BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Adoption of Rules for Alternative and Renewable Energy Technologies and Resources, and Emission Control Reporting Requirements, and Amendment of Chapters 4901:5-1, 4901:5-3, 4901:5-5, and 4901:5-7 of the Ohio Administrative Code, pursuant to Chapter 4928, Revised Code, to Implement Senate Bill No. 221.	))))))))	Case No. 08-888-EL-ORD

ENTRY

The Commission finds:

(1) On May 1, 2008, the governor signed into law Amended Substitute Senate Bill No. 221 (SB 221) which, among other things, substantially revises Chapter 4928 of the Revised Code, to address alternative energy resources, renewable energy credits, clean coal technology, and federal environmental regulations. Upon consideration of SB 221 and the current forecast rules contained in Chapters 4901:5-1, 4901:5-3, 4901:5-5, and 4901:5-7 of the Ohio Administrative Code, (O.A.C.), the Commission staff is proposing various modifications to the forecast rules and the creation of three new utilities division chapters:

4901:1-39	Energy Efficiency and Demand Reduction Benchmarks
4901:1-40	Alternative Energy Portfolio Standard
4901:1-41	Greenhouse Gas Reporting and Carbon Dioxide Control Planning

(2) To assist formulation and review of the proposed rules, the Commission is seeking comments from interested persons on staff's proposals which will be posted to the below website upon issuance of this entry:

www.puco.ohio.gov/puco/rules

To minimize the expense of this proceeding, only a paper copy of this entry will be served on all electric utilities and certified competitive retail electric service providers in the state of Ohio, the Ohio Consumers' Counsel, and all interested persons of record. All persons are directed to download the proposed rules at the above website, or contact the Commission's Docketing Division at (614) 466-4095, Monday through Friday between the hours of 7:30 a.m. and 5:30 p.m.

(3) All comments should be filed in this docket by September 9, 2008, and reply comments should be filed by September 26, 2008. Pursuant to the Commission's May 7, 2008 entry in Case No. 06-900-AU-WVR, comments and replies may be filed electronically. Further information is available at http://dis.puc.state.oh.us/ by clicking on "Electronic Filing Information & Links."

All comments filed may be viewed at: http://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=08-0888

Any person filing comments may request paper copies of the other comments by filing a notice of such request in this docket. All other commenters shall then serve a copy of the comments upon the requesting party via email or hard-copy to the address provided.

It is, therefore,

ORDERED, That all interested persons file comments to the proposed rules and revisions by September 9, 2008, and reply comments by September 26, 2008. It is, further,

ORDERED, That a copy of this entry, without the attachments, be served upon all electric utilities in the state of Ohio, certified competitive retail electric service providers in the state of Ohio, all gas and natural gas companies, the Ohio Consumers' Counsel, and all interested persons of record.

THE PUBLIC UTILITIES COMMISSION OF OHIO

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Entered in the Journal
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Reneé J. Jenkins
Secretary

New Chapter 4901:1-39
Chapter Title: Energy Efficiency and Demand Reduction Benchmarks
Applicable Ohio Revised Code Sections: 4928.65 and 4928.66

4901:1-39-01 *Definitions*

(A) "Demand response" means a change in customer behavior or a change in customer owned or operated assets that effects the quantity and/or timing of electricity consumed as a result of price signals or other incentives. Demand response can reduce kilowatts of demand and/or kilowatt-hours of energy usage. Demand response includes economic interruption or reduction of customer load, and may include certain types of energy conservation.

(B) "Energy efficiency" means the energy content of the useful output from a process, device, or system divided by the energy input into that process, device, or system.

(C) "Electric utility" has the meaning as set forth in division (A)(11) of section 4928.01 of the Revised Code.

(D) "Mercantile customer" has the meaning set forth in division (A)(19) of section 4928.01 of the Revised Code.

(E) "Peak demand reduction" means altering the time and/or quantity of electricity consumed to reduce the electric distribution utility's peak period requirements. Peak demand reduction results in fewer kilowatts of load during peak periods, and may or may not result in fewer kilowatt-hours of energy usage.

(F) "Renewable energy credit" means the fully aggregated attributes associated with one megawatt hour of electricity generated by a renewable energy resource.

(G) "Staff" means the commission staff or its authorized representative.

4901:1-39-02 Purpose and scope

This chapter establishes requirements and processes for determining specific benchmarks for energy efficiency and peak reduction programs, which each electric

utility must implement pursuant to section 4928.66 of the Revised Code, and for establishing energy usage and demand baselines for measurement of annual energy savings and demand reductions. This chapter also provides mechanisms by which investments to achieve energy savings and demand reductions by mercantile customers in their own facilities can be recognized in electric utility programs as contributing to specific levels of energy savings and demand reductions.

4901:1-39-03 Filing and review of the benchmark report

(A) On April fifteenth of each year, each electric utility shall file with its long-term forecast report, a benchmark report in accordance with this chapter, regarding compliance with baselines and benchmarks for energy efficiency and peak reduction programs.

(B) Any person may file comments regarding an electric utility's benchmark report within thirty days of the filing of such report.

(C) The staff shall review the utility's benchmark report and any comments, and file a report of its findings regarding the baselines and benchmarks, and any proposed modifications thereto, and the utility's compliance with the mandated energy efficiency improvements and demand reductions. If staff finds that an electric utility has not demonstrated compliance with the annual sales reductions required by division (A) of section 4928.66 of the Revised Code, staff may recommend the imposition of a forfeiture.

(D) If staff recommends the assessment of a forfeiture, the electric utility may file, within thirty days, a request for hearing.

4901:1-39-04 Benchmark report requirements

(A) Each electric utility shall include in its benchmark report:

(1) A calculation of its baselines for kilowatt-hour sales and kilowatt demand for the current year.

(2) Any proposed adjustments to the baselines and benchmarks for the current calendar year.

(3) A description of all actions considered and taken to comply with the adjusted benchmarks for the prior calendar year.

(4) All plans for meeting future benchmarks.

(B) In calculating and amending an electric utility's baselines and benchmarks for energy sales and demand:

(1) The baseline for energy savings shall be the average of the total kilowatt hours purchased by the electric utility's Ohio distribution customers in the preceding three calendar years as reported in the utility's three most recent forecast reports or reporting forms.

(2) The baseline for peak demand reduction shall be the highest seasonal hourly integrated peak demand in each of the past three calendar years as reported in the utility's three most recent forecast reports or reporting forms.

(3) An electric utility may propose adjustments to its baselines. The electric utility shall include all assumptions, rationale, and calculations, and shall propose methodologies and practices to be used for adjustments and normalizations which, unless modified by the commission, shall be used for all subsequent adjustments and normalizations, and consistently applied from year to year.

(4) An electric utility may apply to amend the benchmarks due to regulatory, economic, or technological reasons beyond the electric utility's reasonable control. In any such proposal, the electric utility shall demonstrate that it has exhausted all compliance options.

(5) An electric utility shall describe all actions considered and taken in the prior calendar year to comply with the approved benchmarks, including:

(a) All energy efficiency programs, peak demand reduction programs, and demand response programs implemented by the utility, customer-sited or customer-committed energy efficiency, peak demand reduction, and demand response programs.

(b) All measurements and verification of the impacts of programs based upon engineering estimates, direct metered measurements, inspections, audits, and sampling and statistical analysis that confirm installation and operation of devices and processes installed or implemented as a part of such programs, and verifications of the impacts of installed or implemented devices or programs.

(c) Measurements of changes in usage and demand over time in buildings, facilities, and community systems based on the United States environmental protection agency's portfolio manager data base.

(6) An electric utility shall include in its benchmark report a ten-year projection of energy efficiency, peak demand reduction, demand response programs, and a five-year action plan for current programs including program budgets.

(7) An electric utility shall include in its benchmark report an assessment and market valuation of demand reduction potential and energy efficiency resources.

(C) An electric utility shall include in its benchmark report a description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Staff may publish guidelines for program measurement and verification of compliance with division (A)(1) of section 4928.66 of the Revised Code, and the utility should identify and explain any deviations from such guidelines.

(1) An electric utility shall not count technologies or measures that are mandated by law including those embodied in the Energy Independence and Security Act of 2007.

(2) An electric utility shall provide monthly billing, usage, and demand data to United States environmental protection agency's portfolio manager database, subject to customer consent, for buildings, facilities, and community systems. The utility shall provide customers with notice and opportunity to opt-out of the sharing of customer-specific data.

4901:1-39-05 Recovery mechanism

(A) Upon approval of an electric utility's long-term forecast and benchmark reports as set forth in Chapter 4901:1-5-1 of the Administrative Code, and this chapter, the utility may file an application for recovery of costs due to peak demand reduction, demand response, energy efficiency program costs, appropriate lost distribution revenues, and potential shared savings.

(1) Recovery of transmission and distribution infrastructure investments pursuant to division (A)(2)(d) of section 4928.66 of the Revised Code is limited to the portion of those investments that are attributable to energy efficiency purposes as opposed to reliability or market purposes.

(2) Mercantile customers who commit their peak demand reduction, demand response, or energy efficiency programs for integration with the electric utility's programs may apply for exemption from such recovery as set forth in rule 4901:1-39-06 of the Administrative Code.

(B) Any person may file objections within thirty days of the filing of an electric utility's application for recovery. The commission staff shall review the utility's application and any objections, and file its report and recommendations within ninety days of the filing of the application. If a stipulation resolving all issues in the proceeding is not filed on behalf of all parties with thirty days of the filing of the staff report, the commission will set the matter for hearing and publish notice of hearing.

4901:1-39-06 Commitment for integration by mercantile customers

(A) A mercantile customer may enter into a special arrangement with an electric utility, pursuant to division (A)(2)(d) of section 4928.66 of the Revised Code, to commit the customer's demand reduction, demand response, or energy efficiency programs for integration with the electric utility's demand reduction, demand response, and energy efficiency programs. Such arrangement shall:

(1) Address coordination requirements between the electric utility and the mercantile customer, including specific communication procedures and intervals.

(2) Specify all circumstances under which demand reductions may be effectuated by the customer.

(3) Grant permission to the electric utility and staff to measure and verify energy savings and/or demand reductions resulting from customer-sited programs and resources.

(4) Identify all consequences of noncompliance by the customer with the terms of the commitment.

(B) The electric utility and mercantile customer shall file an application for approval of a special arrangement under this rule. That application may include a request for an exemption from the rate recovery mechanism set forth in rule 4901:1-39-05 of the Administrative Code. In order to be eligible for such exemption, the mercantile customer must consent to providing data on its facilities to the United States environmental protection agency's portfolio manager as described in rule 4901:1-39-04. If the application includes a request for exemption from the rate recovery mechanism the application shall include the following:

(1) Baselines for kilowatt-hour consumption and kilowatt demand based upon averages of the three most recent years of metered data or, if metered data is not available, based upon a reasonable method of estimation.

(2) An accounting of energy saved and demand reductions achieved, and the resulting new levels of kilowatt-hour consumption and kilowatt demand.

(3) A listing and description of programs undertaken by the customer.

(4) A description of measures taken, devices or equipment installed, processes modified, or other actions taken to increase energy efficiency and reduce demand.

(5) An accounting of expenditures made for each program and for each program element.

(6) The time line of when each program went into effect, and when the energy savings and demand reductions took place.

(7) A copy of the formal declaration or agreement that commits the mercantile customer's programs for integration.

(C) The application shall include a description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. The application should also identify and explain all deviations from any guidelines which may be published by the staff for program measurement and verification of compliance.

(D) Any special arrangement under this rule may be combined with any other arrangement made pursuant to section 4905.31 of the Revised Code, if such arrangement contains appropriate measurements and verification of program results.

New Chapter: 4901:1-40
Chapter Title: Alternative Energy Portfolio Standard
Applicable Ohio Revised Code Sections: 4928.64 and 4928.65

4901:1-40-01 Definitions

(A) "Advanced energy fund" has the meaning set forth in section 4928.61 of the Revised Code.

(B) "Advanced energy resource" has the meaning set forth in division (A)(34) of section 4928.01 of the Revised Code.

(C) "Alternative energy resource" has the meaning set forth in division (A)(1) of section 4928.64 of the Revised Code.

(D) "Biologically-derived methane gas" means landfill methane gas; or gas from the anaerobic digestion of organic materials, including animal waste, municipal wastewater, institutional and industrial organic waste, food waste, yard waste, and agricultural crops and residues.

(E) "Biomass energy" means energy produced from organic material derived from plants or animals and available on a renewable basis, including but not limited to: agricultural crops, tree crops, crop by-products and residues; wood and paper manufacturing waste, including nontreated by-products of the wood manufacturing or pulping process, such as bark, wood chips, sawdust, and lignin in spent pulping liquors; forestry waste and residues; other vegetation waste, including landscape or right-of-way trimmings; algae; food waste; animal wastes and by-products (including fats, oils, greases and manure); biodegradable solid waste; and biologically-derived methane gas.

(F) "Clean coal technology" means any technology that removes or has the design capability to remove criteria pollutants and carbon dioxide from an electric

generating facility that uses coal as a fuel or feedstock consistent with paragraph (C) of rule 4901:1-41-02 of the Administrative Code.

(G) "Co-firing" means simultaneously using multiple fuels in the generation of electricity.

(H) "Commission" means the public utilities commission of Ohio.

(I) "Deliverable into this state" means that the electricity originates from a facility within a state contiguous to Ohio. It may also include electricity originating from other locations, pending a demonstration by an electric utility or electric services company that the electricity could be physically delivered to the state.

(J) "Demand response" has the meaning set forth in rule 4901:1-39-01 of the Administrative Code.

(K) "Demand-side management" has the meaning set forth in rule 4901:1-39-01 of the Administrative Code.

(L) "Distributed generation" means electricity production that is on-site or close to the load center and is capable of supplying energy to the utility distribution system.

(M) "Double-counting" means utilizing renewable energy, renewable energy credits, or energy efficiency savings to (1) satisfy multiple regulatory requirements, (2) support multiple voluntary product offerings, (3) substantiate multiple marketing claims, or (4) some combination of these.

