

# EXHIBIT A

## EXPERT REPORT OF WILLIAM STEINHURST

Entergy Nuclear Vermont Yankee, LLC et al. v. Shumlin et al.  
Docket No. 1:11-cv-99

August 8, 2011

### I. Introduction

In ruling on Plaintiffs' motion for a preliminary injunction, the Court indicated that, in the upcoming trial on the merits, it "must carefully consider" Plaintiffs' Atomic Energy Act preemption claim, including "whether the statutes [challenged by Plaintiffs] are preempted on their face, as applied, or whether they were enacted for a preempted purpose." Doc. 88, Mem. & Order on Pls.' Mot. for Prelim. Inj. at 3-4 (July 18, 2011). I have been retained by the State of Vermont to assess whether the challenged statutes were enacted for the purpose of regulating the radiological safety of the Vermont Yankee Nuclear Power Station (VY). In my opinion, the challenged statutes reflect an array of legitimate state interests and goals that the Vermont Legislature and Executive Branch have developed and implemented in shaping the State's energy policy and regulatory framework over the past thirty-plus years. More specifically, it is my opinion that:

- a. the Vermont Legislature, as well as the State's Executive Branch, has actively and passionately pursued a wide range of legitimate energy policy goals and concerns;
- b. those goals and concerns are traditional matters of legitimate policy concern to state governments outside the preempted sphere of nuclear safety;
- c. those goals and concerns, while not related to nuclear safety, routinely implicated VY; and
- d. those goals and concerns, in combination and often individually, provided a reasonable basis for the legislative and regulatory actions challenged by Plaintiffs in this lawsuit.

In sum, it is my opinion that Vermont's laws, including the enactment of Act 74 of 2005, Act 160 of 2006, and Act 189 of 2008, plus the consideration of S.289 of 2010 (together, "the Actions"), have been enacted and implemented within the State's traditional authority to regulate electricity generating facilities within its borders and not, as Plaintiffs argue, in a manner that "focus[es] on nuclear safety concerns that are entrusted exclusively to the federal government." Compl. ¶ 9.

### II. Background, Qualifications & Compensation

My name is William Steinhurst, and I am a Senior Consultant with Synapse Energy Economics (Synapse). My business address is 32 Main Street, #394, Montpelier, Vermont 05602. My prior testimony and my publications are listed on my résumé, which is attached as Exhibit 1. I am being compensated at a rate of \$200 per hour.

Synapse Energy Economics is a research and consulting firm specializing in energy and environmental issues, including electric generation, transmission- and distribution-system reliability, ratemaking and rate design, electric industry restructuring and market power, electricity market prices, stranded costs, efficiency, renewable energy, environmental quality, and nuclear power.

I have some thirty years of experience in utility regulation and energy policy, including work on renewable portfolio standards and portfolio management practices for default service providers and regulated utilities, green marketing, distributed resource issues, economic impact studies, rate setting and rate design. Prior to joining Synapse, I served, first, as Planning Econometrician and, then, Director for Regulated Utility Planning at the Vermont Department of Public Service (Department or DPS), the State's Public Advocate and energy policy agency. I have provided consulting services for various clients, including the Connecticut Office of Consumer Counsel, the Illinois Citizens Utility Board, the California Division of Ratepayer Advocates, the D.C. and Maryland Offices of the Public Advocate, the Delaware Public Utilities Commission, the Regulatory Assistance Project, the National Association of Regulatory Utility Commissioners (NARUC), the National Regulatory Research Institute (NRRI), American Association of Retired Persons (AARP), The Utility Reform Network (TURN), the Union of Concerned Scientists, the Northern Forest Council, the Nova Scotia Utility and Review Board, the U.S. EPA, the Conservation Law Foundation, the Sierra Club, the Southern Alliance for Clean Energy, the Oklahoma Sustainability Network, the Natural Resource Defense Council (NRDC), New Energy Economy, the Vermont Department of Public Service, the Vermont Legislature, the Illinois Energy Office, the Massachusetts Executive Office of Energy Resources, the James River Corporation, and the Newfoundland Department of Natural Resources.

I hold a B.A. in Physics from Wesleyan University, an M.S. in Statistics, and a Ph.D. in Mechanical Engineering from the University of Vermont. I have attended various in-service trainings on utility matters, including Vermont Yankee Nuclear Power Corporation's BWR [Boiling Water Reactor] Fundamentals I.

I have testified as an expert witness or filed affidavits in more than 100 proceedings on topics including utility rates and ratemaking policy, prudence reviews, integrated resource planning, demand-side management policy and program design, utility financings, regulatory enforcement, green marketing, power purchases, statistical analysis, and decision analysis. I have been a frequent witness in legislative hearings and represented the State of Vermont, the Delaware Public Utilities Commission Staff, and several other groups in numerous collaborative settlement processes addressing energy efficiency, resource planning and distributed resources.

I was the lead author or co-author of Vermont's long-term energy plans for 1983, 1988, and 1994, as well as the 1998 report *Fueling Vermont's Future: Comprehensive Energy Plan and Greenhouse Gas Action Plan*, and also Synapse's study *Portfolio Management: How to Procure Electricity Resources to Provide Reliable, Low-Cost, and Efficient Electricity Services to All Retail Customers*. In 2008, I was commissioned by the National Regulatory Research Institute (NRRI) to write *Electricity at a Glance*, a primer on the industry for new public utility commissioners. In 2011, NRRI commissioned me to prepare a second edition of that work.

Several of my past assignments at the VT DPS and consulting engagements since leaving the VT DPS are of particular relevance in this matter. From 1981 through 1986, I was responsible for the DPS's work on a variety of utility regulation topics, including energy efficiency policy and programs, load forecasting, aspects of power-supply planning, and assessment of both traditional and renewable energy supply options. Between 1986 and 2003, as Director for Regulated Utility Planning at the DPS, I was in charge of the Department's policy development and planning activities for both regulated and non-regulated energy and provided or oversaw the Department's expert testimony regarding many aspects of utility regulation litigation and rulemakings, including power supply acquisition cases under 30 V.S.A. § 248. I also made all "Determinations of Consistency" with the State's electric plan as authorized by 30 V.S.A. § 202(f). I represented the DPS or served on teams representing the DPS in negotiations with utilities over rate cases, power purchases, construction projects, and rulemakings and with power suppliers regarding wholesale power purchases made by the DPS itself. From 1981 to 2003, I frequently appeared before the Vermont Legislature to testify on bills affecting energy policy and utility regulation, provided background briefings on those matters, and answered questions about them. As part of my work at the DPS, I served for many years as backup to the State's Nuclear Engineer and the Department's Commissioner in carrying out the Department's responsibilities under the Vermont Yankee Emergency Response Plan, including regular drills. After leaving the DPS, from fall 2008 through 2010 and while at Synapse, I was part of a team that provided consulting services to the Joint Fiscal Office of the Vermont Legislature regarding Vermont Yankee issues. One part of that assignment was to monitor on behalf of the Legislature the work of the so-called Consensus Study. That was a project funded by Green Mountain Power and CVPS, where two economic consultants hired by those utilities sought to model economic impacts of certain scenarios involving VY.

In sum, I have extensive qualifications as a policy expert on the full range of issues and practices comprising state regulation of the electric industry. As an analyst, manager, expert witness, and policy advisor, I have personal knowledge of the nature, basis, and evolution of Vermont utility law and regulation, as well as Vermont energy policy and programs, from 1981 through the period covered by the Actions.

