



## 2021 Annual Report

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# A Message from the Chair and General Manager



**Ken Nolan**  
VPPSA General Manager



**Reginald Beliveau Jr.**  
Chair of the Board

Over 40 years ago, VPPSA embarked on a mission to provide exceptional value to community-owned utilities. In those early years our purpose was a simple one: to supply affordable, reliable electricity to our member utilities and their customers. Over time as our communities' needs changed, that purpose and our service offerings have grown exponentially.

When we added centralized GIS and cybersecurity technologies, we achieved economies of scale that member utilities wouldn't have been able to access individually. We're seeing similar benefits as we continue to develop our advanced metering infrastructure program.

We've heard loud and clear that there is a need to aggressively respond to climate change, so we've created solutions that don't compromise our communities' need for affordable electricity. In 2021, VPPSA brought two new solar arrays onto the Vermont grid, generating enough renewable energy to power over 400 homes each year.

As our communities grappled with reduced commercial activity and loss of employment, we responded by deploying our available tools. We developed new, innovative electric rates that stimulate tourism, retain local jobs, and encourage economic growth. We also positioned our communities to access federal funding by expanding our network of partners to include grant writing support.

We advocated for greater local decision making for local officials to adjust rates and design pilot

projects, and saw the difference our united voices could make. Bill S.60, also known as the Municipal Rate Flexibility Bill, was passed by Vermont legislators and signed by Governor Phil Scott in July 2021. This new law was VPPSA's second legislative victory in two years for local control.

As we take this moment to reflect on VPPSA's recent achievements, we must acknowledge that we couldn't have reached where we are today without those who came before us. Bill Gallagher was a public power icon who helped solidify VPPSA's foundation and dedicated his life to advocating for local control. He first joined VPPSA in 1990 and went on to be its long-time General Manager, tirelessly promoting the importance of local decision making in improving Vermonter's lives. In 2021, we mourned his passing. Without Bill's efforts, VPPSA wouldn't be positioned to assist its members through the changing utility landscape like it is today.

Utilities are faced with new challenges each year. Whether it's changing customer expectations, adoption of electrification technologies, new climate and energy policies, or even a global pandemic, public power utilities are accustomed to managing complex issues. These challenges have acted as the crucible by which VPPSA's mission was clarified and strengthened in 2021. Through the dedication of its staff and the commitment of its membership, VPPSA emerged from the many challenges brought by 2021 even stronger and more focused on its mission. We look forward to building on that momentum in the years ahead.



# About VPPSA

Vermont Public Power Supply Authority (VPPSA) has been providing Vermont's municipal electric utilities with consolidated services and solutions since 1979. Today, our catalog of offerings includes power supply purchasing and generation operation, information technology and cybersecurity support, financial and rates planning, legislative and regulatory representation, compliance, GIS mapping, and customer outreach.

Our service offerings enables our 11 member utilities to take advantage of economies of scale while allowing each municipality to maintain its individual identity. Individually, VPPSA member utilities serve anywhere from 600 to 6,000 customers. Combined, the customer base adds up to nearly 30,000.



# Our Members



Barton Village  
Village of Enosburg Falls  
Town of Hardwick  
Village of Jacksonville  
Village of Johnson  
Village of Ludlow  
Village of Lyndonville  
Village of Morrisville  
Town of Northfield  
Village of Orleans  
Swanton Village

## MISSION

To deliver exceptional value to community-owned utilities by advocating, educating, collaborating, and providing guidance through the changing economic, technological, and regulatory landscape

## VISION

To promote, advance, and celebrate public power communities in Vermont and beyond







#### IN MEMORIAM

### WILLIAM GALLAGHER

With great sadness, VPPSA shares the passing of former VPPSA General Manager Bill Gallagher. Bill was a tireless advocate of public power and

served in many capacities at the Northeast Public Power Association and the Transmission Access Policy Study Group. Bill also served as Chair of the American Public Power Association Board of Directors. We are honored to recognize his legacy in public power.

