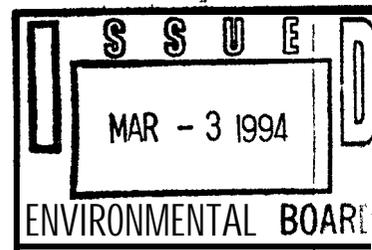


VERMONT ENVIRONMENTAL BOARD
10 V.S.A. Chapter 151



Re: Richard Bartholomae and I. Stanford Zecher
Application #8B0472-EB

FINDINGS OF **FACT**, CONCLUSIONS OF LAW, AND ORDER

This decision pertains to an appeal by the State of Vermont Department of Public Service (DPS) with respect to whether a subdivision proposed by Richard Bartholomae (the Applicant) and I. Stanford Zecher (the Co-applicant) complies with 10 V.S.A. § 6086(a)(9)(5) (public utility services). As is explained below, the Environmental Board concludes that the proposed project will comply with Criterion 9(J) if approval of the project is conditioned to require that electric hot water heating may only be used off-peak, and to prohibit the use of electric heat.

I. SUMMARY OF PROCEEDINGS

On June 26, 1992, the District #8 Environmental Commission issued Land Use Permit #8B0472, authorizing the Applicant to subdivide an approximately 30-acre parcel into seven residential lots, five of which will be served by a 1300-foot gravel road off Deer Meadow Road, Route 7A North, Manchester, Vermont.

On January 8, 1993, in response to a motion to alter filed by DPS, the District Commission issued a memorandum of decision revising Condition #11 of the Permit and the findings of fact and conclusions of law issued in support of the Permit. Condition #11 was issued pursuant to the District Commission's evaluation of the application under 10 V.S.A. § 6086(a)(9)(F) (energy conservation) and (9)(J) (public utility services).

On May 14, 1993, again in response to a motion to alter filed by DPS, the District Commission issued a memorandum of decision altering for a second time Condition #11. The text of Condition #11, as issued by the District Commission on May 14, 1993, is 'included Section III, below (the Findings of Fact).

On June 14, 1993, DPS filed an appeal with the Board. The appeal raises issues with respect to Condition #11 and contends that the proposed project does not comply with Criterion 9(J).

On July 20, 1993, Acting Chair Terry Ehrich convened a prehearing conference in Manchester. On August 6, pursuant to Rule 16(C), the Acting Chair issued a prehearing conference report and order.

In mid-September 1993, the Applicant, DPS, and Central Vermont Public Service Corporation (CVPS) filed memoranda as required by the prehearing order. These memoranda in part set out the parties' positions concerning the burden of

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proof under Criterion 9(J) and on whether Criterion 9(F) (energy conservation) should be part of this appeal.

On October 21, 1993, pursuant to Rule 16(B), the Acting Chair made a preliminary ruling that Criterion 9(F) will not be considered as part of this appeal. Opportunity was given to parties to object to this ruling, and no objection was filed.

On November 2, 1993, the Applicant filed a motion to dismiss the appeal. By memorandum of November 3, the Acting Chair offered the parties an opportunity for oral argument on the motion. No party requested oral argument. On November 10, DPS filed a written reply to the motion. On November 16, the Applicant filed a response to the reply. The Board deliberated on November 17.

On November 18, 1993, the Acting Chair issued a memorandum stating the Board had voted unanimously to deny the motion to dismiss because it is required by law to hold a de novo hearing on **DPS's** appeal. That memorandum is incorporated by reference.

During December 1993 and early January 1994, parties filed prefiled direct and rebuttal testimony, lists of witnesses and exhibits, and written **evidentiary** objections. The Board convened hearings on January 5 and 6, 1994, with the following parties participating:

The Applicant
DPS by Kurt **Janson**, Esq.
CVPS by Morris Silver, Esq.

At the request of Board Chair Elizabeth Courtney and Mr. **Ehrich**, alternate member Darby Bradley presided as Acting Chair. After hearing testimony, the Board recessed the matter pending filing of proposed findings of fact, review of the record, deliberation, and decision.

On February 1, 1994, the parties filed proposed findings of fact and conclusions of law.

The Board deliberated concerning this matter on February 23, 1994, Acting Chair Bradley presiding. On that date, following a review of the evidence and arguments presented in the case, the Board declared the record complete and adjourned the hearing. This matter is now ready for decision. To the extent any proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they are denied.

II. ISSUES

Whether the project, as proposed by the Applicant and conditioned by the District #8 Commission in Condition #11 of Land Use Permit #8B0472, complies with Criterion 9(J).

