



2018 Annual Report



VPPSA's Vision:

To promote and celebrate public power in Vermont and beyond.

VPPSA's Mission:

To provide exceptional essential services to its member utilities.

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Vermont Public Power Supply Authority (VPPSA) is a joint action agency established by act of the Vermont General Assembly on July 1, 1979 and codified as Title 30 VSA, Chapter 84. VPPSA is an instrumentality of the State of Vermont, which primarily means that as a governmental agency, bonds or notes issued by VPPSA are exempt from taxation (subject to IRS rules).

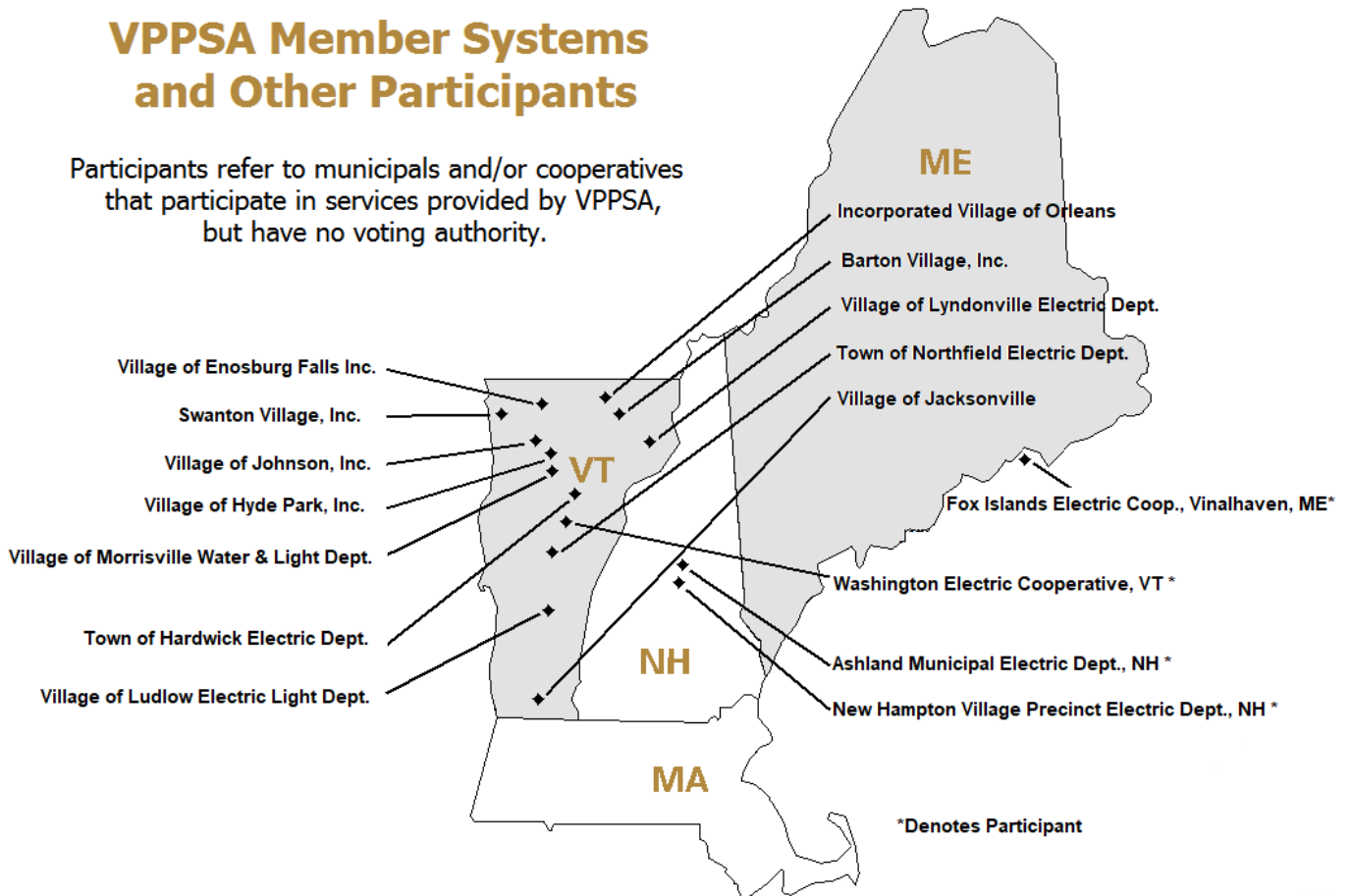
VPPSA is authorized by the State of Vermont to charge sufficient amounts to guarantee re-

covery of all costs. VPPSA provides its members with a broad spectrum of joint action services, as defined by its Board of Directors, which is comprised of one Director from each member. Our membership includes 12 consumer-owned municipals in Vermont. The selectboard, trustees, or commissioners of each municipality appoints its VPPSA Director.