## Board of Directors

### Reginald Beliveau Jr.

Chair, Swanton Village

### Mike Sullivan

Town of Hardwick

### Bill Humphrey

Village of Lyndonville

### John Morley III

Vice Chair, Village of Orleans

### Meredith Dolan

Village of Johnson

### Penny Jones

Morrisville Water & Light

### Jonathan Elwell

Village of Enosburg Falls

### Thomas Petraska

Village of Ludlow

### Stephen Fitzhugh

Town of Northfield

## Officers

### Crystal Currier

Secretary

### Lynn Paradis

Treasurer

### Amy Parah

Assistant Secretary

## VPPSA Staff

### Joshua Bancroft

Application Developer

### Melissa Bailey

Manager of Government and Member Relations

### Crystal Currier

Controller

### Heather D'Arcy

Power Analyst

### Shawn Enterline

Senior Power Analyst

### Steve Farman

Manager of Planning and Support Services

### David Gagne

Project 10 Plant Operator

### Kim Harris

Systems Administrator

### Julia Leopold

Director of Public Affairs

### Kim Lyon

Assistant Controller

### Alex Nicholson

GIS Administrator

### Kenneth Nolan

General Manager

### Amy Parah

Accountant and Administrative Assistant

### Amanda Simard

Senior Analyst

### Ken St. Amour

Manager of Technology and Security Services

# Modernizing the Grid

The Vermont electric grid is complex and expansive with VPPSA's members running nearly 1,600 miles of electric distribution line and 31 substations. As Vermonters adopt clean electric technologies, the grid must become more flexible to meet changing demands. VPPSA provides a path forward for our members to improve connections to their customers while maintaining reliable and affordable electricity.

## Mapping the Future in Lyndonville

For Lyndonville Electric Department General Manager Bill Humphrey, mapping utility assets was a challenge given his long list of other responsibilities. Bill recognized the great benefits that GIS mapping could have on grid modernization and reliability to better serve his customers. He also recognized the economies of scale that a centralized



*Lyndonville Electric Department General Manager Bill Humphrey, left, speaks with a member of the community*

approach could bring to customers across VPPSA's membership. His resulting advocacy led to VPPSA's GIS program and hiring of GIS Administrator, Alex Nicholson, in 2020.

The GIS mapping project has come a long way in the short time since project launch. Lyndonville's dataset went through rigorous hygiene in 2021, leaving Bill and his team with mapping information that's easy to understand and use.

What's more, Bill and Alex worked together to develop a standardized approach to data collection for each utility and established mapping standards. This new approach can be applied across all VPPSA members, meeting them where they are in their individual GIS journeys. While Alex handled the technical aspects of managing the data, Bill provided industry insight into how it would be used on the ground by lineworkers and utility staff. "Bill's insights were critical in helping VPPSA establish that standard," Alex said. "I couldn't have done it without him."

The project is ongoing, but today nearly all VPPSA member utilities have more detailed, standardized GIS asset data. The future shows promise of further efficiencies and opportunities to take advantage of economies of scale as



**Centralizing GIS services is huge for our electric department. Our data is cleaned up and we know how to add to it in the future, which will lead to a whole host of efficiencies that will benefit the people of Lyndonville.**

**– Lyndonville Electric Department General Manager Bill Humphrey**

VPPSA and its members lean on GIS for asset management and analytics.

## Our Support

VPPSA is leading several grid modernization efforts beyond GIS mapping. This includes offerings like advanced metering infrastructure (AMI), utility-scale battery storage, and centralized cybersecurity.

Upgrading to AMI is a major undertaking for community-owned electric utilities, but one that can provide numerous benefits. It can increase customer satisfaction by providing timely outage-related communication and access to usage and cost information. Data from AMI is foundational to developing time-of-use rates and managing the grid. In 2021, VPPSA actively sought to lower the costs associated with AMI by advocating for equitable funding. Access to funding would drastically improve the business case for rolling out smart meters, keeping electric bills low for our communities. VPPSA's advocacy for AMI funding continues into 2022.

