as attic insulation and air sealing, duct sealing and insulation, HVAC tune ups and lighting. These programs are promoted through trade ally outreach and direct communication to customers using numerous channels such as direct mail, community presentations, and website promotions. In regard to lighting offers, online promotions and social media have been particularly effective. In addition, the Company is evaluating additional bulb types for the home such as indoor reflector floodlights, globes, candelabras, A-line, dimmables and 3-way lamps etc. The Property Manager Program is an extension of the CFL program and allows Duke Energy to target multi-family apartment complexes.

Residential Energy Assessments

Duke Energy Ohio provides an in-home assessment called Home Energy House Call. Home Energy House Call is promoted primarily through direct mail and targets owner-occupied, single family residences. The targeting also considers geographic location to better align assessor resources to manage costs and maintain a positive customer experience. The assessors are Building Performance Institute, Inc., certified and spend sixty to ninety minutes with customers as they evaluate the home and explain ways to save energy and money. The assessors offer low cost/no cost recommendations that encourage behavioral changes and inform customers about EE considerations for higher cost investment decisions like new HVAC or appliances. The assessors also install measures from an EE kit while in the home.

Home Energy Comparison Report (marketed as My Home Energy Report)

The Home Energy Comparison Report compares household electric usage to similar, neighboring homes and provides recommendations to lower energy consumption. These normative comparisons are intended to induce an energy consumption behavior change. The Home Energy Comparison Report is promoted through direct mail to targeted customers with desirable characteristics who are likely to respond to the information.

Energy Efficiency Education Program for Schools

This program educates students in the classroom about sources of energy and EE in homes, and it provides students the ability to conduct an energy audit of their homes. After completing a home energy survey, participants receive an Energy Efficiency Starter Kit. The program is promoted to teachers and school administrators. Classroom material is enhanced by live theatre performances delivered to the entire school.

Low Income Services

The Company offers a refrigerator replacement program that complements weatherization services offered by other parties. The program is available to customers with incomes up to 200 percent of the federal poverty level and is offered through Community Action Agencies and Non-Governmental Organizations.

Power Manager®

This is a voluntary residential load control program that offers incentives to participating customers who allow the Company to cycle their outdoor central air conditioning compressor and fan during peak load periods between May and September.

Appliance Recycling Program

The Appliance Recycling program will encourage customers to responsibly dispose of older, functional but inefficient refrigerators and freezers. These are typically second or third units in the home. Customers will have the old unit picked up at their home at no charge and will receive an incentive for participating. Disposed units will have 95 percent of material recycled with only 5 percent entering landfills.

Low Income Neighborhood Program

The Duke Energy Ohio Neighborhood Program takes a non-traditional approach to serving income-qualified areas of the Duke Energy Ohio service territory. The program engages targeted customers with personal interaction in a familiar setting. Ultimately, the program aims to reduce energy consumption by directly installing measures and educating the customer on better ways to manage their energy bills.

Home Energy Solutions

Home Energy Solutions is an approach to delivering energy efficiency solutions designed to offer customers energy savings and the ability to participate in demand response programs. Utilizing smart grid enabled consumer technology; this program provides customers with an engagement and energy management platform and the functionality to potentially enable a variety of demand response opportunities that will allow customers to realize significant benefits. The energy management platform will allow customers to potentially integrate and manage the energy consumption of a number of devices in the home, offering customers critical feedback and the potential for demand response applications for high use energy devices. Examples include:

- Thermostats
- Electric Water Heaters
- Pool/Spa Pumps

This capability has the potential to expand to include other device types over time, such as electric vehicle charging stations and smart appliances, where available. Customers will have the capability to set preferences on how and when these devices use energy based upon their personal comfort, energy savings goals and the current energy rate. Customers will also have remote access to their engagement platform and energy management system via a web browser and smart phones. The program is designed to increase customer engagement and understanding of their energy consumption. Additionally, including this product in the portfolio has the potential to increase customer interest in participating in time differentiated pricing opportunities.

b. Non-Residential Programs

Smart$aver® Prescriptive

The Smart$aver® Prescriptive program consists of over 250 measures covering the five broad technology categories of: Lighting, HVAC, Motors/Pumps/Drives, Energy Star Food Service Equipment, and Process Equipment. The incentives offered are designed to offset a portion of the capital cost of moving to higher efficiency equipment. The incentive amounts are known to the customer before they undertake their project, so the customer can proceed with their project and submit documentation after installation.

Smart$aver® Custom

The Smart $aver® Custom program is intended to capture quantifiable energy savings from projects that do not fit into the Prescriptive portfolio. A key difference between the Prescriptive and Custom programs is that the current Custom program requires that the customer submit an application before they begin their project. Proposed energy efficiency measures may be eligible for Custom Incentives if they clearly reduce electrical consumption and/or demand. Application forms are available on the Duke

Energy website under the Smart $aver® Incentives Business and Large Business tabs. Once a project is submitted, it undergoes a technical review to validate the viability of the technology and the reasonableness of the energy savings claims. After the technical review, the energy savings are modeled against the customers load profile (or a representative load profile) to calculate the avoided energy and avoided capacity associated with the installation. At this point, the customer is tendered an incentive offer. Provided the customer acknowledges acceptance of the offer and completes the project, the customer is issued an incentive check after providing documentation showing completion of the project. Duke Energy Ohio reserves the right to adjust the incentive amount paid either up or down should the installation deviate from what was originally submitted. Potential incentive amounts are based on the avoided energy and avoided capacity produced by the measure(s).

Additionally, Duke Energy continually considers program process improvements that might enable greater participation. One such anticipated change is calculation assistance for customers that have proposed energy efficiency projects of sufficient value, as determined by Duke Energy, but that lack internal or other resources to perform the engineering calculations required by the Custom Incentive program.

Both the Smart $aver® Prescriptive and Custom programs allow for customers to either receive their incentive checks directly or to assign them to a vendor, provided the vendor reduces the amount invoiced to the customer by the amount of the incentive.

Smart$aver® Assessments

The Smart $aver® Assessments program purpose is to assist non-residential customers in assessing their current or planned energy usage and providing recommendations for more efficient use of energy. The program will also help identify those customers who could benefit from other Duke Energy Ohio Energy Efficiency non-residential programs.

PowerShare®

PowerShare® is Duke Energy Ohio's demand response program offered to commercial and industrial customers and offers customers various options from which to choose. PowerShare® QuoteOption is offered for customers that cannot commit to reducing their load when requested. In this program, customers receive notice of a price offer from

Duke Energy Ohio to reduce load. Based on the price offered, the customer makes the decision as to whether or not they will reduce load. If a customer elects not to reduce load, there are no penalties for declining participation in the event. Participation is purely voluntary. The customer only receives a credit for the number of kilowatt-hours they reduced during the event, multiplied by the price offered by Duke Energy Ohio.

Customers may also participate in the CallOption program. Under the CallOption program, customers receive a monthly credit for providing Duke Energy Ohio with the right to call on the customers' load during emergency situations. Each of the CallOption offers contain an emergency provision wherein the customer agrees to provide a maximum number of interruptions for curtailments initiated by the Regional Transmission Operator, PJM Interconnection, Inc., (PJM). The maximum number of events is dictated by PJM, and is currently 10. But, the customer also has the option to agree to provide load for economic events. Under the CallOption program, the customer agrees to a predetermined price at which Duke Energy Ohio has the right, but not the obligation, to initiate an event. If an economic event is called, the customer receives an energy credit for reducing load during the event that is equal to the predetermined price for energy, less the base cost of energy that is embedded in their rate.

Integrated Volt-Var Control Project (IVVC)

The IVVC project will better manage the application and operation of voltage regulators (the Volt) and capacitors (the VAR) on the Duke Energy Ohio distribution system. In general, the project tends to optimize the operation of these devices, resulting in "flattening" of the voltage profile across an entire circuit, starting at the substation and out to the farthest endpoint on the circuit. This is accomplished by automating the substation level voltage regulation, line capacitors, and line voltage regulators and incorporating them into a single integrated control system. This control system continuously monitors and operates the voltage regulators and capacitors to maintain the desired "flat" voltage profile. Once the system is operating with a relatively flat voltage profile across the entire circuit, the circuit voltage at the substation can be operated at a lower level. Lowering the circuit voltage at the substation, results in an immediate reduction of system loading. By applying IVVC and reducing system voltage, Duke

Energy Ohio is thereby reducing load and system demand and providing better quality of service for our customers.

The deployment of the IVVC program is projected to reduce future distribution only peak by 0.10% in 2013, 0.65% in 2014, and 1.00% in 2015 and following years.

Transmission Voltage Demand Response Program

On November 22, 2011, the Commission approved the Stipulation in Case No. 11-3549-EL-SSO, *et al.* In this order, a new demand response program was created for Duke Energy Ohio customers served at transmission voltage for their sites with a minimum load of 10 MWs. This new program started on June 1, 2012 and terminates on May 31, 2015.

Participants in this program are permitted to choose between a capacity only program option or a capacity and energy program option. Both choices are subject to all terms and requirements established by PJM Interconnection, L.L.C., (PJM) for participation in PJM demand response programs. Incentives to participants are fixed and established in the Stipulation.

2. Future Programs

The EE material presented thus far has been primarily focused on current programs. However, both customer adoption rates and costs to achieve new EE measures remain uncertain over the long term. Market potential studies provide estimates of the level of energy efficiency that is realistically achievable by customers in the market place. A study of the market potential involves an assessment of the Technical Potential, the level achievable through application of all technically feasible technologies regardless of market or economic constraints, and the Economic Potential, a subset of the Technical Potential that can be acquired for less than the avoided cost of supply assuming 100% customer participation in all cost-effective EE programs. The Market Potential is a subset of the Economic Potential that reflects expected customer acceptance and adoption of energy efficiency measures.

The most recent market potential study, performed by a third party for Duke Energy Ohio in January 2013, yielded economic accomplishment potentials that indicated that the level of projected cost-effective EE accomplishments would not attain the level necessary to fully comply with the R.C. 4928.66 requirements.

In order to achieve full compliance with R.C. 4928.66 requirements, Duke Energy Ohio would need to exceed the estimated Economic Potential which, as stated above, assumes 100% customer participation in all cost-effective EE programs.

The results of the study do not impact the Company's stated goal of achieving the state mandates as long as economically achievable. However, it is important to note that even though a market potential study may indicate that a certain level of EE is economically achievable, the success of a program is ultimately driven by the adoption rate of the customers which is beyond the control of the utility.

Due to uncertainty, future programs will be guided by the experience gained through periods of testing and application. For now, EE mandates will be accomplished on an incremental basis by applying patterns of continued growth of existing programs, as well as development of new products over the next ten years. At this juncture, while the Company intends to pursue all cost-effective EE, based on the past market potential study, it is unclear whether or not there is sufficient cost-effective EE to enable the Company to fully comply with the Ohio Revised Code R.C. Section 4928.66 requirements.

Table I-E-1 provides projected annual load impacts for an EE scenario that matches the R.C. 4928.66 mandate levels for MWh for the period between 2013 and 2023 along with expected MW values from Demand-Side Management programs.

Table I-E-1
Ohio Revised Code Section 4928.66 Scenario Load Impact Projections
Conservation and Demand-Side Management Programs

	Conservation Program Load Impacts				Demand-Side Management Program Impacts			
	Cumulative MWh			Summer Peak MW	Summer Peak MW			Total Summer Peak MW
Year	Residential	Non-Residential	Total	Cumulative Beginning 2013	Interruptible	Power Manager	Total	Total MW Impacts
2013	70,929	125,184	196,114	21.0	170.5	47.6	218	239
2014	147,469	264,619	412,088	61.4	150.0	51.6	202	263
2015	216,827	408,556	625,383	103.3	37.5	62.4	100	203
2016	285,215	554,732	839,947	144.6	38.6	75.7	114	259
2017	354,435	701,737	1,056,171	186.9	39.6	87.5	127	314
2018	424,519	850,124	1,274,643	223.0	39.6	98.5	138	361
2019	568,757	1,148,021	1,716,778	286.1	39.6	98.5	138	424
2020	713,593	1,448,780	2,162,374	351.2	39.6	98.5	138	489
2021	858,515	1,750,804	2,609,319	433.2	39.6	98.5	138	571
2022	1,002,856	2,052,393	3,055,249	514.2	39.6	98.5	138	652
2023	1,146,388	2,352,860	3,499,248	594.9	39.6	98.5	138	733

Table I-E-2 provides projected annual energy impacts required to be in compliance with R.C. 4928.66.

Table I-E-2
Development of Ohio Revised Code Section 4928.66 Case

	Total Energy History and Forecast	Total Energy Adjusted for EE	Moving Average Prior 3 Years	Ohio Revised Code Section 4928.66 Required EE Impacts	Ohio Revised Code Section 4928.66 Required EE Impacts	Ohio Revised Code Section 4928.66 Required Cumulative EE Impacts	Ohio Revised Code Section 4928.66 Required Cumulative EE adjusted for 2012 Start
Year	MWH	MWH	MWH	%	MWH	MWH	MWH
2006	22,665,556						
2007	22,746,814						
2008	22,249,088						
2009	20,725,616		22,553,819	0.3%	67,661	67,661	
2010	21,924,369		21,907,173	0.5%	109,536	177,197	
2011	22,243,035		21,633,024	0.7%	151,431	328,628	
2012	21,203,863		21,631,007	0.8%	173,048	501,677	
2013	21,541,472	21,345,358	21,790,422	0.9%	196,114	697,790	196,114
2014	21,851,321	21,439,233	21,597,419	1.0%	215,974	913,765	412,088
2015	22,210,084	21,584,701	21,329,484	1.0%	213,295	1,127,059	625,383
2016	22,683,201	21,843,253	21,456,431	1.0%	214,564	1,341,624	839,947
2017	23,169,879	22,113,708	21,622,396	1.0%	216,224	1,557,848	1,056,171
2018	23,637,948	22,363,305	21,847,221	1.0%	218,472	1,776,320	1,274,643
2019	24,079,052	22,362,273	22,106,755	2.0%	442,135	2,218,455	1,716,778
2020	24,478,664	22,316,291	22,279,762	2.0%	445,595	2,664,050	2,162,374
2021	24,820,188	22,210,869	22,347,290	2.0%	446,946	3,110,996	2,609,319
2022	25,127,946	22,072,697	22,296,478	2.0%	445,930	3,556,926	3,055,249
2023	25,432,979	21,933,731	22,199,952	2.0%	443,999	4,000,925	3,499,248

Note: The MWh above represent the annualized values of program participant load impacts

Table I-E-3 provides projected calculations of the achievement towards the peak benchmarks. It is expected that the peak load achievements will exceed the benchmark requirements.

Table I-E-3
Assessment of Peak Benchmark Achievements for the Ohio Revised Code Section 4928.66 Scenario

Year	Weather Normal History and Forecasted Level of Peak Demand	Forecast Adjusted for EE and DR Impacts	Moving Average Prior 3 Years	Ohio Revised Code Section 4928.66 Required Peak Impacts	Ohio Revised Code Section 4928.66 Required Peak Impacts	Ohio Revised Code Section 4928.66 Cumulative Required Peak Impacts	Ohio Revised Code Section 4928.66 Required Cumulative Peak Impacts adjusted for 2013 Start	Projected Cumulative Peak Impacts adjusted for 2013 Start
	MW	MW	MW	%	MW	MW	MW	MW
2006	4,591							
2007	4,328							
2008	4,462							
2009	4,478		4,460	1.00%	45	45		
2010	4,444		4,423	0.75%	33	78		
2011	4,370		4,461	0.75%	33	111		
2012	4,301		4,431	0.75%	33	144		
2013	4,296	4,264	4,372	0.75%	33	177	33	239
2014	4,403	4,338	4,312	0.75%	32	210	65	263
2015	4,481	4,383	4,301	0.75%	32	242	97	203
2016	4,572	4,442	4,328	0.75%	32	274	130	259
2017	4,657	4,494	4,388	0.75%	33	307	163	314
2018	4,758	4,562	4,440	0.75%	33	341	196	361
2019	4,850	4,654	4,499				196	424
2020	4,903	4,707	4,570				196	489
2021	4,966	4,770	4,641				196	571
2022	5,022	4,825	4,710				196	652
2023	5,077	4,881	4,767				196	733

SECTION II - FORECASTS FOR ELECTRIC TRANSMISSION OWNERS

A. GENERAL GUIDELINES

No Response Required.

B. ELECTRIC TRANSMISSION FORECAST

This section of the 2013 Electric Long-Term Forecast Report contains the transmission forecast forms FE-T1 through FE-T10 as required by OAC 4901:5-5-04.

