**Project Overview: Lorton Green Energy Park and Debris Landfill**

**Case name: Furnace Associates, Inc. (dba EnviroSolutions)**

**Case #: SEA-80-L-061-02**

**Background:**

1. The Lorton Construction debris landfill is the major depository for the region’s construction debris waste. It is owned by Furnace Associates, Inc., more commonly known as part of “EnviroSolutions” a local based waste and recycling company. The facility is governed by a special exception (SE) which was approved in 1980-81 and subsequently amended January 2007 after review, analysis and approval by the MVCCA in 2006.
2. The application requests a further amendment to the SE. It includes the following major changes:
3. Establish renewable energy generation facilities including wind and solar, geothermal infrastructure and methane gas collection systems as “interim uses” to further the County’s “Green Energy Triangle” initiative; these facilities are presented as the “Lorton Green Energy Park.”
4. Extend the useful life of the existing construction debris landfill to continue landfilling activities until December 31, 2040;
5. Remove the previously-approved public park uses and the dedication requirement rescinded by the Fairfax County Park Authority Board in 2009;
6. Entitle three private, limited access active recreation “end uses”;
7. Create and operate an “Observation Point” as a private, controlled access accessory use.
8. The project proposes a unique combination of solar/wind/methane/geothermal applications that will produce significant renewable energy, in an urban environment, thus making the Green Energy Park (GEP) a tangible demonstration of Fairfax County’s environmental policies and stewardship.
9. The application proposes the installation of a 40 acre platform on top of the site and 10 acre footprint on its southern slope that will, upon the landfill’s closure, be able to accommodate a renewable energy footprint of 12 wind turbines and a 50 acre solar array (with today’s technology) a scale of renewable energy production, unparalleled along the eastern coast of the US.
10. The GEP is a major and unique opportunity for the County and region to establish the first measureable footprint of renewable energy from solar and wind in the region if not the state. Energy produced from this project will enable a significant building complex, such as the nearby Lorton Arts Foundation Workhouse, to be taken off the electrical grid or some other nearby county-owned facility.
11. The GEP is the catalyst needed to trigger the Fairfax Board of Supervisors’ Green Energy Triangle initiative and rebrand the local area from an industrial corridor to a renewable energy hub. The impact of the GEP is county-wide and regional.
12. The proposed educational feature will provide information on the County’s Green Energy Triangle, and the benefits of renewable energy, to the Fairfax County schools and the general public through access at a physical location, as well as via the internet. Data from this project will enable the county and region to better plan for long term energy sustainability , as well as serve as a ‘case study’ for academic research.
13. The project requires no public funding and offers a revenue stream to the County plus significant funding for the local community’s needs.
14. Denial of the application will result in the landfill ceasing operations in 2018 and the establishment of at least 2 new waste transfer facilities which will dramatically increase truck traffic in the region as well as on local roads, generating significant additional greenhouse gases, estimated 3.6 million additional tons of GHG, as well as adding significant cost to the regional economy in the form of higher transportation cost.
15. Extensive public outreach has been carried out for more than 2 years with the local community as well as environmental stakeholders throughout the county such as the Sierra Club.
16. The community adjacent to the landfill (Lorton Valley HOA) has formally supported the application.
17. One of the largest community groups in the local area (Newington Forest Community Association) has formally supported the application.
18. Local Sierra representatives have represented support for the application.
19. This application is undergoing review by County Zoning & Planning staff for a recommendation to the County Planning Commission. It is anticipated staff will issue a recommendation in late January and the Planning commission will consider it on February 5, providing guidance for the Board of Supervisors’ subsequent consideration.