Vermont's electric demand peaks are expected to rise as more Vermonters adopt technologies like electric vehicles and heat pumps. VPPSA is seeking out new innovations to help flatten future forecasted peaks. By reducing peak load, utilities can minimize the costs associated with capacity and transmission fees. In 2021, VPPSA signed onto a partnership with Delorean Power, a utility-scale battery storage developer, to deploy utility-scale batteries strategically across



*The Hardwick Electric Department line crew works on local electric infrastructure*

VPPSA member territories. The partnership with Delorean will allow VPPSA members to store excess daytime renewable generation and deploy it at times when electric demand is on the rise.

In 2021, VPPSA initiated a centralized cybersecurity offering that utilizes VPPSA's information technology and purchasing power to elevate the member utilities' cyber posture. By continually assessing and improving member capabilities the program is positioning our members to manage potential cyber attacks in the future. Our Technology and Security Services team continues to work with its vendor consultants, implementing cybersecurity hygiene and best practices to protect VPPSA and our members.



# Tackling Climate Challenges

Community-owned utilities are experts at delivering affordable, reliable, and climate-friendly energy. Some VPPSA member utilities have been providing renewable electricity from their hydroelectric facilities for over a century. VPPSA finds innovative ways to grow our members' renewable generation portfolios each year while maintaining low-cost electricity.



## Award-Winning Solar Array Energizes Morrisville

The Morrisville community, located in the heart of central Vermont's Lamoille Valley, is home to some of the best outdoor recreation the Green Mountain State has to offer. Residents take full advantage of the local rail trail, hiking paths, and waterways available. It's no surprise that customers of Morrisville Water & Light Department are committed to building renewable generation that keeps climate change in check. The community hosts three utility-scale solar arrays in addition to the three hydroelectricity generators they have owned for nearly a century.

Morrisville's newest solar field, Salvage Yard, came online in September 2021. It is a Standard Offer Project, meaning its generation is sold pro-rata to all Vermont electric utilities that are not already 100% renewable. The solar array generates 3,200,000 kilowatt-hours per year, enough to power approximately 375 Vermont homes annually.

The project provides the benefits of renewable energy to nearly all Vermonters, but it has special meaning to the property owners. The Morrisville residents hosting the solar array site have had the land in their family for generations. The operational solar project affords both an annual lease payment to the landowners, allowing them to stay on the land, and provides the means to complete the environmental remediation on the former auto salvage facility. The ground beneath the solar array was seeded with pollinator-friendly ground cover to support vital habitat for bees, butterflies,



**Morrisville is now host to three utility-scale solar arrays resulting from the partnership between VPPSA and Encore. Salvage Yard Solar is yet another win-win in that it provides renewable energy to Vermonters while keeping electric bills affordable for our community.**

—Penny Jones, Morrisville Water & Light General Manager

hummingbirds, moths and other insects. The project was awarded the 2021 Solar Builder Magazine Editor's Pick for Best Reuse of Land. This solar array was energized under the VPPSA and Encore Renewable Energy public-private partnership. VPPSA and Encore have arranged to build a 10 MW solar portfolio together, accounting for 16% of VPPSA member utilities' peak demand. Solar projects will be sited across multiple VPPSA member utility territories.

## Our Support

VPPSA member utilities are leaders in providing renewable and carbon-free electricity to Vermonters. Several VPPSA members own their own small, environmentally friendly hydroelectric facilities that have been providing clean energy to their communities since the early 1900s. These renewable generators are key to meeting Vermont's climate requirements and maximizing

their value is one of VPPSA's highest priorities. VPPSA works with member hydroelectric facility operators to optimize generation in alignment with times of peak demand. In 2021, Morrisville Water & Light was able to avoid \$123K of capacity and transmission costs by releasing minimally-ponded water at the right times. VPPSA also successfully transitioned all of Swanton Village's hydro assets to behind-the-meter in June 2021, leading to \$320K in avoided peak costs.

