

# Virginia Commission on Energy and Environment

Bill Murray  
Dominion

September 21, 2010

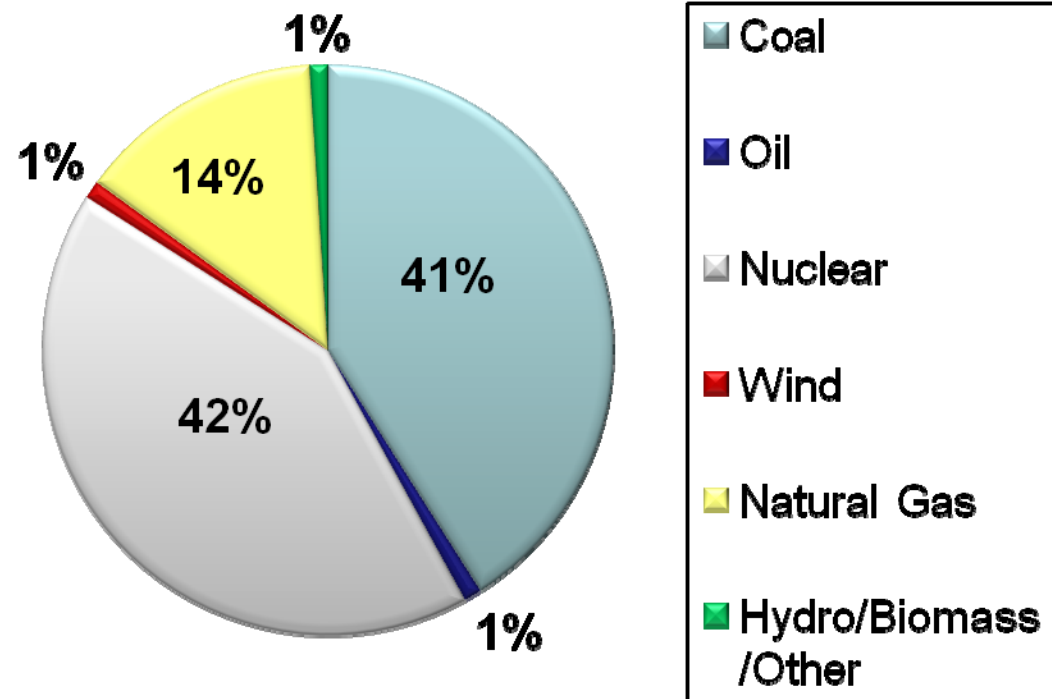


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# Diverse Generation Mix



2009 Electric Production by Fuel\*



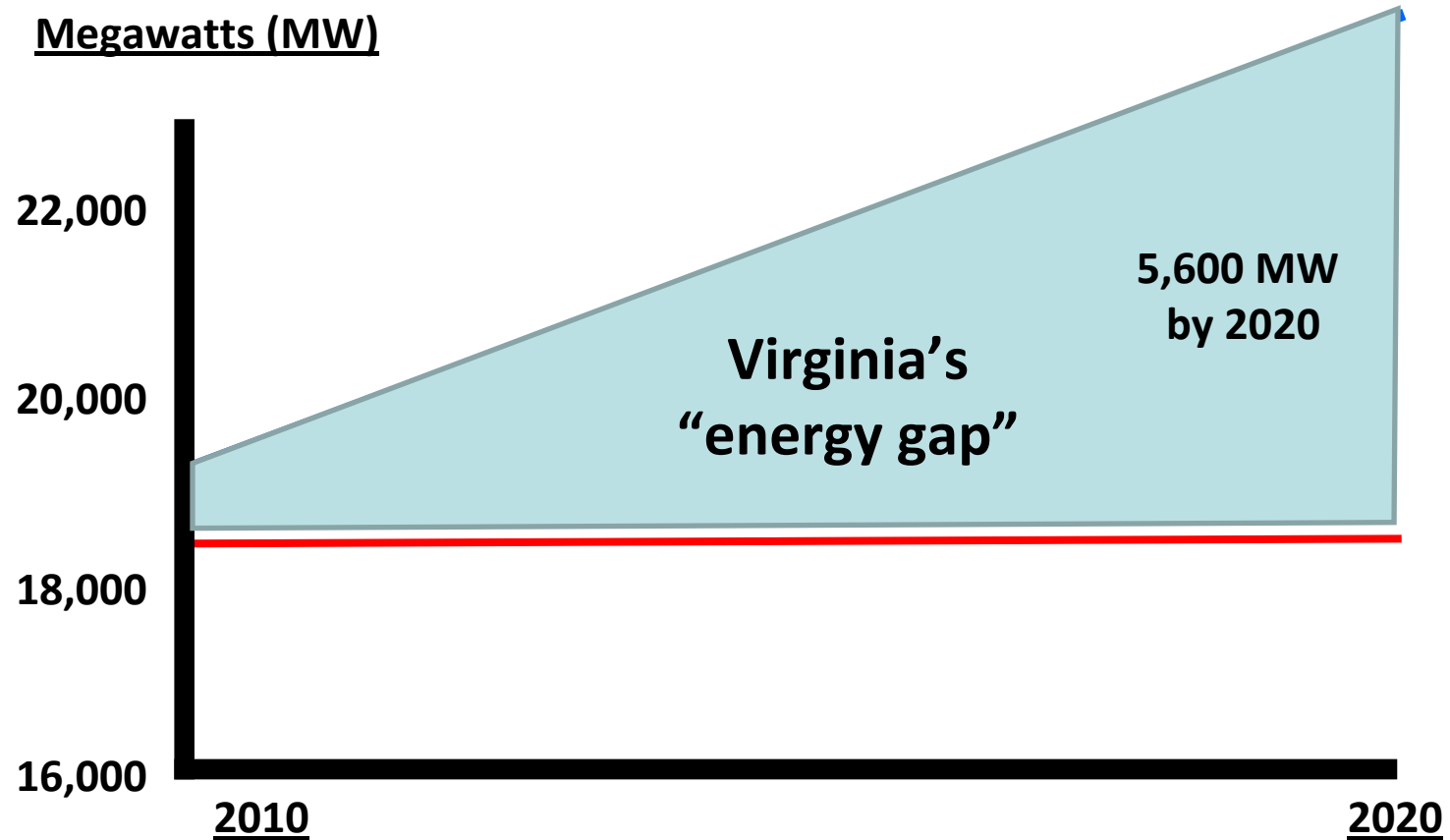
\*Total production by regulated and merchant units.  
Excludes non-utility generation (NUG) under contract.

