

TAX POLICY CAN SPEAK LOUDER THAN WORDS

*AN ANALYSIS OF EDUCATION PROPERTY TAXES PAID BY
VERMONT ELECTRICITY GENERATORS*

Vermont Public Interest Research Education Fund
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- **Appendix II** - Shows the 3 year average ratios for each facility and the total averages separated between, for profits, municipally owned, and peaker facilities.
- **Appendix III** - Shows the 3 year average ratios for each facility and the total averages separated by generation type.
- **Appendix IV** - Contains all of the data relied on to determine the annual property taxes paid on each facility. It also includes the sources of this data, including grand list descriptions. Grand list descriptions are listed in ALL CAPITAL LETTERS in Column Z.

- **Appendix V** - Lists facilities removed from the project and the reason for their removal.
- **Appendix VI** - Provides the generation numbers for each facility and the sources for those numbers.

Introduction

State policy makers in Vermont have passed legislation and spoken at length about the valuable role renewable energy providers can play in providing economic growth in Vermont as well as stable electricity rates. Both the state legislature and the Governor's administration have also highlighted the role that increased renewable energy generation should play in addressing Vermont's contribution to global warming. As suggested by the Governor's Commission on Climate Change, one of the major actions needed in order for Vermont to address the issue of global warming is "through a combination of incentives and/or mandates, expanding the role of renewable energy in Vermont and in the regional power mix."¹ Reform to Vermont's state education property tax is potentially a major tool for providing incentives for renewable energy in the state. If the Governor's goals are to be taken seriously then property tax reform must be given serious consideration.

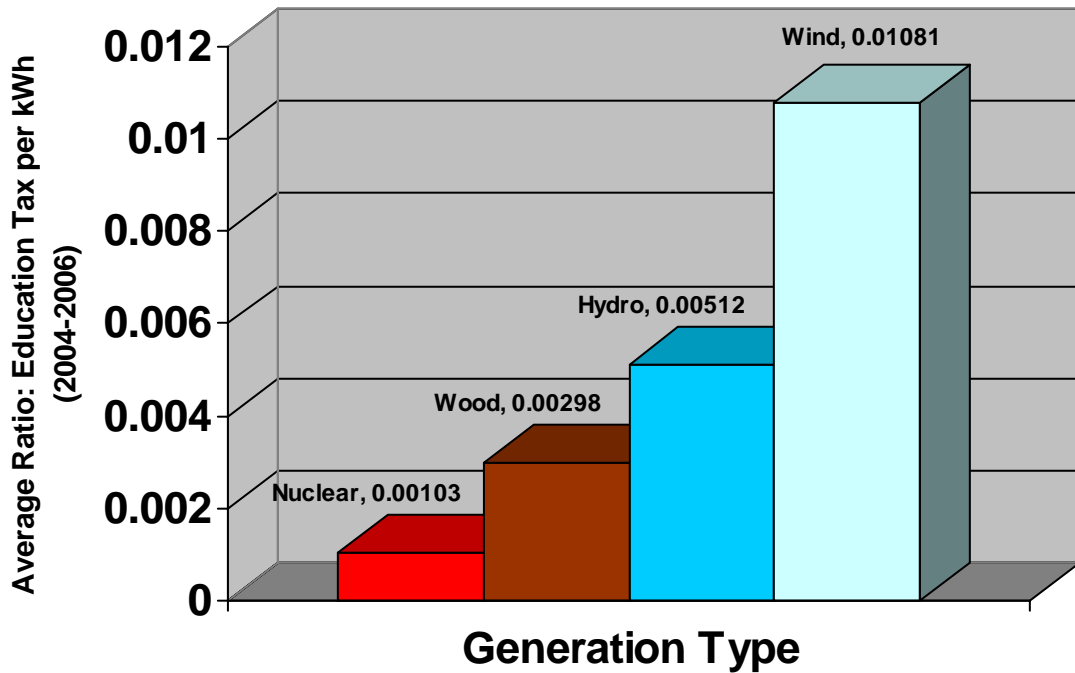
This study was conducted in order to fill an information gap which has become apparent in recent tax policy discussions within the State House, Governor's Office, environmental organizations, and the private sector. During the 2007 legislative session, the Vermont State Legislature explored the concept of using a generation based property tax for certain types of facilities in an effort to "level the playing field" for renewable energy generators. This effort led to the passing of H.520 which created a new method of determining state education property tax for nuclear power plants and wind farm facilities based on generation.