### **III. Materials Considered in Forming Opinions/Developing Testimony**

I have relied upon my relevant personal experience as described above and as reflected in my résumé. I have reviewed and considered information contained in the documents cited and/or discussed in this Report. In addition, I have reviewed and considered the following: the Complaint filed in this action; the State's memorandum of law and declarations opposing Plaintiffs' motion for a preliminary injunction; the Vermont Public Service Board's conference orders in Docket 7404 (Enexus); DPS Biennial Reports, 1972 through 1984, 2007.

### **IV. Statement of Opinions, Bases, and Reasoning**

#### **A. Vermont's Energy Policy, Utility Regulation, and Other Energy Programs Have for Decades Focused Consistently on Many Goals and Concerns Unrelated to Nuclear Safety.**

Based on my 30 years of experience, the Vermont Legislature has actively and consistently been engaged in matters of energy regulation for decades. I do not recall a legislative session since 1980 without consideration of substantial changes to energy regulation by the Vermont Legislature. The debate and discussion in the Legislature throughout that time reflects the Legislature's over-arching priority—least-cost energy portfolio planning that will meet the State's current and future energy needs in a sustainable way. As a result, the priorities and purposes reflected in the text of the challenged statutes—e.g., energy portfolio diversity, promotion of renewable energy resources, ensuring a reliable, economical, environmentally sustainable supply of energy—have been a regular part of the Legislature's public consideration of energy policy since the 1970s, before, during, and after the statutes being challenged in this lawsuit.

Following the oil crises of the 1970s, the Vermont Legislature passed landmark energy legislation in 1979. Act No. 204 (1979 Adj. Sess.), eff. Feb. 1, 1981. Among other steps taken, the Vermont Legislature created the DPS and its Planning Division, commissioned a long-term electric energy plan, and adopted planning goals for the electricity industry in Vermont. *See* 30 V.S.A. § 202 (setting goal of “obtaining for all consumers in the state proper utility service at minimum cost under efficient and economical management consistent with other public policy of the state”). That Act also adopted a state energy policy that was quite far-reaching for its time and that remains in effect today:

It is the general policy of the state of Vermont:

(1) To assure, to the greatest extent practicable, that Vermont can meet its energy service needs in a manner that is adequate, reliable, secure and sustainable; that assures affordability and encourages the state's economic vitality, the efficient use of energy resources and cost effective demand side management; and that is environmentally sound.

(2) To identify and evaluate on an ongoing basis, resources that will meet Vermont's energy service needs in accordance with the principles of least cost integrated planning; including efficiency, conservation and load management alternatives, wise use of renewable resources and environmentally sound energy supply.

*Id.* § 202a (defining “State energy policy”).

Work on Vermont's first long-term electric energy plan began in the fall of 1981. In March 1982, the DPS published *Electric Power in Vermont*, an issue paper that kicked off a broad public input process. The Vermont Legislature's Joint Energy Committee actively oversaw the development of the plan, and in January 1983, the DPS issued a draft plan. In February 1983, the House Energy Committee conducted its own hearings on the draft plan. The final plan was adopted by the DPS on March 31, 1983.

The State's electric plan was intended by the Vermont Legislature to guide the largest and most important decisions about actions regulating the electric industry. In particular, the governing statute provided that: “After adoption by the department of a final plan, any company

seeking [Public Service B]oard authority to make investments, to finance, to site or construct a generation or transmission facility or to purchase electricity or rights to future electricity, shall notify the department of the proposed action and request a determination by the department whether the proposed action is consistent with the plan . . . . If the proposed action is inconsistent with the plan, the board may nevertheless authorize the proposed action if it finds that there is good cause to do so.” 30 V.S.A. § 202(f).

Following a similar public input process that included issuance of two draft electric energy plans (1987 and 1988), the DPS adopted a revised electric energy plan on September 30, 1988. Subsequent electric energy plans were adopted by the DPS in 1994 and 2005.

A major theme of the Department’s 1988 electric energy plan was that least cost integrated planning (LCIP) constituted best practice for electric utilities and that all of Vermont’s electric utilities should engage in that process to guide their resource decisions.<sup>1</sup> Shortly thereafter, the Public Service Board began a lengthy proceeding that led to its 1991 Final Order in Docket 5270, which set the stage for an extensive reworking of utility resource planning in Vermont. The Vermont Legislature later codified the Board’s decision as 30 V.S.A. § 218(c), requiring consideration of both economic and environmental costs in LCIP (Act No. 99 of 1991, § 2). Those considerations, and the State’s commitment to LCIP, run through the electric energy plans adopted in 1994 and 2005.

In 1990, Governor Kunin directed the DPS to prepare a Comprehensive Energy Plan (CEP) covering all forms of energy for Vermont. Exec. Order No. 79. The CEP’s goals were to protect the environment, increase energy efficiency, and reduce overall costs, as well as to set goals for greenhouse gas reductions and “identify alternative means of energy production and conservation to offset the closing of Vermont Yankee.” Exec. Order ¶ 1. The CEP was issued by the DPS in January 1991. Later that year, the Vermont Legislature established a continuing requirement for comprehensive energy planning by the DPS in 30 V.S.A. § 202b. Act No. 259, 1991 (Adj. Sess.), § 2. The first CEP developed under that statute was issued in 1998. Vt. DPS *Fueling Vermont’s Future: Comprehensive Energy Plan and Greenhouse Gas Action Plan*, July 1998. The 1998 CEP identified as primary objectives improving transportation energy use, internalizing energy costs, improving energy efficiency, and increasing the use of renewable energy sources. 1998 CEP, vol. 1 at I-3. It identified as relevant state energy goals: safety, adequacy, reliability, security, sustainability, environmental soundness, efficiency, affordability, and economic vitality. 1998 CEP, vol. 1 at 2-1 to 2-10.

The State is currently developing an updated CEP, which will include an updated 20-year electric energy plan, to be issued by October 15, 2011. As reflected in the stakeholder

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<sup>1</sup> The basic tenets of LCIP are that utilities should select resources so as to minimize the net present value of their cost of service (not their rates) and should consider all resource options, both supply-side and demand-side, on an equal footing when doing so. Also known as integrated resource planning (IRP), LCIP has since become widespread among U.S. energy utilities and is mandated by statute or Commission rule in many states. *See*, for example, W. Steinhurst, *Electricity at a Glance*, rev. ed., National Regulatory Research Inst., 2011, at 7 and 30. Available at [http://www.nrri.org/pubs/electricity/NRRI\\_electricity\\_at\\_a\\_glance\\_jan11-04.pdf](http://www.nrri.org/pubs/electricity/NRRI_electricity_at_a_glance_jan11-04.pdf).

engagement draft that DPS has promulgated for public discussions and comment, the new CEP will also reflect the energy policy goals of 30 V.S.A. § 202a. As the public review draft CEP states, “the goals for this Plan are to promote energy resources that are adequate, reliable, secure, and sustainable; that assure affordability and encourage the state’s economic vitality, the efficient use of energy resources, and cost-effective demand-side management; and that are environmentally sound.” 2011 Public Review Draft of Vermont Comprehensive Energy Plan, *available at* <http://www.vtenergyplan.vermont.gov/>.