(N) "Electric distribution utility" has the meaning as set forth in division (A)(6) of section 4928.01 of the Revised Code.

(O) "Electric generating facility" means a power plant or other facility where electricity is produced.

(P) "Electric services company" has the meaning set forth in division (A)(9) of section 4928.01 of the Revised Code.

(Q) "Electric utility" has the meaning set forth in division (A)(11) of section 4928.01 of the Revised Code.

(R) "Energy efficiency" has the meaning set forth in rule 4901:1-39-01 of the Administrative Code.

(S) "Energy storage" means a facility or technology that permits the storage of energy for future use as electricity.

(T) "Fuel cell" means a device that uses an electrochemical energy conversion process to produce electricity.

(U) "Fully aggregated" means that the renewable energy credit shall retain all of its attributes, including those pertaining to air emissions, and that specific attributes are not separated from the renewable energy credit and sold individually.

(V) "Geothermal energy" means hot water or steam extracted from geothermal reservoirs in the earth's crust and used for electricity generation.

(W) "Hydroelectric energy" means electricity generated by a hydroelectric facility.

(X) "Hydroelectric facility" has the meaning set forth in division (A)(35) of section 4928.01 of the Revised Code.

(Y) "Mercantile customer" has the meaning set forth in division (A)(19) of section 4928.01 of the Revised Code.

(Z) "Midwest system operator" means Midwest Independent Transmission System Operator, Inc. or any successor organization.

(AA) "Peak demand reduction" has the meaning set forth in rule 4901:1-39-01 of the Administrative Code.

(BB) "PJM regional transmission organization" means "PJM Interconnection, LLC" or any successor organization.

(CC) "Placed-in-service" means when a facility or technology becomes operational.

(DD) "Renewable energy credit" means the fully aggregated attributes associated with one megawatt hour of electricity generated by a renewable energy resource.

(EE) "Renewable energy resource" has the meaning set forth in division (A)(35) of section 4928.01 of the Revised Code.

(FF) "Solar energy resources" means solar photovoltaic and/or solar thermal resources.

(GG) "Solar photovoltaic" means energy from devices which generate electricity directly from sunlight through the movement of electrons.

(HH) "Solar thermal" means the concentration of the sun's energy, typically through the use of lenses or mirrors, to drive a generator or engine.

(II) "Solid wastes" has the meaning set forth in section 3734.01 of the Revised Code.

(JJ) "Staff" means the commission staff or its authorized representative.

(KK) "Standard service offer" means an electric utility offer to provide consumers, on a comparable and nondiscriminatory basis within its certified territory, all competitive retail electric services necessary to maintain essential electric service to consumers, including a firm supply of electric generation service.

(LL) "Wind energy" means electricity generated from wind turbines, windmills, or other technology that converts wind into electricity.

4901:1-40-02 Purpose and scope

(A) This chapter addresses the implementation of the alternative energy portfolio standard, including the incorporation of renewable energy credits (RECs), as detailed in sections 4928.64 and 4928.65 of the Revised Code respectively. Parties affected by these alternative energy portfolio standard rules include all Ohio electric utilities and all electric services companies serving retail electric customers in Ohio. Any entities that do not serve Ohio retail electric customers shall not be required to comply with the terms of the alternative energy portfolio standard.

(B) The commission may waive any requirement of Chapter 4901:1-40 of the Administrative Code for good cause shown.

4901:1-40-03 Requirements

(A) All electric utilities and affected electric services companies shall ensure that, by the end of the year 2024 and each year thereafter, at least twenty-five per cent of their retail electric sales in the state are supplied with electricity from alternative energy resources.

(1) Up to half of the electricity supplied from alternative energy resources may be generated from advanced energy resources.

(2) At least half of the electricity supplied from alternative energy resources shall be generated from renewable energy resources, including solar energy resources, in accordance with the following annual benchmarks:

By end of year:	Renewable Energy Resources	Solar Energy Resources
2009	0.25%	0.004%
2010	0.50%	0.01%
2011	1.0%	0.03%
2012	1.5%	0.06%
2013	2.0%	0.09%
2014	2.5%	0.12%
2015	3.5%	0.15%
2016	4.5%	0.18%
2017	5.5%	0.22%
2018	6.5%	0.26%
2019	7.5%	0.30%
2020	8.5%	0.34%
2021	9.5%	0.38%
2022	10.5%	0.42%
2023	11.5%	0.46%
2024 and each year thereafter	12.5%	0.50%

(a) At least half of the renewable energy resources, including solar energy resources, shall be met through electricity generated by facilities located in this state.

(b) To qualify towards a benchmark, any electricity from renewable energy resources, including solar energy resources, that originates from outside of the state must be shown to be deliverable into this state.

(3) All costs incurred by an electric utility in complying with the requirements of the alternative energy portfolio standard shall be avoidable by any consumer that has exercised choice of electricity supplier.

(B) The baseline for compliance with the alternative energy resource requirements shall be determined using the following methodologies:

(1) For electric utilities, the baseline shall be computed as an average from the three preceding calendar years of the total annual number of kilowatt hours of electricity sold under its standard service offer to any and all retail electric customers whose electric load centers are served by that

electric utility and are located within the electric utility's certified territory. The calculation of the baseline shall be based upon the average annual kilowatt hour sales reported in that electric utility's three most recent forecast reports or reporting forms.

(2) For electric services companies, the baseline shall be computed as an average from the three preceding calendar years of the total annual number of kilowatt hours of electricity sold to any and all retail electric consumers served by the company in the state, based upon the kilowatt hour sales in the electric services company's most recent quarterly market monitoring reports or reporting forms.

(a) If an electric services company has not been continuously supplying Ohio retail electric customers during the preceding three calendar years, the baseline shall be computed as an average of annual sales data for all calendar years during the preceding three years in which the electric services company was serving retail customers.

(b) For an electric services company with no retail electric sales in the state during the preceding three calendar years, its baseline shall equal zero.

(3) An electric utility or electric services company may propose a reduced baseline for commission consideration that reflects new economic growth in its service territory or service area. Any such proposal shall include at least a methodology for measuring economic activity, including objective measurement parameters and quantification methodologies.

(C) Beginning in the year 2010, each electric utility and electric services company shall annually submit to staff a plan for compliance with future annual advanced energy and renewable energy benchmarks, including solar, utilizing a fifteen-year planning horizon. This plan, to be submitted by April fifteenth of each year, shall include at least the following items:

(1) Baseline for the current and future calendar years.

(2) Supply portfolio projection, including both generation fleet and power purchases.

(3) Current and projected renewable energy credit inventories.

4901:1-40-04 Qualified resources

(A) The following resources or technologies, if they have a placed-in-service date of January 1, 1998, or after, are qualified resources for meeting the renewable energy resource benchmarks:

(1) Solar photovoltaic or solar thermal energy.

(2) Wind energy.

(3) Hydroelectric energy.

(4) Geothermal energy.

(5) Solid waste energy.

(6) Biomass energy. If co-firing an electric generating facility with a biomass energy resource, the proportion of fuel input attributable to the biomass energy resource shall dictate the proportion of electricity output from the facility that can be considered biomass energy.

(7) Energy from a fuel cell for which the feedstock is a renewable resource.

(8) Storage facility, if it complies with the following requirements:

(a) The electricity used to pump the resource into a storage reservoir must qualify as a renewable energy resource.

(b) The amount of energy that may qualify from a storage facility is the amount of electricity dispatched from the storage facility and shall exclude the amount of energy required to initially pump the resource into the storage reservoir.

(9) Distributed generation system used by a customer to generate electricity from one of the resources or technologies listed above.

(B) The following resources or technologies, if they have a placed-in-service date of January 1, 1998, or after, are qualified resources for meeting the advanced energy resource benchmarks:

(1) Any modification to an electric generating facility that increases its generation output without increasing the facility's carbon dioxide emission rate (pounds of carbon dioxide per megawatt hour).

(2) Any distributed generation system, designed primarily to meet the energy needs of the customer's facility, that utilizes co-generation of electricity and thermal output simultaneously.

(3) Clean coal technology.

(4) Nuclear enhancements, including:

(a) Advanced nuclear energy technology consisting of generation III technology as defined by the nuclear regulatory commission or other later technology.

(b) Significant improvements to existing facilities.

(5) Energy from a fuel cell, regardless of feedstock.

(6) Advanced solid waste or construction and demolition debris conversion technology that results in measurable greenhouse gas emission reductions.

(7) Demand-side management and energy efficiency, above and beyond that used to comply with any other regulatory standard or programs.

(C) The following new or existing mercantile customer-sited resources may be qualified resources for meeting electric utilities' annual renewable energy resource benchmarks or advanced energy resource benchmarks, as applicable, provided that it does not constitute double-counting for any other regulatory requirement and that the mercantile customer has committed the resource for integration into the electric utility's demand-response, energy efficiency, or peak demand reduction programs pursuant to rule 4901:1-39-06 of the Administrative Code.

(1) Renewable energy resources from mercantile customers include the following:

(a) Electric generation equipment that uses a renewable energy resource and is owned or controlled by a mercantile customer.

(b) Any renewable energy resource of the mercantile customer that can be utilized effectively as part of an alternative energy resource plan of an electric utility and would otherwise qualify as a renewable energy resource if it were utilized directly by an electric utility.

(2) Advanced energy resources from mercantile customers include the following:

(a) A resource that improves the relationship between real and reactive power.

(b) A mercantile customer-owned or controlled resource that makes efficient use of waste heat or other thermal capabilities.

(c) Storage technology that allows a mercantile customer more flexibility to modify its demand or load and usage characteristics.

(d) Electric generation equipment owned or controlled by a mercantile customer that uses an advanced energy resource.

(e) Any advanced energy resource of the mercantile customer that can be utilized effectively as part of an advanced energy resource plan of an electric utility and would otherwise qualify as an advanced energy resource if it were utilized directly by an electric utility.

(D) An electric utility or electric services company may also use renewable energy credits (REC) to satisfy all or part of a renewable energy resource benchmark, including a solar energy resource benchmark.

(1) To be eligible for use towards satisfying a benchmark, a REC must originate from a facility that meets the definition of a renewable energy resource, including solar energy resources.

(2) To use RECs as a means of achieving partial or complete compliance, an electric utility or electric services company must be a registered member in good standing of at least one of the following:

(a) The PJM generation attributes tracking system.

(b) The midwest renewable energy tracking system.

(c) Another credible tracking system subsequently approved for use by the commission.

(3) A REC may be used for compliance any time in the five calendar years following the date of its initial purchase or acquisition.

(4) Double-counting is prohibited.

(5) To be applied towards compliance, RECs shall remain fully aggregated.

(E) An entity may seek certification of resources or technologies to ensure that the resources or technologies would count as a qualified resource.

(1) Application for certification of a resource or technology consists of completing and filing application forms as prescribed by the commission or its staff.

(2) The commission may approve, suspend, or deny an application within sixty days of it being filed. If the commission does not act within sixty days, the application is deemed automatically approved on the sixty-first day after the filing date.

(3) If the commission suspends the application, the applicant shall be notified of the reasons for such suspension and may be directed to furnish additional information. The commission may act to approve or deny a suspended application within ninety days of the date that the application was suspended.

(4) Upon commission approval, the applicant shall receive notification of approval and a numbered certificate.

(5) Certification of a resource or technology shall not predetermine compliance with annual benchmarks, and does not constitute any commission position regarding cost recovery.

(F) At its discretion, the commission may classify any new technology or additional resource as an advanced energy resource or a renewable energy resource.

4901:1-40-05 Annual compliance reviews

(A) Staff shall conduct annual compliance reviews with regard to the benchmarks under the alternative energy portfolio standard.

(1) Beginning in the year 2010, the staff shall conduct annual reviews of electric utility and electric services company compliance with the most recent applicable renewable energy and solar energy resource benchmark.

(2) Beginning in the year 2025, the staff shall conduct annual reviews of electric utility and electric services company compliance with the most recent applicable advanced energy resource benchmark.

(B) The annual compliance reviews shall consider any undercompliance an electric utility or electric services company asserts is outside its control, including but not limited to the following:

(1) Weather-related causes.

(2) Equipment shortages for renewable energy resources.

(3) Resource shortages for renewable energy resources.

(C) Staff shall file a report of its findings. The process and timeframes for any annual noncompliance reviews shall be set by entry of the commission, the legal director, deputy legal director, or attorney examiner.

4901:1-40-06 Force majeure

(A) An electric utility or electric services company may seek a force majeure determination from the commission for all or part of a minimum renewable energy or solar energy benchmark.

(1) A decision on a request for a force majeure determination will be rendered within ninety days of an electric utility or electric services company filing a request for such determination. The process and timeframes for such a determination shall be set by entry of the commission, the legal director, deputy legal director, or attorney examiner.

(a) At the time of requesting such a determination from the commission, an electric utility or electric services company shall demonstrate that it pursued all reasonable compliance options including, but not limited to, renewable energy credit (REC) solicitations, REC banking, and long-term contracts.

(b) The request shall include an assessment of the availability of qualified in-state resources, as well as qualified resources within the PJM interconnection regional transmission organization and the midwest system operator.

(2) If the commission determines that force majeure conditions exist, it may modify that compliance obligation of the electric utility or electric services company as it considers appropriate to accommodate the finding.

(a) Such modification does not automatically reduce future year obligations.

(b) The commission retains the right to increase a future year's compliance obligation by the amount of any undercompliance in a previous year that is attributed to a force majeure determination.

4901:1-40-07 Cost cap

(A) An electric utility or electric services company may request a determination from the commission that its reasonably expected cost of compliance with an advanced energy resource benchmark would exceed its reasonably expected generation rate by three percent or more. The process and timeframes for such a determination shall be set by entry of the commission, the legal director, deputy legal director, or attorney examiner.

(1) The burden of proof for substantiating such a claim shall remain with the electric utility or electric services company.

(2) An electric utility or electric services company shall pursue all reasonable compliance options prior to requesting such a determination from the commission.