PUCO FORM FE-T1: TRANSMISSION ENERGY DELIVERY FORECAST
(Megawatt Hours/Year) (a)

	YEAR	(1) ENERGY RECEIPTS FROM GENERATION SOURCES CONNECTED TO THE OWNER'S SYSTEM INSIDE OHIO	(2) ENERGY RECEIPTS FROM GENERATION SOURCES CONNECTED TO THE SYSTEM OUTSIDE OHIO	(3) TOTAL ENERGY RECEIPTS FROM GENERATION SOURCES 1 + 2	(4) ENERGY RECEIPTS AT INTERCONNECTIONS WITH OTHER TRANSMISSION COMPANIES INSIDE OHIO	(5) ENERGY RECEIPTS AT INTERCONNECTIONS WITH OTHER TRANSMISSION COMPANIES OUTSIDE OHIO	(6) TOTAL ENERGY RECEIPTS AT INTERCONNECTIONS 4 + 5	(7) TOTAL ENERGY RECEIPTS 3 + 6	(8) ENERGY DELIVERIES AT INTERCONNECTIONS WITH OTHER TRANSMISSION COMPANIES INSIDE OHIO	(9) ENERGY DELIVERIES AT INTERCONNECTIONS WITH OTHER TRANSMISSION COMPANIES OUTSIDE OHIO	(10) TOTAL ENERGY DELIVERIES AT INTERCONNECTIONS 8 + 9	(11) TOTAL ENERGY DELIVERIES FOR LOAD CONNECTED TO THE SYSTEM 7 - 10	(12) ENERGY DELIVERIES FOR LOADS CONNECTED TO THE SYSTEM INSIDE OHIO	(13) ENERGY DELIVERIES FOR LOADS CONNECTED TO THE SYSTEM OUTSIDE OHIO 11 - 12
-5	2008	20,212,738	4,241,387	24,454,125	17,184,908	1,199,563	18,384,471	42,838,596	14,712,665	184,035	14,896,700	27,941,896	23,542,249	4,399,647
-4	2009	21,060,436	4,278,054	25,338,490	15,856,020	863,773	16,719,793	42,058,283	15,523,646	235,746	15,759,392	26,298,891	22,131,394	4,167,497
-3	2010	22,300,838	4,420,174	26,721,012	16,316,328	1,081,646	17,397,974	44,118,986	15,611,793	182,132	15,793,925	28,325,061	23,748,267	4,576,794
-2	2011	18,050,941	4,250,267	22,301,208	18,587,741	1,438,293	20,026,034	42,327,242	14,593,650	169,580	14,763,230	27,564,012	23,131,173	4,432,839
-1	2012	16,545,979	3,184,661	19,730,640	19,227,267	1,349,731	20,576,998	40,307,638	13,293,957	219,634	13,513,591	26,794,047	22,570,857	4,223,190
0	2013											25,644,894	21,362,079	4,282,815
1	2014											25,880,626	21,558,789	4,321,836
2	2015											26,055,984	21,699,041	4,356,943
3	2016											26,374,202	21,963,457	4,410,746
4	2018											26,677,580	22,211,644	4,465,936
5	2017											26,971,822	22,451,298	4,520,524
6	2019											27,187,775	22,623,936	4,563,838
7	2020											27,088,699	22,536,271	4,552,428
8	2021											27,003,976	22,463,125	4,540,852
9	2022											26,880,464	22,357,328	4,523,136
10	2023											26,757,359	22,251,241	4,506,118

(a) To be filled out by electric transmission owners operating in Ohio

Note - Errors in prior year historical data have been corrected for this submission.

PUCO Form FE-T2 : Electric Transmission Owner's System Seasonal Peak Load Demand Forecast

(Megawatts)(a)

Duke Energy Ohio BEFORE DSM (e)

		Native Load (b)		Internal Load (c)	
	Year	Summer	Winter (d)	Summer	Winter (d)
-5	2008	4,230	3,626	4,230	3,626
-4	2009	3,994	3,316	3,994	3,316
-3	2010	4,388	3,455	4,414	3,428
-2	2011	4,514	3,182	4,534	3,182
-1	2012	4,212	3,329	4,458	3,329
0	2013	4,078	3,377	4,296	3,548
1	2014	4,201	3,460	4,403	3,611
2	2015	4,381	3,655	4,481	3,694
3	2016	4,457	3,751	4,572	3,791
4	2017	4,529	3,837	4,657	3,878
5	2018	4,620	3,914	4,758	3,954
6	2019	4,712	3,956	4,850	3,996
7	2020	4,765	4,005	4,903	4,045
8	2021	4,828	4,056	4,966	4,097
9	2022	4,883	4,107	5,022	4,148
10	2023	4,939	4,156	5,077	4,196

(a) To be filled out by electric transmission owners operating in Ohio.
(b) Excludes interruptible load.
(c) Includes interruptible load.
(d) Winter load reference is to peak loads which follow the summer peak load.
(e) Includes historical DSM impacts.

PUCO Form FE-T2 : Electric Transmission Owner's System Seasonal Peak Load Demand Forecast

(Megawatts)(a)

Duke Energy Ohio AFTER DSM (e)

		Native Load (b)		Internal Load (c)	
	Year	Summer	Winter (d)	Summer	Winter (d)
-5	2008	4,230	3,626	4,230	3,626
-4	2009	3,994	3,316	3,994	3,316
-3	2010	4,388	3,455	4,414	3,428
-2	2011	4,514	3,182	4,534	3,182
-1	2012	4,412	3,329	4,458	3,329
0	2013	4,057	3,355	4,275	3,526
1	2014	4,140	3,416	4,341	3,567
2	2015	4,277	3,477	4,377	3,628
3	2016	4,312	3,664	4,427	3,703
4	2017	4,343	3,720	4,470	3,758
5	2018	4,397	3,762	4,535	3,801
6	2019	4,425	3,759	4,564	3,799
7	2020	4,397	3,761	4,535	3,802
8	2021	4,383	3,768	4,521	3,808
9	2022	4,358	3,773	4,496	3,814
10	2023	4,335	3,778	4,473	3,819

(a) To be filled out by electric transmission owners operating in Ohio.
(b) Excludes interruptible load.
(c) Includes interruptible load.
(d) Winter load reference is to peak loads which follow the summer peak load.
(e) Includes historical DSM impacts.

PUCO Form FE-T3 : Electric Transmission Owner's Total Monthly Energy Forecast (MWh)

Duke Energy Ohio AFTER DSM (e)

2013 (d)	Ohio Portion (a)	Total company (b)	Internal Load (c)
January	1,974,877	1,974,877	1,974,877
February	1,824,207	1,824,207	1,824,207
March	1,720,181	1,720,181	1,720,181
April	1,592,491	1,592,491	1,592,491
May	1,548,707	1,548,707	1,548,707
June	1,844,829	1,844,829	1,844,829
July	2,039,841	2,039,841	2,039,841
August	2,051,157	2,051,157	2,051,157
September	1,897,294	1,897,294	1,897,294
October	1,579,573	1,579,573	1,579,573
November	1,516,504	1,516,504	1,516,504
December	1,773,954	1,773,954	1,773,954
2014 (d)			
January	1,970,669	1,970,669	1,970,669
February	1,805,336	1,805,336	1,805,336
March	1,728,276	1,728,276	1,728,276
April	1,611,899	1,611,899	1,611,899
May	1,570,927	1,570,927	1,570,927
June	1,865,275	1,865,275	1,865,275
July	2,070,578	2,070,578	2,070,578
August	2,087,678	2,087,678	2,087,678
September	1,929,923	1,929,923	1,929,923
October	1,597,713	1,597,713	1,597,713
November	1,522,774	1,522,774	1,522,774
December	1,799,685	1,799,685	1,799,685

a. Electric transmission owner shall provide or cause to be provided data for the Ohio portion of its service area in this column.
b. Electric transmission owner operating across Ohio boundaries shall provide or cause to be provided data for the total service area in this column.
c. Electric transmission owner operating as a part of an integrated operating system shall provide for the total system in this column.
d. All data shown is a forecast. There is no actual data shown on this table.
e. Includes DSM impacts.

PUCO Form FE-T4 : Electric Transmission Owner's Monthly Internal Peak Load Forecast (Megawatts)

Internal

Duke Energy Ohio AFTER DSM (e)

2013 (d)	Ohio Portion (a)	Total Service Area (b)	System (c)
January	3,477	3,477	3,477
February	3,326	3,326	3,326
March	3,134	3,134	3,134
April	2,873	2,873	2,873
May	3,538	3,538	3,538
June	4,158	4,158	4,158
July	4,275	4,275	4,275
August	4,273	4,273	4,273
September	3,787	3,787	3,787
October	2,961	2,961	2,961
November	3,043	3,043	3,043
December	3,412	3,412	3,412
2014 (d)			
January	3,526	3,526	3,526
February	3,366	3,366	3,366
March	3,165	3,165	3,165
April	2,906	2,906	2,906
May	3,593	3,593	3,593
June	4,224	4,224	4,224
July	4,341	4,341	4,341
August	4,340	4,340	4,340
September	3,847	3,847	3,847
October	3,011	3,011	3,011
November	3,073	3,073	3,073
December	3,452	3,452	3,452

a. Electric transmission owner shall provide or cause to be provided data for the Ohio portion of its service area in this column.
b. Electric transmission owner operating across Ohio boundaries shall provide or cause to be provided data for the total service area in this column.
c. Electric transmission owner operating as a part of an integrated operating system shall provide for the total system in this column.
d. *All data shown is a forecast. There is no actual data shown on this table.*
e. Includes DSM impacts.

Forms FE-T5 and FE-T6 - As of January 1, 2012 PJM took over functional control of the transmission system. It is Duke Energy Ohio's opinion that these forms are no longer pertinent to Duke Energy Ohio since Duke Energy Ohio no longer sells transmission or tracks the firmness thereof. Also, the allocation of Available Flowgate Capacity (AFC) became the sole responsibility of PJM. For these reasons, Duke Energy Ohio cannot guarantee the accuracy of the information on these forms. All the data presented on Forms FE-T5 and FE-T6 is for calendar year 2012.

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Jan-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,967,475		1,967,475
Energy Receipts from other sources	(394,891)		(394,891)
Total Energy Receipts	1,572,584	0	1,572,584

PART B: DELIVERY OF ENERGY

Reporting Month Jan-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,319,273,091	0	2,319,273,091
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	44,452		44,452
Municipal-Owned Electric Systems	95,665		95,665
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,354,809		1,354,809
Total Energy Delivery	2,320,768,017	0	2,320,768,017

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Jan-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,940,075,618	0	1,940,075,618
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	28,624		28,624
Municipally-Owned Electric Systems	95,665		95,665
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,328,382		1,328,382
Total Energy Delivery	1,941,528,289	0	1,941,528,289

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Jan-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,319,195,433)	0	(2,319,195,433)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Feb-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,943,707	0	1,943,707
Energy Receipts from other sources	(184,748)		(184,748)
Total Energy Receipts	1,758,959	0	1,758,959

PART B: DELIVERY OF ENERGY

Reporting Month Feb-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,062,228,163	0	2,062,228,163
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	38,925	0	38,925
Municipal-Owned Electric Systems	85,000		85,000
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,225,126		1,225,126
Total Energy Delivery	2,063,577,214	0	2,063,577,214

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Feb-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,727,280,010	0	1,727,280,010
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	24,539		24,539
Municipally-Owned Electric Systems	85,000	0	85,000
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,196,341	0	1,196,341
Total Energy Delivery	1,728,585,890	0	1,728,585,890

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Feb-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,061,818,255)	0	(2,061,818,255)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Mar-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	853420	0	853,420
Energy Receipts from other sources	-1199425	0	(1,199,425)
Total Energy Receipts	(346,005)	0	(346,005)

PART B: DELIVERY OF ENERGY

Reporting Month Mar-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,013,014,898	0	2,013,014,898
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	33861	0	33,861
Municipal-Owned Electric Systems	82960	0	82960
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	823,107	0	823,107
Total Energy Delivery	2,013,954,826	0	2,013,954,826

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Mar-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,677,561,203	0	1,677,561,203
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	19,103		19,103
Municipally-Owned Electric Systems	82,960	0	82,960
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	807,695	0	807,695
Total Energy Delivery	1,678,470,961	0	1,678,470,961

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Mar-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,014,300,831)	0	(2,014,300,831)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Apr-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,043,216	0	1,043,216
Energy Receipts from other sources	(837,315)	0	(837,315)
Total Energy Receipts	205,901	0	205,901

PART B: DELIVERY OF ENERGY

Reporting Month Apr-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,781,294,466	0	1,781,294,466
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	30,833	0	30,833
Municipal-Owned Electric Systems	75,456	0	75,456
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	833,699	0	833,699
Total Energy Delivery	1,782,234,454	0	1,782,234,454

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Apr-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,492,007,517	0	1,492,007,517
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	17,222		17,222
Municipally-Owned Electric Systems	75,456	0	75,456
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	814,767	0	814,767
Total Energy Delivery	1,492,914,963	0	1,492,914,963

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Apr-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(1,782,028,553)	0	(1,782,028,553)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month May-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,447,689,411	0	1,447,689,411
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	19,522		19,522
Municipally-Owned Electric Systems	92,996	0	92,996
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	961,841	0	961,841
Total Energy Delivery	1,448,763,770	0	1,448,763,770

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH May-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(1,730,698,121)	0	(1,730,698,121)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month May-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,291,293	0	1,291,293
Energy Receipts from other sources	(976,654)	0	(976,654)
Total Energy Receipts	314,639	0	314,639

PART B: DELIVERY OF ENERGY

Reporting Month May-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,729,906,226	0	1,729,906,226
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	36,344	0	36,344
Municipal-Owned Electric Systems	92,996	0	92,996
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	977,193	0	977,193
Total Energy Delivery	1,731,012,760	0	1,731,012,760

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Jun-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,485,982	0	1,485,982
Energy Receipts from other sources	(934,150)	0	(934,150)
Total Energy Receipts	551,832	0	551,832

PART B: DELIVERY OF ENERGY

Reporting Month Jun-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,205,546,091	0	2,205,546,091
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	39,926	0	39,926
Municipal-Owned Electric Systems	86,072	0	86,072
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,073,895	0	1,073,895
Total Energy Delivery	2,206,745,984	0	2,206,745,984

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Jun-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,845,989,090	0	1,845,989,090
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	22,115		22,115
Municipally-Owned Electric Systems	86,072	0	86,072
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,056,387	0	1,056,387
Total Energy Delivery	1,847,153,664	0	1,847,153,664

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Jun-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,206,194,152)	0	(2,206,194,152)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Jul-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	2,155,565	0	2,155,565
Energy Receipts from other sources	(721,195)	0	(721,195)
Total Energy Receipts	1,434,370	0	1,434,370

PART B: DELIVERY OF ENERGY

Reporting Month Jul-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,426,251,794	0	2,426,251,794
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	47,519	0	47,519
Municipal-Owned Electric Systems	87,133	0	87,133
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,245,345	0	1,245,345
Total Energy Delivery	2,427,631,791	0	2,427,631,791

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Jul-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,027,417,735	0	2,027,417,735
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	26,719		26,719
Municipally-Owned Electric Systems	87,133	0	87,133
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,225,991	0	1,225,991
Total Energy Delivery	2,028,757,579	0	2,028,757,579

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Jul-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,426,197,421)	0	(2,426,197,421)

(a) FE-T5; Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Aug-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	2,441,046	0	2,441,046
Energy Receipts from other sources	(149,498)	0	(149,498)
Total Energy Receipts	2,291,548	0	2,291,548

PART B: DELIVERY OF ENERGY

Reporting Month Aug-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,481,255,279	0	2,481,255,279
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	41,538	0	41,538
Municipal-Owned Electric Systems	72,686	0	72,686
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,315,663	0	1,315,663
Total Energy Delivery	2,482,685,166	0	2,482,685,166

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Aug-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,069,587,082	0	2,069,587,082
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	22,231		22,231
Municipally-Owned Electric Systems	72,686	0	72,686
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,297,317	0	1,297,317
Total Energy Delivery	2,070,979,316	0	2,070,979,316

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Aug-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,480,393,618)	0	(2,480,393,618)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Sep-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,303,638	0	1,303,638
Energy Receipts from other sources	(783,673)	0	(783,673)
Total Energy Receipts	519,965	0	519,965

PART B: DELIVERY OF ENERGY

Reporting Month Sep-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,251,222,534	0	2,251,222,534
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	32,557	0	32,557
Municipal-Owned Electric Systems	64,698	0	64,698
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	948,478	0	948,478
Total Energy Delivery	2,252,268,266	0	2,252,268,266

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Sep-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,875,112,769	0	1,875,112,769
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	17,068		17,068
Municipally-Owned Electric Systems	64,698	0	64,698
Federal and State Electric Agencies			
Other end user service			
	0		
For Non Distribution service (transmission to transmission service)	937,271	0	937,271
Total Energy Delivery	1,876,131,806	0	1,876,131,806

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Sep-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,251,748,301)	0	(2,251,748,301)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Oct-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,530,744	0	1,530,744
Energy Receipts from other sources	(470,252)	0	(470,252)
Total Energy Receipts	1,060,492	0	1,060,492

PART B: DELIVERY OF ENERGY

Reporting Month Oct-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,821,205,356	0	1,821,205,356
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	33,045	0	33,045
Municipal-Owned Electric Systems	80,742	0	80,742
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,088,947	0	1,088,947
Total Energy Delivery	1,822,408,090	0	1,822,408,090

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Oct-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,517,521,233	0	1,517,521,233
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	18,159		18,159
Municipally-Owned Electric Systems	80,742	0	80,742
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,074,857	0	1,074,857
Total Energy Delivery	1,518,694,991	0	1,518,694,991

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Oct-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(1,821,347,598)	0	(1,821,347,598)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Nov-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,965,500	0	1,965,500
Energy Receipts from other sources	(98,219)	0	(98,219)
Total Energy Receipts	1,867,281	0	1,867,281

PART B: DELIVERY OF ENERGY

Reporting Month Nov-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,716,163,348	0	1,716,163,348
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	36,096	0	36,096
Municipal-Owned Electric Systems	83,359	0	83,359
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,330,143	0	1,330,143
Total Energy Delivery	1,717,612,946	0	1,717,612,946

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Nov-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,434,269,777	0	1,434,269,777
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	21,712		21,712
Municipally-Owned Electric Systems	83,359	0	83,359
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,310,974	0	1,310,974
Total Energy Delivery	1,435,685,822	0	1,435,685,822

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Nov-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(1,715,745,665)	0	(1,715,745,665)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

PART A: SOURCES OF ENERGY

Reporting Month Dec-12

1. Energy Receipts from all sources by type: (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
Energy Receipts from Power Plants directly connected to the Electric Transmission Owner's transmission system	1,931,427	0	1,931,427
Energy Receipts from other sources	(313,387)	0	(313,387)
Total Energy Receipts	1,618,040	0	1,618,040

