



**Biennial Report
of the
Department of Public Service**

In Accordance with 30 V.S.A. §24

Submitted to: Vermont General Assembly

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Introduction

The Department of Public Service (Department or PSD) is charged with advocating for rate payers and otherwise representing the public interest in utility cases before the Public Utility Commission (PUC), federal regulatory agencies and state and federal courts; providing long range planning for the state's energy needs through the Comprehensive Energy Plan; ensuring Vermonters share in the benefits of modern communications through the Vermont Telecommunications Plan; promoting energy efficiency; administering federal energy programs; resolving utility consumer complaints; and making and administering contracts for the purchase of power on behalf of the state.

The Department's mission is to serve all citizens of Vermont through public advocacy, planning, programs, and other actions that meet the public's need for least cost, environmentally sound, efficient, reliable, secure, sustainable, and safe energy, telecommunications, and regulated utility systems in the state for the short and long term. The Department does this by:

- promoting the interest of the general public in the provision of the state's regulated public services: electricity, natural gas, telephone, cable television, and, to a limited degree, water and wastewater;
- ensuring that the state's telecommunications infrastructure can support a diversified set of services that address the current and potential needs of the state's residents and business entities;
- protecting the public health and safety and ensuring that safety regulations established by federal and state government for natural gas, and certain types of propane installations, are met; and
- alerting and discussing with federal agencies issues involving Vermont's nuclear facilities if jurisdiction for the issue lies with a federal agency.

The Department hereby presents this Biennial Report to the Vermont General Assembly in accordance with the Department's obligations under 30 V.S.A. §24. Biennial Reports have been required since 1855, when the Legislature provided for the appointment of a railroad commissioner (No. 26 of the Acts of 1855), giving this commissioner

. . . a limited jurisdiction over the operation of steam railroads with access to the books and accounts of railroad companies operating in Vermont and required such railroads to make annual returns of such character as the commissioner should prescribe. . . . By No. 64 of the Acts of the same session, the commissioner was required to make an annual report to the legislature during the first week of its session. (*Biennial Report of the Public Service Commission of the State of Vermont*, Dec. 1920 - Dec. 1921).

By 1908, the structure of the Commission and its areas of jurisdiction had grown and changed. Under its new name, Public Service Commission, which replaced Board of Railroad Commissioners, the legislature expanded the Commission's authority to include jurisdiction over the manufacture and distribution of gas, electricity, telegraph and telephone companies, and sleeping car companies. A few years later, reservoirs and private water companies were added.

Since these early years, the Department's organization and responsibilities have continued to evolve. However, since 1855, Biennial Reports to the General Assembly have been prepared to reflect significant activities and the status of companies under the jurisdiction of the Public Service Commission, which since 1981 has been divided into the Public Utility Commission (formerly the Public Service Board) and the Department of Public Service.

This Biennial Report describes highlights of the Department's activities covering fiscal years 2017 and 2018.

Staffing and Service Delivery

What follows is a summary of the staffing and functions of the Department that are funded through the gross revenue tax assessed pursuant to 30 VSA §22 .

Table 1 Department Staff by Function and Division, January 2019

Function	Division	Staff #
Ratemaking, finance, industry reporting	Economics and Finance	4
Energy planning, policy formulation, rate case support	Planning and Energy Resources	5
Clean energy development fund and clean energy finance	Planning and Energy Resources	2
Energy efficiency budgets, oversight and verification	Planning and Energy Resources	4
Telecommunications and broadband	Telecommunications	4
Engineering, safety, federal reporting	Engineering	5
Legal support for all the Divisions	Public Advocacy	9.5
Consumer protection, web content, communications, call center	Consumer Affairs and Public Information	6
Administration	Administration	4
Department leadership	Commissioner's Office	4
	Total	47.5

Approximately 7 of the 47.5 members of staff are funded out of another dedicated fund that includes federal program funds, the Clean Energy Development Fund, and the Energy Efficiency Fund. The remaining 40.5 individuals are funded through the state's gross receipts tax fund that is the subject of this report.

The functions of the Department are essential to the state and the health and well-being of utility ratepayers and the ambitions of the state in implementing policy objectives for energy, electricity policy, utility cost management, telecommunications and broadband, and ratepayer protections,

including those that are administered by the various divisions of the Department. A more detailed description of our work is summarized in the sections below.

The workload on the Department in recent years has substantially increased due to merchant projects and self-generation. The responsibilities of the Department have grown both as a matter of industry change (e.g., responding in large part to net-metering, and associated program incentives to encourage merchant generation) and at the direction of the Legislature (e.g., new RES requirements, net-metering requirements, shifting focus of energy efficiency for commercial customers, standard offer programs).

Other expanded activities the Department has been required to accommodate in only the last two to three years include:

- Act 174 (2016) regional and local energy planning reviews;
- Act 150 (2017) review of the self-managed energy efficiency program (“SMEEP”);
- Act 139 (2018) annual reporting on the state’s compliance with the Comprehensive Energy Plan (including a report on the Sheffield-Highgate export interface (“SHEI”));
- Act 139 (2018) requirement to establish 16 new appliance standards through rulemaking procedures;
- Act 174 (2016) wind-project noise monitoring rulemaking (as well ongoing wind project noise monitoring for existing wind generation projects);
- Act 42 (2017) appliance standards implementation;
- Act 917 (2018) transportation electrification planning requirements;
- Act 99 (passed in 2014, implemented in 2018) requirements for substantially revising and implementing the programmatic net-metering rule;
- Act 194 (2018) investigating and reporting on demand charges, and modifications to the energy efficiency programs focused on large customers (i.e., self-managed energy efficiency program or “SMEEP”);
- Act 53 (2017) requiring CPG enforcement and responsibility for fining violators for amounts up to \$5,000;
- Merger of the remaining responsibilities of the Vermont Telecommunications Authority into the Department in 2015.

