

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 5270-CV-1

Investigation into least-cost)
investments, energy efficiency,)
conservation and management of)
demand for energy in re: fuel-)
switching issues specific to CVPS)

Hearings at
Montpelier, Vermont

Docket No. 5270-CV-3

Investigation into least-cost)
investment, energy efficiency)
conservation and management of)
demand for energy in re: CVPS)
program designs)

September 27, 1993
October 22, 1993
June 27-30, 1994
July 1, 1994
August 1-5, 11-12, and 15, 1994
October 17-20, 1994
November 9-10 and 18, 1994

Docket No. 5686

Investigation into the design and)
implementation of Central Vermont)
Public Service Corporation's)
residential controlled water)
heating DSM measures)

February 3, 1995
March 22, 1995
May 3 and 16, 1995

Order entered:

PRESENT: Frederick W. Weston, III, Hearing Officer

APPEARANCES: Geoffrey A. Commons, Esq.
for the Vermont Department of Public Service

Joseph M. Kraus, Esq.
Morris L. Silver, Esq.
Kenneth C. Picton, Esq.
Mary Marzec
for Central Vermont Public Service Corporation

Edward V. Schwiebert, Esq.
Reiber, Kenlan, Schwiebert, Hall and Facey, P.C.
for Central Vermont Public Service Corporation

Lewis Milford, Esq.
Jeanne M. Sole, Esq.
for Conservation Law Foundation, Vermont Natural Resources
Council, and Vermont Public Interest Research Group

Michael L. Burak, Esq.
Burak and Anderson
for Vermont Electric Cooperative, Inc.

Eileen Simollardes, Manager, Rates & Regulatory Affairs
for Vermont Gas Systems, Inc.

Robert S. DiPalma, Esq.,
Paul, Frank and Collins, Inc.
for Vermont Gas Systems, Inc.

Christopher L. Dutton, Esq.
for Green Mountain Power Corporation

James A. Dumont, Esq.
Sessions, Keiner, Dumont, Barnes and Everitt
for New England Coalition for Energy Efficiency and the
Environment and The Grand Council of the Cree

Martin K. Miller, Esq.
Victoria J. Brown, Esq.
Miller, Eggleston and Rosenberg, Ltd.
for Citizens Utilities Company

Lillian Hier
for American Association of Retired Persons

David O'Brien, Executive Director
for Rutland Economic Development Corporation

Richard H. Saudek, Esq.
Cheney, Brock, Saudek and Mullett, P.C.
for Vermont Ski Areas Association and Vermont State Chamber
of Commerce

Karen B. Horn, Director
for Vermont League of Cities and Towns
Robert Savage, *Pro Se*

Patricia A. Donnelly, Executive Director
for Vermont Environmental Council

Charles H. Kremer, Executive Director
for Vermont Farm Bureau Incorporated

Kerrick L. Johnson, Vice President
for Associated Industries of Vermont

Jeffrey N. Wennberg, Mayor
for City of Rutland

TABLE OF CONTENTS

I. Introduction.	5
A. Legal Basis of the Board's Action.	6
B. Positions of the Parties.	9
II. Background.	12
A. Procedural History of This Phase of the Investigation.	12
B. Docket 5686: The Preliminary Injunction.	13
C. The Stipulation.	13
III. Findings of Fact and Discussion.	14
A. General Features of the Stipulation.	14
B. Avoided Costs.	16
C. Fuel-Switching Measures.	17
D. Customer Fuel-Switching Incentives.	19
E. Electrical Efficiency Incentives.	22
F. The Residential New Construction Program.	22
G. Other Residential Programs.	23
H. Rate 3.	24
I. Total DSM Expenditures.	26
J. Promotion of Electrotechnologies.	27
K. Commercial and Industrial Programs.	29
L. DSM Penalty on CVPS's Rate of Return.	33
M. Societal Cost-Effectiveness Testing.	34
N. Disconnection.	36
O. CVPS's 1994 Integrated Resource Plan.	38
P. Cost Recovery.	38
Q. Term of the Stipulation.	38
R. Financing Issues.	39
S. Program Reference Manuals.	39
T. Monitoring, Evaluation, and Reporting.	40
U. Environmental Issues.	41
IV. Other Issues.	42
A. Anti-Trust Issues.	42
B. Regulatory and Policy Issues.	43
V. Conclusion.	45
VI. Order.	47