PART B: DELIVERY OF ENERGY

Reporting Month Dec-12

1. Energy deliveries to all points connected to the Electric Transmission Owner's system (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	2,127,758,632	0	2,127,758,632
Other Investor-Owned Electric Utilities			
Cooperative-Owned Electric System	40,241	0	40,241
Municipal-Owned Electric Systems	89,639	0	89,639
Federal and State Electric Agencies			
Other end user service			
For Non Distribution service (transmission to transmission service)	1,297,186	0	1,297,186
Total Energy Delivery	2,129,185,698	0	2,129,185,698

FORM FE-T5 MONTHLY ENERGY TRANSACTIONS (TOTAL MWH/MONTH) FOR THE MOST RECENT YEAR

Reporting Month Dec-12

2. Energy deliveries to all points connected to the Electric Transmission Owner's system located in Ohio (MWH)

	Firm Transmission Service	Non-Firm Transmission Service	Total
For Distribution service:			
Affiliated Electric Utility Companies	1,768,025,937	0	1,768,025,937
Other Investor-Owned Electric Utilities			
Cooperatively-Owned Electric System	24,978		24,978
Municipally-Owned Electric Systems	89,639	0	89,639
Federal and State Electric Agencies	0		
Other end user service			
For Non Distribution service (transmission to transmission service)	1,282,134	0	1,282,134
Total Energy Delivery	1,769,422,688	0	1,769,422,688

PART C: LOSSES AND UNACCOUNTED FOR (MWH)

REPORTING MONTH Dec-12

	Firm Transmission Service	Non-Firm Transmission Service	Total
Sources minus Delivery (a)	(2,127,567,658)	0	(2,127,567,658)

(a) FE-T5: Part A minus Part B (1)

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month JANUARY

Megawatts	3,385	Day of Week	FRI	Day of Month	13	Hour of Peak	11:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	**Total**	
Number of Requests				66	13	79	
Requests (MW)				36,830	1,127	37,957	
Number of requests accepted				22	2	24	
Requests accepted (MW)				10,456	100	10,556	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				26,374	1,027	27,401	**Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted**

Reporting Month FEBRUARY

Megawatts	3,095	Day of Week	Monday	Day of Month	13	Hour of Peak	8:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	**Total**	
Number of Requests				59	12	71	
Requests (MW)				37,633	1,077	38,710	
Number of requests accepted				15	2	17	
Requests accepted (MW)				10,504	100	10,604	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,129	977	28,106	**Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted**

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month MARCH

Megawatts	3,076	Day of Week	Wednesday	Day of Month	21	Hour of Peak	17:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				56	18	74	
Requests (MW)				37,195	1,477	38,672	
Number of requests accepted				19	7	26	
Requests accepted (MW)				10,504	400	10,904	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				26,691	1,077	27,768	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

Reporting Month APRIL

Megawatts	2,753	Day of Week	Monday	Day of Month	30	Hour of Peak	15:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				56	12	68	
Requests (MW)				37,195	1,077	38,272	
Number of requests accepted				19	2	21	
Requests accepted (MW)				10,504	100	10,604	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				26,691	977	27,668	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month MAY

Megawatts	3,705	Day of Week	Monday	Day of Month	28	Hour of Peak	17:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				59	14	73	
Requests (MW)				36,646	1,252	37,898	
Number of requests accepted				20	3	23	
Requests accepted (MW)				10,504	175	10,679	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				26,142	1,077	27,219	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

Reporting Month JUNE

Megawatts	4,634	Day of Week	Friday	Day of Month	29	Hour of Peak	15:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				61	12	73	
Requests (MW)				38,028	1,077	39,105	
Number of requests accepted				20	2	22	
Requests accepted (MW)				10,284	100	10,384	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,744	977	28,721	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month JULY

Megawatts	4,476	Day of Week	Tuesday	Day of Month	17	Hour of Peak	17:00

CURTAILMENT PRIORITY CLASSES	Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests	60	14	74	
Requests (MW)	38,035	1,227	39,262	
Number of requests accepted	50	4	54	
Requests accepted (MW)	10,316	250	10,566	
				Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery	27,719	977	28,696	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

Reporting Month AUGUST

Megawatts	4,383	Day of Week	Wednesday	Day of Month	8	Hour of Peak	16:00

CURTAILMENT PRIORITY CLASSES	Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests	60	12	72	
Requests (MW)	38,035	1,077	39,112	
Number of requests accepted	20	2	22	
Requests accepted (MW)	10,316	100	10,416	
				Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery	27,719	977	28,696	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month SEPTEMBER

Megawatts	3,869	Day of Week	Friday	Day of Month	7	Hour of Peak	15:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				61	19	80	
Requests (MW)				38,135	1,752	39,887	
Number of requests accepted				20	3	23	
Requests accepted (MW)				10,316	175	10,491	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,819	1,577	29,396	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

Reporting Month OCTOBER

Megawatts	2,832	Day of Week	Tuesday	Day of Month	30	Hour of Peak	19:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				59	14	73	
Requests (MW)				37,735	1,277	39,012	
Number of requests accepted				20	4	24	
Requests accepted (MW)				10,316	300	10,616	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,419	977	28,396	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

FORM FE-T6: CONDITIONS AT TIME OF MONTHLY PEAK

Reporting Month NOVEMBER

Megawatts	3,058	Day of Week	Thursday	Day of Month	29	Hour of Peak	8:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				59	13	72	
Requests (MW)				37,735	1,277	39,012	
Number of requests accepted				20	3	23	
Requests accepted (MW)				10,316	300	10,616	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,419	977	28,396	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

Reporting Month DECEMBER

Megawatts	3,258	Day of Week	Friday	Day of Month	21	Hour of Peak	19:00
CURTAILMENT PRIORITY CLASSES				Firm Transmission Service	Non-Firm Transmission Service	Total	
Number of Requests				58	12	70	
Requests (MW)				37,660	1,125	38,785	
Number of requests accepted				19	3	22	
Requests accepted (MW)				10,316	175	10,491	
							Reason for non-delivery
Requests not accepted (MW) and reason for not accepting delivery				27,344	950	28,294	Withdrawn/ Invalid/ Refused/ Declined/ Annulled/ Retracted

C. THE EXISTING TRANSMISSION SYSTEM

1. General Description - The Duke Energy Ohio transmission system above 125 kV consists of 138 kV and 345 kV systems. The 345 kV system generally serves to distribute power from the larger, base load generating units that are connected to the Duke Energy Ohio transmission system, and to interconnect the Duke Energy Ohio system with other systems. These interconnections enable the transmission of power between systems as required to meet the service area load requirements and they provide capacity for economy and emergency power transfers. The 345 kV system is connected to the 138 kV system through large transformers at a number of substations across the system. The 138 kV system distributes power received through the transformers and also from several smaller generating units that are connected directly at this voltage level. This power is distributed to substations that supply lower voltage sub-transmission systems, distribution circuits, or serve a number of large customer loads directly.

As of December 2012, the transmission system of Duke Energy Ohio and its subsidiary companies consisted of approximately 403 circuit miles of 345 kV lines (including Duke Energy Ohio's share of jointly owned transmission) and 726 circuit miles of 138 kV lines. Portions of the 345 kV transmission system are jointly owned with AEP and/or DP&L.

(a) A summary of the characteristics of existing transmission lines are shown on the following forms FE-T7, Characteristics of existing Transmission lines. The forms are separated into several groups. The first group is of lines designed to operate at 138 kV. The second group is of wholly owned lines designed to operate at 345 kV. The remaining groups are of lines designed to operate at 345 kV, which are jointly owned with other utilities. The line numbers correspond to those shown on the schematic diagrams and geographic maps of O.A.C. 4901:5-5-04 (C)(2).

DUKE ENERGY OHIO
4901:5-5-04(C)(1)(a)
FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

WHOLLY OWNED TRANSMISSION LINES DESIGNED FOR 138 KV OPERATIONS

CIRCUIT NO. DEO-A	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
GE4	Evendale-GE Ram Jet	Evendale	Tower No.2	170	206	227	252	138	138	0.17	100	Steel Tower	1	
684	Elmwood-Lateral	Elmwood	Lateral											
	Section 1			226	275	302	336	138	138	1.34	100	Wood Pole	1	
	Section 2			226	275	302	336	138	138	2.37	100	Steel Tower	2	
689	Elmwood-Terminal	Elmwood	Terminal	261	318	349	389	138	138	1.40	100	Wood Pole	1	
885	Oakley-Red Bank	Oakley	Red Bank	282	343	377	421	138	138	1.09	100	Steel Tower	2	
886	Oakley-Beckjord	Oakley	Beckjord	282	343	377	421	138	138	16.45	100	Steel Tower	2	
1180	Ashland-Whittier	Ashland	Whittier											
	Section 1			230	280	308	343	138	138	0.18	100	Steel Pole	1	
	Section 2			230	280	308	343	138	138	0.31	100	Steel Tower	2	
	Section 3			230	280	308	343	138	138	0.48	50	Steel Pole & Wood Pole	1	
1263	Mitchell-Brighton	Mitchell	Brighton	92	111	123	136	69	138	4.20	100	Steel Tower	2	
1269	Central-Ashland	Tower No. 38	Tower No. 54	98	98	122	122	69	138	2.98	100	Steel Tower	2	
1284	Mitchell-Terminal	Mitchell	Terminal	234	284	312	343	138	138	3.61	100	Steel Tower	2	Henkel Corp.
1286	Mitchell-West End	Mitchell	West End	230	280	308	343	138	138	8.18	100	Steel Tower	2	Cumminsville, Queensgate, Metro Sewer Dist.
1288	Mitchell-Central	Mitchell	Central	230	280	308	343	138	138	2.30	100	Steel Tower	2	
1385	Charles-West End	Charles	West End	234	245	267	277	138	138	1.11	100	Underground	1	
1389	Charles-West End	Charles	West End	234	245	267	277	138	138	1.12	100	Underground	1	
1587	West End-Crescent	West End	Ohio/Ky. St. Line	226	275	302	336	138	138	0.30	100	Steel Tower	1	
1666	Miami Fort-Monsanto	Miami Fort	Tower No. 30	83	101	111	123	69	138	6.39	100	Steel Tower	2	
1681	Miami Fort-Greendale	Miami Fort	Ohio/Ind. St. Line	500	500	679	679	138	138	0.86	100	Steel Tower & Wood Pole	1	
1682	Miami Fort-Clifty Creek	Miami Fort	Ohio/Ky. St. Line	136	136	181	181	138	138	0.30	100	Wood H-Frame	1	
1683	Miami Fort-Hebron	Ohio/Ky. St. Line	Miami Fort	204	248	273	303	138	138	0.13	100	Steel Tower	2	
1688	Miami Fort-MFGT	Miami Fort	Miami Fort GT	226	275	302	336	138	138	0.34	100	Wood Pole	1	
1689	Miami Fort-Morgan	Miami Fort	Morgan	226	275	302	336	138	138	8.16	100	Steel Tower	2	
1762	Trenton-Terminal	Trenton	Terminal											
	Section 1			77	92	102	113	69	138	0.45	100	Steel Tower	1	
	Section 2			77	92	102	113	69	138	1.20	100	Wood Pole	1	
1782	Terminal-Glenview	Terminal	Glenview											
	Section 1			230	280	308	343	138	138	5.03	100	Steel Tower	2	
	Section 2			230	280	308	343	138	138	0.60	100	Wood H-Frame	1	
1783	Terminal-Ebenezer	Terminal	Ebenezer											
	Section 1			234	284	312	349	138	138	9.98	100	Steel Tower	2	
	Section 2			234	284	312	349	138	138	3.64	100	Wood Pole	1	
	Section 3			234	284	312	349	138	138	0.13	100	Wood H-Frame	1	Midway
1880	Beckjord-Silver Grove	Beckjord	Ohio/Ky. St. Line											
	Section 1			253	308	339	377	138	138	1.00	100	Wood Pole	1	
	Section 2			253	308	339	377	138	138	0.25	100	Steel Tower	2	
1881	Beckjord-Wilder	Beckjord	Ohio/Ky. St. Line	166	201	221	245	138	138	0.32	100	Steel Tower	2	
1885	Beckjord-Tobasco	Beckjord	Tobasco	282	343	377	421	138	138	5.84	100	Steel Tower	2	
1887	Beckjord-Pierce	Beckjord	Pierce	478	478	478	478	138	138	0.38	50	Wood Pole & Steel Tower	1	
1889	Beckjord-Pierce	Beckjord	Pierce	478	478	478	478	138	138	0.22	100	Steel Tower	1	
2166	Brighton-Wilder	Brighton	Ohio/Ky. St. Line	83	101	111	123	69	138	3.65	100	Steel Tower	2	
2381	Warren-Clinton County	Warren	Clinton County	170	206	227	252	138	138	16.32	100	Wood H-Frame	1	
2862	Miami Fort GT-Villa	Miami Fort GT	Ohio/Ky. St. Line	83	101	111	123	69	138	0.14	100	Steel Tower	2	
2865	Miami Fort GT-Monsanto	Miami Fort GT	Tower No. 30	113	137	151	168	69	138	6.39	100	Steel Tower	2	
2986	Cedarville-Ford	Cedarville	Ford											
	Section 1			253	308	339	378	138	138	5.02	100	Wood Pole	1	
	Section 2			253	308	339	378	138	138	4.86	100	Wood Pole	1	
3263	Trenton-Middletown Oxygen	Tower No.1	Tower No. 17	83	101	111	123	69	138	2.77	100	Steel Tower	1	
3281	Trenton-College Corner	Trenton	Ohio/Ind. St. Line	153	184	203	225	138	138	24.11	100	Steel Tower	2	Collinsville, BREC Huston
3283	N/A	Structure 696	Structure 645A	170	206	227	252	138	138	3.94	90	Wood H-Frame		
3284	Trenton-Todhunter	Trenton	Todhunter	170	206	227	252	138	138	4.9	100	Wood H-Frame	1	
3881	Port Union-Summerside	Port Union	Summerside	170	206	227	252	138	138	22.74	100	Steel Tower	2	
3885	Port Union-Fairfield	Port Union	Fairfield	310	310	310	310	138	138	6.59	100	Steel Tower	2	Hall
3886	Port Union-Willey	Port Union	Willey	170	206	227	252	138	138	14.30	100	Steel Tower	2	Mulhauser
3887	Port Union-Todhunter	Port Union	Todhunter	304	304	390	390	138	138	9.69	100	Steel Tower	2	Millikin
3888	Port Union-Todhunter	Port Union	Todhunter	304	304	390	390	138	138	9.69	100	Steel Tower	2	Beckett

DUKE ENERGY OHIO
4901:5-5-04(C)(1)(a)
FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