¹ Governor Douglas's Commission on Climate Change, Final Report and Recommendations of the Governor's Commission on Climate Change (October 2007), available at www.anr.state.vt.us/air/Planning/htm/ClimateChange.htm (last visited 11/29/2007).

Through H.520, the legislature chose to create the same property tax scheme for both nuclear and wind. However, Governor Douglas vetoed the bill based in part on his opposition to bringing the tax rate on nuclear power to the same level as wind power. It was difficult to adequately address the issue of fairness in the policy reform discussions due to a substantial lack of information which could be used to compare the generation based tax schemes proposed in H.520 with the various current tax schemes.

VPIRG's goals in producing this study were to provide a simple snapshot of the taxation schemes for Vermont's electric utilities from 2004 to 2006 and to compare each facility's property taxes in relation to their generation produced. Going into this study, we had no preconceived notions of what would be found but simply hoped that the study would provide a clearer picture of the notion of fairness for all stakeholders in the tax reform discussions. What we did find was a pattern between generation type and the amount of property tax paid per kWh generated. This pattern suggests that the current tax schemes favors nuclear energy over renewable sources of energy.

Tax Policy Contrary to Clean Energy Future



This paper is a report of VPIRG's findings. Part I of this paper provides a basic summary of the study. Part II gives a general explanation of the current schemes and complexities of property taxation in regards to electric generating facilities. Part III sets out the methodology of the study. Part IV sets out the results of the study.

I. Summary

For this study, VPIRG has compiled the property taxes paid and kWhs of electricity generated by 53 electric generating facilities in Vermont, from 2004 to 2006. The primary purpose of the study is to examine the ratio of dollars spent on state education tax per kWh generated by electric facilities. However, we have also included information on municipal tax and total property tax. It is our hope that this information is helpful to a wide range of interested parties. Nevertheless, we've limited this paper to a discussion on our findings regarding the state education tax.

Once all of the information gathered for the study is boiled down to a simple ratio of state education property tax per kWh generated [State Education Tax Dollars ÷ kWhs], we begin to see the real world implications of the study. If a generation based tax were currently used for all facilities, we would expect to see a similar rate among the various types of generating facilities. However, current taxation methodologies vary greatly and do not always include a generation based property valuation. When facilities are separated based on generation type (wind, nuclear, biomass/refuse, hydro, and "peakers") it becomes clear that in the current taxation system generation type has a significant affect on the amount of property taxes that a facility pays.

Before diving into the numbers it is important to recognize that certain types of facilities should realistically be considered independently from one another. First, municipally owned generating facilities are not run for profit and typically have some level of tax relief. Therefore, for-profit and not-for-profit facilities are separated in the study. Second, "peakers" (gas turbines, diesel, and hydro/diesel combinations) do not

generate nearly as much electricity as “non-peaking plants” (wind, nuclear, biomass/refuse, and hydro) yet are able to charge a great deal more for the electricity that they produce. Peakers are also typically more harmful to the environment, in respect to air, water, and global warming pollution. The natures of these facilities are so different, that it would not be sensible or fair to compare peakers and non-peaking plants together.

The following chart compares the three year average state education tax per kWh ratios [2004-2006 State Education Tax Dollars ÷ kWhs] by generation type:

	For Profit Average	For Profit + Municipal Total Average
Nuclear	.00103 (Vermont Yankee)	.00103 (Vermont Yankee)
Biomass/Refuse	.00298 (Ryegate)	.00246 (3 facilities total)
Hydro	.00512 (35 facilities total)	.00498 (38 facilities total)
Wind	.01081 (Searsburg)	.01081 (Searsburg)
Peakers	.04018 (5 facilities total)	.02532 (8 facilities total)

The average Vermont for profit non-peaking facility pays .00510 per kWh to the State Education Fund. Based on the current statutory scheme for large generating facilities, Vermont Yankee’s state education tax per kWh ratio is nearly 5 times lower than the state average. The average ratio for biomass/refuse is about 1.7 times lower than the state average. The average hydro facility ratio is almost equal to the state average. However, there is wide variance in individual hydro facilities’ tax ratios. For profit hydro facilities are taxed in a range from .00003 to .01041 per kWh. The Searsburg Wind

Project pays a higher ratio of education tax per kWh than any other for profit non-peaking facility in the state. Its ratio is more than twice the state average and more than ten times the current ratio set for Vermont Yankee.