In addition to providing renewable and carbon-free electricity, VPPSA continues to encourage the transformation away from fossil fuels in heating our homes and buildings. VPPSA is a 19% owner of McNeil Generating Station, which primarily uses wood fuel to generate electricity. In a recent proposal, waste heat from the generating station would be used to heat facilities at the University of Vermont Medical Center in Burlington.

Transportation and heating of our homes and buildings accounts for the majority of greenhouse gas emissions in Vermont. VPPSA has a robust incentive program to encourage utility customers to reduce fossil fuel use, providing rebates and instant discounts for technologies like electric vehicles and heat pumps. Since 2018, VPPSA has provided 100 electric vehicle incentives, with 26 of those going to income-qualifying households. In 2021, a VPPSA member customer could receive \$1,000 for an all-electric vehicle with an additional \$400 available to low-income customers. In a new partnership with Efficiency Vermont, VPPSA was able to offer point-of-purchase heat pump incentives. Over 300 utility customers took advantage of the instant heat pump discount in 2021.



# Innovating New Rates

Vermont's municipally owned electric utilities are known for keeping electric rates affordable. Beyond providing low-cost electricity, rates can also be used as a powerful utility tool. When designed appropriately, innovative electric rates can shift electric load to off-peak times, incentivize utility customers to adopt electrification technologies, and even act as an economic development stimulus.

## Leveling up Ludlow Snowmaking

Ski tourism is an economic engine in many small Vermont communities, including the Village of Ludlow. Skiers from across the country visit each winter to take advantage of the snowy slopes of Okemo Mountain Resort. In return, the resort provides 600 jobs for Vermonters and fills the local shops and restaurants with guests. So when the resort management team expressed a desire for more electrical capacity to increase their snowmaking operations, Ludlow Electric Light Department and VPPSA worked together to bring this new benefit to the community.

Okemo Mountain Resort's use of snowmaking cannons creates increased demand on Ludlow Electric's distribution system. In collaboration with Ludlow Electric, the resort monitors and manages their demand in real-time to prevent pushing to peak loads, even if weather or tourist conditions are favorable for snowmaking. Over the years, with more electrification and increased demand on the Ludlow system, Okemo's snowmaking capacity has been further strained.



Recognizing an innovative opportunity, VPPSA, Ludlow Electric, and Okemo Mountain Resort collaborated to develop a new electric rate that allows more flexibility and capacity for snowmaking. Ludlow adjusted the balance between two substations serving Okemo's snowmaking load, allowing for an extra megawatt of snowmaking capacity. For Bruce Schmidt, the Vice President and General Manager of Okemo Mountain Resort, this represents a huge change.



**At Okemo, we  
want to give our  
visitors the best ski  
conditions possible.**

**We know that takes a lot  
of water and power. Now  
that we're on a new electric  
rate, our highly trained and  
dedicated staff can maximize  
snowmaking for families and  
outdoor enthusiasts to take  
advantage of.**

**—Bruce Schmidt, Okemo Mountain Resort Vice  
President and General Manager**



The new rate also incentivizes the resort to shift its snowmaking to off-peak hours. This benefits the entire Ludlow community by reducing utility transmission and capacity fees.

## Our Support

VPPSA has embraced innovative electric ratemaking as a way to improve the economic well-being of multiple member communities without sacrificing affordability or reliability of service. The Village of Enosburg Falls is home to a large cheese manufacturing plant that employs 85 Vermonters in rural Franklin County. This business is crucial to the economic viability of the community, but their energy costs had management considering relocating. The VPPSA Rates and Planning Department designed a pilot rate to provide the business with at-cost electric service, which helps keep their production costs down and enables them to remain a fixture within the village.

