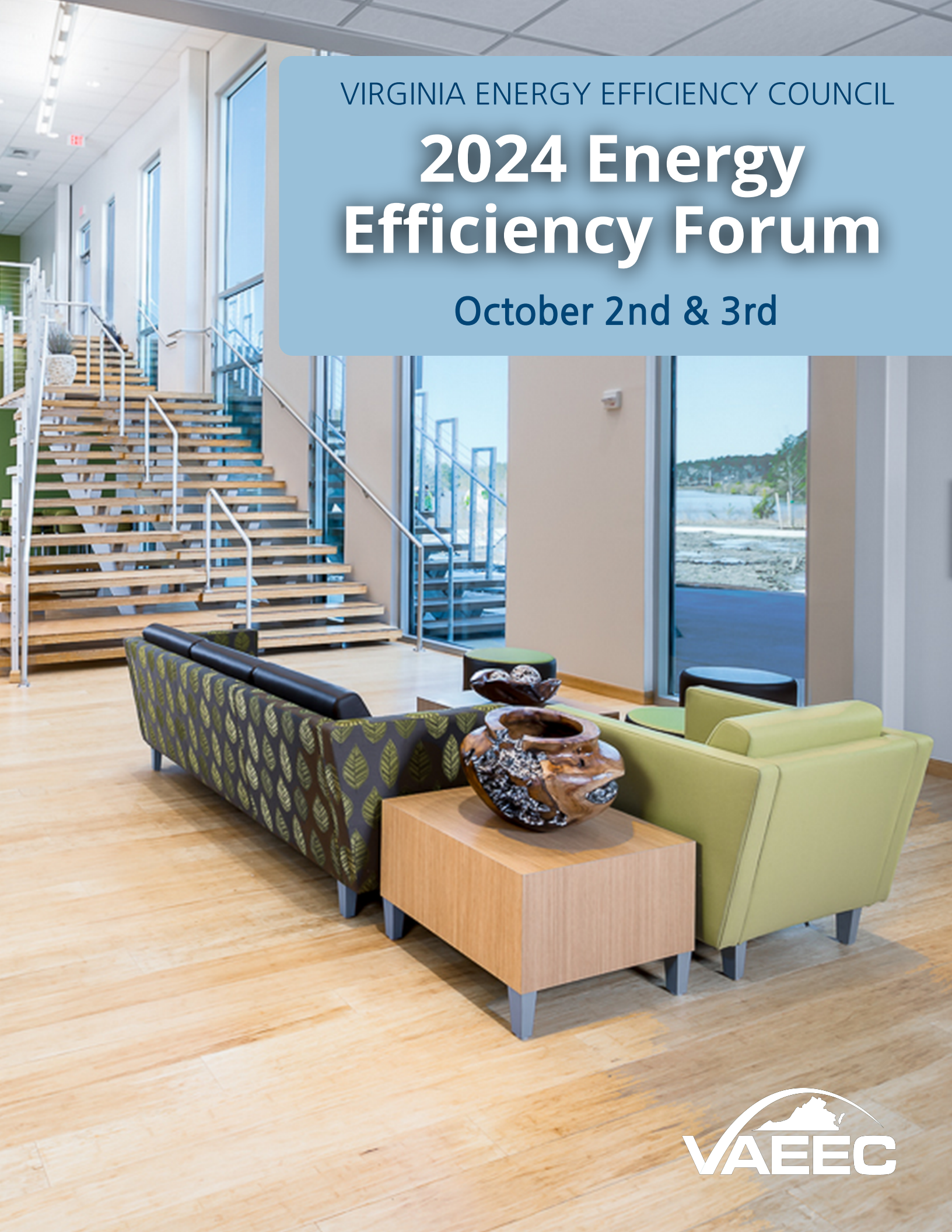


VIRGINIA ENERGY EFFICIENCY COUNCIL

2024 Energy Efficiency Forum

October 2nd & 3rd



Welcome

Dear Energy Efficiency Friends and Supporters,

On behalf of the VAEEC Board and Staff, we welcome you to the 2024 Energy Efficiency Forum. Our Staff has worked diligently for months to arrange this premiere event for all of us to enjoy.



It continues to be an exciting time for the energy efficiency sector in Virginia. Our members are beginning to reap the benefits of strong clean energy and climate state policies while anticipating new federal dollars on the horizon. Gathering together to collaborate on these new opportunities and to share in our collective accomplishments is what sets VAEEC members apart.

Thank you for attending today and for bringing your expertise to our event. You, our members, have the vision, the knowledge, and the experience to help us ensure that energy efficiency is an integral part of the clean energy future in Virginia. We succeed with your involvement.