This comes at a time of increasing budgetary constraints. In the Fall of 2018, the Department embarked on an effort to reduce the size of staff through a reduction in force. As of the date release of this report, there were 47, full and part time positions at the Department.

Looking forward, additional regulatory work is anticipated that will further challenge the resources of the Department, such as establishing a new multi-year planning framework for the investor-owned utilities, increasing the focus on planning for effective integration of distributed energy resources, and updating the energy efficiency programs of utilities.

Vermont also faces longer term challenges. Vermont is a state with strong targets for energy and utility services looking forward. As is reflected in the Department’s Clean Energy Jobs Report

for 2017, the total number of Vermonters engaged in the clean energy industry has grown by 29% since the baseline was collected in 2013. Over 11,200 Vermont workers have full time jobs in this sector and over 18,700 clean energy workers work at least part time in the sector.¹ Vermont has one of the cleanest electricity profiles in the U.S.; it has set targets for the sector that are more ambitious than any state in the lower 48. The state has consistently ranked among the highest in solar jobs per capita in the nation.

¹ PSD/CEDF, 2018 Clean Energy Industries Report, available at https://publicservice.vermont.gov/sites/dps/files/documents/Renewable_Energy/CEDF/Reports/VCEIR%202018%20Report%20Final.pdf

Department of Public Service Activities by Division

Public Advocacy on behalf of Vermont's Ratepayers

The Director of Public Advocacy is statutorily charged with representing the interests of the people of Vermont in all proceedings before the Public Utility Commission (Commission). Attorneys from the Public Advocacy Division execute this obligation by advocating on behalf of Vermonters in proceedings that involve the formation, acquisition, or merger of regulated utilities; siting and construction of energy and telecommunications facilities; proposed changes to regulated utilities' rate schedules; the quality of service provided by utilities; and any other proceeding that involves laws relating to public service corporations and utilities. The Department, through the Director of Public Advocacy, also has the authority to initiate proceedings on its own motion before the Commission with respect to any matter within the jurisdiction of the Commission and may initiate rule-making proceedings before the Commission. Additionally, the Department's attorneys may represent the interests of Vermonters in proceedings before federal administrative agencies and tribunals, including the Federal Communications Commission, the Federal Energy Regulatory Commission, the Nuclear Regulatory Commission, U.S Bankruptcy Court, and state and federal courts.

Public Advocacy is headed by a director, a statutory appointee who is responsible to the commissioner. The Public Advocacy Division has six full-time staff lawyers, one part-time staff lawyer, and two administrative assistants. Other divisions within PSD provide expertise from engineers, economists, and analysts, as well as support services for Public Advocacy. Outside consultants are hired to provide specific information, expertise, and/or other supportive services with cases as needed.

The Public Advocate is a statutory party in all cases before the Public Utility Commission. Much of the litigation work done by Public Advocacy has historically been in utility rate cases that determine whether and how much a utility's rates should be changed because of capital investment and operating expenses. Additionally, the Public Advocacy Division is involved in investigations regarding transmission line upgrades, nuclear plant ownership and siting, and renewable energy generation, as well as issues such as alternative regulatory plans, access to transmission facilities, and contracts for purchase of power by utilities. Public Advocacy is also responsible for review of and recommendations regarding proposed utility tariff changes, certificates of public good, and special contracts. In addition to these traditional activities, Public Advocacy has worked closely with and provided support for the Consumer Affairs Division on consumer protection issues arising from consumer complaints.

The Public Advocate's charge to serve the public interest is broadly understood to mean the long-term interest of all Vermonters (residential, commercial and industrial) in the reliable and least-cost provision of utility services. The public interest, however, encompasses not only the interests of ratepayers, but of all parties affected by utility operations, including other consumers, business and industry, and the state as a whole.

A substantial part of the legal staff's time involves trial advocacy, legal planning, advising, and drafting. During legislative sessions, the Public Advocacy Division is intimately involved with bill review and the legislative process. The Public Advocate also provides in-house legal assistance to the Department. As does any state agency, PSD requires almost daily legal advice on major and minor matters. Lawyers respond to public records requests; they interpret statutes; and they interpret and explain to PSD staff the essential steps to follow in complying with state and federal regulatory requirements. Additionally, with the assistance of PSD personnel from other divisions, Public Advocacy frequently reviews proposed construction and tariff filings and meets with utility petitioners to discuss possible settlement of disputed issues, upcoming projects, and advanced planning for the future of Vermont.

From July 1, 2016 through June 30, 2018, the PA Division handled roughly 7,385 matters. Table 2. provides additional detail.