(3) In the case that the commission makes such a determination, the electric utility or electric services company may not be required to fully comply with that specific benchmark.

(B) An electric utility or electric services company may request a determination from the commission that its reasonably expected cost of compliance with a renewable energy resource benchmark, including a solar energy resource benchmark, would exceed its reasonably expected generation rate by three per cent or more. The process and timeframes for such a determination shall be set by entry of the commission, the legal director, deputy legal director, or attorney examiner.

(1) The burden of proof for substantiating such a claim shall remain with the electric utility or electric services company.

(2) An electric utility or electric services company shall pursue all reasonable compliance options prior to requesting such a determination from the commission.

(3) In the case that the commission makes such a determination, the electric utility or electric services company may not be required to fully comply with that specific benchmark.

(C) Calculations involving the three per cent cost cap may consist of comparing the projected generation rate of an electric utility or electric services company, exclusive of any reasonable costs associated with satisfying an alternative energy portfolio standard requirements, to the projected generation rate of an electric utility or electric services company including any reasonable costs of satisfying an alternative energy portfolio standard requirements.

(D) Any costs included in a commission-approved unavoidable surcharge for construction expenditures or environmental expenditures of generation resources may be excluded from consideration as a cost of compliance under the terms of the alternative energy portfolio standard.

(E) If the commission makes a determination that a three percent provision is triggered, the electric utility or electric services company shall comply with each benchmark up to the point that the three per cent increment would be reached for each benchmark.

(F) The commission retains the right to increase a future year's compliance obligation by the amount of any undercompliance in a previous year that is attributed to the three per cent cost cap provision.

4901:1-40-08 Compliance payments

(A) Any electric utility or electric services company that does not achieve an annual renewable energy resource benchmark, including a solar benchmark, shall remit a compliance payment based on the amount of noncompliance rounded up to the next megawatt hour (MWh), unless the commission has identified the existence of force majeure conditions or the commission has determined that the three per cent cost cap provision would be exceeded in the event of full compliance.

(1) The required payment for noncompliance with any solar energy resource benchmark shall be calculated by quantifying the level of noncompliance, rounded to the next MWh, and multiplying this figure by the per MWh amount in the table below.

Solar Energy Resources – Compliance Payment	
Year	Payment per MWh
2009	$450
2010 and 2011	$400
2012 and 2013	$350
2014 and 2015	$300
2016 and 2017	$250
2018 and 2019	$200
2020 and 2021	$150
2022 and 2023	$100
2024 and beyond	$50

(2) The required payment for noncompliance with any renewable energy resource benchmark, excluding solar, shall be calculated by quantifying the level of noncompliance, rounded to the next MWh, and multiplying this figure by an amount determined by the commission.

(a) The per MWh payment for renewable energy resources for the year 2009 is forty-five dollars.

(b) Beginning in the year 2010, the per MWh payment for renewable energy resources will be adjusted annually to reflect the annual change to the consumer price index as defined in section 101.27 of the Revised Code. Such adjustment shall be performed by staff no later than June first of each calendar year. This annual adjustment shall be calculated using the following formula:

$= ((CPI_{YR2}/CPI_{YR1}) * \text{current per MWh payment})$

(c) In no event shall the compliance payment for renewable energy resources be less than forty-five dollars per MWh.

(3) At least annually, the staff shall conduct a review of the renewable energy resource market, including solar, both within this state and within the regional transmission systems active in the state. The results of this review shall be used to determine if changes to the solar or renewable energy compliance payments are warranted, as follows:

(a) The commission may increase compliance payments if needed to ensure that electric utilities and electric services companies are not using the payments in lieu of acquiring or producing energy or RECs from qualified renewable resources, including solar.

(b) Any recommendation to reduce the compliance payments shall be presented to the general assembly.

(B) Any compliance payment shall be submitted to the commission for deposit to the credit of the advanced energy fund. All compliance payments shall be delivered to the commission within thirty days of the imposition of any compliance payment requirement.

(C) Compliance payments shall be subject to such collection and enforcement procedures as apply to the collection of a forfeiture under sections 4905.55 to 4905.60 and 4905.64 of the Revised Code.

(D) Any electric utility or electric services company found to be liable for a compliance payment is prohibited from passing compliance payments on to consumers. In the event that a compliance payment is required, an electric utility or electric services company shall submit an attestation, signed by a company officer or designee, indicating that it will not seek to recover the specific compliance payment from consumers. Such attestation shall be submitted to staff within thirty days of the imposition of any compliance payment requirement.

4901:1-40-09 Annual Report

(A) Pursuant to division (D)(1) of section 4928.64 of the Revised Code, an annual report shall be submitted to the general assembly addressing at least the following topics:

(1) The compliance status of electric utilities and electric services companies with respect to the advanced energy resource and renewable energy resource benchmarks.

(2) Suggested strategies for electric utility and electric services company compliance.

(3) Suggested strategies for encouraging the use of alternative energy resources in supplying this state's electricity needs in a manner that considers:

(a) Available technology.
(b) Costs.
(c) Job creation.

(d) Economic impacts.

(B) The report shall be submitted in accordance with section 101.68 of the Revised Code.

(C) Prior to its submission to the general assembly, the report will be issued for public comment by interested persons for thirty days, unless otherwise ordered by the commission. The process and timeframes for soliciting public comment shall be set by entry of the commission, the legal director, deputy director, or attorney examiner.

New Chapter 4901:1-41

Chapter Title: Greenhouse Gas Reporting and Carbon Dioxide Control Planning

Rule 4901:1-41-01 Definitions

(A) "Carbon dioxide control planning" means the establishment and implementation of a structured, verifiable process including goals, policies, and procedures, to measure carbon dioxide emissions and control options on both a facility and a system-wide scale over five, ten and twenty-year periods.

(B) "Commission" means the public utilities commission of Ohio.

(C) "Climate registry" means the international greenhouse gas measurement and reporting system, including accounting and verification measures, which provide voluntary or mandatory reporting requirements.

(D) "Electric generating facility" means an electric generating plant and associated facilities capable of producing electricity.

(E) "Greenhouse gas" means the emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and/or sulphur hexafluoride.

(F) "Person" has the meaning set forth in sections 4906.01 and 4935.04 of the Revised Code.

4901:1-41-02 Greenhouse gas reporting and carbon dioxide control planning

(A) Any person which owns or operates an electric generating facility within Ohio shall become a participating member in the climate registry for at least scope 1 (direct) greenhouse gas emissions, and shall report greenhouse gas emissions according to the protocols approved by the climate registry, or as otherwise directed by the commission.

(B) Any person which owns or operates an electric generating facility within Ohio shall file with the commission by April fifteenth of each calendar year an environmental control plan, including carbon dioxide control planning. A copy of such plan shall be provided to the director of the Ohio environmental protection agency, or his designee.

(C) The environmental control plan shall include all relevant technical information on the current conditions, goals, and potential actions based upon the most current scientific and engineering design capability of any facility that has been designed to have the capability to control the emissions of criteria pollutants and carbon dioxide within the parameters of economically feasible best technology.

Chapter 4901:5-1 Long-Term Forecast Reports ~~Generally~~

4901:5-1-01 Definitions.

4901:5-1-02 ~~Form of long-term forecast report filing required~~Purpose and Scope.

4901:5-1-03 ~~Form of l~~Long-term forecast reports ~~additional~~ requirements.

4901:5-1-04 Notice of substantial change.

4901:5-1-01 Definitions.

~~As used in Chapters 4901:5-1 to 4901:5-7 of the Administrative Code:~~

(A) "Business office" means any office maintained by the reporting person where bills issued by the reporting person may be paid and discussed with its representatives.

(B) "Commission" means the public utilities commission of Ohio.

(C) ~~"EDU" means electric distribution utility and for the purpose of this chapter means an electric utility company that supplies at least retail electric distribution service to more than fifteen thousand customers within Ohio.~~"Electric generating facility" means an electric generating plant and associated facilities capable of producing electricity.

(D) ~~"Electric transmission owner" means the owner of a major utility facility as defined in section 4935.04 of the Revised Code.~~ "Electric utility" has the meaning set forth in division (A)(11) of section 4928.01 of the Revised Code.

~~(E) "Gas distribution line and associated facility" means a pipeline and associated facilities other than gathering or transmission line in a distribution area.~~

~~(F) "Gas gathering line and associated facility" means a pipeline and associated facilities which transport gas from a current production facility to a transmission line or main.~~

~~(G) "Gas or natural gas transmission line and associated facilities" has the meaning set forth in rule 4906-1-02 of the Administrative Code.~~

~~(H)~~(E) "Long-term forecast report" has the meaning set forth in section 4935.04 of the Revised Code.

~~(I)~~(F) "Major utility facility", has the meaning set forth in division (A)(1) of section 4935.04 of the Revised Code.

~~(J)~~(G) "Person" has the meaning set forth in sections 4906.01 and 4935.04 of the Revised Code.

~~(K)~~(H) "Reporting person" means any person required to file a long-term forecast report under section 4935.04 of the Revised Code.

~~(L)~~(I) "Substantial change" includes, but is not limited to:

(1) A change in forecasted peak loads or energy delivery over the forecast period of greater than an average of one-half of one per cent per year as calculated in rule 4905:5-3-03 of the Administrative Code.

(2) The addition of a generating facility or facilities in an electric utility's supply plans with the intention of filing an application under the provisions of division (B)(2)(b) or (B)(2)(c) of section 4928.143 of the Revised Code.

(3)~~(2)~~ Demonstration of good cause to the commission by an interested party.

4901:5-1-02 ~~Form of long-term forecast report filing required~~Purpose and Scope.

~~**Each person owning or operating a major utility facility within this state, or furnishing gas, natural gas, or electricity directly to more than fifteen thousand customers within this state shall annually furnish a long-term forecast report to the commission for its review, in compliance with the rules set forth in this chapter.**~~

(A) This chapter specifies the applicable persons, schedules, and filing requirements for the filing and approval of long-term forecast reports for electric and natural gas demand, supplies, and transmission relevant to the state of Ohio.

(B) The provisions of this chapter shall apply to each person owning or operating a major utility facility within this state, or furnishing gas, natural gas, or electricity directly to more than fifteen thousand customers within this state.

4901:5-1-03 ~~Form of long-term~~Long-term forecast ~~reports additional~~ reports requirements.

(A) Each person owning or operating a major utility facility within this state shall annually file a long-term forecast report with the commission for its review in compliance with the rules set forth in this chapter.

(B) Each person furnishing gas or natural gas directly to customers within this state shall annually file a long-term forecast report with the commission for its review in compliance with the rules set forth in this chapter.

(C) Each person furnishing electricity directly to customers within this state shall annually file a long-term forecast report with the commission for its review in compliance with the rules set forth in this chapter.

(1) When filing the long-term forecast report, an electric utility shall include all resource plan requirements set forth in rule 4901:5-5-05 of the Administrative Code, if the utility intends to file a subsequent application under division (B)(2)(b) and/or (B)(2)(c) of section 4928.143 of the Revised Code.

(2) An electric utility shall include with its long-term forecast report all resource plan requirements set forth in rule 4901:5-5-05 of the Administrative Code, for the life of any electric generating facility subject to recovery pursuant to division (B)(2)(b) and/or (B)(2)(c) of section 4928.143 of the Revised Code.

(3) An electric utility may include a resource plan as set forth in rule 4901:5-5-05 with any long-term forecast report filing.

(~~A~~D) All long-term forecast reports shall be submitted pursuant to the requirements set forth in Chapter 4901:5-3 of the Administrative Code.

(~~B~~E) All hard copies of long-term forecast reports must be bound. The binding may include either a hard or soft cover so long as it adequately secures the pages.

(~~C~~F) All long-term forecast reports shall contain a listing of the libraries to which a letter of notification has been mailed, stating where available copies may be obtained.

(~~D~~G) Each long-term forecast report shall include a statement, signed by the person responsible for the filing, that the document is true and correct to the best of his or her knowledge and belief.

(~~E~~H) All long-term forecast reports shall contain a certificate of service, signed by the person responsible for its filing, stating that the requirements of paragraphs (F) to (I) of this rule will be met.

(~~F~~I) On the same date a long-term forecast report is filed with the commission, the reporting person shall deliver or mail a copy of the long-term forecast report to the ~~office of the~~Ohio consumers' counsel ~~at their offices in Columbus, Ohio~~.

(~~G~~J) Within three days of filing with the commission, a letter of notification shall be delivered or sent by first class mail by the reporting person to:

(1) The main public library of each county in Ohio which the reporting person services.

(2) The main public library of each county in Ohio in the area in which any portion of a major utility facility is to be located during the forecast period.

(~~H~~K) The reporting person shall keep at least one copy of the person's current long-term forecast report at the person's principal business office in Ohio for public inspection during office hours.

(~~I~~L) The reporting person shall provide or cause to be provided a copy of the person's long-term forecast report to any person upon request at cost to cover the expenses incurred.

4901:5-1-04 Notice of substantial change.

(A) If the long-term forecast report to be ~~furnished~~ filed under division (C) of section 4935.04 of the Revised Code will contain a "substantial change~~" as defined in division (D)(3)(c) of section 4935.04 of the Revised Code~~, the reporting person shall file a notice of substantial change with the commission forty-five days prior to the filing date of the long-term forecast report or as soon thereafter as the reporting person knows of the substantial change.

(B) Notice of substantial change shall consist of a letter, signed by the person responsible for filing the long-term forecast report, stating that a substantial change will be reflected in the forthcoming long-term forecast report~~ and identifying the provision of division (D)(3)(c) of section 4935.04 of the Revised Code which is applicable~~.

Chapter 4901:5-3 Filing ~~of~~ and Fees for Long-Term Forecast Reports~~; Fees~~

4901:5-3-01 Definitions.

(A) "Commission" means the public utilities commission of Ohio.

(B) "Electric transmission owner" means the owner of a major utility facility as defined in section 4935.04 of the Revised Code

(C) "Electric utility" has the meaning set forth in division (A)(11) of section 4928.01 of the Revised Code.

(D) "Long-term forecast report" has the meaning set forth in section 4935.04 of the Revised Code.

