



viridiant

2020 Annual Report

Adaptability, Energy & Equity

Friends & Supporters

2020 was a difficult year for most. As Viridiant pivoted to a remote team in early March over a year and a half ago, we have continued to work diligently to drive the delivery of affordable, sustainable and energy efficient housing when people needed it most. The world was reminded of the need for safe, efficient housing as shelter in place ordinances kept many families inside for most of the year.

Since 2006, we have been working to ensure equitable housing exists, mitigating energy burdens for some of our most vulnerable community members. Viridiant's work directly impacts a family's quality of life and utility cost savings each month through energy, water and resource efficiency. Our merger with the Richmond Region Energy Alliance in April 2020 further helped us reach the community through home energy audits and SolarizeRVA, Viridiant's community education campaign to help the Richmond region go solar.

The need for expanded programs and policy to reduce energy cost burdens, increase equity, and build more resilient communities has stayed at the forefront of Viridiant's approach over the last 15 years. Viridiant lends expertise in the energy efficiency certification of 30,000+ dwellings, increasing low-income housing supply, utility program design, energy code research, solar feasibility, financing and policy development.

Thanks to our supporters and donors in 2020, we helped put 2,619 families into homes that are more affordable, more livable and more durable. That equals 2,806 tons of carbon dioxide eliminated and over \$904,000 annual savings for these families collectively. With over a decade of experience in energy efficient construction, Viridiant prides itself on delivering services that will accelerate the shift toward high-performance buildings, clean energy, and healthy communities throughout the industry.

On behalf of Viridiant's Board of Directors, staff, and technical advisor network, thank you for your commitments and support for a more sustainable future.



KC Bleile
KC Bleile
 Executive Director



Bryan Mangas
Bryan Mangas
 President

2020 BSCA Award Winners

Winners of the 2020 Building Sustainability Conference and Awards

Visionary Award
Annette Osso - Resilient Virginia

Project or Development - Single Family
The Joyce Residence
 Arlington, VA
Atelier Q2 Architects

Project or Development - Multifamily
Church Street Station Studios
 Norfolk, VA
Virginia Supportive Housing

Project or Development - Commercial
319 Plume Street
 Norfolk, VA
VIA Design Architects, Compo Construction Company

Builder or Developer
Peacock Holland Construction
 Blacksburg, VA

Habitat for Humanity Affiliate
Habitat for Humanity in the Roanoke Valley

Top High-Performance Home of the Year

Singly Family Home
Shelter Alternatives
 HERS20 - Blacksburg, VA



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Newport News Redevelopment & Housing Authority

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Bank of America

* Denotes new members in 2021

** Denotes members that rolled off in 2020

EarthCraft Multifamily Projects Certified in 2020

PROJECT NAME	DEVELOPER	LOCATION
200 Standard II (Price Street Phase II)	The Franklin Johnston Group	Virginia Beach
901 Porter Street Co-Housing	Miller & Associates	Richmond
Carlton Neighborhood Housing	Community Services Housing	Charlottesville
Church Hill North Phase 1A	The Community Builders, Inc.	Richmond
Church Hill North Phase 1B	The Community Builders, Inc.	Richmond
Essex Manor Apartments	People Incorporated of Virginia	Tappahannock
Fisher House II	Arlington Partnership for Affordable Housing	Arlington
Freedman Point	The Woda Group, Inc.	Hopewell
Gilliam Place East	Arlington Partnership for Affordable Housing	Arlington
Gilliam Place West	Arlington Partnership for Affordable Housing	Arlington
Groom School Apartments	The Landmark Group Landmark Asset Services, Inc.	South Hill
Heritage Acres	Fairstead Affordable LLC	Suffolk
Herod Seed	Spy Rock Real Estate, LLC	Richmond
Heronview Apartments	Flatiron Partners, LLC	Sterling
Hope Village Apartments	Fairstead Affordable LLC	Glen Allen
Jackson Ward Senior	Community Preservation and Development Corporation	Richmond
Lewinsville Senior Residences	Wesley Housing Development Corporation	McLean
Market Square IV	Better Housing Coalition	Richmond
Meadow Branch Apartments	Denico Development	Winchester
Mezzo Apartment Homes	S.L. Nusbaum Realty Co.	Virginia Beach
Nottoway Manor Apartments	Flatiron Partners, LLC	Blackstone
Pennington Gap Apartments	People Incorporated of Virginia	Pennington Gap
Renaissance Apartments Phase I	The Franklin Johnston Group	Virginia Beach
Robert Regan Village	Mark-Dana Corporation	Berryville
The Berkeley	AHC, Inc.	Arlington
The Berkeley II	AHC, Inc.	Arlington
The Shops at Riverside Village	Stony Point Design/Build, LLC	Charlottesville
Washington Square	Flatiron Partners, LLC	Emporia
Watermark Condominium	IDI Strand	Alexandria
Willow Branch	Flatiron Partners, LLC	Madison Heights

