



Dominion[®]

Smart Grid Charlottesville

VEDP/Ally Meeting

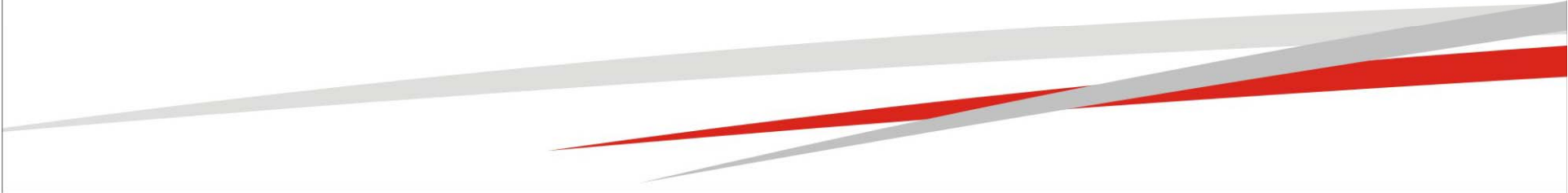
December 3, 2009

Ken Barker

VP Planning

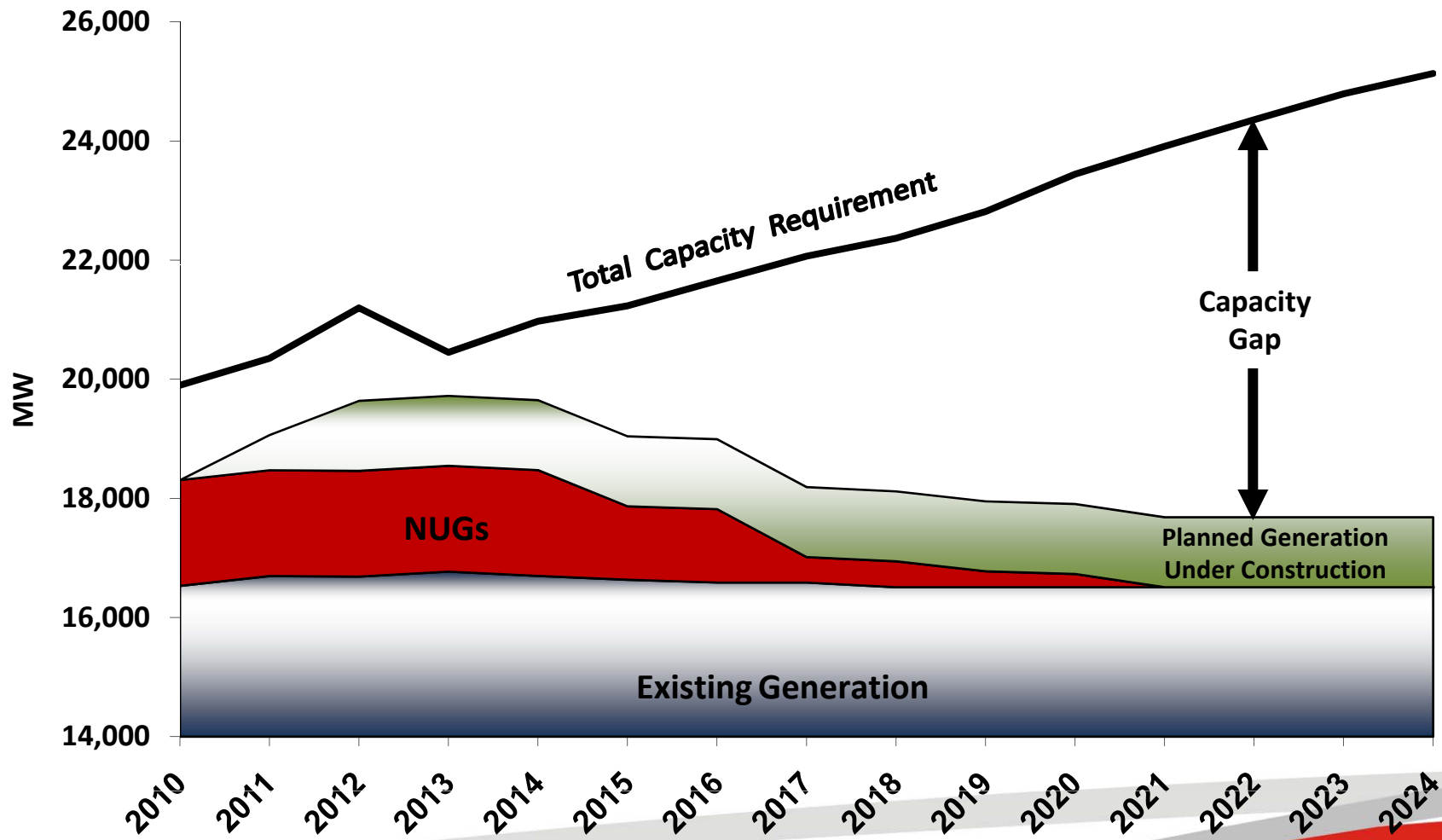
Dominion Virginia Power

Discussion Topics

- Virginia's Energy Gap
