

# **Vermont's Energy Future**

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*Executive Summary* / Public Engagement Process

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# VERMONT DEPARTMENT OF PUBLIC SERVICE

*Public Engagement Process – Executive Summary | February 13, 2008*

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## I. OVERVIEW

The Department of Public Service was tasked with conducting a comprehensive, statewide public engagement process on energy planning focused on energy supply choices facing the state beginning in 2012. The purpose of the process was to educate the public about the energy supply challenges facing the state; to gather meaningful and informed public input about values and preferences of Vermonters regarding energy supply; and, by doing so, foster a broader base of public support of the resulting choices.

During the course of the process, members from the Department of Public Service worked with Legislators and Stakeholders to create a request for proposal(s) for the project. In the end, a series of proposals were selected that engaged the public through Regional Workshops, Deliberative Polling and online conferences. An Advisory Committee for the project developed educational materials that provided a foundation for the discussions.

## II. Controlling Legislation

Act 208 called for the engagement efforts to:

- Provide a strong information dissemination component, in order to develop a shared foundation of credible information that may serve as a basis for engaging in a meaningful dialogue;
- Be conducted in a manner that recognizes that potential choices for Vermont's electric energy supply may be precluded by the passage of time;
- Engage a broad base of Vermonters, including those who are currently engaged in energy issues, as well as those who have not yet been engaged;
- Reach throughout the state, as all Vermonters are stakeholders in this issue; and
- Establish a model for educating the public about the electric energy supply challenges facing the state.

Act 160 required the Department to also conduct an engagement process on the Vermont Yankee Nuclear Power Facility. The Act directed the Department to hold no less than three meetings in separate locations within the state, "...in proximity to the nuclear energy generating facilities involved as well as in other locations as determined by the department..."

Act 160 also required the Department to conduct a series of studies focused on the plant's operation, future potential for relicensing, and economic, health and safety impact. The legislation also directed the Department to conduct an analysis of decommissioning the facility.

### **Status and Results**

- Public engagement activities pursuant to Act 208 have been completed;
- Reports have been received by the consultants who developed the Deliberative Polling event and the Regional Workshops;
- The consultant for the online conferences has validated the data from the conferences;
- Act 160 studies are underway, with a consultant having been retained;
- The Department is preparing the next set of meetings to comply with Act 160;

**III. EDUCATIONAL WHITEPAPERS & MATERIALS**

The Department organized an Advisory Committee and Resource Panel consisting of fifteen stakeholders to work with our consulting team to design materials on the various sources for energy generation. These representatives were widely recognized as experts in fields that were deeply interconnected with Vermont's energy situation. The members were:

Bob Griffin, Green Mountain Power  
Richard Sedano, Regulatory Assistance Project  
Patty Richards, VPPSA  
James Moore, VPIRG  
James Matteau, Windham Regional Planning Commission  
David Lamont, DPS  
Steve Blair, IBM  
Pat Haller, Efficiency Vermont  
Andy Perchlik, REV  
John Zimmerman, Vermont Environmental Research Association  
David McElwee, Vermont Yankee  
Sylvie Racine, Hydro Quebec  
Eileen Simolardes, Vermont Gas Systems  
John Irving, Burlington Electric Department  
Kerrick Johnson, VELCO

**Results**

- Completion of an eighty-page background document, through which consensus was reached about the facts surrounding the State's energy situation and future options;
- Distribution of background materials to participants at five Regional Workshops (800 People);
- Distribution of background materials to participants and observers in the Deliberative Poll (200 People);
- Online posting and distribution;
- Requests to use the background materials by other organizations.

#### **IV. Regional Workshops**

Dr. Jonathan Raab of Raab Associates in Boston, Massachusetts, in partnership with the Consensus Building Institute, the contractors ran the five regional workshops that would be based on materials developed with the Advisory Committee and Resource Panel for the project.