(E) "Substantial change" includes, but is not limited to:

(1) A change in forecasted peak loads or energy delivery over the forecast period of greater than an average of one-half of one per cent per year as calculated in rule 4905:5-3-03 of the Administrative Code.

(2) The addition of a generating facility or facilities in an electric utility's supply plans with the intention of filing an application under the provisions of division (B)(2)(b) and/or (B)(2)(c) of section 4928.01 of the Revised Code.

(3) Demonstration of good cause to the commission by an interested party.

4901:5-3-~~01~~02 Long-term forecast report due dates.

(A) All electric transmission owners or ~~EDU~~s electric utilities required by section 4935.04 of the Revised Code to file a long-term forecast report must file annually on or before April fifteenth. For years in which their forecast does not show substantial change as defined in section 4935.04 of the Revised Code, the electric transmission owner or the ~~EDU~~electric utility may file only the forms specified in Chapter 4901:5-5 of the Administrative Code in satisfying the requirements of this rule. In any year that a hearing is required under division (D)(3) of section 4935.04 of the Revised Code, the electric transmission owner or ~~EDU~~electric utility must file a complete long-term forecast report.

(B) All gas and natural gas distribution companies required by section 4935.04 of the Revised Code to file a long-term forecast report must file annually on or before June first. On alternating years each gas utility may file only the forms specified in Chapter

4901:5-5 of the Administrative Code in satisfying the requirements of this rule. In any year that a hearing is required under division (D)(3) of section 4935.04 of the Revised Code, the reporting utility must file a complete long-term forecast report.

(C) On or before December thirty-first of each year, the commission shall notify each electric transmission owner or ~~EDU~~electric utility of the number of copies of its long-term forecast report it shall be required to submit at the next filing. On or before February fifteenth of each year, the commission shall notify each gas or natural gas distribution company of the number of copies of its long-term forecast report it shall be required to submit at the next filing. In the event that no notice is sent by the commission, the company shall submit the same number of copies of the long-term forecast report submitted with the previous year's filing.

(D) Notwithstanding the requirements of paragraphs (A) and (B) of this rule, the commission may grant an extension of the filing deadline for good cause shown.

4901:5-3-~~02~~03 Fees.

(A) Fees for electric transmission owners or ~~EDU~~electric utilities shall be submitted annually to the commission by May first.

(B) Fees for gas and natural gas distribution companies shall be submitted annually to the commission on or before September fifteenth.

(C) All fee payments shall be made by check, payable to "the public utilities commission of Ohio."

(D) The commission shall annually determine the fee each utility must pay, and shall notify each utility as to that amount at least thirty days prior to the date payment is due.

(E) Fees for electric transmission owners or ~~EDU~~electric utilities will be based on:

(1) For electric transmission owners, the fee shall be two and one-half mills per megawatt hour delivery based upon the energy deliveries for loads connected to the system inside Ohio for the most recent year for which actual data is reported on the most recently filed form FE3-T1 column twelve.

(2) For ~~EDU~~electric utilities, the fee shall be two and one-half mills per megawatt hour delivery based upon the ~~total~~net energy for load for the most recent year for which actual data is reported on the most recently filed form FE4-D1 column eight.

(F) Fees for gas and natural gas distribution companies will be based on two factors:

(1) In-state total number of meters in December of the preceding year, as reported to the commission on form SG-1.

(2) Total in-state sales for the most recent calendar year for which actual data are reported to the commission on the most recently filed form SG-1.

(G) Annual fees for gas and natural gas distribution companies shall be the sum of the following charges:

(1) One hundred mills per meter.

(2) Two Hundred ninety-seven mills per million cubic feet.

4901:5-3-~~03~~04 Calculation of forecast rates of change.

(A) For the purposes of division (D)(3)(c)(i) of section 4935.04 of the Revised Code, the change in the average annual rate of change in the forecasted electric peak loads or energy delivery shall be calculated by comparing the average annual compound rate of change of the previous year's long-term forecast with the average annual rate of change of the current year's long-term forecast. The average annual compound rate of change shall be calculated as the rate of change occurring between year zero and year ten.

(B) The average annual compound rate of change in electric energy delivery for a given forecast shall be calculated as the rate of change occurring between year zero and year ten. For ~~EDUs~~electric utilities the rate of change shall be calculated based upon the ~~total energy column on form FE4-D2 column eight. If form FE4-D2, is not filed, the calculation of rate of change shall be based upon the total energy column on form~~ net energy for load column FE4-D1.~~FE3-D1 column eight.~~

(C) The average annual compound rate of change in electric peak loads for a given forecast shall be calculated as the rate of change occurring between year zero and year ten. The greater of winter or summer internal load shall be used to determine average annual compound rate of change. For ~~EDUs~~electric utilities, the rate of change shall be based upon ~~EDU~~electric utility system seasonal peak load demand forecast, form ~~FE4-D5. If form FE4-D5 is not filed, form FE4-D4 shall be employed to calculate the rate of change of peak loads~~ FE4-D4. For electric transmission owners, the rate of change shall be calculated based upon form FE3-T2 electric transmission owner's system seasonal peak load demand forecast.

(D) For the purposes of division (D)(3)(c)(i) of section 4935.04 of the Revised Code, the change in the average annual rate of change in the forecasted gas consumption shall be calculated by comparing the average annual compound rate of change of the previous year's long-term forecast with the average annual compound rate of change of the

current year's long-term forecast. The average annual compound rate of change shall be calculated as the rate of change occurring between year zero and year ten.

(E) The average annual compound rate of change in gas consumption for a given forecast shall be calculated as the rate of change occurring between year zero and year ten, as reported in the sum of column ten, total consumption, of form FG1-1 plus column four, total volumes transported by respondent for on-system customers, of form FG1-6.

Chapter 4901:5-5 Electric Utility Forecast Reports Filing Requirements

4901:5-5-01 Definitions.

~~The following definitions apply to this chapter:~~

(A) "ATC" means available transfer capability ~~and is the portion of total transfer capacity remaining in the physical transmission system for further commercial activity over and above already committed wholesale and retail uses. (3) "ATC" means available transfer capability~~ as defined by the regional reliability organization standards.

(B) ~~"ECAR" identifies an electric reliability council or a successor organization, which functions within a geographic area that includes Indiana, Ohio, and parts of Kentucky, Maryland, Michigan, Pennsylvania, Tennessee, West Virginia, and Virginia. The electric utility systems in this area that are engaged in the generation, transmission, and sale of electric power and energy are the parties to a formal agreement entitled, "East Central Area Reliability Coordination Agreement" or a similar agreement of a successor organization~~ **"Alternative energy resource" has the meaning set forth in division (A)(1) of section 4928.64 of the Revised Code.**

(C) **"Capability" means the net seasonal demonstrated rating of generating equipment, as defined by the Regional Reliability Organization reliability standards.** ~~"EEI" means Edison electric institute~~

(D) **"Certified territory" means the service area established for an electric supplier under sections 4933.81 to 4933.90 of the Revised Code.**

(E) **"Demand" means the number of kilowatts to meet load at any given instant.**

(F) **"Demand-side management" means those programs or activities that are designed to modify the magnitude and/or patterns of electricity consumption in a utility's service area by means of equipment installed or actions taken on the customer premises.**

(G) **"Electric transmission owner" means the owner of a major utility facility as defined in section 4935.04 of the Revised Code.**

(H) **"Energy-price relationships" mean the calculated or observed effect on peak load, load shape, or energy consumption resulting from changes in the retail price of electricity or other fuels. It consists of both energy conservation effects which reduce customer energy use directly and effects which cause customers to switch to or from utility-provided electricity.**

(~~D~~I) "Forecast year," "year of the forecast," or "year zero" means the year in which the forecast is filed.

(~~E~~I) "Forecast period" means year zero through year ten.

(~~F~~K) "Integrated operating system" means a group of electric transmission owners or ~~EDUS~~ electric utilities who are members of a jointly or commonly operated system as a single entity.

(L) "Integrated resource plan" means that plan or program, established by a person subject to the requirements of this chapter, to furnish electric energy services in a cost-effective and reasonable manner consistent with the provision of adequate and reliable service, which gives appropriate consideration to supply- and demand-side resources and transmission or distribution investments for meeting the person's projected demand and energy requirements.

(M) "Internal load" of a system means the summation of the net output of its generators plus the net of interconnection receipts and deliveries.

(N) "Interruptible load" means load that can be curtailed or reduced at the supplier discretion or in accordance with a contractual agreement.

(~~G~~O) "Load" means demand ~~the amount of power needed to be delivered at a given point on an electric system.~~

(P) "Load modification" means the impact of a demand-side management, energy efficiency, demand reduction, price responsive demand, or demand response program designed to influence customers' patterns of electricity use in order to modify the utility's load shape. Load shape is the distribution of a utility's total electricity demand measured over time, usually expressed as a curve which plots megawatts supplied against time of occurrence, and illustrates the varying magnitude of the load during that time period.

(Q) "Native load" of a system means the internal load minus interruptible loads.

(R) "Nonutility generation" means any source of electricity which is interconnected with a utility's system, but is not exclusively owned by an electric utility.

(~~H~~S) "Peak demand" or "peak load" means the electric transmission owner or ~~EDU's~~ electric utility's maximum sixty-minute integrated clock hour ~~native~~ predicted or actual load ~~predicted (or actual)~~ for the year.

(T) "Person" has the meaning set forth in sections 4906.01 and 4935.04 of the Revised Code.

(U) "Renewable energy resource" has the meaning set forth in division (A)(35) of section 4928.01 of the Revised Code.

(V) "Reporting person" means any person required to file a long-term forecast report under section 4935.04 of the Revised Code.

~~(I) "Service area," means the geographic area in which the electric transmission owner or EDU renders service to wholesale or retail consumers of energy.~~

(U) "Supply-side resources" mean those resources that directly increase the amount of electricity available for consumption in a utility's certified territory.

(V) "System capability" means the installed capability of all generating units on the utility system plus firm purchases.

(~~J~~W) "Transfer capability," means the ~~capability~~ ability of the ~~electric~~ transmission ~~owner or EDU's deliver or transfer power from all points of receipts to all delivery points~~ owner's system to move power over its system to another interconnected transmission system or distribution utility while meeting all national standard reliability requirements.

(~~K~~X) "TTC" means total transfer capacity as defined by the regional reliability organization standards and is the ~~amount~~measure of the ability of the interconnected electric systems to reliably move or transfer power ~~that can be transferred~~ from one ~~control~~ area to another over ~~the interconnected transmission network in a reliable manner while meeting all of a specific set of defined pre- and post contingency~~ system conditions. ~~TTC is the lesser of the network transfer capability or contract path capacity (I.E., the sum of capacities of all interconnections to a neighboring control area)~~ all transmission lines or paths between those areas under specified.

4901:5-5-02 ~~Forecasts~~ Forecast report requirements for electric utilities and transmission owners ~~or EDUS, general guidelines~~.

(A) Summary of the long-term forecast report.

The long-term forecast report shall contain a summary describing the utility's forecast of loads and the resource plan to meet that load and shall include at a minimum:

(1) The planning objectives.

(2) A summary of ~~the forecast~~ its forecasts of energy and peak load demands and the key assumptions or projections underlying these forecasts.

(3) A description of the process by which the load ~~forecast was~~ forecasts were developed.

(B) General guidelines. The following guidelines shall be used in the preparation of the forecast:

(1) The forecast must be based upon independent analysis by the reporting electric transmission owner or ~~EDU~~electric utility.

(2) The forecast may be based on those forecasting methods that yield the most useful results to the electric transmission owner or ~~EDU~~electric utility.

(3) Where the required data have not been calculated directly, relevant conversion factors shall be displayed.

(C) Special subject areas.

(1) The following matters shall specifically be addressed:

(a) A description of the extent to which the reporting electric transmission owner or ~~EDU~~electric utility coordinates its load and resource forecasts with those of other systems such as affiliated systems in a holding company group, associated systems in an integrated operating system or other coordinating organization, or other neighboring systems.

(b) A description of the manner in which such forecasts are coordinated, and any problems experienced in efforts to coordinate ~~load~~ forecasts.

(c) A brief description of any polls, surveys, or data-gathering activities used in preparation of the forecast.

(2) No later than six months prior to the required date of submission of the forecast, the commission ~~shall~~ may supply the reporting electric transmission owner or ~~EDU~~electric utility:

(a) Copies of appropriate commission or other state documents or public statements that include the state energy policy for consideration in preparation of the forecast.

(b) Such current energy policy changes or deliberations, which, due to their immediate significance, the commission determines to be relevant for specific identification in the forecast (including but not limited to new legislation, regulations, or adjudicatory findings). **The reporting person shall provide a discussion of the impacts of such factors and how it has taken these factors into account.**

(3) Existing energy efficiency, demand reduction, and demand response programs and policies of the reporting utility which support energy conservation and load modification shall be described along with an estimate of their impacts on energy and peak demand and supply resources.

(~~3~~4) Energy-price relationships:

(a) To the extent possible, identify the relationship between price and energy consumption and describe how such changes are accounted for in the forecast.

(b) A description of, and justification for, the methodologies employed for determining such energy-price relationships shall be included.

(D) Forecast documentation. The purpose of the documentation section of the report is to permit a thorough review of the forecast methodology and test its validity. The components of the forecast documentation include:

(1) A description of the forecast methodology employed, including:

(a) Overall methodological framework chosen.

(b) Specific analytical techniques used, their purpose, and the forecast component to which they are applied.

(c) The manner in which specific techniques are related in producing the forecast.

(d) Where statistical techniques have been used:

(i) All relevant equations and data.

(ii) The size of the standard error of the estimate, and the size of the forecasting error, associated with each relevant forecasting model equation, this information shall be included for each forecast at the bottom of forms FE4-D1 to FE4-D5.

(iii) A description of the technique.

(iv) The reason for choosing the technique.

(v) Identification of significant computer software used.

(e) An explanation of how controllable and interruptible loads are forecast and how they are treated in the total forecast.