In addition to these planning efforts, during the mid-1990s, against the backdrop of federal initiatives to facilitate wholesale competition in the generation of electricity, the Vermont Legislature and the DPS intensively considered a major restructuring of its retail electric industry. Several sessions of the Legislature saw frequent hearings by at least four different standing committees, as well as various joint hearings and special committees to study options for that restructuring. I made many presentations on diverse aspects of utility regulation and economics during that time period. I conservatively estimate that legislators invested several thousands of hours to that topic during the 1990s. While Vermont ultimately declined to restructure its electric industry, one important concern of the Vermont Legislature throughout those hearings and debates was the way wholesale and retail competition would affect the economics and reliability of Vermont Yankee. Legislators and the DPS were concerned that if retail competition were introduced and VY spun off (as nuclear plants were in many restructured states), competitive pressures in the wholesale market could create stranded costs related to the plant or have negative effects on the plant’s reliability.<sup>2</sup> Legislative concern over those issues was at least one of the factors Vermont legislators weighed in their decision to reject retail competition.

Over the last ten or twelve years, the Vermont Legislature has delved into many areas of electric industry policy and regulation, with the Public Service Board and DPS following up on the Legislature’s initiatives. Those initiatives reflect a consistent commitment to promoting an energy policy and future for Vermont that is efficient, diverse, sustainable, reliable, economical and environmentally sound. By way of example, during this time period, alternative regulation was made available. Alternative regulation means, among other things, replacing certain aspects of traditional rate-base rate-of-return rate setting with different mechanisms designed to realign utility incentives with public policy goals. Net metering and feed-in tariffs that provide novel mechanisms and economic incentives for customers and developers to generate renewable energy for their own use or for sale to the utility were established to promote development of renewable and sustainable energy resources. A program for low-income utility bill support was authorized. Efficiency Vermont, a first-in-the-nation independent energy efficiency utility was established along with a bill surcharge to fund it. Its purpose is to implement a state-wide set of electric energy efficiency programs independent of the electric utilities in order to maximize the

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<sup>2</sup> Stranded cost is a term used in the debates over restructuring of the electric industry during the 1990s. It means previously committed costs of a utility for a supply resource that might not be recovered in a market sale if the utility had to divest itself of that resource or that might not be recoverable from retail customers if the utility had to compete with other retailers. Stranded costs were a concern because, at least in some states, ratepayers were required to compensate retail utilities for stranded costs.

benefits of those programs and to eliminate the conflicting incentives that retail utilities had between maximizing sales and carrying out their (former) energy efficiency duties. Efficiency Vermont has been funded at several percent of the retail rate and has established a track record of innovation making it one of the best energy efficiency programs in the country.

In particular, the Legislature passed important legislation aimed at promoting renewable energy and energy efficiency during the same general timeframe in which Acts 74 and 160 were enacted. For example, in the 2003 session, the Legislature enacted Act 69, entitled “An Act Relating to Promotion of Energy Efficiency and Renewable Electric Generation.” Act 69 added a statutory chapter addressing renewable energy programs and authorizing utilities to establish renewable pricing programs to allow electric consumers to voluntarily participate in programs that increase utilization of renewable energy sources by investing in renewable energy projects or by purchasing tradeable renewable energy credits. *See* 30 V.S.A. §§ 8001-8004.

In 2005, the same session that saw the passage of Act 74, the Legislature established requirements for retail electricity providers relating to the use of new renewable energy sources and created the Sustainably Priced Energy Enterprise Development (SPEED) program. *See* 2005 Vt. Acts & Resolves No. 61 §§ 1-4 (amending Vt. Stat. Ann. tit. 30 §§ 8001-8002, 8004 and adding §§ 8005-8006). A primary goal of the SPEED program was to encourage the in-state development of renewable sources of electricity.

The Vermont Energy Efficiency and Affordability Act of 2008 further demonstrates the Legislature’s ongoing commitment to and consideration of the energy policy goals discussed above. *See* 2008 Vt. Acts & Resolves No. 92. In addition to establishing a number of specific efficiency goals and programs, Act 92 created Vermont’s “25 by 25” goal of producing “25 percent of the energy consumed within the state through the use of renewable energy sources, particularly from Vermont’s farms and forests” by the year 2025. *See* 10 V.S.A. § 579(a) (added by Act 92, § 5).

In addition to the acts discussed above, the Legislature has passed many other statutes addressing energy efficiency, diversity, reliability, and the promotion of renewable energy. *See, e.g.*, 2011 Vt. Acts & Resolves No. 47 (enacting various energy provisions to increase efficiency, reliability, security, and the use of renewable energy, reduce costs and greenhouse gas emissions, and plan for future energy needs); 2010 Vt. Acts & Resolves No. 159 (same); 2009 Vt. Acts & Resolves No. 45 (same); 2008 Vt. Acts & Resolves No. 209 (same); 2006 Vt. Acts & Resolves No. 208 (same); 2006 Vt. Acts & Resolves No. 201 (providing business and technical assistance for farmers to harvest biomass, convert biomass to energy, and produce biofuel); 2006 Vt. Acts & Resolves No. 168 (establishing goals for greenhouse gas reductions); 2006 Vt. Acts & Resolves No. 152 (establishing energy “efficiency standards” in order to “reduce pollution and other environmental impacts,” “make electricity systems more reliable,” “reduce or delay the need for new power plants, power transmission lines, and power distribution system upgrades,” “contribute to the economy of this state,” “sav[e] consumers and businesses money on energy bills,” and “help the state and local economy”); 2006 Vt. Acts & Resolves No. 123 (regarding Vermont’s participation in the Regional Greenhouse Gas Initiative); 2004 Vt. Acts & Resolves No. 82 (addressing stability and reliability during state of emergency); and 2002 Vt. Acts & Resolves No. 145 (encouraging diversity of energy portfolio).

In addition to the matters discussed above, nuclear power in general and Vermont Yankee in particular have been the subject of a number of legitimate concerns that fall within the jurisdiction of state regulators. For instance, the 1983 electric energy plan determined that the possibility of meeting Vermont's capacity requirements by building a new nuclear facility "can be eliminated on purely practical grounds." 1983 Electric Energy Plan at 48. Those purely practical grounds included financial stress, public acceptance, and "the problems of the nuclear industry as a whole and of the Seabrook and Millstone units in particular." *Id.*

The 1988 plan expressed concern over several extended repair outages at VY in the early- and mid-1980s and identified dependence on VY as a "significant potential threat to the state's portfolio." 1988 Electric Energy Plan at II.2-40. It also warned that "Vermont's energy mix is moderately at risk from its exposure to nuclear power." *Id.* at II.2-43. For example, the Plan noted that "generic issues arising as the industry matures could jeopardize whole families of plant designs," or "an earlier than planned shutdown" could result from "intractable technological problems, high societal costs of fuel storage and related decommissioning work, or other reasons." *Id.* at II.2-44.

It is worth noting that the plan does not mention radiological safety anywhere in its discussion—only the "purely practical" effects that problems stemming from the NRC's requirements might have on Vermont ratepayers. In sum, the only role played by radiological safety in the 1988 Plan's discussion of nuclear power was the recognition that if the NRC (not Vermont) at some point concluded there were safety issues at the plant, that could have a negative reliability or financial impact on Vermont utilities and ratepayers.

**B. The Legislation at Issue in This Lawsuit Is Reasonably Calculated to Further Longstanding Vermont Energy Goals and Policies that are Unrelated to Nuclear Safety.**

It is my opinion that each of the Actions (Act 74 of 2005, Act 160 of 2006, and Act 189 of 2008 plus the consideration of S.289 of 2010) fits within the legitimate goals and priorities discussed above, is a logically selected means to pursue those goals and priorities—as well as the particular goals set out in each of those enactments—and is consistent with the broad energy policies and priorities that have consistently characterized the Vermont Legislature's activities in the energy policy arena since at least 1981. The Actions are part of and wholly consistent with the Vermont Legislature's longstanding tradition of promulgating forward-looking energy policy affecting all parts of the State's electric industry.