Dr. Raab was the facilitator of the meetings of these groups, and was responsible for the drafting of the background materials. He also co-facilitated the development of polling questions with Dr. Robert Luskin and his team from the Center for Deliberative Research at the University of Texas. The completion of the polling questions was no small feat, given the environment in which they were created. The nature of the committee and the panel was purposely designed to create a forum where “champions” from various sources of generation could debate with one another. During this process, it was quite common for opposing viewpoints on energy sources and their attributes to be the source of intense discussion. Additionally, the members subjected the polling questions and background materials to several revisions.

Five locations across the state served as “hosts” for the regional workshops. Each of these locations was selected because of its proximity to a population center. Several distribution utilities further contributed to the effort by paying for the space and meals for participants. In October of 2007, meetings were held at the following locations:

- Oct. 3, 2007 St. Johnsbury Elementary School, St. Johnsbury (Hosted by DPS)
- Oct. 17, 2007 Tuttle Middle School, So. Burlington (Hosted by GMP)
- Oct. 18, 2007 Montpelier Elks Club, Montpelier, (Hosted by VELCO)
- Oct. 29, 2007 Dean Educational Center, Springfield (Hosted by WRPC)
- Oct. 30, 2007 Holiday Inn, Rutland (Hosted by CVPS)

The agenda of the meeting incorporated: a presentation by David Lamont, the Department’s senior power planner; professionally facilitated discussions of small groups of citizens; a question and answer panel with members from the Advisory Committee and Resource Panel; a public comment period where Commissioner David O’Brien fielded comments from the audience; and a polling session utilizing “key pad” technology that immediately registered and displayed the results for the audience. Dr. Jonathan Raab combined the data from these meetings, with the following resulting highlights:

**Overarching theme:** the participants expressed great concern for the environment, and the effects of energy decisions on global climate change.

Environment - Participants indicated a strong concern for the environment, especially air pollution and greenhouse gas emissions.

Resource Prioritization – Energy efficiency, wind and hydroelectric power were identified as the most desirable resource categories, while coal, oil, and nuclear power were identified as the least desirable;

Energy Efficiency - Participants expressed a strong desire for an increase in funds for efficiency measures (82%); over 75% believed Vermont should meet as much electricity as possible through efficiency

Renewables - 94% believed that Vermont should obtain the majority its energy from renewable sources of energy; 84% believed that there should be a minimum percentage of electricity that comes from renewables;

Wood - While wood ranked 5<sup>th</sup> overall in resource prioritization, many discussions regarded wood as an attractive, larger source of generation.

Hydro Quebec - 80% of the participants believed that Vermont should continue to purchase from HQ. When asked to choose between HQ or oil, coal, gas and out of state nuclear, support for HQ grew to 93%;

Vermont Yankee - When asked if Vermont should continue to purchase power from VY, 63% opposed further purchases. When asked to choose between Vermont Yankee or gas, oil, coal and out of state nuclear, opposition changed to modest support with 54% of participants supporting commitments toward the resource;

Rate Issues - Participants expressed strong support for daily time differentiated rates to reflect real underlying cost differentials. However, participants were relatively between stable monthly bills and access to market rates;

Generation - Participants showed a small preference for acquiring power from Vermont utility-owned generation vs. contracting for power;

Size - Participants showed a preference for smaller decentralized generation relative to centralized generation;

Location - About two-thirds of participants believed Vermont's power should be generated in-state.

### **Results**

- Over 800 people registered; there were 650 participants and 175 observers;
- Regional workshops were held in five locations throughout the state (St. Johnsbury, South Burlington, Montpelier, Springfield and Rutland) based on feedback from the advisory committee;
- The agenda consisted of a presentation, small group discussions, Q&A panel, Key Pad polling, and an open comment session;
- Participants tended to support socialized solutions, and a willingness to pay more for cleaner energy;
- Participants expressed an appreciation for the workshops, and were interested in the follow up actions planned by the State.