VPPSA also provides services to other municipals and cooperatives both within and outside Vermont. These systems are considered participants rather than members. Participants differ from members in that they have no representation on the Board of Directors. These systems have access to VPPSA's project services at the discretion of the Board. To the extent that participants take part in VPPSA projects, they are bound by the same terms and conditions as the members.

VPPSA Member Systems and Other Participants

Participants refer to municipals and/or cooperatives that participate in services provided by VPPSA, but have no voting authority.



Message from the Chairman and General Manager



2018 represented a year of significant growth in VPPSA's efforts to promote the public power vision at the state, regional, and national levels. Over the past several years, VPPSA focused on changes that would strengthen VPPSA's internal network - within finance, technology, and human resource positions. 2018 marked a turning point where those improvements were put to use to serve member needs and to spread public power's vision.



Financially, VPPSA ended the year in an increasingly strong position while simultaneously reinvesting in its assets. Infor-

mation Technology upgrades were implemented that lay the groundwork for a completely mobile workforce that will allow staff to be even more responsive to serving members needs in the future. The rebranding effort that the organization began in 2017 was completed with the launch of VPPSA's new website that is significantly more effective and user friendly, and for the first time in several years VPPSA proactively put forward legislation designed to financially strengthen the membership.

VPPSA's national profile was elevated in 2018 through the successful launch of Hometown Connections Inc., a new non-profit company whose mission is to improve the viability of small utilities by allowing joint procurement of technology and services at a national scale. In partnership with four other joint action agencies, VPPSA became a 20% owner of this new firm. Through its participation in this effort VPPSA is able to bring additional services to its members that would not otherwise be possible and has become an active participant in the national dialogue around how best to bring 21st century technologies to small rural municipal utilities.

As the utility industry undergoes the tremendous changes brought about by exponentially more rapid technology improvements, small governmental entities like VPPSA's members are increasingly feeling a need to change their operations. Even the smallest municipal utilities now find their customers demanding the same services provided by the largest investor owned utilities. VPPSA will play a central and necessary role in this evolution. The internal improvements VPPSA has undertaken in the past several years, coupled with the steps under way to strengthen its connection to public power nationally will serve the membership well in the years ahead.

Reginald R. Beliveau, Jr.

Kenneth A. Nolan

VPPSA Members



Barton Village, Inc. - The Village of Barton is located in the northeast corner of Vermont in Orleans County. It was incorporated in 1874 and its electric department was formed in 1893. Its service area is between fifteen and twenty square miles within the Town of Barton boundaries and portions of the Towns of Brownington, Charleston, Irasburg, Orleans, Sutton and Westmore. During 2017, the Village provided electrical service to 2,166 customers, most of which were residential customers accounting for 74% of energy sales, followed by commercial customers at 19%, and the remaining 7% from area lighting and other. During 2017, the Village experienced a peak demand in December of approximately 3,020 kW. ***VPPSA Director: Evan Riordan***



Village of Enosburg Falls, Inc. - The Village of Enosburg Falls is located in the northwest corner of Vermont in Franklin County. It was incorporated in 1886 and its electric department was formed in 1896. It serves a 70 square mile service area within the Village boundaries and the Towns of Enosburg, Sheldon, Bakersfield, Berkshire, Fairfield and Franklin. During 2017, the Village provided electrical service to 1,734 customers, most of which were residential customers accounting for 55% of energy sales, followed by large commercial and industrial sales of 33%, small commercial sales at 7%, and the remaining 5% from area lighting and other. During 2017 the Village experienced a peak demand in February of approximately 4,700 kW. ***VPPSA Director: Jonathan Elwell***



Town of Hardwick Electric Department - The Town of Hardwick is located in the north central portion of Vermont in Caledonia County. It was incorporated in 1894 and its electric department was formed in 1897. The Hardwick Electric Department serves a 174 square mile service area within the Towns of Hardwick, Craftsbury, Greensboro, Woodbury, Wolcott, Calais, Elmore, Hyde Park, Eden, Stannard and Walden. During 2017, the Town experienced a peak demand in December of approximately 7,120 kW and provided service to 4,496 customers, most of which were residential customers accounting for 69% of energy sales, followed by small commercial sales at 16%, large commercial and industrial sales at 14%, and other sales at less than 1%. ***VPPSA Director: Mike Sullivan***



Village of Hyde Park, Inc. - The Village of Hyde Park was incorporated in 1894 and is located in the north central portion of Vermont in Lamoille County. It serves customers within the Village boundaries and extending throughout the Town of Hyde Park and into a portion of the Town of Johnson. During 2017, the Village provided electrical service to 1,395 customers, most of which were residential customers accounting for 67% of energy sales, followed by commercial customers at 27%, and the remaining 5% from area lighting and other. During 2017, the Village experienced a peak demand in December of approximately 2,496 kW. ***VPPSA Director: Carol Robertson***

