

ENERGY INGENUITY COMMITTEE



▪ *In-Person Meeting* ▪

A G E N D A

ENERGY INGENUITY COMMITTEE

Inn at Wise, 110 E. Main Street, Wise, Virginia 24293

Tuesday, May 21, 2024

4:15 P.M.

If participating in the meeting by phone, dial: **1-332-249-0607** and enter **access code: 887372082#**.

The Commission will not change the method by which it chooses to meet without providing a new meeting notice that is in accordance with the Virginia Freedom of Information Act. If you experience problems calling in, please contact: **Hannah Franke-Fuller** at **(804) 894-9659** or **hfranke-fuller@revitalizeva.org** or **Roz Stein** at **(804) 894-9651**.

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| Welcome and Call to Order | <i>TBD</i> |
| Call of the Roll | <i>The Honorable James Campos, Executive Director</i> |
| Public Comment | |
| Program Overview and Development | <i>The Honorable James Campos, Executive Director, and Ms. Vicki Humphreys, Grants Director</i> |
| Grant Projects | <i>Mr. Jerry Silva, Director of Regional Energy Development and Innovation</i> |
| Other Business | <i>The Honorable James Campos, Executive Director</i> |
| Adjournment | |

**FY25 Energy Ingenuity Program
Staff Summaries and Recommendations
May 21, 2024**

The Commission received seventeen pre-applications for the March 31, 2024, application deadline of the FY25 Energy Ingenuity Program. Nine applicants were invited to submit full proposals, and four proposals were ultimately received by the deadline. The Energy Committee will act on these applications at its meeting scheduled for May 21, 2024, at 4:15 pm. The applications are grouped by investment category.

| Req# | Organization | Project Title | Requested Amount | Staff Rec. |
|--|----------------------|---|---------------------|------------------|
| Energy Catalyst – Planning Grants | | | | |
| 4259 | ATIP Foundation, LLC | Planning for Energy Revitalization Project | \$50,000 | \$50,000 |
| 4262 | Edtunity Institute | The Next Military EV Education | \$50,000 | \$50,000 |
| Energy Execution – Implementation Grants | | | | |
| 4260 | Halifax County | Hitachi Energy Equipment Upgrades for Increased Productivity in the Energy Sector | \$2,000,000 | Tabled |
| 4261 | Brunswick County | LNG Storage Project | \$1,000,000 | Tabled |
| TOTAL (4 requests) / Staff Recommendation | | | \$ 3,100,000 | \$100,000 |

Energy Catalyst – Planning Grants

ATIP Foundation, LLC

Planning for Energy Revitalization Project (#4259)

\$50,000 Requested

Project Summary: The purpose of the Catalyst planning grant is to lay the foundation for local and regional demonstrations of biomass-to-bioenergy and co-products conversion technologies. The geographic scope of this plan would encompass all counties in the Southwest (14 counties & 3 cities) and Southern (20 counties plus 3 cities) footprints of the Tobacco Region Revitalization Commission. Thus, the planning grant includes (1) identifying all biomass feedstocks in region (geospatial inventory) for conversion; (2) analyzing these data to identify potential demonstration sites where a combination of feedstocks and infrastructure is sufficient for the given (specific) technology; (3) identifying and engaging community leaders and organizations that will commit to work with the Foundation to serve on a regional advisory council to draft and finalize a Regional Strategic Plan; and (4) establishing a working group of those identified in #3 above to coordinate communications & education of stakeholders, and to develop a timeline of action items to result in execution of demonstrations.

Matching Funds:

- \$50,000 from USDA Rural Business Development grant (money in hand)

Project Outputs:

- Quarterly reports providing progress to date on each of the four enumerated Tasks. Each report will include status of GIS work and screenshots of important layers documenting geospatial inventory of feedstocks.
- GIS analysis layers and tables to identify potential demonstration sites where a combination of feedstocks is sufficient for the technology.
- List and contact points of community leaders and organizations that will commit to work with the Foundation as the Regional Advisory Council
- Strategic Regional Plan for Advancing the Bioeconomy and Bioenergy Production in SW Virginia.
- Roster of working group members and their respective roles & responsibilities in developing communication & education materials and developing proposed timelines for subsequent technology demonstrations.
- Final Comprehensive Report from ATIP Foundation and Regional Advisory Council suitable to serve as a multi-year, multi-technology implementation document.

