

# CYPRESS CREEK POWER STATION

## AIR PERMIT INFORMATIONAL BRIEFING

MARCH 18, 2009



# About ODEC

# ODEC

Your Touchstone Energy® Partner

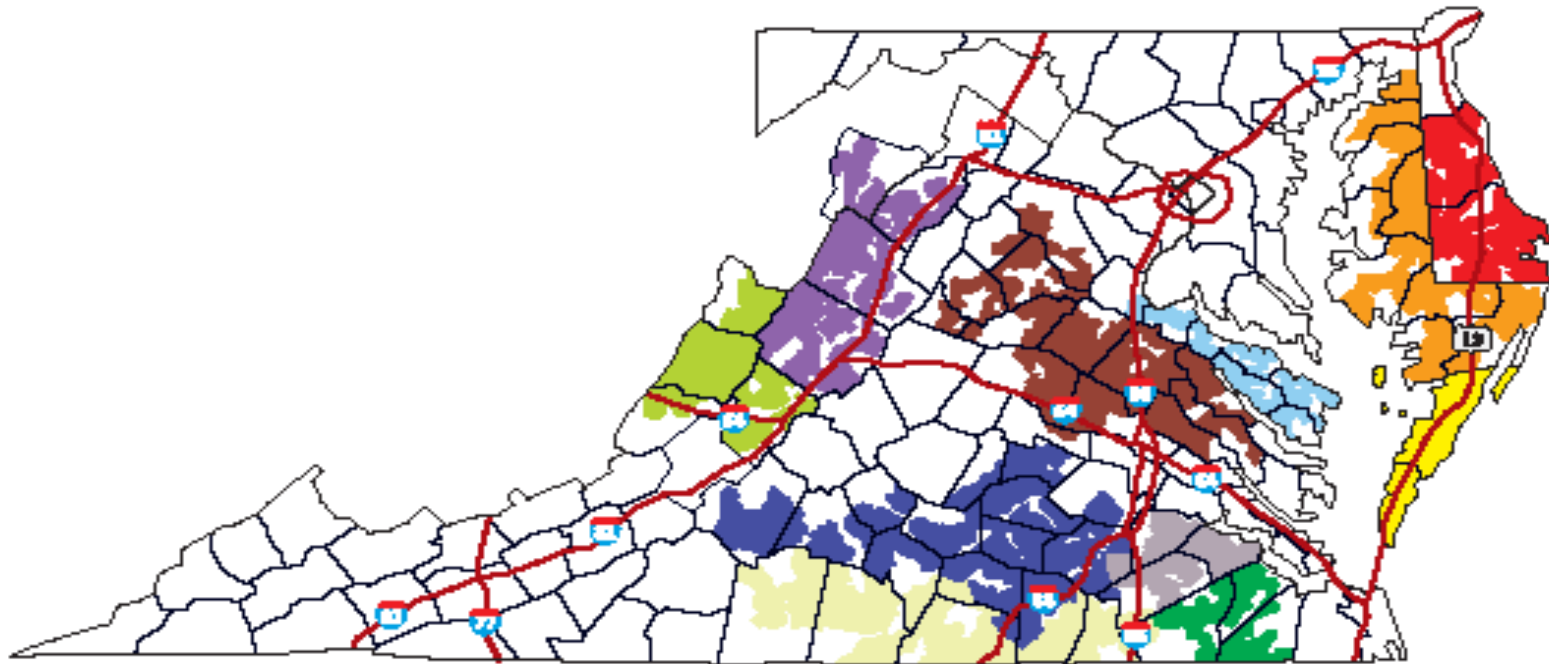


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# ODEC Service Territory



# ODEC Power Stations

- Base load
  - Clover Power Station (co-owner)
  - North Anna Nuclear Power Station (partial owner)
- Peaking
  - Louisa Power Station
  - Marsh Run Power Station
  - Rock Springs Generation Facility



