

INTEGRATED RESOURCE PLANNING GUIDELINES**A. Purpose.**

The purpose of these guidelines is to implement the provisions of §§ 56-597, 56-598 and 56-599 of the Code of Virginia with respect to integrated resource planning ("IRP") by the electric utilities in the Commonwealth. In order to understand the basis for the utility's plan, the IRP filing shall include a narrative summary detailing the underlying assumptions reflected in its forecast as further described in the guidelines. To better follow the utility's planning process, the narrative shall include a description of the utility's rationale for the selection of any particular generation addition or demand-side management program to fulfill its forecasted need. Such description should include the utility's evaluation of its purchase options and cost/benefit analyses for each resource option to confirm and justify each resource option it has chosen. Such narrative shall also describe the planning process including timelines and appropriate reviews and/or approvals of the utility's plan. For members of PJM Interconnection, LLC ("PJM"), the narrative should describe how the IRP incorporates the PJM planning and implementation processes and how it will satisfy PJM load obligations.

These guidelines also include sample schedules to supplement this narrative discussion and assist the utilities in developing a tabulation of the utility's forecast for at least a 15-year period and identify the projected supply-side or demand-side resource additions and solutions to adequately and reliably meet the electricity needs of the Commonwealth. This tabulation shall also indicate the projected effects of demand response and energy efficiency programs and activities on forecasted annual energy and peak loads for the same period. These guidelines also direct that all IRP filings include information to comparably evaluate various supply-side technologies and demand-side programs and technologies on an equivalent basis as more fully described below in Section F (7). The Commission may revise or supplement the sample schedules as needed or warranted.

B. Applicability.

These guidelines are applicable to all investor-owned utilities responsible for procurement of any or all of its individual power supply resources.

C. Integrated Resource Plan.

Each utility shall develop and keep current an integrated resource plan, which incorporates, at a minimum, the following:

1. Forecast. A three-year historical record and a 15-year forecast of the utility's native load requirements, the utility's PJM load obligations if appropriate, and other system capacity or firm energy obligations for each peak season along with the supply-side (including owned/leased generation capacity and firm purchased power arrangements) and demand-side resources expected to satisfy those loads, and the reserve margin thus produced.

2. Option analyses. A comprehensive analysis of all existing and new resource options (supply- and demand-side), including costs, benefits, risks, uncertainties, reliability, and customer acceptance where appropriate, considered and chosen by the utility for satisfaction of native load requirements and other system obligations necessary to provide reliable electric utility service, at the lowest reasonable cost, over the planning period.

a. Purchased Power – assess the potential costs and benefits of purchasing power from wholesale power suppliers and power marketers to supply it with needed capacity and describe in detail any decision to purchase electricity from the wholesale power market.

b. Supply-side Energy Resources - assess the potential costs and benefits of reasonably available traditional and alternative supply-side energy resource options, including, but not limited to technologies such as, nuclear, pulverized coal, clean coal, circulating fluidized bed, wood, combined cycle, integrated gasification combined cycle, and combustion turbine, as well as renewable energy resources such as those derived from sunlight, wind, falling water, sustainable biomass, energy from waste, municipal solid waste, wave motion, tides, and geothermal power.

c. Demand-side Options - assess the potential costs and benefits of programs that promote demand-side management. For purposes of these guidelines, peak reduction and demand response programs and energy efficiency

and conservation programs will collectively be referred to as demand-side options.

d. Evaluation of Resource Options - analyze potential resource options and combinations of resource options to serve system needs, taking into account the sensitivity of its analysis to variations in future estimates of peak load, energy requirements, and other significant assumptions, including, but not limited to, the risks associated with wholesale markets, fuel costs, construction or implementation costs, transmission and distribution costs, environmental impacts and compliance costs.

3. Data availability. To the extent the information requested is not currently available or is not applicable, the utility will clearly note and explain this in the appropriate location in the plan, narrative, or schedule.

D. Narrative Summary.

Each utility shall provide a narrative summary detailing the major trends, events, and/or conditions reflected in the forecasted data submitted in response to these guidelines. Examples of items which should be highlighted in the summary include:

1. Discussion regarding the forecasted peak load obligation and energy requirements. PJM members should also discuss the relationship of the utility's expected non-coincident peak and its expected PJM related load obligations.

2. Discussion regarding company goals and plans in response to directives of Chapters 23 and 24 of Title 56 of the Code of Virginia, including compliance with energy efficiency, energy conservation, demand-side and response programs, and the provision of electricity from renewable energy resources.

3. Discussion regarding the complete planning process, including timelines, assumptions, reviews, approvals, etc., of the company's plans. For PJM members, the discussion should also describe how the IRP integrates into the complete planning process of PJM.