WHOLLY OWNED TRANSMISSION LINES DESIGNED FOR 138 KV OPERATION

CIRCUIT NO. DEO-A	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
3889	Port Union-City of Hamilton	Port Union	City of Hamilton	253	308	339	377	138	138	4.65	100	Wood Pole	1	
3981	Central-Oakley	Central	Oakley	230	280	308	343	138	138	2.90	100	Steel Tower	2	
3985	Central-Ashland	Central	Ashland	230	280	308	343	138	138	3.43	100	Steel Tower	2	
4187	Lateral-Red Bank	Lateral	Red Bank	230	280	308	343	138	138	2.90	100	Steel Tower	2	
4861	Ivorydale-Terminal	Tower No. 1	Tower No. 5	83	101	111	123	69	138	0.90	100	Steel Tower	2	
5381	Shaker Run-Rockies Express													
	Section 1	Structure 69B	Rockies Express	478	478	478	478	138	138	0.67	50	Steel Pole	1	
	Section 2	Rockies Express	Carlisle	287	287	287	287	138	138	10.58	50	Wood Pole	1	Carlisle, Union
5483	Foster-Port Union	Foster	Port Union											Dimmick, Montgomery
	Section 1			226	275	302	336	138	138	9.19	100	Steel Tower	2	Twenty Mile, Cornell
	Section 2			253	308	339	378	138	138	8.39	100	Wood Pole	1	Simpson, Socialville
5487	Foster-Remington	Foster	Remington											
	Section 1			253	308	339	378	138	138	13.40	100	Steel Tower	2	Montgomery
	Section 2			170	206	227	252	138	138	4.45	100	Wood Pole	1	
5489	Foster-Cedarville	Foster	Cedarville	253	308	339	378	138	138	12.23	100	Wood Pole	1	Obannonville
5484	Foster-Warren	Foster	Warren	253	308	339	378	138	138	8.70	100	Wood pole	1	Mainaville
5666	Todhunter-Manchester	Tower No. 17	Tower No. 20	113	137	151	168	69	138	0.55	100	Steel Tower	1	
5667	Todhunter-Shaker Run	Todhunter	Structure 645A	83	101	111	123	69	138	5.14	100	Wood H-Frame	1	
5680	Todhunter-Warren	Todhunter	Warren	165	202	227	252	138	138	9.55	90	Wood H-Frame	1	Nickel
5682	Todhunter-AK Steel	Todhunter	AK Steel	300	300	300	300	138	138	2.34	100	Steel Tower	2	
5686	Todhunter-AK Steel	Todhunter	AK Steel											
	Section 1			300	300	300	300	138	138	2.34	100	Steel Tower	2	
	Section 2			170	206	227	252	138	138	0.33	100	Steel Tower	1	Dicks Creek
5689	Todhunter-Rockies Express	Structure 69B	Rockies Express	478	478	478	478	138	138	0.63	50	Steel Pole	1	
5781	Fairfield-City of Hamilton	Fairfield	City of Hamilton	253	308	339	378	138	138	6.05	100	Wood Pole	1	
5783	Fairfield-Morgan	Fairfield	Morgan	166	201	221	245	138	138	16.50	100	Steel Tower	2	
5884	Brown-Eastwood	Brown	Eastwood	253	308	339	378	138	138	13.00	100	Wood H-Frame	1	
5886	Brown-Stuart	Brown	Stuart	234	285	213	349	138	138	21.16	100	Wood H-Frame	1	
5985	Wilder-West End	Ohio/Ky. St. Line	West End	253	287	339	351	138	138	0.20	100	Steel Tower	2	
5988	Wilder-Beckjord	Ohio/Ky. St. Line	Beckjord	226	275	302	336	138	138	0.37	100	Steel Tower	2	
6365	Tobasco-Markley	Pole No. 601	Markley	83	101	111	122	69	138	1.70	100	Wood Pole	1	
6885	Ebenezer-Miami Fort	Ebenezer	Miami Fort											
	Section 1			228	280	313	350	138	138	10.26	100	Steel Tower	2	
	Section 2			226	275	302	336	138	138	4.92	100	Wood Pole	1	
6984	Summerside-Beckjord	Summerside	Beckjord	310	310	310	310	138	138	10.44	100	Steel Tower	2	Clermont
7284	Glenview-Miami Fort	Glenview	Miami Fort											
	Section 1			230	248	308	342	138	138	0.60	100	Wood H-Frame	1	
	Section 2			230	280	308	342	138	138	15.07	100	Steel Tower	2	Kleeman
	Section 3			185	224	246	273	138	138	0.12	100	Wood H-Frame	1	Midway
7481	Red Bank-Terminal													
	Section 1	Tower 117	Cornell	344	423	463	518	138	138	9.10	100	Wood Pole	1	Deer Park
	Section 2	Pole 1493	Cooper	226	274	302	336	138	138	1.19	50	Wood Pole	1	
7484	Red Bank-Ashland	Red Bank	Ashland											
	Section 1			240	300	240	300	138	138	0.96	100	Steel Tower	2	
	Section 2			240	300	240	300	138	138	0.12	100	Wood Pole	1	
	Section 3			240	300	240	300	138	138	4.24	100	Underground	1	
7489	Red Bank-Tobasco	Red Bank	Tobasco											
	Section 1			282	344	378	421	138	138	9.64	100	Steel Tower	2	
	Section 2			282	344	378	421	138	138	0.07	100	Wood Pole	1	
8281	Rochelle-Whittier	Rochelle	Whittier	269	282	307	318	138	138	1.20	50	Underground	1	
8283	Rochelle-Charles	Rochelle	Charles	269	282	307	318	138	138	2.38	100	Underground	1	
8286	Rochelle-Terminal	Rochelle	Terminal											
	Section 1			234	287	307	318	138	138	3.56	100	Steel Tower	2	
	Section 2			234	287	307	318	138	138	1.25	100	Wood Pole	1	
	Section 3			234	282	307	318	138	138	1.32	100	Underground	1	
8481	Eastwood-Ford	Eastwood	Ford											
	Section 1			253	308	339	378	138	138	4.97	100	Wood Pole	1	
	Section 2			253	308	339	378	138	138	1.50	100	Wood Pole	1	
8887	Hillcrest-Eastwood	Hillcrest	Eastwood	306	306	382	382	138	138	9.63	50	Wood Pole	1	SCP Eastwood
9482	Remington-Beckjord	Remington	Beckjord	310	310	310	310	138	138	19.08	100	Steel Tower	2	Feldman, Wards Corner
9784	Willey-Miami Fort	Willey	Miami Fort	170	206	227	252	138	138	14.95	100	Steel Tower	2	

DUKE ENERGY OHIO
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FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

WHOLLY OWNED TRANSMISSION LINES DESIGNED FOR 138 KV OPERATION

CIRCUIT NO. DEO-A	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
9787	Willey-Terminal	Willey	Terminal											
	Section 1			226	275	302	336	138	138	5.68	100	Wood H-Frame	1	Mapleknoll
	Section 2			226	275	302	336	138	138	11.71	100	Wood Pole	1	Mt. Healthy, Finneytown
	Section 3			226	275	302	336	138	138	0.50	100	Steel Tower	2	
13803	Hutchings-College Corner													
	Section 1	Structure 1101	Trenton	170	206	227	252	138	138	4.91	100	Wood H-Frame	1	
	Section 2	Trenton	Tower 129	170	206	227	252	138	138	24.06	100	Steel Tower	2	

DUKE ENERGY OHIO

4901:5-5-04(C)(1)(a)
FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

WHOLLY OWNED TRANSMISSION LINES DESIGNED FOR 345 KV OPERATION

CIRCUIT NO. DEO-B	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
04	Miami Fort-Tanners Creek	Miami Fort	Ohio/Ky. St. Line	717	824	717	824	345	345	0.32	150	Steel Tower	2	
08	Port Union-Foster	Port Union	Foster											
	Section 1			1195	1315	1195	1315	345	345	11.66	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	0.24	150	Steel Tower	1	
13	Terminal-Port Union	Terminal	Port Union											
	Section 1			1195	1315	1195	1315	345	345	0.46	150	Steel Tower	1	
	Section 2			1195	1315	1195	1315	345	345	9.65	150	Steel Tower	2	
14	Miami Fort-Terminal													
	Section 1	Terminal	Ohio/Ky. St. Line	1195	1315	1195	1315	345	345	14.84	150	Steel Tower	2	
	Section 2	Miami Fort	Ohio/Ky. St. Line	1195	1315	1195	1315	345	345	0.32	150	Steel Tower	2	
15	Foster-Todhunter	Foster	Todhunter	1195	1315	1195	1315	345	345	15.79	150	Steel Tower	2	
16	East Bend-Terminal	Ohio/Ky. St. Line	Terminal	1195	1315	1195	1315	345	345	14.84	150	Steel Tower	2	
62	Woodsdale-Todhunter	Woodsdale	Todhunter	1195	1315	1195	1315	345	345	4.68	150	Steel Tower	2	
1883	Beckjord-Red Bank	Beckjord	Red Bank											
	Section 1			282	344	378	421	138	345	0.89	150	Steel Tower	1	
	Section 2			282	344	378	421	138	345	13.82	150	Steel Tower	2	Newtown
4683	Evendale-Port Union	Evendale	Port Union											
	Section 1			344	423	463	518	138	345	0.52	150	Steel Tower	1	
	Section 2			344	423	463	518	138	345	5.48	150	Steel Tower	2	Kemper
4685	Evendale-Terminal	Evendale	Terminal											
	Section 1			382	382	382	382	138	345	0.21	150	Steel Tower	1	
	Section 2			382	382	382	382	138	345	4.02	150	Steel Tower	2	
5381	Shaker Run-Rockies Express	Structure 69A	Rockies Express	478	478	478	478	138	345	2.62	150	Steel Tower	2	
5485	Foster-Shaker Run	Foster	Shaker Run	259	314	345	385	138	345	10.29	150	Steel Tower	2	Park, Bethany
5689	Todhunter-Rockies Express	Todhunter	Structure 69B	478	478	478	478	138	345	6.44	150	Steel Tower	2	
7481	Red Bank-Terminal	Red Bank	Terminal	344	423	463	518	138	345	5.72	150	Stl Twr & Pole	2	Golf Manor

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FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

COMMONLY OWNED TRANSMISSION - DEO, AEP AND DP&L COMPANIES
TENANTS IN COMMON WITH UNDIVIDED OWNERSHIP, TOTAL MILEAGE GIVEN

CIRCUIT NO. CCD-B	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
01	Beckjord-Pierce	Beckjord	Pierce	500	500	500	500	345	345	0.32	150	Steel Tower	1	
02	Pierce-Foster	Pierce	Foster											
	Section 1			1195	1315	1195	1315	345	345	23.38	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	0.57	150	Steel Tower	1	
03	Sugarcreek-Greene	Sugarcreek	Greene	1195	1315	1195	1315	345	345	8.30	150	Steel Tower	1	
06	Greene-Beatty	Greene	Beatty											
	Section 1			1195	1315	1195	1315	345	345	3.66	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	45.34	150	Steel Tower	1	
07	Marquis-Bixby	Marquis	Bixby											
	Section 1			1195	1315	1195	1315	345	345	63.16	150	Steel Tower	1	
	Section 2			1195	1315	1195	1315	345	345	8.52	150	Steel Tower	2	
09	Stuart-Greene	Stuart	Greene	1195	1315	1195	1315	345	345	80.38	150	Steel Tower	1	
10	Stuart-Killen	Stuart	Killen Tap	1195	1315	1195	1315	345	345	13.13	150	Steel Tower	1	
11	Stuart-Hillcrest	Stuart	Hillcrest	1255	1374	1255	1374	345	345	32.61	150	Steel Tower	1	
24	Foster-Sugarcreek	Foster	Sugarcreek	1257	1554	1745	1947	345	345	27.33	150	Steel Tower	2	
31	Beatty-Bixby	Beatty	Bixby											
	Section 1			1042	1338	1042	1338	345	345	4.69	150	Steel Tower	1	
	Section 2			1042	1338	1042	1338	345	345	8.52	150	Steel Tower	2	
33	Kirk-Corridor	Kirk	Corridor	1302	1673	1302	1673	345	345	18.36	150	Wood H-Frame	1	
40	Conesville-Hyatt	Conesville	Hyatt											
	Section 1			1195	1374	1195	1374	345	345	66.07	150	Steel Tower	1	
	Section 2			1195	1374	1195	1374	345	345	1.78	150	Wood Pole	1	
	Section 3			1195	1374	1195	1374	345	345	0.48	150	Wood H-Frame	1	
41	Spurlock-Zimmer	Ohio/Ky. St. Line	Zimmer											
	Section 1			1195	1315	1195	1315	345	345	31.77	150	Steel Tower	1	
	Section 2			1195	1315	1195	1315	345	345	0.78	150	Steel Tower	2	
42	Atlanta-Beatty	Atlanta	Beatty											
	Section 1			1042	1281	1042	1281	345	345	3.68	150	Steel Tower	2	
	Section 2			1042	1281	1042	1281	345	345	25.22	150	Steel Tower	1	
43	Conesville-Bixby	Conesville	Bixby											
	Section 1			1195	1374	1195	1374	345	345	14.87	150	Steel Tower	2	
	Section 2			1195	1374	1195	1374	345	345	50.86	150	Wood H-Frame	1	
44	Zimmer-Port Union	Zimmer	Port Union											
	Section 1			1195	1315	1195	1315	345	345	35.88	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	10.03	150	Steel Tower	1	
45	Zimmer-Red Bank													
	Section 1	Zimmer	Ohio/Ky. St. Line	1264	1538	1264	1538	345	345	0.43	150	Steel Tower	1	
	Section 2	Red Bank	Tower No. 24	1195	1315	1195	1315	345	345	10.58	150	Steel Tower	2	
	Section 3	Tower No. 23	Ohio/Ky. St. Line	1195	1315	1195	1315	345	345	0.80	150	Steel Tower	1	
46	Red Bank-Terminal	Red Bank	Terminal											
	Section 1			1195	1315	1195	1315	345	345	5.75	150	Steel Pole	2	
	Section 2			1195	1315	1195	1315	345	345	0.90	150	Steel Tower	2	
47	Bixby-Kirk	Bixby	Kirk											
	Section 1			1302	1673	1302	1673	345	345	14.87	150	Steel Tower	2	
	Section 2			1302	1673	1302	1673	345	345	4.20	150	Wood H-Frame	1	
49	Killen-Marquis	Killen Tap	Marquis	1195	1315	1195	1315	345	345	32.01	150	Steel Tower	1	
52	Stuart-Atlanta	Stuart	Atlanta	1195	1315	1195	1315	345	345	65.00	150	Steel Tower	1	
69	Hillcrest-Foster	Hillcrest	Foster	1551	1551	1793	1793	345	345	26.36	150	Steel Tower	1	
93	Spurlock-Stuart	Ohio/Ky. St. Line	Stuart	1195	1315	1195	1315	345	345	10.86	150	Steel Tower	1	

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FORM FE-T7: CHARACTERISTICS OF EXISTING TRANSMISSION LINES

COMMONLY OWNED TRANSMISSION - DEO AND DP&L COMPANIES
TENANTS IN COMMON WITH UNDIVIDED OWNERSHIP, TOTAL MILEAGE GIVEN

CIRCUIT NO. CCD-B	LINE NAME	ORIGIN	TERMINUS	SUMMER CAPABILITY (MVA) NORMAL RATING	SUMMER CAPABILITY (MVA) EMERGENCY RATING	WINTER CAPABILITY (MVA) NORMAL RATING	WINTER CAPABILITY (MVA) EMERGENCY RATING	VOLTAGE (KV) OPER. LEVEL	VOLTAGE (KV) DESIGN LEVEL	R-O-W LENGTH (MILES)	WIDTH (FEET)	SUPPORTING STRUCTURES	NUMBER OF CIRCUITS	SUBSTATIONS ON THE LINE
61	Woodsdale-Todhunter	Woodsdale	Todhunter	1195	1315	1195	1315	345	345	4.68	150	Steel Tower	2	
91	Miami Fort-West Milton	Miami Fort	Tower No. 173											
	Section 1			1195	1315	1195	1315	345	345	33.25	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	1.37	150	Steel Tower	1	
92	Miami Fort-Woodsdale	Miami Fort	Woodsdale											
	Section 1			1195	1315	1195	1315	345	345	33.25	150	Steel Tower	2	
	Section 2			1195	1315	1195	1315	345	345	4.82	150	Steel Tower	1	
98	Foster-Bath	Foster	Bath	1195	1315	1195	1315	345	345	40.28	150	Steel Tower	2	

(b) A separate listing of substations for each line included in form FE-T7 is shown on the following forms FE-T8, Summary of Existing Substations. The existing and proposed lines associated with each station are listed. The line numbers correspond to those shown on the schematic diagrams and geographic maps of O.A.C. 4901:5-5-04-(C)(2).

DUKE ENERGY OHIO
4901:5-5-04(C)(1)(b)
FORM FE-T8: SUMMARY OF EXISTING SUBSTATIONS

SUBSTATION NAME	TYPE*	VOLTAGE(S) (KV)	LINE NAME	LINE NUMBER	EXISTING OR PROPOSED
AK Steel	T	138	Todhunter-AK Steel	5682	Existing
			Todhunter-AK Steel	5686	Existing
Ashland	D	138	Ashland-Whittier	1180	Existing
			Central-Ashland	3985	Existing
			Red Bank-Ashland	7484	Existing
Beckett	D	138	Port Union-Todhunter	3888	Existing
Beckjord	T	345 & 138	Oakley-Beckjord	886	Existing
			Beckjord-Silver Grove	1880	Existing
			Beckjord-Red Bank	1883	Existing
			Beckjord-Tabasco	1885	Existing
			Beckjord-Pierce	1887	Existing
			Beckjord-Pierce	1889	Existing
			Remington-Beckjord	9482	Existing
			Beckjord-Wilder	1881	Existing
			Wilder-Beckjord	5988	Existing
			Summerside-Beckjord	6984	Existing
			Beckjord-Pierce	4501	Existing
Bethany	D	138	Foster-Shaker Run	5485	Existing
BREC Huston	T	138	Trenton-College Corner	3281	Existing
Brighton	D	69	Mitchell-Brighton	1263	Existing
Brown	D	138	Brown-Stuart	5886	Existing
			Brown-Eastwood	5884	Existing
Carlisle	D	138	Shaker Run-Rockies Express	5381	Existing
Cedarville	D	138	Foster-Cedarville	5489	Existing
			Cedarville-Ford	2986	Existing
Central	D	138	Mitchell-Central	1288	Existing
			Central-Oakley	3981	Existing
			Central-Ashland	3985	Existing
Charles	D	138	Charles-West End	1385	Existing
			Charles-West End	1389	Existing
			Rochelle-Charles	8283	Existing
Cinti. M.S.D.	T	138	Mitchell-West End	1286	Existing
City of Hamilton	T	138	Port Union-City of Ham.	3889	Existing
			Fairfield-City of Hamilton	5781	Existing
Clermont	D	138	Summerside-Beckjord	6984	Existing
Clinton County	D	138	Warren-Clinton Co.	2381	Existing
Collinsville	D	138	Trenton-College Corner	3281	Existing
Cooper	D	138	Red Bank-Terminal	7481	Existing
Cornell	D	138	Red Bank-Terminal	7481	Existing
			Port Union-Foster	5483	Existing
Cumminsville	D	138	Mitchell-West End	1286	Existing
Deer Park	D	138	Red Bank-Terminal	7481	Existing
Dicks Creek	T	138	Todhunter-AK Steel	5686	Existing
Dimmick	D	138	Foster-Port Union	5483	Existing

* DISTRIBUTION (D) TRANSMISSION (T)