Staff Comments:

This application requests \$50,000 in Energy Catalyst funding for a planning study to lay the foundation for future efforts to advance a bioenergy economy in Southwest Virginia. As of 2021, out of the 30 biomass facilities in the Commonwealth, only one was located in Southwest. The study will include documentation of feedstocks and potential placements of biomass conversion technology in the region, a strategic plan for regional implementation, and development of an advisory council for the project. The study will also include projections regarding the job creation and capital investment outcomes that could result from future bioenergy projects in the region.

The Agricultural Technology Innovation Partnership (ATIP) Foundation is a 501(c)(3) based in Arlington, TX, with member offices in eight states. They form strategic, collaborative partnerships to promote adoption and commercialization of USDA research outcomes. In September 2023, ATIP was instrumental in collaborating with the Cumberland Plateau PDC, the Virginia Coalfield Economic Development Authority, and several other partner organizations in having a Bioeconomy Development Opportunity (BDO) Zone “A” Rating for woody biomass in Tazewell County.

The ATIP Foundation will match the \$50,000 request with an equal amount of funding from the USDA’s Rural Business Development Grant program. Three third-party contractors (Bioeconomy Strategic Innovations, Wes Jurey, and Clean Economy Works LLC) will lead various facets of the study.

Financial Viability Assessment:

A review of key viability criteria for this project indicates that it is highly achievable. . The ATIP Foundation is a bonafide 501(c)(3) nonprofit, and is active and in good standing with the State Corporation Commission. The ATIP Foundation has been in operation since 2011. The applicant has identified qualified contractors to complete the study. The budget is appropriately scaled and all match is in hand. Staff believes this project is a good investment that would provide some new opportunities for agriculture and forestry producers and contribute to the overall effort to expand the energy economy in Southwest Virginia.

Staff Recommendation: Staff recommends a \$50,000 planning grant to support this effort.

Edtunity Institute
The Next Military EV Education (#4262)
\$50,000 Requested

Project Summary: As a result of the landmark federal Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act of (IIJA), the federal government is investing over \$7 Billion dollars in Electric Vehicle (EV) charging infrastructure. The states and regions that will benefit most from this massive investment will be the ones with an EV-ready workforce that has the skills to design, install and repair the battery charging stations on which electric vehicles depend. Edtunity Institute is a nonprofit training organization that certifies transitioning military, reservists, National Guard members and other underserved populations for technical jobs in telecommunications and media fields. Edtunity just started a pilot training program for EV technicians. In this proposal, Edtunity will assess the EV charging skills needed by transitioning military personnel in Southern and Southwest Virginia to qualify for jobs in infrastructure installation, maintenance and repair. The Needs Assessment will include an Implementation Plan that will lay out the curriculum, institutional partnerships and resources needed to create a local, skilled EV charging infrastructure workforce.

Matching Funds:

- \$50,000 - grant from ElectrifyAmerica (a subsidiary of Volkswagen Group of America established in late 2016 by the automaker as part of its efforts to offset emissions).

Project Outputs:

- A ten-year analysis and report projecting a 10-year outlook on:
 - Number of charging infrastructure jobs in the target region.
 - Current and projected supply of workers in the Southern and Southwestern regions, and assessment of the gap between supply and demand.
 - Specialized skills needed for selected EV charging infrastructure jobs including charging station design, installation, maintenance and repair, as well as creating and maintaining charging networks and payment systems.
 - Current public and private training and job placement resources serving the target area.
 - Environmental and economic impacts of bringing additional EV-related jobs to Virginia.
- 10-year Plan for Training the TRRC Regional EV Infrastructure Workforce

Staff Comments:

Grant funds are requested to support a workforce needs assessment for Southern and Southwest Virginia to inform electric vehicle (EV) infrastructure training plans. This training, funded in part by a \$100,000 grant from Electrify America, will be targeted to transitioning active military personnel, reservists and National Guard members living or serving in various locations in Southern and Southwest Virginia. These locations include the following:

| SOUTHERN | SOUTHWEST |
|---|---|
| <ul style="list-style-type: none"> • Fort Barfoot, Nottoway • Army Reserve Harmony Crossing, Bedford • US Army 98th Training Division, Campbell | <ul style="list-style-type: none"> • US Army 412th Theatre Engineer Command, Smyth • Army Reserve unit 655 Transportation Company Detachment 1, Galax • Engineers (heavy equipment operators, electricians, carpenters) and wheeled vehicle mechanics, Tazewell • Truck drivers and wheeled vehicle mechanics, Scott and Washington Counties |

Since 2021, Electrify America has granted more than \$3MM to community organizations to deliver STEM and workforce development programs. Organizational leadership for the project will be provided by Brigadier General (Retired) Marianne Watson, Edtunity Institute’s Chief Operating Officer. She has notable expertise in veteran employment efforts. Other partners in the project include Virginia Clean Cities, Green Paradigm Consulting, and SkillFusion, a software development corporation specializing in developing skilled EV workers.

The Electrify America grant, \$50,000 of which will serve as matching funds for the project, is restricted to the delivery of training for 50 individuals exclusively from the Tobacco Region footprint. Because the EA grant was specified for training materials and trainee recruitment and tracking, it cannot be applied 50/50 across the expenses for the needs assessment being proposed for TRRC funding. Staff typically likes to see equal distribution of expenses across the budget line items between TRRC and the applicant organization. Edtunity has been made aware of TRRC funding policies that require documentation of expenditures and application of match funding; and that the matching funds must be expended before they can receive reimbursement from TRRC for the needs assessment. Staff is supportive of the effort, however, to identify and address the specific needs of service members and others from the Tobacco Region to facilitate their transition into energy careers.

Financial Viability Assessment:

A review of key viability criteria reveals an interesting opportunity to study needs and best practices for training individuals in Southern and Southwest Virginia for careers that support zero-emission vehicles and their associated service/infrastructure needs. Edtunity Institute is a bonafide 501(c)(3) nonprofit headquartered in Norfolk, VA and is active and in good standing with the State Corporation Commission. Edtunity Institute has been in operation since 1994. The budget is supported by cost estimates with delineated scopes of work from identified contractors. The application of match is a bit lopsided due to Electrify America grant use restrictions, which may present an obstacle to receiving reimbursement in a more timely manner. This may affect cash flow for Edtunity and they will need to structure their operations to account for this issue.

Staff Recommendation: Staff recommends approval of a \$50,000 planning grant award.

Energy Execution – Implementation Grants

Halifax County Industrial Development Authority

Hitachi Energy Equipment Upgrades for Increased Productivity in the Energy Sector (#4260)

\$2,000,000 Requested

Project Summary: Hitachi Energy is one of the largest power and distribution liquid filled transformer manufacturers. Hitachi Energy has operated in Halifax County for over fifty years, beginning as Westinghouse, then ABB and now Hitachi Energy. Hitachi Energy is Halifax County’s fourth largest employer with over five hundred employees currently. Virginia is home to two Hitachi Energy facilities, one in Bland and one in South Boston Virginia. South Boston's tank shop is hampered by outdated plasma punch machines, necessitating significant weekly maintenance to sustain operation. This ongoing maintenance burden translates into approximately 22 hours of downtime per week, incurring excessive costs and disrupting production schedules. Consequently, the company is compelled to outsource plate cutting, impeding its ability to meet burgeoning demand and undertake future projects. In response to

these challenges and to fortify South Boston's operational capacity, there is an urgent need for updated cutting equipment in the tank shop.

Matching Funds:

Matching funds are being requested from Hitachi for the following purposes:

- \$250,000 for property and improvements
- \$3.4MM toward the purchase/shipping/installation of a second 30kW fiber laser cutting system and related building modifications required to support the new equipment.

