



Expedition Generating Station **Natural Gas Power Plant**

Narrative for
Special Use Permit (Utility, Major; Power Production Plant)
and
Consistency with the Comprehensive Plan Review (“2232”)

Fluvanna County, Virginia
PIN: 27-A-1 and 27-A-4

INTRODUCTION

Founded in Omaha, Nebraska in 1987, Tenaska is one of the largest private energy companies in the U.S. The company’s operating fleet includes 17 power-generating facilities in nine states, providing 7,482 megawatts of generation. Tenaska affiliates developed, built, own and operate Tenaska Virginia Generating Station (“TVGS”), which has been operating in Fluvanna County for over 20 years. Tenaska seeks to expand its operations by adding a new natural gas power plant proposed near the existing power plant, located near Branch Road (“Expedition”). Locating near TVGS is ideal for access to existing transmission lines, natural gas pipelines, and water sources.

PROJECT PROPOSAL

Expedition is a proposed natural gas-fueled combined cycle power plant with a nominal summer capacity of electrical generation of up to 1,540 megawatts of reliable electricity (the “Project”). The Project is proposed to be located immediately west and across the street from the existing power plant, on two parcels, 27-A-1 and 27-A-4 (the “Site”), which contain a total of 425 acres (collectively, the “Property”). Please see the General Location Map, enclosed.

The Project is a “Utility, Major” use that may be allowed by special use permit in the Agricultural, General, District A-1, per the County’s Zoning Ordinance § 22-4.2.2 and § 22-17-4. A “Utility, Major” is defined as “*Facilities for the distribution, collection, treatment, production, transmission and generation of public, private and central utilities including, but not limited to, transmission lines, production plants, electrical substations, pumping stations, treatment facilities, information and communication facilities*” per § 22-22-1 of the Zoning Ordinance. Section 22-17-16 provides specific requirements for approval of a special use permit for power production plants, which is one type of major utility.

The application for a special use permit and request for a Comprehensive Plan conformity determination is made by Expedition Generation Holdings, LLC (the “Applicant”). Tenaska Power Generation, LLC

currently owns Tax Map parcel 27-A-1 and has an option to purchase Tax Map parcel 27-A-4 from Pardee Virginia Timber I, LLC.

APPLICATION REQUIREMENTS

Describe briefly the improvements proposed. State whether new buildings are to be constructed, existing buildings are to be used, or additions made to existing buildings.

The Project will be located adjacent to the existing Tenaska facility near Branch Road, allowing the use of existing utility easements and infrastructure also used by TVGS such as the substation, and water and wastewater lines and system. Additional utility lines and pipes for water, wastewater, gas, and electricity will be needed to serve the Project. Consistent with the County's Zoning Ordinance § 22-17-16(A)(1), "*(t)he proposed location for the power plant is supported by a clear dependence upon the confluence of utilities necessary for the operation of the power production plant and the transmission of the electricity the plant generates,*" while location near the existing plant minimizes land disturbance and confines the new facility to a compact footprint.

The proposed improvements include the construction of:

- A combined cycle natural gas plant, used to produce electrical power, which will occur through a combined cycle dual fuel gas turbine and steam turbine generating system.
- An operations and maintenance building with associated parking.

No additions to the existing facility are proposed. At least 87% of the Property will be open space¹, which includes providing a 300' vegetative natural buffer around the Project. Detailed layouts are provided in the enclosed Illustrative Plan.

¹ The Zoning Ordinance defines "open space" as follows:

Sec. 22-17-12. - Special provisions relating to open space.

A. Open space defined: For purposes of this chapter, except as otherwise provided in this chapter, "open space" shall mean land or water left in undisturbed natural condition and unoccupied by building lots, structures, streets and roads and parking lots. The foregoing notwithstanding, the following shall be permitted in open space:

(Ord. 9-17-08)

(1) Agriculture, forestry and fisheries, including appurtenant, non-residential structures, including, but not limited to, barns, sheds, fences and the like;

(2) Private, non-commercial recreational structures;

(3) Public utilities otherwise permitted;

(4) Wells and sewage disposal systems otherwise permitted;

(5) Stormwater detention and flood control devices.