I. INTRODUCTION

The central issue in this complex case is whether Central Vermont Public Service Corporation ("CVPS" or "Company") should acquire, to the greatest extent possible, all cost-effective energy efficiency and conservation resources, including fuel-switching measures, in its service territory. On the basis of a detailed and thorough record resulting from intense litigation over several years, today's proposed decision urges the Board to reaffirm its long-standing commitment to the least-cost provision of utility services to Vermont's ratepayers and approve a comprehensive redesign of the Company's demand-side management ("DSM") programs.

Specifically, I recommend that the Board approve a comprehensive settlement between the Company and the Department of Public Service ("DPS" or "Department"). The settlement ("Stipulation") resolves, or sets out processes for the future resolution of all outstanding issues in these dockets, ranging from the design and implementation of a broad set of residential, commercial, and industrial energy-efficiency programs to the rate structure for water heating service. Also, the Stipulation deals with issues outstanding from the Company's previous rate case, Dockets 5701/5724: to wit, the lifting of a 75-basis point penalty that the Board attached to CVPS's allowed return on equity for its demonstrated mismanagement of its DSM programs.¹

The redesigned DSM programs will produce tremendous savings for CVPS's ratepayers. The energy efficiency and conservation measures that will be implemented under these programs during 1995 and 1996 will avoid more than \$40 million in power costs over the next two decades. And they are extremely cost-effective: CVPS's investment will total only \$10.7 million, in effect yielding a return of well over 35 percent.² It is for this reason that I recommend that the Board approve the Stipulation. The failure to capture these savings would have deleterious impacts on Vermont's citizens and environment.

A. Legal Basis of the Board's Action

1. Dockets 5701/5724, Order of 10/31/94 at 5, 127-175. On April 30, 1996, the Board issued a final Order in Docket 5863 (CVPS's recent request for an increase in its rates) in which it approved the lifting of the DSM penalty. The Board did *not* remove the concurrent penalty for the Company's mismanagement of its power costs, although it did suspend that penalty for the duration of the Memorandum of Understanding at issue in that docket. Docket 5863, Order of 4/30/96 at 5.

2. The present value of the savings is approximately \$14.8 million (1995 \$). See Footnote 30. The benefit-cost ratio of the programs is 1.38 (14.8/10.7).

For twenty years, Vermonters have sought ways to eliminate wasteful uses of energy and to promote improved energy efficiency in their homes and businesses. Government, business, and private citizens have all worked together to try to lower energy bills, thus enhancing the state's economic vitality and protecting its natural resources.

Since 1988, Vermont's regulated utilities, regulatory agencies, and other interested parties have worked to reduce energy costs by encouraging utility customers to use energy more efficiently. After extensive public and evidentiary hearings in Docket 5270, the Board ordered regulated utilities to invest in:

efficiency programs that are comprehensive, including aiming at cost-effective savings from new construction, commercial lighting, low-income consumers, and economical fuel switching.

Docket 5270, Order of 4/16/90 at I-6 (emphasis in original). The Board's initial investigation in Docket 5270 included substantial testimony on the benefits of cost-effective fuel-switching³ from both a customer and a societal perspective. That evidence led to findings that fuel-switching had many special characteristics—both positive and negative—but that it was one of the many measures that utilities should evaluate for cost-effectiveness. *Id.*

Three basic facts support those findings: (1) electric space heat has been and still is a principal driver of winter electric peaks and subsequent high winter electric rates; (2) at peak, the New England Power Pool ("NEPOOL") dispatches oil-fired supply resources; and (3) fossil fuel electric generation delivers only 30 percent of its gross energy (BTUs) in the form of useful heat.

The most fundamental fact favoring fuel switching lies in the physical laws governing energy production: it takes up to three times as much fuel to produce electricity and later to convert it into heat or power as it does when that fuel can be used directly for heat and power. This is particularly true when the problems of storing electricity and the losses in transmitting it are considered.

Docket 5270-CV-1, Order of 3/19/91 at 31.