Single Family Building Partners in 2020-21

PARTNER NAME	
Alliance RE Development, LLC	Habitat for Humanity of Washington, D.C.
Bench Mark Builders	Habitat for Humanity Peninsula and Greater Williamsburg
Blue Ridge Habitat for Humanity	Habitat for Humanity Virginia
Blue Ridge Home Builders Association	J. Hall Homes, Inc.
Bremen Builders	Luke Construction
Community Housing Partners	MaxMark Homes, LLC
Cumberland Custom Homes	Peter Johnson Builders, LLC
Dominion Custom Homes	Pyramid Construction Group
Evergreen Homecrafters LLC	Richmond Metropolitan Habitat for Humanity
Evergreene Homes, LLC	SAS Builders, Inc.
Farmville Area Habitat for Humanity, Inc.	Shelter Alternatives, inc.
Fauquier Habitat for Humanity	Southside Community Development & Housing Corporation
Green Valley Builders, Inc.	Stony Point Design/Build, LLC
Habitat for Humanity in the Roanoke Valley	Theta Homes, LLC
Habitat for Humanity of Northern Virginia	US2BG Contracting, LLC
Habitat for Humanity of the New River Valley	Wayne Harbin Builder, Inc.

Why Your Support Matters

Viridiant, a 501(c)(3) non-profit, prides itself on offering superior quality, affordable programs that can suit the needs of any builder or developer who shows a commitment to high-performance homebuilding. We strive to remove any financial barriers to green building by delivering our programs at a fraction of the cost of similar programs. With your support, we can touch more buildings, making a significant impact not only on the region's energy use but also on the lives of the residents who will enjoy comfortable, healthy, and affordable homes.

> **Donate today!**

Your donation helps Viridiant share our expert building science knowledge with the community and industry professionals on a range of topics from statewide energy codes to analyzing your water bill. **Visit viridiant.org/donate.**



2020 Top High-Performance EarthCraft Home of the Year Award

BUILDER: Shelter Alternatives (HERS20)

BUILDING TYPE: Single Family Home

LOCATION: Blacksburg, VA

Each year at the Building Sustainability Conference & Awards hosted by Viridiant, the Top High Performance EarthCraft Home category assesses projects' overall improvement, notable energy performance, aesthetic improvement, and community impact. The 2020 winner was a single family home in Blacksburg, Virginia designed and constructed by Shelter Alternatives.

This single family home includes a tight building envelope and robust insulation combined with ENERGY STAR appliances and solar to achieve a **RESNET Home Energy Rating Index (HERS) Index of 20**. In addition to reducing the amount of energy needed to operate the home, there were material choices that made good use of existing resources. Trees taken down for the homesite were repurposed into trim and countertops for the home and the siding is locally sourced hemlock. The home was intentionally designed to incorporate warehousing and home offices for a home-based business and also includes a suite for an aging parent which will in turn provide future aging in place for the owners.

