Energy Conservation at Dominion

Virginia Energy and Environment Commission

November 19, 2008

Dominion's Commitment to Conservation

- Conservation key to meeting Virginia's growing energy needs while protecting the environment
- Fully committed to state's goal of 10 percent electricity consumption reduction by 2022
- Developing portfolio of demand-side management programs
  - Plan to be filed with SCC in near future
  - Evaluating "smart" technologies
- Important part of an integrated strategy

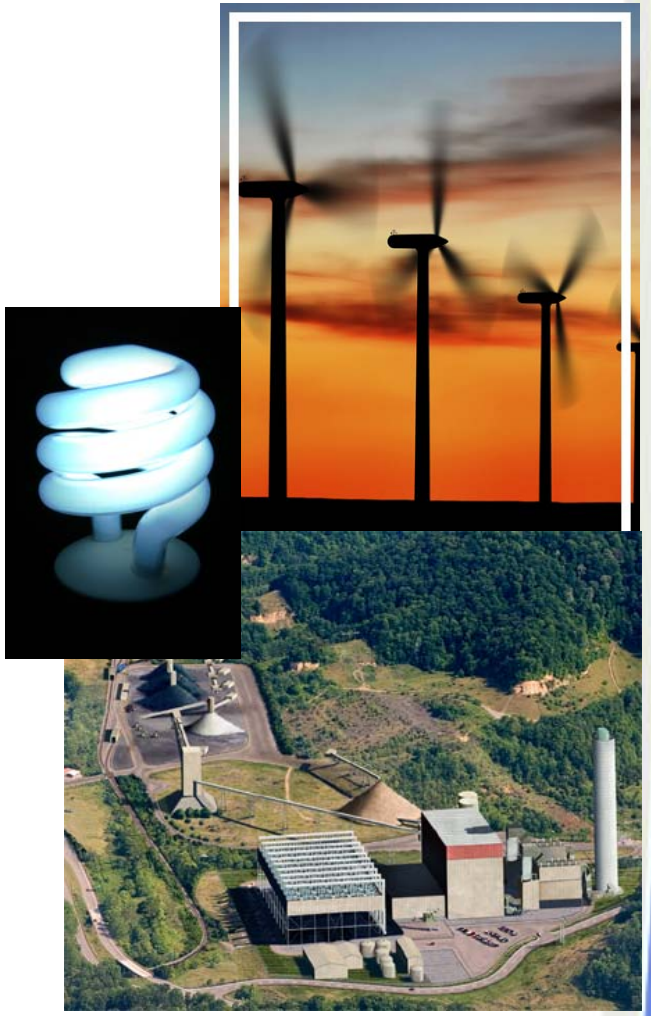
Meeting Demand Requires a Diversified Strategy

Dominion's objective:

- Providing reliable, affordable energy for our customers while being environmentally responsible

Dominion's integrated strategy:

- Meeting the need with three major tools
  - Conservation and efficiency
  - Renewable generation
  - Infrastructure development



Renewable Energy: Vital to the Equation

- Dominion supports Virginia goal of having 12 percent of power supply come from renewable resources by 2022

- Biomass at three VA power stations
  - Pittsylvania Power Station
  - Altavista Power Station
  - Virginia City Hybrid Energy Center
- Existing hydroelectric in VA and NC
- Bath County pumped storage facility (10% of U.S. pumped storage capacity): helps make renewable energy dispatchable
- Over 750 MW of wind power announced or operating
  - Joint agreement with BP to develop wind sites in VA
- Green energy option available to customers in 2009

Dominion's Conservation Focus

- Energy Conservation Department expanded in 2007
- Demand-side management pilots

Power Cost Monitor

ENERGY STAR PARTNER

Demand-side Management: Two Key Elements

- Demand response
  - Reduces peak electricity demand, often by shifting usage to off-peak hours
  - Improves reliability
  - Easily measured and verified
- Conservation
  - Reduces consumption of electricity
  - Produces environmental benefits
  - Poses new set of challenges:
    - Requires change in customer behavior
    - Harder to measure and verify

Demand-side Management Pilots 2008

Peak Reduction Pilots

- Air Conditioning Cycling Device
- Programmable Thermostats
- Programmable Thermostat with Smart Meter/Critical Peak Pricing
- Distributed Generation

Consumption Reduction Pilots

- Compact Fluorescent Lighting
- Residential Energy Audits
- Commercial Energy Audits
- Energy Star Homes
- Energy efficiency welcome kits
- In-home energy display