 - What is Smart Grid Technology?
 - Smart Meter and the Customer
 - Smart Grid Progress at Dominion
 - Smart Grid Charlottesville
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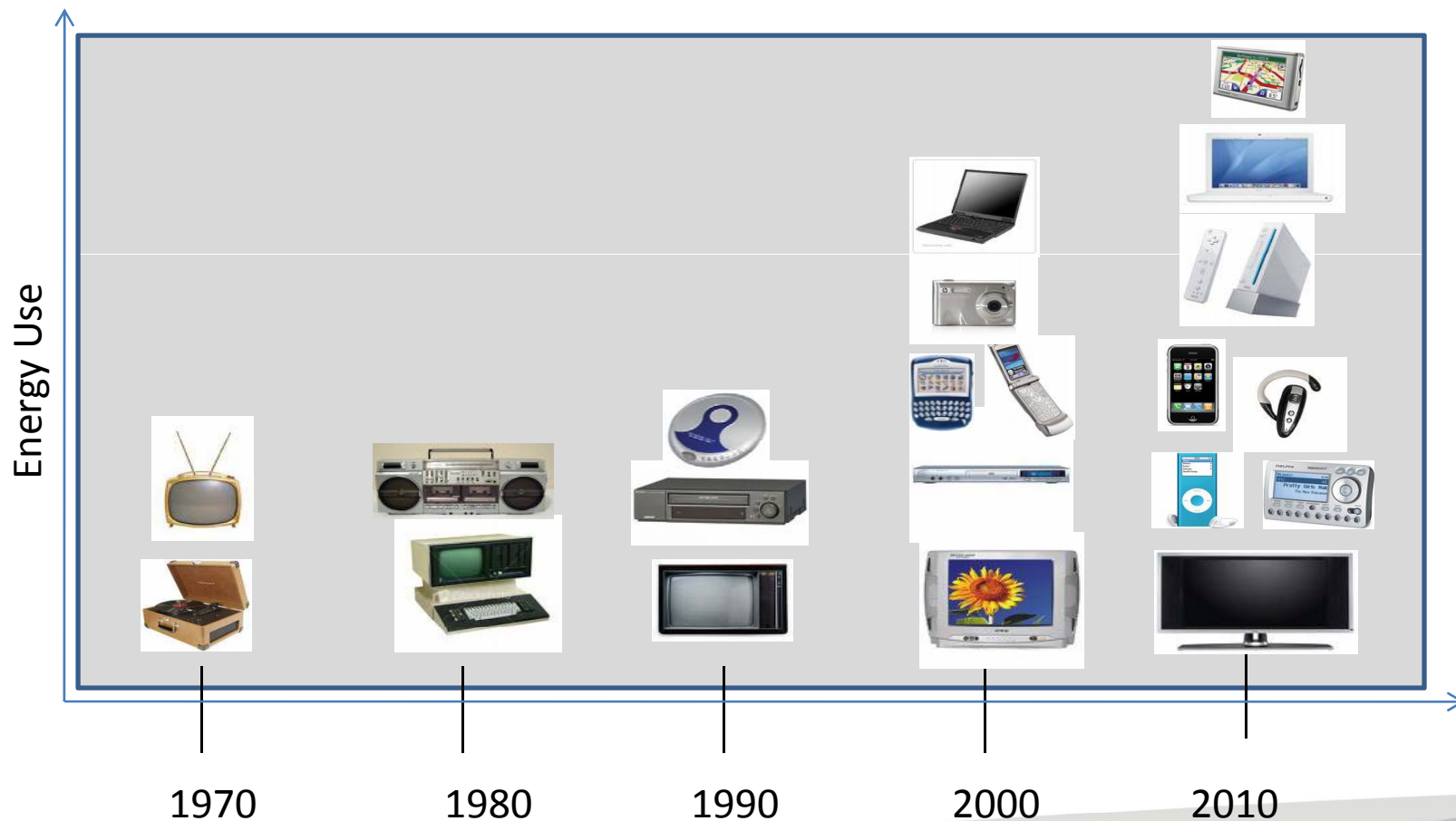
Virginia's Mounting Electric Energy Gap