However, the Board also noted that there are special aspects to fuel-switching measures that suggest caution in requiring utilities to implement such measures:

3. As used herein, the term "fuel-switching" refers to replacing an electric end-use technology with a cost-effective substitute technology that operates on an alternative fuel: generally propane, oil, or natural gas. "Fuel choice" refers to the decision to use electricity or some other fuel for a particular end-use in the first instance, *i.e.*, at the time of construction of a dwelling or facility.

Thus, the decision to require specific fuel switching measures should be made only where there is strong evidence that fuel switching will be cost-effective, that it will not occur in the absence of utility action, that the planned utility action is no greater than necessary, and that the apparent cost-benefits for customers are not outweighed by the risks of price volatility and supply disruption inherent in increased reliance upon unregulated fuels.

Id. at 32-33.

In 1991, the General Assembly reaffirmed Vermont's commitment to energy efficiency by enacting legislation that requires regulated Vermont utilities to develop "least cost integrated plans" that include "comprehensive energy efficiency programs" for all customer classes. 30 V.S.A. § 218c.

For many Vermont utilities, the development and implementation of energy efficiency programs, including fuel-switching measures, has generally proceeded smoothly. Sixteen of the state's 22 distribution companies are implementing fuel-switching programs.⁴ Together, these utilities provide for more than half of the state's annual electricity consumption.

CVPS, the state's largest utility, has developed and implemented a number of DSM (or conservation and energy efficiency) programs, most of which have benefitted its commercial and industrial customers. CVPS has been reluctant to implement fuel-switching measures, a decision that has led to delays in the development of residential programs, where it is expected that fuel-switching measures will have the widest applicability.

In the summer of 1990, the DPS and other parties sought a Board order requiring CVPS to develop and implement all *cost-effective* fuel-switching measures for acquiring energy efficiency savings from its customers. CVPS, in response, argued that the Board did not have the authority to require utilities to evaluate fuel-switching measures regardless of whether or not those measures would ultimately reduce costs for the utility or its ratepayers.

After argument and briefing, the Board concluded that it had the authority to require regulated utilities to implement demand-side management programs, including programs with

4. They are Green Mountain Power Corporation, City of Burlington Electric Department, Washington Electric Cooperative, Inc., Citizens Utilities Company, Village of Ludlow Electric Light Department, Village of Northfield Electric Department, OMYA, Inc. (Vermont Marble Company Power Division), Town of Hardwick Electric Department, Village of Hyde Park Electric Department, Village of Lyndonville Electric Department, Village of Stowe Electric Department, Village of Swanton Electric Department, Village of Johnson Water & Light Department, Town of Readsboro Electric Department, Village of Orleans Electric Department, and Barton Village, Inc. Electric Department.

fuel-switching measures, as part of a utility's obligation to provide "proper service at minimum cost".⁵ CVPS appealed the Board's Order to the Vermont Supreme Court. On August 5, 1991, the Court dismissed CVPS's appeal.⁶

In May of 1991, CVPS and the DPS entered into a stipulation for the provision of cost-effective fuel-switching measures for the benefit of CVPS's ratepayers.⁷ After a hearing, and with some modifications, the Board approved that stipulation in its Order of July 12, 1991 in Docket 5270-CV-1. Specifically, the Board concluded that the design principles:

represent a reasonable and good-faith effort to test the threshold level of utility action that is necessary to acquire savings from cost-effective fuel-switching investments.

In addition, the Board stated that it expected CVPS to:

monitor closely and to evaluate carefully the fuel-switching components of its programs. If cost-effective fuel-switching is not occurring because of inadequate financial incentives, we will expect [CVPS] to discover that fact and to gather enough information to restructure, and if necessary strengthen, the incentives that it offers.

Dockets 5270-CV-1&3, Order of 7/12/91 at 7, 9. CVPS did not seek judicial review of that Order.