Project Outputs:

- Reduce cost of outsourced components, estimated annual savings \$407K USD
- Reduce operating cost by \$68/hour or \$326K USD/year
- Eliminate use of “plate dogs” to load plate steel/material handling savings ~ \$64K USD
- Eliminate manual identification of parts ~ \$128K USD
- Scrap material reduction, estimated annual savings \$427K USD
- Reduce machine downtime by 75% ~ \$80K USD

Staff Comments:

This project expands the capacity of Hitachi Energy to realize cost savings, and maintain jobs associated with the tank room operation. Grant funds are requested in the amount of \$2,000,000 to replace an outdated Whitney Plasma Punch machine and oxy fuel burn table with a 30kW fiber laser cutting system. The applicant states that this will result in a \$5.5MM total capital investment and addition of 30 jobs through the increase in capacity gained from replacement of the outdated machines. An analysis of operating costs and a time study of the current and proposed equipment was provided, indicating that operating costs were reduced by \$635K when switching to the new equipment. The applicant also states that Halifax County can expect to net \$173,210 over a ten year period in Machinery and Tools Tax revenue for the new equipment (when adjusted for Enterprise Zone incentive payments).

The TRRC's longtime practice regarding reimbursement for equipment for a private beneficiary is limited to no more than 25% of the total cost of the equipment, which is still a sizable request at \$1.35MM.

Hitachi is currently experiencing a growth in business that the current equipment cannot support. Not replacing the equipment could result in outsourcing cutting to other Hitachi facilities and reducing the number of additional new hires.

Financial Viability Assessment:

A review of key viability criteria for this project reveals an opportunity for a major Halifax County employer to receive financial assistance from the Commission to replace some outdated equipment that is hindering productivity. The project's budget is detailed and supported by current quotes from vendors. The project has at least 75% match identified, but a request for corporate funding is pending. It is difficult to ascertain, at this time, the estimated return on investment to the Commonwealth for the project. Further discussion is warranted due to the size of the request and the newness of the TRRC Energy Ingenuity Fund.

Staff Recommendation:

Staff recommends that this application be tabled until the Fall Commission meeting to allow for additional discussion/evaluation by the Commission.

Brunswick County
LNG Storage Tank Project (#4261)
\$1,000,000 Requested

Executive Summary:

Dominion Energy Virginia plans to construct a liquified natural gas (LNG) storage facility to support Brunswick and Greensville Power Stations with backup fuel. Mecklenburg Cooperative, the local distribution company at the proposed construction site, will build a new substation to provide power to the LNG facility. Brunswick County is seeking funding from the Tobacco Region Revitalization Commission on behalf of Dominion Energy to support the purchase of equipment that will be installed in the electric substation.

Matching Funds:

- \$1,000,000 from Dominion Energy to support equipment purchase (cash in hand).

Project Outputs:

- Agreement between Dominion Energy and Mecklenburg Electric Cooperative
- Electric load requirement document
- Design Engineering Report
- Substation ready for operation

Staff Comments:

The operation of the LNG Storage facility will improve the dependability of DEV's electric grid, which provides service to 2.7 million customers in North Carolina and Virginia. The implementation of the LNG Storage facility will serve as a blueprint for other potential projects seeking to improve resiliency and reliability of the electric infrastructure, positioning Virginia's Southern Tobacco region as a case study to support similar projects throughout the country. The proposed LNG Storage Project is a high-impact/priority project for Dominion Energy Virginia (DEV) since it helps mitigate risks associated with natural gas fuel supply to two power generation stations that are critical to supporting electricity demand in the Commonwealth from DEV's electric customers.

Traditionally, utilities generate earnings through regulator-approved adjustments to rates that recover investment costs and add a margin of return, typically a return-on-equity over the life of the investment asset(s). In this case, the investment in the LNG Storage Project by DEV, if approved by the Virginia State Corporation Commission (DEV's regulator) will earn a fixed return on equity, currently approved at 9.7%, annually through the expected life of the asset. Additionally, the reasonable and prudent operating and maintenance costs would also be recovered from customers on an annual basis and passed along at cost to DEV customers. If the VA TRRC decides to provide a \$1M grant for this project, it would result in lowering the cost recovered from DEV customers, by reducing the capital investment basis that is used to determine customer rates.

Financial Viability Assessment:

A review of key viability criteria for this project indicates that more information is needed to be able to determine whether the project is a good investment for TRRC funding. The project's budget lacks details on the specific piece(s) of equipment that would be supported by the grant. The outcomes projections appear to need further refinement.

Staff Recommendation: Staff recommends that this application be tabled until the Fall Commission meeting to allow for further evaluation.