Summary of Comments from June 10 and 11, 2009
Public Scoping Meetings

Project Need

1. Consider statewide demand for energy in determining need for project

2. Demonstrate need for power in this region

3. Why is ODEC taking on more need - assuming control of additional grid?

4. Analysis of data used for future demand projections

5. Effect of loss of Northern Virginia Electric Cooperative on future demands

6. Are current transmission lines sufficient?

7. Can present grid support more electricity generation without grid expansion?

8. Business model?

Alternatives

1. Alternative energy sources

    a. Renewable resources
        i. 30,000 MW available
        ii. Off-shore wind
        iii. Solar
        iv. Geothermal
        v. Wave generation technology
        vi. Combined heat and power
        vii. Invest 6 Billion (money from plant) into solar and wind power
        viii. Cost of renewable equivalent to coal plant
        ix. Renewable energy sources will be less expensive than coal when factoring in carbon taxes in future
        x. Social cost of coal versus wind and other technologies
    b. Integration of different sources
    c. Integrated Gasification Combined Cycle (IGCC)
        i. Will not emit harmful emissions
    d. Natural gas combined cycle
    e. Other fuel sources besides nuclear, coal, and natural gas

f. Battery bank-store excess produced energy and store water generation facility/solar thermal storage

2. Energy Conservation
   a. Large scale reduction through efficiency
      i. How much energy need can be met through energy conservation
      ii. Consider ACEEE study; if people use energy efficiently will not need new power plant
   b. Public incentives for conservation
   c. Free compact fluorescent bulbs for low income
   d. Low percentage loans for people buying efficient, low energy heating/cooling systems
   e. Incentives for buying energy efficient appliances
   f. Incentives for LED lighting
   g. Mandatory efficiency standards
   h. Energy efficiency for businesses and commercial properties
   i. Implementing system-wide energy efficient system- potential to shave off 27% of projected generation need by 2025.
   j. Virginia Energy found 8,869 GW of efficiency for energy savings that are cost effective
   k. Net metering rules and procedures to hook distributing generators up to the grid
   l. Price structuring and net metering
   m. Incentives to homeowners who invest in distributing renewable
   n. Supply side efficiency
      i. Upgrade transmission lines, substations, etc.
      ii. Improved grid efficiency
      iii. Smart grid technology
      iv. Cogeneration

3. Sites
   a. Other sites reviewed
   b. Possibility of building in Bacon's Castle area near nuclear plant or in Prince George near James River; can barge coal in on the James River
   c. Explore Sussex site further
      i. No town present near site
      ii. Determine if transmission line issue can be overcome
      iii. Sussex site is close to railroad; less impact to homes; water/sewer already in place; studies have already been done on that tract in the past
   d. Other sites possible, using long-range transmission lines(550,000 volt lines)

4. General

   a. Viability of coal in terms of cost in the future due to potential CO2 regulations
   b. Cost analysis of a new reactor at nuclear power plant versus new coal plant
   c. Buy from the grid

d. Explore more progressive technologies; use the newest, most up-to-date technologies
e. Use smaller, cheaper facilities
f. Purchase from PJM
g. Tap into other new plants-North Anna, Warren County

5. Combination of alternatives

6. Comparisons of data collected from existing power plants or other large projects:

   a. In other parts of the country and VA / Wise County
   b. Effects of replacing older power plants with newer, cleaner plant
   c. Potential for mercury emission to be 30X amount of Wise County
   d. Effects on property values at those sites
   e. Detriments to environment from existing plants

7. Proposed Project Site Lay Out and Design

   a. Justification for site location being shifted closer to human population (Dendron).
   b. Aesthetics / fencing concerns – materials, distance from roads – overgrowth
   c. Pedestrian traffic and general use of town with plant located at roadside
   d. Storm water design / possibly inadequate
   e. Plant being located 1100 feet from houses in Dendron