B. Designation and protection of open space: Open space shall be designated and shall be dedicated to public use or subject to easements in a form approved by the governing body and the County Attorney as sufficient to restrict the land subject thereto as provided herein. Except as otherwise approved in a particular case, such easements shall be granted to the County or to the Commonwealth of Virginia. Any easement dedicated or granted in accordance with the terms of Chapter 10.1, Title 10.1 of the Code of Virginia (sections 10.1-1009, ff.) or with the terms of Chapter 17, Title 10.1 of the Code of Virginia (sections 10.1-1700, ff.) shall be deemed, prima facie, to be sufficient to satisfy this section.

(Ord. 9-17-08)

NECESSITY OF USE: Describe the reason for the requested change.

The requested change is necessary to meet rapidly growing energy demand in Fluvanna County and across Virginia. This demand is being driven by the retirement of coal-fired plants, as well as significant growth in data centers, domestic manufacturing, and residential development and the need to respond to extreme weather events. Recent forecasts project that regional electricity demand will double between 2025 and 2040.

Virginia currently imports more electricity than any other state in the nation. Project Expedition will help reverse this trend by providing new, in-state generation capacity, thereby reducing reliance on out-of-state energy supplies.

By adding efficient, reliable natural gas generation, the Project will strengthen grid reliability, help prevent blackouts and brownouts, and contribute to stabilizing electricity costs for residents and businesses in both Fluvanna County and the Commonwealth.

PROTECTION OF ADJOINING PROPERTY/MITIGATION OF IMPACTS: Describe the effects of the proposed use on adjacent property and the surrounding neighborhood. What protection will be offered adjoining property owners?

Zoning Ordinance § 22-17-16.-Special Use Permit for Power Production Plants-sets out development guidelines that ensure that a *“proposed power plant will not be of substantial detriment to adjacent property and the general character of the district will not be changed as a result of its operation. This shall be accomplished, in part, by meeting the following minimum criteria:*

(a) The proposed site shall be a minimum of 300 acres and allow for at least eighty-seven (87%) of the property to be left as open space;

(b) The proposed site features natural vegetation or topographical features that provide for ample perimeter screening and buffering to minimize any visual or other impacts on adjacent property;

(c) The proposed location has adequate access to the road system and shall not create or exacerbate traffic congestion.”

Expedition will be located on two abutting parcels comprising 425 acres. At least 87% of the Property will be open space, including a 300' vegetative natural buffer around the Project. A minimum 300-foot-wide vegetative buffer will remain around the perimeter of the two parcels, as required by § 22-17-16(3)(e).

Viewshed Mitigation (See enclosed renderings)

- The Project is proposed to be approximately 1300 feet from the roadway, and similar to the existing Tenaska facility, will be minimally visible from the roadway.
- The Project is situated centrally within the 425-acre site, providing ample setback and visual buffer.

- The Project proposes a minimum 300-foot vegetative buffer on Tax Map parcel 27-A-1, which will be tree preservation of existing managed pine forest or, where there are gaps in the existing wooded area, new buffer plantings as detailed in the landscaping plan in compliance with the County Ordinance landscaping requirements. Parcel 27-A-4 will maintain trees exceeding compliance with the buffer requirements. This southern parcel will be used for a laydown yard and parking during construction, but, following the construction of the plant, it will be retimbered and remain in a natural condition, subject to a forest management plan.
- Existing trees and natural topography will further mitigate viewshed impacts.
- Just like the existing facility, neutral paint colors and landscaping will enhance the aesthetic look and blend into the existing landscape.
- Outdoor lighting will be pointed downward and inward to the site and will be warm in color.
- Expedition will not utilize Rock Lane as our primary site entrance but may utilize it as a secondary (emergency) access.
- A new accessway from Branch Road will be buffered by forest on both sides.