III. FINDINGS OF FACT

1. Richard Bartholomae (the Applicant) proposes to create a seven-lot subdivision on 30 acres lying west of Route 7A in the Town of Manchester. Two lots, which have existing dwellings, have direct access to Route 7A. The other five lots do not have dwellings on them and will be served by a 1300-foot gravel road proposed as part of this application. A permit is required for the proposed project under 10 V.S.A. Chapter 151 (Act 250) pursuant to 10 V.S.A. § 6081(a) and Board Rule 2(A)(6).
2. I. Stanford **Zecher** (the Co-applicant) owns land contiguous to the land which is the site of the proposed project. The proposed road will run across the Co-applicant's land. He is therefore a co-applicant under Board Rule 10(A).
3. The Applicant does not plan to construct dwellings on the other five lots described above. The lots will be sold to interested buyers.
4. On June 26, 1992, the District #8 Commission issued Land Use Permit #8B0472 (the Permit) to the Applicant, approving the proposed project with conditions. Under Condition #10 of the Permit, the Applicant is prohibited from selling more than two lots in any 12-month period.
5. In the Permit, the District Commission included Condition #11, which reads as follows:

The installation or use of electric resistance space heating is specifically prohibited without the prior written approval of the District Commission.

In the alternative:

Each house constructed on an approved lot shall be designed to a "Four Star Plus" rating by Energy Rated Home of Vermont, Inc., or an equivalent level using an alternative home energy rating system.

Notwithstanding the above, at the time of any lot sale to an initial purchaser, or to the initial home builder, **the Permittee shall** provide the-purchaser with a-current (dated within 12 months of the purchase date) life cycle cost analysis of available alternatives for domestic water heating. The purchaser shall select from the lowest **one-**third of the options, that is given at least nine choices, the purchaser must install one of the three lowest life cycle cost alternatives.

6. Before the Board, the Applicant has adopted Condition #11 as part of the proposed project.
7. Purchasers of residential lots in the Manchester area include a mixture of permanent and seasonal residents, first-time buyers, retirees, and vacation home owners. There will be no restrictions on the residential use of the proposed lots. Local zoning does prohibit any commercial uses, including bed and breakfast operations.
8. The Applicant does not propose any specific type of hot water heating. Lot purchasers will make their own selection, based on the information available to them, price, their own use patterns, and consumer preference. With the assistance of the relevant public utility and in accordance with Condition #11 of the Permit, the Applicant plans to provide purchasers information about the range of hot water systems available and their relative cost over the life of the system. Electric space heating will not be used in the proposed project.
9. Central Vermont Public Service Corporation (CVPS) is the public utility that provides electric service to the Manchester area. CVPS is Vermont's largest utility. It is also part of a New England-wide electric power network known as NEPOOL.
10. Prior to 1986, the demand for electric power in Vermont and throughout New England was rising rapidly. Like other utilities, and in order to meet demand, CVPS had to make investments in new generating plants, and transmission and distribution lines. Because new facilities generally were and are more costly than existing ones, rising demand resulted in rate increases for all payers.

11. The increase in demand for electricity was caused in part by a rate structure that failed to recover the full cost of supplying power to new users. In addition, split-incentives-caused-builders and landlords to **install electric** resistance heat because it had a lower capital cost than other forms of space heating, thereby shifting the higher operating costs of electricity onto homeowners and tenants.
12. In response to this situation, the Vermont Public Service Board (PSB) has instituted a series of measures to reduce the demand for electricity. The **PSB's** demand side management (DSM) program includes redesign of utility rates structures to capture the full marginal cost of providing power, provision of better information to consumers about the life-cycle costs of electric appliances, encouragement of switching from electricity to other fuels, and promotion of energy conservation. In addition, through Criteria 9(F) and 9(J), the Vermont Environmental Board and District Commissions have discouraged the use of electric space heating in developments and subdivisions requiring a permit pursuant to Act 250.
13. Because of these measures, and because of an economic recession and declining oil prices, the demand for electricity in Vermont and New England has remained flat or even declined since 1986. Today, **CVPS** and **NEPOOL** have generating capacity substantially in excess of demand. This situation is expected to persist for the foreseeable future.
14. Despite the excess in generating capacity, there can still be localized distribution problems, particularly during periods of peak demand. An example is **CVPS's** so-called Southern Loop, a transmission line running from Brattleboro to Bennington. This line serves the Manchester area and has been near capacity for several years. In February 1992, when the Applicant was preparing the application for the proposed project, **CVPS** provided an "ability to 'serve'" letter which stated in relevant part:

Our ability to serve new winter electrical loads in the Manchester area is becoming critical and is at a point where additional facilities may be needed soon. The anticipated new electrical growth plus the existing base load has placed our existing facilities near full capacity during the winter months.
15. Since the above letter was written, **CVPS** has made a number of improvements to the Southern Loop. In addition, interruptible power contracts, and fuel switching have led to a decrease in peak demand.