Rate design can also be used to encourage utility customers to pursue electrification technologies. VPPSA has teamed up with Efficiency Vermont to pilot a research and development project that will inform a future electric vehicle time-of-use rate. In 2021, the groundwork was laid to install 40 electric vehicle chargers in the homes of VPPSA member customers who own or lease an all-electric vehicle. VPPSA received \$71K of funding from the Vermont Department of Public Service Rate Design Initiative to use this data to develop residential and commercial electric vehicle charging rates.



Skiers ride the lift at Okemo Mountain Resort

# Advocating for our Communities

A major advantage to living in a public power community is that customers have a say in how their utility is run. Community values are reflected in how the utility operates. VPPSA works to amplify the voices within our member communities and share those values on a state and even national platform. We work to bring about desired changes to help our localities thrive.

## Vermont Legislators Provide Municipalities with Rate Flexibility

The 2021 legislative session was heavily marked by VPPSA's advocacy for more rate flexibility at the local level. VPPSA worked with legislators and utility regulators to draft language that provides cooperative and community-owned public power utilities with the ability to make minor adjustments to electric rates and provide customers with new, innovative services. Senate Bill 60, sponsored by Senator Ann Cummings, was signed into law by Vermont Governor Phil Scott in April 2021.

Prior to passage of the bill, all municipal electric utility rate adjustments and pilot programs were subject to formal reviews by state utility regulators. Often lengthy and expensive, this review process

also presents a hurdle to utility innovation. Traditional electric rate reviews can cost utility customers over \$45,000 and take many months to implement. The new law gives public power utilities the authority to implement rate changes up to 2% each year without undergoing the traditional reviews. It also allows utilities to pilot new services that advance Vermont's climate requirements without being subject to a formal tariff review.

VPPSA worked closely with Public Utility Commissioner and former Deputy Commissioner of the Vermont Department of Public Service, Riley Allen, to ensure utility regulator confidence in the level of ratemaking oversight. Utility regulators maintain ratemaking structure and the authority to implement the full review process any time an objection is raised against a utility proposal.



**Our role is to help utilities deliver safe, reliable, affordable, and environmentally sound energy.**

**Electricity consumer requirements are changing and presenting new challenges for our utilities. The regulatory environment is also ready for some change. We believe this legislation strikes the right balance between valued traditional regulatory protections when compared with ratepayer interests in lower administrative costs, more flexible and responsive local oversight, and opportunities for greater innovation.**

—Riley Allen, Public Utility Commissioner

The municipal and cooperative rate flexibility went into effect July 1, 2021.

## Our Support

VPPSA provides support and advocacy for our member communities in a myriad of ways. We foster partnerships with organizations that augment services to our member communities and assist with utility operations that advances the mission of VPPSA serving its members.



VPPSA is a strong advocate for efficiency services, especially in communities that have been historically underserved or underrepresented. Efficiency Vermont, the statewide energy efficiency utility, and VPPSA have been closely collaborating on efforts to better reach these communities. As part of an agreement to return 47% of energy efficiency funds raised in VPPSA member communities, VPPSA and Efficiency Vermont have engaged in community outreach programs to provide enhanced efficiency incentives in VPPSA member communities. These programs are designed to re-envision Efficiency Vermont's statewide incentive offerings and tailor them to meet the needs of the local community. With the efforts being

driven by community-owned utility managers, the programs become more in line with the local mission and values.

Over the past several years, VPPSA's Board of Directors have encouraged VPPSA to expand its ability to provide managerial support to members. This request was put into action when the trustees of Barton Village electric utility expressed a need for utility management. VPPSA was able to quickly put a plan into place to provide the village with full-time assistance. A VPPSA staff member led Barton's electric utility operations throughout 2021.



Barton Village



# Upgrading Operations

VPPSA is always striving to find ways to become more efficient. In 2021, this meant embracing the new normal of remote work and revising our disaster response plans to incorporate dispersed operations.