Sincerely,

Leigh Anne Ratliff

Leigh Anne Ratliff
VAEEC Board Chair
Trane Technologies

Chelsea Harnish

Chelsea Harnish
VAEEC Executive Director



Virginia Energy Efficiency Council
2024 ENERGY EFFICIENCY FORUM

Day One (Virtual): Wednesday, October 2nd

1:00-1:10 PM

WELCOME & OPENING REMARKS

1:10-1:30 PM

KEYNOTE ADDRESS

REP. JENNIFER MCCLELLAN

UNITED STATES CONGRESS

1:35-2:45 PM

BREAKOUT SESSION 1

*DATA CENTER DEMAND-
HOW DO WE RESPOND?*

*BEST PRACTICES FOR
WORKFORCE SUCCESS*

2:45-3:00 PM

BREAK

3:05-4:15 PM

BREAKOUT SESSION 2

*INCLUSIVE
DECARBONIZATION*

*HOW ARE WE TALKING
ABOUT ENERGY EFFICIENCY?*

4:15 PM

CLOSING REMARKS, DAY-TWO OVERVIEW

Virginia Energy Efficiency Council
2024 ENERGY EFFICIENCY FORUM

Day Two (In-Person): Thursday, October 3rd

12:00-1:00 PM

REGISTRATION

1:00-1:10 PM

WELCOME & UPDATES

1:10-1:35 PM

KEYNOTE ADDRESS

ANGELA NAVARRO

ALN POLICY & LAW, FORMER VIRGINIA COMMISSIONER

1:35-2:10 PM

NETWORKING BREAK

2:15-3:30 PM

PLENARY SESSION

Multifamily Multiverse: Navigating the Funding Maze Beyond WAP

3:40-4:25 PM

VIRGINIA ENERGY EFFICIENCY
LEADERSHIP AWARDS CEREMONY

4:25-4:30 PM

CLOSING REMARKS

4:30-6:00 PM

NETWORKING RECEPTION
Hors d'oeuvres and drinks provided

Sessions

OCTOBER 2ND, 1:35 - 2:45 PM (CONCURRENT SESSIONS)

Data Center Demand: How Do We Respond?

Nearly 70% of the world's internet traffic runs through Virginia data centers, with the largest concentration in Northern Virginia. As scrolling, streaming, and generative AI use skyrocket, how do utilities, localities, and grid operators keep their cool? This session will explore demand response and energy efficiency solutions for data centers and their surrounding communities.

Speakers: Rich Anderson, Siemens; Haneepha DeGarmo, Voltus; Keith Dennis, Beneficial Electrification League; Bob Lazaro, Northern Virginia Regional Commission; John Morrill, (Moderator) Fairfax County Government

Best Practices for Workforce Success

Workforce is a central tenet of many of the programs under the Inflation Reduction Act and Bipartisan Infrastructure Law. While the roll-out of funds has been slow, experts in the field are ramping up to meet the demand. This panel will focus on updates from last year's workforce panel and the best practices to achieve program success.

Speakers: Roxana Ayala, American Council for an Energy-Efficient Economy; Sherie Fulcher, Southern Air; Erika Reel (Moderator), Virginia Energy Efficiency Council; Dan Taylor, Blue Green Alliance

OCTOBER 2ND, 3:05 - 4:15 PM (CONCURRENT SESSIONS)

Inclusive Decarbonization

Decarbonization plays a critical role in stabilizing our climate, but how do we ensure it is available to all? Speakers will share insights on crafting decarbonization plans that reduce greenhouse gas emissions while addressing the needs of disadvantaged communities and empowering the clean energy workforce.

Speakers: Erin Cosgrove, Northeast Energy Efficiency Partnerships; McKenna Dunbar (Moderator), VA Chapter of the Sierra Club; Maggie Kelley Riggins, Southeast Energy Efficiency Alliance; Jamal Lewis, Rewiring America



Sessions

OCTOBER 2ND, 3:05 - 4:15 PM (CONCURRENT SESSIONS)

How Are We Talking About Energy Efficiency? How To Get Into the Weeds and Then Get Out of Them

Fiction, VA just received funds for a Main Street Revitalization project. With more buildings to repair than money to do so, and more opinions than facts, how can a locality get the job done? This session will focus on the communication breakdowns and barriers to getting multiple players on the same page for project success.

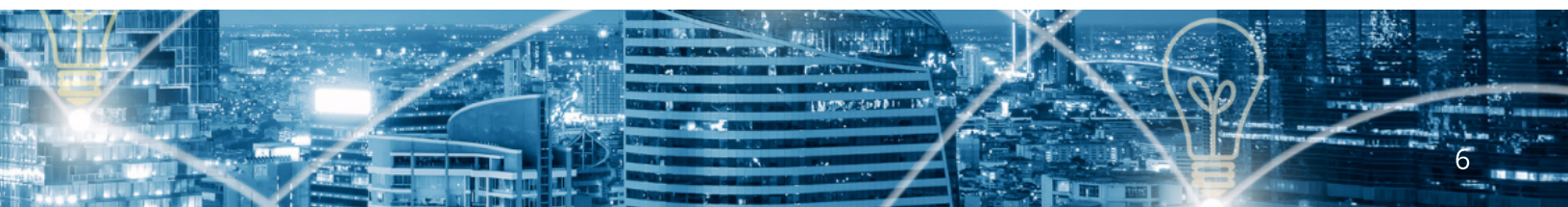
Speakers: Rebecca Hui (Moderator), Virginia Energy Efficiency Council; Andrew McKinley, VIA design architects; Michele Mitch-Peterson, Siemens; Dawn Oleksy, City of Richmond; Blair St. Ledger-Olson, Virginia League of Conservation Voters

OCTOBER 3RD, 2:15-3:30 PM (PLENARY SESSION)

Multifamily Multiverse: Navigating the Funding Maze Beyond WAP

LIHTC, CNI, HEAR, ASNH, 25c - for multifamily developers, this alphabet soup is the difference between a successfully funded project and leaving dollars on the table. Hear from experts across the state on how they navigate the maze of affordable and multifamily housing incentives beyond weatherization.