In its Order of May 4, 1993, the Board directed CVPS to file a report on its programs with fuel-switching measures in compliance with the July 12, 1991 Order, which had approved the stipulation on design principles. At a prehearing conference on a related matter in this docket, CVPS, the DPS, and Conservation Law Foundation ("CLF") agreed to conduct informal discussions with a member of the Board's staff in an effort to reach agreement on

5. See, Docket No. 5270-CV-1, Order of 3/19/91 at 10-11, citing *In Re GMP*, 142 Vt. 373, at 388-89 (1983).

6. After reaching a stipulation with the DPS regarding the design principles for fuel-switching measures, CVPS petitioned the Supreme Court to dismiss its appeal, specifically requesting that the dismissal be "without prejudice". The Supreme Court did not grant CVPS's request and simply dismissed the appeal. Vt. S.C., 91-155, 8/5/91. Thus, the Order of 3/19/93 is binding as to the issues that were or could have been raised in CVPS's appeal. Because the Supreme Court did not dismiss the appeal without prejudice as explicitly requested by CVPS, the dismissal must be taken to be with prejudice.

7. Cost-effective DSM programs benefit customers who participate in them, by lowering their individual energy bills, and, over time, will benefit *all* ratepayers, by avoiding the construction or purchase of expensive new supply resources.

modifications to CVPS's programs with fuel-switching measures. The Board stated that, in the event the informal discussions failed to produce complete agreement, it would hold evidentiary hearings on appropriate changes to CVPS's programs. Dockets 5270-CV-1&3, Order of 5/26/93 at 3-4. Three months later, the DPS informed the Board that further negotiations were unlikely to result in agreement on changes to CVPS's programs. DPS Status Report, 8/17/93. That filing precipitated the litigation resolved with today's proposed Order.

B. Positions of the Parties

There are twenty-one parties to this proceeding. Not all of them participated actively in this phase of the Docket. The merits of any specific objections to fuel-switching are discussed where appropriate in Section IV., below. Here I make several general observations about their positions.

During the contested phase of this docket, CVPS argued that utility-sponsored fuel-switching programs are cost-effective when they result in conversions that produce societal benefits that are greater than their costs. However, the Company also maintained that a utility is less able than an informed consumer to determine when a potential conversion is societally cost-effective and when it is not. In support of its position, CVPS presented testimony and evidence addressing (i) the recognition and treatment of certain risks, (ii) the potential societal impacts of rate increases resulting from fuel-switching, and (iii) the potential environmental effects of fuel-switching. *See generally* Deehan pf. (summarized at 1-4). In the light of these considerations, the Company recommended that the Board (a) adopt specific changes to the societal cost-effectiveness test for evaluating DSM measures (as set out in its April 16, 1990 Order in Docket 5270), (b) approve CVPS's proposal for a limited fuel-switching program, designed to overcome certain market imperfections, and (c) allow the Company to continue offering direct financial incentives for load control measures (*e.g.*, Rate 3 water heating) where they appear to be societally cost-effective. *Id.* at 5-10.

The Department vigorously opposed the Company's proposals. The DPS presented evidence and testimony on (i) the nature and pervasiveness of market barriers to cost-effective investment in energy efficiency, (ii) the environmental benefits of DSM generally and fuel-switching specifically, and (iii) detailed designs and implementation plans for all of CVPS's energy efficiency, conservation, and load management programs. *See generally* Chernick and Plunkett pf.

After the close of hearings in the case-in-chief, the Company and Department entered into settlement negotiations and, in April 1995, filed a stipulation resolving all outstanding issues. In May 1995, the two stipulating parties presented testimony and evidence in support of the settlement.

The Conservation Law Foundation ("CLF"), which has been a participant in Dockets 5270-CV-1&3 since their inception, has also recommended that the Board order the Company to design and implement programs to acquire all cost-effective fuel-switching resources. CLF Position Statement, 8/2/93. CLF did not present testimony or evidence in the contested phase of the Dockets.

The Vermont Ski Areas Association and the Vermont Chamber of Commerce (together "VSAA/VCC") oppose utility-sponsored fuel-switching and the Department's recommendations. VSAA/VCC argue that (i) neither fuel-switching nor the Stipulation is supported by law or public policy, (ii) the societal cost-effectiveness analyses in support of the stipulated programs are flawed, (iii) the agreement with respect to CVPS's participation in Act 250 proceedings is beyond the scope of law and proof in these dockets, and (iv) the design of the stipulated residential new construction program is contrary to public policy.⁸ VSAA/VCC Brief at 1-9.