**1. Act 160**

The language of Act 160 does not mention or implicate radiological safety. Rather, it discusses "economic and environmental benefit, risks, and costs," "the general welfare," and "present day cost benefit assumptions and analyses," and it envisions transparent "public engagement" and "fact finding" to assist the Legislature. It does not establish radiological safety as a standard or issue in any legislative or regulatory decision affecting ENVY.

Nor does the fact that Act 160 included “public health issues” in a list of factors to be studied in order to inform the Legislature’s decision whether to authorize the PSB to consider granting a certificate of public good (CPG), Vt. Stat. Ann. tit. 30, § 254(b)(2)(B), demonstrate that the Legislature’s purpose was to regulate radiological safety. It would have been entirely reasonable for the Legislature to consider “public health issues” not implicating radiological safety. For example, the Legislature could reasonably have intended to consider, as it has done on many past occasions, public health issues such as spills of non-radiological toxic materials.

Many aspects of operating a nuclear power plant not related to radiological safety impact the environment and the public health, and are appropriate for state consideration. First, since at least the 1980s, the Vermont Legislature has taken the health of the Connecticut River and other aquatic ecosystems seriously in energy legislation and resource selection both as an environmental protection issue and as an essential ingredient in its economic development and tourism strategies. For example, the State has long regulated thermal discharges from VY in order to monitor and prevent potential damage to the river’s ecosystem. Further, the operation of VY may have implications on the ability of the State to remove or alter the Vernon Dam on the Connecticut River for environmental protection purposes.

Similarly, noise pollution, traffic and other impacts on terrestrial resources,<sup>3</sup> leaking underground storage tanks (Vermont has had a leaking underground storage tank regulation program for some time), and non-radiological occupational health and safety concerns are legitimate public health issues related to power plants that are routinely considered by states.

Beyond the issues mentioned above in connection with thermal pollution, Vermont’s tourism and economic development strategies have long been highly dependent on Vermont’s healthy environment, natural resources, and environmental consciousness. The Vermont Legislature would have reasonable grounds for concern about the effect of a nuclear power plant’s presence on the State’s tourism and economic development “brand,” including Vermont’s reputation for natural products and for an environment conducive to outdoor activities, health, and fitness. Vermont law-makers might legitimately conclude that these priorities are associated with a pristine natural environment that does not host a nuclear power plant, even if the plant were entirely safe from a radiological safety perspective.

## 2. Act 74

The language of Act 74 does not mention or implicate radiological safety. Rather, it discusses a “diverse, reliable, economically sound, and environmentally sustainable” power supply for the state. Act 74, Sec. 2. These are appropriate state policy and regulatory goals that have been priorities for the Vermont Legislature, the Public Service Board, and the DPS since at least 1981. Indeed, the language of the Act itself recites some examples of past—and contemporaneously enacted—legislative measures that advanced those goals. Act 74, Sec. 2,

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<sup>3</sup> See, e.g., Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437, Vol. 1 (May 1996)), § 2.3.6 (recognizing that “[a] number of ongoing issues associated with terrestrial resources can arise in the immediate area around the plant or its power transmission lines”).

codified as 10 V.S.A. § 6521(6). The Act also concerns itself with “a smooth transition to the future,” whether or not VY is relicensed, and finds “great value” in renewable energy sources, efficient, combined heat and power facilities, and energy efficiency, but does not mention radiological safety. It does not establish radiological safety as a standard or issue in any regulatory process affecting VY.

Act 74 does create procedures and standards for the permitting of dry cask storage, but does so in a manner plainly intended to defer to the NRC on all matters within the NRC’s purview and not to impede or supersede any NRC safety regulation.

### 3. Act 189

The language of Act 189 does not establish radiological safety as a standard in any State regulatory process affecting VY. Other expert testimony being offered by the State covers the reasons why that is the case. Here, I discuss how the reliability review called for in Act 189 is also consistent with the State’s historical approach and focuses on legitimate areas of state regulatory authority.

An issue clearly left to state regulation, even for nuclear power plants, is the need for power. The Vermont Legislature and DPS have made it clear many times that the need for the power from a specific source is inextricably linked to that source’s reliability. Adequate and reliable service is an issue within the State’s traditional regulatory authority and one that Vermont has actively pursued as a matter of state energy policy for decades. *See, e.g.*, 30 V.S.A. § 202a (“It is the general policy of the state of Vermont . . . [t]o assure, to the greatest extent practicable, that Vermont can meet its energy service needs in a manner that is adequate, reliable, secure and sustainable; that assures affordability and encourages the state’s economic vitality, the efficient use of energy resources and cost effective demand side management; and that is environmentally sound.”). Consistent with that legitimate State goal, Section 1 of Act 189 states that the Legislature’s purpose was to consider the reliability of the plant, not its radiological safety: “No. 160 of the Acts of the 2005 Adj. Sess. (2006) reconfirmed the obligation and authority of the general assembly *to examine the reliability of the nuclear power station of Entergy Nuclear Vermont Yankee (ENVY) in order to determine if it should be authorized to operate in this state beyond the expiration of its current operating license on March 21, 2012.*” (emphasis added.)

In pursuing the legitimate state goal of promoting a transition to a sustainable energy future in which energy efficiency and renewable energy are central, the State can legitimately consider the degree of uncertainty—that is, the converse of reliability—of various resource options, including VY. For that reason, it is reasonable for the Vermont Legislature to direct state agencies, such as the DPS, to carry out assessments of those uncertainties. Further, in my opinion, all of the matters prescribed for the assessments under Act 189 have a clear nexus to the future availability of VY (that is, its ability to ensure that it will be available to produce power), not its radiological safety. Therefore, no provision of Act 189 regulates radiological safety or interferes with the NRC’s regulation of radiological safety.

The fact that VY is a merchant plant able to sell its power into the wholesale market does not change my conclusion. In 2008, when Act 189 was passed, it was entirely reasonable for Vermont legislators and policy makers to consider the possibility that, if VY were to operate beyond March 21, 2012, Vermont utilities would purchase power from the plant. Indeed, I recall that Vermont utilities and Entergy were engaged in discussions about such purchases throughout 2008. In any event, because it was reasonable for legislators to consider the scenario in which Vermont utilities purchase power from VY beyond March 2012, it was also reasonable for the Legislature to consider the reliability of the plant.

Indeed, in the 1980s, the plant suffered two lengthy outages—one due to leaky fuel and the other due to a generic issue with the torus, a major part of the reactor. Both outages were required to comply with NRC regulations, not those of the State of Vermont, but both had material effects on the availability, and thus the reliability, of the plant. Such issues impose great costs on a plant's owners, potentially sufficient for a merchant owner to consider a long-term or permanent shutdown. Therefore, in my opinion, reliability, as assessed under Act 189, is a reasonable concern for the Vermont Legislature under traditional state regulatory authority that has nothing to do regulating radiological safety and that does not interfere with or impede NRC regulation of radiological safety.

#### 4. S.289

Finally, the February 2010 vote on S.289 also reflects the Legislature's focus on valid areas of State consideration, including minimizing financial risk and problems from potential delays in decommissioning, spent nuclear fuel management and site restoration.