Table 2 Number of Matters Handled by the Public Advocacy Division by Type

Cases*		
	07/01/2016 – 12/31/16	97
	01/01/2017 – 12/31/2017	272
	01/01/2018 – 06/30/2018	329
Tariffs		131
Net-metering Projects**		
7/01/2016 – 12/31/2016	Net Metered Registration	1986
	Mid-Size Net Metering	98
	Net Metering Petitions	31
01/01/2017 – 12/31/2017	Net Metered Registration	2551
	Mid-Size Net Metering	8
	Net Metering Petitions	27
01/01/2018 – 06/30/2018	Net Metered Registration	1766
	Mid-Size Net Metering	4
	Net Metering Petitions	42
Special Contracts		14
Telecom CPGs		17
Energy Efficiency Utility		12

Total

7,385

* “Cases” includes petitions under §248, §248(j), §248a, financing, post-2016 net-metering, utility transfers/sales, standard-offer contracts, and other matters.

** Net Metering Registrations are defined by size and mounting under PUC Rule 5.105. Net Metering registrations are generally small domestic projects. Net metering petitions pertain to the largest projects and are defined under 5.107. Other mid-size net metering cases are defined under 5.106.

Administrative Services

The five staff of the Administrative Services Division are collectively responsible for the daily business functioning of the Department including: maintaining the Department budget; human resource administration, accounts payable; accounts receivable including the gross receipts tax; and grant writing and administration. All payments made to vendors for any reason are processed through this division. Responsibility for the timely billing and collection of billbacks, authorized in statute, is with this division as well. All grants and contracts are processed by this division. In the event any of these grants and/or contracts require financial reports be completed, the staff in this division are responsible for that. Management of the Department budget is done within this division. The estimated gross receipts tax revenues are used to determine budget funding each fiscal year. These funds carry the regular Department operations and staff costs. Other funding sources are used for specialized expenditures, and appropriate staff costs are also allocated to these funding sources. These other funds are also managed by this division.

Consumer Affairs and Public Information (CAPI)

(CAPI) advocates for policies that protect consumer interests, educates consumers about utility issues and helps people and businesses reach an informal resolution of their disputes with regulated utilities as well as broadband and cellular providers. CAPI also investigates complaints about the alleged failure of a CPG holder to comply with the terms and conditions of its Certificate of Public Good (CPG). CAPI serves as the single location within state government to receive, track, respond to and report on all complaints of alleged CPG violations. See separate Annual Report filed about CPG Complaints (<https://publicservice.vermont.gov/content/legislative-reports>).

The division is headed by a director and is staffed by five full-time consumer affairs specialists. CAPI consults regularly with special counsel in the Commissioner's office to resolve complaints informally and works closely with attorneys in the Public Advocacy Division in litigated proceedings.

CAPI provides information about consumer complaints and represents consumer interests in cases before the PUC. CAPI monitors utility performance against service quality standards, as well as the adherence to consumer protection rules established by the PUC. CAPI provides support and training to utilities and consumer advocate groups about PUC rules. The division reviews utility disconnection notices for compliance with rules established by the PUC.

The Department encourages the public to provide input and express opinions about the issues and utilities over which it and the Public Utility Commission have regulatory oversight. CAPI makes a record of public input it receives for use in current and future dockets.

Consumer Contacts and Complaints

CAPI endeavors to informally resolve disputes between consumers and utilities. Consumer contacts are received by phone, email, in writing or via the division's online consumer complaint portal. Vermonters who first contact the Public Utility Commission with a consumer complaint

are generally referred to CAPI, for the specialists to attempt to reach an informal resolution between the parties. CAPI collects very minimal data from people needing only a utility referral; the division performs an intake for all other types of contact. These contacts are classified as grievances, objections, questions, compliments or general information requests. CAPI investigates all complaints. Many of the complaints are about utility disconnections for people who need the division's assistance establishing a reasonable payment arrangement with their utility. "Grievances" are cases for which CAPI has determined that the utility reasonably could not have taken action to resolve the matter before the consumer contacted the Department and/or the issue is not regulated by the PUC. CAPI codes complaints as "Escalations" when, following investigation, the division has determined that there was something the utility could or should have done differently to resolve the customer's concern before the consumer contacted the Department. Cases coded as Escalations may or may not involve a violation of Public Utility Commission rule or a law.

In the six-year period reported below in Table 3, utility complaints overall filed by consumers were at their highest in 2015. Complaints overall and "Grievances" have steadily decreased year after year through 2017. In 2017, total contacts and complaints overall were at their lowest in more than a decade. The number of total contacts and complaints (especially "Escalations") that CAPI recorded can be correlated to utility events such as mergers, bankruptcies, and strikes; and changes relating to technology or regulation such as the advent of smart meters, open-internet concerns, and the analog to digital conversion for television. Additionally, CAPI was responsible for recording and responding to contacts resulting from inquiries made at the Broadband Vermont website. That website generated 318 contacts in 2013 and 153 in 2014, and declined to only 59 in 2015.

Of note, investigated complaints for electric, cable and telephone service (with a spike for telephone complaints in 2015) have declined significantly (see Table 4). CAPI attributes a small portion of the decline in complaints to its own efforts to provide training to utilities and to address opportunities with utilities to help them avoid complaints going to the Department directly instead of the company's own customer service staff. An example is a utility having provided information on their own customer notices that used formatting (bold, underline, highlighting) and positioning (above or in front) to highlight the CAPI consumer complaint contact information rather than the company's own customer service toll free numbers. This practice by utilities does continue but certainly to a lesser extent.