4. Discussion of the critical input assumptions to determine the load forecast and expected changes in load growth including factors such as energy conservation, efficiency, load management, demand response, variations in customer class sizes,

expected levels of economic activity, variations in fuel prices and appliance inventories, etc.

5. Discussion regarding cost/benefit analyses and the results of such factors on this plan, including the methodology used to consider equal or comparable treatment afforded both the demand-side options and supply-side resources.

6. Planned changes in operating characteristics such as unit retirements, unit uprates or derates, changes in unit availabilities, changes in capacity resource mix, changes in fuel supplies or transport, emissions compliance, unit performance, etc.

7. Discussion regarding the effectiveness of the utility's IRP to meet its load obligations with supply-side and demand-side resources to enable the utility to provide reliable service at reasonable prices over the long term.

E. Filing.

By September 1, 2009, and every two years thereafter, each utility shall file with the Commission its then current integrated resource plan, which shall include all information required by these guidelines for the ensuing 15-year planning period along with the prior three-year historical period. The process and analyses shall be described in a narrative discussion and the results presented in tabular format using an EXCEL spreadsheet format, similar to the attached sample schedules, and be provided in both printed and electronic media. For those utilities that operate as part of a multi-state integrated power system, the schedules should be submitted for both the individual company and the generation planning pool of which the utility is a member. The top line stating the company name should indicate that the data reflects the individual utility company or the total system. For partial ownership of any facility, please provide the percent ownership and footnote accordingly.

Each filing shall include a five-year action plan that discusses those specific actions currently being taken by the utility to implement the options or activities chosen as appropriate per the IRP.

If a utility considers certain information in its IRP to be proprietary or confidential, the utility may so designate, file separately and request such treatment in accordance with the Commission's Rules of Practice and Procedures.

Additionally, by September 1 of each year in which a plan is *not* required, each utility shall file a narrative summary describing any significant event necessitating a major revision to the most recently filed IRP, including adjustments to the type and size of resources identified. If the utility provides a total system IRP in another jurisdiction by September 1 of the year in which a plan is not required, filing the total system IRP from the other jurisdiction will suffice for purposes of this section.

As § 56-599 E requires the giving of notice and an opportunity to be heard, each utility shall also include a copy of its proposed notice to be used to afford such an opportunity.

F. Contents of Filing.

The IRP shall include the following data:

1. Forecast of Load. The forecast shall include descriptions of the methods, models, and assumptions used by the utility to prepare its forecasts of its loads, requirements associated with the utility's PJM load obligation (MW) if appropriate, the utility's peak load (MW) and energy sales (MWh) and the variables used in the models and shall include, at a minimum, the following:

a. The most recent three-year history and 15-year forecast of energy sales (kWh) by each customer class,

b. The most recent three-year history and 15-year forecast of the utility's peak load and the expected load obligation to satisfy PJM's coincident peak forecast if appropriate, and the utility's coincident peak load and associated non-coincident peak load for summer and winter seasons of each year (prior to any DSM), annual energy forecasts, and resultant reserve margins. During the forecast period, the tabulation shall also indicate the projected effects of incremental demand-side options on the forecasted annual energy and peak loads, and

c. Where future resources are required, a description and associated characteristics of the option that the utility proposes to use to address the forecasted need.

2. Supply-side Resources. The forecast shall provide data for its existing and planned electric generating facilities (including planned additions and retirements and rating changes, as well as firm purchase contracts, including cogeneration and small power production) and a narrative description of the driver(s) underlying such anticipated changes such as expected environmental compliance, carbon restrictions, technology enhancements, etc. :

a. Existing Generation. For existing units in service:

i. Type of fuel(s) used;

ii. Type of unit (e.g., base, intermediate, or peaking);

iii. Location of each existing unit;

iv. Commercial Operation Date;

v. Size (nameplate, dependable operating capacity, and expected capacity value to meet load obligation (MW));

vi. Units to be placed in reserve shutdown or retired from service with expected date of shutdown or retirement and an economic analysis supporting the planned retirement or shutdown dates;

vii. Units with specific plans for life extension, refurbishment, fuel conversion, modification or upgrading. The reporting utility shall also provide the expected (or actual) date removed from service, expected return to service date, capacity rating upon return to service, a general description of work to be performed as well as an economic analysis supporting such plans for existing units;

viii. Major capital improvements such as the addition of scrubbers, shall be evaluated through the IRP analysis to assess whether such improvements are cost justified when compared to other alternatives, including retirement and replacement of such resources; and

ix. Other changes to existing generating units that are expected to increase or decrease generation capability of such units.

b. Assessment of Supply-side Resources. Include the current overall assessment of existing and potential traditional and alternative supply-side energy

resources, including a descriptive summary of each analysis performed or used by the utility in the assessment. The utility shall also provide general information on any changes to the methods and assumptions used in the assessment since its most recent IRP or annual report.