VPPSA Members



Village of Jacksonville - The Village of Jacksonville is located in southern Vermont in Windham County. It was incorporated in 1904 and its electric company was formed the same year. It serves a 50 square mile service area within the Village boundaries and the Town of Whitingham. During 2017, the Village provided electrical service to 709 customers, most of which were residential customers accounting for 69% of energy sales, followed by commercial customers at 30%, and less than 1% from area lighting and other. During 2017, the Village experienced a peak demand in December of approximately 1,237 kW. **VPPSA Director: Pamela Moore**



Village of Johnson, Inc. - The Village of Johnson is located in the northern part of Vermont in Lamoille County. The Village was chartered in 1894 and its electric and water departments were formed the same year. Its service area is the Village of Johnson, extending a limited distance into the Town of Johnson, comprising approximately 30 miles of distribution lines. During 2017, the Village provided electrical service to approximately 958 customers. Of these, residential customers account for 41% of energy sales, followed by small and large commercial customers at 24%, industrial customers at 28% and the remaining 8% from area lighting and other. The largest user by kWh is the Johnson campus of Northern Vermont University. During 2017, the Village experienced a peak demand in December of approximately 2,340 kW. **VPPSA Director: Meredith Birkett**



Village of Ludlow Electric Light Dept. - The Village of Ludlow is located in the south central portion of Vermont in Windsor County. It was incorporated in 1866 and its electric light department was formed in 1900. It serves a 23 square mile service area within the Village boundaries and portions of the Towns of Ludlow, Cavendish, Proctorsville and Plymouth. During 2017 the Village experienced a peak demand in January of approximately 12,242 kW and served 3,745 customers. Skiing is an important industry in the area. In 2017, residential customers accounted for 29% of energy sales, large commercial and industrial customers accounted for 31%, and small commercial customers accounted for 39% of energy sales. The remaining 1% of sales came from area lighting and other customers. **VPPSA Director: James Pallotta**



Village of Lyndonville Electric Dept. - The Village of Lyndonville is located in the north east portion of Vermont in Caledonia County, an area known as the Northeast Kingdom. It was incorporated in 1880 and the electric department was formed in 1896. It serves a 246 square mile service area within the Village boundaries and the Towns of Burke, East Haven, Glover, Kirby, Lyndon, Newark, Sheffield, St. Johnsbury, Sutton, Westmore and Wheelock. The Village provided service in 2017 to 5,719 customers, and experienced a peak demand in December of approximately 13,156 kW. In 2017, residential customers accounted for 52% of energy sales, large commercial and industrial accounted for 19%, small commercial customers accounted for 19% of energy sales, and the remaining 10% came from street lighting and other. **VPPSA Director: Bill Humphrey**

VPPSA Members



Village of Morrisville Water & Light Dept. - The Village of Morrisville is located in the north central portion of Vermont in Lamoille County. It was incorporated in 1884 and its electric department was formed in 1895. It serves a 73 square mile area within the Village boundaries and the Towns of Morristown, Elmore, Hyde Park, Stowe, Wolcott and Johnson. During 2017, the Village provided service to 4,108 customers, and had a peak demand in December of approximately 8,816 kW. In 2017, residential customers accounted for 47% of energy sales and commercial and industrial customers accounted for 53% of energy sales. **VPPSA Director: Craig Myotte**



Town of Northfield Electric Dept. - The Town of Northfield is located in the central portion of Vermont in Washington County. It was chartered in 1781 and its electric department was formed in 1894. It serves a 13 square mile service area within the Towns of Northfield, Berlin and Moretown. During 2017, the Village served 2,209 customers and had a peak demand in September of approximately 4,910 kW. In 2017, residential customers accounted for 37% of energy sales and commercial and industrial customers 56%, with its largest industrial accounting for 28% of energy sales. The remaining 7% of usage came from area lighting and other. **VPPSA Director: Stephen Fitzhugh**



Incorporated Village of Orleans - The Village of Orleans is located near the Canadian border in Orleans County. It was incorporated in 1879 and its electric department was formed in 1925. It serves 38 miles of electric line within the Village boundaries and portions of the Towns of Barton, Brownington, Coventry and Irasburg. During 2017, the Village provided electrical service to 669 customers, most of which were residential customers accounting for 27% of energy sales, followed by commercial customers at 12%, and 4% from area lighting and other. The Village's largest customer is an industrial customer that accounts for 57% of energy sales. During 2017, the Village experienced a peak demand in December of approximately 3,337 kW. **VPPSA Director: John Morley III**