One example of a purely practical financial risk is the funding of decommissioning. While decommissioning standards (aside from greenfielding standards) are set by NRC, Vermont has a non-radiological-safety interest in knowing that decommissioning will be properly funded. At this time, Entergy characterizes itself as “an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, and it is the second-largest nuclear generator in the United States. Entergy delivers electricity to 2.7 million utility customers in Arkansas, Louisiana, Mississippi, and Texas. Entergy has annual revenues of more than \$11 billion and more than 15,000 employees.”<sup>4</sup> Entergy press release, 7/25/2011, available at [http://investor.shareholder.com/common/download/download.cfm?CompanyID=ETR&FileID=485369&FileKey=c5fea82d-daad-4885-9a9e-57027a129428&FileName=VY\\_REFUEL.pdf](http://investor.shareholder.com/common/download/download.cfm?CompanyID=ETR&FileID=485369&FileKey=c5fea82d-daad-4885-9a9e-57027a129428&FileName=VY_REFUEL.pdf).

While Entergy portrays itself as a going concern capable of meeting the financial obligations of itself and its subsidiaries, Entergy's long term financial future is less clear. For

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<sup>4</sup> Entergy's status as an “integrated energy company” is of particular importance here. This phrase means, among other things, that Entergy is a vertically integrated monopoly retail electric utility in certain states. The importance of that fact is that it has captive customers who can be counted on to provide a steady revenue stream. That fact can greatly enhance credit rating agencies' view of Entergy and ease its access to capital needed for any purpose.

example, the states it serves at retail might choose retail competition, or it might make risky investments that would diminish its financial viability. Therefore, the Vermont Legislature and DPS have a reasonable concern regarding VY's owner and whether its current financial strength is assured for another twenty years.

That concern was amplified in January 2008 when ENVY, Entergy Corporation itself, and various affiliates filed with the Vermont Public Service Board a petition seeking approval of transactions as part of a restructuring intended to centralize ownership and control of Entergy Corporation's six non-utility, wholesale-nuclear units (including VY) under a new holding-company structure. Referred to as "Enexus," this affiliate would have had limited financial resources compared to Entergy Corporation and would have been highly leveraged. While Entergy tabled that deal in April 2010, it was, at the time of the Vermont Legislature's vote on S.289, another reason for concern about the future financial strength of VY's owner, through which Entergy might have succeeded in distancing itself further from financial obligations related to the plant. The current VY ownership structure is layered enough to raise reasonable concern that future actions by Entergy or its subsidiaries could further distance the parent company from its obligations. As set out in ¶16 of the Complaint, "Plaintiff ENVY is a limited liability company. ENVY's sole member is another limited liability company named Entergy Nuclear Vermont Investment Company, LLC, which in turn has a sole member named Entergy Nuclear Holding Company #3, LLC (also a limited liability company), which in turn has a sole member named Entergy Nuclear Holding Company." Even this chain of ownership does not reach the ultimate parent corporation.

These concerns about the comparative financial strength of VY's ownership structure today and as it might be in the future, and about the possibility of underinvestment due to short-term market pressures, were, in fact, matters of concern Vermont legislators discussed in 2008, 2009, and 2010. Indeed, that issue was a key concern in the regulatory process and government decision-making surrounding the sale of VY to Entergy in the first place in 2002.

Another factor unrelated to radiological safety that the Vermont Legislature would reasonably have been concerned about at the time of the S.289 vote harks back to the Vermont utilities' prior overdependence on VY power, an issue that was of concern to them and the State from the 1980s onward. As of the time of the vote, Vermont utilities had indicated that they planned to take a smaller amount of power from VY, but the size of the reduction could reasonably have been viewed as inadequate for many reasons, including an appreciation of the effect of aging plant issues on reliability. In any event, there was no power purchase agreement at that time, so the Vermont Legislature had no specific degree of diversification it could rely on.

In addition, at the time of the S.289 vote, Vermont legislators and regulators voiced concerns about their lack of trust in VY's ownership and management. Separate and apart from radiological safety, there was a concern that the plant's ownership and management were not business partners with whom the State should continue to work for another 20 years, based in part on statements concerning underground piping and in part on the Enexus proposal. In my experience at DPS, trust has always been an extremely important part of the State's relationship with any utility. Thus, in my opinion, lack of trust forms another valid basis for the S.289 vote.

Finally, Section III of this report demonstrates that the Vermont Legislature has a longstanding and deeply-held desire to make a transition to an energy future that focuses on energy efficiency and renewable energy. Therefore, it is reasonable for the Vermont Legislature to be concerned about making decisions that would diminish the space available in the electric industry for those resources. Those resources are inherently ones that will require ramp-up time to develop and take up their desired place in Vermont's energy future. In light of that goal, it is reasonable for legislators to be concerned that issuing a renewal CPG to VY would undercut development and maturation of those alternative resources and could delay, or even preclude, the desired transition. Therefore, it would have been reasonable to vote against S.289 in order to prioritize the Vermont Legislature's longstanding policy goals.

## **V. Conclusion**

In sum, every Vermont governmental entity that has addressed Vermont's energy policy issues, many of which affect VY, is well aware of federal preemption of nuclear safety matters, and has properly pursued the State's longstanding and passionate concerns with many other aspects of energy policy and with the plant's operation as a regulated entity in Vermont, concerns having nothing to do with nuclear safety and, in and of themselves, reasonable grounds for deciding not to extend VY's CPG under 30 V.S.A. § 248.

/s/ William Steinhurst

William Steinhurst

August 8, 2011

**Exhibit 1**

Résumé of William Steinhurst

## **William Steinhurst**

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### **PROFESSIONAL EXPERIENCE**

#### **Synapse Energy Economics Inc., Cambridge, MA.**

*Senior Consultant, July 2003 to Present*

Consulting services to state and provincial energy regulators and public advocates, state provincial and national energy departments, and non-governmental organizations on regulatory policy, power supply procurement, electric industry restructuring, portfolio management, rate setting and rate design, economic impacts of efficiency and renewable generation programs, and other utility and energy topics. Expert witness services and litigation advice. Co-authored reports, journal articles and conference presentations on portfolio management, energy efficiency programs, and electric reliability.

#### **Vermont Department of Public Service, Montpelier, VT.**

*Director for Regulated Utility Planning, 1986-2003*

Preparation of long range policy plans in the areas of electric utilities, energy and telecommunications, including oversight of research, modeling, public input processes, policy analysis and writing. Development of policy positions and drafting of legislation and rules concerning utility resource planning, power supply acquisition, generation and transmission permitting, environmental costing, energy efficiency and alternative generation, utility restructuring and retail choice, distributed utility planning, rate setting and rate design, mergers, financing and acquisitions, decision analysis, power contract restructuring, Qualifying Facility contracts and permits, net metering, and other critical regulatory issues. Extensive expert testimony on those matters, as well as utility bankruptcy, prudence reviews, and critical utility policy matters. Extensive legislative testimony.

*Planning Econometrician, 1981-1986*

Energy demand forecasting, economic and demographic projections, economic and policy impact analysis, avoided cost estimates, and other quantitative analysis for utility and energy policy making. Development of State's basic policies regarding least cost planning and resource selection, including methods for evaluation of and program design for generation, transmission and demand-side options. Implementation of utility energy efficiency program requirements.