# Dominion Virginia Power Emissions Reductions

1998-2009 Actual Emissions

2010-2015 Projected Emissions

# Demand for Electricity Continues to Grow



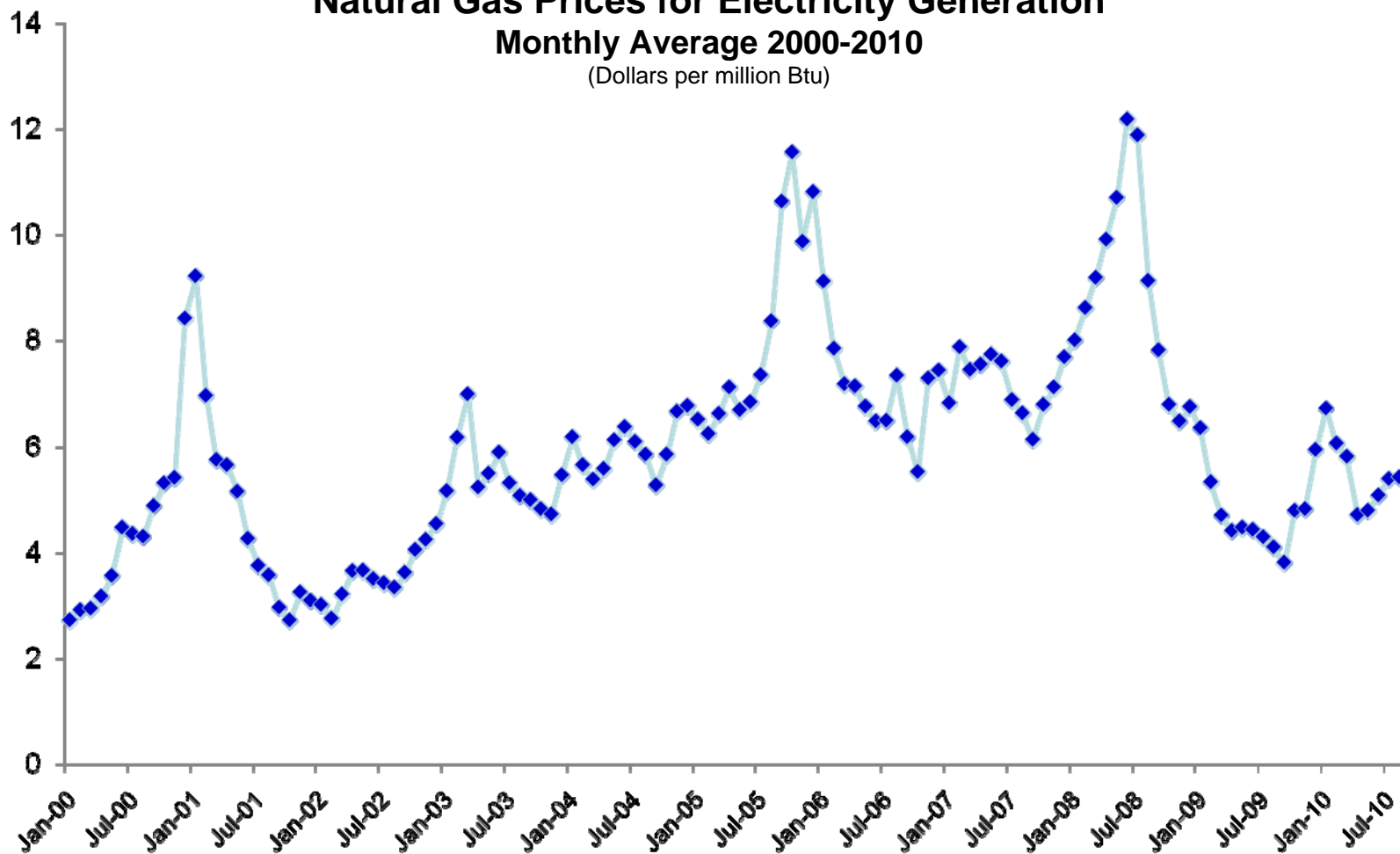
Source: PJM long-range forecast, January 2010