Speakers: KC Bleile, VEIC; Phil Cunningham, Virginia Housing; Stephen Evanko, Dominion Due Diligence Group; Sunshine Mathon, Piedmont Housing Alliance



Premier



**Dominion
Energy®**

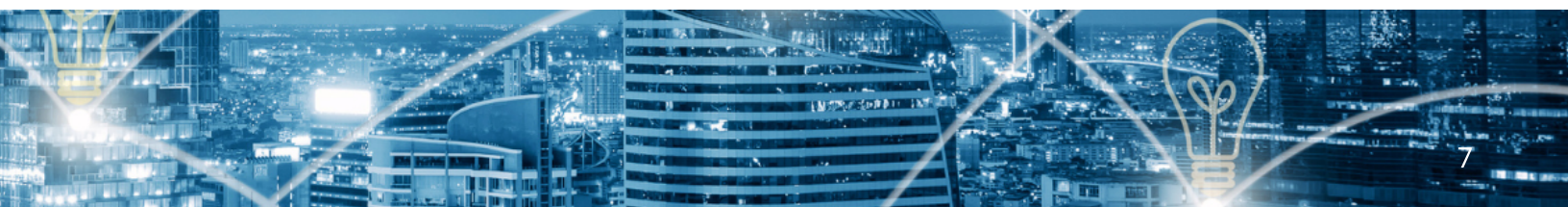
Dominion Energy has energy efficiency programs that can help you explore ways to reduce your energy usage at home and work. The Dominion Energy Efficiency Products program has discounted over 5 million LED bulbs, and in 2020 discounted over 19,000 appliances. The Home Energy Assessment program reached over 2,700 participants, and the low income weatherization programs reached over 3,200 homes. Dominion launched a variety of new programs this year to provide customers with more energy-saving opportunities.

Leader



Community Housing Partners' Energy Solutions

division promotes healthier, safer, and more energy-efficient built environments by providing energy audits, inspections, energy performance upgrades, and building science education across the Southeast and Mid-Atlantic. CHP Weatherization helps low-income individuals and families reduce energy burdens by improving the energy efficiency and health of their homes. They also partner with electric and gas utilities across the state to administer efficiency programs that reduce energy burdens and increase comfort, health, and safety for their income-qualifying residential customers. The Research and Training Center extends the knowledge and skills of the Energy Solutions team to weatherization and energy efficiency professionals across the country.



Sponsors

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NETWORKING RECEPTION

Join us for a reception following the awards ceremony on October 5th for networking and connection with fellow energy efficiency leaders, as well as a time to learn more about the projects and programs receiving our ninth annual **Virginia Energy Efficiency Leadership Awards**.



Complimentary hors d'oeuvres and drinks will be provided thanks to the generosity of our sponsors. Two drink tickets can be found in the back of your name badge.



Speakers



Richard Anderson, Data Centers National Sales Manager, Northeast & Atlantic at Siemens Smart Infrastructure: Since 2019, Richard has been an enabler for data centers and mission-critical IT environments to enhance transparency, optimize operations, and ensure resiliency and reliability through innovative, operational technologies. Within his tenure at Siemens, Richard has held various roles, including web developer, international delegate, and marketing manager. Richard is an MBA candidate at the University of Illinois Urbana-Champaign and holds a BSBA in IT Management from Western Governors University.

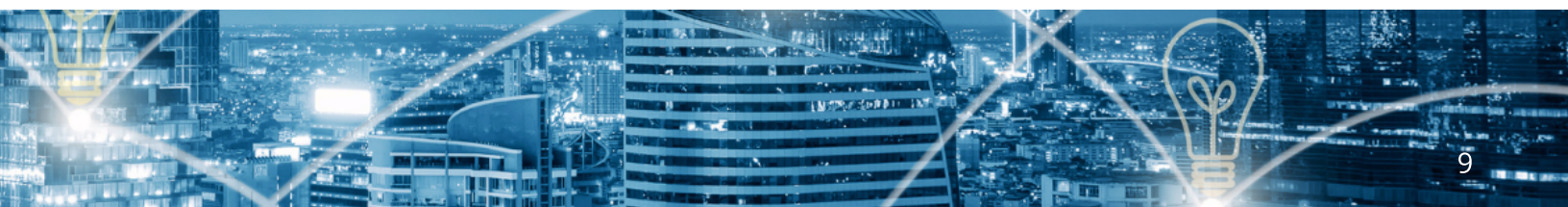


Roxana Ayala, Senior Analyst at American Council for an Energy-Efficient Economy: Roxana assists the local policy program with research and technical assistance related to city-led clean energy policy. She contributes significantly to ACEEE's research on inclusive workforce development, energy affordability, and energy equity. Prior to joining ACEEE in 2019, Roxana worked with the United States Forest Service as a conservation educator fellow. Before that, she interned with the Natural Capital Project at the University of Minnesota. Roxana holds a BA in environmental science and urban studies from the University of California, Irvine.



K.C. Bleile, Director, Consulting Operations at VEIC: K.C. joined VEIC in the 2024 as Director, Consulting Operations to support VEIC's growing role as a trusted energy efficiency industry partner. VEIC delivers mission impact via utility program administration and consulting projects across our nation.

Bleile holds a master's degree in Business Management Administration at Virginia Commonwealth University and B.S. degree in Environmental Policy and Planning from Virginia Tech. Her previous work includes pioneering Virginia's first green building programs as Viridiant's (formerly EarthCraft Virginia) first employee in 2006 and Executive Director through 2024. She currently serves as Treasurer of the Virginia Energy Efficiency Council Board of Directors.



Speakers



Erin Cosgrove, Senior Manager, Policy and Programs at Northeast Energy Efficiency Partnerships: Erin works collaboratively with the entire organization to assist communities, states, federal agencies, utilities, NGOs and industry to accelerate state and local government adoption of equitable and impactful building decarbonization policies, programs, and best practices across the Northeast and Mid-Atlantic region.

Prior to joining NEEP in February 2021, Erin worked in the energy efficiency and environmental policy space as the Director of Regulatory Affairs at the Energy Efficiency Alliance, working on energy efficiency policy in New Jersey and Pennsylvania. She has a dual Juris Doctorate and Masters of Science in Public Policy from Drexel University and a dual Bachelor of Arts in Public Policy and Film Production from Temple University. She is also a member of the New Jersey Bar.