**V. Deliberative Polling Event**

The Deliberative Poll questioned an initial random sample of Vermonters, recruited them to spend a weekend deliberating the issues of how Vermont should meet its future electricity needs, and then questioned them again at the conclusion of the weekend sessions. The post-deliberation distribution of opinion gives a picture of what Vermonters *would* think about these issues if they knew, thought, and talked more about them. The contrast between the pre and post-deliberation distribution suggests reveals how opinions move and vary from the less considered ones visible in ordinary surveys.

The results address a large number of policy issues: for example, what reliance should be placed on energy efficiency and on energy from various sources like wind, nuclear, and hydro in meeting Vermont's future electricity needs; whether the state should continue to buy energy from existing suppliers like Vermont Yankee and Hydro Quebec; and whether the state should rely more on a few large central facilities or a larger number of smaller and more geographically distributed ones.

After deliberating, the participants' considered opinions on these matters included the following:

- More than a quarter of the state's electricity should come from hydro, about 20% come from wind, around 15% come from solar, and just a tad less come from wood and nuclear. They wanted almost none of it, however, to come from oil or, especially, coal.
- 86% of them agreed (49% of them strongly) that Vermont should continue buying electricity from Hydro Quebec, and 97% agreed (76% strongly) that it should continue buying electricity from the Vermont based independent Power Producers, while a slender plurality (50% versus 48%, with 2% in the middle) agreed that it should continue buying electricity from the Vermont Yankee nuclear plant.
- 90% supported (74% strongly) a wind farm's being built if it were visible from where they live.
- 69% wanted to see the electricity used by Vermonters produced mostly or entirely (13% entirely) inside Vermont.
- 70% preferred seeing Vermont's electricity produced by smaller facilities, spread across the state, compared to 10% who preferred seeing it produced by a few large, centralized plants (20% in the middle).

In many cases the deliberative experience shifted the participants' policy attitudes to a statistically significant degree. For example:

- The support for continuing to buy from Quebec Hydro increased by 20%, and the support for continuing to buy from the Independent Power contracts improved by 8%, although the support for continuing to buy from Vermont Yankee nuclear plant did not change significantly in either direction.
- The percentages of the state's electricity the participants wanted to see come from hydro and wood increased, while the percentage they wanted to see come from oil decreased.
- The support for increasing efficiency as much as possible versus buying or generating power increased. The results also address many of the empirical premises (for example, how much reduction in usage can be gained by energy efficiency, what percentage of the state's power *could* be supplied by each of various sources) and values or goals (for example, reducing greenhouse gas emissions, ensuring a reliable electricity supply,

## VERMONT DEPARTMENT OF PUBLIC SERVICE

*Public Engagement Process – Executive Summary | February 13, 2008*

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avoiding facilities that detract from the scenic beauty of Vermont, or keeping electric rates stable) that may underlie these policy attitudes. Knowing what goals the public wants energy choices to achieve and how well (before and after deliberation) it thinks given choices serve given goals shed light on why it hold the policy preferences it does (before and after deliberation).

Some examples of the sample's post-deliberation opinions on relevant empirical premises are:

- Majorities of 55% and 64% thought that power not purchased from Hydro-Quebec or from Vermont Yankee would *not* have to be replaced by natural gas, coal, out of state nuclear, or oil.
- The participants thought that increased efficiency in the use of electricity could reduce Vermont's need for electricity by an average of 22% over the next 10 years.
- Wind, solar, and efficiency were seen as extremely friendly to the environment; methane, hydro, and wood, as lightly less but still very friendly; nuclear and natural gas as somewhat unfriendly; and coal and oil, in that order, as extremely unfriendly.
- Majorities thought that cleaner energy will cost more in the short run, but will not do so in the long run.