As expected, peakers pay a much higher rate than non-peaking plants. However, several municipally owned peakers pay no state education tax due to various exemptions. These exempt plants account greatly for the drastic difference between the average ratios when municipally owned plants are included.

II. Background on Electric Facility Property Taxation and Exemptions

Grand List System & Electric Facilities

There are several ways in which owners of electric generating facilities can pay property tax. The most common of which is through the Grand List valuation and taxation system. This is the same system that is used for almost all residential and non-residential property owners in the state. Under this system, the town assesses a value to the property (usually land and improvements) and places this value in the town's grand list. The grand list value (which is 1% of the total assessed value) is multiplied by the town's state education and local tax rates. The result of this simple formula is the total state and local property tax owned for that year. However, it is important to note that municipalities use different methodologies in appraising facilities. This paper does not explore these methodologies, but simply compares facility valuations regardless of how they are determined.

While the Grand List system is simple in theory, using the Grand Lists to determine the tax paid on a specific generating facility is not as easy as one may think. Each municipality not only determines value based on different methodologies, but also separates its parcels differently. An electric generating facility might have a listing in the grand list by itself or it could be listed along with a vast track of land or other facilities. For examples, the town of Derby lists the Newport Hydro Dam along with 475.48 acres of land and the methane electric plant at Blue Spruce Farm is included in a listing which includes nearly the entire farm. Furthermore, because rivers often act as natural borders, many hydro facilities must pay taxes to towns on both sides of the river. Several facilities on the Connecticut River pay taxes in both Vermont and New Hampshire.

Generally, towns have great discretion in how they appraise particular properties. Pursuant to 32 V.S.A. §§4461-4467, a property owner can appeal the town's valuation to the Vermont Superior Court and then to the Vermont Supreme Court. USGEN New England v. Town of Rockingham, 177 Vt. 193 (2004), is an example of such an appeal. In this case, the owners of the Bellows Falls Hydro Station in Rockingham appealed the town's valuation methodology and disputed the testimony of the town's appraiser. However, the Superior Court had accepted and relied on the appraiser's testimony in setting the valuation, despite contradicting testimony from two other expert witnesses. The VT Supreme Court showed great deference to the lower court in affirming the decision. In a general sense, the result of this dispute suggests that the courts will typically give great weight to the towns' appraiser's methodology in setting property valuation. Of course, once a methodology is chosen a town appraiser can not simply ignore factors which should rationally be included in that methodology. *See, Town of Barnet v. New England Power Company*, 130 Vt. 407, 412 (1972).

In many cases, the assessed value for electric generating facilities is "stabilized" through a "tax stabilization agreement." Such agreements are allowed under 24 V.S.A. §2741. These stabilization agreements contain one of the following (1) a fixed valuation over a number of years, (2) a fixed tax rate over a number of years, (3) a fixed lump sum paid towards property taxes each year, or (4) a fixed tax based on a percentage of the annual tax. There are three alternatives in the nature of these agreements:

- (1) A municipality may enter into a tax stabilization agreement with a property owner for the municipal tax liability,

(2) A municipality may enter into a tax stabilization agreement with a property owner for the municipal tax liability and the state education tax liability. If the business does not seek approval from the Vermont Economic Progress Council for stabilization on the education tax, then the municipality must make up the difference so that the municipality's education tax payment to the state remains the same, or

(3) The state, upon approval of VEPC, may enter into a tax stabilization agreement with a property owner for the state education tax liability. The municipality must also approve a proportional stabilization of its municipal tax.