8. Avoidance and Minimization of Impacts
   a. Using existing power lines
   b. Use existing landfill (Sussex)
   c. Power plant moved further off wetlands, but flyash landfill still in wetlands

9. Biomass
   a. Yield and impacts
   b. Potential for wood-burning plant only, since it is a renewable resource
   c. Biomass accumulation prevention
   d. Move emphasis on biomass as an alternative fuel

Air Quality

1. Byproducts of burning biomass; effects of switching fuels on pollution control devices

2. Change in emission levels over time due to types of coal and technology

3. Effectiveness of control measures due to local environmental conditions

4. Ozone

   a. Additional inputs to nonattainment areas
   b. Effects of additional emissions on redesignation of nonattainment areas to meet EPA's new criteria for 75 ppb ozone concentrations
   c. Areas with existing or impending ozone quality nonattainment include Richmond/Petersburg area and Hampton Roads
   d. Surface ozone effects on agriculture; crop impacts; potential for ground level ozone to reduce growth of plants; cost to farmer (NASA study)
   e. Potential for Surry County to be bumped into nonattainment status for ozone

5. Acid rain and deposition-impacts on public health and infrastructure from sulfates and sulfur dioxides

6. Economic impacts of cumulative effects of air quality on other businesses

7. Emission efficiency of using a newer plant

8. Balance efficiency with health; choose healthier versus more efficient

9. Percentage of pollution going up stack and not captured

10. Potential for particulate matter in air pollution to cause health effects and premature death; Study of micro-sized carbon particles on human health

11. Air quality impacts to entire Hampton Roads area; potential 20-50+ mile study range

12. Climate Change and Global Warming

    a. Effects from acid rain and acid mist
    b. Effects from factory emissions
    c. sea level rise
    d. Chesapeake Bay and ocean acidity
    e. Effects on marine life
    f. Greenhouse gases

13. Carbon emissions -Carbon capture sequestration (CCS)

a. Environmental impacts of carbon sequestration at this site versus alternative locations
b. Permanent carbon sequestration-future carbon capture and storage
c. Pumping carbon offsite
d. Potential cap and trade effecting rates

e. Evaluate effects of project under current technology not using future technology
f. Ocean water injection
g. Impacts of pipeline for CCS
h. Clean coal technology
i. Short and long-term effects of carbon emissions

Water Quality and Quantity

1. Groundwater
    a. Seasonal high and low water tables
    b. Health Department study on effects to groundwater
    c. Impacts to different level aquifers and deep wells
    d. Removal of water from existing sources (Town of Dendron water supply)
    e. Water table drop
    f. Private wells
        i. Testing of private wells
        ii. Concern that some pollutants can't be filtered from private water supplies
        iii. Potential pollution of shallow potable wells
        iv. Need for deeper (>200 foot) private wells
        v. Potential for wells onsite to be used for steam generation
        vi.Town of Dendron well less than ½ mile from nearest landfill onsite.

2. Pollution impacts to ocean

3. Potential impacts on water quality from Nitrogen

    e. From Nitrogen Oxides (NOx)-impacts on eutrophication in estuaries, rivers, streams, and lakes
    f. Potential for excess nitrogen in water to cause significant water quality impairments, such as oxygen deprived areas (dead zones)
    g. Concentration of nitrogen in water discharged to James River-potential to further impair River

4. Intake and outfall impacts

5. Dioxin impacts to waterways

6. Impacts to two creeks that border Dendron site

7. Stormwater retention ponds onsite
    a. Only 25-year flood retention
    b. Soil erosion downstream
    c. Impacts to physical and ecological health of local waterbodies
    d. Impacts to physical and ecological health of local water bodies caused by stormwater runoff from coal pile