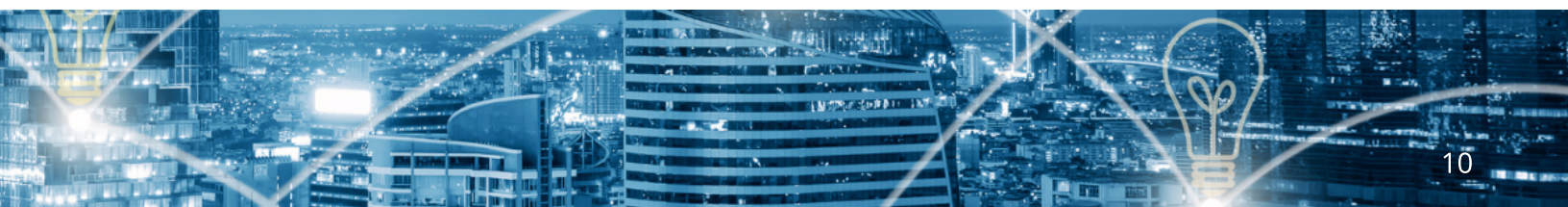
Phil Cunningham, Asst Director of Tax Credit Programs at Virginia Housing: Active in the affordable housing industry for the past decade, Phil provides strategic support in program and process excellence, construction control, and special initiatives. With a background in community organizing and activism, he is interested in the ways housing can be a launchpad for more just societies.

Phil was appointed to the Virginia Clean Energy Advisory Board in 2024 and is currently pursuing an MBA at Virginia Commonwealth University where he received a B.S. in Urban & Regional Studies. He is also the founder of Housing Advocates of the Next Generation (HANG), building and strengthening relationships throughout the affordable housing ecosystem. Prior to joining Virginia Housing in 2020, Phil worked with Better Housing Coalition.



Haneepha DeGarmo, Director, Field Operations at Voltus: Haneepha has 11 years of experience in the energy industry, with expertise in energy efficiency and demand response technology solutions. She currently leads the Field Operations team at Voltus who are technical subject matter expertise in getting our customers ready for Demand Response participation across energy markets in the US and Canada. She holds a Bachelor in Electrical Engineering

with a minor in Power Systems from the University of Technology and a Masters of Engineering Management with focus in Energy & Sustainable technologies from Duke University. Haneepha currently serves as a board member for South Eastern Virginia Association of Energy Engineers (SEVA).



Speakers



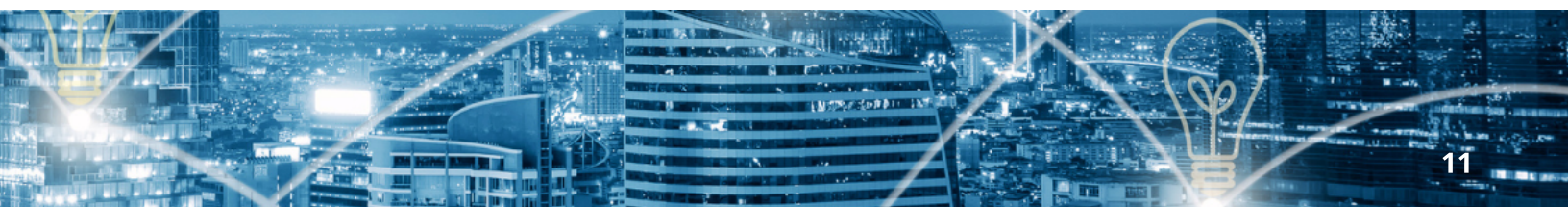
Keith Dennis, President at Beneficial Electrification League: Keith is the President of the Beneficial Electrification League, a 501c3 non-profit organization whose mission is to increase understanding of the benefits of electrification by promoting the market acceptance of beneficial electrification. He is also the CEO of Electrification Strategies, LLC. Keith has an interdisciplinary background in engineering, business, and law. He worked for nearly a decade at the trade association for 900 not-for-profit electric cooperatives (NRECA), where he was Vice President of consumer member engagement. In 2015, he coined the term “environmentally beneficial electrification,” which led to an industry movement around beneficial electrification.

Keith joined NRECA directly from the Department of Energy where he led a Policy and Guidance Team for a \$3.2 billion energy efficiency and conservation grant (EECBG) program. He also served at The White House where he supported several large energy efficiency and renewable energy programs.



McKenna Dunbar, Community Engagement Coordinator at the Virginia Chapter of the Sierra Club: McKenna acts as the Community Engagement Coordinator and leads a team focused on building and home electrification developments through Sierra Club’s Beyond Coal Campaign. Most of their work focuses on reducing dependence on fossil fuels in order to move the electric sector to clean energy. Dunbar is the Founder and President of Ecological

Justice Initiative - an environmental advocacy non-profit organization focused on youth focused environmental research and engagement. Concerned Citizens of Charles City County, Bridging the Gap in Virginia, The North Face, Greening Youth Foundation, The Climate Reality Project, Stop the Abuse of Virginia Energy Coalition, DivestMVP, NASA SERVIR, and Mother’s Out Front are some of the organizations they have worked with in the past. Dunbar is passionate about energy policy, environmental law, and has a background in environmental justice, clean energy finance, and solar research.



Speakers



Stephen Evanko, Vice President at Dominion Due Diligence Group: Stephen is the Vice President of Energy and Sustainability for Dominion Due Diligence Group (D3G) and he is responsible for multifamily energy benchmarking, energy audits, energy modeling and green building consulting to support green financing. He has worked in the sustainability industry for the past fifteen years and is certified as a LEED AP, BPI MF Building Analyst and Healthy Homes Evaluator, GreenPoint Rated Existing Home Rater, and NGBS Master Green Verifier. Prior to D3G, Stephen launched and led Capital One's Environmental Sustainability Office and sustainability strategy. Stephen has served as the Chairman of the Richmond Region Energy Alliance, served on the board of the Virginia Poverty Law Center and currently serves as the vice chair on the board of the Virginia Energy Efficiency Council.