Here too, deliberation brought some significant changes, among them the following:

- The percentage by which the participants thought the need for electricity could be reduced over the next ten years declined by 9%.
- The percentages thinking that power not purchased from Hydro-Quebec or from Vermont Yankee would *not* have to be replaced by natural gas, coal, out of stat nuclear, or oil increased.
- Wood and methane came to be seen as significantly friendlier, and oil, coal, and natural gas as significantly unfriendlier to the environment.
- The percentage thinking that cleaner energy would cost more in the short run increased.

Some examples of relevant values held by the participants include:

- "Minimizing air pollution," "getting electricity from resources that will never be used up," "reducing the emission of gases that may contribute to climate change," and "ensuring a reliable supply of electricity" were regarded as the most important of a series of possible goals to be considered in deciding how Vermont might meet its future electricity needs, "keeping electric rates stable for consumers" and, especially, "avoiding facilities that detract from the scenic beauty of Vermont" as the least important.
- As among several possible "threats," the level of concern was highest for "greenhouse gases produced by burning fuel to make electricity" and for "other air pollution produced by burning fuel to make electricity," somewhat lower but still high for "radioactive waste from nuclear power plants" and "damage to river habitats from building hydro power facilities," and much lower for "the visual impact of wind farms on the scenery of Vermont."

Unlike policy attitudes and empirical premises, values are not expected to change much from deliberation, and by and large these didn't, although the importance attached to "getting electricity from resources that will never be used up" and "minimizing air pollution" did increase.

The participants learned a great deal, improving their average score on a series of factual knowledge questions by a whopping 39.5%. They also expressed appreciation for the process, overwhelmingly regarding it as valuable and fair. They came to care (still) more about how the electricity they use is produced.

### **Results**

- Participants demonstrated a significant knowledge gain;
- The overarching theme through Deliberative Polling and the Regional Workshops was a concern for global climate change;
- Participants were largely interested in power supplies that were clean, locally owned, and sustainable;
- Nuclear power was an issue that people struggled with, as demonstrated by the participants near 50% support or lack thereof. Participants may have judged the power type as "not clean" due to waste, and therefore discounted the carbon emissions issue.



## VERMONT DEPARTMENT OF PUBLIC SERVICE

Public Engagement Process – Executive Summary | February 13, 2008

### VI. WEB-BASED CONFERENCES

The language in Act 208 not only directed the Department to provide education for participants on energy, but to create a methodology that could be readily duplicated for other issues under consideration. Given the nature of the internet and the increasing role technology plays in all Vermonters lives, a web-based approach was identified as an innovative means of reaching out to people who may not have been able to participate in a traditional meeting.

The Department of Public Service purchased a software package intended to facilitate online conferences. Staff of DPS received training on how to use the software, and Burlington Telcom provided access to the software. To maintain as much consistency as possible, the regional workshop survey was re-created in the online environment. Preceding topics were drafted that were designed to be open-ended and engender discussion.

After review of the demographic information of participants at the regional workshops and the deliberative polling event, it became clear that the residential rate class was well represented; businesses and industry representation was much lower. Given that information, it was decided that the conferences would be made available to the general public that had registered through Raab Associates and would not be able to attend a workshop, as well as associations and organizations that could reach out to verifiable Vermont populations who were interested in participating. This turned out to be a necessary step, as at least one out of state anti-nuclear organization attempted to flood the conferences with their membership. After all conferences were complete, the DPS staff identified two additional participants who resided out of state. Because of this, their results were removed from the sample.

The following groups hosted events, through their memberships:

GROUP	CONTACT	STATUS
<b>Regional Workshop overflow/ registered</b>	Steve Wark / Jonathan Raab	Completed
<b>Champlain Chamber of Commerce</b>	Frank Cioffi	Completed
<b>Regional Planning Commissions</b>	Jim Matteau	Completed
<b>Associated Industries of Vermont</b>	Bill Driscoll	No participation
<b>Vermont Retail Association</b>	Tasha Wallis	No participation
<b>Vermont Energy Partnership</b>	Brad Ferland	No participation
<b>Vermont Chamber of Commerce</b>	Duane Marsh	Completed
<b>Vermont Business Roundtable</b>	Lisa Ventress	Completed
<b>PEP Advisors</b>	Steve Wark	Completed
<b>VT Ski Association</b>	Parker Riehle	Completed

The people who participated in the ten online conferences represented a sample of people best identified as business or industry-related. In total, 75 people participated in the online conferences, and provided results that paralleled the regional workshops.