Exemptions from the Grand List System

The great majority of Vermont's electric generating facilities are taxed through the grand list valuation system, with or without tax stabilization agreements. However, there are a few facilities which are exempt from this taxation system. For example, the Burlington Gas Turbine owned by the Burlington Electric Department is exempt from the grand list property tax system because it is zoned in a "Tax Increment Financing District" (TIF) pursuant to 24 V.S.A. §§ 1891-1900. TIF districts are meant to provide revenues for improvements to the property within the district in order to stimulate development. TIF districts can only last for up to 20 years.

Perhaps the most important exemption to the grand list system is contained in 32 V.S.A. §5402a. This statutory exemption to the grand list system only applies to facilities with a very high amount of annual generation. In practice, the exemption only applies to the Vermont Yankee Nuclear Facility. Although Vermont Yankee is exempt

from the Grand List system its owners still pay property taxes on the facility. Instead of going through an appraisal through the town, Vermont Yankee's state education property tax is based on a formula set out in the statute. This formula is based in part on the plant's generation. Vermont Yankee's owners have also entered into a tax stabilization agreement with the town of Vernon for purposes of "stabilizing" its municipal taxes.

Municipally Owned Facilities

Vermont's municipally owned electric facilities are probably the most complex in regards to how they are appraised and taxed. Our information on these facilities mostly comes from conversations with several facility managers and employees.² A truly thorough investigation on the various taxation schemes for municipally owned facilities is beyond the scope of this study's purpose. Nevertheless, we believe that it may be helpful to share our basic understanding of the various property tax schemes for municipally owned facilities.

To begin, a municipality that owns generating facilities may choose to make a "payment in lieu of taxes" for its facilities that are within its own town borders. This sum must be approved by vote of the municipality's legislative body, typically at town meeting. The Village of Enosburg Falls has approved such a payment in the last 3 years. The hydro and diesel facility in the Village of Enosburg Falls, which is municipally owned, has paid \$5,000 per year in lieu of property taxes. However, any property owned by the Village that is outside of its borders must pay taxes just like any other property owner.

² Ken Mason (Lyndonville Electric Department), Lynn Paradis (Swanton Village Electric Department), Jon Elwell (Village of Enosburg Falls), Brian Hanson (Barton Village), and Avram Pratt (Washington Electric Co-op).

However, in regards to the valuation of municipally owned properties which are not located in the town which owns them, there still seems to be some variety of favorable treatment. Based on our conversations with several managers of municipally owned electric facilities, it seems as if each is valued differently. Some are based on the results of court cases, some have “legislatively mandated” valuation systems, and others simply go with whatever the town’s normal valuation process is.

In Swanton Village v. Town of Highgate, 131 Vt. 318 (1973), the court upheld 32 V.S.A. §3659 which sets the assessment for municipally owned land in other municipalities according to the following formula: only the land and whatever is on the land when it is purchased is determined in the property assessment & then the town can only add an additional 75% of that value on top of that assessment. No improvements can be considered in the assessment. According to Ken Mason of the Lyndonville Electric Department, as this plays out for the Vail and Great Falls facilities, the town's assessed value is \$219,400 while the actual value with improvements is closer to \$3 Million.

Despite 32 V.S.A. §3659, other municipally owned utilities do not use this formula and it is not always clear why. For example, Brain Hanson of the Barton Village Electric Department said that their facility’s value was determined by a settlement with the town and state.

III. Study Methodology

The bulk of the work for this study was in the form of information gathering from electric facility owners, the Vermont Tax Department, town grand lists, state tax rate lists, and town clerks. As the information was obtained it was added to two main spreadsheets: (1) a spreadsheet which shows the annual state, local, and total property taxes paid on each facility from 2004 to 2006 and (2) a spreadsheet which shows the annual state, local, and total property taxes paid per annual kWh generated from 2004-2006.

