Energy Ingenuity

#4317, A.L. Philpott Manufacturing Extension Partnership d.b.a. GENEDGE Alliance E-3 Assessment for Industrial Training Assessment Center (ITAC) Implementation Grant Qualification Pilot Program - \$49,250 Grant

The industrial sector consumes approximately 35% of U.S. energy, with manufacturing accounting for approximately 76% of that total. Rising energy costs and growing regulatory demands challenge small and medium-sized manufacturers (SMMs), particularly in Virginia's Tobacco Region. GENEDGE, approved as an ITAC-equivalent by the U.S. Department of Energy, proposes a pilot project funded by the Tobacco Region Revitalization Commission (TRRC) to help three (3) SMMs reduce energy costs, improve efficiency, and achieve sustainability goals through capital projects and energy utilization investment. The project will provide each participating manufacturer E-3 assessments and grant application support for DOE's ITAC Implementation Program. This initiative will enhance manufacturers' competitiveness and promote decarbonization by enabling access to application for up to \$300,000 in match grant funding per identified energy efficiency project. Additionally, a market study is planned to identify high energy use manufacturing across the Southern portion of the Tobacco Region Revitalization Commissions service area for potential expansion of this pilot project and to identify potential participants in future TRRC Energy Ingenuity program proposals.

#4311, Commonwealth Center for Advanced Logistics Systems (CCALS) Understanding Potential Hydrogen and Hydrogen-Hybrid Electric Use-Cases in Southern Virginia - \$50,000 Grant

This project explores the transformative potential of hydrogen and hybrid hydrogen-electric solutions, including those powered by future MMR/SMR nuclear reactors, to revolutionize rural infrastructure in Southern Virginia. By focusing on critical sectors such as surface transportation, aviation, freight logistics, and data centers, the initiative will define innovative use cases and scope demonstration projects that align with the Commonwealth's priorities. Emphasizing energy resilience, cybersecurity, and sustainable economic growth, the project aims to establish Southern Virginia as a model for the consideration of deploying hydrogen technologies. Funding from the Tobacco Region Revitalization Commission (TRRC) will be used to support the requisite research,

stakeholder engagement, report compilation, and presentations necessary to develop an initial roadmap and provide actionable insights to stakeholders.

#4322, Commonwealth Center for Advanced Logistics Systems (CCALS) CCALS & IVDA Developing a UAS (Drone) Energy Center in the TRRC Region - \$49,560 Grant

CCALS will collaborate with the Inland Valley Development Agency (IVDA) on the project entitled "Planning for the Launch of the Unmanned Aircraft Systems (UAS) Energy Center: A Drone Testing and Training Center Focused on the Energy Sector in Virginia" seeks to build upon Virginia's vibrant drone industry, and the growing needs for UAS (Drone) technologies in the energy sector by planning for the launch of a new UAS Energy Center in the Tobacco Region footprint. Leveraging an already successful UAS center in San Bernadino, California as a model, the CCALS – IVDA will use Commission and matching funds to build a solid foundation for a UAS Energy Center by engaging with regional stakeholders, conducting market research, assessing training needs, identifying a suitable location, developing facility requirements, creating a funding strategy, and hosting "in-region" community information sessions. The final deliverable will be a plan for a vibrant UAS energy center that not only meets the needs of the energy sector but also enhances economic development (jobs, research, capital investment) in the region.

#4323, Virginia Ed Strategies Energy Workforce Needs Assessment - \$50,000 Grant

Energy demand is growing across the country, and in Virginia, specifically, there are plans underway for a great amount of infrastructure development in the Southside and Southwest regions to meet these demands. There is not currently a trained workforce prepared to fill all of the roles that will be needed to successfully meet these demands. The Energy Workforce Needs Assessment would address this issue with two major studies to be conducted by a contractor in consultation with Virginia Ed Strategies, the Virginia Energy Workforce Consortium, and other key partners across the Southside and Southwest regions of the Tobacco Commission footprint: (1) to study the forecasted demand for energy generation and capacity and how that demand will impact talent pipeline needs and (2) to study the current and anticipated workforce needs for energy companies along with the existing and planned training and education that would prepare future employees in the region for these jobs. Funding from the Tobacco Commission would cover a contractor, travel expenses, and miscellaneous expenses such as data or license fees. The studies conducted with the planning grant will yield concrete data and recommendations for the projects and partnerships that are critical to best meet those needs in the most efficient, economical way.