Viridiant is proud to recognize the hard work of Shelter Alternatives in certifying this property as EarthCraft and ENERGY STAR. "We worked closely with Viridiant in planning the details of this high performance home. Fortunately, our years of working with the EarthCraft program (since 2007) made it easier for us to meet all the criteria. The commitment of the client to also encourage us to follow a high efficiency path made it a great collaboration. Starting with an efficient envelope and following through with all the details helps keep these clients comfortable." - **Ed Tuchler, President, Shelter Alternatives**

Since 1988 Shelter Alternatives has served homeowners of the New River Valley with new homes, additions, and remodels.

Building a Pipeline of Talent

Viridian continues to keep workforce development at the forefront as we help shape the future leaders of tomorrow by developing hands-on internships for students, providing educational offerings, and partnering with industry leaders to have a seat at the table for those important conversations around workforce development.



A robust workforce will be needed to meet the goals of the Virginia Clean Economy Act, including the goal of making Virginia carbon-free by 2050. Virginia's Department of Education has long provided "career clusters" to introduce pathways that help students explore career fields and educational opportunities. The Virginia Department of Education recently added their 17th career cluster which introduces students to the energy industry, provides information on job opportunities available to meet growing workforce demands, and develops a talent pipeline for the energy workforce.

The goal is to allow students to become interested in and aware of career opportunities in the industry and provide core skills which easily translate to industries such as architecture, construction, and manufacturing, increasing a student's options for post-secondary education and career pathways.

"You can find sustainability and energy efficiency within any career path that somebody is interested in. I would encourage folks to look at where they desire to be and make sure they are incorporating an energy efficiency or sustainability approach because that is where we need to be to work towards true sustainability."

- KC Bleile
EXECUTIVE DIRECTOR

Viridian's Executive Director, KC Bleile, along with Henrico County's Energy Manager, Carrie Webster, and Community Housing Partners' Director of Utility Programs, Chase Counts, were invited to contribute to the conversation around energy efficiency careers on the Henrico CTE NOW podcast. The episode discusses the efficiency and sustainability resources in Virginia and what students can look for in an energy related career as they consider the 17th Career Cluster.

Viridian has had the pleasure of working with the University of Richmond's Bonner Scholar Program to introduce students to the inner workings of high-performance buildings. Through the program, students provide much needed additional support to local non-profits, such as Viridian, who often operate with minimal staff and resources, while also gaining practical experience and learning and practicing the intangible soft skills necessary to succeed in today's workforce.

Viridian is currently represented at the Steering Committee level for the Virginia Energy Workforce Consortium, which works to engage energy companies and utilities in strategic, unified, and results-oriented efforts to ensure a skilled, qualified, and diverse workforce to meet future industry needs throughout the Commonwealth.

As workforce development takes the front seat in Virginia, Viridian will continue to advocate for the needs of the growing energy industry.

Expanding Residential Energy Code Resources

Rounding out the 3rd and final year of funding provided by the Southeast Energy Efficiency Alliance (SEEA) to assess the implementation of the residential energy code across Virginia in new construction single family buildings, Viridiant successfully conducted the Circuit Rider Program during 2020 after an unexpected pivot to a virtual delivery during COVID-19.

3-Year
Funded

RESEARCH &
DEVELOPMENT

14

RESOURCES
DEVELOPED

1,000+

INDUSTRY
PROFESSIONALS
TRAINED

Over the course of the 3-Year Grant Funded Project, Viridiant has:

- Trained over 1,000 industry professionals, and the number continues to increase as on-demand access to training remains available
- Pivoted in early 2020 to a fully virtual delivery and incorporated new technologies to address the needs of the remote workforce
- Built relationships with the 10 Circuit Rider participating jurisdictions and connected with over 50 jurisdictional employees
- Recognized consistent challenges faced by Building Code Departments and identified solutions to address these challenges
- Developed 14 resources for the Circuit Rider Program and circulated a total of 21 resources to every jurisdiction across Virginia
- Increased accessibility to energy code information by making resources available not only virtually, but distributed hard copies to ensure communities experiencing connectivity challenges received the information

"The building workforce's practical application of building energy codes is essential to realizing energy savings and better outcomes for the occupants living or working in a building. Our partnership with Viridiant has been incredibly successful in numerous technical and energy code-related projects over the years and we are thrilled to continue and expand on collaboration opportunities with their team."