DUKE ENERGY OHIO
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FORM FE-T8: SUMMARY OF EXISTING SUBSTATIONS

SUBSTATION NAME	TYPE*	VOLTAGE(S) (KV)	LINE NAME	LINE NUMBER	EXISTING OR PROPOSED
Eastwood	D	138	Brown-Eastwood	5884	Existing
			Eastwood-Ford	8481	Existing
			Hillcrest-Eastwood	8887	Existing
Ebenezer	D	138	Terminal-Ebenezer	1783	Existing
			Ebenezer-Miami Fort	6885	Existing
Elmwood	D	138	Elmwood-Lateral	684	Existing
			Elmwood-Terminal	689	Existing
Evendale	D	138	Evendale-Port Union	4683	Existing
			Evendale-Terminal	4685	Existing
			Evendale-General Electric	GE4	Existing
Fairfield	D	138	Fairfield-Morgan	5783	Existing
			Port Union-Fairfield	3885	Existing
			Fairfield-City of Hamilton	5781	Existing
			Port Union-Fairfield	3886	Proposed
			Willey-Fairfield	9782	Proposed
Feldman	D	138	Remington-Beckjord	9482	Existing
Finneytown	D	138	Willey-Terminal	9787	Existing
Ford	D	138	Foster-Ford	5489	Existing
			Brown-Ford	5884	Existing
Foster	T & D	345 & 138	Foster-Port Union	5483	Existing
			Foster-Warren	5484	Existing
			Foster-Shaker Run	5485	Existing
			Foster-Remington	5487	Existing
			Foster-Cedarville	5489	Existing
			Pierce-Foster	4502	Existing
			Stuart-Foster	4511	Existing
			Port Union-Foster	4508	Existing
			Foster-Todhunter	4515	Existing
			Foster-Sugarcreek	4524	Existing
Glenview	D	138	Terminal-Glenview	1782	Existing
			Miami Fort-Glenview	7284	Existing
Golf Manor	D	138	Red Bank-Terminal	7481	Existing
Hall	D	138	Port Union-Fairfield	3885	Existing
Henkel Corp.	D	138	Mitchell-Terminal	1284	Existing
Hillcrest	T & D	345 & 138	Stuart-Hillcrest	4511	Existing
			Foster-Hillcrest	34569	Existing
			Hillcrest-Eastwood	8887	Existing
Kemper	D	138	Evendale-Port Union	4683	Existing
Kleeman	D	138	Glenview-Miami Fort	7284	Existing
Lateral	D	138	Elmwood-Lateral	684	Existing
			Lateral-Red Bank	4187	Existing
Maineville	D	138	Foster-Warren	5484	Existing
Mapleknoll	D	138	Willey-Terminal	9787	Existing

* DISTRIBUTION (D) TRANSMISSION (T)

DUKE ENERGY OHIO
4901:5-5-04(C)(1)(b)
FORM FE-T8: SUMMARY OF EXISTING SUBSTATIONS

SUBSTATION NAME	TYPE*	VOLTAGE(S) (KV)	LINE NAME	LINE NUMBER	EXISTING OR PROPOSED
Miami Fort	T	345 & 138	Miami Fort-Greendale	1681	Existing
			Miami Fort-Clifty Creek	1682	Existing
			Miami Fort-Hebron	1683	Existing
			Miami Fort-MFGT	1688	Existing
			Miami Fort-Morgan	1689	Existing
			Ebenezer-Miami Fort	6885	Existing
			Glenview-Miami Fort	7284	Existing
			Willey-Miami Fort	9784	Existing
			Miami Fort-Miami	4591	Existing
			Miami Fort-Woodsdale	4592	Existing
			Miami Fort-Tanners Creek	4504	Existing
			Miami Fort-Terminal	4514	Existing
Miami Fort GT	T	138	Miami Fort-MFGT	1688	Existing
			MFGT-Villa	2862	Existing
			MFGT-Ebenezer	2865	Existing
Midway	D	138	Terminal-Ebenezer	1783	Existing
			Miami Fort-Glenview	7284	Existing
Millikin	D	138	Port Union-Todhunter	3887	Existing
Mitchell	D	138	Mitchell-Brighton	1263	Existing
			Mitchell-Terminal	1284	Existing
			Mitchell-West End	1286	Existing
			Mitchell-Ashland-Oakley	1288	Existing
			Mitchell-Central	1288	Proposed
Montgomery	D	138	Foster-Remington	5487	Existing
			Foster-Port Union	5483	Existing
Morgan	D	138	Miami Fort-Morgan	1689	Existing
			Fairfield-Morgan	5783	Existing
Mt. Healthy	D	138	Willey-Terminal	9787	Existing
Mulhauser	D	138	Port Union-Willey	3886	Existing
Newtown	D	138	Beckjord-Red Bank	1883	Existing
Nickel	D	138	Warren-Todhunter	5680	Existing
Oakley	D	138	Oakley-Red Bank	885	Existing
			Oakley-Beckjord	886	Existing
			Mitchell-Ashland-Oakley	1288	Existing
			Central-Oakley	3981	Proposed
OBannonville	D	138	Foster-Cedarville	5489	Existing
Park	D	138	Foster-Shaker Run	5485	Existing
Port Union	T & D	345 & 138	Port Union-Summerside	3881	Existing
			Foster-Port Union	5483	Existing
			Port Union-Fairfield	3885	Existing
			Port Union-Willey	3886	Existing
			Port Union-Todhunter	3887	Existing
			Port Union-Todhunter	3888	Existing
			Port Union-City of Hamilton	3889	Existing
			Evendale-Port Union	4683	Existing
			Zimmer-Port Union	4544	Existing
			Port Union-Foster	4508	Existing
			Terminal-Port Union	4513	Existing

* DISTRIBUTION (D) TRANSMISSION (T)

DUKE ENERGY OHIO
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FORM FE-T8: SUMMARY OF EXISTING SUBSTATIONS

SUBSTATION NAME	TYPE*	VOLTAGE(S) (KV)	LINE NAME	LINE NUMBER	EXISTING OR PROPOSED
Queensgate	D	138	Mitchell-West End	1286	Existing
Red Bank	T	345 & 138	Red Bank-Terminal	7481	Existing
			Lateral-Red Bank	4187	Existing
			Beckjord-Red Bank	1883	Existing
			Red Bank-Ashland	7484	Existing
			Oakley-Red Bank	885	Existing
			Red Bank-Tobasco	7489	Existing
			Red Bank-Terminal	4546	Existing
			Zimmer-Red Bank	4545	Existing
Remington	D	138	Remington-Beckjord	9482	Existing
			Foster-Remington	5484	Existing
Rochelle	D	138	Ridgeway-Whittier	8281	Existing
			Rochelle-Charles	8283	Existing
			Rochelle-Terminal	8286	Existing
Rockies Express	T	138	Shaker Run-Rockies Express	5381	Existing
			Todhunter-Rockies Express	5689	Existing
Seward	D	138	Port Union-Hamilton	3889	Existing
Shaker Run	D	138	Foster-Shaker Run	5485	Existing
			Shaker Run-Rockies Express	5381	Existing
Simpson	D	138	Foster-Port Union	5483	Existing
Socialville	D	138	Foster-Port Union	5483	Existing
SCP Eastwood	T	138	Hillcrest-Eastwood	8887	Existing
Summerside	D	138	Beckjord-Oakley-Summerside	886	Proposed
			Port Union-Summerside	3881	Existing
			Summerside-Beckjord	6984	Existing
Terminal	T & D	345 & 138	Elmwood-Terminal	689	Existing
			Mitchell-Terminal	1284	Existing
			Terminal-Allen	1762	Existing
			Terminal-Glenview	1782	Existing
			Terminal-Ebenezer	1783	Existing
			Evendale-Terminal	4685	Existing
			Red Bank-Terminal	7481	Existing
			Rochelle-Terminal	8286	Existing
			Willey-Terminal	9787	Existing
			Terminal-Port Union	4513	Existing
			Miami Fort-Terminal	4514	Existing
			East Bend-Terminal	4516	Existing
			Red Bank-Terminal	4546	Existing
Tobasco	D	138	Beckjord-Tobasco	1885	Existing
			Red Bank-Tobasco	7489	Existing

* DISTRIBUTION (D) TRANSMISSION (T)

DUKE ENERGY OHIO
4901:5-5-04(C)(1)(b)
FORM FE-T8: SUMMARY OF EXISTING SUBSTATIONS

SUBSTATION NAME	TYPE*	VOLTAGE(S) (KV)	LINE NAME	LINE NUMBER	EXISTING OR PROPOSED
Todhunter	T & D	345 &138	Trenton-Todhunter	3284	Existing
			Port Union-Todhunter	3887	Existing
			Port Union-Todhunter	3888	Existing
			Todhunter-Monroe	5667	Existing
			Warren-Todhunter	5680	Existing
			Todhunter-AK Steel	5682	Existing
			Todhunter-AK Steel	5686	Existing
			Todhunter-Rockies Express	5689	Existing
			Foster-Todhunter	4515	Existing
			Woodsdale-Todhunter	4561	Existing
			Woodsdale-Todhunter	4562	Existing
Trenton	D	138	Trenton-College Corner	3281	Existing
			Trenton-Todhunter	3284	Existing
			Trenton-Air Products	3263	Existing
Twenty Mile	D	138	Foster-Port Union	5483	Existing
Union	D	138	Shaker Run-Rockies Express	5381	Existing
Wards Corner	D	138	Remington-Beckjord	9482	Existing
Warren	T & D	138	Foster-Warren	5484	Existing
			Warren-Todhunter	5680	Existing
			Warren-Clinton County	2381	Existing
West End	D	138	Mitchell-West End	1286	Existing
			Charles-West End	1385	Existing
			Charles-West End	1389	Existing
			Crescent-West End	1587	Existing
			Wilder-West End	5985	Existing
Whittier	D	138	Ashland-Whittier	1180	Existing
			Ridgeway-Whittier	8281	Existing
Willey	D	138	Port Union-Willey	3886	Existing
			Willey-Miami Fort	9784	Existing
			Willey-Terminal	9787	Existing
Woodsdale	T	345	Woodsdale-Todhunter	4561	Existing
			Woodsdale-Todhunter	4562	Existing
			Miami Fort-Woodsdale	4592	Existing
Zimmer	T	345	Spurlock-Zimmer	4541	Existing
			Zimmer-Port Union	4544	Existing
			Zimmer-Red Bank	4545	Existing

* DISTRIBUTION (D) TRANSMISSION (T)

2. Existing Transmission System Maps

(a) Schematic diagrams of the existing 345 kV and 138 kV transmission networks are considered by Duke Energy Ohio to be critical energy infrastructure information. The diagrams will be provided under seal.

(b) A map showing the actual, physical routing of the transmission lines, geographic landmarks, major metropolitan areas, and the location of substations and generating plants, interconnects with distribution, and interconnections with other electric transmission owners is considered by Duke Energy Ohio to be critical energy infrastructure information. The map will be provided under seal.

(c) Rule Requirement - Two copies of the map described in paragraph (C)(2)(b) of this rule, for Commission use, on a 1:250,000 scale. The electric transmission owners may jointly provide one set of maps to meet this requirement. Participation in the Commission's joint mapping project will meet this requirement:

The joint mapping project coordinated by the Ohio Electric Utility Institute has not been accomplished for a number of years to Duke Energy Ohio's knowledge. Duke Energy Ohio can provide a map at the requested scale to the Commission upon request.

D. THE PLANNED TRANSMISSION SYSTEM

1. Specifications of planned transmission lines are provided on the following forms FE-T9, Specifications of Planned Electric Transmission Lines.

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Zimmer-Spurlock DEO-B4541
2.	Point of Origin: Terminus:	Tap Feeder 4541 (Zimmer side) Meldhal Dam Substation (proposed)
3.	Right-of-Way, Length: Average width: Number of circuits:	0.1 mile 150 ft. 1
4.	Voltage:	345 kV
5.	Application for Certificate:	Construction Notice approved 2/18/2013
6.	Construction to Commence: Commercial Operation:	4/2013 12/2013
7.	Capital Investment:	$518,000
8.	Substations:	None
9.	Supporting Structures:	Steel poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Interconnection with independent power producer AMP-Ohio, Inc.
12.	Consequences of Line Construction deferment or Termination:	Inability to interconnect with independent producer.
13.	Miscellaneous:	Project is located in southeast Clermont County, OH.

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Zimmer-Spurlock DEO-B4541
2.	Point of Origin: Terminus:	Tap Feeder 4541 (Spurlock side) Meldhal Dam Substation (proposed)
3.	Right-of-Way, Length: Average width: Number of circuits:	0.1 mile 150 ft. 1
4.	Voltage:	345 kV
5.	Application for Certificate:	Construction Notice approved 2/18/2013
6.	Construction to Commence: Commercial Operation:	4/2013 12/2013
7.	Capital Investment:	$518,000
8.	Substations:	None
9.	Supporting Structures:	Steel poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Interconnection with independent power producer AMP-Ohio, Inc.
12.	Consequences of Line Construction deferment or Termination:	Inability to interconnect with independent producer.
13.	Miscellaneous:	Project is located in southeast Clermont County, OH.

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Trenton-Todhunter DEO-A3284
2.	Point of Origin: Terminus:	Trenton Substation Todhunter Substation
3.	Right-of-Way, Length: Average width: Number of circuits:	4.9 miles 90 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	6/2013
6.	Construction to Commence: Commercial Operation:	9/2013 12/2013
7.	Capital Investment:	$1,036,000
8.	Substations:	None
9.	Supporting Structures:	Wood poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce 138 kV transmission system, prevent overloads for various system contingencies
12.	Consequences of Line Construction deferment or Termination:	Continued susceptibility to overload for various system contingencies
13.	Miscellaneous:	Existing circuit to be reconductored to increase current carrying capacity. Project located in northeast Butler County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Port Union-Willey DEO-A3886
2.	Point of Origin: Terminus:	Tap Feeder 3886 (Port Union side) Fairfield Substation
3.	Right-of-Way, Length: Average width: Number of circuits:	0.05 mile 100 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	9/2013
6.	Construction to Commence: Commercial Operation:	1/2015 6/2015
7.	Capital Investment:	$172,000
8.	Substations:	None
9.	Supporting Structures:	Steel poles
10.	Participation with other Utilities:	 DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce 138 kV transmission system, prevent overloads for various system contingencies
12.	Consequences of Line Construction deferment or Termination:	Continued susceptibility to overload for various system contingencies
13.	Miscellaneous:	Existing circuit 3886 to be split into two new circuits terminating in Fairfield Substation; project located in south-central Butler County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Port Union-Willey DEO-A3886
2.	Point of Origin: Terminus:	Tap Feeder 3886 (Willey side) Fairfield Substation
3.	Right-of-Way, Length: Average width: Number of circuits:	0.05 mile 100 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	9/2013
6.	Construction to Commence: Commercial Operation:	1/2015 6/2015
7.	Capital Investment:	$172,000
8.	Substations:	None
9.	Supporting Structures:	Steel poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce 138 kV transmission system, prevent overloads for various system contingencies
12.	Consequences of Line Construction deferment or Termination:	Continued susceptibility to overload for various system contingencies
13.	Miscellaneous:	Existing circuit 3886 to be split into two new circuits terminating in Fairfield Substation; project located in south-central Butler County, OH

FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Beckjord-Oakley-Summerside DEO-A886
2.	Point of Origin: Terminus:	Tap Feeder 886 Summerside Substation
3.	Right-of-Way, Length: Average width: Number of circuits:	1.8 miles 50 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	7/2013
6.	Construction to Commence: Commercial Operation:	9/2013 6/2015
7.	Capital Investment:	$4,029,830
8.	Substations:	None
9.	Supporting Structures:	Wood and Steel Poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce 138 kV transmission system,
12.	Consequences of Line Construction deferment or Termination:	Inability to supply all 138 kV transmission system load under normal and outage conditions
13.	Miscellaneous:	Area to be served is Western Clermont County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Foster-Warren DEO-A5484
2.	Point of Origin: Terminus:	Tap Feeder 5484 Columbia Substation (proposed)
3.	Right-of-Way, Length: Average Width: Number of Circuits:	Approximately 175 feet 50 feet 1 transmission line above 125 kV
4.	Voltage:	138 kV design and operate voltage
5.	Application for Certificate:	9/2014
6.	Construction: Commercial Operation:	Construction commencement – 3/2015 Anticipated date: 6/2015
7.	Capital Investment:	$30,000
8.	Substations:	Columbia Substation, 138 kV
9.	Supporting Structures:	Wood poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the planned transmission line:	Supply new substation to provide 12.47 kV distribution system capacity.
12.	Consequences of Line Construction deferment or Termination:	Inability to supply 12.47 kV distribution load
13.	Miscellaneous:	Area to be served is primarily west-central Warren County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Foster-Warren DEO-A5484
2.	Point of Origin: Terminus:	Tap Feeder 5484 Columbia Substation (proposed)
3.	Right-of-Way, Length: Average Width: Number of Circuits:	Approximately 175 feet 50 feet 1 transmission line above 125 kV
4.	Voltage:	138 kV design and operate voltage
5.	Application for Certificate:	9/2014
6.	Construction: Commercial Operation:	Construction commencement – 3/2015 Anticipated date: 6/2015
7.	Capital Investment:	$30,000
8.	Substations:	Columbia Substation, 138 kV
9.	Supporting Structures:	Wood poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the planned transmission line:	Supply new substation to provide 12.47 kV distribution system capacity.
12.	Consequences of Line Construction deferment or Termination:	Inability to supply 12.47 kV distribution load
13.	Miscellaneous:	Area to be served is primarily west-central Warren County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Eastwood – Ford Batavia DEO-A8481
2.	Point of Origin: Terminus:	Tap Feeder 8481 (Eastwood side) Curliss Sub (Proposed)
3.	Right-of-Way, Length: Average width: Number of circuits:	0.1 miles 50 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	09/2015
6.	Construction to Commence: Commercial Operation:	01/2016 06/2016
7.	Capital Investment, Estimated Cost:	$58,117
8.	Substations:	Curliss Sub
9.	Supporting Structures:	Wood Poles
10.	Participation with other Utilities:	DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce underlying 69 kV transmission system
12.	Consequences of Line Construction deferment or Termination:	Inability to supply all 69 kV subtransmission system load under normal and outage conditions
13.	Miscellaneous:	Area to be served is central Clermont County, OH

DUKE ENERGY OHIO
4901:5-5-04(D)(1)
FORM FE-T9: SPECIFICATIONS OF PLANNED ELECTRIC TRANSMISSION LINES

1.	Line Name: Line Number:	Eastwood-Ford Batavia DEO-A8481
2.	Point of Origin: Terminus:	Tap Feeder 8481 (Ford-Batavia side) Curliss Sub (Proposed)
3.	Right-of-Way, Length: Average width: Number of circuits:	0.1 miles 50 ft. 1
4.	Voltage:	138 kV
5.	Application for Certificate:	09/2015
6.	Construction to Commence: Commercial Operation:	01/2016 06/2016
8.	Capital Investment, Estimated Cost:	 $58,117
8.	Substations:	Curliss Sub
9.	Supporting Structures:	Wood Poles
10.	Participation with other Utilities:	 DEO – 100%
11.	Purpose of the Planned Transmission Line:	Reinforce underlying 69 kV transmission system
12.	Consequences of Line Construction deferment or termination:	Inability to supply all 69 kV subtransmission system load under normal and outage conditions
13.	Miscellaneous:	Area to be served is central Clermont County, OH

2. A listing of all proposed substations is provided on the following forms FE-T10, Summary of Proposed Substations.

DUKE ENERGY OHIO
4901:5-5-04(D)(2)
FORM FE-T10: SUMMARY OF PROPOSED SUBSTATIONS

Substation Name: Meldahl Dam

Voltage(s): 345 kV

Type of Substation: Transmission (T)

Timing: 2013

Line Association(s): DEO-B4541

Minimum Substation Site Acreage: Approximately 10 acres

DUKE ENERGY OHIO
4901:5-5-04(D)(2)
FORM FE-T10: SUMMARY OF PROPOSED SUBSTATIONS

Substation Name: Columbia

Voltage(s): 138 kV, 12.47 kV

Type of Substation: Distribution (D)

Timing: 2015

Line Association(s): DEO-A5484

Minimum Substation Site Acreage: Approximately 5 acres

DUKE ENERGY OHIO
4901:5-5-04(D)(2)
FORM FE-T10: SUMMARY OF PROPOSED SUBSTATIONS

Substation Name: Curliss Substation

Voltage(s): 138 kV, 69 kV

Type of Substation: Distribution (D)

Timing: 2016

Line Association(s): DEO-A8481

Minimum Substation Site Acreage: Approximately 5 acres

3. Planned Transmission System Maps

   (a) Schematic maps and geographic maps depicting the existing and planned 345 kV and 138 kV transmission networks are considered by Duke Energy Ohio to be critical energy infrastructure information. The maps and diagrams will be provided under seal.