It will Take a Portfolio of Options to Address the Generation Gap



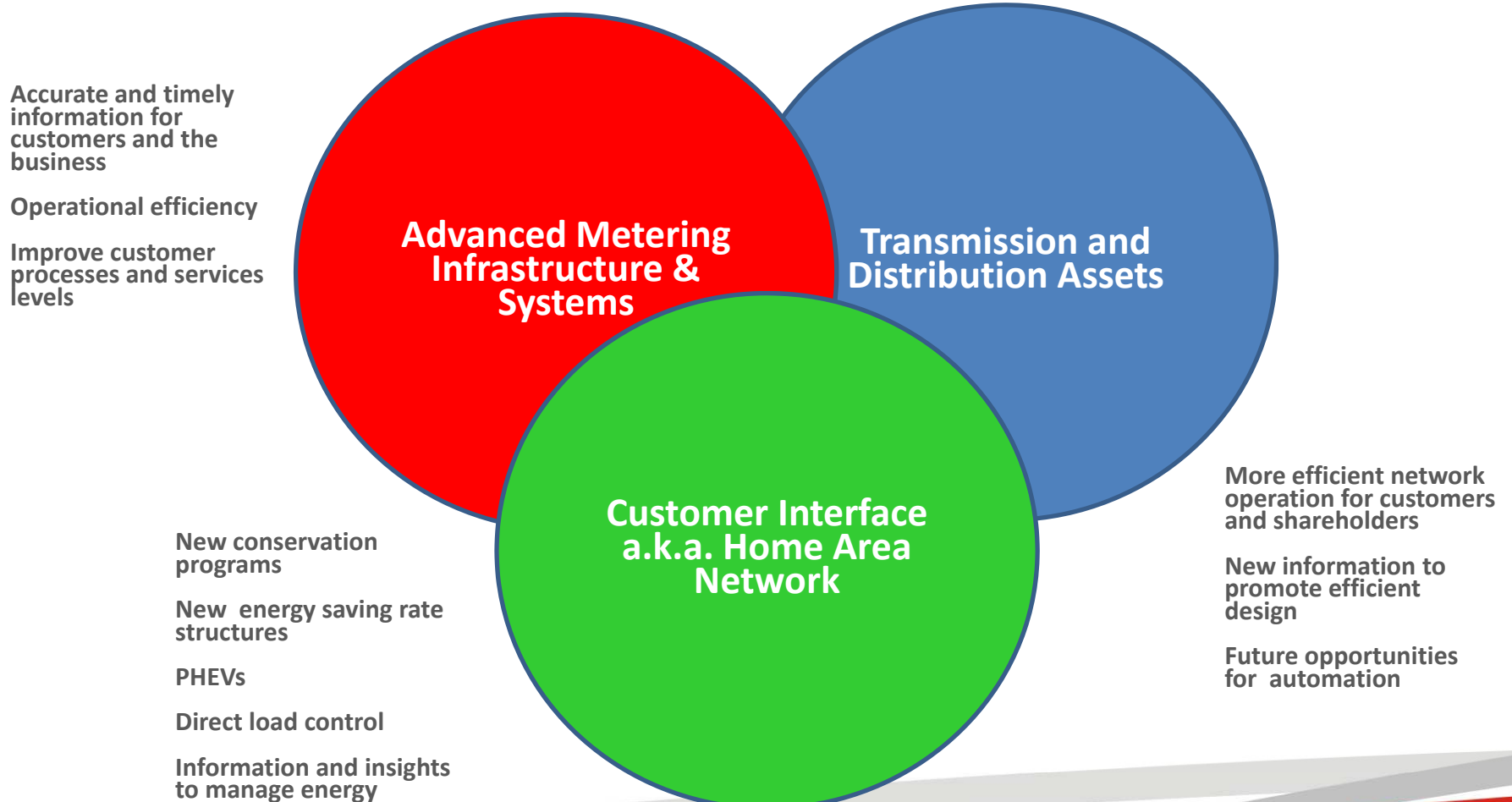
Our Customers' Growing Energy Demand

Demand for Electricity Grows as Technology Advances



What is this Smart Grid?