The Energy Code Circuit Rider Program to Virginia not only met our goal of supporting building departments in the state, it also showed how Viridiant's dedication to meaningful workforce development has created significant shifts in the building energy sector. It felt natural to expand this program to Virginia under Viridiant's leadership. The team's ability to build relationships, provide technical expertise, and identify strategic areas of support for the workforce will propel Virginia forward in realizing the statewide building code."

- Maggie Kelley Riggins

BUILT ENVIRONMENT PROJECT MANAGER | SOUTHEAST ENERGY EFFICIENCY ALLIANCE

Modeled off the Florida Circuit Rider program, the Virginia Circuit Rider Program intended to provide a one-on-one connection with building permit departments to better understand how the residential energy code is implemented, identify challenges, and develop resources to aid in enforcement and implementation.

With a goal of reaching plan reviewers and building inspectors who work directly with the residential energy code, Viridiant worked with 10 building departments around Virginia to understand their work processes and challenges encountered day-to-day. Based on this invaluable information, Viridiant developed content to address themes, challenges and gaps in available resources emphasized by the participants. Resource content ranged from HVAC, virtual inspections, duct sealing and testing, inspections and plan review around indoor air quality, insulation and air barriers, fresh air ventilation, and slab edge insulation.

Once the draft resources were completed, they were shared with the Virginia Department of Housing & Community Development (DHCD) and the participating Circuit Rider jurisdictions to incorporate their feedback as expert partners.

The resources were initially released in December 2020 to the participating jurisdictions and then in February 2021 to all jurisdictions across Virginia. Over the course of this funding project, Viridiant led a successful effort to expand the knowledgebase and available resources to aid in the residential energy code implementation and is pleased to make those freely accessible at viridiant.org/vacircuitrider.

Thank you to the participating jurisdictions:

City of Alexandria
Fairfax County
City of Franklin/Southampton
Goochland County
City of Hampton
James City County
Montgomery County
City of Norfolk
City of Suffolk
Warren County

A YEAR IN REVIEW: Community Energy Services

Viridiant's Community Energy Services Division (CES) launched in April 2020 after merging with Richmond Region Energy Alliance under the Viridiant name. CES's first year saw great success with home energy audits, the SolarizeRVA campaign, and community education across the Richmond region.

The SolarizeRVA campaign emerged with a new brand this year and Viridiant is grateful for the partnerships with the City of Richmond and Henrico County to increase reach and spread awareness. Viridiant helped one family go solar in 2020 and is eager to expand on the SolarizeRVA program in the coming years.

During the first year of home energy audits, our team:



Conducted 94
Home Energy Audits



Installed Over 1500
LED Lightbulbs



Installed More than 1800 ft.
of Pipe Insulation Wrap



Reduced Annual Energy Use
by 91.6 Megawatt Hours



Saved Clients an Average of
\$123 a Year on their Energy Bills
(That's a typical month's energy bill gone!)