#### **Vermont Agency of Human Services, Montpelier, VT.**

*Director of Planning, 1979-1981*

#### **Vermont Department of Social and Rehabilitation Services, Waterbury, VT.**

*Director of Planning and Evaluation, 1977-1979*

*Acting Deputy Commissioner, 1977*

#### **Vermont Department of Corrections, Montpelier, VT.**

*Director of Planning and Research, 1974-1977*

*Chief of Research and Statistics, 1973-1974*

***Pre-2004 Energy Consulting***

Illinois Energy Office, 1986.  
Massachusetts Executive Office of Energy Resources, 1986.  
Northern Technology, Inc., Gorham, NH, 1983-1985.  
James River Corporation, Green Bay, WI, 1985.  
Newfoundland Department of Natural Resources, 1995

***Teaching***

University of Vermont, Burlington, Vt., 1977 to 1989  
Adelphi University, Garden City, N.Y., 1980 to 1988  
University of N. H., Complex Systems Ctr., Grad. Studies Comm., 1992-1994  
Institute of International Education, Least Cost Planning Seminar, 1999  
Community College of Vermont, 2002-2004

***Miscellaneous***

National Science Foundation Undergraduate Research Grant, 1965.  
Wesleyan University Astronomy Prize, 1967.  
Association for Criminal Justice Research (Northeast/Canada), Director, 1973 to 1981,  
Secretary/Treas., 1973 to 1980.  
University of Vermont Graduate Award in Statistics, May, 1980.  
Contributing Editor, Current Index to Statistics, 1976-1985.  
Chair, Session on Energy Economics, New England Business and Economics Association  
Annual Meeting, 1983.  
Member, Intl. System Dynamics Soc., Tau Beta Pi.  
Northeast International Committee on Energy, New England Governors' Conference/Eastern Canadian Premieres,  
various periods, 1986 to 2003  
Director, Vermont Girl Scout Council, 1989-1991, 2000-2008; Secy., 1991-1997  
3<sup>rd</sup> Vice President, Girl Scouts of the Green and White Mountains, 2009 to date  
Editor, Intl. System Dynamics Soc. Bibliography, 1990-  
Advisory Group Member, New England Project, MIT Analysis Group for Regional  
Electricity Alternatives, 1991-1995.  
Chair, Steering Committee & Modeling Subcommittee, New England Governors Conf.  
Regional Energy Planning Project, 1991-1995.  
Member, Montpelier School System Technology Steering Committee and Montpelier  
High School Technology Committee, 1992-1993.  
Reviewer, Vermont Experimental Program to Stimulate Competitive Research, 1993-  
Invited Speaker, 3<sup>rd</sup> Intl. Conf. on Externality Costs, Ladenburg, FDR, 1995.  
Member, Steering Committee, New England Governors Conference, Restructuring/  
Environmentally Sustainable Technologies Project, 1996-1997  
U. S. DOE Distributed Generation Collaborative, 2000-2003  
Justice of the Peace, Montpelier, Vermont, 2007-

**EDUCATION**

***Degrees***

B.A., Physics, Wesleyan University, Middletown, CT, 1970  
M.S., Statistics, University of Vermont, Burlington, VT, 1980  
Ph.D., Mechanical Engineering, University of Vermont, Burlington, VT, 1988

***Continuing Education***

Seminar in Electricity and Telecommunications Demand, 1981  
Advanced Workshop in Regulation and Public Utility Economics, June, 1982 and  
June, 1983, Rutgers University  
Transmission Reliability Assessment, Power Technologies, Inc., 1986  
Regional Forecasting and Simulation Modeling, January, 1991, U. Massachusetts-Amherst

**TESTIMONY and AFFIDAVITS**

**Vermont Public Service Board**

*On behalf of the Vermont Department of Public Service:*

Docket 4661 - Green Mountain Power Rate Increase  
Dockets 5009/5112 - Vt. Electric Coop. Rate Increase  
Dockets 5108/5109 - Vt. Marble Co. Small Power Rate  
Docket 5133 - Moretown Hydro Energy Co. Small Power Rate  
Docket 5202 - VPPSA Refinancing  
Docket 5248 - DPS Ontario Hydro Power Purchase  
Docket 5270 - Least Cost Planning and Demand-Side Management  
Docket 5270-GMP-1 - Highgate Apartments Fuel Switching  
Docket 5270-CV-1&3 - Demand-Side Management Preapproval and Ratemaking Principles  
Docket 5270-CV-4 - IRP  
Docket 5270-VGS-1 - Demand-Side Management Preapproval  
Docket 5270-WEC-1 - Demand-Side Management Preapproval  
Dockets 5270-BRTN-1, 5270-CUC-3, 5270-HDPK-1, 5270-JHNS-1, 5270-JKSN-1,  
5270-LDLW-1, 5270-LYND-1, 5270-MRSV-1, 5270-ORLN-1, 5270-RDSB-1,  
5270-ROCH-1, 5270-STOW-1, 5270-SWNT-1, 5270-VMC-1 - IRP's  
Docket 5270-VGS-2 - Demand-Side Management Preapproval  
Docket 5277 - DPS Ontario Hydro Transactions Agreement  
Docket 5330A - Hydro Quebec Power Purchase  
Docket 5330E - Hydro Quebec Power Purchase, Waiver and Amendment  
Docket 5372 - CVPSC Rate Increase  
Docket 5491 - CVPSC Rate Increase  
Docket 5630/32 - VEC Debt Restructuring & Rate Increase  
Docket 5634 - NET Toll Dialing Plan  
Docket 5638 - CVPSC Mack Molding\*  
Docket 5664 - EPACT Standards  
Docket 5810/11/12 - VEC Debt Restructuring & Rate Increase  
Docket 5825 - Ludlow IRP - externalities  
Docket 5826 - Vermont Marble Electric Division - IRP - externalities

Docket 5832 - Lyndonville IRP - externalities  
Docket 5841/5859 - Citizens Utilities Prudence Review & Revocation Petition  
Docket 5854 - Electric Restructuring\*  
Docket 5857 - GMP Rate Increase\*  
Docket 5971 - VEC Bankruptcy Reorganization\*  
Docket 5980 - Proposal for Statewide Efficiency Utility  
Docket 5983 - GMP Rate Increase (HQ Issues)  
Docket 6018 - CVPSC Rate Increase (HQ Issues)  
Docket 6107 - GMP Rate Increase (HQ Issues)  
Docket 6140 - Electric Industry Restructuring (various presentations)\*  
Docket 6033/6053/6110/6142/6158/6326/6327/6371/6462/6464 - various municipal electric rate increases\*  
Docket 6270 - Qualifying facility contract reform  
Docket 6290 - Distributed Generation\*  
Docket 6300 - Sale of Vermont Yankee  
Docket 6330 - Petition of CVPSC and GMP on Restructuring (various presentations)\*  
Docket 6149/6315 - WEC electric rate increases\* (HQ and Settlement Issues)  
Docket 6460 - CVPSC Rate Increase (HQ Issues)  
Docket 6495 - Vermont Gas Systems Rate Increase (Deferral Account and Hedging)  
Docket 6565 - Various station service contracts  
Docket 6596 - CUC rate Increase (HQ Issues)  
Docket 6758 - Fourteen Utilities - Violations of Statutes on Special Contracts and Special Rates—Phases I & II  
*For consulting clients:*  
Docket 6958 - Green Mountain Power Rate Design - for AARP  
Docket 6958 - Green Mountain Power Rate Design - for Conservation Law Foundation  
Docket 6958 - Green Mountain Power Rate Design - for Conservation Law Foundation  
Docket 7085 – CVPS Street Lighting Tariff – for Village of Woodstock  
Docket 7175 - Green Mountain Power Rate Design – for Conservation Law Foundation and AARP  
Docket 7176 - Green Mountain Power Alternative Regulation Plan—for Conservation Law Foundation and AARP  
Docket 7336 – CVPS Alternative Regulation Plan – for Conservation Law Foundation\*  
Docket 7466—Efficiency Utility Structure—for Conservation Law Foundation  
Docket 7670—20 Utilities Petition to Purchase Power from Hydro Québec US— for Conservation Law Foundation

