



Chesterfield Energy Reliability Center

Informational Meeting

November 16, 2023

Dominion Energy Virginia

Committed to serving the people of the Commonwealth by safely providing them with reliable, affordable, sustainable, and increasingly clean energy



2.7 M

Customers



10,000+

Employees & Contractors



16%

Lower than national average residential rate



65,000+

Miles of Power Lines
(Transmission & Distribution)



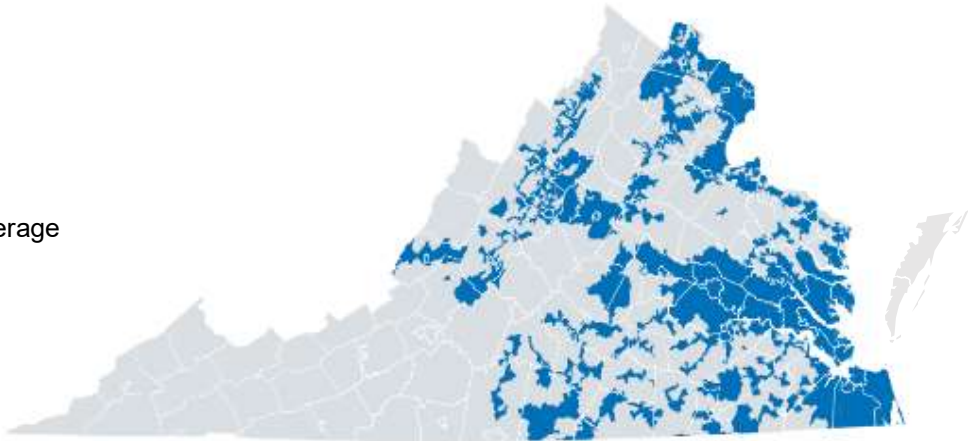
20,400+

Megawatts of Generation



40

Years of EnergyShare Program



DEV Electric Distribution Territory in Virginia

Dominion Energy in Chesterfield County

Dominion Energy has been part of the Chesterfield County community for over 100 years.



161,071
Customers



1,000+
Employees & Retirees



6
Major Asset Locations



\$12.03M
2022 Property Taxes Paid



Project Overview

- "Always-ready" generation project
- Four, ~250 MW each, combustion turbines (CTs)
 - Limited to up to 3,240 hours per year
- Dual-fuel capabilities
 - Natural gas (primary)
 - No. 2 Fuel Oil (ultra-low sulfur) (secondary)
 - Hydrogen blend (natural gas with up to 10% hydrogen) (future/potential alternative)



- Location
 - 94-acre site in James River Industrial Center
 - Dominion Energy-owned property
 - Adjacent to Chesterfield Power Station

Major Project Equipment

- Four, 250 MW, GE Frame simple-cycle combustion turbines
- Six black start emergency generators
- One natural gas-fired pre-heater
- One diesel-fired fire water pump
- One 12-million-gallon fuel oil storage tank
- Circuit breakers



Turbine Operations

- Fuel Type
 - Primary Fuel – Natural gas
 - Secondary Fuel – Ultra low sulfur No. 2 fuel oil
 - Potential Future Alternative Fuel – Hydrogen blended with natural gas
- Proposed Maximum Operating Profile
 - A reliability facility to operate when needed / called upon by PJM – with fast start capability
 - 3,240 hours per year per turbine (with up to 750 hours per year per turbine firing fuel oil)
 - 500 Startup/Shutdowns events per year per turbine (with up to 120 events per year per turbine on fuel oil)

Air Permit

- Seeking a new stand alone permit for CERC while considering existing operations at Chesterfield Power Station
 - Prevention of Significant Deterioration Permit (Major Modification)
 - State Minor Source Permit
- Required to install Best Available Control Technology
- Required to demonstrate project satisfies federal and state standards protective of human health and the environment specifically including sensitive populations

Mitigating Environmental Impact

Turbine Emission Controls- Best Available Control Technology

- Nitrogen Oxides (NO_x) emissions
 - State-of the art low-NO_x combustors
 - Water injection during fuel oil operations
 - Selective catalytic reduction
- Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Hazardous Air Pollutants (HAP) emissions:
 - Good combustion practices
 - Oxidation catalyst
- Sulfur Dioxide (SO₂) and Particulate Matter (PM, PM₁₀, and PM_{2.5})
 - Use of low-sulfur fuels
 - Good combustion practices

Permitting Requirements

Air modeling will demonstrate CERC meets federal and state standards designed to be protective of human health and the environment, including sensitive populations

- Permitting applicability takes into consideration the closure of coal fired units 5 and 6
- PSD – Prevention of Significant Deterioration Permitting Program
- MNSR – Minor New Source Review Permitting Program

Pollutant	CERC Project (tons/year)	Applicable Permit
Nitrogen Oxides (NO _x)	345	MNSR
Carbon Monoxide (CO)	819	PSD
Volatile Organic Compounds (VOC)	159	PSD
Particulate Matter (PM)	82	MNSR
PM <10 microns in diam. (PM ₁₀)	154	MNSR
PM <2.5 microns in diam. (PM _{2.5})	154	PSD
Sulfur Dioxide (SO ₂)	28	MNSR
Sulfuric Acid Mist (H ₂ SO ₄)	18	MNSR
Green House Gases (CO ₂ e)	2,213,100	PSD