Nonetheless, **CVPS's** ability to serve, with existing facilities, an increase in peak loads remains limited.

16. At this time, CVPS serves approximately 100,000 residential customers. Between 20,000 and 25,000 customers use uncontrolled (on-demand) electric hot water heaters and pay a higher rate, known as Rate 1, for electric power. Between 28,000 and 30,000 customers use controlled (off-peak) electric hot water heaters. These heaters are controlled either by timers which limit water heating during certain hours in the day, or by CVPS directly, which can turn the heaters off through the so-called "RIPPLE" system. Because controlled heaters impose a lower demand on the system during the critical peak periods, CVPS charges these users a lower rate for electric power known as Rate 3.
17. The PSB, as part of its regulation of electric utilities, has required CVPS to prepare an Integrated Resource Plan (IRP) to guide all future programs and investments. Adopted in September 1991, **CVPS's** IRP includes forecasts of future demand for electric power; an assessment of existing generating, transmission, and distribution facilities; descriptions of demand and supply options; an integrated resource evaluation; a long term plan; and a shorter term action plan.
18. In evaluating various program and investment options, CVPS is required by the PSB to apply the so-called "Societal Test." The Societal Test incorporates all of the costs and benefits to all elements of society of providing electricity, rather than just the costs and benefits to the utility or to a specific consumer group. The Societal Test is a screening device that is used to compare or rank different options in relationship to each other.
19. In theory, the Societal Test can include costs and benefits that are not normally reflected in the price of power. For example, in examining electric options, the PSB requires CVPS to include a five percent "add-on" to represent "externalities." The term externalities primarily means the pollution associated with generating electric power. Non-electric power options are given a 10 percent "risk reduction" under the same test.
20. The Societal Test is still an evolving concept. At the consumer level, the test has not yet been widely used. There is no consensus on-whether, and how, adjustments should be made for consumer preference in, for example, choosing a hot water heater. Even when used to evaluate a utility's options,

there are still significant gaps in the test. For example, there is no “externality” cost assigned to other types of fuel such as oil, gas, or wood.

21. There are at least two dozen types of hot water heating systems using a half-dozen common fuels (electricity, natural gas, propane, oil, wood, and solar). At the present time, there is no PSB-approved list of which of these options should be looked at in applying a Societal Test. In addition, there is no PSB-approved method of accounting for considerations such as convenience, safety, health impacts, reliability, and differences in usage.

IV. CONCLUSIONS OF LAW

10 V.S.A. § 6086(a)(9)(5), known as Criterion 9(J), provides:

A permit will be granted for a development or subdivision whenever it is demonstrated that, in addition to all other applicable criteria, necessary supportive governmental and public utility facilities and services are available or will be available when the development is completed under a duly adopted capital program or plan, an excessive or uneconomic demand will not be placed on such facilities and services, and the provision of such facilities and services has been planned on the basis of a projection of reasonable population increase and economic growth.

There are thus three elements that must be met to satisfy Criterion 9(J):

- (a) necessary public utility facilities and services are or will be available to the proposed project under a duly adopted capital program or plan; (b) an excessive or uneconomic demand will not be placed on such facilities and services, and (c) the provision of such facilities and services has been planned on the basis of a projection of reasonable population increase and economic growth.

The burden of proof with respect to these elements lies with the Applicant. 10 V.S.A. § 6088(a). In evaluating whether such burden has been met, the Board keeps in mind the following statement it issued in a prior case:

The Board believes that in enacting Criteria 9(F) [energy conservation] and 9(J), as well as Criterion 9(K) dealing with impacts on public investments including generating and transmission facilities, the General Assembly wanted the Environmental Board and District Commissions to take a broad view of the problem of energy conservation and the impact which new developments have on the

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demand for public utility services. Each project which comes through Act 250 usually has only a minor impact if looked at individually. **Cumulatively**, however; the- impact-may be enormous.- **In deciding this** case, the Board is keeping the cumulative impact firmly in mind. Failure to do so would inevitably result in higher additional costs to all rate-payers, as public utilities are forced to speed up their timetables in the construction of new generating and transmission facilities.

Re: Killington 43 Associates, #1R0522-4-EB, Findings of Fact, Conclusions of Law, and Order at 7-8 (Aug. 20, 1986).