The first step in compiling this information was to find a list of all of Vermont's electric generating facilities. The Public Service Department led us to a fairly comprehensive list from ISO New England. However, as the study progressed we learned of several facilities that were missing from this list. These facilities were then added to the study. The list also contained facilities that were removed from the study, either because (1) they were "load reducers" for which generation figures are not kept or (2) at the time of the study's release, we were unable to obtain the necessary information to include them in the study.³

Generation numbers were then obtained from the facility owners, FERC Annual Reports, or (for most municipally owned facilities) the Vermont Public Power Supply Authority (VPPSA).⁴ Most facility owners were helpful in providing their generation numbers or leading us to alternative sources such as the FERC annual reports. The generation numbers for most of the facilities owned by CVPS and Green Mountain

³ A list of facilities removed from the study is included in Appendix V.

⁴ A list of sources of generation information is provided in Appendix VI.

Power were taken from their FERC annual reports.⁵ VPIRG was unable to obtain generation numbers for a few facilities, including all of the facilities owned by The Vermont Marble Company⁶, as well as Blue Spruce Farm and the Brattleboro Landfill methane plants.

The biggest challenge was in determining the property taxes paid on each facility. The town grand lists for 2004, 2005, and 2006 were the primary sources for the majority of this information. The Vermont Tax Department helpfully narrowed the grand lists that we used, to only include those properties listed under the grand list category code “Utility Electric” (UE). Using these narrowed grand lists helped us find the vast majority of the electric facilities based on the property descriptions contained in the grand lists.⁷

However, many of the grand list property descriptions were too vague to determine where exactly the facilities were located within the towns’ listings. In order to resolve questions of vagueness in grand list descriptions, we contacted facility owners and on some occasions Town Clerks. Although this was not always a scientific process, we made every attempt to resolve any uncertainties within our information. Nevertheless, working with vague grand lists occasionally required logical assumptions based on common sense.

Because of the assumptive nature of matching grand list descriptions to specific generating facilities, facility owners were given the opportunity to check over the findings. However, some owners failed to respond to this opportunity. Mike Kovacs of

⁵ It is important to note that the numbers taken from FERC annual reports are the facilities’ total generation minus the plants’ operating usage. All other generation numbers are based on the total generation and do not exclude operating usage.

⁶ The Vermont Marble Company was unwilling to provide these numbers for our study and they were not made available in their FERC reports.

⁷ Grand list descriptions relied on are include in Appendix IV.

CVPS responded by giving us a list of his annual property value assessments for all of CVPS's facilities. Many of Mr. Kovacs' assessments matched what we had found in the grand lists. However, some did not. Mr. Kovacs gave two primary reasons for these discrepancies. One reason was that some of the grand lists had not been updated after reevaluations had taken place, such as the in the case of the Pierce Mills Hydro Station in 2005. Another reason was that occasionally (often without explanation) town appraisers set the property's valuation lower than CVPS's assessment.

For those CVPS facilities with grand list descriptions that were not vague, we've relied on the grand list numbers rather than Mr. Kovacs' assessment. However, due to vagueness and uncertainty surrounding the grand list descriptions for several of CVPS's facilities, Mr. Kovacs assessments were used for those facilities.⁸ It is important to note that some of Mr. Kovacs' assessments may not accurately reflect the actual valuations as set by the town. However, if there are discrepancies it is likely that the differences would be slight. Therefore, we believe that the CVPS assessments adequately meet the project's purpose.

In this project we've tried to only include those listings which included the actual generating facility - excluding separate listings for such things as power lines, substations, and additional lands & buildings. However, this raised the question - what should and shouldn't be considered part of the generating facility. For example, some town's list hydro-electric generating equipment separate from the actual dams which power the equipment. In this situation, we've adopted an expansive definition of

⁸ All facilities for which the CVPS assessments were used are clearly marked in Appendix IV.

generating facility and have included both the dam and the generating equipment.⁹ For all other questionable properties, we did not adopt an expansive view in defining facilities and tried to narrow the property listings used in order to get as close as possible to only the facilities themselves and any immediately surrounding property contained in the same listing.