**Green Energy Park Application Features & Benefits:**

* **Removal of in-perpetuity mixed waste reclamation facility and its related significant truck traffic on local and regional road networks.**
* **3 medium wind turbines** on top of the applicant’s landfill operational within 36 months of approvals
* **3 acre solar panels** on applicant owned I-6 zoned land-operational within 24 months of approvals
* **Recovered methane gas capable of producing 2 million Kilowatt hours of electricity** provided to the county annually for use at local county owned facilities. Estimated cost savings $250,000 annually, until landfill closure, and $100,000+ annually during post-closure. **Total estimated savings: $7 million**.
* **1 million square feet of geothermal capacity** for nearby county-owned facilities such as the planned regional sports complex
* **Avoiding impact of, at least,** **two new waste facilities** (including EnviroSolutions neighboring reclamation facility) that would be needed to replace the construction debris landfill should it close in 2018 (as currently required) and avoiding the related truck traffic to transport the debris from these facilities to long distance debris landfills. This translates into **avoiding approximately 3.6 million tons of greenhouse gases and consumption of over 41,558,000 million gallons of diesel** over the life of the applicant’s proposed project.
* **Provision to the general public of operational, cost, environmental and performance data** of the proposed green energy park features to enable long-term analysis and research of such uses in the region.
* Creating a platform on the landfill to facilitate **a potential 50+ acre green energy park on the landfill** with capacity for 12 wind turbines and 50 acre solar array with current technology.
* **Installation of an “Observation Point” on top of the landfill** during its operational life and during its post-closure period that will allow controlled access to the top of the site, enabling **scenic view** of both the Green Energy Triangle area and the nearby Potomac River, **accommodate lectures** and **provide educational information** on renewable energy and history of Lorton area.
* **Renewable energy education feature** for the general public
* **6090+ trees to be planted** (in lieu of ineffective shrub components) which includes **1700 more trees** than provided for in the current landscape plan.
* **Branding the County nationwide as a renewable energy leader at No Cost to the County**
* **Provide long term disposal and recycling capacity for construction debris**, via the extended fixed closure date, which is vital to the county’s economic vitality, redevelopment and revitalization projects, **avoiding millions of additional cost to the region’s economy**.
* **County shares revenue** from sale of wind/solar generated electricity. Estimated revenue in Phases 1-4 of the project: estimated $2.5 million benefit. This benefit does not include the 50% net profit share in Phase 5 from the full green energy park revenue.)
* **$15 million of income** over life of the landfill operation for local community needs
* **$3.2 million for local park & recreation uses**.

**Potential Questions**

1. ***Why is this application a County and regional issue?***

* The beneficial environmental impact of the Green Energy Park is regional not local.
* The GEP is a demonstration of County-wide environmental policies and objectives.
* Closure of the landfill will have a significant negative environmental as well as economic impact on the region and county, resulting in new additional waste facilities, significant increases in truck traffic locally and regionally with the associated significant additional cost to the economy.
* The rebranding benefit from industrial to renewable is a county-wide benefit.
* The educational benefit is regional not local.
* This project is a key catalyst for the County’s Green Energy Triangle initiative.

1. ***How will this affect the neighboring residents?***

* The homeowners association adjacent to the site is in favor of the project (Lorton Valley) as are other associations in the area, such as Newington Forest.
* The GEP will have no impact on this community’s view shed. The application does not seek an increase in the site’s currently approved height.
* The turbines will be visible from sections of I-95 and many believe the optics of the turbines will be a positive billboard for Fairfax County broadcasted to the thousands of vehicles passing by on the interstate.
* There will be a significant negative impact to the local community if the landfill closes as its replacement will generate significantly more truck traffic on local roads.

1. ***What happens if this project is not approved?***

* The landfill closes in 2018 and, at least, 2 new waste facilities will be needed to replace it, both of which will generate far more truck traffic than the landfill. This will result in a significant increase in greenhouse gases and truck traffic. Other than the applicant’s landfill, there are no other landfill facilities available to receive the region’s construction debris, which is critical for the revitalization and redevelopment.
* The County will lose a significant opportunity to trigger the development of its Green Energy Triangle concept.
* The significant economic benefits of the project will be lost

1. ***How do I know this will work?***

* All of the proposed renewable technologies have a sound track record.
* The applicant has provided examples of turbines and solar on landfills.
* The applicant has provided to county staff a thorough feasibility study produced by a nationwide renewable energy consultant with experience in the landfill industry.
* There is no risk for Fairfax County, only benefit. The applicant is funding all aspects of the green energy park and offering to share the revenue from electricity sales with the county as well as provide millions in funding for local community needs.