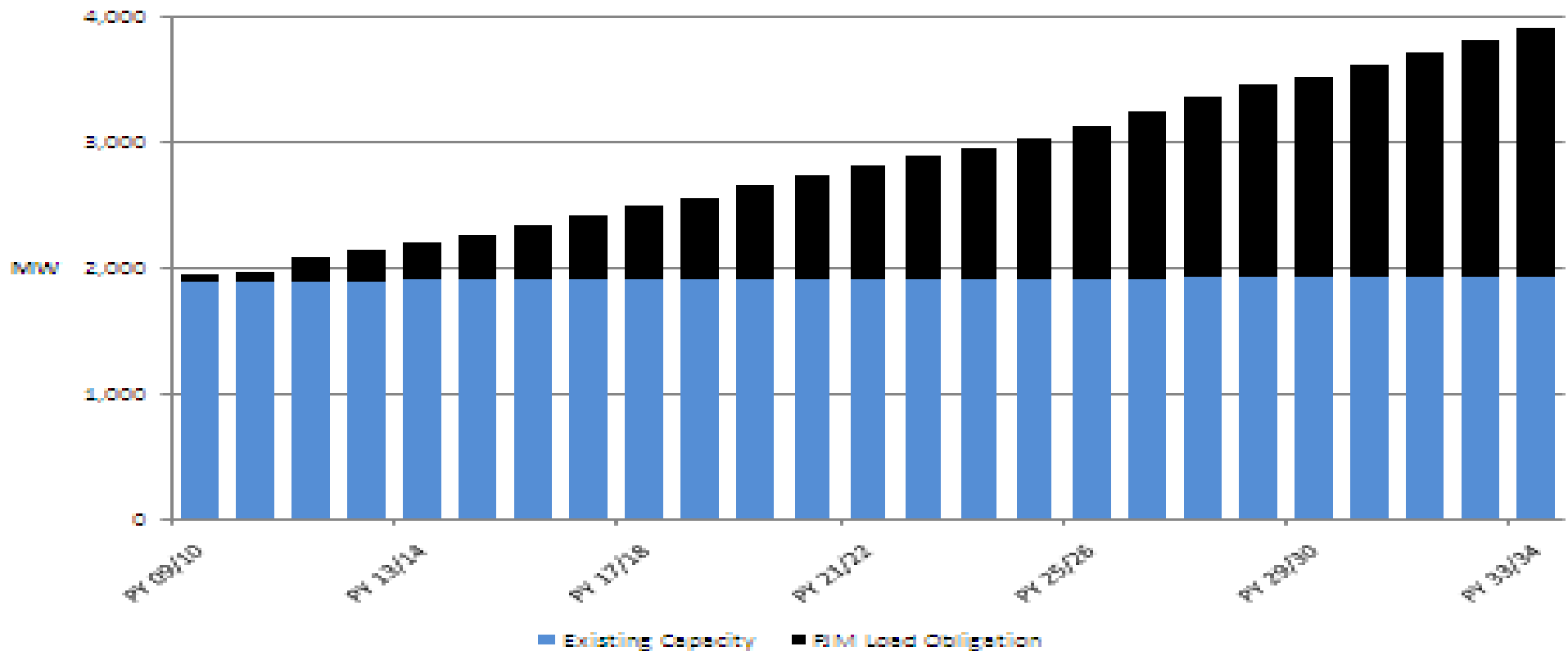
# Increasing Energy Needs



# The Gap Analysis

## The Gap Analysis

Projected PJM Load Obligation vs Existing Capacity Resources



# Proposed Solution - Generation

- Supercritical coal- and biomass-fueled base load generation facility
- Surry County – Primary Site
- Sussex County – Alternative Site
- Capable of producing up to 1,500 megawatts
- Meeting the future energy needs of nearly 300,000 Virginia households



# Regulatory Process

## National Environmental Policy Act (NEPA)

### Environmental Impact Statement (EIS)

- Corps of Engineers (COE)
- Environmental Protection Agency (EPA)
- Fish & Wildlife Service (USFWS)
- National Park Service (NPS)
- National Forest Service (NFS)
- Coast Guard