   (b) Rule Requirement - Two copies of the above maps, for Commission use, on a scale of 1:250,000. The electric transmission owners may jointly provide one set of overlays to meet this requirement. Participation in the Commission's joint mapping project will meet this requirement:

   The joint mapping project coordinated by the Ohio Electric Utility Institute has not been accomplished for a number of years to Duke Energy Ohio's knowledge. Duke Energy Ohio can provide a map at the requested scale to the Commission upon request.

E. SUBSTANTIATION OF THE PLANNED TRANSMISSION SYSTEM

1. Graphic plots of the Duke Energy Ohio 138 kV and 345 kV systems that show the MW and MVAR flows and the bus voltages have been prepared. They are considered by Duke Energy Ohio to be critical energy infrastructure information. Plots of 138 kV system and 345 kV system for the 2013 summer base case and the most recently prepared 2018 summer base case plots will be provided separately to Commission staff. The 2013 and 2018 summer base case power flow cases in PSS/E format are included with the Critical Energy Infrastructure Information.

2. Contingency cases - Contingency cases based on the peak load base cases are studied to determine system performance for generation and transmission system outages. The results of such studies are used as bases for the determination of the need for and timing of additions to the transmission

system. Duke Energy Ohio has prepared several power flow outage cases that can be considered representative of the types of outages studied. All cases are based on the 2013 Summer Peak Load Power Flow Base Case. The outage cases, discussion and power flow transcription diagrams are considered by Duke Energy Ohio to be critical energy infrastructure information that will be provided under seal.

3. Analysis of proposed solutions to problems identified in paragraph (E)(2) of this rule: As discussed, a number of contingency cases, predicated on the various base cases, have been studied. These contingency cases include loss of transformer and/or loss of transmission circuit, as well as unscheduled variation of generation dispatch. These contingency cases seek to model system performance under various conditions that are common to electric system operation. The general criteria applied to these studies are that the loss of either a major transformer or transmission circuit should not cause loading on any of the remaining transformers or circuits to exceed their emergency thermal ratings. In addition, double-contingency outages, which include at least one 345 kV system component, should likewise not cause loading on any remaining components to exceed the emergency thermal ratings. Probability of occurrence, availability of mitigating procedures, and other factors are considered when these reliability analyses are performed and evaluated. No problems are expected as a result of the contingencies identified in paragraph (E)-(2) of this rule. Duke Energy Ohio expects all electric components to operate within their limits based on Duke Energy Ohio's planning criteria.

4. Adequacy of the electric transmission owner's transmission system to withstand natural disasters and overload conditions: The contingency cases and reliability analyses described above indicate the performance of the transmission system subsequent to outages, which may be caused by natural disasters. As discussed above, the transmission system is designed to withstand certain outages without causing loading on the remaining system components to exceed emergency thermal load ratings. More severe outages

may cause system components to overload. Such overloads, if not corrected by switching or other actions, may cause loss of life of the overloaded system components. Some outages may be of such a severity that all of the load could not be served. The transmission system could also be segmented to such a degree that all of the load could not be served.

5. Analysis of the electric transmission owner's transmission system to permit power interchange with neighboring systems: The Duke Energy Ohio transmission system is interconnected to AEP, DP&L, Ohio Valley Electric Company (OVEC), and Eastern Kentucky Power Cooperative (EKPC). The ability to accommodate any particular interchange, whether short term or long term is highly dependent on the actual transfer and the conditions under which it would occur. Duke Energy Ohio is a member of the PJM System Operator, as such the allocation of Available Flowgate Capacity (AFC) is the sole responsibility of PJM.

6. Transmission Import and Export Transfer Capability: Duke Energy Ohio is a member of the PJM System Operator, as such the allocation of AFC is the sole responsibility of the PJM.

7. A description of any studies regarding transmission system improvement, including, but not limited to, any studies of the potential for reducing line losses, thermal loading, and low voltage, and for improving access to alternative energy resources: No transmission system studies specifically addressing the above items have been performed. Line losses are considered in the evaluation of alternative projects. Thermal loading and low voltage issues are considered and addressed as a part of the transmission system evaluation and planning process. Accommodation of alternative energy sources requesting connection to the Duke Energy Ohio transmission system are handled by the PJM interconnection procedures.

8. Switching diagrams of the Duke Energy Ohio 138 kV and 345 kV systems are considered by Duke Energy Ohio to be critical energy infrastructure information which will be provided under seal.

F. REGIONAL AND BULK POWER REQUIREMENTS

Information relating to the Reliability First Corporation (RFC, the reliability region of the North American Reliability Corporation in which Duke Energy Ohio and PJM reside) and bulk power requirements are provided to the Commission by RFC on behalf of Duke Energy Ohio and several Ohio electrical utilities.

G. CRITICAL ENERGY INFRASTRUCTURE INFORMATION

As discussed previously, Duke Energy Ohio considers all or portions of the information sought under the rules listed below to be critical energy infrastructure information. This information has been assembled separately and will be provided to the Commission under seal.

4901:5-5-04 (C)(2)(a)	4901:5-5-04 (C)(2)(b)	4901:5-5-04 (C)(2)(c)
4901:5-5-04 (D)(3)(a)	4901:5-5-04 (D)(3)(b)	4901:5-5-04 (E)(1)
4901:5-5-04 (E)(2)	4901:5-5-04 (E)(8)	

SECTION III – ELECTRIC DISTRIBUTION FORECAST

On the following pages, the loads for Duke Energy Ohio are provided.

A. SERVICE AREA ENERGY FORECASTS

The following forms contain the energy forecast for Duke Energy Ohio's service area. Before implementation of any new EE programs or incremental EE impacts, residential use for the ten-year period of the forecast from 2013 to 2023 is expected to increase at a rate of 2.1 percent per year; commercial use increases 1.7 percent per year; and industrial use increases 1.7 percent per year. The summation of the forecast across each sector and including losses results in a growth rate forecast of 1.7 percent for total energy.

The total energy growth rate after EE impacts from 2013 to 2023 is 0.4 percent.

B. SYSTEM SEASONAL PEAK LOAD FORECAST

The following forms also contain the forecast of summer and winter peaks before implementation of EE programs for the Duke Energy Ohio service area. The historical difference between native and internal load before EE reflects the impact of the interruptible rate tariff and other demand response programs.

The table shows the Summer and succeeding Winter Peaks, the Summer Peaks being the predominant ones historically. Projected growth in the internal summer peak demand is 1.7 percent. Projected growth in the internal winter peak demand is 1.6 percent per year.

Peak load forecasts after implementation of EE programs are shown for native and internal loads after EE. The projected growth in the internal summer peak is 0.5 percent.

C. CONTROLLABLE LOADS

The native peak load forecast reflects the MW impacts from the PowerShare® demand response program and controllable loads from the Power Manager program. The amount of load controlled depends upon the level of operation of the particular customers participating in the programs. The difference between the internal and native peak loads consists of the impact from these loads. See Section I, part E in Duke Energy Ohio's Long-Term Forecast Report and Resource Plan for a complete discussion of controllable and other demand response programs.

PUCO Form FE-D1 : EDU Service Area Energy Delivery Forecast
(Megawatt Hours/Year) (a)
Duke Energy Ohio (d)

		1	2	3	4	5(a)	5(b)	6	7	8
	Year	Residential	Commercial	Industrial	Transportation (b)	Other (c)	Energy Efficiency & Demand Response (e)	Total End Use Delivery (f)	Line Losses and Company Use	Total Energy
								1+2+3+4+5(a)-5(b)		6+7
-5	2008	7,405,275	6,486,706	5,442,127		1,713,026		21,047,135	1,393,162	22,440,297
-4	2009	7,050,776	6,281,633	4,720,539		1,611,326		19,664,274	1,312,323	20,976,597
-3	2010	7,623,889	6,585,663	5,118,277		1,494,709		20,822,537	1,723,285	22,545,823
-2	2011	7,377,474	6,516,096	4,941,843		1,477,855		20,313,268	2,314,497	22,627,765
-1	2012	7,140,194	6,338,963	4,983,947		1,395,918		19,859,022	2,626,509	22,485,530
0	2013	7,242,116	6,373,584	4,991,300		1,413,052	93,272	19,926,780	1,437,961	21,364,741
1	2014	7,341,821	6,500,869	5,139,348		1,426,534	289,262	20,119,310	1,452,605	21,571,915
2	2015	7,496,963	6,590,373	5,239,959		1,427,995	493,389	20,261,901	1,461,237	21,723,137
3	2016	7,681,415	6,719,749	5,384,024		1,431,818	696,920	20,520,086	1,477,960	21,998,046
4	2017	7,852,318	6,904,405	5,469,484		1,438,303	901,797	20,762,713	1,493,949	22,256,662
5	2018	8,032,415	7,079,795	5,539,470		1,452,178	1,108,539	20,995,319	1,511,464	22,506,783
6	2019	8,200,427	7,306,924	5,618,464		1,467,959	1,421,769	21,172,005	1,523,228	22,695,234
7	2020	8,377,160	7,388,442	5,701,146		1,488,080	1,843,660	21,111,167	1,517,785	22,628,952
8	2021	8,587,479	7,466,944	5,776,339		1,502,838	2,269,425	21,064,175	1,513,150	22,577,326
9	2022	8,753,877	7,556,683	5,852,547		1,518,005	2,694,078	20,987,034	1,506,078	22,493,111
10	2023	8,925,025	7,648,462	5,920,422		1,531,673	3,116,048	20,909,534	1,498,994	22,408,528

(a) To be filled out by all EDUs. The category breakdown should refer to the Ohio portion of the EDU's total service area.
(b) Transportation includes railroads & railways.
(c) Other includes street & highway lighting, public authorities, interdepartmental sales, and wholesale
(d) Historical class numbers include the impact of DSM programs in place at the time. Forecast numbers have not been reduced for energy efficiency impacts.
(e) Historical numbers represent incremental impacts of energy efficiency programs. Forecast numbers represent cumulative impacts.
(f) Historical numbers include the impact of DSM programs in place at the time. Forecast numbers include losses.

PUCO Form FE-D1 : EDU Service Area Energy Delivery Forecast
(Megawatt Hours/Year) (a)
Duke Energy Ohio After DSM (d)

		1	2	3	4	5	6	7	8
	Year	Residential	Commercial	Industrial	Transportation (b)	Other (c)	Total End Use Delivery	Line Losses and Company Use	Total Energy
							1+2+3+4+5		6+7
-5	2008	7,405,275	6,486,706	5,442,127	-	1,713,026	21,047,135	1,393,162	22,440,297
-4	2009	7,050,776	6,281,633	4,720,539	-	1,611,326	19,664,274	1,312,323	20,976,597
-3	2010	7,623,889	6,585,663	5,118,277	-	1,494,709	20,822,537	1,723,285	22,545,823
-2	2011	7,377,474	6,516,096	4,941,843	-	1,477,855	20,313,268	2,314,497	22,627,765
-1	2012	7,140,194	6,338,963	4,983,947	-	1,395,918	19,859,022	2,640,751	22,499,773
0	2013	7,206,651	6,341,864	4,967,001	-	1,406,479	19,921,995	1,437,961	21,359,956
1	2014	7,232,622	6,403,162	5,063,443	-	1,405,244	20,104,471	1,452,605	21,557,076
2	2015	7,314,818	6,422,333	5,108,214	-	1,391,225	20,236,590	1,461,237	21,697,827
3	2016	7,430,376	6,479,673	5,194,705	-	1,379,580	20,484,334	1,477,960	21,962,294
4	2017	7,532,493	6,587,649	5,225,346	-	1,370,962	20,716,450	1,493,949	22,210,400
5	2018	7,642,938	6,682,404	5,242,640	-	1,370,469	20,938,451	1,511,464	22,449,915
6	2019	7,704,204	6,789,145	5,241,265	-	1,364,453	21,099,069	1,523,228	22,622,297
7	2020	7,736,539	6,716,749	5,209,900	-	1,353,399	21,016,588	1,517,785	22,534,372
8	2021	7,801,424	6,639,970	5,169,467	-	1,336,893	20,947,754	1,513,150	22,460,904
9	2022	7,823,191	6,574,244	5,130,302	-	1,321,091	20,848,828	1,506,078	22,354,905
10	2023	7,850,967	6,510,558	5,083,971	-	1,304,185	20,749,681	1,498,994	22,248,675

(a) To be filled out by all EDUs. The category breakdown should refer to the Ohio portion of the EDU's total service area.
(b) Transportation includes railroads & railways.
(c) Other includes street & highway lighting, public authorities, interdepartmental sales, and wholesale
(d) Historical numbers include the impact of DSM programs in place at the time.

PUCO Form FE-D3 : EDU System Seasonal Peak Load Demand Forecast (c)

(Megawatts)(a)

Duke Energy Ohio Before DSM

		Native				Internal			
	Year	Summer	Demand Response	Net Summer	Winter (b)	Summer	Demand Response	Net Summer	Winter (b)
-5	2008	4,230	0	4,230	3,626	4,230	0	4,230	3,626
-4	2009	3,994	0	3,994	3,316	3,994	0	3,994	3,316
-3	2010	4,388	0	4,388	3,428	4,414	26	4,388	3,428
-2	2011	4,514	0	4,514	3,182	4,534	20	4,514	3,182
-1	2012	4,412	0	4,412	3,329	4,458	47	4,412	3,329
0	2013	4,078	0	4,078	3,377	4,296	218	4,078	3,548
1	2014	4,201	0	4,201	3,460	4,403	202	4,201	3,611
2	2015	4,381	0	4,381	3,655	4,481	100	4,381	3,694
3	2016	4,457	0	4,457	3,751	4,572	114	4,457	3,791
4	2017	4,529	0	4,529	3,837	4,657	127	4,529	3,878
5	2018	4,620	0	4,620	3,914	4,758	138	4,620	3,954
6	2019	4,712	0	4,712	3,956	4,850	138	4,712	3,996
7	2020	4,765	0	4,765	4,005	4,903	138	4,765	4,045
8	2021	4,828	0	4,828	4,056	4,966	138	4,828	4,097
9	2022	4,883	0	4,883	4,107	5,022	138	4,883	4,148
10	2023	4,939	0	4,939	4,156	5,077	138	4,939	4,196

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area.
(b) Winter load reference is to peak loads which follow the summer peak load.
(c) Historical company peaks not necessarily coincident with the system peak.
(d) Figures reflect the impact of historical demand side programs.

PUCO Form FE-D3 : EDU System Seasonal Peak Load Demand Forecast

(Megawatts)(a)

Duke Energy Ohio After DSM

		Native (b)(c)				Internal (b)(c)			
	Year	Summer	*Demand* Response	Net Summer	Winter (b)	Summer	Demand Response	Net Summer	Winter (b)
-5	2008	4,230	0	4,230	3,626	4,230	0	4,230	3,626
-4	2009	3,994	0	3,994	3,316	3,994	0	3,994	3,316
-3	2010	4,388	0	4,388	3,428	4,414	26	4,388	3,428
-2	2011	4,514	0	4,514	3,182	4,534	20	4,514	3,182
-1	2012	4,412	0	4,412	3,329	4,458	47	4,412	3,329
0	2013	4,057	0	4,057	3,355	4,275	218	4,057	3,526
1	2014	4,140	0	4,140	3,416	4,341	202	4,140	3,567
2	2015	4,277	0	4,277	3,477	4,377	100	4,277	3,628
3	2016	4,312	0	4,312	3,664	4,427	114	4,312	3,703
4	2017	4,343	0	4,343	3,720	4,470	127	4,343	3,758
5	2018	4,397	0	4,397	3,762	4,535	138	4,397	3,801
6	2019	4,425	0	4,425	3,759	4,564	138	4,425	3,799
7	2020	4,397	0	4,397	3,761	4,535	138	4,397	3,802
8	2021	4,383	0	4,383	3,768	4,521	138	4,383	3,808
9	2022	4,358	0	4,358	3,773	4,496	138	4,358	3,814
10	2023	4,335	0	4,335	3,778	4,473	138	4,335	3,819

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area.