Swanton Village, Inc - Swanton Village is located in the upper northwest portion of Vermont in Franklin County. It was incorporated in 1888 and the electric department was formed in 1894. It serves an area of 56 square miles within the Village boundaries and the Towns of Swanton and Highgate Falls. During 2017, the Village served 3,679 customers, and experienced a peak demand of approximately 10,198 kW in September. In 2017, residential customers accounted for 46% of energy sales, commercial and industrial customers accounted for 51% of energy sales and the remaining 3% from area lighting and other. **VPPSA Director: Reginald Beliveau, Jr.**

2018 Highlights



Crystal Currier

Amy Parah

Finance

The overall financial integrity of the Authority continues to remain strong. This is attributable to a sound membership with a commitment to timely payments. The Authority has a strong cash flow position and little need to draw on its operating line of credit. In 2018 and 2017, the Authority realized an increase in net assets of approximately \$3.8M and \$1.8M, respectively (exclusive of other comprehensive income activity).

In 2018, the Authority's total assets increased by approximately \$541K or less than 1%. This was the result of additional purchases in Vt. Transco, LLC, and an initial purchase investment in Hometown Connections, Inc.; offset by the sale of VPPSA's 9.36% ownership share of the Highgate Converter Facility that occurred in 2017.

Over the last several years, Vermont's distribution utilities have had the opportunity to purchase equity in the form of membership units in Vermont's transmission provider, Vt. Transco, LLC. As an alternative to purchasing the membership units directly, any utility that is eligible to be a member of the Authority, has the option to have the Authority purchase the units on their behalf, should the Authority's Board of Directors authorize overall financing of the purchases. As a result, the Authority has worked with its members, to help facilitate their ability to realize the economic benefits of these offers. As of December 31, 2018, the Authority owns a total of 4,188,878 TRANSCO membership units, at a value of \$41,888,780. Of the total 4,188,878 member units, 4,082,703 member units were purchased for the direct benefit of the Authority's members and 1,061,750 member units were purchased to benefit the Authority itself. The direct purchase provides another source of revenue that reduces operating costs. As shown in the Authority's financial statements, TRANSCO equity pur-

chases earn an average rate of return of 12.51%. Currently, this rate of return is significantly higher than the overall related debt service, resulting in an economic benefit that reduces the members' costs and ultimately the cost to their ratepayers.

In 2018, the Authority partnered with four (4) other agencies to establish Hometown Connections, Inc., a non-profit entity that will provide consulting and technology services, as well as advanced metering programs to public power utilities across the United States. This investment will bring greater value to the public power industry (including VPPSA's members) by combining resources and allowing utilities of all sizes to obtain the products and services they need to keep their electric systems robust and to preserve the benefits of community-owned, not-for-profit service. The Authority contributed \$265,000 to the new company and obtained a 20% equity position in the organization.

During 2018 and 2017, the Authority continued to pay down principal on existing debt obligations (bonds and long-term debt) in the amount of \$3.6M and \$4.0M, respectively. This decline in debt levels further strengthens the Authority's financial position. During 2017, a major restructuring of debt was completed including an advance refunding of the Authority's Project #10 bonds, and the refinancing of several outstanding loans associated with Vt. Transco LLC membership unit purchases. Refinancing the Vt. Transco associated loans also resulted in elimination of balloon payments that would have come due in 2021/2022.

During 2018 and 2017, the Project #10 participants were invoiced and met their obligations as established under the Power Sales Agreements with the Authority. The economic benefits the participants received in 2018 and 2017 exceeded the participant cost by approximately \$2.4M and \$1.0M, respectively, making the project beneficial to those participants by reducing their overall power supply costs.

In 2018, Moody's Investor Services conducted a review of the rating assigned to the Authority's Project 10 project revenue bonds. Moody's maintained the Project 10 revenue bonds rating of Baa1 with a stable outlook.



Melissa Bailey

Legislative and Regulatory Affairs

VPPSA staff actively participated in statewide regulatory proceedings at the Public Utility Commission through workshops, hearings, and the submission of written comments. Significant staff efforts were devoted to proceedings covering the structure of the state's energy efficiency utilities and the regulatory structure for electric vehicle (EV) charging.

Programs under Vermont's Renewable Energy Standard (RES), which took effect in 2017, continued to be implemented. The pilot Electric Vehicle Rebate program was continued in 2018 in compliance with the Energy Transformation Tier of the RES. VPPSA's members have the option of meeting their RES requirements in the aggregate, so a replicable internal structure to track RES obligations, credits, and program participation was developed. Program offerings in 2019 will be expanded to include rebates for Cold Climate Heat Pumps and Heat Pump Water Heaters.