Five CVPS ratepayers—Robert Savage, Ruth Harvie, Blake Morris, Nancy Gaudreau, and Tuthill Doane—testified in opposition to utility-sponsored fuel-switching programs.⁹ They argued that such programs are unfair to both the utility and its customers, constitute a subsidy from one group of customers to another, will have adverse environmental impacts on the state, will expose Vermonters to greater fossil-fuel price risk, and could increase the risk of household accidents. *See generally* Savage pf., Harvie pf., Gaudreau pf., Tuthill pf., and tr. 7/1/94 at 163-313. Mr. Savage also raised concerns about the costs incurred by the Company and the DPS in litigating these dockets.¹⁰

The City of Rutland ("City") presented the evidence and testimony of its mayor, Jeffrey Wennberg, in opposition to utility-sponsored fuel-switching programs. The City takes this position for three general reasons: (i) the Board lacks the legal authority to impose such a duty upon utilities; (ii) such programs do not treat ratepayers equitably; and (iii) fuel-switching will

8. I address the substantive issues raised by VSAA/VCC and the other intervenors where appropriate in the sections that follow. For a discussion of the legal basis for the Board's authority to order fuel-switching, see Section I.A., above.

9. Originally, the ratepayers filed a motion to intervene on behalf of the Company's Customer Advisory Panel, of which they were members at the time. Customer Advisory Panel Motion to Intervene, 7/8/93. The Board denied the Panel's motion, but granted permissive intervention to the five ratepayers as individuals. All submitted prefiled testimony, and all but Mr. Blake gave oral testimony.

10. The cost of litigation is a legitimate issue to be taken up by the Board in a rate proceeding. In fact, this question was addressed in CVPS's 1994 rate case, Dockets 5701/5724.

result in adverse environmental and economic impacts in CVPS's service territory. Wennberg pf. at 1.

The Rutland Industrial Development Corporation ("RIDC") also opposes utility fuel-switching programs, and presented testimony on the negative economic impacts that such programs could have on CVPS's service territory.

A number of other parties opposing fuel-switching — the American Association of Retired Persons, the Vermont League of Cities and Towns, the Vermont Environmental Council, the Vermont Farm Bureau, Inc., and Associated Industries of Vermont, intervened in this phase of these dockets. However, they neither presented evidence nor filed briefs in support of their positions.

The efforts and resources that the parties devoted to these investigations over the past several years were extraordinary: thoughtful, intensive, and at times, I am sure, difficult. They should know that their labors were not wasted. I believe that the public good has been served by their hard work and dedication.

II. BACKGROUND

A. Procedural History of This Phase of the Investigation

On September 9, 1993, the Board issued an Order responding to the Department's status report filed on August 17th. In that Order, the Board described the scope of inquiry and appointed Michael H. Dworkin, Esq., as Hearing Officer.¹¹ A prehearing conference was held on September 27th.

On October 4, 1993, the Board opened Docket 5686 in order to resolve issues which had arisen concerning the appropriateness of CVPS's controlled water heating rate and the cost-effectiveness of including controlled water heating as an energy efficiency measure. Necessarily, this investigation included a review of the Company's Rate 3 off-peak water heating rate. The Board appointed Frederick W. Weston as Hearing Officer. A prehearing conference was held on October 22, 1993, during which the question of consolidating Docket 5686 with Dockets 5270-CV-1&3 was taken up. By Order of November 4th, the dockets were consolidated for hearing.

11. In November 1995, after the close of all hearings in these dockets, Mr. Dworkin left the employ of the Board. In his place, the Board appointed me as Hearing Officer in Dockets 5270-CV-1&3. Because these dockets were consolidated for hearings with Docket 5686, I heard all evidence and testimony presented during the hearings in this phase. I have also reviewed the record in detail.