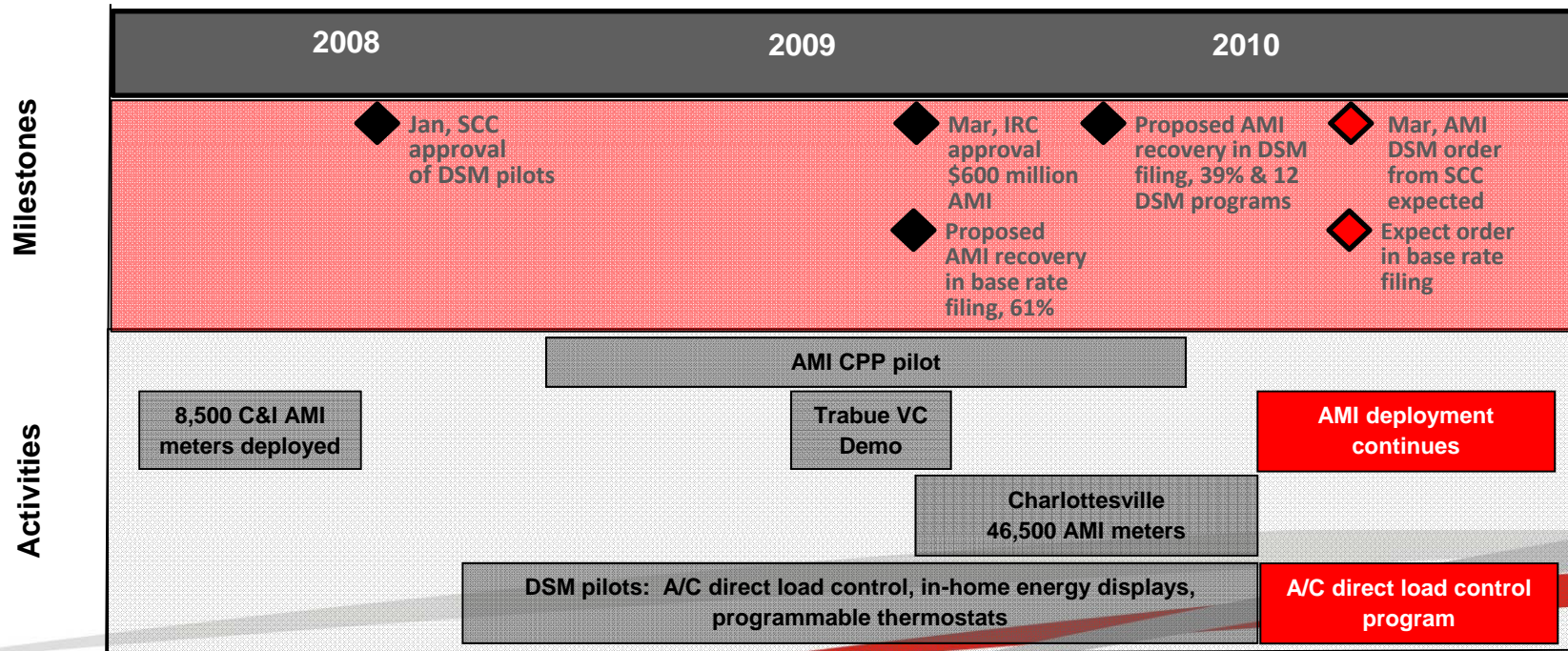
Leverages Energy Information from Advanced Technologies and Customer Engagement to Create Efficiency in Grid Operations and Energy Consumption while Improving the Customer Experience and Protecting the Environment