The decline in investigated complaints overall is attributable to dedicated efforts to customer service by Green Mountain Power and Comcast. Green Mountain Power, Vermont's largest electric utility maintains its investment in service quality and customer service with demonstrable results. Additionally, Comcast's improvements in customer service are evidenced by the decline in cable complaints.

Table 5 shows the savings made up of refunds, billing adjustments, discounts, credits, etc., that CAPI staff negotiated with utilities on behalf of consumers. Fewer complaints obviously yields lower savings achieved by CAPI on Vermonters' behalf.

Table 3 Consumer Contacts by Type

	2013	2014	2015	2016	2017	2018
Contacts	6107	5866	7303	4022	3593	3861
Referrals*	2325	2809	2849	1691	1420	1,775
Complaints	3578	2514	3989	1861	1775	1,783
Grievances	3163	1893	1582	1035	1073	1,175
Escalations	415	341	827	172	128	97
Objections	0**	280	1580	654	574	511
Questions	191	587	352	393	373	335
Compliments	16	32	23	18	11	9

*Referrals to utilities or the Attorney General's Office

**Objection classification use began in late 2013

Table 4 Complaints by Utility Type

	2013	2014	2015	2016	2017	2018
Broadband	397	260	276	162	172	193
Cable	596	329	242	262	255	237
Electric	1041	687	427	306	321	293
Natural Gas	97	74	26	26	28	27
Telephone	1192	739	1389	359	300	363
Water	38	22	4	3	8	0
Wireless	64	37	30	78	87	115
Other	152	86	39	11	23	42

Table 5 CAPI Advocacy Yields Consumer Savings

	2013	2014	2015	2016	2017	2018
Consumer Savings Achieved through Complaint Resolution	\$86,545	\$130,693	\$88,238	\$96,298	\$46,301	\$45,199

Engineering

The Engineering Division has responsibility for natural gas and propane delivery and operations issues; and electric energy production, transmission, and distribution activities with a focus on safe, reliable, and efficient operations on behalf of Vermonters. The Engineering staff performs monitoring and inspections at facility sites in the state, including Vermont Yankee Nuclear Power Station, liquefied petroleum gas (propane gas) sites, and electric and gas transmission and distribution facilities. Engineering is responsible for reviewing facility investment plans by companies in these fields and supports the Public Advocacy Division with technical analysis and expert testimony. The Engineering Division consists of a Chief Engineer, an Electrical Engineer, a Gas Engineer, a Nuclear Engineer, and an administrative assistant.

Electric Transmission and Distribution Facilities

The Engineering Division is focused on ensuring that Vermont's electric transmission and distribution systems are well planned, carefully sited consistent with environmental goals, and constructed in a least-cost manner that also supports a highly reliable electric system. Engineering is charged with performing technical analyses that consider financial impact and assuring a project's plans integrate well into long range objectives. It then collaborates with the relevant utility to advance, retract, or enhance each proposal. With each evaluation, Engineering typically writes testimony, in concert with other divisions, that provides an independent recommendation to the Commission that details Department support or opposition to a particular project as required by the integrated resource planning process, pursuant to 30 V.S.A. 248.

Vermont System Planning Committee (VSPC)

The VSPC was created by a Public Utility Commission order to promote a proactive approach that better accomplishes integrated resource planning mandates by addressing long term reliability issues as early as possible through a broad stakeholder process. VSPC members include representatives from each of Vermont's electric distribution and transmission utilities, and three public members representing the interests of residential consumers, commercial and industrial consumers, and environmental protection, respectively. The Department is among three non-voting members that participate in the VSPC.

Energy Loss Savings

The Engineering Division supports system planning and enhanced distribution operation that results in the reduction of energy line losses throughout Vermont's transmission and distribution infrastructure. Various complementary studies including system measurement and modeling, voltage and frequency analysis, as well as financial analysis, are merged and when completed, provide utilities with a blueprint for upgrading their systems in a reliable manner that generates operating efficiencies.

Electric Transmission and Distribution System Reliability

The Engineering Division monitors the reliability of facilities that deliver electricity to Vermont consumers. Facilities operated by the Vermont Electric Power Company (VELCO) transmit high-voltage (345 kV, 230 kV and 115 kV) bulk power in and around Vermont.

Homeland Security and State Emergency Operations Plan

Protecting the safety and security of Vermont's utility infrastructure is a priority of the Department of Public Service. The Vermont Homeland Security Unit of the State Police is the lead agency during an act of terrorism crisis in Vermont. The mission of the Homeland Security Unit is to enhance public safety by promoting a coordinated terrorism response among Vermont's emergency response agencies. This unit has developed the First Responder Plan to an Act of Terrorism in Vermont. This plan details first response guidelines and operational plans for local-, regional-, and state-level response agencies.

The Department is the lead agency for State Support Function 12 (Energy) of the State Emergency Operations Plan (SEOP). The Engineering Division staffs the State Emergency Operations Center (SEOC) during real-world emergencies (e.g., weather events that cause widespread power outages) and during regularly scheduled emergency exercises. Engineering also participates in periodic Vermont Yankee emergency exercises and would staff the SEOC and the Emergency Operations Facility (in Brattleboro) if there were an emergency at Vermont Yankee.