The level of engagement with Efficiency Vermont to promote coordination between the energy efficiency utility and the VPPSA members increased substantially in 2018. Areas of discussion include RES implementation, data sharing, and the future role of the energy efficiency utility.

VPPSA's participation in the Vermont System Planning Committee (VSPC), including the geotargeting and forecasting subcommittees, continued on behalf of its municipal member systems. Staff attends quarterly VSPC meetings to represent members on issues related to grid planning.

Relevant state legislative proceedings were actively mon-

itored with staff testifying before the House and Senate committees with jurisdiction over energy-related issues. Much of the legislative focus was devoted to proposals around the regulation of electric vehicle charging stations and making regulatory changes that strengthen public power.

In addition to its activities at the state level, VPPSA was very active working to shape energy policy at the regional and national level through participation in the Transmission Access Policy Group (TAPS), the American Public Power Association (APPA), and the Northeast Public Power Association (NEPPA). VPPSA helped craft position papers and policy documents put forward by these entities and participated in meetings with both Congressional and Federal Energy Regulatory Commission (FERC) staff to promote public power viewpoints.

Looking towards 2019, VPPSA will be redoubling its efforts to promote the benefits of its members public power business model and will continue efforts to effectively promote consumer friendly energy policies at the state, regional, and national levels.



2018 Highlights



Ken St. Amour

Kim Harris

Information Systems and Support Services

VPPSA continued to make improvements in its underlying Information Systems technology during 2018.

The most visible project was the design and development of the new website (www.vppsa.com), completed by a crossfunctional team led by Systems Administrator, Kim Harris. The website represents a completely new design which effectively promotes VPPSA's vision and mission. It was developed using WordPress, a modern web development platform.

In February, after two years of effort by the Information Systems and power supply groups, VPPSA launched a new Central Dispatch Agreement (CDA) billing process. The new processes leverage VPPSA's investment in Microsoft's SQL Server and development tools, resulting in more streamlined, efficient, and accurate reporting.

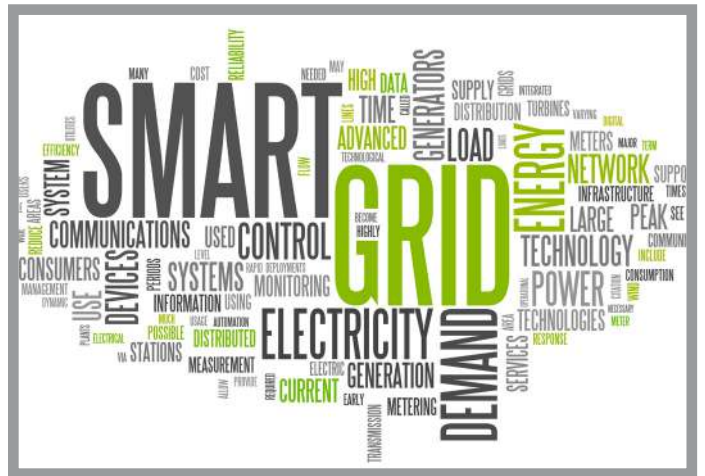
Staff also completed the first step of a project to virtualize the computing environment at the VPPSA headquarters office. This effort provides an efficient, cost-effective infrastructure, resulting in efficiencies in Systems management, business continuity, and cybersecurity. In 2019 the second stage of this project will virtualize workstations to complement the conversion to laptops that occurred in 2018. This project, when completed, will realize VPPSA's vision for a mobile computing environment, allowing management and staff to work from anywhere at any time.

VPPSA is managing an Advanced Metering Infrastructure (AMI) feasibility survey for participating member systems that will assist them in evaluating the technology.

The study, being conducted by Lemmerhirt Consulting, will provide each member with an assessment of suitability for implementation of AMI technology. A presentation of current trends in the industry, followed by comprehensive interviews took place in 2018. The final reports will be presented in early 2019, and decisions about whether to proceed to the procurement phase will be made at that time.

Increasing VPPSA's cybersecurity posture and compliance with NERC Critical Infrastructure Protection (CIP) requirements continued to be a focus during 2018. Standards compliance continues to be ingrained in VPPSA's business culture, especially related to Project 10. Significant staff involvement in NERC Compliance efforts at VPPSA's Project 10 generator was undertaken as an extension of ongoing CIP Compliance work, and general IT infrastructure upgrades. Work will continue in 2019 and beyond as VPPSA continues building a strong culture of compliance.

In addition to managing and maintaining its own building and electronic infrastructure, VPPSA completed technology projects at many of its members' facilities during the year. These projects included the replacement of aging computer systems, Cybersecurity devices, and meter interrogation systems.