Smart Grid Progress at Dominion

Significant Progress with a Focus on AMI and DSM Programs Surrounding the Customer Interface

- Invaluable experience from deploying over 60,000 AMI meters and supporting systems
- Successful 2009 Voltage Conservation demonstration
- AMI-enabled Critical Peak Pricing (CPP) pilot implemented in 2008
- Proposed DSM Programs involving direct load control and thermostats
- Proposed dynamic pricing tariffs filed in March 2009 base rate filing



2009 AMI Demonstrations

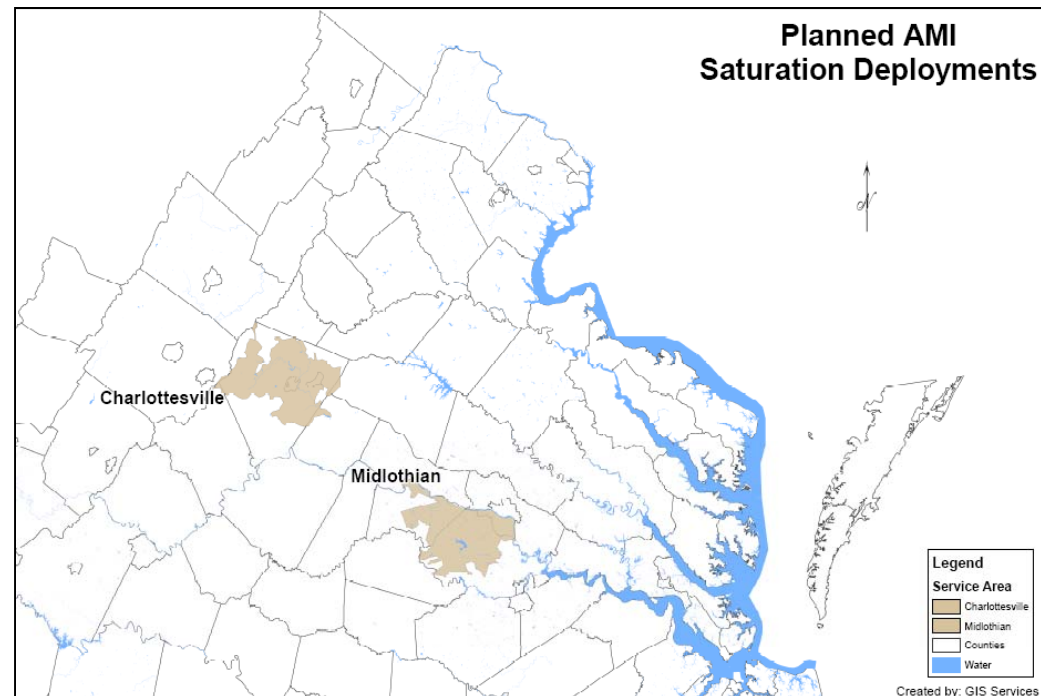
AMI Is Being Deployed In Two Areas To Demonstrate AMI Capabilities