8. Concerns that more contaminated water means need for more clean water

9. Impacts to high water table

10. Water quality of private ponds used for recreation and farming
    a. Testing before and after project

11. Cisterns and gutter spouts
    a. Safety of water for use
    b. Testing of water
    c. Potential cost to consumer

12. Water quality impacts to entire Hampton Roads area; potential 20-50+ mile study range

Flyash and Landfills

1. Landfills
    h. Protective liners in landfills
    i. Length of legal liability for landfill
    j. Worst case scenario for size of flyash landfills in case market for flyash shrinks
    k. Flyash landfill on sand versus clay
    l. Concerns that landfill liners do not block radiation from flyash
    m. Guaranteed life of landfill liner; concerns about leakage
    n. Landfill alternatives
    o. Control and containment of landfill material
    p. Monitoring requirements, spacing and density of monitoring wells

2. Flyash dust in the air and potential for arsenic, sulfur dioxide, nitrogen oxide, mercury, and lead pollution
    a. Effects of flyash dispersal on forests, crops and streams
    b. Impacts of disposal in areas with high population density
    c. Migration of flyash from wind, storms, flooding, hurricanes, and earthquakes

3. Potential impacts to Blackwater River and wetlands

4. Impacts to shallow and deep wells and aquifers

5. Leachate
    a. Recovery measures for groundwater leaching
    b. Bottom ash leaching
    c. Leaching into substrate
    d. Wetland impacts

e. Habitat impacts
f. Potential failure of leachate collection system causing leakage of lead and arsenic into ground (review study by Environmental Research Foundation?

6. Flyash holding ponds
    q. Impacts of flyash holding ponds and possible overflow
    r. Contents of holding ponds onsite (flyash storage?)
    s. Concerns about what happens to water if flyash is held wet
    t. Concerns about a flyash spill similar to the December 2008 spill in Kingsport, TN
    u. Length of time for flyash to permeate into water table if released into environment

7. Marketing and regulation of flyash for commercial products
    a. Responsibility for tracking commercial products made with flyash
    b. Erosion of concrete made from flyash; poor quality concrete because substances may be concentrated; toxins in environment from concrete erosion
    c. Building products made from flyash (counter-tops, drywall); responsibility for potential toxin release when products are removed

8. Disposal of flyash under current regulations

9. Transfer of flyash within plant site and offsite

10. Effects of flyash in regards to close proximity to residential housing

11. Height of flyash pile

Heavy Metals, Lead, Mercury, and Other Chemicals

1. Potential for pollution in primary rivers and farm fields

2. Potential for soot impacts, toxins in soils and water

3. Mercury and methyl mercury
    a. Impacts to human health-one fifth of woman in child bearing age have too much mercury
    b. Impacts to already impaired waters
    c. Modeling should consider distribution in all of Virginia's waters

        v. Include combined impacts from other mercury emissions sources within 100km radius of proposed facilities and potential hotspots

w. Use spatial references with sensitivity to show mercury deposition from this plant into surrounding waters and land
x. Concerns that limiting mercury models to a 3KM area around plant and one 200km larger areas does not analyze most significant amount of deposition that may occur in 40-60 km area.

d. Mercury levels in fish
e. Impacts hunting and fishing and recreational/commercial hunting/fishing industry
f. Potential for transport of local mercury to ocean fish via algae
g. Impact on outdoor recreation
h. Impacts on wetland habitats and wildlife
i. Effects of mercury deposition in the James River and Blackwater River-take into account current restrictions on fishing
j. Impacts on tourism due to abundance of signs warning of fish consumption
k. Mercury emissions 30 times the amount of Wise County plant
l. Need 60-mile radius independent study for mercury
m. Mitigation for the 118 pounds of methyl mercury

4. Acid rain
    a. Sulfuric acid
    b. Nitrogen dioxide

5. Effects of 900 pounds of lead per year

6. Chemicals of concerns that may be released from coal-fired energy facilities

    a. Boron
    b. Molybdenum
    c. Ammonia
    d. Cyanide
    e. Phenol
    f. Chromium
    g. Chlorine (trihalomethanes and other compounds), may be amplified with temperature changes
    h. Copper
    i. Iron
    j. Zinc
    k. Dioxin
    l. Tributylin (TBT)
    m. Selenium

        i. Bioaccumulates in fish
        ii. Potential for birds to eat selenium-contaminated fish and experience effects such as deformation of beaks and jaws and problems producing viable eggs
        iii. Potential human neurological damage, hair and nail loss