Underground Utilities Damage Prevention

To better ensure reliable utility, telecommunication, and cable television service to Vermont consumers, Vermont has legislation that enacts a strong underground utilities damage prevention program – known as Dig Safe®. The Engineering Division administers the Dig Safe® Program by performing training, timely communication, and enforcement.

Finance & Economics

The Finance and Economics Division provides support for advocacy on behalf of the public in utility finance and economic matters before state and federal regulatory agencies. The division analyzes and evaluates the economic and financial impact of petitions to ensure they will serve the general good of the state. Vermont currently has seventeen electric distribution companies, one electric transmission company, ten incumbent telephone companies, one natural gas company and many small private water companies that receive routine cost and financial performance review. Utility companies that are lightly regulated and operating in competitive markets are monitored consistent with non-regulated markets.

Tariff Filings

The Finance and Economics Division is responsible for the initial review and recommendations regarding tariff filings and the preparation and presentation of financial testimony before the PUC, as well as other regulatory jurisdictions. Petitions filed with the Public Utility Commission cover a wide range of topics including requests to change rates for service, merge with or acquire other utilities, transfer assets, issue long-term debt, or issue stock. The day-to-day work of the division involves analyzing data provided to determine its adequacy and accuracy; developing the Department's own rate base, cost of capital, and cost-of-service recommendations; providing written and oral testimony before the Public Utility Commission; and conducting settlement discussions and negotiations as appropriate.

Policy Analysis

The division evaluates policy recommendations regarding state energy policy, electric and gas utility regulatory policy, alternative regulatory plans, and utility market structures. The division also conducts financial analysis and prepares cost reports and other economic and financial reports for internal and external use by decision makers. Additionally, the division is responsible for matters related to alternative regulation plans, rate designs, and establishing financial regulatory reporting information requirements.

Utility Industry Monitoring

The Finance and Economics Division manages the process by which utilities file annual reports on their financial results and other activities. It is during this process that the gross receipts tax is collected. This process provides base line data that is useful in a wide range of analyses related to the utility industry. The division also maintains a close working relationship with the financial staffs of each electric, gas, and private water utility. Through these regular discussions, and its own research, the division is able to keep up to date on the latest technological and market factors that affect the financial health of Vermont utilities.

Planning & Energy Resources Division (PERD)

PERD's responsibilities include developing a Comprehensive Energy Plan; general oversight of the Energy Efficiency Utilities; assisting the PUC with implementation of Vermont's Renewable Energy Standard, the Standard Offer Program, and net metering programs; reviewing least-cost Integrated Resource Plans; and review of the electric utilities' power supply portfolios in rate cases and filings under Section 248. In addition, PERD houses the Clean Energy Development Fund and PSD staff responsible for clean energy financing.

The Planning Group

The Planning Group develops and revises the state's plans for electricity and for other energy resources. The Planning Group analyzes utility and energy-related policy proposals for the state; the building of facilities and transmission lines; reviews proposed utility special contracts and integrated resource plans; and provides technical support and expert witness testimony to the Department on a wide range of utility plans, planning processes, purchases, rate and rate design proposals, and alternative forms of regulation. The Planning Group also prepares studies on numerous issues arising from legislation and in the regulatory arena.

Energy Resources Group

The Energy Resources Group (ERG) in the Planning and Energy Resources Division (previously the Energy Efficiency Division) works to develop policies and programs that facilitate the efficient use of energy, and the use of renewable energy in Vermont. The Energy Resources Group initiates, promotes, coordinates, monitors, evaluates and reviews a wide variety of policies, programs, and initiatives.

The ERG has the primary responsibility for overseeing the operation of Efficiency Vermont (EVT) and Burlington Electric Department (BED), Vermont's two electric Energy Efficiency Utilities (EEUs) and the Vermont Gas Systems Energy Efficiency Utility. The ERG reviews the

activities of each EEU, advises and participates in program design changes, verifies savings claims and manages an extensive program of formal evaluation and reporting on EEU performance, and provides an ongoing assessment of Vermont's energy efficiency markets.

The ERG functions within the Department as Vermont's State Energy Office and works with the U.S. Department of Energy (DOE) on energy efficiency and renewable energy programs in this role. The Department has supported the School Energy Management Program, Vermont Energy Education Program, Vermont Clean Cities Program, Vermont Campus Energy Group, and many other projects and programs with DOE State Energy Program funds.

Telecommunications & Connectivity

The Division for Telecommunications and Connectivity works to improve telecommunications technology for all Vermonters, supports universal availability of voice and broadband, and leads the state's telecommunications policy and regulatory efforts. The division oversees the telephone and cable industries, and advocates for the public interest in telecommunications matters before the Public Utility Commission, including review of mergers, tariffs, and licenses. It is responsible for preparing the state Telecommunications Plan.

The division annually gathers broadband availability information to identify underserved locations statewide and prepares maps and statistics depicting information at three speed tiers. The division meets with communities throughout the state in an effort to promote and expand access to high speed Internet at underserved locations.