#4320, Virginia's Gateway Region Dinwiddie Energy Innovation Campus Planning Study - \$50,000 Grant

Virginia's Gateway Region and the Dominion Energy Innovation Center are requesting a \$50,000 Energy Catalyst Planning Grant to explore two specific opportunities. First, we will work to understand the viability of creating an energy-focused innovation campus in Dinwiddie County, located in close proximity to the Dominion Energy Locks Campus and other nearby energy-related assets. Second, we will explore possibilities of siting a pilot project for clean hydrogen/electricity production on the property as a tenant of the Energy Innovation Campus. TRRC funds will be used to develop a strategic plan, perform highlevel site work, understand project economics, and identify potential tracts for the pilot project.

#4312, Town of Altavista

Altavista Wastewater Treatment Plant Improvement Project - \$500,000 Grant and a \$250,000 loan from the Commission's Lending Partnership Program, contingent on loan approval by the Virginia Small Business Financing Authority.

The proposed Wastewater Treatment Plant (WWTP) upgrade project in Altavista offers significant benefits in terms of energy efficiency, environmental impact, and economic stability. By implementing modern technology and control mechanisms, the town can achieve substantial improvements in its wastewater treatment process. The installation of High-Speed Turbo Blowers (HSTBs) and dissolved oxygen (DO) control equipment is expected to reduce energy usage by 4050%. This significant reduction in energy consumption will be achieved through:

- Precise aeration control, eliminating over-aeration of digesters and aeration basins.
- High-efficiency equipment operation, including HSTBs with magnetic bearings.
- Implementing a Supervisory Control and Data Acquisition (SCADA) system for automated monitoring and control.

The current Wastewater Treatment Plant (WWTP) operation does not utilize energy efficient control mechanisms such as dissolved oxygen (DO) control. Since the existing controls and instrumentation are no longer functioning, operations regularly over-aerate the digesters and aeration basins to eliminate the potential to under-aerate and upset the treatment process. The upgrade will contribute to a reduced carbon footprint through elimination of oil usage (55 gallons per year) for blowers, more efficient treatment of high-concentration wastewater from the town's largest employer Abbott Nutrition, and better management of biochemical oxygen demand (BOD) loading, which ranges from 450 to 750 mg/L due to industrial discharge. The normal household biochemical oxygen demand

loading on a domestic plant is normally 180 to 250 milligrams per liter of BOD loading. The project will support the maintenance of lower treatment rates for the town's industrial base, help retain jobs at Abbott Nutrition, and ensure the WWTP can meet stringent federal standards, particularly for treating Abbott's high-concentration discharge.

#4315, Central Virginia Electric Cooperative

Appomattox Battery Energy Storage System (BESS) Project - \$750,000 Grant and a \$750,000 loan from the Commission's Lending Partnership Program, contingent on loan approval by the Virginia Small Business Financing Authority.

CVEC and Lightshift Energy (propose jointly developing a 6-megawatt advanced battery energy storage system ("BESS") in Appomattox, Virginia that will be used to reduce peak load for CVEC and will in turn save millions of dollars over the life of the project. These savings will be directly passed through to the commercial, industrial, and residential customers of CVEC, helping ensure lower electricity costs for current and future residents as well as attract new businesses to the Tobacco Region in southern Virginia. The project will also enable workforce training for the emerging BESS industry in Virginia which has been catalyzed by the Virginia Clean Economy Act, and will provide emissions reductions benefits and reduced transmission and generation requirements for the regional grid, as well as a clean source of local power for CVEC.

Education

Advanced Manufacturing Workforce Training

#4301, Central Virginia Community College Educational Foundation, Inc. CVCC Meets Workforce Demand through NC3 Training and Advanced Manufacturing Expansion - \$243,404 Grant

CVCC is Central Virginia's leading workforce trainer, committed to expanding regional training that increases Advanced Manufacturing educational achievement and accommodating student needs through traditionally and non-traditionally timed instruction. To further satisfy this commitment, CVCC has embarked on a \$840,406 project (\$730,389.80 of which is eligible for matching funds due to payment dates) to expand NC3 training and Advanced Manufacturing capacity. This project will provide classroom upgrades, purchase additional training equipment, and fund NC3 faculty training. This will allow CVCC to increase student enrollment without decreasing hands-on instructional time. In addition, through CVCC's NC3 partnership, students will receive

industry-led national certifications upon program completion while earning embedded micro-credentials throughout their training.

Workforce Training Programs

#4305, The Bridge Ministry, Inc. *Heavy Equipment Operator/Technician and CDL Driver Building* - \$100,000 Grant

The Bridge Ministry, Inc. works in Virginia to transform the lives of troubled men and their families by providing behavioral and mental health services, vocational skills and training, education, and the relationships they need to bridge the gap from addiction to productive community and family life. The funding from the Tobacco Region Revitalization Commission will support a new heavy equipment building that will provide training to students in heavy equipment operation and maintenance. During the construction of this building, students will receive hands-on training and earn industry-recognized credentials in many areas including excavation, construction, heating and air conditioning, electrical work, roofing, plumbing, painting, carpentry work, and landscaping. Training will be provided in partnership with Piedmont Virginia Community College.