i. For the currently operational or potential future supply-side energy resources included, provide information on the capacity and energy available or projected to be available from the resource and associated costs. The utility shall also provide this information for any actual or potential supply-side energy resources that have been discontinued from its plan since its last biennial report and the reasons for that discontinuance.

ii. For supply-side energy resources evaluated but rejected, a description of the resource; the potential capacity and energy associated with the resource; estimated costs and the reasons for the rejection of the resource.

c. Planned Generation Additions. A list of planned generation additions, the rationale as to why each listed generation addition was selected, and a 15-year projection of the following for each listed addition:

- i. Type of conventional or alternative facility and fuel(s) used;
- ii. Type of unit (e.g. baseload, intermediate, peaking);
- iii. Location of each planned unit, including description of locational benefits identified by PJM and/or the utility;
- iv. Expected Commercial Operation Date;
- v. Size (nameplate, dependable operating capacity, and expected capacity value to meet load obligation (MW));
- vi. Summaries of the analyses supporting such new generation additions, including its type of fuel and designation as base, intermediate, or peaking capacity.
- vii. Estimated cost of planned unit additions to compare with demand-side options.

d. Non-Utility Generation. A separate list of all non-utility electric generating facilities included in the IRP, including customer-owned and stand-by generating facilities. This list shall include the facility name, location, primary fuel type, and contractual capacity (including any contract dispatch conditions or limitations), and the contractual start and expiration dates. The utility shall also indicate which facilities are included in their total supply of resources.

3. Capacity Position. Provide a narrative discussion and tabulation reflecting the capacity position of the utility in relation to satisfying PJM's load obligation, similar to Schedule 16 of the attached schedules.

4. Wholesale Contracts for the Purchase and Sale of Power. A list of firm wholesale purchased power and sales contracts reflected in the plan, including the primary fuel type, designation as base, intermediate, or peaking capacity, contract capacity, location, commencement and expiration dates, and volume.

5. Demand-side Options. Provide the results of its overall assessment of existing and potential demand-side option programs, including a descriptive summary of each analysis performed or used by the utility in its assessment and any changes to the methods and assumptions employed since its last IRP. Such descriptive summary, and corresponding schedules, shall clearly identify the total impact of each DSM program.

6. Evaluation of Resource Options. Provide a description and a summary of the results of the utility's analyses of potential resource options and combinations of resource options performed by it pursuant to these guidelines to determine its integrated resource plan. IRP filings should identify and include forecasted transmission interconnection and enhancement costs associated with specific resources evaluated in conjunction with the analysis of resource options.

7. Comparative Costs of Options. Provide detailed information on levelized busbar costs, annual revenue requirements or equivalent methodology for various supply-side options and demand-side options to permit comparison of such resources on equitable footing. Such data should be tabulated and at a minimum, reflect the resource's heat rate, variable and fixed operating maintenance costs, expected service life, overnight construction costs, fixed charged rate, and the basis of escalation for each component.

COMPANY NAME: _____

Schedule I

I. PEAK LOAD AND ENERGY FORECAST

	2006	2007	2008	(ACTUAL)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
PJM Load Obligation (if appropriate)																			
1. Utility Peak Load (MW)																			
A. Summer																			
1. Base Forecast																			
2. Conservation, Efficiency																			
3. Demand-side and Response																			
4. Adjusted Load																			
5. % Increase in Adjusted Load (from previous year)																			
B. Winter (1)																			
1. Base Forecast																			
2. Conservation, Efficiency																			
3. Demand-side and Response																			
4. Adjusted Load																			
5. % Increase in Adjusted Load (from previous year)																			
2. Energy (GWH)																			
A. Base Forecast																			
B. Conservation, Efficiency																			
C. Demand-side and Response																			
D. Adjusted Energy																			
E. % Increase in Adjusted Energy (from previous year)																			

(1) 2006 data refers to winter season 2005/2006, 2007 data refers to winter season 2006/2007, etc.

COMPANY NAME: _____

Schedule 2

GENERATION

(ACTUAL) (PROJECTED)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
a. Nuclear																			
b. Coal																			
c. Heavy Fuel Oil																			
d. Light Fuel Oil																			
e. Natural Gas																			
f. Hydro-Conventional																			
g. Hydro-Pumped Storage																			
h. Renewable Resources																			
i. Total Generation (sum of a through h)																			
j. Purchased Power																			
1. Firm																			
2. Other																			
k. Less Pumping Energy																			
1. Less Other Sales (1)																			

m. Total System Firm Energy Requirements

II. Energy Supplied by Competitive Service Providers

* In the event that a unit uses multiple fuels for generation (alternate fuel) allocate generation accordingly; ignition and flame stabilization fuels are not considered to be fuel for generation.