The division awards broadband development grants from the Connectivity Initiative as part of its effort to bring high speed Internet to Vermont's hardest to reach locations. The division manages and leases roughly 340 route miles of state-owned, open-access fiber optic cable located throughout Vermont. It oversees a network that will eventually have over 400 utility pole-mounted cellular wireless transceivers.

The division also administers the Vermont Telecommunication Relay Service, connecting individuals who are deaf, deaf-blind, hard-of-hearing, or have a speech disability, with users of standard telephones. The Telecommunications and Connectivity Division is led by a division director and has three full time staff.

Table 6 below presents several high-level telecommunications and broadband statistics for the state. While most of the state has access to lower levels of data communications (4/1 Mbs), only 13% of the state has access to speeds at or above 100 Mbs upload and download speeds.

Table 6 Telecommunications and Connectivity Division

	2017
Connectivity Initiative locations served	451
State-owned open-access fiber offered to providers	340 miles
Telecommunications Relay Service calls supported	12,973
State Lifeline customers (\$4.25/mo benefit)	10,961
Locations with broadband at 4/1 Mbps	91%
Locations with broadband at 100/100 Mbps	13%

Major Publications and Reference Materials

The detailed information relevant to the Department and the industries that are regulated by the Department and the Commission are contained in the many resources that the Department prepares for the legislature, including the following reports and resources. The Department is completing a major annual publication reflecting progress toward targets set in the Comprehensive Energy Plan for renewables and carbon reduction pursuant to Act 138 of 2018. The first issue of this report will be completed in January 2019.

[Energy and Electricity](#)

[Comprehensive Energy Plan](#) (January 2016) available at https://publicservice.vermont.gov/publications-resources/publications/energy_plan/2016_plan

Annual Report Associated with Compliance with the Comprehensive Energy Plan (January 2019) available at <https://publicservice.vermont.gov>

[Energy Storage Report](#) (November 2017) available at https://publicservice.vermont.gov/sites/dps/files/documents/Pubs_Plans_Reports/Energy_Storage_Report/Storage_Report_Final.pdf

[Retail Fuel Prices](#) (updated monthly) available at <https://publicservice.vermont.gov/content/retail-prices-heating-fuels>

[Annual Report on the Renewable Energy Standard](#) (2018) available at <https://publicservice.vermont.gov/content/renewable-energy-standard-and-standard-offer-reports>

[Biennial Renewable Energy Standard and Standard Offer Report](#) (March 2017) available at Vermont <https://publicservice.vermont.gov/content/renewable-energy-standard-and-standard-offer-reports>

[Telecommunications and Connectivity](#)

Tax Receipts and Special Funds Disbursements

Gross Revenue Tax

By statute, each person, partnership, association, and private or municipal corporation conducting a business subject to the supervision of the Department of Public Service and the Public Utility Commission must pay an annual tax on its gross revenues to fund the operation of the Department and Commission. The same tax rates have been in effect over the 9-year period covered by this report and are shown in the following table.

Table 7 Gross Revenue Tax Rates

Type of Company	Electric	Telephone	Gas	Water	Cable TV	Customer Owned Coin Operated Telephone Companies	For All Other Companies (i.e., sewer)
<i>FY11- FY16</i>	0.005	0.0050 (or \$500 if greater)	0.003	0.0010 (or \$5.00 if greater)	0.0050 (or \$25.00 if greater)	Customer-owned, coin-operated telephones total annual revenues of less than \$5000, the choice of either .0050 of gross from telephone revenues or the amount of \$20.00	0.001

Table 8 Vermont Department of Public Service Gross Revenue Tax Receipts

		2010	2011	2012	2013	2014	2015	2016	2017	2018
Electric		\$ 4,193,263	\$ 4,445,824	\$ 4,782,085	\$ 5,008,103	\$ 5,310,619	\$ 5,470,690	\$ 5,507,514	\$ 5,487,512	\$ 5,505,661
Telephone		\$ 1,836,859	\$ 1,759,004	\$ 1,995,423	\$ 1,846,454	\$ 1,799,615	\$ 1,826,415	\$ 1,747,995	\$ 1,571,085	\$ 1,419,576
Cable		\$ 764,061	\$ 843,298	\$ 907,349	\$ 1,005,051	\$ 1,056,332	\$ 1,071,971	\$ 1,173,788	\$ 1,247,667	\$ 1,325,924
Gas		\$ 347,655	\$ 284,004	\$ 301,622	\$ 282,760	\$ 305,528	\$ 347,410	\$ 358,143	\$ 302,912	\$ 310,285
Water		\$ 1,675	\$ 1,530	\$ 1,172	\$ 2,148	\$ 1,483	\$ 1,549	\$ 1,304	\$ 1,181	\$ 1,008
Total		\$ 7,143,514	\$ 7,333,660	\$ 7,987,651	\$ 8,144,516	\$ 8,473,577	\$ 8,718,035	\$ 8,788,743	\$ 8,610,357	\$ 8,562,453
Department	60%	\$ 4,286,108	\$ 4,400,196	\$ 4,792,591	\$ 4,886,710	\$ 5,084,146	\$ 5,230,821	\$ 5,273,246	\$ 5,166,214	\$ 5,137,472
Commission	40%	\$ 2,857,406	\$ 2,933,464	\$ 3,195,061	\$ 3,257,806	\$ 3,389,431	\$ 3,487,214	\$ 3,515,497	\$ 3,444,143	\$ 3,424,981

Over the last 16 years, gross receipt tax revenues show a steady rate of growth until 2016. Since that year, gross receipt tax revenues have experienced a flat to modest decline in nominal dollars and a more material decline in real dollars, as can be seen in Tables 8 through 10.