(f) An identification of load factors or other relevant conversion factors and a description of how they are used within the forecast.

(g) Where the methodology for any sector has changed significantly from the previous year, a discussion of the rationale for the change.

(2) Assumptions and special information. The reporting ~~electric transmission owner or EDU~~person shall:

(a) For each significant assumption made in preparing the forecasts include a discussion of the basis for the assumption and the impact it has on the forecast results. Give sources of the assumption if other than the reporting ~~electric transmission owner or EDU~~person.

(b) Identify special information bearing on the forecast (e.g., the existence of a major planned industrial expansion program in the area of service or other need determined on a regional basis).

(3) Data base documentation. The responsibilities of the reporting ~~electric transmission owner or EDU~~person with regard to its forecast data base are as follows:

(a) The ~~electric transmission owner or EDU~~reporting person shall provide or cause to be provided:

(i) A brief description of all data sets used in making the forecast, both internal and external, input and output, and a citation to the sources.

(ii) The reasons for the selection of the specific data base used.

(iii) A clear identification of any significant adjustments made to raw data in order to adapt them for use in the forecast, including, to the extent practicable:

(a) The nature of the adjustment made.

(b) The basis for the adjustment made.

(c) The magnitude of the adjustments.

(b) If a hearing is to be held on the forecast in the current forecast year, the reporting ~~electric transmission owner or EDU~~ person shall ~~submit~~ provide to the commission ~~with its long-term forecast report a diskette~~ in electronic formats or other medium ~~that~~ as the commission ~~deems acceptable~~ directs, ~~containing~~ all data series, both input and output, raw and adjusted, and model equations used in the preparation of the forecast. ~~The commission may make exceptions to paragraph (D)(3) of this rule for good cause.~~

(c) The ~~electric transmission owner or EDU~~ reporting person shall ~~be prepared to~~ provide to the commission, on request:

(i) Copies of all data sets used in making the forecasts, including both raw and adjusted data, input and output data, and complete descriptions of any mathematical, technical, statistical, or other model used in preparing the data.

(ii) A narrative explaining the data sets and any adjustments made with the data to adapt it for use in the forecast.

4901:5-5-03 Forecasts for electric transmission owners.

(A) General guidelines.

The electric transmission owner shall provide or cause to be provided data on the use of its transmission lines and facilities.

(1) The forecast shall include data on all existing transmission lines and associated facilities of one hundred twenty-five kilovolts (KV) and above as defined by the commission, for year zero to year ten.

(2) The forecast shall include data on all planned transmission lines and associated facilities of one hundred twenty-five kilovolts (kV) and above as well

as substantial planned additions to, and replacement of existing facilities, as defined by the commission for year zero to year ten.

(3) The reporting electric transmission owner shall be prepared to supply to the commission on demand, additional data and maps of transmission lines and facilities.

(B) Transmission energy data and peak demand forecast forms.
The electric transmission owner's forecast presentation shall include the following elements presented on the forms supplied by the commission:

(1) Electric transmission owners shall file energy delivery forecast (megawatt hours/year) data: Actual and forecast as shown on form FE3-T1. The electric transmission owner shall indicate the total energy it received from all generating sources connected to their transmission system within Ohio as well as the total energy received from all generating sources connected to their system. They shall indicate the total energy received at interconnections with other electric transmission owners within Ohio as well as the total energy received from all its interconnections. The electric transmission owner shall report the total energy deliveries to interconnections within Ohio as well as to all its interconnections. The electric transmission owner shall report the total energy deliveries for loads within Ohio as well as to all load deliveries.

(2) Electric transmission owners shall file system seasonal peak load demand forecast: Actual and forecast system peak demand levels for summer and winter seasons as displayed on form FE3-T2, covering both native and internal loads, as defined in the form.

(3) Monthly data of energy and peak loads. The electric transmission owner shall specify in detail the methodology employed to produce monthly forecasts of energy and peak load for the current year and one year in the future. The reporting electric transmission owner shall provide or cause to be provided monthly information as required on the following forms:

(a) Total monthly energy forecast" forecast information concerning monthly energy forecasts shall be provided for two years on form FE3-T3.

(b) "Monthly internal peak load forecast" forecast information concerning monthly peak load forecasts shall be provided for two years on form FE3-T4.

(c) "Monthly energy transaction" the reporting electric transmission owner shall provide or cause to be provided monthly data on all energy received and delivered for the twelve months of the most recent year for which actual data is reported on the forms FE3-T5 and FE3-T6:

(i) On form FE3-T5 part A, the electric transmission owner shall provide or cause to be provided monthly data on all energy received under firm contract and nonfirm contract:

(a) From power plants directly connected to their transmission system.

(b) From other sources.

(c) The total energy received from all sources for the month.

(ii) On form FE~~3~~2-T5 part B, the electric transmission owner shall provide or cause to be provided monthly data on energy delivered under firm and nonfirm contract for the total system and for delivery points located in Ohio:

(a) The amount of power delivered to affiliated ~~EDUs~~ **electric utilities**.

(b) The amount of power delivered to other nonaffiliated investor-owned ~~EDUs~~ **electric utilities**.

(c) The amount of power delivered to cooperatively owned ~~EDUs~~ **electric utilities**.

(d) The amount of power delivered to municipally owned ~~EDUs~~ **electric utilities**.

(e) The amount of power delivered to federal and state electric agencies.

(f) The amount of power delivered for nondistribution service.

(g) The total amount of power delivered.

(iii) On form FE3-T5 part C, the electric transmission owner shall provide or cause to be provided monthly data on system losses and/or unaccounted for energy by firm and nonfirm transmission service.

(4) The reporting electric transmission owner shall provide or cause to be provided data on the operating conditions at the time of the monthly peak for each month during the most recent year for which actual data is shown on form FE3-T6:

(a) The peak demand, day of the week, date, and hour of peak.

(b) The number of requests for ATC.

(c) The amount of the ATC requested in MW.

(d) The number of ATC requests accepted.

(e) The amount of ATC accepted in MW.

(f) The amount of ATC request not accepted (MW) and the reason for not accepting.

(C) The existing transmission system.

(1) The reporting electric transmission owner shall provide or cause to be provided a brief narrative description of the existing electric transmission system and identify any transmission constraints and critical contingencies with and without the power transfers to the neighboring companies detailed in forms FE3-T7 and FE3-T8:

(a) A summary of the characteristics of existing transmission lines shall be shown as indicated in form FE3-T7, characteristics of existing transmission lines.

(b) A separate listing of substations for each line included in form ~~FE2~~FE3-T7 shall be shown as indicated in form ~~FE2~~FE3-T8, summary of existing substations.

(2) Each reporting electric transmission owner shall provide or cause to be provided maps of its electric transmission system as follows:

(a) One schematic map of the transmission network.

(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.

(c) 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.

(D) The planned transmission system.

The reporting electric transmission owner shall provide or cause to be provided a detailed narrative description of the planned electric transmission and identify any transmission constraints and critical contingencies with and without the power transfers to the neighboring companies and a description of the plans for development of facilities for years zero through ten as follows:

(1) Specifications of planned transmission lines shall be provided on form FE3-T9, specifications of planned electric transmission lines for:

(a) New lines requiring new rights-of-way.

(b) Lines in which changes of capacity, either in terms of current, voltage, or both, are scheduled to take place.

(c) Other changes in transmission lines or rights-of-way, which would be considered as substantial additions, as defined in rule 4906-1-02 of the Administrative Code.

(2) A listing of all proposed substations shall be provided in form FE3-T10, summary of proposed substations.

(3) The transmission forecast shall include maps of the planned transmission system as follows:

(a) An overlay to each of the maps required in paragraph (C) of this rule showing the planned transmission lines, substation, and generating plants as they will tie into the existing system; planned

lines shall be shown and identified as such and keyed into form FE3-T9, to provide as complete a picture of the system as is possible. Combined maps showing both existing and proposed facilities may be substituted for the overlays. Where planning horizons make it impractical to comply fully with the data requirements of this rule, as many data as are available shall be provided along with the estimated date on which additional data will be available.

(b) Two copies of the above overlay, 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.

(E) Substantiation of the planned transmission system.

The reporting electric transmission owner shall submit a substantiation of transmission development plans, including:

(1) Description and transcription diagrams of the base case load flow studies of the transmission owner's transmission system in Ohio, one for the current year and one as projected either three or five years into the future, and provide base case load flow studies on computer disks in PSSE or PSLF format along with transcription diagrams for the base cases.

(2) A tabulation of and transcription diagrams for a representative number of contingency cases studied along with a brief statements concerning the results.

(3) Analysis of proposed solutions to problems identified in paragraph (E)(2) of this rule.

(4) Adequacy of the electric transmission owner's transmission system to withstand natural disasters and overload conditions.

(5) Analysis of the electric transmission owner's transmission system to permit power interchange with neighboring systems.

(6) A diagram showing the electric transmission owner's import and export transfer capabilities and identifying the limiting element(s) during each season of the reporting period. In addition, the reporting electric transmission owner will provide a listing of transmission loading relief (TLR) procedures called during the last two seasons for which actual data

are available. That listing may include only those TLRs called as a result of a transmission limit on the reporting electric transmission owner's transmission system. For each TLR event, the listing shall include the maximum level, and the duration at the maximum level, and the magnitude (in MW) of the power curtailments.

(7) A description of any studies regarding transmission system improvement, including any studies of the potential for reducing line losses, thermal loading, and low voltage.

(8) A switching diagram of the transmission network.

(F) Regional and bulk power requirements.

To avoid the inefficiencies associated with having each electric transmission owner report this data, the electric transmission owners may have ~~ECAR or a successor organization~~the regional transmission system operator submit a single report on their behalf. This information shall be provided as soon as it becomes available. Data provided to the commission concerning the electric transmission owner's existing and planned bulk power transmission system (two hundred thirty kV and above) shall include the following:

(1) The most recent regional power supply existing facilities ~~existing~~ and an authorized map.

(2) A plan on the bulk power transmission network of the region in service (total ~~service area~~certified territory of the companies in the region including out-of-state ~~service areas~~certified territories) at the time of the report, including interfaces with adjoining regions.

(3) Regional transmission system power interchange matrix.

(4) A ~~description~~transmission diagram and ~~plot~~a summary of the ~~base case for~~ load flow base case studies of the bulk power network of the region as it now exists~~, substantially~~ at the time of ~~reporting, and a list of significant contingency cases~~ reporting.

(5) A plan of the bulk power transmission network of the region (including interties with adjoining regions) and the general routing of facilities committed or tentatively projected for service within ten years, including identification of principal substations, operating voltages, and projected in-service dates.

(6) ~~Information on reliability analysis~~A list and diagram showing transmission constrains of the bulk power transmission network, including ~~the criteria adopted by the regional council relating to network reliability~~ interconnections.

4901:5-5-04 ~~Forecasts~~Energy and demand forecasts for electric ~~distribution~~ utilities ~~(EDUs)~~.

(A) General guidelines.

(1) The reporting ~~EDU~~ person shall provide or cause to be provided data on the use of ~~its~~ the electric utility's distribution lines and facilities.

(2) The ~~EDU~~ reporting person shall specify in detail the methodology employed to produce monthly forecasts of energy and peak load for the current year and one year in the future.

(3) The reporting ~~EDU~~ person shall, ~~be prepared to~~ upon request, supply ~~to~~ the commission ~~on demand,~~ with additional data and maps of distribution lines and facilities.

(B) Distribution energy data and peak demand forecast forms.

The distribution forecast presentation shall include the following elements presented on forms supplied by the commission:

(1) ~~EDUs~~ Each electric utility shall file a ~~service area~~certified territory energy forecast (megawatt hours/year). ~~EDUs that~~ Each electric utility ~~operate~~ operating in Ohio shall furnish completed sets of FE4-D1, ~~FE4-D2~~ and FE4-~~D3~~ D2 forms:

(a) FE4-D1 shall contain data for only the Ohio portion of the reporting ~~EDU~~electric utility's total ~~service area~~certified territory.

~~(b)(b) FE4-D2 shall contain data for the reporting EDU's total service area.~~

~~(c)~~ ~~EDUs~~Electric utilities that are members of an integrated operating system and operated on a system basis shall also file FE4-D2~~FE4-D3~~ for the integrated system.

(2) Each electric utility ~~EDUs~~ shall file Ohio and~~a~~ system seasonal peak load demand forecasts:~~forecast:~~ Actual and forecast system peak demand levels for

summer and winter seasons as displayed on forms FE4-D3 and FE4-D4, ~~FE4-D5, and FE4-D6,~~ as follows:

(a) FE4-D3~~FE4-D4~~ shall contain data for only the Ohio portion of the reporting ~~EDU~~electric utility's total ~~service area~~certified territory.

~~(b)(b) FE4-D5 shall contain data for the reporting EDU's total service area.~~

~~(c)~~ ~~EDUs~~Electric utilities that are members of an integrated operating system and operated on a system basis shall also file form FE4-D4~~FE4-D6~~ for the integrated system.

(3) Monthly forecasts of energy and peak loads.

The ~~EDU~~electric utility shall specify in detail the methodology employed to produce monthly forecasts of energy and peak load for the current year and one year in the future. The reporting ~~EDU~~electric utility shall provide or cause to be provided monthly information as required on the following forms:

The ~~EDU~~electric utility shall specify in detail the methodology employed to produce monthly forecasts of energy peak load and resources for the current year and one year in the future. The reporting ~~EDU~~electric utility shall provide or cause to be provided monthly information as required on the following forms:

(a) From FE4-D5, monthly net energy for load forecast.

~~(a) From FE4-D7, total monthly energy forecast.~~

(b) Form FE4-D6,~~FE4-D8,~~ monthly native and internal peak load forecasts. ~~forecast.~~

(C) Substantiation of the planned distribution system.

The reporting ~~EDU~~electric utility shall submit a substantiation of distribution development plans, including:

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

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

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

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

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

(4) Analysis and consideration of any studies regarding distribution system improvement, including any studies of the potential for reducing line losses, thermal loading and low voltage or any other problems.