#4302, Patrick & Henry Community College Foundation *P&HCC Building Trades Expansion: Electrician Training* - \$129,527 Grant

P&HCC has experienced great growth in both employer demand and enrollment in building trades programming in the last two years, and is working on planned expansions of multiple building trades training programs. P&HCC is seeking funding to bring training to students with barriers that prevent or make it difficult to travel to the college's main campus. P&HCC requests funding for equipment needed to offer expanded electrician training. This equipment will be housed in an existing mobile trailer and will be used at P&HCC's Patrick County site, The Franklin Center, and to serve the Henry County Adult Detention Center, in conjunction with classroom space at each location. Students participating in training in the mobile lab can earn up to 11 industry recognized certifications.

#4304, Southside Virginia Community College Foundation SVCC's Occupational Technical Center Expansion – \$400,000 Grant

Southside Virginia Community College is requesting funding to expand workforce training opportunities at the Occupational Technical Center in Blackstone, VA. The project has received \$2,664,357 from the Economic Development Administration (EDA), and if awarded, Tobacco Region Revitalization Commission funds will serve as match, further bolstering financial resources for this critical initiative. Key components of the project include the purchase and construction of a prefabricated training facility at the Occupational Technical Center Complex and the addition of 44,000 square feet of

pavement for a Commercial Driver's License (CDL) training and testing course. Additionally, the project includes funding for training tools/equipment, furniture, IT equipment, and fiber infrastructure installation. The proposed expansion leverages existing specialized facilities, such as a pole yard for power line training and the only diesel technician training site in the region. This strategic initiative will ensure that students from rural areas have equal opportunities to achieve industry-standard certifications and gain employment with competitive pay.

#4307, Southwest Virginia Community College Automotive Technology Program Expansion to Include Hybrid and Electric Vehicle Technology – \$105,142 Grant

Commission funds are requested to expand the automotive technology programs at Southwest Virginia Community College to include hybrid and electric vehicle technology, battery technology, and additional supporting certifications with skills aligned to clean energy related pathways. Commission funds will be used for instructor training, marketing, program supplies, a hybrid vehicle systems panel trainer, and an electric vehicle car kit.

#4306, Virginia Highlands Community College Educational Foundation *Electrical Technology Program Modernization Initiative* – \$313,022 Grant

Commission funds will be used to purchase updated equipment for VHCC's Electrical Technology programs, which will allow the College to better align instructional resources to current industry standards. The project will increase enrollment capacity across multiple AAS pathways for the program, in Energy Technology and Mechatronics. The modernization will address current capacity limitations due to outdated equipment and limited space, resulting in a renovated and more functional learning space.

#4308, Wytheville Community College

Wytheville Community College Certified Clinical Medical Assistant Program – \$188,820.29 Grant

Commission funds are requested to establish a short-term Certified Clinical Medical Assistant Program at Wytheville Community College. The grant will primarily support the salary for a full-time faculty position (\$176,264.40) during the first three program years. Additionally, the College will purchase an EKG simulator, an EKG 12 lead, and a PCR Analyzer needed for the program. The program will be offered at either the college's campus in Wytheville or at its off-site location at the Crossroads Institute in Galax.

Incentives & Loans

TRRC/VSBFA Lending Partnership

City of Danville - \$750,000 Loan

The City of Danville, Virginia has solicited the Tobacco Region Revitalization Commission (TRRC) for a loan in the amount of \$750,000. Proceeds of the loan will be used to finance the construction and installation costs of a battery energy storage system located at 900 Mount Cross Road, Danville, Virginia 24540. The city is collaborating with Lightshift Energy in developing their second batter energy storage system (BESS) and are seeking a low-cost fixed rate loan from the TRRC to drive down the costs of the project and deliver even greater savings to Danville Utilities' customers. The BESS project, like the first, will be used to reduce peak system demand for Danville Utilities and reduce their wholesale power costs.

Town of Richlands - \$2,000,000 Loan

The Town of Richlands, Virginia has applied with the Tobacco Revitalization Region Commission (TRRC) for an Economic Development Loan (EDLF) in the amount of \$2.0MM. The EDLF Program is underwritten and administered through the Virginia Small Business Financing Authority (VSBFA). Proceeds will be used as part of a \$14.0MM initiative to install a 5-Megawatt Solar Mercury 50 natural gas-fired rubine and generator, which will facilitate the Town's century-long history of providing electricity to its citizens.

Grayson Loan - \$200,000 Loan

This loan will support a private agricultural enterprise in the County with repairs and improvements to their operation.