Ecological Impacts

1. Wildlife
    a. Hunting and fishing impacts, consider current restrictions
    b. Bioaccumulation of toxins through food chains
    c. Dose response-how much before there is an impact
    d. Effects on productivity
    e. Potential dioxin impacts to species, endocrine system and reproduction
    f. Light pollution effects on nocturnal plants and animals
    g. Migratory bird impacts-eagles and their habitat
    h. Effects on local wildlife
    i. Potential for adverse effects on the life stages of aquatic life and other wildlife dependent on the aquatic ecosystem

2. Wetlands
    a. Flora and fauna
    b. Effects on blue crabs, which are already suffering
    c. Wetlands sensitive to mercury contamination
    d. Blackwater River and mercury levels
    e. Cobham Bay (intake and outfall area) is a major nursery
    f. Potential that mitigation will not be equal to natural wetlands
    g. Concerns about impacts from railroad bridges
    h. Potential to further burden streams and rivers that already contain mercury-DEQ placed some off limits to fishermen because of excess mercury bioaccumulation in fish
    i. Flyash distributed during hurricanes and other storm events may impact streams, wetlands, and forests
    j. Effects on river ecosystems
    k. Wetland habitat impacts due to stormwater runoff, potential contamination and water withdrawal
    l. Effects on flood prevention function of wetlands
    m. Effects of potentially changing the water quality functions of the wetlands (i.e. filtration of runoff, nutrient and sediment remediation, ecosystem functions and nutrient cycling)
    n. Potential effects of methylmercury on the aquatic environment, ecosystem, and organisms associated with mercury deposition.

3. Threatened and Endangered Species.
    a. Potential to jeopardize the continued existence of species listed as endangered or threatened
    b. Potential for destruction or adverse modification of critical habitat
    c. Mid-Atlantic sturgeon
    d. Red-Cockaded woodpecker

4. Impacts to plant and animal habitats
    a. Habitat fragmentation from railroad and pipelines

5. Effects on bee population

6. Effects to Chesapeake Bay and Tributaries and other watersheds
    y. Nitrogen deposition to Bay and tribs and other watersheds
    z. Mercury deposition
    aa. Potential for lead and mercury to pollute Bay and farm fields
    bb. Estuaries and biodiversity
    cc. Erosion effect on watersheds
    dd. Executive order from Obama to clean up Bay
    ee. Nitrogen excessive levels cause oxygen depravation in Bay
    ff. Effect to Blackwater River, Pamlico Albemarle watersheds
    gg. Impact to local water sources – local ponds – level of arsenic
    hh. Mercury pollution in Blackwater River source of drinking water for Norfolk
    ii. Stream in backyard that goes through site – fear of mercury pollution

Coal

1. Use of coal
    a. Not Clean - clean coal does not exist
    b. Consider coal technology – feed greenhouse effect?
    c. Use low sulfur coal
    d. Consider cumulative pollutants
    e. Cumulative impact
    f. Need to read Big Coal by Jeff Goodell

2. Need study on longevity and source of coal
    a. Life of coal technology- replace with other energy sources
    b. Where will coal come from?
    c. What happens when run out of coal?
    d. Greater demand will deplete coal sources

3. Coal Storage on Site
    a. Management (sprinklers) of dust from storage piles
    b. Noise of coal being dropped into binds
    c. How will effects of coal dust be regulated?
    d. Environmental effect of processing coal onsite

4. Coal Transportation
    a. Diesel fuel

b. Rail transportation route - can use existing lines
c. Effects on RR spurs
d. Dust from rail cars on route
e. Use existing railroad in Sussex
f. Do communities consent to increased RR traffic?