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

4901:5-5-05 Resource plans for electric distribution utilities.

(A) When filing the long-term forecast report, the following shall also be considered:

(1) When filing the long-term forecast report, an electric utility shall include all resource plan requirements in rule 4901:5-5-05 subsequent to filing an application under division (B)(2)(b) and/or (B)(2) (c) of section 4928.143 of the Revised Code.

(2) An electric utility shall include all resource plan requirements set forth in rule 4901:5-5-05 with its long-term forecast report for the life of any electric generating facility subject to recovery pursuant to division (B)(2)(b) and/or (B)(2)(c) of section 4928.143 of the Revised Code.

(3) An electric utility may include a resource plan as set forth rule 4901:5-5-05 with any long-term forecast report filing.

(B) Special subject areas.

(1) The integrated resource plan shall contain a narrative discussion and analysis of:

(a) Anticipated technological changes which may be expected to influence the reporting utility's generation mix, use of energy efficiency and peak demand reduction programs, availability of fuels, type of generation, use of alternative energy resources pursuant to section 4928.64 of the Revised Code or techniques used to store energy for peak use;

(b) Availability and potential development of alternative energy resources pursuant to section 4928.64 of the Revised Code for generating electricity;

(c) Research, development and demonstration efforts made in paragraph (A)(1)(a) of this rule, or otherwise, including expenditure information and description of specific investigations (no proprietary information should be included) and the nature and timing of anticipated results of these investigations; and

(d) The impact of environmental regulations pursuant to section 4928.143 of the Revised Code on generating capacity, cost, and reliability (provide precise quantitative estimates or historical data if available).

(2) Textual material not specifically required but of importance to the resource forecast of the reporting utility may be included in the appropriate section.

(C) Existing generating system description.

(1) The reporting utility shall provide a brief summary narrative of the existing electric generating system (which is detailed in paragraph (E)(1) of this rule). If a hearing is to be held on the forecast in the current year, the reporting utility shall submit to the commission with its long-term forecast report, the anticipated operating, maintenance, and fuel expense of each unit for each year of the forecast period. The commission may make exceptions to this paragraph for good cause.

(2) A summary of the pooling, mutual assistance, and all agreements for purchasing from and selling power and energy to other utilities or non-utility generators, including costs and amounts, shall be provided and reconciled with the information required in paragraph (E)(2)(b) of this rule.

(D) Need for additional electricity resource options.

(1) The reporting utility shall describe the procedure followed in determining the need for additional electricity resource options. All major factors shall be discussed, including but not limited to:

(a) System load profile.

(b) Maintenance requirements of existing and planned units.

(c) Unit size and availability of existing and planned units.

(d) Forecast uncertainty.

(e) Electricity resource option uncertainty with respect to cost, availability and performance.

(f) Lead time for construction or implementation of planned electricity resource options.

(g) Power interchange with other electric systems, including consideration of the ability to sell power.

(h) Price responsive demand and price elasticity.

(i) Regulatory climate.

(j) Reliability criteria, including a discussion and analysis of the reporting utility's reliability criteria and factors influencing their selection, including but not limited to:

(i) Reliability measures used and factors including the selection.

(ii) Engineering analysis performed.

(iii) Economic analysis performed.

(iv) Any judgments applied.

(2) A discussion of the utility's projected system reliability shall be presented. It shall include a discussion of the projected adequacy of the existing system in both the short term and long term.

(E) Resource plan.

(1) This paragraph shall include the utility's projected mix of resource options to meet the base case projection of peak demand and total energy requirements.

(2) A discussion of the utility's projected system reliability shall be presented. It shall include:

(a) A discussion of the future adequacy of the utility's projected system in both the short term and long term.

(b) A discussion of the future adequacy of fuel supplies in both the short term and long term. Additionally, the reporting utility shall provide, for the forecast period, a description of its overall fuel procurement policies and procedures. A description of the system's fuel requirements, the system's geographic source of fuel supply, and the percentage of fuel supply under contract shall be included.

(3) The utility shall demonstrate the cost-effectiveness of the plan through a comparison over the ten-year forecast horizon of the revenue requirement and rate impacts of the selected plan and alternative plans evaluated pursuant to section 4928.143 of the Revised Code. The selection of the plan shall demonstrate adequate consideration of the risks, reliability, and uncertainties associated with the person's selected plan and alternative plans, and of other factors the utility deems appropriate.

(4) The methodology for arriving at the plan must be fully explained and described. The description must be sufficiently explicit, detailed and complete to allow the commission and other knowledgeable parties to understand how the assessment was conducted. This description shall also include:

(a) A general discussion of the decision-making process, criteria, and standards employed by the company as it relates to the development of the integrated resource plan.

(b) A discussion of how the plan is consistent with the person's overall planning objectives from paragraph (A) of rule 4901:5-5-02 of the Administrative Code.

(c) A discussion of key assumptions and judgments used in development of the integrated resource plan.

(5) The reporting utility shall provide information sufficient for the commission to determine the reasonableness of the integrated resource

plan. In determining the reasonableness of an integrated resource plan the commission will consider:

(a) The adequacy, reliability and cost-effectiveness of the plan.

(b) Whether the methodology used to develop the plan evaluates demand-side management programs and non-utility generation in a manner consistent with utility generation and other electricity resource options.

(c) Whether the plan gives adequate consideration to the following factors:

(i) Uncertainty in load forecasts and electricity resource option cost, availability, and performance estimates.

(ii) Potential rate and customer bill impacts of the plan.

(iii) Environmental impacts of the plan and their associated costs.

(iv) Other significant economic impacts and their associated costs.

(v) Impacts of the plan on the financial status of the company.

(vi) Other strategic considerations including flexibility, diversity, the size and lead time of commitments, and lost opportunities for investment.

(vii) Equity among customer classes.

(viii) The impacts of the plan over time.

(d) Such other matters the commission considers appropriate.

(F) Electricity resource forecast forms. The resource presentation shall include the following elements presented on the indicated forms contained in this rule:

(1) Form FE5-D1, "Monthly Forecast of Electric Utility's Ohio Service Area Peak Load and Resources Dedicated to Meet Ohio Service Area Peak Load." Forecast information concerning monthly loads and resources shall be provided for two years on form FE5-D1.

(2) Form FE5-D2, "Monthly Forecast of System Peak Load and Resources Dedicated to Meet System Peak Load." Forecast information concerning

monthly loads and resources shall be provided for two years on form FE5-D2.

(3) Existing system description. The reporting utility shall provide the existing electric system generating capability both inside and outside Ohio in summary form as indicated in form FE5-D3: "Summary of Existing Electric Generation Facilities for the System."

(4) Long-term forecast requirements. The reporting utility shall provide a ten-year forecast which shall identify the electricity resource options (including purchased power) expected to be needed to meet forecast system load levels, as identified in the demand forecast (paragraph (D)(6) of this rule). The following forms shall be provided.

(a) Form FE5-D4: "Actual Generating Capability Dedicated to Meet Ohio Peak Load."

(b) Form FE5-D5: "Projected Generating Capability Changes To Meet Ohio Peak Load." A summary and reconciliation of the information given in form FE5-D10 shall be provided by the completion of form FE5-D5.

(c) Form FE5-D6: "Electric Utility's Actual and Forecast Ohio Peak Load and Resources Dedicated to Meet Ohio Peak Load." Actual and forecast information concerning summer seasonal loads and resources shall be provided for years minus five through ten on form FE5-D6.

(d) Form FE5-D7: "Actual and Forecast System Peak Load and Resources Dedicated to Meet System Peak Load." Actual and forecast information concerning summer seasonal loads and resources shall be provided for years minus five through ten on form FE5-D7.

(e) Form FE5-D8: "Electric Utility's Actual and Forecast Ohio Peak Load and Resources Dedicated to Meet Ohio Peak Load." Actual and forecast information concerning winter seasonal loads and resources shall be provided for years minus five through ten on form FE5-D8.

(f) Form FE5-D9: "Actual and Forecast System Peak Load and Resources Dedicated to Meet System Peak Load." Actual and forecast information concerning winter seasonal loads and resources shall be provided for years minus five through ten on form FE5-D9.

(5) Plans for development of facilities in the forecast period. Information regarding new generating capacity shall be provided for each planned facility on form FE5-D10: "Specifications of Planned Electric Generation Facilities."

(a) All information on facilities which will commence operating during the forecast period and facilities on which construction will commence during the forecast period shall be displayed, and

(b) Each applicable facility shall be keyed to the capacity increases summarized in form FE5-D5, indicating the amount and timing of additional generating capability provided.

Chapter 4901:5-7

Gas and Natural Gas Forecast Reports

4901:5-7-01 Definitions~~Gas and natural gas demand forecasts for gas distribution companies serving more than one hundred thousand customers~~.

~~(A) Definitions.~~ Unless otherwise specified, all terms used in Chapter 4901:5-7 of the Administrative Code ~~are~~ have the same meaning as ~~those found~~used in the fourth edition "Glossary For The Gas Industry" published by the planning and analysis group of the "American Gas Association." The following definitions apply to this chapter:

(A) "Commission" means the public utilities commission of Ohio.

(B) "Energy conservation" means the effect upon gas demand resulting from customer adoption and use of measures, standards, equipment, or techniques designed, at least in part, to decrease gas consumption or to increase efficiency of gas use. Energy conservation may include the result of increases in price, but does not include price-induced fuel switching.

(~~1~~C) "Energy-price relationships" means the calculated or observed effects on gas demand resulting from changes in the customer price of gas or other fuels. It consists of both energy conservation effects which reduce customer energy use directly and effects which cause customers to switch to or from utility-provided gas.

(D) "Forecast period" means year zero through year ten.

(~~2~~E) "Forecast year," "year of the forecast," or "year zero" means the year in which the forecast is filed.

(F) "Fuel switching" means the substitution of one energy source for another in a particular end use or process, as a result of changing relative prices or technologies.

(G) "Gas distribution line and associated facility" means a pipeline and associated facilities other than gathering or transmission line in a distribution area.

(H) "Gas gathering line and associated facility" means a pipeline and associated facilities which transport gas from a current production facility to a transmission line or main.

(I) "Gas or natural gas transmission line and associated facilities" has the meaning set forth in rule 4906-1-02 of the Administrative Code.

(J) "Long-term forecast report" has the meaning set forth in section 4935.04 of the Revised Code.

(K) "Person" has the meaning set forth in sections 4906.01 and 4935.04 of the Revised Code.

(L) "Reporting period" means year minus five through year ten.

~~(3) "Energy conservation" means the effect upon gas demand resulting from customer adoption and use of measures, standards, equipment, or techniques designed, at least in part, to decrease gas consumption or to increase efficiency of gas use. Energy conservation may include the result of increases in price, but does not include price induced fuel switching.~~

(~~4~~M) "Self-help gas and other transported gas" means natural or synthetic gas owned by or acquired on behalf of an end-user or owned by another person which was developed independently or acquired from a third party, but which requires the use of one or more company or utility to transport the gas to the end-user.

~~(5) "Forecast period" means year zero through year ten.~~

~~(6) "Reporting period" means year minus five through year ten.~~

(7N) "Service area" means the geographic area within Ohio in which the company renders service to wholesale and retail consumers of gas.

~~(8) "Fuel switching" means the substitution of one energy source for another in a particular end use or process, as a result of changing relative prices or technologies.~~

4901:5-7-02 Gas and natural gas demand forecasts for gas distribution companies serving more than one hundred thousand customers.

(~~B~~A) General guidelines. The following guidelines shall be used in the preparation of the demand forecast:

(1) The demand forecast must be based upon independent analysis by the reporting utility.

(2) The demand forecast may be based on those forecasting methods which yield the most useful results to the utility.

(3) Where the required data have not been calculated directly, relevant conversion factors shall be displayed.

(4) All gas volumes shall be reported at 14.73 psia.

(5) If there are differences between data in the forecast report and similar actual and forecast data in other forms filed with the commission (e.g, federal energy regulatory commission form 2), the reporting utility shall note and explain any discrepancies.

(~~C~~B) Special subject areas.

(1) The following matters shall specifically be addressed:

(a) A description of the extent to which the reporting utility coordinates its load forecasts with those of other systems such as affiliated systems in a holding company group, or other neighboring systems and, if the reporting utility is a combination utility, a description of the coordination of its gas load forecast with its electric load forecast.

(b) A description of the manner in which such forecasts are coordinated, and any problems experienced in efforts to coordinate load forecasts.

(c) A brief description of any computer modeling, demand forecasting, polls, surveys, or data-gathering activities used in preparation of the forecast.

(d) Research and development efforts anticipated to affect supply or demand, including expenditure information and description of specific investigations (no proprietary information should be included) and the nature and timing of anticipated results of these investigations.

(2) No later than six months prior to the required date of submission of the forecast, the commission shall supply reporting utilities:

(a) Copies of appropriate commission or other state documents or public statements that include the state energy policy for consideration in preparation of the forecast.

(b) Such current energy policy changes or deliberations which, due to their immediate significance, the commission determines to be relevant for specific identification in the forecast (including but not limited to new legislation, regulations, or adjudicatory findings). It is the commission's intent that such additional factors be limited to issues of current policy which may influence the forecast, but which otherwise may not have been specifically identified by the reporting utility. The reporting utility shall, to the extent possible, provide either a discussion of the impacts of such factors on the forecast or demonstrate how it has taken these factors into account in its forecast. The reporting utility need not adopt such factors as a part of its forecast.

(3) Energy conservation:

(a) A description of, and justification for, the methodologies employed for determining energy conservation shall be included.

(b) Programs and policies of the reporting utility which support energy conservation shall be described.

(c) To the extent possible, identify changes during the forecast period due to energy conservation for:

(i) Annual usage by major customer class.

(ii) System winter season usage.

(iii) System peak day usage.

(d) To the extent possible, identify changes during the forecast period in energy demand due to market penetration of equipment or techniques designed to produce energy conservation.

(4) Energy-price relationships:

(a) To the extent possible, identify changes during the forecast period in energy demand by major customer class and system peak due to customer energy prices. Identify and describe how such changes are accounted for in the forecast.