More than twenty-five days of evidentiary hearings in these three cases were held between June and November 1994. During this phase of the proceedings, a number of parties were allowed a limited right of intervention in these dockets.¹²

In December 1994, a procedural order was issued setting out a schedule for the filing of initial and reply briefs. On January 6, 1995, the Company and the DPS informed the Board that they had entered into settlement negotiations and, therefore, requested an extension of the deadline for filing briefs. That request was granted and, after two more short extensions, these two parties ("Stipulating Parties") filed the Stipulation on April 7, 1995. Hearings on the Stipulation were held in May.¹³ In June, briefs were filed, followed by reply briefs in July.¹⁴

B. Docket 5686: The Preliminary Injunction

On February 25, 1994, the Department filed a Motion For Injunctive Relief in Docket 5686 seeking to enjoin CVPS from offering service under Rate 3 to any new (additional) customers during the pendency of the proceeding. By Orders of June 7 and 28, 1994, I declined to freeze enrollment under Rate 3 but instead ordered alternative relief, requiring CVPS to notify potential Rate 3 customers that the water-heating service and its rates were currently under investigation by the Board and that they could be modified or withdrawn. Docket 5686, Order of 6/7/94 at 39-40 (as amended 6/28/94).

At the evidentiary hearing of May 16, 1995, the Company requested that I modify the preliminary injunction to allow Section 7 of the Stipulation to go into effect until such time as a

12. In July 1993, the Board received ten requests for intervention in these dockets. For the reasons set out in the Board's Order of September 9, 1993, most of the motions were granted pursuant to Board Rule 2.209(B), "permissive intervention." CVPS's panel was denied intervention; however, the Board granted the Panel members their alternative motion to intervene as a group of individual ratepayers. Order of 9/9/93 at 6-10.

13. The parties opposed to the settlement were granted an opportunity to conduct discovery on the Stipulating Parties, cross-examine the Stipulating Parties' witnesses, and present testimony and evidence of their own.

14. Briefs were filed by the DPS and CVPS (jointly), Robert Savage, the City of Rutland, the Vermont Chamber of Commerce, and the Vermont Ski Areas Association. Of these, only the Stipulating Parties' submissions contained comprehensive and detailed references (with citations) to the evidentiary record.

final order is issued.¹⁵ I granted the request at that time. As discussed later in this Order, by approving this Stipulation the Preliminary Injunction is lifted and replaced by the establishment of a cap on the number of customers that are able to receive service on Rate 3. Continuation or abolition of the cap after the expiration of the Stipulation will be considered, along with other aspects of Rate 3, in CVPS's current rate design case, Docket 5835.

C. The Stipulation

On April 7, 1995, the DPS and CVPS filed the Stipulation, which settled all outstanding issues between the two parties. The Stipulation called for the immediate implementation of its terms, "in anticipation of [its] ultimate approval" by the Board. Stipulation at 1. In this way, the delivery of programs and services to CVPS customers during the 1995 construction season would be assured. The Stipulation provided that if the Board did not want the Stipulating Parties to begin delivering the agreed-to programs and services until after there had been an opportunity for hearing and approval, CVPS would cease its implementation efforts. The Board did not act to prevent implementation of the Stipulation while it was under review.

III. FINDINGS OF FACT AND DISCUSSION

A. General Features of the Stipulation

Findings

1. The Stipulation establishes a framework of agreements and implementation strategies for the provision of fuel-switching services to CVPS's customers. In addition, it contains broad policy and procedural agreements which resolve certain related disputes between the Department and the Company concerning the scope and breadth of CVPS's portfolio of DSM programs and services. Exh. Joint-1 (hereinafter referred to as the "Stipulation").

15. Under the terms of the Stipulation, CVPS will be freed during calendar years 1995 and 1996 of the obligation to notify new customers of the investigation. In addition, during those years, enrollment under Rate 3 will be capped at 26,830 customers at any one time. Stipulation, § 7.

2. The Stipulation establishes a procedure for lifting the return-on-equity ("ROE") penalty imposed by the Board on CVPS for the Company's mismanagement of its programs. *Id.* at 15 (§ 11.1).¹⁶

3. CVPS agrees to use specified avoided costs and price escalators, inclusive of adjustments for environmental externalities, in the cost-effectiveness screening of DSM measures, electrotechnologies, load-control measures, and measures at issue under Act 250. Stipulation at 1-2 (§ 1.1).

4. CVPS also agrees to use, without amendment or modification, and to not challenge the societal test as defined by the Board in Docket 5270 for the screening and design of DSM measures and programs, electrotechnologies, and load control measures. *Id.* at 15 (§ 12).