## Remote Control

When the COVID-19 pandemic struck in 2020, VPPSA, like businesses across the country, required employees to stay safe at home. What set VPPSA apart was how quickly and seamlessly the change to virtual operation occurred. On Friday March 13, 2020, Vermont Governor Phil Scott declared a state of emergency and instructed public agencies to move all feasible



operations to remote access. VPPSA staff was sent home that Friday evening and opened operations in a fully remote configuration the following Monday. Nearly overnight, the Technology and Security Services Department had ensured staff was fully operational with remote access to all necessary systems while simultaneously putting protocols in place to prevent cyber attacks. Over the subsequent days they tapped into existing video communication platforms and expanded VPPSA's network to provide member utilities with similar technologies. We're

*VPPSA leaders of IT and security services accept the Special Districts Program Award for Transition to Virtual Operation. Left: Ken St. Amour, Manager of IT and Security Services. Right: Kim Harris, Systems Administrator*

proud to share that those efforts earned the VPPSA Technology and Security Services Department the Government Technology Magazine AT&T Special Districts Technology Innovation Award for operations.

In 2021, remote work became ingrained in VPPSA's workplace culture. VPPSA staff and board members alike took advantage of the efficiencies that came along with virtual meetings, including reduced commutes and increased productivity. Staff members do venture into the office at least once a week, which allows time for valuable face-to-face conversation. The hybrid approach and flexibility to work from home will likely be a mainstay benefit for VPPSA employees in the years to come.

## Our Support

It's within the nature of utility industry managers to always be prepared for high risk, low-probability events. Creating a mobile workforce has generated a necessary redundancy in secure workplace locations for VPPSA staff, but in 2021 VPPSA decided to take things one step further by designing a disaster response facility.

VPPSA and its utility members own the Project 10 peaking plant located in Swanton, VT. In prior years, only one VPPSA staff member consistently worked at this facility. In 2021, VPPSA took steps to develop this facility into a secondary office and training center. An addition was built with office and classroom spaces, along with access to all necessary VPPSA systems. Today, the building serves as a space for both VPPSA staff and utility members to operate in emergencies. Should a disaster occur that prevents use of the main office in Waterbury Center, Project 10 will be well equipped to serve as backup.