Existing generating capacity

Expected peak demand

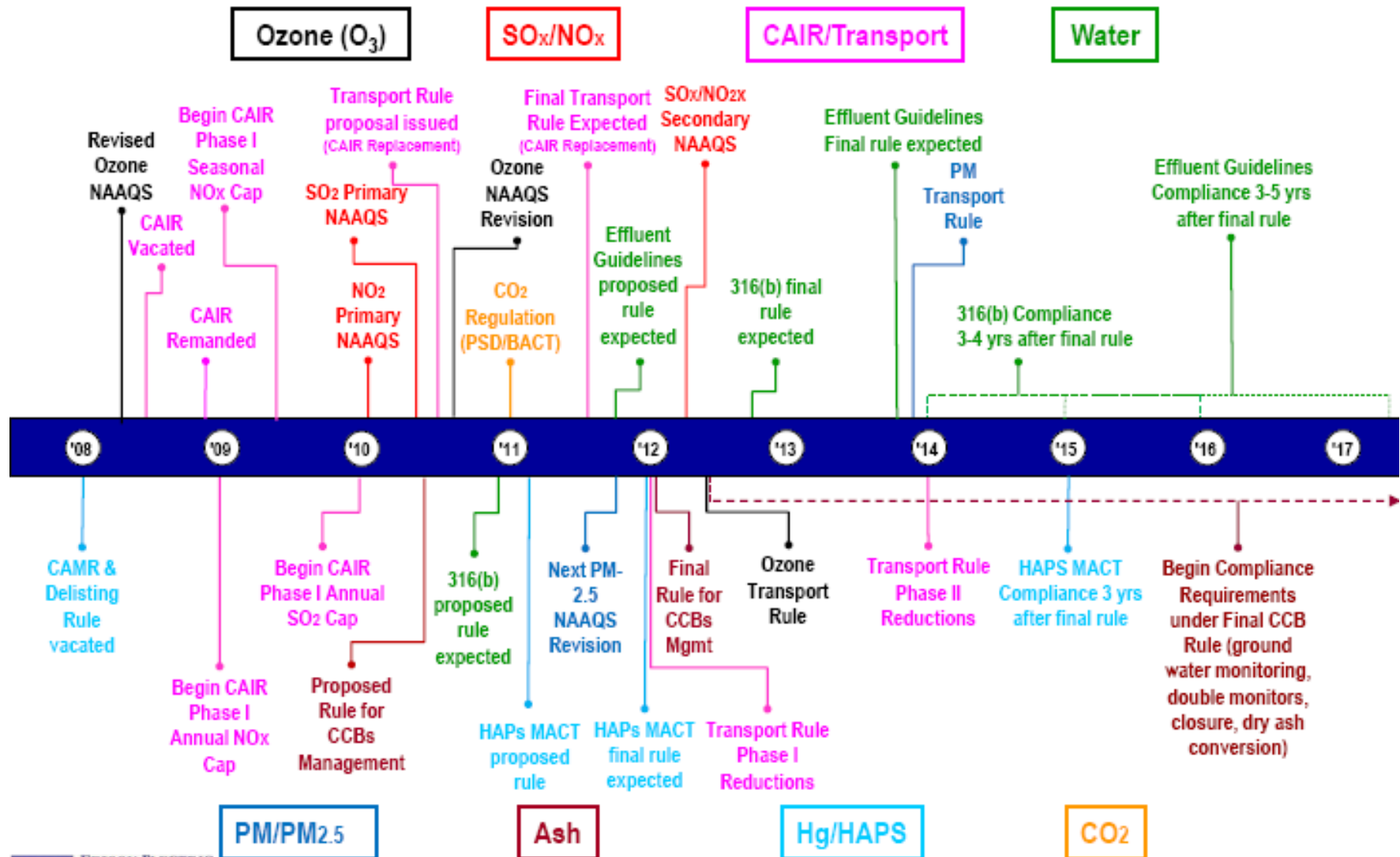
# Natural Gas Pricing

**Natural Gas Prices for Electricity Generation**  
**Monthly Average 2000-2010**  
(Dollars per million Btu)



Source: Energy Information Administration, Short-Term Energy Outlook, Electricity, Power Generation Fuels Costs.