Families Served in 2020

SINGLE FAMILY

MULTIFAMILY



EarthCraft House



EarthCraft House
with ENERGYSTAR®



EarthCraft New
Construction



EarthCraft
Renovation



ENERGYSTAR®



Certified
HERS® Only



EarthCraft New
Construction



EarthCraft
Renovation



2,619
30,503

FAMILIES SERVED
IN 2020

FAMILIES SERVED
THROUGH 12/31/2020

2020 ENERGY SAVINGS

In 2020, Viridiant verified **2,619** homes



HERS® INDEX



EQUATES TO ELIMINATION OF

6.7 OR **2,806**
GIGAWATT HOURS OF ENERGY TONS OF CARBON DIOXIDE

OR



\$904,382

TOTAL ANNUAL SAVINGS

using our voices

Working together to provide long-lasting impacts to our local communities

2020 ASSOCIATIONS:

Virginia Energy Workforce Consortium | Virginia Energy Efficiency Council Board of Directors
 Virginia Housing Rental Advisory Board | City of Richmond Green City Commission
 Virginia Energy Efficiency Council | Virginia Clean Energy Advisory Board
 City of Richmond Sustainability Plan Buildings & Energy Working Group
 Department of Housing & Community Development Home Innovation
 in Energy Efficiency Stakeholder Group

PRESENTED TO OR EXHIBITED AT:

Virginia Clean Energy Summit | VA Governor's Housing Conference | RESNET Conference

Supporting the Delivery of Low-Load, High-Performance Buildings

Viridiant continues to focus on federal and state funding opportunities to increase the strength of Virginia's delivery of low-load, high-performance buildings and the workforce necessary to support it.

The Department of Housing and Community Development's (DHCD) Housing Innovations in Energy Efficiency (HIEE) program makes energy efficiency upgrade funding available to new and existing residential buildings to reduce energy bills for low-income Virginians. Viridiant had the pleasure of being included in the development of the HIEE policy framework with service to focus funds to address the energy efficiency needs of Virginia households through DHCD's Affordable and Special house program and the Weatherization Assistance Program. Funded through Regional Greenhouse Gas Initiative (RGGI) proceeds, the funding pool pushes projects to incorporate more ambitious energy efficiency programs for affordable housing, community flood preparedness, and coastal resilience.

Supporting clean energy advancements in the Commonwealth, Viridiant Executive Director KC Bleile served on the Clean Energy Advisory Board. The Clean Energy Advisory Board is established as an advisory board in the executive branch of state government with the purpose to establish a pilot program for disbursing loans or rebates for the installation of solar energy infrastructure in low-income and moderate-income households through the Low-to-Moderate Income Solar Loan and Rebate Fund.

Viridiant continued service in 2020 on Dominion's Energy Efficiency Stakeholder Group. Viridiant provides feedback on program design and implementation to maximize energy efficiency efforts for customers in Dominion's service territory.

Collaborative work to research and understand market potential for Energy Efficiency On-Bill Tariff was a focus of Viridiant over the last year. Viridiant worked closely with Rappahannock Electric Cooperative and stakeholders to explore on-bill tariff feasibility, program design, and anticipated subscription. On-bill tariff programs have the ability to finance energy efficiency improvements to homes resulting in energy savings that exceed financing costs and remain with the home.

Viridiant advocates for programs aimed at reducing energy burden and increasing energy equity. Striving to better understand the needs and service gaps for low-income households, Viridiant works tirelessly to advocate for the benefit of energy efficiency and clean energy across all communities in Virginia and to provide more resilient infrastructure and reduced energy consumption.

Donors & Sponsors

A sincere thank you to all of our supporters.

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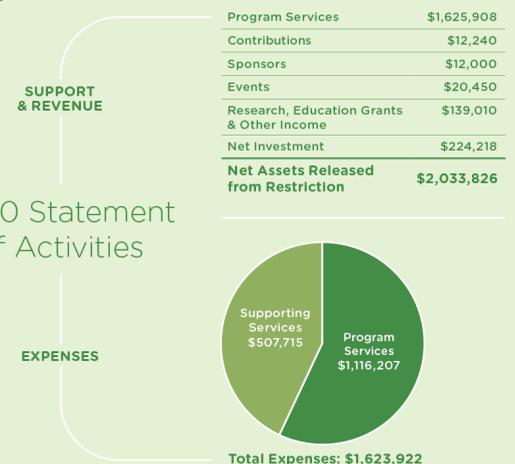
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2020 Statement of Activities



Donate Today!

Your donation helps deliver the immediate benefits of sustainability through education, consultation and certification. Visit viridiant.org/donate.

Your Support Matters

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