**Vermont State Environmental Board**

Docket 5W0584-EB - Developers Diversified Land Use Permit

**Federal Energy Regulatory Commission**

Docket Nos. ER95-1586-000 and EL96-17-000 - Citizens Utilities Company \*\*

**California Public Utilities Commission**

Multi-Stakeholder Study of Alternatives to the Mohave Generating Plant Pursuant to CPUC Decision 04-12-016 - for Southern California Edison (February 2006) \*

R.06-02-013 – Long Term Procurement Plans of PG&E, SCE and SDG&E&E – for the Division of Ratepayer Advocates (March 2007)

**Connecticut Department of Public Utility Control**

Docket No. 03-07-16 - Alternative Transitional Standard Offer (live testimony Dec. 2004, prefiled comments Jan. 2003) \*

**Delaware Public Service Commission**

Docket No. 04-391 – Standard Offer Service – for the Commission Staff (live testimony October 2006)

**District of Columbia Public Service Commission**

Formal Case 1047 – Investigation into the Structure of the Procurement Process for Standard Offer Service – for the District Office of People’s Counsel (June 2006 to date) \*\*

**Florida Public Service Commission**

Dockets 080407 through 080413-EG – Commission Review of Numeric Conservation Goals – for the Southern Alliance for Clean Energy and the Natural Resources Defense Council (August 2009)

**Illinois Commerce Commission**

Docket No. 05-0159 - Commonwealth Edison Basic Utility Service Procurement

Docket No. 05-0160, 0161 and 0162 - Ameren CILCO, AmerenCIPS, and AmerenIP - Basic Utility Service Procurement

**Indiana Utility Regulatory Commission**

CAUSE NO. 42598 - Vectren North - Gas cost rate making mechanism and demand side management programs (Sept. 2004)

CAUSE NO. 42612 - Public Service of Indiana - demand side management programs (Sept. 2004)

**Massachusetts Department of Public Utilities**

Docket 07-050 – Investigation into Rate Structures that will Promote Efficient Deployment of Demand Resources – for The Energy Consortium (June 2007) \*

**Mississippi Public Service Commission**

Docket 2008-AD-158 – Proceeding to Review Statewide Electric Generation Needs – for The Sierra Club (June 2008)

Docket 2008-AD-477— Docket to Consider Standards Established by the Energy Independence and Security Act of 2007, Section 111(d) of Public Utility Regulatory Policy Act (16 U.S.C. § 2621)—for The Sierra Club (November 2009) \*

**New Hampshire Public Utilities Commission**

Docket DE 07-064 – Revenue Decoupling Investigation – for Conservation Law Foundation (May 2007 to date) \*

**New Mexico Public Regulation Commission**

Case No. 10-00086-UT – Public Service of New Mexico Rate Case — for New Energy Economy (May 2011)

**Ohio Public Utilities Commission**

Restructuring Roundtable – System Benefit Charges - Commission workshop presenter \*

Case No. 09-906-EL-SSO—Competitive Bidding Process—for Ohio Consumers’ Counsel (December 2009)

**Oklahoma Corporation Commission**

Cause No. RM 2007-007 – Demand Side Management Rulemaking – for The Sierra Club and the Oklahoma Sustainability Network (May 2008) \*

**South Carolina Public Service Commission**

DOCKET NO. 2009-261-E—SCE&G DSM filing—for Southern Environmental Law Center and the South Carolina Coastal Conservation League (January 2010) (testimony filed—settlement pending)

**U.S. District Court for the District of Vermont**

Civ. No. 2:03-cv-279 – Circumferential Highway Impact Analysis – for Vermont Public Interest Research Group, Inc., Friends of the Earth, Inc., Conservation Law Foundation, and The Sierra Club (January 2004) \*\*

**Utah Public Service Commission**

Docket No. 10-035-124 – Rocky Mountain Power Rate Case – Sierra Club (May 2011)

**Virginia State Corporation Commission**

Docket # PUE-2009-00023 – Conservation and demand response targets – the Southern Environmental Law Center, Appalachian Voices, Chesapeake Climate Action Network and the Virginia Chapter of the Sierra Club (September 2009)

Docket # PUE-2009-00081 – Demand Side Management Program Approvals – the Southern Environmental Law Center, Appalachian Voices, Chesapeake Climate Action Network and the Virginia Chapter of the Sierra Club (December 2009)

Docket # PUE-2009-00096 – Dominion IRP – the Southern Environmental Law Center, Appalachian Voices, Chesapeake Climate Action Network and the Virginia Chapter of the Sierra Club (February 2010)

Docket # PUE-2009-00097 – APCo IRP – the Southern Environmental Law Center, Appalachian Voices, Chesapeake Climate Action Network and the Virginia Chapter of the Sierra Club (March 2010) (testimony filed pending hearing)

**Wyoming Public Service Commission**

Docket No. 20000-384-ER-10 – Rocky Mountain Power Rate Case – Powder River Basin Resource Council (April 2011)

\* No prefiled testimony

\*\* Affidavit only

**PUBLICATIONS**

Allen, R., V. L. McCarren and W. Steinhurst. *Vermont Telecommunications Plan: Final Draft and Final*. Vt. DPS, 1992.

Backus, G., J. Amlin, W. Steinhurst and P. Cross. *Champlain Pipeline Project: Energy and Economic Systems – Assessment*. Vt. DPS, 1989.

Bartels, C., R. Squires, and W. Steinhurst. *Electric Power Supply in Vermont*. Vt. DPS, 1983.

Biewald, B, C. Chen, A. Sommer, W. Steinhurst and D. E. White. *Comments on the RPS Cost Analyses of the Joint Utilities and the DPS Staff*. Synapse Energy Economics report for Renewable Energy Technology and Environment Coalition. September 19, 2003.

