

Introduction to Utility Regulation

Overview of the regulated and the regulators in Vermont

Presentation for the House Committee on Energy and Digital Infrastructure

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January 21, 2025

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Why Regulate?

Why are some private industries subject to a large measure of government control?

Characteristics of a utility (1876):

- Natural monopolies
 - High fixed infrastructure costs that, once established, discourage new entrants
- Affected with a public interest
- Gateway of commerce

When private property is devoted to a public use, it is subject to public regulation

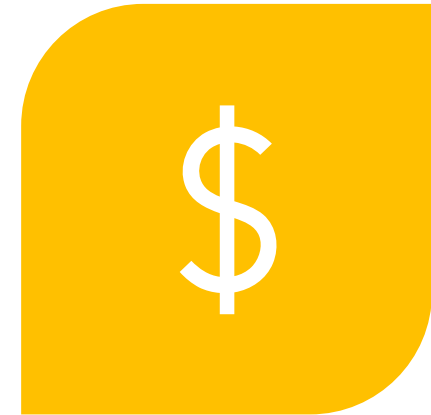
Regulatory Compact



DESCRIBES THE RELATIONSHIP BETWEEN
REGULATORS AND UTILITIES



UTILITY ACCEPTS AN OBLIGATION TO SERVE
ALL CUSTOMERS IN ITS SERVICE TERRITORY



REGULATOR SETS RATES THAT WILL
COMPENSATE THE UTILITY FULLY FOR THE
COSTS IT INCURS TO MEET THAT OBLIGATION

Types of Regulation

- **Rates**
- **Quality and terms of service**
- **Financial management**
- **Siting**
- **Intercompany practices**
- **Planning**

Ratemaking

- Rates must be **just and reasonable**
- **Cost of service** ratemaking (traditional)
 - Utility recovers the **prudent** and **used and useful** costs it incurs to serve customers, plus a reasonable rate of return (profit) = **revenue requirement**
 - $R = O + (V - D) * r$
 - Allocated across different customer classes (residential, commercial, industrial; EV rates)
 - Ratemaking can take 7-8 months
- **Incentive/Alternative** regulation
 - Telecom and energy – different rationales
 - Flexibility in pricing – competitive environment
 - Revenue decoupling – severs link between sales and revenues
 - Performance-based – profit aligns with societal goals

Need for Regulation and Market Conditions

Private Monopoly

Establish rights and obligations of the provider and a regulatory framework to facilitate oversight

Partial Competition

Foster and sustain a competitive market through tools such as rules prohibiting anticompetitive practices, licensing frameworks, setting tariffs, universal service

Full Competition

Decrease regulation as competitive market largely regulates itself, but . . . (subject to consumer protection and antitrust regulation)

Who is Regulated?



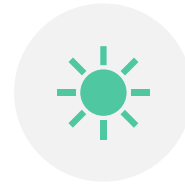
ELECTRIC SERVICE
COMPANIES



ENERGY GENERATORS
AND STORAGE



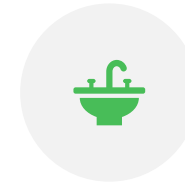
NATURAL GAS
COMPANIES



ENERGY EFFICIENCY
UTILITIES



PRIVATE WATER
COMPANIES



PRIVATE (LARGE)
WASTEWATER
COMPANIES

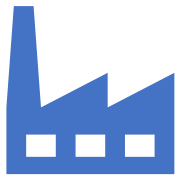


TELECOMMUNICATIONS
COMPANIES



CABLE TELEVISION
COMPANIES

Electric Distribution Utilities



17 Distribution Utilities

1 investor-owned

14 municipal departments

Vermont Public Power Supply Authority
(VPPSA) - 11

2 member-owned cooperatives



Tariffs and Service Quality and Reliability Plans

Regulated monopolies

Smart Grid
(advanced metering infrastructure)



Integrated Resource Planning

Least-cost integrated plan every 3 years

Electric Transmission Utility



Vermont Electric Power Company, Inc. (VELCO)

For profit, statewide, transmission-only company formed in 1956

Manages and operates Vermont's high-voltage transmission grid on behalf of VT Transco

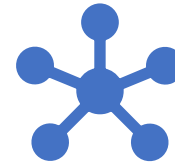
Owned by all VT distribution utilities (ownership percentage based on each utility's share of VT's retail electric load) and the VT Low Income Trust for Electricity (VLITE), a public benefit corp.

Fiber optic network



Long-Range Transmission Plan (20 years), updated every 3 years

Vermont System Planning Committee (VSPC)



Network is part of the integrated New England regional network

Federal Energy Regulatory Commission (FERC)
ISO-New England (regional transmission operator)

- Grid reliability
- Wholesale market

Energy Generators



Owners and operators of energy generating systems

Utility

Merchant (private)



VT's energy production comes from hydro, wind, solar, and biomass



Certificate of public good (CPG) from the PUC before site preparation or construction can begin

(Does not apply to facilities operated solely for on-site electricity consumption by the owner of the facilities)



Interconnection with transmission grid (wholesale power market access)