Sound Mitigation

- The Project proposes a minimum 300-foot vegetative buffer, providing a natural sound buffer.
- Combustion turbine generators and other major equipment will be enclosed and include sound attenuation equipment to reduce the sound of operations. Please see the Noise Mitigation Measures Map, enclosed.
- Exhaust stacks will be equipped with noise suppression systems.
- Emission control equipment will have a sound-dampening effect on the gas turbine outlet.
- Low noise fans will be installed on the plant's primary heat exchangers.
- Predictive sound modeling has been performed, accounting for the combined sound of the existing plant plus Expedition, assuming conditions favoring sound propagation and worse-case operating conditions.
- Predictive sound modeling shows that sound above approximately 60 decibels (dBA) would be contained within the subject parcels. At nearby existing residences, sound levels are predicted to be 50 dBA or less. Please see the Thermal Map, enclosed.

Air Quality

- The facility will be required to obtain and comply with the following permits from the Virginia Department of Environmental Quality (VDEQ) as a new, major source:
 - Prevention of Significant Deterioration (PSD) Air Quality Permit, prior to construction
 - Title V Operating Permit, soon after start of operation
- "Best available emission control technology" will be utilized.
- Natural gas is the cleanest available fuel for dispatchable power generation.
- Ultra-low sulfur diesel will be used minimally as backup fuel when natural gas supply is challenged.

Water Use

- Water use is anticipated to average six to seven million gallons per day.
- Primary use of water is for the non-contact cooling system.
- Water will be circulated multiple times before discharge to minimize consumption.

- Water for plant operations will be sourced from surface waters of the James River watershed.
- No ground water will be used for power generation.
- The Project or its water provider will be required to obtain and comply with a Virginia Water Protection (VWP) Permit from VDEQ for the withdrawal of the water supply, which VWP Permit will contain limits on the amount of withdrawal and other conditions to ensure sufficient flow in the River is preserved for aquatic life, recreational uses, and “off-stream” uses.

Discharge Water

- Estimated to discharge an average of 1.5 million gallons of water per day.
- Discharge will most likely be back into the James River watershed.
- The Project will be required to obtain and comply with a Virginia Pollutant Discharge Elimination System (VPDES) permit from VDEQ.
- The VPDES permit will include limits that ensure the state water quality standards are met, which are established to protect human health and the environment.

Transportation

- The Project will have similar traffic demand as the existing facility.
- Construction is predicted to be 12-18 months, during which time approximately 800 cars per day and 6-30 delivery trucks per day will enter the site via Branch Road.
- See the enclosed Site Entrance Traffic Control Plans for details of traffic management during construction. Flaggers on the road will coordinate lane closures. Rock Lane will not be closed or used during construction or plant operations except as secondary emergency site entrance.
- Following construction, plant access will be from the east off Branch Road.

Summary: The proposed Project has been carefully designed to minimize impacts on adjoining properties and the surrounding community. The facility will occupy only a small portion of the 425-acre site, with extensive setbacks, natural topography, and vegetative buffers to protect viewsheds. Neutral colors, landscaping, and downward-directed lighting will further reduce visual impacts. Sound impacts will be mitigated through equipment enclosures, attenuation technology, and quieter cooling fans. Air quality will be safeguarded under strict VDEQ permits requiring best available control technology, with natural gas serving as the primary, clean-burning fuel. Water use and discharge will be tightly regulated, with VDEQ permits ensuring protection of human health and the environment. Finally, traffic impacts during operation will be minimal and comparable to the existing facility. Together, these measures provide strong protections for adjacent property owners and ensure that the Project is compatible with the area.

ENHANCEMENT OF COUNTY: Why does the applicant believe that this requested change would be advantageous to the County of Fluvanna? (Please substantiate with facts)

The Applicant believes this change will provide substantial, measurable advantages to Fluvanna County because it strengthens the local economy with projected revenue and builds upon Tenaska’s longstanding role as a valued community partner.

Proven Track Record of Community Benefits

Tenaska and its existing facility have already demonstrated a strong commitment to Fluvanna County through:

- **\$34.9 million in tax revenue** contributed to date.
- **Stable employment opportunities** for 29 local residents, including 19 County residents and 10 graduates of Fluvanna County High School.
- **Support for community services**, including collaboration with the Sheriff's Office and Fire Department.
- **Investment in education and social programs**, with \$100,000 in scholarships awarded to 88 local students and contributions to public schools and social services.