Steve Farman

Amanda Simard

Rates and Planning

Building collaborative relationships with regulators while supporting members' ongoing regulatory reporting and filing requirements was a key focus in 2018. Efforts in this area include the completion of annual Service Quality and Reliability Performance (SQRP) reports, Small Electric Annual Reports to the Public Utility Commission (PUC) and other Department of Energy (DOE) reports. Efforts to complete, file and gain approval for all twelve members' 2015 Integrated Resource Plans (IRP) Transmission and Distribution (T&D) components continued throughout the year. Memorandum Of Understanding's (MOU's) for eleven out of twelve have been filed and seven are completely approved, with four currently awaiting approval. Having established a "repeatable" template for the MOU's leading to approval of the T&D sections, it is expected that final approvals on the remaining four will be received in early 2019.

Net metering continued to take significant effort as staff worked with members to comply with reporting requirements associated with the Public Utility Commission's (PUC) 2018 Biennial Update and subsequently develop and file compliance tariffs consistent with changes to Rule 5.100 ordered by the PUC in that proceeding. Staff participated in an effort to identify appropriate and affordable enhancements to current internal net metering software; after extensive analysis the decision was made to continue to develop enhancements to the existing software internally.

Efforts also continued to enhance the capital planning aspect of member financial planning, while also encouraging greater member involvement in the analysis and projection of retail revenue requirements, anticipated

financing needs, and potential rate increase requirements. Emphasis on capital planning is ongoing and will be featured in the development of the next round of IRP's in the upcoming year.

Staff has continued to explore the potential for new demand response, storage and load management programs; and will continue doing so in 2019.

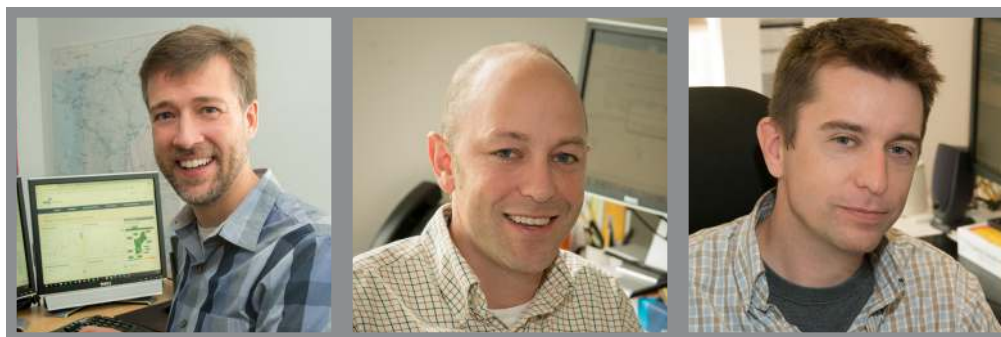
This has been an active year in terms of regulatory initiatives with staff devoting significant time to coverage and analysis of a number of regulatory proceedings. These include the Public Service Department's review of utility rate design, the PUC's investigation into promoting the ownership and use of electric vehicles, and the ongoing regulatory efforts to revamp utility pole attachment rates.

Planning efforts during the year included continued participation in the statewide peak load forecasting and peak load management effort, continued staff support for the Municipal Electric Association of Vermont (MEAV), and continued exploration of grant funding for storage & load management opportunities.

Staff also worked with members to develop a community solar tariff pilot program and a targeted economic development arrangement. VPPSA anticipates further efforts in these areas in the upcoming year as it continues to provide analytical and educational support on emerging issues.



2018 Highlights



Shawn Enterline

TJ Poor

Josh Bancroft

Power Supply

VPPSA's power supply staff continued to support Members' short and long-term power supply needs through the evaluation and contracting of resources to meet demand, as well as improving evaluation and reporting mechanisms.

Renewable Energy Standard - 2018 was the second year of obligations under Vermont's Renewable Energy Standard (RES). Staff have worked diligently to analyze the dynamics of the new Vermont Renewable Energy Certificate (REC) market created by this regulatory change and evaluate least cost solutions for members. Given the dynamics of the New England renewable energy markets, it is necessary to analyze VPPSA member needs for Vermont RECs in conjunction with the entire New England market. At times, it may be beneficial to sell RECs from Vermont owned resources and replace them with lower cost RECs from out of state resources. VPPSA has regularly evaluated these opportunities to provide the least cost solution to the members. VPPSA also began assisting its members in offering some strategic electrification and other fossil fuel reduction programs (i.e. RES Tier 3 programs) in 2018, in advance of the members having an obligation under that Tier of the RES, which begin in 2019.

Planned Purchasing - The Planned Purchasing program continued in 2018. This program blends a systematic structure with continual market monitoring and judgement. Under this approach, Member market exposure is regularly reviewed to analyze the benefits and costs associated with making a market purchase to reduce exposure to price uncertainty, volatility, and counterparty risk. This approach is akin to the concept of dollar cost averaging used in investing and results in lower realized power price volatility.