# Regulatory Process

## National Environmental Policy Act (NEPA)

### Environmental Impact Statement (EIS)

- Department of Environmental Quality (DEQ)
- Department of Historic Resources (DHR)
- Department of Transportation (VDOT)
- Marine Resources Commission (VMRC)
- Department of Game & Inland Fisheries (DGIF)
- Department of Conservation & Recreation (DCR)

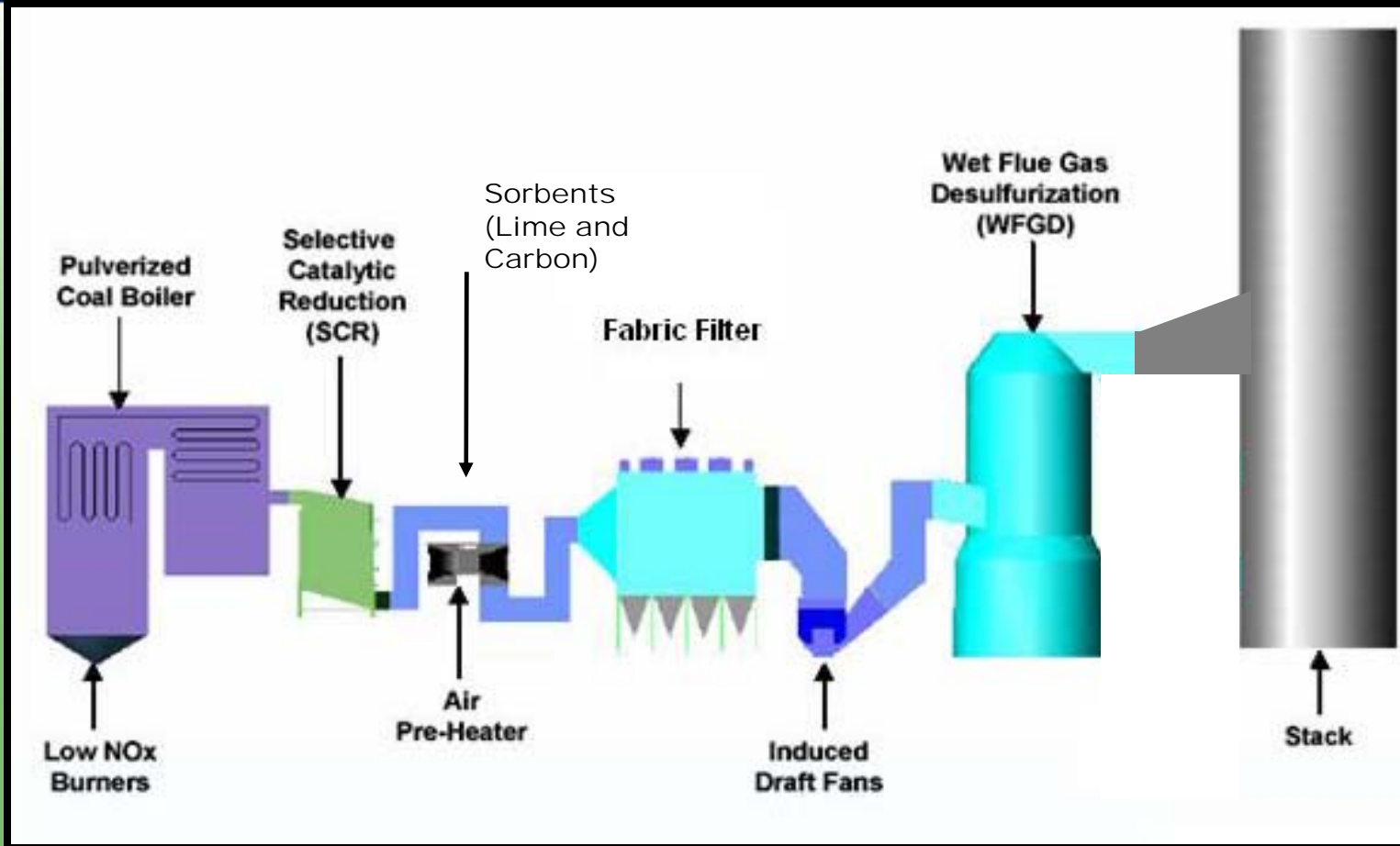
# Air Permit Process

- Application
  - Information Forms (DEQ Form 7)
  - Best Available Control Technology (BACT)
  - Maximum Achievable Control Technology (MACT)
  - Air Dispersion Modeling
- Air Information Briefing (tonight's meeting)
- Draft Permit

# Air Permit Process

- Public Hearings
- Response to Comments
- State Air Pollution Control Board Considers the Permit
- Issued

# Emission Control Equipment



# Maximum Proposed Emissions

Carbon Monoxide	10,446 tons/yr
Nitrogen Oxides	3,085 tons/yr
Sulfur Dioxide	3,685 tons/yr
PM <sub>10</sub>	2,155 tons/yr
VOC	247 tons/yr
Lead	0.46 tons/yr
H <sub>2</sub> SO <sub>4</sub> Mist	283 tons/yr
Fluorides	43 tons/yr
Mercury	0.059 tons/yr

# Short-Term Emissions

Pollutant	Control	Emission Rate	Averaging Period
NO <sub>x</sub>	Selective catalytic reduction	0.07 pound per million British thermal units (lb/MMBtu)	30-day
		0.05 lb/MMBtu	12-month
PM <sub>10</sub> /PM	Fabric filter baghouse	0.012 lb/MMBtu (filterable PM <sub>10</sub> /PM) <sup>A,B</sup>	30-day
		84.1 pound per hour (lb/hr) (filterable PM <sub>10</sub> /PM) <sup>B</sup>	3-hour average stack test
		0.030 lb/MMBtu (filterable plus condensable PM <sub>10</sub> /PM) <sup>B</sup>	3-hour average stack test