Fiscal Advantages of the Proposed Project

The new Project Expedition is projected to generate significant and long-term fiscal benefits for Fluvanna County. Based on operation at full permitted capacity, the Project is anticipated to generate estimated County tax revenue as follows:

County Tax Revenue

- **\$247.7 million in tax revenue over 30 years**, with no tax abatement requested.
- **\$14.3 million annually in the first five years** of operation.
- Tenaska's tax contribution will make Expedition the top taxpayer in the County, with **33.81%** of the total assessed valuation in the County.
- An average of **\$8.3 million annually for 30 years**, supporting County services such as first responders, schools, and infrastructure, while potentially easing the property tax burden for residents.

Economic Development and Job Creation

The project will also drive meaningful job creation and economic growth:

- **Construction Phase:** \$20.3 million in economic output to Fluvanna, supporting **116 job years** (66 direct, 50 indirect/induced) and generating **\$7.5 million in wages** and **\$9.7 million in sales/use taxes**.
- **Operational Phase:** \$75.2 million in annual economic output to Fluvanna, sustaining **82 job years** (29 direct, 53 indirect/induced) with **\$8.8 million in wages** and **\$8.3 million in property tax revenue**.

- **Commonwealth Impact:** \$445.6 million in economic output during construction and \$90.6 million annually during operations, strengthening the wider Virginia economy.

Alignment with County Goals

The Comprehensive Plan emphasizes the need to diversify the County’s tax base and reduce reliance on residential property taxes. Tenaska is already one of the County’s largest taxpayers, and Expedition will further advance this objective by ensuring a stable, long-term industrial revenue stream that buffers against economic fluctuations.

Summary

The Applicant believes the requested change is advantageous because it directly supports Fluvanna County’s fiscal stability, economic development goals, and community well-being—providing hundreds of millions in tax revenue, new jobs, and sustained local investment without imposing additional financial burdens on residents.

CONSISTENCY WITH THE COMPREHENSIVE PLAN (“2232”)

Comprehensive Plan Designation: Rural Residential (27-A-1) and Rural Preservation (27-A-4)

Expedition is fully consistent with—and directly advances—the goals of Fluvanna County’s Comprehensive Plan. The Plan emphasizes the importance of diversifying the tax base, enhancing economic vitality, strengthening infrastructure, and protecting the County’s rural character.

Economic Development & Fiscal Resilience

Chapter 5 of the Comprehensive Plan underscores the County’s fiscal objective to shift away from a heavy reliance on residential property taxes (currently about 70% residential / 30% commercial) by expanding commercial and industrial contributions. Tenaska is already one of the County’s largest taxpayers, as documented in the Comprehensive Plan (see table below), and Expedition will significantly strengthen that role. The Project is expected to contribute nearly \$250 million in local tax revenue over 30 years, providing stable, long-term funding the County could allocate to schools, emergency services, and infrastructure, while reducing pressure on property taxes from homeowners.

Top-10 Taxpaying Companies, 2023		
Business Name	Assessed Value	% of Tax Base
Virginia Electric and Power	\$148,769,623	4.04%
Tenaska Virginia Partners	\$143,579,301	4.18%
Central Virginia Electric Co-op	\$57,976,054	1.63%
Transcontinental Gas Pipeline	\$54,809,662	1.54%
CSX Transportation	\$11,876,850	0.33%
Colonial Pipeline Co.	\$10,905,796	0.31%
Columbia Gas of Virginia	\$9,017,666	0.25%
Aqua Resources, Inc.	\$8,092,136	0.23%
Central Telephone of Virginia	\$4,546,810	0.13%
East Coast Transport	\$2,450,872	0.07%
Total	\$303,255,147	8.67%

Figure ED-6, Top Ten Taxpayers

Job Creation & Local Economic Stimulus

The Project will generate jobs both during construction and long-term operations:

- Construction Phase: Dozens of skilled trade, engineering, and logistics positions, along with indirect opportunities for local contractors, suppliers, restaurants, and lodging.
- Operations Phase: Permanent, high-paying technical and administrative jobs, plus ongoing vendor contracts.