5. Mountain Top Mining Impacts
    a. Miles of stream covered up
    b. Effects on deep aquifers
    c. Corps issues permits for mining
    d. Need life cycle analysis for use of coal
    e. Displacing endangered species
    f. Will destroy Appalachian region

James River / Intake and Outfall Effects

1. Effects on tidal range and flow

2. Net loss between intake and outfall of water (evaporation)
    a. Mercury deposit
    b. Current restrictions on fishing
    c. Thermal pollution and effects on migratory fish and vegetation
    d. Salinity levels
    e. Temperature
    f. Concentrations of pollutants
    g. Withdrawal impacts from upstream and downstream drinking water supplies

3. Water quality at outfall, silt effects of removal and/or addition, nutrient concentrations of discharge water, and chemicals added
    a. Erosion along the watershed

4. Intake
    a. Effect on fish and nursery habitat at Cobham Bay
    b. Type and size of screen openings
    c. Reliable source of water after 50 years, saltwater intrusion due to sea level rise

5. Environmental damage from pipeline location, pumping station, and chemicals used to heat water

6. Quality of oxygen levels in dead zones and mitigation harm

7. Impacts from water usage on ground and surface water supplies

8. Potential for salinity change from withdrawal and discharge

9. Withdrawal impacts
    a. Fish impingement and entrainment
    b. Sturgeon and Shad
    c. Shellfish
    d. Recreational and commercial anglers
    e. Forage value to other fish
    f. Changes in fish feeding patterns

10. Alteration of water level and flow impacts to habitat
    a. Adaption to these possible fluctuations
    b. Natural variability is critical to ecosystem health

11. Water levels
    a. Change in water elevation
    b. Change in currents
    c. Change in circulation
    d. Change in re-colonization and existence of indigenous aquatic organisms and communities

12. Other water use / reclamation options
    a. Closed cycle re-circulating cooling systems
    b. Geothermal cooling systems
    c. Dry cooling systems

Cumulative Impacts

1. OLF flyover - jet fuel impacts

2. Expansion of Route 460

3. Nuclear power plant in Surry

4. Additional impacts to area that already has prison, landfill, hog farms and sewage treatment plant

5. Cumulative effect of all coal fired power plants (Chesapeake, Hopewell, Yorktown)

Long Term Effects

1. What will be the condition of the site when the plant is gone?

2. Long term effects of emissions

3. What is possibility of retrofitting the facility?

4. Should guarantee enforcement of regulations and third party monitoring

5. What will happen when there is no more coal?

Historic Resources, Parks and Conservation Areas

1. 18th Century Home - Mussel Fork House in Dendron

2. Three historic sawmills from 1800's in Dendron

3. Effects of acid rain on historic sites, natural and historic parks

4. Effect on slave quarters and grave yards in vicinity

5. Effect on visual rural landscape and tourism

6. Effects on State owned conservation areas and Nature Conservancy lands

7. Damage to local archaeological, historical, cultural and religious heritage site?

Public Health Impacts

1. Schools are within 3 miles of Dendron.
    a. Children most vulnerable to cognitive development damages
        i. Asthma, lung diseases, cancer, stroke, and premature death
        ii. Pollutant control to protect children

2. Children development issues because of emissions from coal burning, mercury, methyl mercury, sulphric acid, nitrogen dioxide

3. Impacts to hunting, fishing, livestock, vegetable gardens, crop safety

4. Micro-sized carbon particles effect on human health

5. Health effects from mining in Appalachian

6. Consult with VA Dept. of Health Office of drinking water quality – effects of fly ash on ground water

7. Large population over 60 (years of age) in Dendron, thus a concern about effects to older people / emissions will shorten lives and impair health at people over 60