Standard-Offer Program - VPPSA has been utilizing the State Standard Offer Program to reduce member costs for several years. In 2015, VPPSA was awarded Standard Offer contracts for a 485kW and a 500kW solar PV project in Lyndonville Electric Department's (LED) service territory. These two projects, which were developed on a brownfield site that sat unused for over a decade, successfully navigated the Brownfield Redevelopment and Environmental Limited Liability Act program and were commissioned in the Spring of 2018.

In 2017, VPPSA was awarded Standard Offer contracts for 860 and 855 kW (AC) projects in Morristown and Brandon, respectively. The site in Morristown has received its Certificate of Public Good and is expected to be commissioned in the Spring of 2019. The site in Brandon was withdrawn due to unexpectedly high interconnection costs.

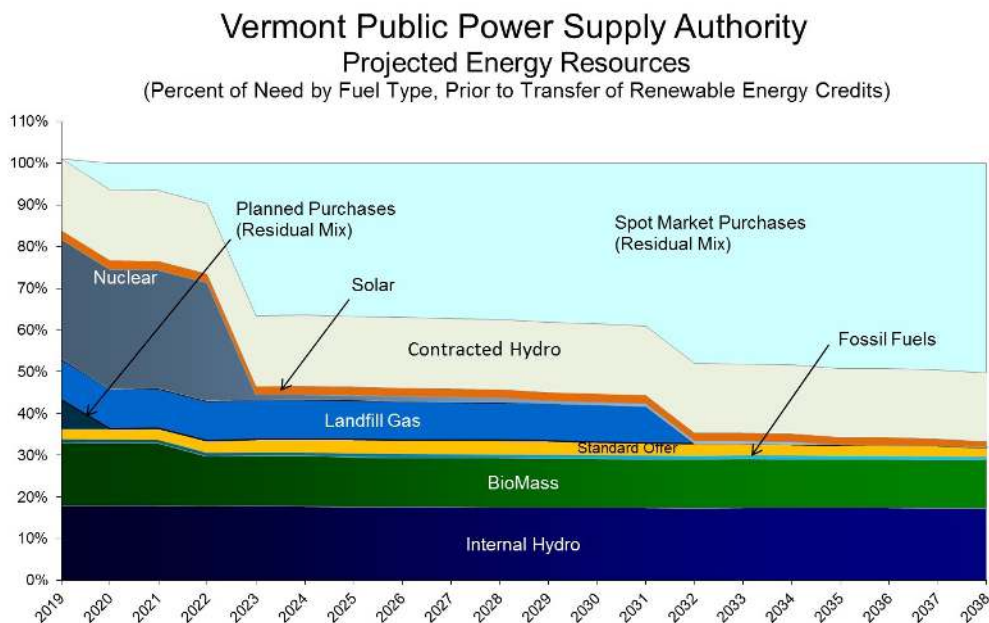
In 2018, VPPSA was awarded a Standard Offer contract for a 1 MW project in Morristown. Following the award, wetlands were discovered on the site. VPPSA is working with the Developer and the Agency of Natural Resources to determine if there are viable mitigation steps available. If so, then the project could be constructed in 2020. While this power is sold to all Vermont utilities under a statewide contract, the revenue received offsets members costs.

Applications Development - VPPSA's power supply related information technology systems underwent a significant transformation in 2018. A combined Power Bill Summary and Central Dispatch Agreement Invoice system that had been largely developed through 2017 was brought online in early 2018. The heart of this system is a collection of configuration tables, views, functions, and stored procedures built within and run by VPPSA's Microsoft SQL Server. Alongside the server components is a user interface which allows staff to view and manage the system. This new system now allows VPPSA to process a month's worth of transactions in approximately 15-25 minutes. The metadata stored

alongside the billing data in this system allows staff to trace each value back to the original report/invoice from which they were sourced, report on the allocation method used, and determine which procedure performed the calculations. This effort resulted in significant streamlining of power market settlement, invoice generation, and reporting.

VPPSA also devoted significant resources toward streamlining member management of net metering customer credits in 2018. This effort focused on upgrading existing VPPSA software designed to calculate bill credits for net metered customers. Based on a 2016 initial estimate of costs, VPPSA selected ARC Business Solutions Utility Sector Consulting division to assist in the consideration of options. ARC gathered a detailed set of requirements and proposed a set of possible solutions, from limited improvements to the existing software up to a full Customer Information System based solution. In addition to the substantial up-front cost, ongoing monthly operational costs for the most viable solution were found to be significant as well. Given the higher-than-expected upfront and ongoing costs, participating utilities decided not to pursue any of the proposed new solutions, but to instead utilize internal staff to make incremental improvements to the existing system over time. VPPSA has committed to providing updates for the existing VPPSA Net Metering Management software throughout 2019.