5. The Stipulation also provides "that fuel-choice and fuel-switching measures are appropriate DSM measures under current Vermont law when they are societally cost-effective and are included in programs that provide appropriate customer information and allow customers the choice of whether to participate." *Id.* at 2 (§ 2.1).

6. In order to implement the program strategies identified in the Stipulation, the Stipulating Parties agreed to certain program and implementation designs, preliminary program budgets, and significant program design details. In addition, the Stipulating Parties established overall DSM expenditure levels and energy savings targets for 1995 and 1996. *Id.* at 3 (§ 2.5 and Attachment B).

7. The Stipulation sets out DSM spending levels for CVPS of \$5.9 million¹⁷ in 1995 and \$4.8 million in 1996, adjusted for assessment fees actually retained and Low-Income Weatherization Tax credits actually received. *Id.* at 10 (§ 8.1).

16. In Dockets 5701/5724, the Board imposed a 75-basis point reduction in CVPS's allowed ROE as a penalty for the Company's "mismanagement of [its] energy-efficiency programs." The penalty was applied concurrently with an equivalent but independent penalty for deficiencies in CVPS's management of its power costs. Dockets 5701/5724, Order of 10/31/94 at 2, 171. Today's Order will not in any way change the rates approved for CVPS in that proceeding.

17. Section 8.1 of the Stipulation indicates that the 1995 DSM spending level is \$5.8 million. In their jointly-filed proposed decision, CVPS and the Department state that the correct 1995 level, as reflected on Attachment 2-B, is \$5.9 million. Joint Brief at 10. CVPS's Annual DSM Report, filed on 3/11/96, states that the company actually spent \$4.7 million in 1995. With the compliance report to be filed within thirty days of this Order, the Company should address the question of why its actual spending differed from the budgeted amount.

8. The Stipulation sets out a protocol for the rate recovery of the Company's expenditures and related net lost revenues ("ACE" or "Account Correcting for Efficiency") associated with delivery of the stipulated DSM programs. *Id.* at 16 (§ 15.1).

9. The Stipulation establishes specific incentives to be provided by CVPS to its DSM customers. The Stipulating Parties also specified budgets and acceptance targets for low-income customers and customers located within transmission constrained areas.¹⁸ *Id.* at 3-6 (§§ 2.4 and 3).

10. The Stipulation contains agreements related to the provision of electrical efficiency (non-fuel-switching) measures and other electrotechnologies for residential, commercial, and industrial customers. *Id.* at 6-15 (§§ 4, 6, 9, and 10).

11. The Stipulation provides that CVPS will continue offering Rate 3 water heating service and information relating to Rate 3 as currently designed without the notification required by the Hearing Officer, or any other warning, during calendar years 1995 and 1996. However, no more than 26,830 customers will be able to receive service on Rate 3 at any one time during that period and no DSM incentives will be offered to customers for a conversion to Rate 3 service during that period. *Id.* at 9-10 (§ 7).

Discussion

The Stipulation constitutes a comprehensive settlement of all outstanding issues in these dockets. The DPS and CVPS assert that their decisions to enter into the settlement were based on "their expert judgments that it represented a fair, efficient and reasonable means to bring closure to this case, that the record evidence supports a broad range of outcomes, and that the terms and conditions of the Stipulation are well within that range." Joint Brief at 12.

On the basis of my independent review of the record in these dockets, I recommend that the Board approve the Stipulation in its entirety. The following sections of this proposed order examine the details of the settlement, consider the objections raised by some intervenors, and the set out the reasons for my recommendation. I have structured this proposed order to follow, to the greatest extent possible, the outline of the Stipulation.

B. Avoided Costs

Findings

12. In the Stipulation, the DPS and CVPS specify the avoided costs, fossil fuel prices, and fossil fuel price escalators that CVPS will employ for the purposes of DSM measures and

18. For purposes of the Stipulation, stressed transmission area is defined as the Company's Southern Transmission Loop.

program screening during the term of the agreement. CVPS will also use these avoided costs for establishing the societal cost-effectiveness of electrotechnologies, load control measures, and measures at issue under Act 250. The avoided costs are inclusive of environmental externality and comparative risk adjustments, applied to all measure or program costs.¹⁹ Stipulation at 1-2 (§ 1).