Table 9 Vermont Gross Receipt Tax Revenues 2002-2018

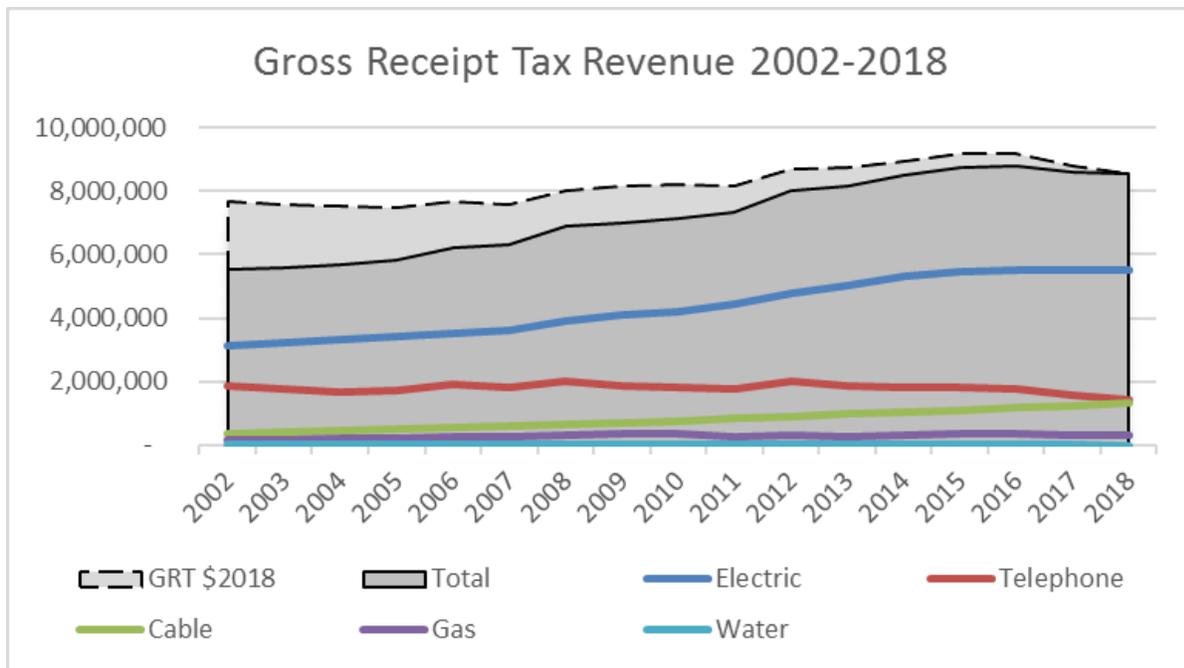


Table 10 Gross Receipts Tax Revenues FY 2015-2018

	2015	2016	2017	2018	FY 2016 - FY 2018
Electric	5,470,690	5,507,514	5,487,512	5,505,661	0.0%
Telephone	1,826,415	1,747,995	1,571,085	1,419,576	-19%
Cable	1,071,971	1,173,788	1,247,667	1,325,924	13%
Gas	347,410	358,143	302,912	310,285	-13%
Water	1,549	1,304	1,181	1,008	-23%
Total	8,718,035	8,788,743	8,610,357	8,562,453	-2.6%
Department	5,230,821	5,273,246	5,166,214	5,137,472	
Public Utility Commission	3,487,214	3,515,497	3,444,143	3,424,981	

Department of Public Service Expenditures

Table 11 provides an overview of the Department's expenditures by funding source for fiscal years 2011 through 2018.

Table 11 Department's Expenditures by Funding Source

Gross Receipts Fund - 21698								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits	3,279,327	3,175,643	3,572,906	3,842,481	4,336,665	4,271,312	4,904,361	4,702,309
Contractual Services	2,302,941	1,150,607	170,297	407,010	450,169	517,766	135,589	759,386 *
Grants			328,191	36,917	347,403	264,395	105,381	456,372
Operating Expenditures	670,242	624,397	716,875	635,904	797,541	670,285	651,762	779,158 *
Total	6,252,510	4,950,647	4,788,269	4,922,312	5,931,778	5,723,758	5,797,092	6,697,224
* includes certain one-time reimbursed expenses for 2018								
Low-Level Radioactive Waste Fund - 21020								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits							-	-
Contractual Services	62,624	79,606	84,873	51,558	54,104	53,874	71,003	49,623
Grants							-	
Operating Expenditures	36,268	11,781	3,510	8,285	1,430	12,255	7,419	8,867
Total	98,892	91,387	88,383	59,843	55,534	66,129	78,422	58,490
Billback and EEU - 21699								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits			139786	164831	181023	167943	247,805	288,160
Contractual Services			5350411	4911214	519688	682034	1,613,699	3,880,092
Operating Expenditures			10619	11689	-555	30882	24,627	90,577
Total			5,500,816	5,087,734	700,156	880,859	1,886,130	4,258,829
Telecom Services for the Deaf - 21703								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits					9777	5087	-	-
Contractual Services	414756	439765	331086	408786	235335	181217	205,252	250,484
Grants						31,383		
Operating Expenditures	772	485	578	651	5284	13418	1,224	2,486
Total	415,528	440,250	331,664	409,437	250,396	231,105	206,476	252,970