## VERMONT DEPARTMENT OF PUBLIC SERVICE

*Public Engagement Process – Executive Summary | February 13, 2008*

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It should be noted that these conferences were conducted in December of 2007, during a time when the holiday season was reported to have greatly decreased people's ability to participate. Also, some groups did not have an interest in participating due to time commitments or other factors. Nonetheless, 75 participants do provide a depth of insight that should be considered, and in fact represents a larger audience than attended the St. Johnsbury regional workshop.

The participants comments were recorded in the online conferences were captured and documented in the detailed report for the online conferences. They can be summarized as having a deep regard for Vermont's environmental resources, and are associated with a concern for the role of energy in global climate change.

Environment - Participants related that they were concerned about pollutants, greenhouse gases, and sustainability.

Resource Prioritization – The highest priorities identified were hydro, wind and efficiency; the lowest priorities were identified as coal, solar and nuclear power.

Energy Efficiency – Participants indicated a preference (53%) for increased spending on efficiency measures.

Renewables - 23% thought the current levels of renewables was acceptable, while 72% believed that Vermont should increase the amount of renewables used.

Wood - Wood was a relatively innocuous topic in the online conferences. It was neither selected nor de-selected as a potential source of future generation.

Hydro Quebec - 94% of the conference participants believed the state should continue to purchase power from Hydro Quebec. Additionally, a large majority believed hydroelectric power is environmentally friendly.

Vermont Yankee - As with the other components of the public engagement process, nuclear power is a divided issue. While the topic was initially divided, support grew to 73% when participants were confronted with a choice between VY and oil, coal, gas or out of state nuclear power. Issues considered positive: no greenhouse gases and price; con: radiological waste.

Rate Issues - Participants tended to favor choice and economy in regard to rate issues. There was slight support for dynamic or cost-based time-of-use pricing.

Generation - A majority preferred contracts or had no preference for new power, vs. utility-owned facilities.

Size - Participants appeared to prefer smaller, decentralized facilities that were suggestive of a renewable strategy.

Location - Conference participants appeared to be indifferent of the location where power was generated.

The use of Internet conferences is unique to governance in Vermont. The technology can play an increasingly important role, if used and facilitated correctly. In this case, we learned lessons that can help future deliberations: shorter polling questions, better advertisement, and hosting by organizations that have the capacity and time to participate. As we proceed forward, the low cost of the software and the ease of use could help other state agencies and organizations engage the people of our state in a way not previously explored.

### **Results**

- 75 participants “attended” online conferences and responded to a lengthy survey;
- Comments from the participants were captured and documented with greater detail than was possible at any of the live events;
- Over 20 new people expressed an interest in participating in a conference (the end date of the project was reached);
- A new methodology was explored; one that provides a potential for new avenues of engagement, once inculcated within the state;

**VII. Conclusions**

The work of the members of the advisory committee, resource panel, consultants and the staff of the Department of Public Service has resulted in the largest known sample of opinion regarding energy, through various methods, within the nation. It has provided a statistically large percentage of Vermonters with the venue for learning about energy, and expressing their opinions about how we should forge ahead into Vermont's Energy Future.

We have learned that regardless of how we engage Vermonters, there is an underlying appreciation for our natural resources that impacts the decisions we make. We have learned that people have a desire to embrace clean sources of energy, even if at an additional cost. Finally, we have learned that many of the desires expressed in these processes are either part of our existing energy strategy, or have been identified as actionable in the future.