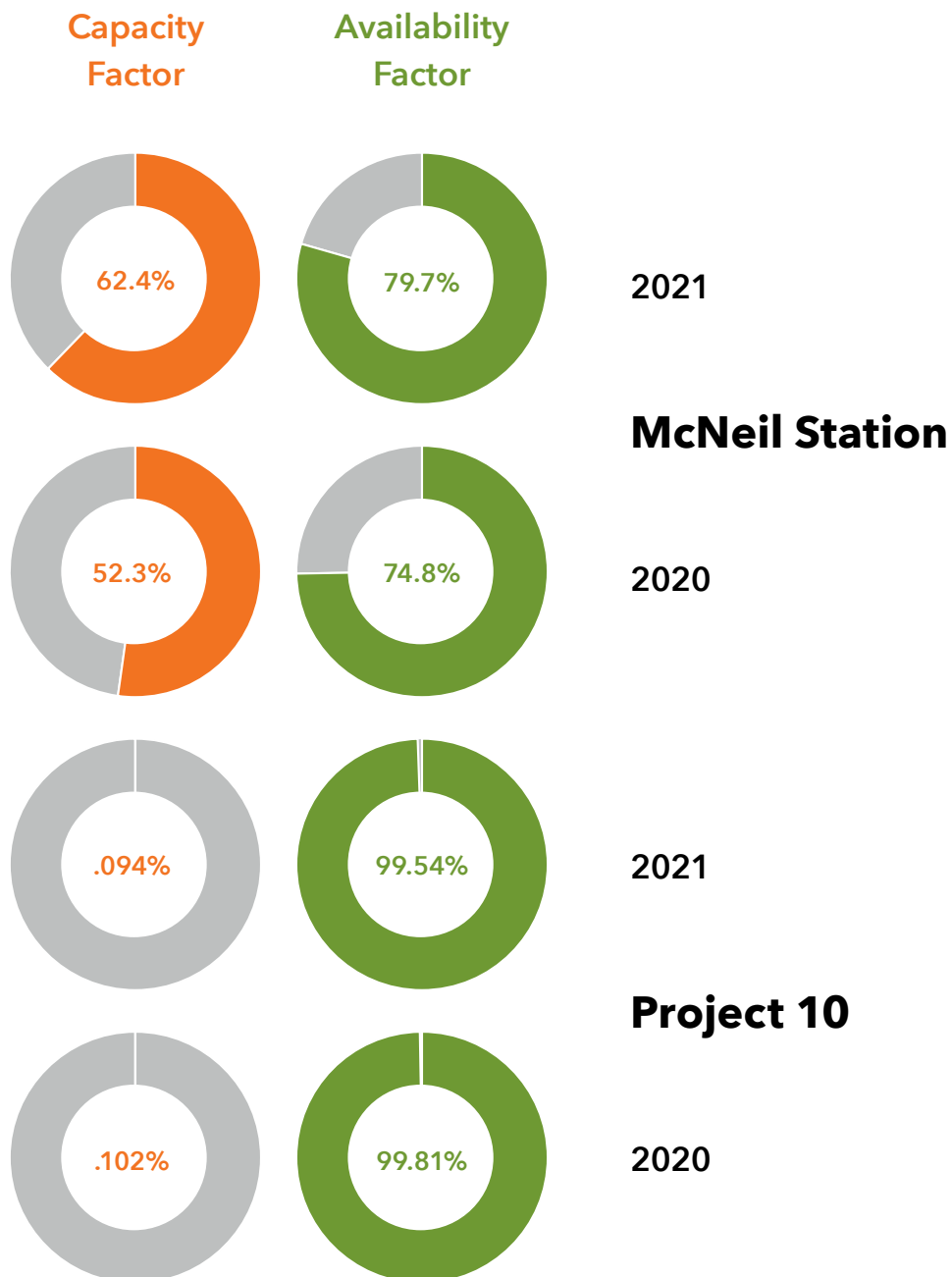
# 2021 Condensed Financial Results

A complete copy of VPPSA's audited financial reports can be found at: <https://vppsa.com/about-vppsa/financial-reports>

	2021	2020
Net Capital Assets	\$14,129,096	\$15,057,025
Current Assets, including cash and cash equivalents, accounts receivable, and other assets	\$19,990,800	\$18,979,302
Long-term assets, including investments	\$35,182,995	\$34,557,453
Deferred outflow of resources	\$25,000	\$25,000
<b>Total Assets and Deferred Outflow of Resources</b>	<b>\$69,327,891</b>	<b>\$68,618,780</b>
Current Liabilities, including accounts payable, short-term debt, current portion of bonds and LTD	\$8,812,431	\$8,235,420
Long-term liabilities, including bonds and long-term debt	\$24,187,856	\$26,302,080
Deferred inflow of resources	\$25,000	\$25,000
<b>Total Liabilities and Deferred Inflows of Resources</b>	<b>\$33,025,287</b>	<b>\$34,562,500</b>
Invested in Capital Assets, Net	\$1,960,762	\$1,660,359
Restricted Earnings	\$29,508,636	\$27,648,731
UnRestricted Earnings	\$4,838,852	\$4,747,223
Other Comprehensive Income	-\$5,646	-\$32
Total Retained Earnings	\$36,302,604	\$34,056,280
<b>Total Liabilities and Capital</b>	<b>\$69,327,891</b>	<b>\$68,618,780</b>

# Project Operations

VPPSA owns 19% of the J.C. McNeil Generating Facility, located in Burlington. The McNeil Station is managed by Burlington Electric Department, which is the majority owner. Additionally, VPPSA owns 100% of the Project 10 peaking generating facility, located in Swanton. This is a “fast-start” generator within the ISO-NE wholesale market, allowing New England power grid operators to quickly dispatch generation to keep the power grid stable.







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