Long-Term Portfolio - Long-term resource agreement opportunities that meet the priorities of Members as articulated in their Integrated Resource Plans, including but not limited to fuel diversity, affordability, and cost stability also continued to be pursued. In 2018, the primary focus was on developing solar in the member utility service territories both under the Vermont Standard Offer Program and to meet the Vermont Renewable Energy Standard requirements. In addition, short and mid-term contracting with several hydro asset owners was explored. Short to medium-term energy agreements via “market” contracts (sourced by the region’s residual mix) remain a useful tool to insulate against market prices. The chart below shows VPPSA’s overall energy resource position as of 12/31/18.



VPPSA members currently have resources to cover over 90% of their projected aggregate energy needs through the year 2022. Each individual Member holds a varying mix of the above summarized resources, and each individual portfolio continues to be evaluated as to its short and long-term need. As seen above, VPPSA’s portfolio has a diverse set of fuel types and balances base-load facilities with intermittent resources (whose output varies depending on weather conditions).

In 2018, developing projects emanating from the 2017 Request for Proposals for solar photovoltaic resources within Member service territories continued to be a main focal point. Based on a second round of binding bids from vendors, VPPSA began the process to convert a number of these proposals to active projects and to begin the process of acquiring Certificates of Public Good for those resources. Projects under consideration include a blend of standard offer projects and projects for Member portfolios that total over 8 MW, currently focusing on the service territories of Hardwick, Morrisville, and Northfield.

VPPSA Projects

The Authority has knowledge, experience, and access to tax-free bond financings. Its current projects include the following:

The J. C. McNeil Generating Facility (Project #2) - The Authority owns 19% of the J. C. McNeil Generating Facility, located in Burlington, Vermont. The McNeil Station is managed by the Burlington Electric Department, which is the majority owner. McNeil continues to be a reliable source of energy for the project participants. The following chart identifies the capacity and availability factors for the plant over the last ten (10) years and demonstrates that the plant has been, and continues to be, a dependable resource for its owners. A major VPPSA milestone was realized in July 2015 with the maturity of the McNeil revenue bonds that were issued to construct the project in the early 1980's.

Year	Capacity Factor	Availability Factor
2018	56.1%	77.1%
2017	61.4%	74.6%
2016	69.7%	96.3%
2015	66.3%	82.3%
2014	65.7%	82.5%
2013	72.9%	89.7%
2012	51.3%	83.8%
2011	51.9%	84.9%
2010	62.1%	89.7%
2009	50.8%	89.3%



The Highgate Converter Station (Project #3) - The Authority owned a 9.36% share of the 225 mW AC-DC-AC converter station, which connects the US and Quebec electric grids at Highgate, Vermont, until early 2017. This converter station provides Vermont with electricity imports from the Hydro-Quebec Trans Energie grid. In May of 2017, the Authority sold its ownership interest in the converter to Vt. Transco, Vermont's transmission provider and the Town of Stowe Electric Department, but the project remains open pending resolution of several FERC Dockets.

The Swanton Peaker Generating Facility (Project #10) – The Authority owns 100% of the peaking generating facility located in Swanton, Vermont. This facility was completed and entered commercial operation in 2010. The project consists of two GE Frame 5N turbines, each rated at 24 mW. As a peaking facility, the facility is expected to operate infrequently. The two GE Frame 5N turbines are able to produce maximum capable output (24 MW) within ten minutes of being energized from a standing (off) state. This gives the units “Fast-Start” capabilities within the ISO-NE wholesale markets. The units are remotely controlled by the operators of the New England power grid, allowing the operators to quickly dispatch the units to help keep the power grid stable. The following chart identifies the operating statistics for the plant since it began operation.

Year	Runtime (Hrs)	Generation (MWh)	Capacity Factor	Availability Factor
2018	58	504.6	.1%	99%
2017	33	589.0	.2%	100%
2016	110	965.2	.3%	99%
2015	126	904.5	.3%	99%
2014	74	225.3	.1%	99%
2013	92	539.9	.2%	99%
2012	42	319.0	.1%	91%
2011	47	362.7	.1%	98%



Project 10 Plant Manager



Dave Gagne

This report, along with the 2018 Independent Auditors' Report, is included on the CD attached to the back cover in electronic format for your convenience. Questions concerning any of the information found in this report, requests for additional information, or requests for written copies should be directed to:

Crystal L. Currier, Controller
Vermont Public Power Supply Authority
P.O. Box 126
Waterbury Center, VT 05677
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The information may also be accessed on our website:
www.vppsa.com



Our Audit was performed by:

Graham & Graham, P.C.
www.grahamcpa.com