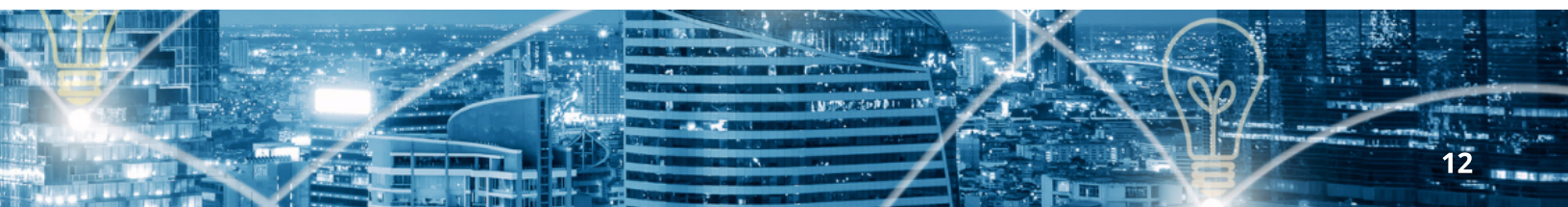
Sherie Fulcher, Personnel Development Coordinator at Southern Air, Inc.: Sherie is the Personnel Development Coordinator for Southern Air, Inc. In her previous role as a Registered Apprenticeship Consultant, Sherie worked with local businesses to develop customized training programs to up-skill their workforce. With recognized strengths in Youth Registered Apprenticeship, she became the Youth Registered Apprenticeship subject matter expert, as well as developed the first ever Youth Registered Apprenticeship programs in Appomattox and Bedford Counties. Sherie also developed and fostered relationships with local workforce boards, high schools, community colleges, and technical centers and utilized those relationships to connect businesses with educational sources to aid in up-skilling their workforce.



Rebecca Hui, Manager, Research & Strategic Partnerships at Virginia Energy Efficiency Council: Rebecca joined VAEEC in October 2018, acting as the single point of contact for all membership activities. She also spearheads the organization's workforce development initiative and acts as the staff liaison on the technology committee. Rebecca holds a Bachelors of Art in English , which she applies daily to the organization's communications and social media.



Maggie Kelley Riggins, Senior Programs Manager at Southeast Energy Efficiency Alliance: Maggie has devoted her career to developing innovative approaches to solving gnarly climate and energy problems in the South. Maggie is laying the landscape for equity through climate and workforce in energy efficiency. She manages SEEA's energy-efficient building code portfolio and the building-oriented pilot project models for local governments to increase energy efficiency as a solution for residential, commercial, and municipal buildings.



Speakers



Robert Lazaro, Executive Director at Northern Virginia Regional Commission: As Executive Director, Bob leads an award-winning staff of 16 accomplished professionals who provide a wide range of services to local governments and community partners. During his tenure he has stabilized the Commission's finances, created its first rainy day fund, and invested in personnel and technology to improve the Commission's operations. Bob has a long history of public service and is recognized as a leader in the Commonwealth. He has chaired the Northern Virginia Regional Commission, served as Chairman of the Virginia Municipal League (VML) Environmental Quality Committee, chaired the VML Go Green Committee, and served as Vice-Chairman of VML's Legislative Committee. Bob also served on the Board of Directors of the Metropolitan Washington Airports Authority and the Board of Directors of the Local Energy Alliance Program. He has served on the Board of Directors of Visit Loudoun, the George Mason University Research Foundation, and the Virginia Land Conservation Foundation.



Jamal Lewis, Senior Director, Implementation Learning & Integration at Rewiring America: Jamal is Senior Director, Implementation Learning & Integration at Rewiring America. Previously, he led the energy and climate initiatives at Green & Healthy Homes Initiative and worked with states and localities across the country to advance electrification, healthy housing, and energy efficiency programs and policies. He has multiple publications outlining pathways to promoting equity by retrofitting our existing housing stock to be healthy, energy-efficient, all-electric, and affordable. He is a Young, Gifted, & Green 40 under 40 award recipient for his leadership in Environmental Justice. Jamal has an MPH from Columbia University Mailman School of Public Health, a BA in Environmental Studies from the University of Pennsylvania, and a certificate from the Fall 2021 DC Cohort of the Clean Energy Leadership Institute.



Sunshine Mathon, Executive Director at Piedmont Housing Alliance: Committed to supporting deeply equitable and sustainable affordable communities, Sunshine has led the development of over 1,200 healthy, efficient homes in Texas and Virginia. As a nationally-recognized leader at the intersection of climate resilience and equitable affordable housing development, Sunshine has consulted with a wide variety of local and national housing intermediaries.

With a broad range of professional experiences, Sunshine strives for collaborative work at three connected, equity-focused scales: relationship-building through one-on-one connections; cultivating place-based community development that centers residents' lived-expertise; and guiding policy-shift through a racial equity lens.



Speakers



Rep. Jennifer McClellan, United States Congress: Jennifer McClellan entered the U.S. Congress in 2023 after winning a special election to replace the late Congressman A. Donald McEachin. A lifelong Virginia native, McClellan was born in Petersburg and attended Matoaca High School in Chesterfield County, where she was valedictorian. She earned her undergraduate degree from the University of Richmond, where she served as a Charter member of the Rho Rho Chapter of the Delta Sigma Theta Sorority, Inc. She then obtained her Juris Doctorate from the University of Virginia School of Law. McClellan has served the greater Richmond area in elected office for nearly twenty years. She was first elected to the Virginia House of Delegates in 2005 and served in that post until she was elected to the Virginia State Senate in 2017, where she succeeded A. Donald McEachin after his election to the U.S. House of Representatives.