This activity directly supports workforce development and raises household income levels in the County.

Infrastructure & Energy Reliability

The Comprehensive Plan recognizes the importance of reliable infrastructure to support growth. Expedition will bolster regional grid stability at a time when electricity demand is projected to double between 2025 and 2040, while older coal-fired plants are being retired. By providing efficient, dispatchable natural gas generation, the Project enhances energy security for local businesses, residents, and future development.

Environmental & Regulatory Alignment

Responsible environmental stewardship is ingrained in the development and day-to-day operations of Tenaska’s existing generating facilities, and Expedition will be no different. The Project will be designed, constructed and operated to comply with all applicable environmental standards. Tenaska will work closely with state and federal agencies during development and beyond to minimize the impact on air quality, water quality, wetlands, cultural resources, and threatened and endangered wildlife.

The Project will comply with stringent federal permitting requirements of the Clean Air Act and State Air Pollution Control Law and attendant regulations, including Prevention of Significant Deterioration (PSD) and major source (or Title V) air permits from the Virginia Department of Environmental Quality (VDEQ). By employing best available control technology, the Project will minimize emissions and operate as one of the cleanest forms of dispatchable energy. The Virginia Water Protection (VWP) Permit will ensure

appropriate surface water withdrawal limits and conditions, and the Virginia Pollutant Discharge Elimination System (VPDES) permit will ensure water discharged is compliant with state water quality standards that protect human health and the environment.

Additionally, the Project will be designed to minimize impacts to streams and wetlands. If impacts cannot be avoided, the necessary permits and local approvals will be obtained and, if necessary, compensatory mitigation implemented. Construction activities will also be sequenced to minimize impacts to threatened and endangered wildlife.

Lastly, while at least 87% of the 425-acre site will remain open space, preserving natural buffers while containing development to a compact footprint, an additional approximately 350 acres south of the Project will be subject to conservation protections to further preserve the rural character of the County.

Strategic Alignment with Comprehensive Plan Goals

Comprehensive Plan Goal	Project Expedition Benefit
Diversify the tax base	Adds nearly \$250M in long-term local tax revenue
Support economic development	Creates construction and permanent jobs; stimulates local economy
Enhance infrastructure & reliability	Provides reliable, efficient energy supply that supports business retention and attraction
Foster fiscal resilience	Reduces dependence on residential taxes; stabilizes revenue base
Protect rural character	Limits development footprint so that at least 87% of the Site is left as open space; maintains 300-foot-wide vegetated buffers around site; includes commitment to preserve an additional approximately 350 acres south of the Property.

Summary

Expedition is not only consistent with the Comprehensive Plan—it actively advances its vision by expanding Fluvanna’s commercial tax base, generating high-quality jobs, strengthening infrastructure, and ensuring reliable, clean energy to support long-term economic sustainability.

CONCLUSION

Expedition represents a rare opportunity for Fluvanna County to strengthen its economic foundation, enhance energy reliability, and support long-term community goals while maintaining respect for the County's rural character. Building on Tenaska's proven track record as one of the County's largest taxpayers and a valued community partner, the Project will generate nearly \$250 million in local tax revenue, create well-paying jobs, and provide reliable infrastructure to meet the Commonwealth's rapidly growing energy needs.

With its compact footprint, extensive natural buffers, and compliance with strict environmental and regulatory standards, the Project has been carefully designed to minimize impacts on adjoining properties and the surrounding neighborhood. At least 87% of the site will remain open space, confining development to the most appropriate location adjacent to existing infrastructure.

Expedition is consistent with Fluvanna County's Comprehensive Plan and advances its strategic objectives: diversifying the tax base, fostering fiscal resilience, supporting economic development, and ensuring infrastructure capacity for the future. This expansion will not only benefit the County today but also secure lasting economic and energy stability for decades to come.

Expedition SUP Application
tfortune@fluvannacounty.com
9/2/2025 1:37:13 PM
Todd Fortune