# Projected Timeline for Environmental Regulatory Requirements for Utilities



# Diversity: Renewable Energy

- More than 1,600 MW of renewable capacity operational or under development
  - Operational (689 MW)
    - NedPower Wind  
(132 MW in Mt. Storm, WV)
    - Pittsylvania Biomass  
(80 MW in Hurt, VA)
    - Gaston/Roanoke Rapids Hydro  
(315 MW in Roanoke Rapids, NC)
  - Under Development (912 MW)
    - VCHC Biomass  
(Wise County, VA)
    - Solar Project  
(Halifax County, VA)
    - Virginia Wind  
(Western Virginia)



# Conservation / Demand Management

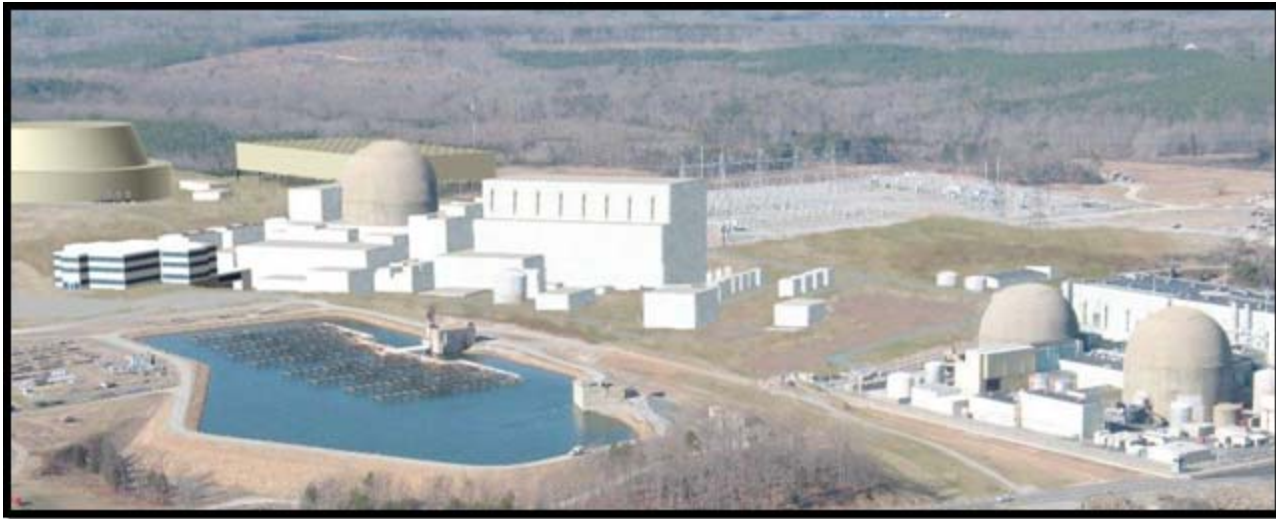
- Strong public interest
- Played significant role in reducing summer 2010 peak
- Significant strides, especially in “smart” technology
  - Dominion pilots in Chesterfield, Charlottesville, Northern Virginia
- Five Dominion programs underway in Virginia; more planned
  - current typical cost, 53 cents month





# Traditional Generation: Nuclear

- Emissions free
- Renewed interest across U.S., especially in the South
- Proven record of safety, reliability, low production costs
- Dominion considering third reactor at North Anna



Artist's conception of North Anna 3

# Traditional Generation: Fossil Fuels

- Natural gas electricity production from fuel more than doubled 1993-2009
- Dominion natural gas plans include Bear Garden, Warren County combined cycle plants
- Coal accounts for about half of U.S. electric generation
- VCHEC operational in 2012, will burn coal, waste coal, and biomass; air permit requires conversion of Bremo coal plant



# New Generation Promoting Economic Development

- Offers direct, immediate economic benefits
  - New projects create significant numbers of construction and permanent jobs, additional tax revenue
  - VCHEC: Current construction workforce about 1,750; annual payroll once complete about \$4 million
  - Bear Garden: Current construction workforce about 640; will generate about \$1.6 million in annual tax revenue



# Key Numbers

- Dominion Virginia Power (DVP) is one percent of the VA economy
- 80 percent plus reductions in DVP air emissions
- 5600 MW of new capacity needed
- 1600 MW of renewables in service or in development
- 2400 workers employed building two new power plants





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