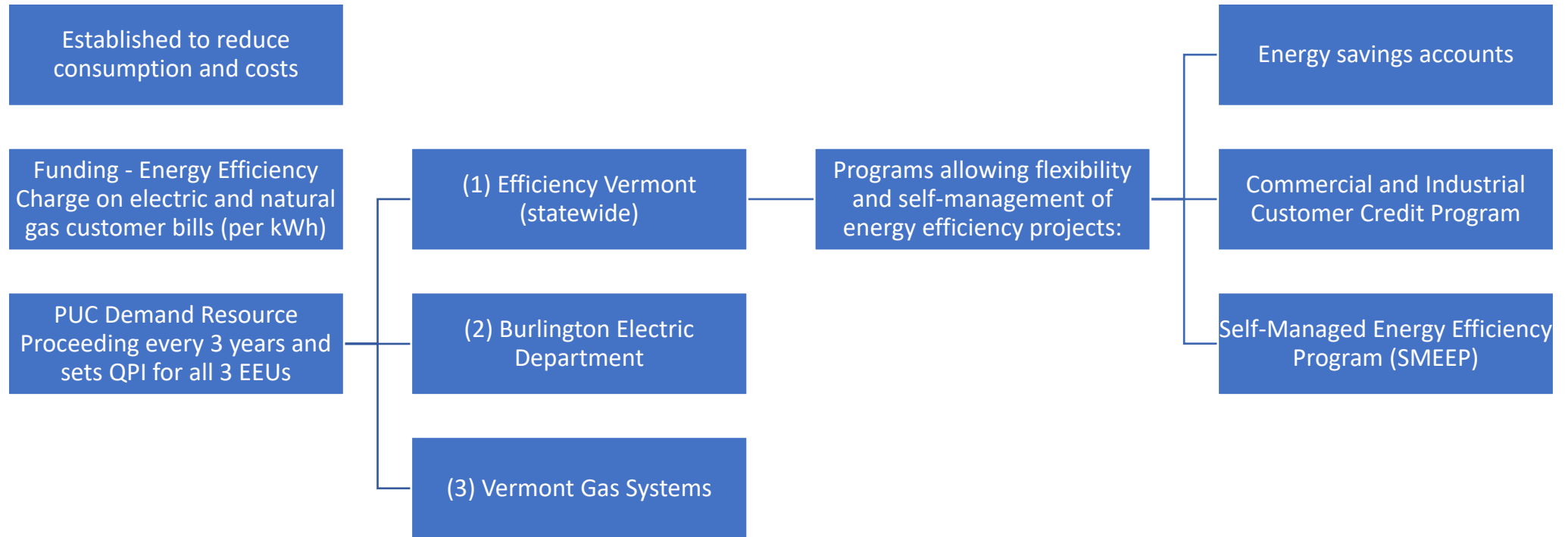
CPG also required for electric energy storage facilities

Natural Gas Companies

Vermont Gas Systems (VGS)

- Thermal energy service, primarily
- Natural gas transported through the TransCanada Pipeline
- Regulated monopoly; Integrated Resource Plan; Alternative Regulation Plan
- Appointed an Energy Efficiency Utility in 2016

Energy Efficiency Utilities



Private Water and Private (large) Wastewater Companies



**Private water companies
(typically small)**



**“Large” wastewater companies
(at least 750 source
connections)**



**Rate regulation
(ANR water quality)**



**Most water/wastewater
companies are owned and
operated by municipalities
(towns and fire districts)**

Subject to Agency of Natural Resources
(ANR) jurisdiction

Department of Environmental
Conservation, Drinking Water and
Groundwater Division

Cable Television Companies

- 11 cable TV companies
- PUC is the local franchising authority (LFA)
- CPG (certificate of public good) is required to operate
 - Renewed every 11 years
- Franchise fee (5% of gross cable TV revenue)
 - Support for PEG Access is required (public, educational, government access programming)
- Nonexclusive service territories; line extensions; service quality; annual report
- Rates and programming are not regulated

Telecommunications (Voice) Companies



Incumbent Local Exchange Carriers (ILECs)

9 legacy providers delivering POTS:

- 1 regional bell operating company (RBOC)
- 8 independent telephone companies



Competitive Local Exchange Carriers (CLECs)

Cellular
VoIP

Stay tuned . . .

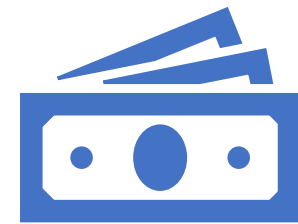
Who Regulates?



Public Utility Commission



Department of Public
Service



Self-Funded

Annual gross receipt tax

Application fees

Bill-back authority

Public Service Board split into PSB and DPS in 1981

Public Utility Commission



Independent and Quasi-Judicial

Three Commissioners

- Full-time chair nominated, appointed, and confirmed like a Superior Judge
- Part-time commissioners appointed in a similar manner
- 6-year staggered terms



Types of proceedings:

Formal court-like proceedings based on the rules of civil procedure (contested cases)

Workshops and investigations (uncontested)

Rulemakings

Department of Public Service



Executive Branch Entity



Advocacy

Represents “consuming public” in rate cases
Represents interests of the people of VT in PUC hearings
Gives “heightened consideration” to the interests of ratepayer classes not independently represented in PUC proceedings



Planning

Comprehensive Energy Plan
(20-year period)
Climate Action Plan
Telecommunications Plan
(10-year period)



Mapping

Cell towers; mobile wireless coverage; broadband



Consumer Protection

The Consumer Affairs and Public Information Division (CAPI) helps resolve customer complaints with utilities

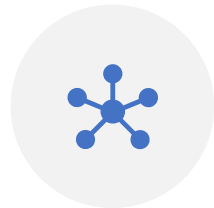
Common Themes Across Industry Sectors



AFFORDABILITY



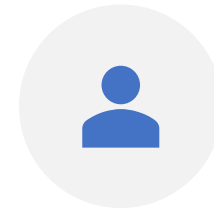
EQUITY AND
JUSTICE



NETWORK
RESILIENCY AND
REDUNDANCY



CYBERSECURITY



CONSUMER DATA
PRIVACY



MERGERS AND
ACQUISITIONS

Federalism