Integrated Resource Planning and Solar Distributed Generation at Dominion

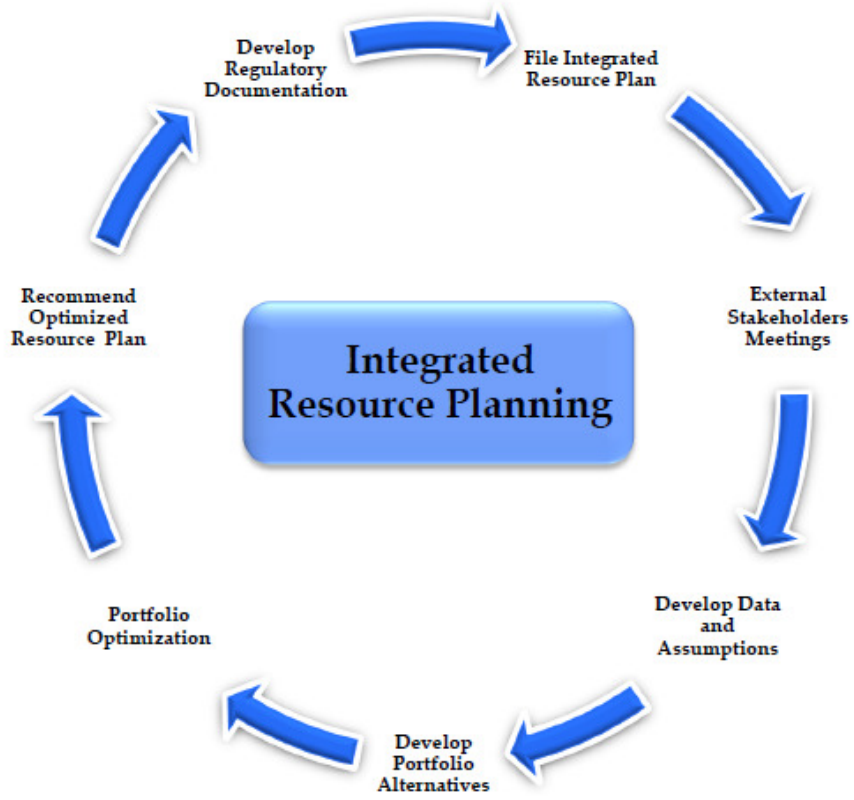
Sarah Cosby
Manager – Alternative Energy Policy and Mandate Analysis
Dominion Resources Services, Inc.
Presented to MWCOG Energy Advisory Committee
October 20, 2011

Dominion®
It all starts here.®

Integrated Resource Planning

Integrated Resource Plan (IRP)

- The IRP is a document that provides a forecast of the Company's load obligations and a plan to meet those obligations by supply side and demand side resources over the ensuing 15 years to promote reasonable prices, reliable service, energy independence, and environmental responsibility. (VA Code § 56-597)
- The IRP represents a snapshot in time.
- Plans subject to change based on future legislative, regulatory, and/or market drivers.
- Updated annually, filed in alternating years with VA SCC and NCUC, September 1st.
- In Virginia, the SCC makes determination on reasonableness and whether plan is in the public interest.



Integrated Resource Planning Process

- The IRP Process begins with development of a long-term annual peak and energy requirements forecast.
- Next, existing and approved supply- side and demand-side resources are compared with expected load and reserve requirements.
- This yields the Company's expected future capacity needs to maintain reliable service over the Planning Period.
- Then, the Company evaluates the economics associated with various supply- side and demand-side alternatives that complement existing resources to meet capacity and energy requirements in conjunction with regulatory and legislative requirements.

Solar Distributed Generation

Net Metering Standby Charge

- 2011 Virginia General Assembly legislation (HB 1983) raised the residential individual system capacity limit from 10kW to 20kW

- HB 1983 states that a residential customer-generator with an individual system capacity greater than 10kW "shall pay to its supplier, in addition to any other charges authorized by law, a monthly standby charge"
  - Amount and methodology must be developed by the electricity supplier and approved by the Virginia SCC
  - Standby charge designed to recover the portion of the electricity supplier's infrastructure costs associated with serving the customer-generator

- HB 1983 passed both the bodies of the Virginia General Assembly unanimously and was signed into law by the Governor
  - Va. Code § 56-594 F

Net Metering Fixed Infrastructure Cost Recovery in Other States

- **North Carolina**
  - Standby charge for non-residential customers greater than 100 kW
- **Pennsylvania**
  - If a net metering small commercial, commercial or industrial customer's self-generation results in 10% or more reduction in the customer's purchase of electricity for an annualized period, the net metering customer shall be responsible for its share of stranded costs to prevent interclass or intraclass cost shifting
- **Arkansas**
  - Arkansas law allows the State's regulatory commission to authorize a charge to net metering customers if the "…utility's direct costs of interconnection and administration of net metering outweigh the distribution system, environmental and public policy benefits of allocating the costs among the electric utility's entire customer base."
- **New Hampshire**
  - New Hampshire passed legislation in its 2010 session allowing distribution utilities to determine the net effect of net metering on its default service and distribution revenues and expenses in the prior calendar year and providing for a reconciliation mechanism to collect or credit any such net effects with appropriate carrying charges and credits applied (to be determined by the commission)
- **Montana**
  - Montana legislature has proposed a bill that would require net metering customers to have two meters and mandate that they pay all transmission and distribution charges associated with electricity delivered to them
- **California**
  - E3 study on cost effectiveness of net energy metering in California identified cross-subsidy in program equal to $230 million over 20 years
  - San Diego Gas & Electric recently proposed "Network Use Charge" for net metering customer generators
    - ***"Unless there is a modification to the rate structure, growth in NEM [net energy metering] is not sustainable"***
    - Customers without net metering now pay a subsidy of $34 per year for net metering customers

House Bill 1686

- 2011 Virginia General Assembly legislation (HB 1686) was passed allowing utilities to petition the SCC for approval for solar distributed generation demonstration programs
- Allows both utility-owned and customer-owned solar DG
  - Special tariff for customer-owned solar DG designed as an alternative to net metering
- Aggregate amount of rated generating capacity up to 0.2% of each utility's 2010 adjusted Virginia peak load
- Demonstration program to assess benefits of solar DG to electric distribution system
  - Installations shall be prioritized in areas identified by the utility as areas where localized solar generation would provide benefits to the distribution grid
- At least four of the installations shall be in a community setting
  - Local governments, schools, nonprofits

Community Solar Power Program

- Strategically located distributed solar PV across Virginia service territory to study impacts and assess benefits to the distribution grid
- Company-owned Solar PV
  - Systems built on leased roof space or ground-mounted
  - Tied to specific study objectives
  - Up to maximum of 30 MW
  - Installations will begin in 2013 and conclude in 2015
- Community Solar Power Program Tariff
  - Designed as an alternative to net metering
  - Will provide an opportunity for customers that own solar PV systems to sell energy and renewable energy credits (RECs) to Dominion Virginia Power
  - Up to a maximum amount of 3 MW, which aligns with the approximate total capacity of net-metered systems currently connected to Dominion's distribution system


Dominion®
It all starts here.®