(b) Winter load reference is to peak loads which follow the summer peak load.

(c) Includes DSM impacts.

PUCO Form FE-D5: EDU's Total Monthly Energy Forecast (MWh)
Duke Energy Ohio Before DSM

2013 (d)				Ohio Service Area	System
January				1,976,337	1,976,337
February				1,826,758	1,826,758
March				1,723,932	1,723,932
April				1,595,759	1,595,759
May				1,554,992	1,554,992
June				1,853,274	1,853,274
July				2,050,499	2,050,499
August				2,063,062	2,063,062
September				1,908,822	1,908,822
October				1,587,980	1,587,980
November				1,529,722	1,529,722
December				1,790,534	1,790,534
2014 (d)					
January				1,991,336	1,991,336
February				1,824,761	1,824,761
March				1,748,689	1,748,689
April				1,626,227	1,626,227
May				1,594,198	1,594,198
June				1,892,789	1,892,789
July				2,101,975	2,101,975
August				2,119,971	2,119,971
September				1,959,121	1,959,121
October				1,617,785	1,617,785
November				1,552,605	1,552,605
December				1,835,380	1,835,380

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area in this column.
(b) EDUs operating across Ohio boundaries shall provide data for the total service area in this column.
(c) EDUs operating as a part of an integrated operating system shall provide data for the total system in this column.
(d) All data shown is a forecast. There is no actual data shown on this table.

PUCO Form FE-D5: EDU's Total Monthly Energy Forecast (MWh)
Duke Energy Ohio After DSM (e)

2013 (d)				Ohio Service Area	System
January				1,974,877	1,974,877
February				1,824,207	1,824,207
March				1,720,181	1,720,181
April				1,592,491	1,592,491
May				1,548,707	1,548,707
June				1,844,829	1,844,829
July				2,039,841	2,039,841
August				2,051,157	2,051,157
September				1,897,294	1,897,294
October				1,579,573	1,579,573
November				1,516,504	1,516,504
December				1,773,954	1,773,954
2014 (d)					
January				1,970,669	1,970,669
February				1,805,336	1,805,336
March				1,728,276	1,728,276
April				1,611,899	1,611,899
May				1,570,927	1,570,927
June				1,865,275	1,865,275
July				2,070,578	2,070,578
August				2,087,678	2,087,678
September				1,929,923	1,929,923
October				1,597,713	1,597,713
November				1,522,774	1,522,774
December				1,799,685	1,799,685

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area in this column.
(b) EDUs operating across Ohio boundaries shall provide data for the total service area in this column.
(c) EDUs operating as a part of an integrated operating system shall provide data for the total system in this column.
(d) All data shown is a forecast. There is no actual data shown on this table.
(e) Includes DSM impacts.

PUCO Form FE-D6: EDU's Monthly Internal Peak Load Forecast (Megawatts)
Duke Energy Ohio Before DSM

	Native				Internal	
2013 (d)	Ohio Service Area	Demand Response	Net Summer	System	Ohio Service Area	System
January	3,478	177	3,301	3,301	3,478	3,478
February	3,331	177	3,154	3,154	3,331	3,331
March	3,141	177	2,964	2,964	3,141	3,141
April	2,881	177	2,703	2,703	2,881	2,881
May	3,550	225	3,325	3,325	3,550	3,550
June	4,175	218	3,957	3,957	4,175	4,175
July	4,296	218	4,078	4,078	4,296	4,296
August	4,296	218	4,078	4,078	4,296	4,296
September	3,810	218	3,592	3,592	3,810	3,810
October	2,978	171	2,808	2,808	2,978	2,978
November	3,062	171	2,891	2,891	3,062	3,062
December	3,430	171	3,259	3,259	3,430	3,430
2014 (d)						
January	3,548	171	3,377	3,548	3,548	3,548
February	3,389	171	3,219	3,389	3,389	3,389
March	3,203	171	3,033	3,203	3,203	3,203
April	2,937	171	2,766	2,937	2,937	2,937
May	3,637	223	3,415	3,637	3,637	3,637
June	4,279	203	4,076	4,279	4,279	4,279
July	4,403	203	4,200	4,403	4,403	4,403
August	4,403	203	4,200	4,403	4,403	4,403
September	3,905	203	3,702	3,905	3,905	3,905
October	3,052	151	2,901	3,052	3,052	3,052
November	3,116	151	2,965	3,116	3,116	3,116
December	3,491	151	3,340	3,491	3,491	3,491

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area in this column.
(b) EDUs operating across Ohio boundaries shall provide data for the total service area in this column.
(c) EDUs operating as a part of an integrated operating system shall provide data for the total system in this column.
(d) All data shown is a forecast. There is no actual data shown on this table.

PUCO Form FE-D6: EDU's Monthly Internal Peak Load Forecast (Megawatts) (e)

Duke Energy Ohio After DSM (e)

	Native				Internal	
2013 (d)	Ohio Service Area	Demand Response	Net Summer	System	Ohio Service Area	System
January	3,477	177	3,300	3,477	3,477	3,477
February	3,326	177	3,149	3,326	3,326	3,326
March	3,134	177	2,956	3,134	3,134	3,134
April	2,873	177	2,696	2,873	2,873	2,873
May	3,538	225	3,313	3,538	3,538	3,538
June	4,158	218	3,940	4,158	4,158	4,158
July	4,275	218	4,057	4,275	4,275	4,275
August	4,273	218	4,055	4,273	4,273	4,273
September	3,787	218	3,569	3,787	3,787	3,787
October	2,961	171	2,790	2,961	2,961	2,961
November	3,043	171	2,873	3,043	3,043	3,043
December	3,412	171	3,241	3,412	3,412	3,412
2014 (d)						
January	3,526	171	3,355	3,526	3,526	3,526
February	3,366	171	3,195	3,366	3,366	3,366
March	3,165	171	2,994	3,165	3,165	3,165
April	2,906	171	2,735	2,906	2,906	2,906
May	3,593	223	3,370	3,593	3,593	3,593
June	4,224	203	4,020	4,224	4,224	4,224
July	4,341	203	4,139	4,341	4,341	4,341
August	4,340	203	4,137	4,340	4,340	4,340
September	3,847	203	3,644	3,847	3,847	3,847
October	3,011	151	2,860	3,011	3,011	3,011
November	3,073	151	2,922	3,073	3,073	3,073
December	3,452	151	3,301	3,452	3,452	3,452

(a) To be filled out by all EDUs. Data should refer to the Ohio portion of the EDU's total service area in this column.

(b) EDUs operating across Ohio boundaries shall provide data for the total service area in this column.

(c) EDUs operating as a part of an integrated operating system shall provide data for the total system in this column.

(d) All data shown is a forecast. There is no actual data shown on this table.

(e) Includes DSM impacts.

D. LOAD FACTOR

The numbers below represent the annual percentage load factor for the Duke Energy Ohio System before any new or incremental EE. It shows the relationship between Total Energy and the annual internal Summer Peak, before EE.

Year	Load Factor
2008	60.56%
2009	59.95%
2010	58.31%
2011	56.98%
2012	57.61%
2013	57.04%
2014	56.68%
2015	56.59%
2016	56.64%
2017	56.73%
2018	56.51%
2019	56.59%
2020	56.73%
2021	56.72%
2022	56.75%
2023	56.78%

E. SUBSTANTIATION OF THE PLANNED DISTRIBUTION SYSTEM

1. Load flow or other system analysis by voltage class of the electric distribution utility's distribution system performance in Ohio, that identifies and considers each of the following:

(a) Any thermal overloading of distribution circuits and equipment; and

(b) Any voltage variations on distribution circuits that do not comply with the current version of American National Standard Institute (ANSI) C84.1, electric power systems and equipment and equipment voltage ratings or standard as later amended.

The Duke Energy Ohio distribution system includes systems that operate at nominal voltages of 4.16 kV, 12.47 kV, 13.2 kV, 34.5 kV and 69 kV. Planning for the 4.16 kV, 12.47 kV and 34.5 kV systems utilizes a combination of peak load power flow analysis and projections of the expected future peak loads on the various system components. The load projections are based on historical loads, general load growth trends within defined load areas, and known proposed loads. The projected future loads are then compared to the assigned capacity of the components to determine if and when any components are expected to experience peak loading in excess of their assigned capacities. System reinforcement projects are then identified and planned for completion prior to the projected time that the components would be overloaded without relief. This process is repeated on an annual basis, adjusting project schedules as required due to differences between actual load growth and projected load growth and any other pertinent factors.

The distribution capacity planning process addresses voltage variation in planning for the Duke Energy 4.16 kV, 12.47 kV, 13.2 kV and 34.5 kV systems by incorporating design parameters intended to maintain the voltage at all the customer service points within ANSI C84.1 standards. These design parameters include the following:

a. Application of automatic voltage regulation at the feeder source within substations;

b. Application of capacitor banks both within substations and distributed on the distribution feeders; and

c. Utilization of adequately sized conductor and distribution transformers

Any voltage concerns identified by customer notification or system monitoring are addressed by ensuring that the above design parameters are adhered to.

2. Analysis and consideration of proposed solutions to problems identified in paragraph (C)(1) of this rule.

As of the date of preparation of this report, the following major projects are planned to insure that adequate thermal capacity will exist on the Duke Energy 4.16 kV, 12.47 kV, 13.2 kV and 34.5 kV distribution systems:

<u>2013</u>

Green Secondary Network Improvements – Add transformers and conductors to relieve projected overloading to parts of downtown Cincinnati service area.

<u>2014</u>

Canal Substation – Install a 22.4 MVA, 69-12.47 kV transformer and associated equipment in a new Duke Energy substation to serve expected increased demand in the vicinity of Hamilton, Ohio area.

Rybolt Substation – Install a 22.4 MVA, 69-12.47 kV transformer and associated equipment at an existing Duke Energy Ohio Substation to serve expected increased demand in the area and relieve existing area circuits.

<u>2015</u>

Columbia Substation – Install a 22.4 MVA, 138-12.47 kV transformer and associated equipment at a new Duke Energy Ohio substation to serve projected area loading and relieve existing circuits in the area.

Brown Substation – Install a 22.4 MVA, 138-12.47 kV transformer and associated equipment at an existing Duke Energy Ohio substation to serve projected winter heating demand in southeastern Brown County.

Distribution capacity projects are typically not planned beyond a three-to-four year time horizon, due to the variability in area load growth patterns and the ability to react fairly quickly in the implementation of capacity projects. Smaller-scale projects to upgrade or establish distribution feeder routes to serve new load and/or allow loads to be served by existing substation capacity are typically planned and implemented in shorter time-frames as required by actual load development.

3. Adequacy of the electric utility distribution system to withstand natural disasters and overload conditions.

The Duke Energy Ohio distribution system is designed to withstand certain wind loading, ice loading, and other structural issues by recognized national standards. Natural disasters that exceed these conditions may result in damage to the distribution system and the inability to serve all customers. Duke Energy Ohio has an Emergency Plan that calls for the mobilization of personnel and resources as required by the severity of a given incident, including mutual assistance from other utilities.

The goal of the Duke Energy Ohio planning process is to ensure that components are not loaded beyond their assigned ratings under normal system conditions to meet expected load. However, under outage or other abnormal conditions, Duke Energy Ohio recognizes that it may be necessary to load components beyond the ratings assigned for normal use. Certain components, such as transformers, regulators, and cables, have identifiable overload capabilities that are either allowable for intermittent use during the life of the component or can be mitigated after the overload by maintenance activities. Duke Energy Ohio will utilize such capacity when necessary and feasible to carry load if the alternative is to not serve the load. Certain other system components, such as overhead lines, do not have significant overload capacity due the necessity of maintaining adequate electrical clearance.

4. Analysis and consideration of any studies regarding distribution system improvement, including, but not limited to, any studies of the potential for reducing line losses, thermal loading and low voltage or any other problems, and for improving access to alternative resources.

The analytical process intended to alleviate thermal loading and low voltage conditions on the Duke Energy Ohio distribution system is described in response to O.A.C. 4901:5-5-04(C)(1)(a) and (b). No general improvement studies or studies related solely to the reduction of line losses are performed. No studies specifically related to improving access to alternative energy sources have been performed.

5. A switching diagram of circuits less than one hundred twenty-five kV that are not radial.

All Duke Energy Ohio 4.16 kV, 12.47 kV, 13.2 kV and 34.5 kV circuits are operated in a radial mode. A number of 69 kV circuits operate in non-radial mode. The switching diagram of the Duke Energy Ohio 69 kV system is considered by Duke Energy Ohio to be critical energy infrastructure information. This diagram will be provided separately to Commission staff with the 138 kV and 345 kV switching diagrams requested under 4901:5-5-04 (E)(8). The non-radial operated circuits are indicated on this diagram.

SECTION IV - DUKE ENERGY OHIO 2013 RESOURCE PLAN

A. OVERVIEW

Duke Energy Ohio is currently providing competitive retail electric service pursuant to an Electric Security Plan (ESP) that was approved by the Commission on November 22, 2011. The ESP, which has a term of January 1, 2012, through May 31, 2015, incorporates a competitive bidding process (CBP) for the procurement of all of the competitive retail supply necessary to serve Duke Energy Ohio's standard service offer (SSO) customers. Consistent with its ESP, Duke Energy Ohio has conducted four competitive procurements, or auctions. These auctions were held in December 2011, May and November 2012, and May 2013. A fifth auction will be conducted in November 2013. The Commission has approved the results of each of the auctions held to date.

Under the CBP plan, Duke Energy Ohio is procuring full requirements supply for its retail SSO load for the term of its current ESP. Further, in approving the Company's ESP, the Commission has authorized the continued use of a CBP in the next SSO to be offered by Duke Energy Ohio.

As a result of the current ESP, Duke Energy Ohio does not need to plan for the energy needs of its SSO customers. Rather, the energy requirements for the Company's SSO customers are met via the CBP plan, by those auction suppliers winning tranches in the various auctions.

For the period January 1, 2012, through May 31, 2015, Duke Energy Ohio is a fixed resource requirement (FRR) entity in PJM Interconnection, LLC. As an FRR entity, Duke Energy Ohio must self-supply all capacity resources for its footprint.

B. LONG-TERM RESOURCE PLAN

Based upon the ESP under which Duke Energy Ohio is now operating, the 2013 Long-Term Resource Plan, like the one for 2012, is substantially different than the filings for 2011 and prior years. Significant changes and regulatory requirements associated with the 2013 Long-Term Forecast Report (LTFR) are discussed below.

1. **Electric Security Plan:** As previously discussed, the ESP approved in November 2011 is the platform under which Duke Energy Ohio is now operating. The ESP establishes the

manner in which Duke Energy Ohio provides a SSO of all competitive retail electric service. The full requirements supply for SSO customers is being procured through wholesale auctions.

2. **Transmission:** As of January 1, 2012, Duke Energy Ohio is operating within PJM regional transmission organization.

3. **Load Forecast:** A detailed discussion on the load forecast and required information is provided in Section I of this document. The 2013 load forecast for Duke Energy Ohio is higher due mainly to lower projected retail rates, driven by a decline in gas prices as compared to the 2012 forecast. Other factors contributing to a higher sales projection include a revised outlook for the number of residential customers and personal income.

4. **Resource Planning:** As previously noted, Duke Energy Ohio provides the supply for its SSO of competitive retail electric service by means of auctions. Furthermore, pursuant to the ESP, the assets previously owned by Duke Energy Ohio will be transferred to an affiliate by December 31, 2014. Duke Energy Ohio has no present plans to build new resources to meet the needs of customers, but instead is relying on the competitive procurements for SSO supply described above.

5. **Energy Efficiency and Demand Side Management:** Duke Energy Ohio plans to meet EE and peak load reduction goals mandated in R.C. 4928.66 over the next ten years with considerations for full implementation by 2025, as discussed in Section I.E of this document. The IVVC project also contributes to this goal via a 1 percent reduction of energy and demand as discussed in Section I.E.

6. **Alternative Energy Requirements:** R.C. 4928.64 establishes a 25 percent alternative energy portfolio standard (AEPS) that must be met by 2025. At least one-half of the AEPS must be satisfied by renewable energy resources. The renewable requirement also includes a specific "set-aside" for solar energy resources. Compliance with annual R.C. 4928.64 renewable energy benchmarks may be achieved through either the self-generation or purchase of renewable energy certificates (RECs). As defined in O.A.C. 4901:1-40-01(BB), a REC is measured as the environmental attributes associated with one megawatt-hour of electricity generated by a renewable energy resource. Duke Energy Ohio's AER requirement is determined by the amount of energy sold to SSO customers, or the non-

shopping customer load. Customer switching patterns have fluctuated significantly in recent years and remain uncertain going forward. As such, Duke Energy Ohio's renewable compliance strategy is one that recognizes that its future compliance obligations are subject to change based on future customer switching patterns, as well as other factors. The current renewable strategy addresses the uncertainty of customer switching patterns by securing RECs primarily through short-term purchases. Duke Energy Ohio's strategy has been successful to date, although the Company recognizes that efforts other than short-term REC purchases may be needed in order to ensure compliance as renewable requirements increase over time. The Company will make adjustments to its strategy, as necessary.

7. **Existing Resources and Anticipated Changes:** All capacity from Duke Energy Ohio's directly owned and existing generation resources is committed to fulfilling its obligations, in PJM, as an FRR entity. For this reason, Commission Forms FE-R1 through FE-R10 referencing generating capability and future resource additions are not applicable in this resource plan and are not included with this LTFR.

C. ENVIRONMENTAL REGULATIONS

Numerous state and federal regulations impact the generation resources that make up the PJM energy and capacity markets. In addition to current programs and regulatory requirements, several new regulations are in various stages of implementation and development. Each of these regulations is addressed below.