- Biewald, B., Woolf, T., Roschelle, A., & Steinhurst, W. (2003) *Portfolio Management: How to Procure Electricity Resources to Provide Reliable, Low-Cost, and Efficient Electricity Services to All Retail Customers*. Synapse Energy Economics report for NARUC. October 10, 2003.
- Blomberg, L., B. Hausauer, and W. Steinhurst, et al., *Fueling Vermont's Future: Comprehensive Energy Plan and Greenhouse Gas Action Plan: Public Review Draft*. Vt. DPS, 1997 and *Final*, 1998.
- Copp, L., W. Steinhurst, et al. *Electric Power Issues in Vermont*. Vt. DPS, 1982.
- *Electric Power in Vermont: Statistical Sourcebook*. Vt. DPS, 1982.
- *Electric Power in Vermont: Twenty-Year Plan*. Vt. DPS, 1983.
- Copeland, R. and W. Steinhurst. *Private Sector Day Care Rates*. Vt. Dept. of SRS, 1979.
- Huffman, B., W. Steinhurst, et al., *Energy Use in Vermont and the Public Interest*. Vt. DPS, 1984.
- Parker, S., & Steinhurst, W. (2004). *How To Deliver the (Efficiency) Goods: Why an Independent Third Party Works Best and How To Make Sure It Works Well*. Synapse Energy Economics, Inc.
- Roschelle, A., Steinhurst, W., Peterson, P., & Biewald, B. (2004). *Procuring Default Service: Relationships between Contract Duration and Contract Price* (pp. 15). ME PUC. On behalf of ME Office of Public Advocate. May 21, 2004.
- Roschelle, A., Steinhurst, W., Peterson, P., & Biewald, B. (2004). *Long Term Power Contracts: The Art of the Deal*. Public Utilities Fortnightly (August), 56-74.
- Roschelle, A., & Steinhurst, W. (forthcoming). *Best Practices in Procurement of Default Electric Service: A Portfolio Management Approach*. Electricity J.
- Schwartz, L., and W. Steinhurst. *Is it smart if it's not clean? Questions Regulators Can Ask About Smart Grid and Energy Efficiency*, Part one: Strategies for utility distribution systems. Regulatory Assistance Project *Issueletter* prepared for U.S. Environmental Protection Agency. May 2010.
- Shapiro, W., W. Steinhurst, et al. *Vermont Telecommunications Plan: Final Draft*. Vt. DPS, Aug. 1996 and *Final*, Dec. 1996.
- *Vermont Telecommunications Plan: Final Draft*. Vt. DPS, 1999 and *Final*, 2000.
- Steinhurst, W., *Hypothesis Tests for Parole Survival Analysis*. Masters thesis, University of Vermont, May, 1980.
- *Residential Price Elasticity of Electric Demand in the Northeast*, Vt. DPS, 1982.
- *Long Range Forecast of Electric Loads for Vermont*. Vt. DPS, 1983.
- *Electricity Conservation in Vermont*. Vt. DPS, 1983.
- *Twenty Year Electric Plan: Public Review Draft*. Vt. DPS, 1987, and *Final*, 1988.
- *Twenty Year Electric Plan: Public Review Draft*. Vt. DPS, Mar. 1994, and *Final*, Dec. 1994.
- *On Some Aspects of the Thermoplastic in Engineering*. Ph.D. Dissertation. Univ. of Vermont, 1988.
- *Electricity at a Glance*. National Regulatory Research Inst., 2008.

Steinhurst, W. (August 6, 2004). *Social Priorities under Restructuring: Coordinated and Comprehensive Delivery*. Paper presented at the Standard Offer Service Conference, Wilmington, DE.

-----, et al. *Vermont Comprehensive Energy Plan*. Vt. DPS, 1991.

-----, et al. "Electric System benefits of clean Energy." Ch. 3 in U.S. Environmental Protection Administration, *Assessing the Multiple Benefits of Clean Energy: A Resource for States*. Feb. 2010.

-----, R. Allen, et al. *Shutdown Assessment of the Vermont Yankee Nuclear Power Facility: Interim Report*. Vt. DPS, 1987.

-----, R. Allen, et al. *Shutdown Assessment of the Vermont Yankee Nuclear Power Facility*. Vt. DPS, 1988.

-----, et al. *A Field Assessment of the Vermont Low-Income Weatherization Program*. Vt. DPS, 1990

-----, et al. *Vermont Comprehensive Energy Plan*. Vt. DPS, 1991.

-----, et al. *Vermont Government 2000 Conference Report*. 1989.

Steinhurst, W., Woolf, T., & Roschelle, A. (2004). *Energy Efficiency: Still an Cost-Effective Resource Option*. Paper presented at the USAEE/IAEE Conference, Washington, D.C.

Steinhurst, W., Chernick, P., Woolf, T., Plunkett, J., & Chen, C. (2003). OCC Comments on Alternative Transitional Standard Offers (pp. 58). CT DPUC Docket 03-07-16 on behalf of CT OCC.

----- and D. Lamont. *Building Energy Code Study*. Vt. DPS, 1985.

----- and D. Lamont. *Guide to Evaluating Energy Conservation Opportunities*. Vt. DPS, 1985.

----- and B. Patterson. *Weeks School Recidivism Study*. Vt. Corrections Dept., 1976.

----- and N Perrin. *1977-78 High School Survey: Patterns of Substance Use*. Vt. Dept. of SRS, 1979.

-----, N. Perrin, and A. Jette. *Running in the SRS Juvenile System: 1975 - 1979*. Vt. Det. of SRS, 1979.

----- and T. Weaver. *Long Range Forecast of Electric Loads for Vermont*. Vt. DPS, 1986.

Stoneman, K., and W. Steinhurst. *Comprehensive Proposal for Corrections in Vermont*. Vt. Corrections Dept., 1972.

von Turkovich, B., and W. Steinhurst. "Plastic Flow Localization and Instability in Metal Processing." *Proc. 14th N. Amer. Manuf. Res. Conf.*, Minneapolis, May, 1986, pp. 340-347.

White, D., Roschelle, A., Peterson, P., Schlissel, D. A., Biewald, B., & Steinhurst, W. (forthcoming). *The 2003 Blackout: Solutions that Won't Cost a Fortune*. Electricity J.

Wilson, D., J. O'Rourke, W. Steinhurst, et al. *Welfare Reform: A Vermont Perspective*. Vt. AHS, 1980.

## ARTICLES AND PRESENTATIONS

Andersen, D., G. Richardson, J. Rohrbaugh, S. Ratanawijitrasin, W. Steinhurst. "Group Model Building. *Proceedings of the International System Dynamics Conference*. Intl. System Dynamics Soc., 1992.

Biewald, B., Chernick, P., and W. Steinhurst. *Environmental Externalities: Highways and Byways*. Proc. NARUC IRP Conf., Kalispell, MT, 1994.

Hamilton, B., L. Milford, S. Parker and W. Steinhurst, "Fuel Switching in Vermont: Issues and Experiences." *Proc. of ACEEE 1992 Summer Study on Energy Efficiency in Buildings*, 12 pp.

Hogan, C., and W. Steinhurst. "Managing Change in Corrections." *Federal Probation*, June, 1976.

Steinhurst, W., "Hypothesis Tests for Limited Failure Survival Distributions." *Proc. Social Statistics Section*, American Statistical Association, 1980, pp. 521 - 524.

----- "Hypothesis Tests for Parole Survival Analysis." *Evaluation Review*, 5, 699-711 (1981).

----- "Don't Throw Out the Baby: Some Design Requirements for Federalism Reform." *New England Journal of Human Services*, 1, 41 - 45 (1981).

----- "Environmental Externalities: Analysis and Advocacy." *Proc. 3rd Intl. Conf. on Externality Costs*, Springer-Verlag: Berlin.

----- and G. Backus. "Application of System Dynamics to an Integrated Economic and Environmental Policy Assessment." In D. F. Andersen, et al., *System Dynamics '90, Proc. of the 1990 International System Dynamics Conf.*, Boston, MA., pp. 1060-1074.

----- and W. Merten. "Statistical Analysis of Thermal Shock Tests." *Statistics in Manufacturing*, S. G. Kapoor and M. R. Martinez, eds., ASME Proc., PED-9 (83), 51-56.

----- and W. Merten. "Statistical Analysis of Thermal Shock Tests." *J. of Engineering for Industry*.

----- and R. Samuels. *The Future of the Uniform Parole Reports Project: Proceedings of the ACJR-UPR Working Session*. Assoc. for Criminal Justice Research, 1978.

----- and R. Squires. *Electric Utility Cost of Service Projections for James River Corporation New England Mills: 1984 to 2000*. Northern Technology, Inc., Jefferson NH, 1985.

----- and B. von Turkovich. "Material Influences on Plastic Flow Localization and Instability in Metal Processing." *Proc. 2nd Intl. Conf. on Technology of Plasticity*, Stuttgart, 1987.

Resume dated March 2010.