Clean Energy Development Fund								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits	136,416	139,424	73,538	79,363	144,623	119,157	126,178	176,920
Contractual Services	355,856	167,210	2,587,479	2,867,814	313,141	180,612	148,133	108,130
Grants	2,742,890	3,838,115	440,999	624,515	584,820	413,810	499,945	1,040,644
Small Scale Ren. Incentives				1,159,004	1,897,951	392,765		
Operating Expenditures	30,637	2,933	3,440	2,022	11,497	977	540,607	633,732
Total	3,265,799	4,147,682	3,105,456	4,732,718	2,952,032	1,107,321	1,314,862	1,959,427
Federal Funds - 22005								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits	218,321	337,809	217,192	186,926	194,031	360,987	-	-
Contractual Services	59,437	81,801	457,407	(67,597)	331,667	789,482	15,131	13,858
Grants	438,424	311,558	401,504	514,377	23,793	355,164	243,259	134,101
Operating Expenditures	32,597	34,546	23,805	32,381	47,691	43,805		
Total	748,779	765,714	1,099,908	666,087	597,182	1,549,438	258,390	147,959
ARRA Funds - 22040 & 22041								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits	470,533	489,270	124,841	81,940	12,661		9,215	14,310
Contractual Services	3,420,333	5,866,756	1,734,666	101,199	86,606	17,781	1,098	45
Grants	8,033,683	10,711,417	1,317,531		(200)	317,106		
Operating Expenditures	21,794	45,099	31,104	47,027	2,991		2,802,595	3,125,016
Total	11,946,343	17,112,542	3,208,142	230,166	102,058	334,887	2,812,908	3,139,371
Purchase of Public Power - 50900								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits				5,919	7,822	9,140	9,215	14,310
Contractual Services							1,098	45
Purchase of Public Power				4,435,537	3,163,572	2,877,338	2,802,595	3,125,016
Operating Expenditures								
Total	-	-	-	4,441,456	3,171,394	2,886,478	2,812,908	3,139,371
Other								
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salary and Benefits	12,048	19,715					309,977	370,961
Contractual Services	835,382	1,661,991				5,876	424,637	(7,149)
Grants				35,000	48,161	13,793	748,877	641,543
Operating Expenditures	2,501,816	2,173,359	133,513	64,620		28,336	102,636	158,123
Total	3,349,246	3,855,065	133,513	99,620	48,161	48,005	1,586,128	1,163,478

Fund Definitions

21698 – Gross Revenue Fund

This funding source is from the collection of gross revenue from utilities doing business in the state of Vermont. Reports are filed by these entities each April. Those reports and subsequent revenue collections fund activities in the fiscal year in which the collection happens. (For example, the 2016 filings paid in April of 2016 provide the revenue for the Department's activities July 1, 2015 – June 30, 2016 or Fiscal Year 2016.) This fund is the main operating fund for the Department. The majority of staff salaries are paid from here. This fund shoulders the cost of space rental for the Department as well as all general operating expenditures.

21020 – Low-level Radioactive Waste Compact

Funded by a billback pursuant to 10 V.S.A. Section 1067, to the generators of low-level radioactive waste in the state. This fund is used to support the PSD's oversight and involvement in the Texas Compact Commission.

21699 – Billback and EEU

This fund is used to pay for all expenditures related to docket work that will be billed back to various entities. This fund also supports any expenditures paid by the Department that will in turn be billed back to the EEU.

21703 – Telecom Services for the Deaf

This fund is used to support providing equipment and support to Vermonters who are deaf or hard of hearing. The funding source is supported by the Universal Service Fund.

21991 – Clean Energy Development Fund

This fund is used by CEDF to increase the development and deployment of cost-effective and environmentally sustainable electric power resources, primarily with respect to renewable energy resources and the use of Combined Heat and Power technologies.

22005 – Federal Funds

The programs supported by these federal funds are the State Energy Program, fuel price monitoring, Dig Safe® and the gas pipeline safety program.

22040 & 22041 – ARRA Revolving Fund

The source of this funding is the repayment of ARRA loans issued FY2010-FY2013. As principle is received, the monies will be directed to grants as well as a reserve for any default loans.

21500 – Interunit Transfers Fund

This fund is used to facilitate payments and/or receipt of payments from other state agencies related to shared activities and agreements covering services of interest to the Department and its sister agencies.

50900 – Purchase of Electric Power

This fund supports the administrative costs to the PSD for the purchase of wholesale power that is sold to utilities. These costs are billed back to the utilities pursuant to 20 V.S.A. Section 21.1.

Other

Items in this category include expenditures related to the operations of the former Vermont Telecommunications Authority (VTA). These activities were paid for using a capital appropriation that the VTA received to fund ongoing construction projects to bring telecommunications services to rural areas.

Expenditures related to a one-time General Fund appropriation that the Department received are also included in this category. These funds were used for the development of the case management system that is shared by the Public Utility Commission and the Public Service Department. The appropriation has all been expended and no further expenditures are being charged to the General Fund.