Another major question that we faced was how to make “apples to apples” comparisons when (as explained in part II) the actual grand list parcel listings vary in how much property is included beyond just the generating plants. For example, the listings varied greatly in how many acres of land (if any) were listed along with the generating facility. Due to the complexity of local differences in how property is listed, we decided not to attempt to separate the facilities from other lands and improvements included in the listings. Because all property owners are subject to local listing and appraisal schemes, simply deferring to how the towns choose to separate property provides (at least in a legal sense) an “apples to apples” comparison. Furthermore, it is our view that immediately surrounding land on which the plant is located and improvements which assist the facilities in generating electricity should be considered part of the property tax costs for the plant. The majority of local listings do not include more than immediately surrounding lands and improvements.¹⁰

Once a facility’s appropriate grand list parcel listing was identified, then the “Grand List Value” (1% of the total assessed value) was gathered for the years 2004,

⁹ In two cases this stance raises an additional problem because the dam listings included an additional vast track of land: (1) the Marshfield 6 Hydro facility’s dam is listed along with 650 acres of land and (2) the Newport Hydro facility’s dam is listed along with 475.48 acres of land. It is arguable that keeping the dam listings out would have provided a more accurate reflection of the taxes paid on the facilities. However, in order to maintain consistency in the study we’ve included the dam listings.

¹⁰ Most of the grand list descriptions give a general sense of what properties are included in the listing. To compare the grand list descriptions see Appendix IV.

2005, and 2006. These values were then multiplied by the town's state, local, and total tax rates for the corresponding year. These equations lead to the facility's state, local, and total property taxes paid by year.¹¹

The multiple alternative schemes that can be established through tax stabilization agreements create another issue in using the grand list values to determine property tax. There are a variety of ways in which such agreements can affect the flow of money between municipalities and the state education fund. One example of a tax stabilization agreement having an effect on the grand list system is the case of the Winooski 1 Hydro Station. The owners of Winooski 1 and the town of Winooski agreed to a 20 year tax stabilization agreement which set tax payments at an annually increasing lump sum. According to the Winooski Town Clerk's office, these payments go directly to the town of Winooski and the facility owners never make a direct payment into the State Education Fund. Although the owners of the facility make payments based on the stabilization agreement, the grand list does not reflect this payment and lists the property as having no value.

We have not come across any stabilization agreements similar in nature to the Winooski 1 agreement. However, there remains the potential that there are such agreements which affect the grand list values. To our knowledge there is no centralized record keeping of tax stabilization agreements which is made available to the public. This makes the process of deciphering the relationships between individual stabilization agreements and grand list values extremely difficult. Facility owners and Town Clerks

¹¹ Listing of grand list descriptions and property tax equations for each facility is included in Appendix IV. For the facilities for which we've relied on Mr. Kovacs' assessment, we've used 1% of his total assessment. For the Winooski 1 facility, we did not have an assessed value and only used the total property tax paid as given to us by the plant's owner Matthew Rubin.

are in the best position to make these determinations and we look forward to any feedback on this issue.

One final issue in determining the breadth of an electric facility dealt not with the property listings, but with the fact that some facilities on the Connecticut River have property in both Vermont and New Hampshire. When this was the case, the percentage of the facility that was located in Vermont was used to allocate a percentage of the total generation to those facilities.¹² For example, only 42% of the total generation by TransCanada's hydro facility in Vernon, Vermont was used in determining its property tax per kWh ratio, because 58% of that facility is located in New Hampshire. This allocation provides a more accurate number for comparing the facilities' property taxes paid in Vermont to an equal percentage of generation produced.

Once the generation and Vermont property tax information was gathered for a significant number of Vermont's generating facilities, the facilities were compared using a simple property tax per kWh generated ratio. This ratio was determined for each facility for the years 2004, 2005, and 2006. With this information, a three year average was determined for each facility.¹³ Annual and three year average ratios were determined for (1) state education property tax per kWh, (2) local property tax per kWh, and (3) total property tax per kWh.

The following appendixes provide all of the data compiled for the study and sources of that data.

¹² A list of these allocations is included in Appendix I.

¹³ The averages for those facilities which did not produce generation for all three years only include the information from the years in which they were running under normal working conditions for the whole year. For example, because Coventry Clean Energy was not opened until half way through 2005, only the plants 2006 numbers are used in its average. However, any temporary periods during which facilities stopped generating were not considered in the averages.