Southwest Virginia Program

Agribusiness

#4293, Appalachian Sustainable Development ASD Agricultural Campus Phase I: Food Hub Expansion - \$610,000 Grant

Commission funds are requested to assist with site preparation for the ASD Agricultural Campus currently under development in Bristol. The request will also support the construction of a new, 8,000 sq ft food hub facility which will serve as an additional node on ASD's distribution network.

#4294, Lee County Livestock Association Round Two: Forage Improvement Initiative for Southwest Virginia - \$240,000 Grant

Commission support is requested to continue a cost-share program serving farmers in Lee, Scott, Wise, Dickenson, Buchanan, Russell, Tazewell, Washington, Smyth, Wythe, Grayson, Carroll, and Bland Counties. The program assists participants with the purchase of eligible forage production equipment such as no-till drills, fertilizer spreaders, hay wrappers, testing equipment, etc. Additionally, the application will provide reimbursement for hay storage and permanent and temporary fencing. These programs will result in improved forage quality and storage capability for regional producers. Cost share payments will be limited to 33% of eligible expenses up to a maximum \$5,000 payment per participant.

Business Development

#4239, Town of Pennington Gap Pennington Gap Multi-Purpose Building Kitchen Incubator - \$515,000

Commission funds are requested for 50% of the cost to construct and equip a new commercial kitchen space located in a multipurpose facility under development within the existing town hall building. The shared commercial kitchen space will serve as an incubator for local food entrepreneurs and related small businesses.

Other Economic Development

#4292, LENOWISCO Planning District Commission SCTC / Verizon Wireless 5G Initiative - \$405,480 Loan

Commission funds are requested for 50% of the cost of equipment required to upgrade Scott County Telephone Cooperative owned equipment located on Verizon Wireless cell towers. This equipment is necessary to facilitate the deployment of 5G cell service throughout the region. The equipment is estimated to cost \$810,960.

#4288, Virginia Coalfield Coalition, Inc. Buchanan/Tazewell Wireless Communication Job Growth Corridor Project -\$1,401,335 Grant

Commission funds are requested to support the installation of 6 new towers on VA Highway 460 which will provide continuous coverage from Grundy to Cedar Bluff. There are currently large sections that do not have service. Commission funds will be used to close a funding gap created as a result of required changes in project scope as well as the increased cost of materials.

Sites and Infrastructure

#4295, Lee County *Western Lee Sewer Phase I-A* - \$1,000,000 Grant

Commission funds are requested to support the construction of a new 0.3 MGD wastewater treatment plant and to install 171,000 LF (32.4 miles) of new gravity and force main sewer lines in Western Lee County. This project will provide public wastewater service in a 20-mile economic development corridor; this includes the nation's largest vet school, 17 30+ acre parcels adjacent to US 58, and over 2,000 acres of potential industrial, agricultural, commercial, residential, and mixed-use developable lands.

#4297, Smyth County Economic Development Authority Groseclose Sewer/General Shale Infrastructure Improvements Design -\$257,450.00 Grant

Commission funds are requested to support 50% of the cost associated with engineering and design services for a sewer line extension to serve the former General Shale site and the adjacent Route 11/I-81 Exit 54 interchange area. Funds would be used to fund preparation of plans and specifications and securing regulatory permits needed prior to construction of the sewer improvements.

<u>Tourism</u>

#4290, Town of Abingdon Abingdon Cultural Heritage Tourism Strategic Plan: Abingdon's History is America's History - \$30,000 Grant

Commission funds are requested for contractual expenses associated with development of the Abingdon Cultural Heritage Tourism Strategic Plan. This plan will address historical sites in Abingdon that have influenced local and national history but are currently underutilized. The plan will prioritize necessary repairs, upgrades, and long-term stewardship for these structures.

#4299, Tazewell County - Tourism Department Northwestern District Campground - \$25,000 Grant

Commission funds are requested to support a feasibility study that will assess potential locations for a new, County owned, campground. The Northwestern District Campground Site Selection Feasibility Study will evaluate site viability based on factors such as

accessibility, environmental impact, and infrastructure needs. The estimated total cost of the study is \$50,000 with this amount to be split evenly between TRRC and matching funds.

#4289, Virginia Department of Wildlife Resources *Cumberland Outdoor Access Legacy* - \$500,000 Grant

Commission funds are requested to help secure a public access easement in Buchanan, Dickenson, Russell and Wise Counties. This will be the largest open space conservation easement ever recorded in Virginia. Cumberland Forest Limited Partnership (CFLP) owns more than 150,000 acres and offered DWR a public access easement across all this acreage. The DWR identified about one third of this surface estate as high priority. These parcels offer a variety of outdoor recreational opportunities including hunting, fishing, wildlife viewing, boating (paddling), hiking and trail riding.