(b) Describe the methodologies for determining such energy-price relationships, including justification for the methodologies employed.

(5) Fuel switching:

(a) To the extent possible, identify changes during the reporting period in gas demand by major customer class due to fuel switching. Include where practicable the specific type of application for which fuel switching is expected and associated volumes in each customer class expected to switch and how such changes are accounted for in the forecast.

(b) Describe the methodologies for determining such fuel switching, including justification for the methodologies employed.

(6) Self-help and other transported gas:

(a) To the extent possible, identify changes during the reporting period in gas demand by major customer class due to customer obtained self-help gas or other transported gas. Include a description of the company's policy toward the transportation of self-help gas.

(b) Describe the methodologies for determining the volumes described above, including the justification for the methodologies employed.

(c) Discuss the effect on gas demand of current state and federal policies toward the transportation of natural gas.

(7) Textual material not specifically required but of importance to the demand forecast of the reporting utility may be included in an appropriate section.

(~~D~~C) Forecast documentation. The purpose of the documentation section of the report is to permit a thorough review of the forecast methodology and test its validity. The documentation when combined with the data tape provided under paragraph (D)(3)(b) of this rule should be thorough enough to permit replication of the forecast results by the commission or other parties who have prima facie expertise in forecasting. The components of the forecast documentation shall include:

(1) Forecast methodology. The reporting utility shall specify in detail for both the load and peak forecast the methodology employed, including:

(a) Overall methodological framework chosen.

(b) Specific analytical techniques used, their purpose, and the forecast component to which they are applied.

(c) The manner in which specific techniques are related in producing the forecast.

(d) Where statistical techniques have been used.

(i) All relevant equations.

(ii) The results of appropriate statistical tests.

(iii) A description of the technique.

(iv) The reason for choosing the technique.

(v) Identification of significant computer software used.

(e) An explanation of how interruptibles, curtailables, and other non-firm requirements are forecast, how they are treated in the total forecast and an identification of demand volumes subject to interruption or curtailment and other non-firm demand.

(f) A brief description of any alternative methodologies attempted and a discussion of the results.

(g) An identification of customer usage factors and a description of how they are used within the forecast.

(h) Where the methodology for any major customer class has changed significantly from the previous year, a discussion of the rationale for the change.

(i) Where surveys are used, a display of:

(i) Assumptions provided to those surveyed, if any (e.g., gas price forecasts, price forecasts of alternate fuels).

(ii) Copies of any forms used in the survey.

(iii) Survey technique used.

(2) Assumptions and special information. The reporting utility shall:

(a) For each significant assumption made in preparing the forecasts include a discussion of the basis for the assumption and the impact it has on the forecast results. Give sources of the assumption if other than the reporting utility.

(b) Specifically address each of the following:

(i) Current and future relative prices and availability of conventional fuels by major customer class for the forecast period and its effect on the forecast.

(ii) Current and future relative prices and availability of alternative energy sources and technologies (including but not limited to solar, wind, waste, and wood) for the forecast period and its effect on the forecast.

(iii) Pricing policy, including:

(*a*) Alternative rate structures.

(*b*) Predicted consumption effects for each customer class.

(c) Predicted natural gas price behavior.

(iv) Economic and demographic trends within the utility's service area.

(v) Assumed inflation rate.

(vi) Anticipated penetration of cogeneration technology in each customer class and its likely effect on demand for natural gas.

(vii) Residential customers, including:

(a) Number of year-end residential customers disaggregated by heat and non-heat for the past five years, the current year, and the number anticipated for the next ten years.

(b) Specific data and sources of population and household data upon which customer projections are based.

(c) Where official state population projections are not used, an explanation of why alternative population projections are employed.

(viii) A listing of all customer groups included in the "other" category on form FG1-1.

(ix) Other assumptions critical to forecast techniques or company operating procedures.

(x) To the extent possible, the impact of changes in appliance saturation on total residential demand and on usage per residential customer.

(xi) For years minus five through minus one the reporting utility shall provide weather-adjusted (normalized) sales volumes, by major customer class and total sales, with a brief description of how the adjustments were obtained.

(c) Identify special information bearing on the forecast (e.g., the existence of a major planned industrial expansion program in the area of service).

(3) Data base documentation. The responsibilities of the reporting utility with regard to its forecast data base are as follows:

(a) The reporting utility shall provide:

(i) A brief description of all data sets used in making the forecast, both internal and external, input and output, and a citation to the sources.

(ii) The reasons for the selection of the specific data base used.

(iii) A clear identification of any adjustments made to raw data in order to adapt them for use in the forecast, including for each adjustment, to the extent practicable:

(*a*) The nature of the adjustment made.

(*b*) The basis for the adjustment made.

(*c*) The magnitude of the adjustment.

(b) If a hearing is to be held on the forecast in the current forecast year, the reporting utility shall submit to the commission with its long-term forecast report a documented magnetic tape (1600 BPI, 9 track, EBCDIC) containing all data series, both input and output, raw and adjusted, and model equations used in the preparation of the forecast. The commission may make exceptions to paragraph (D)(3) of this rule for good cause.

(c) The reporting utility shall be prepared to provide to the commission on request:

(i) Copies of all data sets used in making the forecasts, including both raw and adjusted data, input and output data, and complete descriptions of any mathematical, technical, statistical, or other model used in preparing the data.

(ii) A narrative explaining the data sets, and any adjustments made with the data to adapt it for use in the forecast.

(~~E~~D) Demand forecast forms. The demand presentation shall include the following elements presented on the indicated forms supplied by the commission.

(1) Service area natural gas demand; actual and forecast Ohio service area natural gas demand (MMCF/year) displayed by major customer class as indicated in form FG1-1.

(2) Service area natural gas demand by industrial sectors: actual and forecast natural gas demand in Ohio only (MMCF/year) by industrial sectors displayed for each of the standard industrial classification (SIC) codes indicated on form FG1-2.

(3) Monthly gas sendout: a month-by-month forecast of gas sendout in the service area for the current year and the following two years, as indicated on form FG1-3 (this sendout shall conform to the most likely growth scenario).

(4) Range of forecasts: a range of forecasts provided on form FG1-4 for natural gas sales volumes by residential, commercial, and industrial sector and total sales volumes. The range of forecasts shall consist of, at a minimum, three scenarios (highest, lowest, and most likely growth). The methodology for the range forecast shall be determined by the reporting utility and may be based on confidence intervals, different assumptions, or whatever techniques the reporting utility finds appropriate.

(5) Peak and forecast design day requirements: historical peak requirements and forecast design day requirements (MMCF) as indicated on form FG1-5.

(6) Self-help and other transported gas: historical and forecast self-help gas volumes as transported and anticipated to be transported by the reporting utility as indicated on form FG1-6.

4901:5-7-~~02~~03 Gas and natural gas supply forecasts for gas distribution companies serving more than one hundred thousand customers.

(A) General guidelines. The supply estimates used in these forecasts must be based upon the reporting utility's independent analysis of alternative sources of gas as well as its current sources. When data is based on material received from current or prospective suppliers, the reporting utility must show that it has made an independent review of such data and arrived at its own analysis of the probable future availability and price of gas from the source in question.

(B) Special subject areas.

(1) The forecast shall contain a copy of the most recent annual report to shareholders of the reporting utility and of any parent company of the reporting utility. A photocopy is acceptable.

(2) One completed copy of securities exchange commission form 10K, "Annual Report to the Securities Exchange Commission," shall be filed at the time it is available as part of the reporting utility's annual forecast filing. If the reporting utility does not file such a form and a comparable form is prepared by the parent company, then the parent company's form shall be filed at the time it is available as part of the annual forecast filing.

(3) Compatibility with other filings. If there are differences between data in the forecast report and similar actual or forecast data in other forms filed with the commission (e.g., federal energy regulatory commission form 2), the reporting utility shall note and explain any discrepancies.

(4) The forecast shall contain a description of the reporting utility's policies and activities involving the procurement of Ohio gas, the impact of such procurement upon the reliability of the reporting utility's gas supply, and the compatibility of such policies and activities with a least-cost procurement plan.

(C) Gas and natural gas supply forecast discussion. A narrative shall be prepared which includes a general description of the methods and procedures used to develop the reporting utility's forecast of:

(1) Gas supply, by source including geographic source.

(2) Gas supply prices, by source.

(3) Natural gas storage facilities.

(D) Projected sources of gas. A narrative shall be prepared which includes the following.

(1) A description of the projected sources of gas for the forecast period. This description shall include the following:

(a) A list of the projected sources of gas for the forecast period.

(b) A description of the role of company- owned gas in the future supply mix.

(c) A description of the anticipated use of storage facilities in the future supply mix.

(d) The anticipated use of firm and interruptible transportation to obtain gas for system supply and the effect of state and federal policies toward the transportation of natural gas on the reporting utility's supply mix.

(2) A description of those factors which may have an impact on the reporting utility's projected natural gas supplies and its future construction of additional facilities, including but not limited to interconnections with alternate supplies.

(E) Reliability of gas sources. A narrative shall be prepared which includes the following:

(1) The reporting utility's working definition(s) of gas supply reliability.

(2) A description of the methods used by the reporting utility to quantitatively or qualitatively measure gas supply reliability.

(3) The reliability of gas sources over the past five years and the anticipated reliability of each of the reporting utility's gas sources over the forecast period.

(F) Analysis of system peak and winter season planning. The reporting utility shall provide an analysis of its ability to meet peak requirements under design weather conditions throughout the forecast period and shall also provide a description of supply projections for meeting winter season requirements.

(G) Supply forecast forms. The supply presentation shall include the following elements presented on the indicated forms supplied by the commission.

(1) Gas supplies: actual and forecast gas supply volumes (MMCF/year) by source, as indicated in form FG2-1.

(2) Gas prices: actual and forecast gas supply prices (annual average $/MCF) by source, as indicated in Form FG2-2.

(3) Peak and design day supply: historical and forecast peak day supplies (MMCF) by source, as indicated in form FG2-3.

(4) Natural gas storage facilities: a list of wholly or jointly owned or leased storage facilities, existing and planned over the forecast period, as indicated in form FG2-4.

(5) Propane facilities: a list of existing facilities and those planned over the forecast period, as indicated in form FG2-5.

(6) Other peaking facilities: a list of other sources of peaking gas supplies not included in paragraphs (G)(4) and (G)(5) of this rule, as indicated in form FG2-6.

(H) The reporting utility shall independently develop a long-term strategic supply plan for the purpose of assisting it in operating within a changing natural gas industry environment. The long-term strategic supply plan shall be structured in a manner which provides the most useful results to the utility.

4901:5-7-~~03~~04 Resource forecasts and site inventories of transmission facilities for gas distribution companies serving more than one hundred thousand customers.

(A) General guidelines.

(1) The forecast shall include data on all existing and planned transmission lines and associated facilities, planned additions to, and replacement of, existing facilities, as defined by section 4906.01 of the Revised Code and rule 4906-1-02 of the Administrative Code, as well as any such gas lines leased or acquired.

(2) The reporting utility shall be prepared to provide the commission, on request, additional maps of transmission facilities.

(B) The existing transmission system.]

(1) The reporting utility shall provide a brief narrative description of the existing gas transmission system which is detailed in form FG3-1.

(2) Each reporting utility shall provide maps of the gas transmission system within Ohio through which the reporting utility provides service as follows:

(a) A map showing the actual, physical routing of the transmission lines, pumping stations, city gates, storage facilities, system interconnections,

geographic landmarks, major interstate and intrastate pipelines, major metropolitan areas, and major highways.

(b) One copy of the map described in paragraph (B)(2)(a) of this rule, for commission use, on a 1:250,000 scale. The utilities may jointly provide one set of maps to meet this requirement. Participation in the commission's joint mapping project will meet this requirement.

(C) The planned transmission system. The transmission forecast shall include maps of the planned transmission system as follows:

(1) An overlay to each of the maps required in paragraph (B) of this rule showing the planned transmission lines and associated facilities as they will tie into the existing system; planned lines shall be shown and identified as such and keyed into form FG3-2 to provide as complete a picture of the system as is possible. Combined maps showing both existing and proposed facilities may be substituted for the overlays. Where planning horizons make it impractical to comply fully with the data requirements of this rule, as many data as are available shall be provided along with the estimated date on which additional data will be available.

(2) Two copies of the above overlay, for commission use, on a scale of 1:250,000 participation in the commission's joint mapping project will meet this requirement.

(D) Transmission forecast forms. The reporting utility shall provide, on forms supplied by the commission:

(1) A summary of the characteristics of existing transmission lines as indicated in Form FG3-1, "Characteristics of Existing Transmission Lines."

(2) Specifications of planned transmission lines as indicated in form FG3-2, "Specifications of Planned Gas Transmission Lines."

4901:5-7-~~04~~05 Gas and natural gas demand forecasts for gas distribution companies serving fifteen thousand to one hundred thousand customers.

(A) Definitions. Unless otherwise specified, all terms used in Chapter 4901:5-7 of the Administrative Code are the same as those found in the fourth edition "Glossary

For The Gas Industry" published by the planning and analysis group of the "American Gas Association." The following definitions apply to this chapter:

(1) "Energy-price relationships" means the calculated or observed effects on gas demand resulting from changes in the customer price of gas or other fuels. It consists of both energy conservation effects which reduce customer energy use directly and effects which cause customers to switch to or from utility-provided gas.

(2) "Forecast year," "year of the forecast," or "year zero" means the year in which the forecast is filed.

(3) "Energy conservation" means the effect upon gas demand resulting from customer adoption and use of measures, standards, equipment, or techniques designed, at least in part, to decrease gas consumption or to increase efficiency of gas use. Energy conservation may include the result of increases in price, but does not include price-induced fuel switching.

(4) "Self-help gas and other transported gas" means natural or synthetic gas owned by or acquired on behalf of an end-user or owned by another person which was developed independently or acquired from a third party, but which requires the use of one or more company or utility to transport the gas to the end-user.

(5) "Forecast period" means year zero through year ten.