(1) To include all sales or delivery transactions with other electric utilities, i.e., firm sales, diversity exchange, etc.

POWER SUPPLY DATA

(ACTUAL) (PROJECTED)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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I. Capability (MW)

1. Summer																			
a. Installed Net Dependable Capability (1)																			
b. Total Positive Interchange Commitments(2)																			
c. Capability in Cold Reserve/ Reserve Shutdown Status(1)																			
d. Demand-side and Response																			
e. Total Net Summer Capability (a+b+c+d)																			
2. Winter (3)																			
a. Installed Net Dependable Capability (1)																			
b. Total Positive Interchange Commitments (2)																			
c. Capability in Cold Reserve Status (1)																			
d. Demand-side and Response																			
e. Total Net Winter Capability (a+b+c+d)																			

(1) Provide Net Seasonal Capability.
 (2) To include firm commitments for the receipt of specified blocks of power (i.e., unit power, limited term, diversity exchange, cogeneration, small power production, etc.)
 (3) 2006 data refers to winter of 2005/2006, 2007 data refers to winter of 2006/2007, etc.

COMPANY NAME: _____

POWER SUPPLY DATA (continued)

	(ACTUAL)							(PROJECTED)										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
II. Load (MW)																		
1. Summer																		
a. Adjusted Summer Peak(1)																		
b. Total Negative Power Commitments(2)																		
c. Total Summer Peak																		
d. Percent Increase in Total Summer Peak																		
2. Winter (3)																		
a. Adjusted Winter Peak(1)																		
b. Total Negative Power Commitments (2)																		
c. Total Winter Peak																		
d. Percent Increase in Total Winter Peak																		

(1) Peak after energy efficiency and demand-side programs, see page 1.
(2) To include firm commitments for the delivery of specified blocks of power (i.e., unit power, limited term, diversity exchange, etc.).
(3) 2006 data refers to winter of 2005/2006, 2007 data refers to winter of 2006/2007, etc.

COMPANY NAME: _____

POWER SUPPLY DATA (continued)

	(ACTUAL)							(PROJECTED)										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
I. Reserve Margin (Including Cold Reserve Capability)(1)																		
1. Summer Reserve Margin																		
a. MW																		
b. Percent of Load																		
2. Winter Reserve Margin (2)																		
a. MW																		
b. Percent of Load																		
II. Reserve Margin (Excluding Cold Reserve Capability)(3)																		
1. Summer Reserve Margin																		
a. MW																		
b. Percent of Load																		
2. Winter Reserve Margin (2)																		
a. MW																		
b. Percent of Load																		
III. Annual Loss-of-Load Hours																		

(1) To be calculated based on Total Net Capability for summer and winter.
(2) 2006 data refers to winter of 2005/2006, 2007 data refers to winter of 2006/2007, etc.
(3) Same as footnote 1 above less capability in cold reserve.

COMPANY NAME: _____

CAPACITY DATA

	(ACTUAL)				(PROJECTED)															
	2006	2007	2008		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
I. Installed Capacity(MW) (1)																				
a. Nuclear																				
b. Coal																				
c. Heavy Fuel Oil																				
d. Light Fuel Oil																				
e. Natural Gas																				
f. Hydro-Conventional																				
g. Pumped Storage																				
h. Renewable																				
i. Total (sum of a through h)																				
II. Installed Capacity Mix (%) (2)																				
a. Nuclear																				
b. Coal																				
c. Heavy Fuel Oil																				
d. Light Fuel Oil																				
e. Natural Gas																				
f. Hydro-Conventional																				
g. Pumped Storage																				
h. Renewable																				

(1) Net dependable installed capacity during peak season; unit capabilities to be classified by primary fuel type; for winter peaking utilities - 2006 refers to the winter of 2006/2007, etc.
 (2) Each item in Section I as a percent of line i (total).

FUEL DATA

(ACTUAL) (PROJECTED)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
I. Delivered Fuel Price (cents/MBtu)*																			
a. Nuclear																			
b. Coal																			
c. Heavy Fuel Oil																			
d. Light Fuel Oil																			
e. Natural Gas																			
f. Renewable**																			
II. Primary Fuel Expenses (cents/kWh)*																			
a. Nuclear																			
b. Coal																			
c. Heavy Fuel Oil																			
d. Light Fuel Oil																			
e. Natural Gas																			
f. Renewable**																			
g. Purchases																			
Energy Charges only																			
h. Purchases																			
Energy and Capacity Charges																			

* To reflect total dispatch costs, including any variable O&M and environmental or compliance costs.

** Per definition of §56-576 of the Code of Virginia.