Project Need

Extreme Weather Events

- Winter Storm Elliott (Dec. 2022)
 - Customer demand peaked before sunrise
 - Diverse fuel mix allowed flexibility when resources were constrained
 - Unable to charge storage facilities
 - Solar eased constraints after sunrise

Increased Customer Demand

- PJM's electric load growth has continued to increase in Dominion Energy's electric service territory
 - Industry and residential growth
- More energy and capacity is needed to support customers
 - Electrification of vehicles and everyday items

Project Benefits

- Continued reliable service while supporting the clean energy transition
- Assist in replacing lost tax revenues and local economic activity resulting from retirement of Chesterfield Unit 5 & 6
- Jobs and local business opportunities

Construction (Total)



\$53+ Million
in local economic
activity



\$2.2 Million
in state and local
tax revenues



540+
direct, indirect and
induced local jobs

Opportunity for local businesses—Construction suppliers, civil construction, equipment rentals, hospitality, restaurants, gas stations, hotels

Operations and Maintenance (Annual)



\$25 Million
in local economic
activity



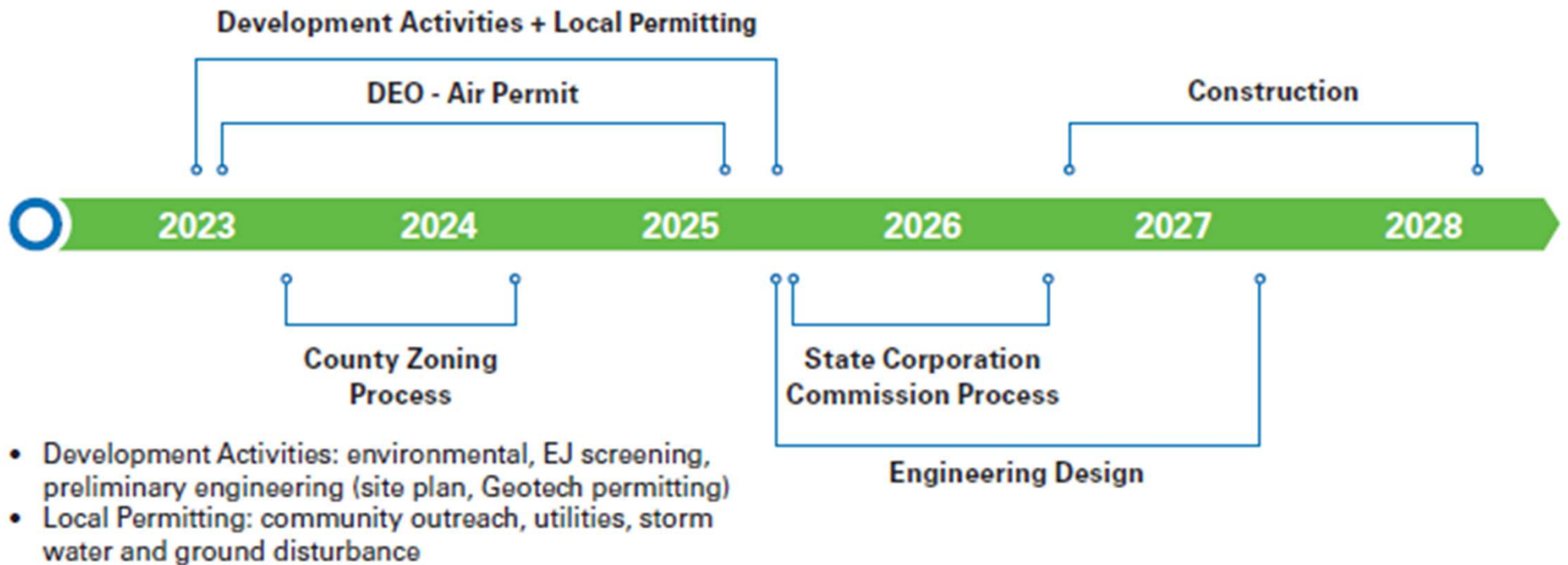
\$24.9 Million
in local
tax revenues



35
or more direct and
indirect local jobs created

Source: Estimated economic impacts determined by Mangum Economics

Project Timeline



Project Approval Process

DEQ Air Permit

- ✓ Submittal of Air Permit Application to VDEQ August 1, 2023
- ✓ DEQ Air Permit Informational Briefing November 16, 2023
- DEQ Air Permit Public Participation Process
- DEQ Air Permit Decision

Local Permitting

- Submittal of CUP to Chesterfield County
- Chesterfield County Planning Commission
- Chesterfield County Board of Supervisors
- Local Permitting Decision

State Corporation Commission (SCC)

- Submittal of Project to SCC
- SCC Certificate of Public Convenience and Necessity Hearing
- SCC Decision

Our Commitments

- Ensuring reliable energy access via a diverse portfolio of electric generation resources
- Keeping rates affordable to support customers and economic growth
- Delivering increasingly clean energy by deploying solar, wind, energy storage, and other emerging technologies
- Giving back to the communities we serve and investing in their future

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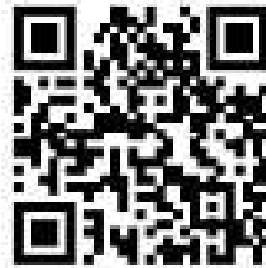
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