Future DSM Programs

Demand Reduction

- A/C heat pump cycling
- Distributed generation
- Curtailable service

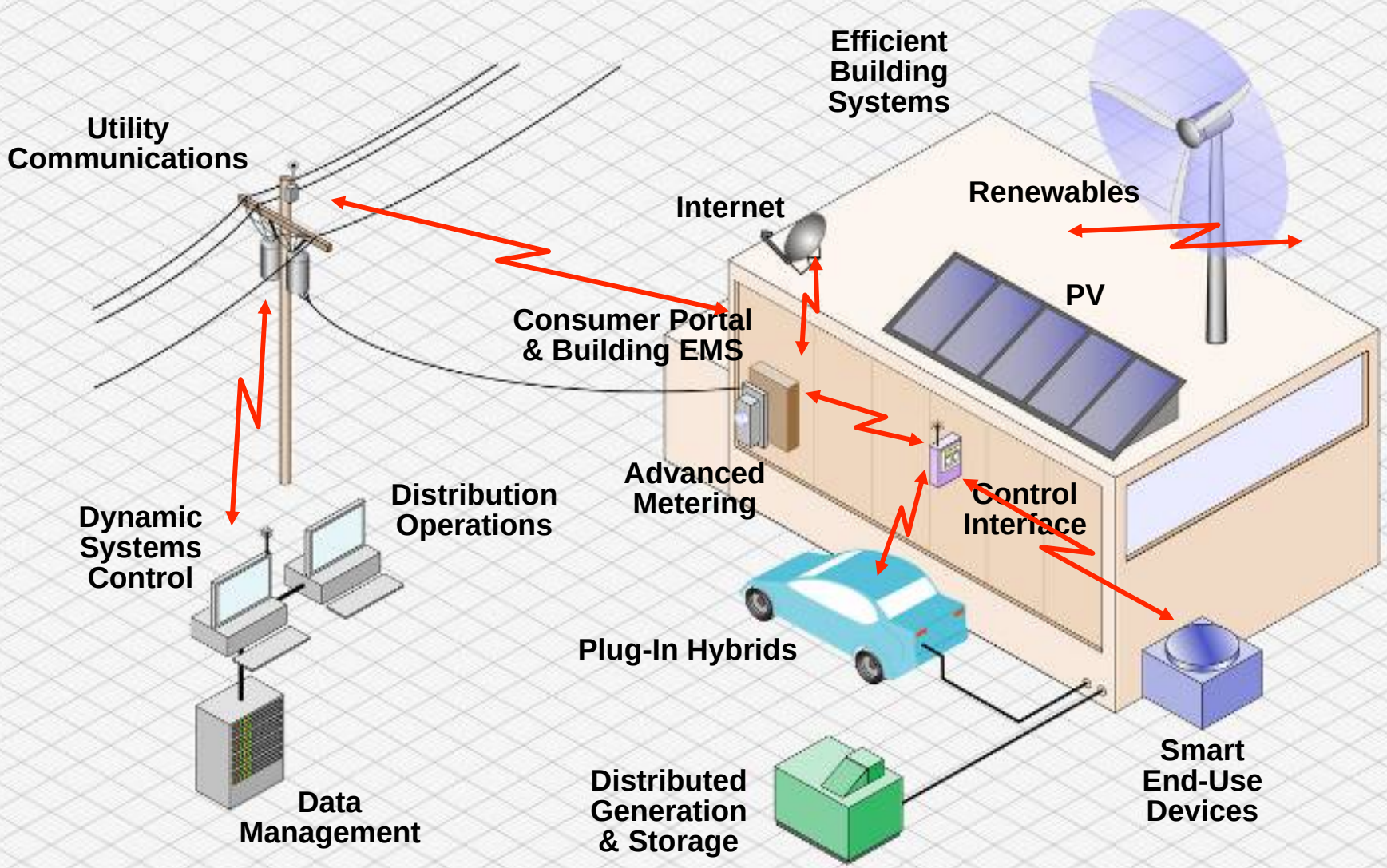
Consumption Reduction

- Compact fluorescent lights
- Low-income audits
- ENERGY STAR home
- In-home energy display
- Commercial HVAC upgrades
- Commercial lighting upgrades
- Refrigerator turn-in
- Heat pump tune-up
- Residential HVAC upgrades

Advanced Metering Infrastructure (AMI) Overview

- Intelligent systems open door for customers and utility to expand conservation and demand response efforts
- Allows two way communications between customers and the utility
- Being implemented across the U.S.
- Will save energy by allowing more precise voltage control
- Improves outage reporting and overall reliability

AMI: Communications



AMI: Customer Benefits

Customer benefits

- Reduces off-peak energy consumption
- Improves electric reliability and outage communications
- Enhances pricing and conservation options
- Enables on-demand re-connect / disconnect
- Establishes foundation for more Smart Grid initiatives

AMI: Dominion's Approach

- Limited testing through pilot currently underway
- Larger-scale tests planned
- Deployment of "smart" meters to C&I customers in high density areas
- Will utilize data from pilots to finalize "smart" grid strategy

Demand-side Management: the Future

- “Smart” technology makes pricing signals available to customers
- “Smart” technology enables wide-scale deployment of environmentally friendly plug-in hybrids – essential to managing load
- DSM not a panacea – new generation and transmission will still be needed.

Dominion®

It all starts here.®