In Congress, she sits on the House Armed Services Committee and the House Science, Space, and Technology Committee. A principled and progressive legislator, McClellan has always worked to ensure Virginians' voices are heard in government. Throughout her eighteen sessions in the Virginia General Assembly, McClellan passed over 370 pieces of legislation, including landmark bills to protect and expand voting rights, combat climate change, preserve reproductive health care, and enhance workers' protections and labor rights.



Andrew McKinley, Principle at VIA design architects: Andrew is a dedicated architect focused on designing sustainable, functional, and affordable buildings. By strategically utilizing available resources and considering each project element holistically, Andrew aims to create durable, long-lasting, and energy-efficient structures.

As a Co-Chair of the AIA Coastal Virginia Committee on the Environment (COTE), Andrew actively promotes sustainable design practices. He incorporates energy-efficient design into his projects through early-stage modeling and post-construction analysis, ensuring that predicted energy performance aligns with actual outcomes.



Michele Mitch-Peterson, Energy & Sustainability Transformation Executive at Siemens: Michele specializes in guiding customers through the challenges of decarbonization and technology at the grid edge. With a focus on the supply and demand sides across diverse vertical markets, Michele strategizes and implements technologies to reduce utility consumption and drive sustainability initiatives. She is passionate about producing clean energy and optimizing energy mixes through digital data solutions to achieve deeper savings and efficiency.



Speakers



John Morrill, Director of the Office of Environmental & Energy Coordination at Fairfax County: John has led the implementation of the county's climate mitigation and resilience plans since joining Fairfax in late 2020. Prior to joining Fairfax, John was with Arlington County for 20 years, where he led a broad portfolio of work in energy management and policy. John began his career with the American Council for an Energy-Efficient Economy (ACEEE) in Washington DC, where he held various research and management positions, and coauthored two books on energy efficiency and indoor air quality.

John served on the VAEEC Board of Governors for nine years (2015-2023), including three years as Chairman.



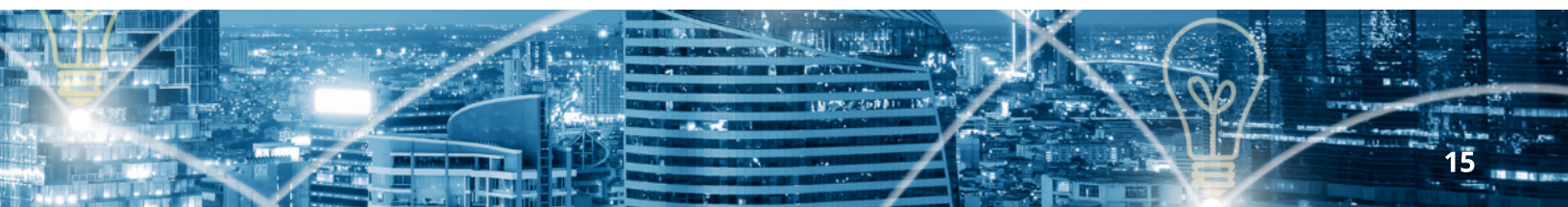
Angela Navarro, President at ALN Policy & Law: As President of ALN Policy & Law, Angela counsels energy companies, tech companies, non-profits, and foundations on complex regulatory and policy issues in markets across the country. Previously, she served as the Head of the Regulatory Affairs at Arcadia. Angela spent nearly eight years in public service, including as a Commissioner on the Virginia State Corporation Commission.

She has also served as a senior advisor across two Governor's offices in Virginia. Before entering government service, Angela practiced law with the Southern Environmental Law Center. Angela holds degrees in Business and English from the University of Florida and a law degree from Georgetown Law.



Dawn Oleksy, Energy Program Manager, Office of Sustainability at City of Richmond: Dawn has over 25 years of experience in energy management for local governments. Currently, she oversees the Energy Management Program that crosswalks equitable clean energy and resilience strategies across all departments. By collaborating with internal and external stakeholders to meet the long-term net zero carbon emissions and resilience goals as outlined in

RVAgreen 2050, she works to create Richmond's equity-centered climate action and resilience initiative. Dawn is a Certified Energy Manager through the Association of Energy Engineers and an Envision Sustainability Professional through the Institute for Sustainable Infrastructure.



Speakers



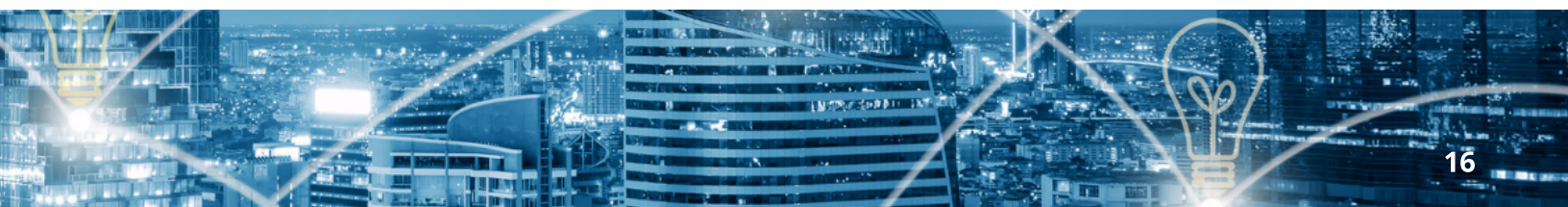
Erika Reel, Workforce Program Director at Virginia Energy Efficiency Council: Erika is native of Brooklyn, NY, currently residing in Norfolk, VA. She is a Hampton University graduate with an advanced Women's Entrepreneurial Studies certificate from Cornell University. With several years of experience in Workforce Development, Erika is a champion of working with communities to ensure that all residents are stable and thriving with opportunities to achieve economic mobility, by way of career or self-employment opportunities. Erika is also an active member of the Huntersville Civic Leagues and a supporter of the St. Paul's Advisory Committee.



