

Overview of Pepco Demand Side Management Initiatives

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Motivation for Pepco's Blueprint for the Future DSM Initiative

- **Higher Regional Energy Costs**
 - Blueprint Plan facilitates Maryland customer control over electricity bills and places downward pressure on wholesale energy and capacity prices. MADRI/Commission/PJM Brattle Study recently calculated that a 3% reduction in peak electricity demand would reduce regional electricity prices annually by \$57 million to \$182 million. Demand response capabilities mitigate generator market power.
- **Constrained Regional Transmission Import Capability**
 - Blueprint Plan reduces future peak electricity demand to lessen burden on transmission system.
- **Growing Environmental Concerns over Power Plant Air Emissions**
 - Blueprint Plan reduces future power plant air emissions and resulting greenhouse gases.

Motivation for Pepco Blueprint for the Future DSM Initiative (continued)

- **Availability of New Electric Distribution System Technology**
 - Blueprint Plan uses new tested technology to enhance distribution system operation, improve service quality, reduce electric distribution operational costs, support demand side management initiatives, support renewable generation technologies, and support future plug-in vehicles.
- **Plan Benefits vs. Costs**
 - Blueprint Benefits will be Significantly Greater than Costs for Maryland Pepco Customers
 - DSM Proposals are Cost-Effective
 - Significant Regional/National Benefits from Resulting Reductions in Greenhouse Gases

Key PHI DSM Initiatives

- Demand Response Programs
 - Reduce Summer Peak Electricity Demand
- Energy Efficiency/Conservation Programs
 - Reduce Annual Electricity Use
- Advanced Metering Infrastructure
 - Improve Distribution System Operation
 - Improve Customer Service
 - Provide Interval Consumption Data through Remote Readings
 - Support Demand Response through Dynamic Pricing and Direct Load Control Technology Capability
 - Support Small Renewable Generation/Plug-In Vehicles

Pepco Recommended Utility DSM Programs

➤ Non-Residential Programs

• Building Commissioning and O&M

- Offer technical and financial assistance for improved commissioning of new buildings and the re-commissioning of existing facilities.
- Incentives will be based on the cost of the consulting and engineering services necessary to carry out a commissioning plan.

• HVAC Efficiency

- High Efficiency HVAC Equip. up to 30 Tons and Contractor Training
- Motivate customers to select high efficiency HVAC purchasing decisions by providing incentives for high efficiency unitary air conditioning and heat pump equipment.

Pepco Recommended Utility DSM Programs (continued)

- Prescriptive

- Energy Efficiency Measure Incentives for Electric Motors and Lighting
- Measures will range from energy-efficient equipment such as premium efficiency motors and variable frequency drives on HVAC systems, to niche market applications such as T5 lighting conversions in the big-box retail sector. LED traffic signals will be included.

- Custom Incentive

- Measures are expected to include large air conditioning equipment and chillers, industrial process improvements, energy management systems, and improvements which increase the efficiency of an energy consuming system rather than a single piece of equipment.

Pepco Recommended Utility DSM Programs (continued)

- Smart Stat:
 - Installation of remotely controllable smart thermostats capable of reducing the air conditioners load on the electric system after receipt of a Pepco command signal and capable of being programmed to automatically vary temperature settings
- Internet Platform:
 - Web-based Platform to Facilitate Participation in PJM Demand Response Market
 - Customers who participate will receive hourly customer energy data (daily or monthly depending upon existing metering), hourly Pepco Zonal Locational Marginal Prices (LMPs) for energy, and load reduction calculations (hourly energy savings) presented through the Internet platform.

Solar Initiatives

- Pepco has proposed 3.8 MW of photovoltaic distributed generation capacity between 2008 and 2015
- Pepco will arrange for installation of solar panels
 - on any Maryland Pepco customer's property
 - on all Pepco owned and leased facilities
- All costs will be recovered over a 15 year period on the customer's bill
- Customers will own the equipment and receive all applicable tax credits and rebates along with reducing their monthly energy bills

Advanced Metering Infrastructure

- Universal Deployment of Advanced Meters for All Distribution Customers
 - Meters Capable of Providing Interval Data through Remote Readings
 - Providing Distribution System Monitoring
 - Communications with Direct Load Control Equipment/Smart Appliances/Data Display Devices

AMI Benefits

- Remote Meter Reading
 - Eliminates Need for Meter Reader
 - Permits More Frequent Readings
 - Supports Enhanced Customer Service Capabilities
 - Improves Reading Accuracy
 - Discovers Malfunctioning Meters
 - Customer Specific Load Research Data

AMI Benefits (continued)

➤ Demand Response

- Communicates w/Demand Response Enabling Technology
- Supports Dynamic Pricing Options
- Enhances Customer Control Over Monthly Bills through Detailed Consumption Data

AMI Benefits (continued)

- **Distribution System Monitoring**
 - Improves Distribution System Design, Reliability, and Performance
- **Distribution System Asset Management**
 - Outage Reporting
 - Increased Accuracy of Repair Crew Dispatch
- **Remote Service Disconnect**
 - Reduces Utility Service Visits
- **Tamper Detection**
 - Informs Utility of Possible Meter Tampering

AMI Benefits (continued)

- Supports New Rate Options
 - Pricing for Renewable Generators
 - Pricing for Plug-In Vehicles
 - Any Time Differentiated Pricing
- Summary of Benefits
 - Distribution Utility Cost Reductions
 - Distribution Customer Service Enhancements
 - Peak Demand Reductions
 - PHI to Share Estimated Monetary Value of Benefits with Maryland Stakeholders in the Near-term

Looking Forward in Maryland

- Maryland Public Service Commission approved Bill Stabilization Adjustment
- Maryland Public Service Commission approved the Direct Load Control program
- Commission approved residential CFL Program
 - Over 700,000 bulbs sold to date across Maryland service territory
- EmPower MD goals established
 - 15% reduction in energy by 2015
 - Based on the 2007 base year
- Pepco is preparing rollout of an Automated Metering Infrastructure

Looking Forward in the District of Columbia

- Blueprint Initiative filed in April 2007
- Pepco is pursuing AMI and DLC in DC
 - Upcoming hearings on AMI
 - Upcoming hearings on DLC
- Bill Stabilization Adjustment
- PowerCents DC
 - Smart Thermostat
 - Dynamic Pricing supporting Demand Response
- Case 1056
 - Automated Metering Infrastructure and Demand Response
- Councilmember Cheh Bill
 - Creates Sustainable Energy Utility