8. Fugitive emissions prevent or limit time out doors for humans and keep homes from being clean

    a. Impacts to respiratory function and health for surrounding residents in immediate and broader project area
    b. Carbon monoxide to residents
    c. Arsenic impacts to humans
    d. Cancer risks
    e. Impacts to human and ecosystem health
    f. Impacts from release of manganese, beryllium, hydrogen fluoride, and lead

9. Particulate pollution in atmosphere from NOX & SO2 emissions – reaction of coal combustion

    a. Hydrogen chloride
    b. Hydrogen sulfide mist
    c. Related to pre-term and low birth weight leading to first year development delays
    d. Volatile organic compounds
        i. Ground level ozone
        ii. Fine particulate matter (PM 2.5)

10. Particulate Matter impacts to cardiovascular disease rates in the region

    a. [Health Effects Institute, Research Report 140, *Extended Follow-up and Spatial Analysis of the American Cancer Society Study Linking Particulate Air Pollution and Mortality*]
    b. Contributes to Asthma and chronic bronchitis
    c. Increases heart rhythm irregularities
    d. Chest pain episodes
    e. Fatal heart attacks

Roads and Railroad Crossings

1. Traffic Route 31

2. Route 460 upgrades and expansion

3. Changes in traffic patterns

4. Safety for children near schools

5. Increased truck traffic

6. Effects of railroad spurs and highways on town of Dendron

7. Effects on pedestrian traffic in Dendron

8. Traffic delays at RR crossings

9. Rescue squad and fire delays at RR crossings

10. Road improvements and maintenance

11. Regional transportation impacts

12. Traffic at all hours in Dendron

13. Safety at non-gated RR crossings

Economics and Socio-economics

1. Jobs
    a. What jobs will be brought in?
    b. Jobs are not for community residents but engineers and trained workers
    c. Temporary construction jobs bided out of state
    d. Jobs would be a benefit to Sussex Co

2. Impacts to game resources - fishing and hunting
    a. Impacts on recreational and commercial fishing (from Nitrogen and Mercury deposition)
    b. Loss of revenue from fishing

3. Increased cost of electricity

4. Effects on rural character of area
    a. Disruption caused by 1,200 - 1,500 trailers to house workers for five years
    b. Permanently change community
    c. Effects of coal by products on agriculture
    d. Effects on population across demographics - age
    e. Cost to farmers and effect on crops and livestock
    f. Impact on peanut and soybean farming (ozone and acid rain)

5. Viability of town
    a. Zoning change could attract industry and change character of town
    b. Impact on local services, police fire and rescue
    c. Will ODEC have eminent domain?
    d. What will ODEC do for community?
    e. Economic impact on area businesses and resident

6. Taxes, property values and depreciation
    a. Will taxes change?
    b. Tax revenue questionable - does it really go to county improvements?

7. Effects on quality of life
    a. Light, noise, smell from plant 24/7
    b. Dust during construction
    c. Plant in generation 24/7
    d. Increased number of industrial users in the area affecting quality of life

8. Impact on tourism
    a. Decreased tourism in Williamsburg Jamestown and Yorktown
    b. Visibility impacts at federal, state and local parks and scenic views

9. Cost of increased medical problems
    a. Increased hospital visits, doctor visits, medications
    b. Workforce loss of IQ from mercury contaminated fish consumption and lead emissions

Environmental Justice

1. Determine impacts to citizens of Dendron

2. Determine impacts to community at source of coal

General

1. Need for EIS

2. Request public hearing

3. Effects of terrorism attack on plant (& knocking out power to people

4. Use best technology available (up to date) or generator and pollution control

5. EPA rejected landfill in same site 3-4 years ago

6. Effects on industrialized areas

7. Effects on weather pollution

8. Regulations / Standards for Coal Power Plant

    a. Sub-house committee from May 2009 / possible avoidance before new laws are passed
    b. Up dated with current federal regulations

9. Independent studies
    a. Wetlands
    b. Not rely on ODEC studies
    c. Health - Mercury