Blair St. Ledger-Olsen, Director of Advocacy & Campaigns at Virginia League of Conservation Voters: A former ecologist turned climate policy advocate, Blair comes to the Virginia League of Conservation with extensive environmental policy experience - both in Virginia and numerous states nationwide. As the new Director of Advocacy and Campaigns, Blair continues VALCV's work to protect resources important to all Virginians: clean air and water, thriving communities and rural landscapes, productive farms and forests, historic battlefields and Main Streets, and ample public lands and recreation.



Dan Taylor, Southeast Regional Field Manager at BlueGreen Alliance: Dan works with BlueGreen Alliance's legislative, field, and communications staff to engage partners and allies within the Southeast in support of advancing federal economic recovery focused on manufacturing and infrastructure investments. Dan has experience in environmental advocacy as a former organizer and board member with the Ohio Valley Environmental Coalition and as Interim Director of Energy Efficient West Virginia. He also worked in southern West Virginia for over three years doing community economic development with the WV Community Development Hub. In 2020, he served as Campaign Manager for a US Congressional candidate in West Virginia's 2nd Congressional District.



Energizing Efficiency Campaign

To showcase the incredible work being done across the Commonwealth and to inspire even more, the VAEEC launched our Energizing Efficiency Campaign in May 2023. The campaign **highlights programs and projects big and small, from all sectors and regions, to proudly demonstrate how energy efficiency helps Virginians save energy and money.**



Learn more about the campaign and all participants on the [VAEEC website](#).

2024 CAMPAIGN PARTICIPANTS

Academic

- Loudoun County Public Schools Energy Efficiency Improvements
- Thoroughgood Elementary School, Virginia Beach City Public Schools

Government

- Virginia Beach Parks & Recreation Administration Building
- Fairfax County's Pender Office Building Energy Upgrades
- Albemarle County's 1600 5th St. Office Building Energy Efficiency Project
- Virginia Museum of Natural History's Empowering the Past in Leading by Example for the Future: Achieving Carbon Reduction, Renewable Energy, and EV Charging Through an Energy Savings Performance Contract

Residential

- Unlocking the Energy Efficiency of Virginia's Tangier Island
- Energy for All Eco House Initiative
- Sustainable Energy Resources for Consumers (SERC) Grant Program

Leadership Awards

VIRGINIA ENERGY EFFICIENCY LEADERSHIP AWARDS

Over the last eight years, the VAEEC has honored dozens of individuals, organizations, and companies for their energy efficiency achievements. These awards showcase how energy efficiency leaders across the Commonwealth are *helping businesses, governments, homeowners, and schools save money on energy bills while reducing energy consumption - all while stimulating job growth and our economy.*



SELECTION PROCESS

The 2024 awards were made possible by members of our Education & Events Committee, who scored all of the nominations. The Committee is composed of VAEEC members who are energy experts from different sectors working across the Commonwealth.

Each nomination was scored using the same criteria. The main considerations were the impact/potential impact of the nominee's efforts on *reducing overall energy use* and on *improving the building for the occupants and/or the affected community.*

Thank you, Education & Events Committee members!

Congratulations to all of the 2024 VEEL Awards winners. Learn about winning projects from previous years in our video series, *Building the Future.*



Leadership Awards

HONORABLE MENTION

Unlocking the Energy Efficiency of Virginia's Tangier Island

Presented to project:HOMES

Project:HOMES is redefining affordable housing by addressing a wide spectrum of housing needs, from the production and preservation of high-quality affordable homes, to large-scale home repairs, and enhancing the accessibility and energy efficiency of existing homes. By challenging common misconceptions about affordable housing, **Project:HOMES demonstrates that affordability does not have to come at the expense of quality or sustainability.**

One of their most challenging and rewarding endeavors has been the extension of their weatherization program to the remote community of Tangier Island. Tangier Island, located 12 miles out in the Chesapeake Bay, is home to approximately 400 residents and is accessible only by boat. This unique geographic situation presents a host of challenges for the team, from logistical hurdles to increased project costs. Recognizing these challenges, we applied for and received funding from the Community Energy Innovation Prize challenge. This funding is crucial in supplementing their existing resources, allowing them to address the dual issues of a scarcity of qualified contractors and the age and deteriorating condition of many homes. The additional financial support helps bridge the gap created by these higher costs.

This initiative is supported by the Department of Housing and Community Development and Old Dominion Electric Cooperative, underscoring the **collaborative effort required to improve access to services** to this region. A significant component of their project is the training of two local subcontractors. By equipping these teams with the necessary skills and knowledge, they aim to **create a lasting impact that extends beyond the duration of their initial involvement.** These contractors will be capable of sustaining the work and ensuring ongoing benefits for the community. Their immediate goal is to provide weatherization services and home repairs to at least six households on Tangier Island. These services include **enhancing insulation, air-sealing, and upgrading heating and cooling systems** to improve energy efficiency. In addition to these technical improvements, they are also focused on **making homes safer and more accessible** for residents, particularly the elderly and those with disabilities.

The Department of Energy reports an **average savings of 3,500 kWh per home weatherized**, annually. Multiplying by 6 would result in approximately 21,000 kWh in savings annually. This has the net equivalent of a yearly reduction of nearly 17.5 tons of CO₂. Considering that many of these measures are designed to last approximately 20 years, **we could realize a savings of over 300 tons of CO₂ over the lifetime of these measures.**

Leadership Awards

ACADEMIC CATEGORY

Virginia Beach City Public School's Thoroughgood Elementary School

Presented to VIA design architects

Thoroughgood Elementary School, a LEED Silver-certified facility, replaced a previously overcrowded school with a state-of-the-art learning environment. The 91,913-square-foot building facilitates exploration, play, and discovery as catalysts for education utilizing non-traditional elements and varied learning environments.