Applying these authorities to the present case, there appears to be little or no dispute among the parties as to whether the project meets the first and third elements of Criterion 9(J). Moreover, it is clear from the evidence that those elements are met. Electric power from a public utility, CVPS, is and will be available to the proposed project. Such power has been planned for and will be provided by CVPS in accordance with its 1991 Integrated Resource Plan.

The dispute among the parties in this case centers primarily on the second element of Criterion 9(J), namely, whether the application, as proposed and conditioned under Condition #11, is sufficient to prove that the project will not place an excessive or uneconomic demand on CVPS.

Under Condition #11, lot owners at the subdivision would be free to choose electric hot water heaters, and electric space heating so long as the home is rated "Four Star Plus." Thus, the proposed project does have the potential to place a burden on CVPS.

With respect to use of electric water heaters, the Board is persuaded that no excessive or uneconomic demand will be placed on CVPS during off-peak periods. As found above, CVPS at this time generally has significant generating capacity and is no danger of being unable to meet demand during the off-peak periods.

However, the Board is not persuaded that the proposed project will not have an excessive or uneconomic demand on CVPS during periods of peak demand if electric water heaters are used. As found above, CVPS's Southern Loop, which is the transmission line that serves Manchester, has been near full capacity during winter months for several years and CVPS's ability to serve an increase in peak loads in Manchester remains limited. Thus, to ensure that the proposed project does not pose an excessive or uneconomic demand on CVPS during peak periods, the Board will require by permit condition under 10 V.S.A. § 6086(c) that any electric water

heaters installed at the proposed project be heaters that are controlled in such a way that their use is limited or non-existent during peak periods.

The Board will therefore alter Condition #11 to reflect this conclusion. With regard to the remainder of Condition #11 as it applies to water heaters, the Board believes that the measures prescribed are not necessary to mitigate impact under Criterion 9(J). The Board further believes that the implementation of Condition #11 as written will be problematic. Specifically, the condition would require the Permittee to prepare for each lot purchaser a life cycle cost analysis of various alternatives for domestic water heating. However, the condition does not specify how many alternatives must be analyzed or even that the analysis be prepared by the utility. There is no review of the analysis to determine whether it is reliable. The parties will not have an opportunity to object to, nor will the District Commission have an opportunity to review, the list of alternatives and the analysis of them. The Board therefore will delete the final paragraph of Condition #11.

On the subject of electric space heating, the Board notes that despite the fact that the Applicant does not propose to use electric space heating in the proposed project, Condition #11 as written would allow electric heat if the purchaser of a lot builds a "Four Star Plus" home. There has been little or no evidence presented as to what a "Four Star Plus" home is or why electric heat in such a home will not pose an excessive or uneconomic demand on CVPS. Accordingly, the Board will alter Condition #11 to prohibit use of electric space heating entirely.

As part of this proceeding, DPS has argued strongly that the Societal Test mandated by the PSB should be used to evaluate a project's compliance with Criterion 9(J). The Board acknowledges the importance and usefulness of the Societal Test in weighing the costs and benefits of various **utility** investments and programs. However, the Board is not convinced that the test is yet refined enough to apply to decisions by end-users and consumers. Even in the utility field, the test is still being refined. In the consumer field, there is no consensus as to which water heating systems are included in the analysis, and there is no agreement on whether, and how, to factor in matters of consumer preference, safety, health, convenience, etc.

Certainly the Board should strive to make its decisions on Criterion 9(J) - as well as 9(F) - consistent with other state statutes and PSB regulations governing utilities and the use of regulated fuels such as electricity. But until there is greater consensus on how the Societal Test should be applied to end-user applications, or until the PSB prepares a specific order setting out how the test should be used in these situations, the Board declines to require the use of the Societal Test in determining whether a proposed development or subdivision meets Criterion 9(J).

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V. ORDER

Land Use Permit #8B0472-EB is hereby issued. -Jurisdiction is returned to the District #8 Commission.

Dated at Montpelier, Vermont this *3rd* day of March 1994.

ENVIRONMENTAL BOARD



Darby Bradley, Acting Chair

Rebecca Day*

Lixi Fortna

Arthur Gibb

Samuel Lloyd

Steve E. Wright

Members Ferdinand **Bongartz** and Terry **Ehrich** participated in the January 1994 hearings in this matter but did not participate in the Board's deliberation of February 23, 1994 because the Vermont Senate voted on February 22, 1994 not to confirm their re-appointment by the Governor.

*Member Day was not present during the Board's deliberation of February 23, 1994; she concurs in this decision.

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