Saturation Deployments

- Midlothian
 - Voltage Conservation M&V
 - Two representative circuits
- Charlottesville
 - Diverse elevations
 - Rural
 - Communications challenges

AMI Capabilities

- Voltage Conservation
- Demand Side Management
- Outage Notifications
- Remote Service Switch



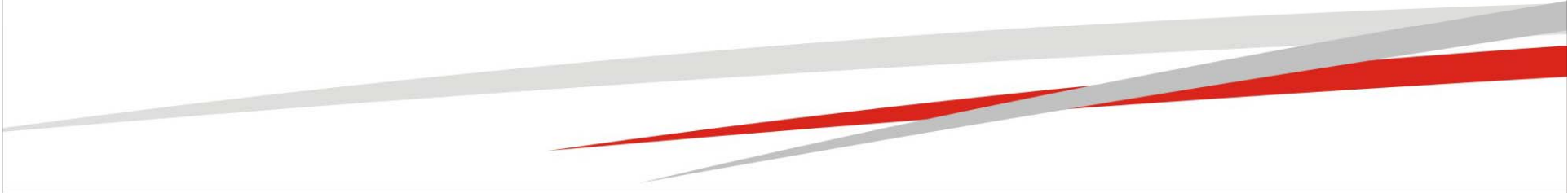
2009 Demonstration Results

Results have been Very Promising

Midlothian

- Controlling voltage on two circuits in the lower 5% band (114 to 120 volts) 24 x 7 since January 28
- 6,697 meters deployed
- Addressed numerous technical challenges

Charlottesville

- Testing communications
 - 46,500 meters deployed
 - Designing new business processes
 - Integrating the new meter data management system
 - Testing new meter functionalities
 - Refining business case assumptions
 - Begin Voltage Conservation in Q4 2009
- 

Dominion's Future Plans for Charlottesville

1

Remote Reads

- Perform remote meter reading, processing through dependent systems to render a customer bill
- Support proposed dynamic rates

2

Voltage Conservation

- Provide data to enable off-peak voltage reduction and validate conservation benefits

3

Remote Turn-On and Turn-Off

- Demonstrate meter remote turn-on and turn-off functionality

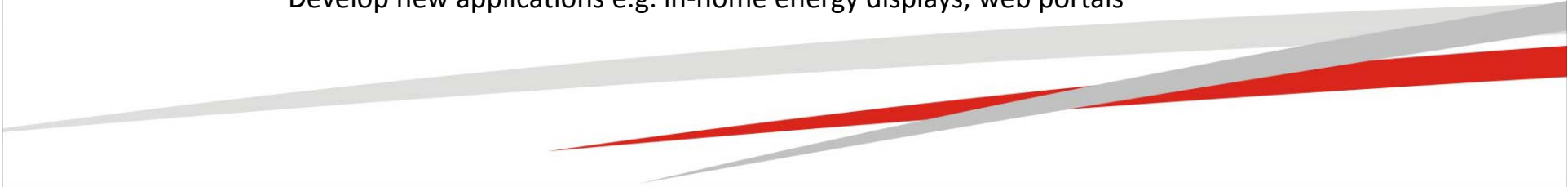
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Outage Notification

- Demonstrate power outage and restoration notification functionality

5

Demand Side Management

- Supply interval data for AMI CPP Pilot through November 2009
 - Develop new applications e.g. in-home energy displays, web portals
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Questions & Answers