Energy use and efficiency were the deciding factor for multiple design and systems decisions. Building on Virginia Beach City Public School's initiative for energy efficiency, the design team held multiple scoping meetings, traveled to other VBCPS projects, met with maintenance staff at the Maintenance Services, and spoke directly with teachers, staff, and students about their goals for the school.

One of the primary planning principles was to harvest as much natural daylight as possible, including in spaces deep within the footprint. Transparency throughout the school provides natural daylight to nearly every occupiable space, which reduces large electricity loads for building lighting.

Further reducing energy loads, all lighting is high-efficiency **LED** with both **daylight and occupancy sensors** on all fixtures. A **geothermal HVAC system** was incorporated, with 280 geothermal wells provided in the open play area adjacent to the building. The design also incorporated net-zero ready elements. About three-quarters of the way through construction, VBCPS entered into a contract with a solar photovoltaic company to provide solar PV systems to multiple schools, with Thoroughgood being chosen due to the incorporation of this infrastructure.

The result is a building that **performs 35.9% better than a typical elementary school building**, and whose **utilities are expected to operate at less than \$1 per square foot**. The solar panels provide 27% of the school's annual electricity usage, and VBCPS is also engaged in a 'Demand Response' relationship to dramatically reduced energy usage when the grid nears capacity.

The project **directly impacts the students, staff, and surrounding community** of the school. The focus on sustainable design serves as a **model for the wider community** and potentially influences future school projects within the district to adopt similar sustainable design elements, **leading to a broader positive impact on the environment.**



Leadership Awards

GOVERNMENT CATEGORY

Fairfax County Pender Office Building Energy Upgrades

Presented to Fairfax County's Offices of Environmental & Energy Coordination, Housing & Community Development, and Redevelopment & Housing Authority, and CMTA

The Pender Office Building is a key facility owned and operated by Fairfax County Government that serves as the headquarters for the Fairfax County Redevelopment and Housing Authority. The building underwent an **energy upgrades project through a performance contract** with CMTA, an engineering consultant and energy services company.

After an **extensive energy audit**, a variety of measures were selected for design and implementation. The energy efficiency upgrades included **LED lighting retrofits, building envelope improvements, low-E window film, transformer replacements, a new solar photovoltaic array, and new high performance VAV rooftop units.**

This project was not without its challenges. While rooftop solar PV was an exciting possibility, the current roof was prohibitive to a solar PV array. The project team worked alongside the owner to plan for a roof replacement that dovetailed into the energy project timeline and maximized renewable energy production. Ultimately, the roof was replaced with a solar-compatible white membrane “cool roof”. The reflectivity of the new roof improved the production of the solar modules and improved the building envelope by using better insulation.

The end result **saves significant energy** and also allowed the owner to **replace the aging roof**. The energy upgrades project **significantly enhanced the building, occupant experience, and community impact**. The large reduction in overall kWh also qualifies this building for a utility rate change to a new tariff which is projected to **save Fairfax County an additional \$26,000 in electric bills.**

The Pender Office Building represents a **model of sustainability for commercial office buildings, creating a roadmap for similar buildings** in Fairfax County to implement similar upgrades through energy performance contracting. Finally, the **project's energy savings are projected to far exceed the energy savings guarantee**, which highlights the amazing results that can be accomplished when the project team and building owner collaborate together.



Leadership Awards

RESIDENTIAL CATEGORY

Sustainable Energy Resources for Consumers (SERC) Grant Program

Presented to Community Housing Partners Energy Solutions

Community Housing Partners (CHP) Energy Solutions is embarking on a **pioneering initiative to enhance energy efficiency and comfort** in low-rise garden style multifamily communities. This ambitious project aims to deploy a mix of advanced technologies to optimize weatherization efforts, focusing on improving heating and cooling performance, indoor air quality, and moisture management.

The primary challenge lies in efficiently conditioning small, low-load dwelling units typical of garden style multifamily buildings, especially in mixed-humid climates. Conventional HVAC systems often struggle with peak heating and cooling demands while effectively removing excess moisture during shoulder seasons. Moreover, improvements to building envelopes can **exacerbate moisture retention issues**, impacting occupant comfort, indoor air quality, and building durability.

To address these challenges, CHP plans to integrate modern HVAC technologies beyond standard single-stage heat pumps. This includes **Energy Recovery Ventilators (ERV), variable speed heat pumps, and advanced systems** capable of managing latent cooling needs independent of sensible cooling requirements. The project also **tackles ventilation standards** set by ASHRAE, which necessitate mechanical ventilation but do not specify treatment for incoming air contaminants such as excess moisture. In mixed-humid climates, this poses significant challenges as ventilation can introduce more moisture than cooling systems can effectively remove, leading to potential health and durability concerns.

By coupling standard weatherization techniques with innovative mechanical systems, **CHP aims to not only improve energy efficiency but also monitor and evaluate performance in real-world conditions**. This data-driven approach will provide valuable insights into the effectiveness of these solutions, **informing scalable practices** for similar projects across the region. CHP's extensive experience, coupled with their proficiency in monitoring energy consumption and air quality, positions them uniquely to pioneer these advancements.

Successful implementation of these technologies will not only **benefit current residents** but also **set a precedent for future weatherization efforts** in multifamily housing, particularly in climates with similar challenges. This **collaborative approach** seeks to address the unique needs of multifamily homes in mixed-humid climates, **promoting sustainability, comfort, and health across communities**.

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Upcoming Dates

JANUARY 8 2025
General Assembly
Session Begins

MAY 2025
VAEEC
Spring Forum



VAEEEC

Photo courtesy of VIA design architects

Virginia Beach Parks & Recreation Administration Building
2024 Energizing Efficiency Campaign participant