(6) "Reporting period" means year minus five through year ten.

(7) "Service area" means the geographic area within Ohio in which the company renders service to wholesale and retail consumers of gas.

(8) "Fuel switching" means the substitution of one energy source for another in a particular end use or process, as a result of changing relative prices or technologies.

(B) General guidelines. The following guidelines shall be used in the preparation of the demand forecast:

(1) The demand forecast must be based upon independent analysis by the reporting utility.

(2) The demand forecast may be based on those forecasting methods which yield the most useful results to the utility.

(3) Persons filing forecast reports under this rule may use common methodologies and participate in joint hearings.

(4) Where the required data have not been calculated directly, relevant conversion factors shall be displayed.

(5) All gas volumes shall be reported at 14.73 psia.

(C) Special subject areas.

(1) The following matters shall specifically be addressed:

(a) A description of the extent to which the reporting utility coordinates its load forecasts with those of other systems such as affiliated systems in a holding company group; or other neighboring systems and, if the reporting utility is a combination utility, a description of the coordination of its gas load forecast with its electric load forecast.

(b) A description of the manner in which such forecasts are coordinated, and any problems experienced in efforts to coordinate load forecasts.

(c) A brief description of any computer modeling, demand forecasting, polls, surveys, or data-gathering activities used in preparation of the forecast.

(2) Energy conservation:

(a) A description of, and justification for, the methodologies employed for determining energy conservation shall be included.

(b) Programs and policies of the reporting utility which support energy conservation shall be described.

(c) To the extent possible, identify changes during the forecast period due to energy conservation for:

(i) Annual usage by major customer class.

(ii) System winter season usage.

(iii) System peak day usage.

(d) To the extent possible, identify changes during the forecast period in energy demand due to market penetration of equipment or techniques designed to produce energy conservation.

(3) Energy-price relationships:

(a) To the extent possible, identify changes during the forecast period in energy demand by major customer class and system peak due to customer energy prices. Identify and describe how such changes are accounted for in the forecast.

(b) Describe the methodologies for determining such energy-price relationships, including justification for the methodologies employed.

(4) Fuel switching:

(a) To the extent possible, identify changes during the reporting period in gas demand by major customer class due to fuel switching. Include where practicable the specific type of application for which fuel switching is expected and associated volumes in each customer class expected to switch and how such changes are accounted for in the forecast.

(b) Describe the methodologies for determining such fuel switching, including justification for the methodologies employed.

(5) Self-help and other transported gas:

(a) To the extent possible, identify changes during the reporting period in gas demand by major customer class due to customer obtained self-help gas or other transported gas. Include a description of the company's policy toward the transportation of self-help gas.

(b) Describe the methodologies for determining the volumes described above; including the justification for the methodologies employed.

(c) Discuss the effect on gas demand of current state and federal policies toward the transportation of natural gas.

(6) Textual material not specifically required but of importance to the demand forecast of the reporting utility may be included in an appropriate section.

(D) Forecast documentation. The purpose of the documentation section of the report is to permit a thorough review of the forecast methodology and test its validity. The documentation when combined with the data provided under paragraph (D)(3)(b) of this rule should be thorough enough to permit replication of the forecast results by the commission or other parties who have prima facie expertise in forecasting. The components of the forecast documentation shall include:

(1) Forecast methodology. The reporting utility shall specify in detail for both the load and peak forecast the methodology employed, including:

(a) Overall methodological framework chosen.

(b) Specific analytical techniques used, their purpose, and the forecast component to which they are applied.

(c) The manner in which specific techniques are related in producing the forecast.

(d) Where statistical techniques have been used:

(i) All relevant equations.

(ii) The results of appropriate statistical tests.

(iii) A description of the technique.

(iv) The reason for choosing the technique.

(v) Identification of significant computer software used.

(e) An explanation of how interruptibles, curtailables and other non-firm requirements are forecast, how they are treated in the total forecast, and an identification of demand volumes subject to interruption or curtailment and other non-firm demand.

(f) A brief description of any alternative methodologies attempted and a discussion of the results.

(g) An identification of customer usage factors and a description of how they are used within the forecast.

(h) Where the methodology for any major customer class has changed significantly from the previous year, a discussion of the rationale for the change.

(i) Where surveys are used, a display of:

(i) Assumptions provided to those surveyed, if any (e.g., gas price forecasts, price forecasts of alternate fuels).

(ii) Copies of any forms used in the survey.

(iii) Survey technique used.

(2) Assumptions and special information. The reporting utility shall:

(a) For each significant assumption made in preparing the forecasts include a discussion of the basis for the assumption and the impact it has on the forecast results. Give sources of the assumption if other than the reporting utility.

(b) Specifically address each of the following:

(i) Current and future relative prices and availability of conventional fuels by major customer class for the forecast period and its effect on the forecast.

(ii) Current and future relative prices and availability of alternative energy sources and technologies (including but not limited to solar, wind, waste, and wood) for the forecast period and its effect on the forecast.

(iii) Pricing policy, including:

(*a*) Alternative rate structures.

(*b*) Predicted consumption effects for each customer class.

(*c*) Predicted natural gas price behavior.

(iv) Economic and demographic trends within the utility's service area.

(v) Assumed inflation rate.

(vi) Anticipated penetration of cogeneration technology in each customer class and its likely effect on demand for natural gas.

(vii) Residential customers, including:

(*a*) Number of year-end residential customers disaggregated by heat and non-heat for the past five years, the current year and the number anticipated for the next ten years.

(*b*) Specific data and sources of population and household data upon which customer projections are based.

(*c*) Where official state population projections are not used, an explanation of why alternative population projections are employed.

(viii) A listing of all customer groups included in the "other" category on form FG1-1.

(ix) Other assumptions critical to forecast techniques or company operating procedures.

(x) To the extent possible, the impact of changes in appliance saturation on total residential demand and on usage per residential customer.

(xi) For years minus five through minus one the reporting utility shall provide weather-adjusted (normalized) sales volumes, by major customer class and total sales, with a brief description of how the adjustments were obtained.

(*c*) Identify special information bearing on the forecast (e.g., the existence of a major planned industrial expansion program in the area of service).

(3) Data base documentation. The responsibilities of the reporting utility with regard to its forecast data base are as follows.

(a) The reporting utility shall provide:

(i) A brief description of all data sets used in making the forecast, both internal and external, input and output, and a citation to the sources.

(ii) The reasons for the selection of the specific data base used.

(iii) A clear identification of any adjustments made to raw data in order to adapt them for use in the forecast, including for each adjustment, to the extent practicable:

(*a*) The nature of the adjustment made;

(*b*) The basis for the adjustment made; and

(*c*) The magnitude of the adjustment.

(b) The reporting utility shall be prepared to provide to the commission, on request:

(i) Copies of all data sets used in making the forecasts, including both raw and adjusted data, input and output data, and complete descriptions of any mathematical, technical, statistical, or other model used in preparing the data.

(ii) A narrative explaining the data sets, and any adjustments made with the data to adapt it for use in the forecast.

(E) Demand forecast forms. The demand presentation shall include the following elements presented on the indicated forms supplied by the commission.

(1) Service area natural gas demand: actual and forecast Ohio service area natural gas demand (MMCF/year) displayed by sector, as indicated on form FG1-1.

(2) Monthly gas sendout: a month-by-month forecast of gas sendout in the service area for the current year and the following two years, as indicated on form FG1-3 (these volumes shall conform to the most likely growth scenario).

(3) Range of forecasts: a range of forecasts provided on form FG1-4 for natural gas sales volumes by residential, commercial, and industrial sectors and total sales volumes. The range of forecasts shall consist of, at a minimum, three

scenarios (highest, lowest, and most likely growth). The methodology for the range forecast shall be determined by the reporting utility and may be based on confidence intervals, different assumptions, or whatever techniques the reporting utility finds appropriate.

(4) Peak and forecast design day requirements: historical peak requirements and forecast design day requirements (MMCF) as indicated on form FG1-5.

(5) Self-help and other transported gas: historical and forecast self-help gas volumes as transported and anticipated to be transported by the reporting utility as indicated on form FG1-6.

4901:5-7-~~05~~06 **Gas and natural gas supply forecasts for gas distribution companies serving fifteen thousand to one hundred thousand customers.**

(A) General guidelines. The supply estimates used in these forecasts must be based upon the reporting utility's independent analysis of alternative sources of gas as well as its current sources. When data is based on material received from current or prospective suppliers, the reporting utility must show that it has made an independent review of such data and arrived at its own analysis of the probable future availability and price of gas from the source in question.

(B) Special subject areas.

(1) The forecast shall contain a copy of the most recent annual report to shareholders of the reporting utility and of any parent company of the reporting utility. A photocopy is acceptable.

(2) One completed copy of securities exchange commission form 10K, "Annual Report to the Securities Exchange Commission," shall be filed at the time it is available as part of the reporting utility's annual forecast filing. If the reporting utility does not file such a form and a comparable form is prepared by the parent company, then the parent company's form shall be filed at the time it is available as part of the annual forecast filing.

(3) Compatibility with other filings. If there are differences between data in the forecast report and similar actual or forecast data in other forms filed with the commission (e.g., federal energy regulatory commission form 2), the reporting utility shall note and explain any discrepancies.

(4) The forecast shall contain a description of the reporting utility's policies and activities involving the procurement of Ohio gas, the impact of such procurement upon the reliability of the reporting utility's gas supply, and the compatibility of such policies and activities with a least-cost procurement plan.

(C) Gas and natural gas supply forecast discussion. A narrative shall be prepared which includes a general description of the methods and procedures used to develop the reporting utility's forecast of:

(1) Gas supply, by source.

(2) Gas supply prices, by source.

(3) Natural gas storage facilities.

(D) Projected sources of gas. A narrative shall be prepared which includes the following.

(1) A description of the project sources of gas for the forecast period. This description shall include the following:

(a) A list of the projected sources of gas for the forecast period.

(b) A description of the role of company-owned gas in the future supply mix.

(c) A description of the anticipated use of storage facilities in the future supply mix.

(d) The anticipated use of firm and interruptible transportation to obtain gas for system supply and the effect of state and federal policies toward the transportation of natural gas on the reporting utility's supply mix.

(2) A description of those factors which may have an impact on the reporting utility's projected natural gas supplies and its future construction of additional facilities, including, but not limited to, interconnections with alternate supplies.

(E) Reliability of gas sources. A narrative shall be prepared which includes the following:

(1) The reporting utility's working definition(s) of gas supply reliability.

(2) A description of the methods used by the reporting utility to quantitatively or qualitatively measure gas supply reliability.

(3) The reliability of gas sources over the past five years and the anticipated reliability of each of the reporting utility's gas sources over the forecast period.

(F) Analysis of system peak and winter season planning. The reporting utility shall provide an analysis of its ability to meet peak requirements under design weather conditions throughout the forecast period and shall also provide a description of supply projections for meeting winter season requirements.

(G) Supply forecast forms. The supply presentation shall include the following elements presented on the indicated forms supplied by the commission.

(1) Gas supplies: actual and forecast gas supply volumes (MMCF/year) by source, as indicated in form FG2-1.

(2) Gas prices: actual and forecast gas supply prices (annual average $/MCF) by source, as indicated in form FG2-2.

(3) Peak and design day supply: historical and forecast peak day supplies (MMCF) by source, as indicated in form FG2-3.

(4) Natural gas storage facilities: a list of wholly or jointly owned or leased storage facilities, existing and planned over the forecast period, as indicated in form FG2-4.

(5) Propane facilities: a list of existing facilities and those planned over the forecast period, as indicated in form FG2-5.

(6) Other peaking facilities: a list of other sources of peaking gas supplies not included in paragraphs (G)(4) and (G)(5) above, as indicated in form FG2-6.

(H) The reporting utility shall independently develop a long-term strategic supply plan for the purpose of assisting it in operating within a changing natural gas industry environment. The long-term strategic supply plan shall be structured in a manner which provides the most useful results to the utility.

4901:5-7-~~06~~07 **Resource forecasts and site inventories of transmission facilities for gas distribution companies serving fifteen thousand to one hundred thousand customers.**

(A) General guidelines.

(1) The forecast shall include data on all existing and planned transmission lines and associated facilities, planned additions to, and replacement of, existing facilities, as defined by section 4906.01 of the Revised Code and rule 4906-1-02 of the Administrative Code, as well as any such gas lines leased or acquired.

(2) The reporting utility shall be prepared to provide to the commission, on request, additional maps of transmission facilities.

(B) Existing transmission system.

(1) The reporting utility shall provide a brief narrative description of the existing gas transmission system which is detailed in form FG3-1.

(2) The reporting utility shall provide a summary of the characteristics of existing transmission lines as indicated in form FG3-1, "Characteristics of Existing Transmission Lines."

(3) Upon request, the reporting utility shall provide a map of its service area and other information as may be required by the commission.

(C) The planned transmission system. If applicable, the reporting utility shall submit a ten-year resource forecast of all gas transmission facilities to be constructed, leased, or acquired with location of such facilities indicated on the map referenced in paragraph (B)(3) of this rule.

4901:5-7-~~07~~08 **Gas and natural gas information filing for gas distribution companies serving fewer than fifteen thousand customers.**

(A) General.

(1) All gas volumes shall be reported at 14.73 psia.

(2) The names, addresses, and telephone numbers of the utility and responsible individuals shall be provided in the information filing.

(B) Forms. Each reporting utility shall submit one completed copy of form FG-S, "Small Gas Distribution Company Information Form."

(C) One completed copy of securities exchange commission form 10K, "Annual Report to the Securities Exchange Commission," shall be filed at the time it is available as part of the reporting utility's annual forecast filing. If the reporting utility does not file such a form and a comparable form is prepared by the parent company, then the parent company's form shall be filed at the time it is available as part of the annual forecast filing.

(D) Annual report If applicable, the reporting company shall file a copy of its most recent annual report to shareholders.

(E) Compatibility with other filings. If there are differences between data in this information filing and similar data in other forms filed with the commission (eg., federal energy regulatory commission form 2), the reporting utility shall note and explain any discrepancies.