1. **Clean Air Interstate Rule and the Cross-State Air Pollution Rule:** The EPA finalized its Clean Air Interstate Rule (CAIR) in May 2005. The CAIR limits total annual and summertime NOX emissions and annual SO2 emissions from electric generating facilities across the Eastern U.S. through a two-phased cap-and-trade program. In December 2008, the United States District Court for the District of Columbia issued a decision remanding CAIR to the EPA, allowing CAIR to remain in effect as an interim solution until the EPA developed new regulations.

   In August 2011, a replacement for CAIR was finalized as the Cross-State Air Pollution Rule (CSAPR), however, on December 30, 2011 the CSAPR was stayed by the U.S. Court of Appeals for the D.C. Circuit. Numerous petitions for review of the CSAPR were filed with the D.C. Circuit Court. On August 21, 2012, by a 2-1 decision, the D.C. Circuit vacated the CSAPR. The Court also directed the EPA to continue administering the CAIR that Duke Energy Ohio has been complying with since 2009 pending completion of a remand rulemaking to replace CSAPR with a valid rule. CAIR requires additional Phase II reductions in SO_2 and NO_X emissions beginning in 2015. The court's decision to vacate the CSAPR leaves the future of the rule uncertain. The EPA filed a petition with the D.C. Circuit for en banc rehearing of the CSAPR decision, which the court denied. The EPA then filed a petition with the Supreme Court asking that it review the D.C. Circuit's decision. The Supreme Court has not yet ruled on the petition. If the D.C. Circuit's August 21, 2012 decision is upheld, the CAIR will remain in force for an unknown period of time until the EPA develops a replacement rule. If the decision is overturned on potential review by the Supreme Court, it is not known when the EPA would move to implement the CSAPR.

Duke Energy Ohio cannot predict the outcome of the rehearing process or how it could affect future emission reduction requirements that might apply as a result of a potential CSAPR replacement rulemaking. It is likely to take beyond 2015 for a replacement rulemaking which means that Phase II of CAIR would take effect on January 1, 2015. Until that time, CAIR Phase I is in place. Little to no risk for compliance with CAIR Phase I or Phase II exists, as such, no additional controls are planned.

2. Mercury and Air Toxics Standard (MATS): In February 2008, the United States Court of Appeals for the District of Columbia issued its opinion, vacating the Clean Air Mercury Rule (CAMR). The EPA announced a proposed Utility Boiler Maximum Achievable Control Technology (MACT) rule in March 2011 to replace the CAMR. The EPA published the final rule, known as the Mercury and Air Toxics Standard (MATS), in the Federal Register on February 16, 2012. MATS regulates Hazardous Air Pollutants (HAP) and establishes unit-level emission limits for mercury, acid gases, and non-mercury metals, and sets work practice standards for organics for coal and oil-fired electric generating units. Compliance with the emission limits will be required by April 16, 2015. Permitting authorities have the discretion to grant up to a one-year compliance extension, on a case-by-case basis, to sources that are unable to install emission controls before the compliance deadline. The one-year extension to meet compliance is not to be granted for units set to retire, unless the retirement would create reliability problems.

Numerous petitions for review of the final MATS rule have been filed with the United States Court of Appeals for the District of Columbia. Briefing in the case has been completed. Oral arguments have not been scheduled. A court decision in the case could come in late 2013 or early 2014. Duke Energy Ohio cannot predict the outcome of the litigation or how it might affect the MATS requirements as they apply to operations.

Because of the emission limits and other requirements in the MATS rule, the accelerated retirement of certain coal-fired generation is possible.

3. National Ambient Air Quality Standards (NAAQS)

a. 8-Hour Ozone Standard

In March 2008, the EPA revised the 8-Hour Ozone Standard by lowering it from 84 to 75 parts per billion (ppb). In September of 2009, the EPA announced a decision to reconsider the 75 ppb standard in response to a court challenge from environmental groups and their own belief that a lower standard was justified. However, the EPA announced in September 2011 that it would retain the 75 ppb primary standard until it is reconsidered under the next five-year review, which is expected to be proposed in late 2013 and finalized in late 2014 (possibly in the 60 to 70 ppb range). The earliest attainment date for a standard revised in 2014 could be 2019, and would depend on a nonattainment area's classification.

On May 21, 2012 the EPA finalized the area designations for the 2008 75 ppb 8-hour ozone standard. The Cincinnati area is now classified as a "marginal" nonattainment area, which establishes December 31, 2015 as its attainment date. For marginal nonattainment areas, states are not required to prepare an attainment demonstration. The EPA in its final rule states that it performed an analysis that indicates that the majority of areas classified as marginal will be able to attain the 75 ppb standard in 2015 due to federal and state emission reduction programs already in place. If the Cincinnati area's air quality does not qualify it to be reclassified as attainment, the area can still qualify for the first of two possible one-year extensions of the attainment date if it has no more than one exceedance of the standard in 2015. Alternatively, should the Cincinnati area not attain the standard by its attainment date and thus not qualify for an extension, it could be bumped up to the next higher classification. For Cincinnati, this would be moderate, which would then establish a six-year attainment schedule and require Ohio to develop an attainment SIP.

The EPA is also preparing a proposed rule that will address implementation issues for the 2008 standard, including policies on Reasonably Available Control Technology which might provide additional information regarding the Agency's expectations for marginal nonattainment areas between now and 2015. It is not known when the EPA will propose or finalize the rule.

b. SO_2 Standard

On June 22, 2010 the EPA established a 75 ppb 1-hour SO_2 NAAQS and revoked the annual and 24-hour SO_2 standards. The EPA plans to make final area designations for the 75 ppb standard in June 2013. Based on the EPA's preliminary final designations, the only designated nonattainment area impacting Duke Energy Ohio is near its Beckjord station.

On February 6, 2013, the EPA released a document that updates its strategy for addressing all areas that it will not be designating as nonattainment areas in June 2013. The document indicated that the EPA will allow states to use modeling or monitoring to evaluate the impact of large SO_2 emitting sources relative to the 75 ppb standard. The document also laid out a schedule for implementing the standard.

The EPA plans on undertaking notice and comment rulemaking to codify the implementation requirements for the 75 ppb standard. The outcome of that rulemaking, which the EPA currently intends to complete in late 2014, could be different from what the EPA put forth in its February 6, 2013 document.

4. Global Climate Change: The EPA has been active in the regulation of greenhouse gases (GHGs). In May 2010, the EPA finalized what is commonly referred to as the Tailoring Rule. This rule sets the emission thresholds to 75,000 tons/year of CO_2 for determining when a source is potentially subject to Prevention of Significant Deterioration (PSD) permitting for greenhouse gases. The Tailoring Rule went into effect beginning January 2, 2011. Being subject to PSD permitting requirements for CO_2 will require a Best Available Control Technology (BACT) analysis and the application of BACT for GHGs. BACT will be determined by the state permitting authority. Since it is not known if, or when, a Duke Energy Ohio generating unit might undertake a modification that triggers PSD permitting requirements for GHGs and exactly what might constitute BACT, the potential implications of this regulatory requirement are unknown. Also, beginning July 2011, the EPA deferred, for a period of three years, application of the PSD and Title V permitting requirements to CO_2 emissions from bioenergy stationary sources. The EPA will use this time to evaluate these sources to determine PSD applicability and its carbon position relative to biomass use.

On April 13, 2012, a proposed rule to establish GHG new source performance standards (NSPS) for new electric utility steam generating units (EGUs) was published in the Federal Register. The proposed GHG NSPS applies only to new pulverized coal, IGCC and natural gas combined cycle units. The proposed NSPS is an output-based emission standard of 1,000 lb CO_2/gross MWh of electricity generation. Any future pulverized coal and IGCC units will have to employ carbon capture and storage (CCS) technology to meet the CO_2 emission standard the EPA has proposed. The proposed standard will not require new natural gas combined cycle facilities to install CCS technology. It is not known when the EPA will finalize the proposal. It has been rumored that the EPA might re-propose the rule for the purpose of setting separate emission limits for gas-fired and coal-fired units. If the EPA does this it will likely push the date for a final rule into 2014.

The EPA is expected to propose GHG emission guidelines for existing EGUs that do not undergo a modification at some point. It could be 2014 before the EPA issues a proposal. Once the EPA finalizes emission guidelines for existing sources, the states will be required to develop the regulations that will apply to covered sources, based on the emission performance standards established by the EPA in its guidelines.

It is highly unlikely that legislation mandating reductions in GHG emissions or establishing a carbon tax will be passed by the 113th Congress which began on January 3,

2013. Beyond 2014 the prospects for enactment of any federal legislation mandating reductions in GHG emissions or establishing a carbon tax are highly uncertain.

5. Water Quality

a. CWA 316(b) Cooling Water Intake Structures

Federal regulations in Section 316(b) of the Clean Water Act may necessitate cooling water intake modifications for existing facilities to minimize impingement and entrainment of aquatic organisms. The EPA published its proposed rule on April 20, 2011.

The proposed rule establishes mortality reduction requirements due to both fish impingement and entrainment and advances one preferred approach and three alternatives. The EPA's preferred approach establishes aquatic protection requirements and new on-site facility additions for existing facilities with a design intake flow of 2 million gallons per day (mgd) or more from rivers, streams, lakes, reservoirs, estuaries, oceans, or other U.S. waters that utilize at least 25 percent of the water withdrawn for cooling purposes.

The current EPA settlement agreement calls for the EPA to finalize the 316(b) rule in June 2013. If the rule is finalized as proposed, initial submittals, station details, study plans, etc, for some facilities would be due in the March/April 2014 timeframe. If required, modifications to the intakes to comply with the impingement requirements could be required as early as mid to late 2016. Within the proposed rule, the EPA did not provide a compliance deadline for meeting the entrainment requirements.

b. Steam Electric Effluent Limitation Guidelines

In September 2009, the EPA announced plans to revise the steam electric effluent limitation guidelines. The steam electric effluent limitation guidelines are to be technology-based, in that limits are based on the capability of the best technology available. The primary focus of the revised regulation is on coal-fired generation, thus the major areas likely to be impacted are FGD wastewater treatment systems and ash handling systems. The EPA may set limits that dictate certain FGD wastewater treatment technologies for the industry and may require the installation of dry fly ash handling systems. The EPA announced the proposed guidelines on April 19, 2013, and final guidelines are expected by May 2014. After the final rulemaking, effluent limitation guideline requirements will be included in a station's National Pollutant Discharge Elimination System (NPDES) permit renewals. Thus, requirements to comply with NPDES permit conditions may begin as early as 2017 for some facilities. The deadline to comply will depend upon each station's permit renewal schedule. Steam electric effluent limitation guidelines may also revise thermal discharges requirements.

6. Waste Issues (Coal Combustion Residuals): Following Tennessee Valley Authority's (TVA) Kingston ash dike failure in December 2008, the EPA began to assess the integrity of ash dikes nationwide and to begin developing a rule to manage coal combustion residuals (CCRs). CCRs primarily include fly ash, bottom ash, and FGD byproducts (gypsum). Since the 2008 TVA dike failure, numerous ash dike inspections have been completed by the EPA and an enormous amount of input has been received as it developed proposed regulations. In June 2010, the EPA published its proposed rule regarding CCRs. The proposed rule offers two options: 1) a hazardous waste classification under Resource Conservation Recovery Act (RCRA) Subtitle C; and 2) a non-hazardous waste classification under RCRA Subtitle D, along with dam safety and alternative rules. Both options would require strict new requirements regarding the handling, disposal and potential re-use ability of CCRs. The proposal will likely result in more conversions to dry handling of ash, more landfills, the closing or lining of existing ash ponds and the addition of new wastewater treatment systems. Final regulations are not expected to be issued by the EPA until 2014 or later. The EPA's regulatory classification of CCRs as hazardous or non-hazardous will be critical in developing plans for handling CCRs in the future. Based on a 2014 final rule date, compliance with new regulations is generally expected to begin around 2019.

Appendix 4

Cross-Reference Table of RP Requirements

CROSS-REFERENCE OF RESOURCE PLAN DEVELOPMENT REQUIREMENTS		
Requirement	Location	Reference
Discussion and analysis of anticipated technological changes expected to influence:		
generation mix	N/A[7,8]	4901:5-5-06 A.1
use of energy efficiency and peak-demand reduction programs	Section I, part E	4901:5-5-06 A.1
availability of fuels	N/A[7,8]	4901:5-5-06 A.1
type of generation	N/A[7,8]	4901:5-5-06 A.1
use of alternative energy resources	Section IV, part B	4901:5-5-06 A.1
Discussion and analysis of availability and potential development of alternative energy resources	Section IV, part B	4901:5-5-06 A.2
Discussion and analysis of research, development, and demonstration efforts relating to alternative energy resources	Section IV, part B	4901:5-5-06 A.3
Discussion and analysis of the impact of environmental regulations on generating capacity, cost, and reliability	Section IV, part C	4901:5-5-06 A.4
Discussion and analysis of textual material not specifically required, but of importance to the resource forecast	Section IV, parts A and B	4901:5-5-06 A.5
Electricity resource forecast forms Form FE-R1 Form FE-R2 Form FE-R3 Form FE-R4 Form FE-R5 Form FE-R6 Form FE-R7 Form FE-R8 Form FE-R9 Form FE-R10	N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8] N/A[7,8]	4901:5-5-06 A.6.a 4901:5-5-06 A.6.b 4901:5-5-06 A.6.c 4901:5-5-06 A.6.d.i 4901:5-5-06 A.6.dii 4901:5-5-06 A.6.d.iii 4901:5-5-06 A.6.d.iv 4901:5-5-06 A.6.d.v 4901:5-5-06 A.6.d.vi 4901:5-5-06 A.6.e.i 4901:5-5-06 A.6.e.ii
Existing generation system description	N/A[7,8]	4901:5-5-06 B.1.a
Existing pooling, mutual assistance, and all purchase/salesagreements including costs and amounts	N/A[7,8]	4901:5-5-06 B.1.b

[7] "N/A" refers to those requirements that are no longer applicable to this Resource Plan due to the ESP construct under which Duke Energy Ohio is now operating.

[8] Under the Electric Security Plan approved by the Public Utilities Commission of Ohio in an Opinion and Order in Case No. 11-3549-EL-SSO, et al.,, Duke Energy Ohio has regulatory approval to transfer its generating assets on or before December 31, 2014.

CROSS-REFERENCE OF RESOURCE PLAN DEVELOPMENT REQUIREMENTS

Requirement	Location	Reference
System load profile	PUCO Forms FE-D1-6	4901:5-5-06 B.2.a
Maintenance requirements of existing and planned units	N/A[78]	4901:5-5-06 B.2.b
Number, size, and availability of existing and planned units	N/A[78]	4901:5-5-06 B.2.c
Forecast uncertainty	N/A[78]	4901:5-5-06 B.2.d
Option uncertainty with respect to cost, availability, in-service dates, and performance	N/A[78]	4901:5-5-06 B.2.e
Lead times for construction and implementation	N/A[78]	4901:5-5-06 B.2.f
Power interchange with other electric systems	N/A[78]	4901:5-5-06 B.2.g
Price-responsive demand and price elasticity due to the implementation of time-differentiated pricing options	Section IV, part A	4901:5-5-06 B.2.h
Regulatory climate	Section IV, part A	4901:5-5-06 B.2.i
Reliability criteria and reliability measures used	N/A[78]	4901:5-5-06 B.2.j.i
Reliability criteria and engineering analysis performed	N/A[78]	4901:5-5-06 B.2.j.ii
Reliability criteria and economic analysis performed	N/A[78]	4901:5-5-06 B.2.j.iii
Reliability criteria and any judgments applied	N/A[78]	4901:5-5-06 B.2.j.iv
Resource plan description of base case projected resource mix	N/A[78]	4901:5-5-06 B.3.a
Resource plan discussion of projected system reliability	N/A[78]	4901:5-5-06 B.3.b.i
Resource plan discussion of projected adequacy of fuel supply	N/A[78]	4901:5-5-06 B.3.b.ii
Resource plan discussion of revenue requirements and rate impacts of base and alternative plans	N/A[78]	4901:5-5-06 B.3.c
Resource plan methodology discussion of: decision-making process, criteria, and standards employed overall planning objectives (4901:5-5-03 paragraph A) key assumptions and judgments used in development	N/A[78]	4901:5-5-06 B.3.d.i 4901:5-5-06 B.3.d.ii 4901:5-5-06 B.3.d.iii
Discussion of adequacy, reliability, and cost-effectiveness of the plan	N/A[78]	4901:5-5-06 B.3.e.i
Discussion of evaluation equality among all resource options	N/A[78]	4901:5-5-06 B.3.e.ii
Discussion of adequate consideration of potential rate and customer bill impacts	Section IV, part A	4901:5-5-06B.3.e.iii.a

CROSS-REFERENCE OF RESOURCE PLAN DEVELOPMENT REQUIREMENTS		
Requirement	**Location**	**Reference**
Discussion of adequate consideration of environmental impacts and their associated costs	Section IV, part C	4901:5-5-06B.3.e.iii.b
Discussion of adequate consideration of other economic impacts and their associated costs	N/A[78]	4901:5-5-06B.3.e.iii.c
Discussion of adequate consideration of plan impact on financial status of the company	N/A[78]	4901:5-5-06B.3.e.iii.d
Discussion of adequate consideration of plan impact on other strategic decisions (flexibility, diversity, size and lead times, and lost investment opportunities)	N/A[78]	4901:5-5-06B.3.e.iii.e
Discussion on adequate consideration of plan impact on equity among customer classes	Section IV, part A and B	4901:5-5-06B.3.e.iii.f
Discussion on adequate consideration of plan impact over time	Section IV, parts A and B	4901:5-5-06B.3.e.iii.g
Discussion on adequate consideration of plan impact on other matters the commission considers appropriate	Section IV, parts A and B	4901:5-5-06B.3.e.iii.h