SO <sub>2</sub>	Wet flue gas desulfurization	0.06 lb/MMBtu	12-month
		841 lb/hr	24-hour

<sup>A</sup>Filterable PM is monitored by a continuous emission monitoring system.

<sup>B</sup>Within the first 3 years of operation, the PM/PM<sub>10</sub> emission limit may be increased to 0.015 lb/MMBtu, depending on actual performance of the control technologies.

# Short-Term Emissions

CO	Good combustion practices	0.15 lb/MMBtu (coal combustion) 0.17 lb/MMBtu (coal and biomass combustion) <sup>C</sup>	30-day
VOC	Good combustion practices	0.0035 lb/MMBtu (coal combustion) 0.0040 lb/MMBtu (coal and biomass combustion) <sup>D</sup>	3-hour average stack test
Fluorides	Sorbent injection, Fabric filter baghouse, Wet flue gas desulfurization	0.00070 lb/MMBtu or 96% Removal	3-test run average (Method 26 stack test)
Lead	Fabric filter baghouse	7.5 pound per tera British thermal unit (lb/TBtu)	3-hour average stack test
H <sub>2</sub> SO <sub>4</sub> Mist	Sorbent injection, Fabric filter baghouse, Wet flue gas desulfurization	0.0046 lb/MMBtu	3-hour average stack test

<sup>C</sup>The CO emission limit is 0.15 lb/MMBtu on a 30-day average when combusting coal. When co-firing biomass with coal, the emission limit is 0.17 lb/MMBtu.

<sup>D</sup>The VOC emission limit is 0.0035 lb/MMBtu when combusting coal. When co-firing biomass with coal, the emission limit is 0.0040 lb/MMBtu.

# For More Information

Web

[www.CypressCreekPowerStation.com](http://www.CypressCreekPowerStation.com)

Phone

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Thank You