13. If the Company and the Department reach agreement on new avoided costs during the review of the Company's 1994 Integrated Resource Plan ("IRP"), the IRP avoided costs will replace those set out in the Stipulation. *Id.* at 2.

14. The stipulated avoided costs represent a reasonable projection of the value of future electric power and energy. Tr. 5/16/95 at 157-163; *see also* exh. DPS-PLC-S-6.

Discussion

During the hearings on the case-in-chief, the assumptions and methodologies underpinning the calculation of CVPS's avoided costs were heavily litigated. *See generally*, Bentley pf. and reb. pf.; Chernick pf. and reb. pf. While the DPS and the Company disputed numerous and important aspects of this issue, the single, most critical difference in their estimates turned on the forecast timing of need for new capacity purchases (or construction) in the New England region. The duration of the region's current surplus has a profound effect on the value of avoided supply, depressing it particularly in the early years of the planning horizon when the relative cost of alternative energy efficiency measures is high.²⁰ Both parties presented plausible, but significantly different, projections of the time of future need and its effect on prices.

Upon review, I conclude that the stipulated set of avoided costs is reasonable. These values lie well within the ranges of costs originally projected by both the Company and the DPS. By their very nature, prognostications for the future cannot be established as facts; however, their reasonableness can be assessed in the light of likely outcomes and the risks of volatility in the energy markets. In this case, the evidence supports a finding that the stipulated

19. Specifically, CVPS will continue to apply the 10.0 percent comparative risk discount to the costs of non-fuel-switching measures when performing cost-effectiveness analyses, but will apply only a 7.5 percent discount to the costs of fuel-switching measures. Stipulation at 2 (§1.1); Docket 5270, Order of 4/16/90, Vol. IV at 9-17, and Order of 6/6/90 at Attachment A.

20. This is intensified by the standard practice of discounting the future value of costs and benefits, on the theory that consumption today is more valuable than consumption in the more distant—and uncertain—future.

avoided costs fall well within the range of reason and form an appropriate basis for resource planning and acquisition.

C. Fuel-Switching Measures

Findings

15. CVPS and the DPS agree that fuel choice and fuel-switching measures are appropriate DSM measures under current Vermont law when they are societally cost-effective and are included in programs which provide appropriate customer information and allow customers the choice of whether to participate. Stipulation at 2 (§ 2.1); *see* Docket 5270-CV-1, Order of 3/19/91, and 30 V.S.A. § 218c.

16. With respect to regulatory proceedings or requirements affecting energy use (*e.g.*, building or energy codes, Act 250 Land Use Permit proceedings), the Stipulating Parties agree that fuel-choice and -switching measures are appropriate efficiency options when they are societally cost-effective, taking into account technical feasibility, health or safety considerations, and special application requirements. Stipulation at 2 (§ 2.1).

17. Residential new construction and retrofit projects subject to Act 250 will be considered by the DPS to have satisfied both Criteria 9(F) and 9(J) of the Act if an applicant in CVPS's Residential New Construction Program attains (1) a "four-star plus" (or equivalent rating under a home energy rating to be offered under the program) and (2) meets the other relevant criteria set out in the Stipulation. *Id.* (§ 2.2).

Discussion

The evidence in this docket (and prior dockets) demonstrates that, under appropriate circumstances, fuel-switching programs are rightly included in a utility's portfolio of resources to meet present and future demand for service. This is consistent with the legal conclusions reached by the Board in its Order of March 19, 1991. *See* Section I.A., above. CVPS and the Department agreed on this essential point, although they disputed hotly the means of and extent to which such programs should be offered. In contrast, the other intervenors challenged the propriety of fuel-switching altogether, although none filed briefs that offered a basis for overturning the legal analysis of the issue set out in the Board's March 19, 1991 Order.

The Stipulation acknowledges the reasonableness of DSM in general, and fuel-switching in particular, to assist a utility to serve its customers at the lowest possible societal costs. In this way, it is consistent with Vermont statutory requirements and prior case law, and should be approved. 30 V.S.A. § 218c; Docket 5270, Order of 4/16/90; Docket 5270-CV-1, Order of 3/19/91.

D. Customer Fuel-Switching Incentives

Findings

18. The Stipulation establishes incentives to be provided by CVPS to encourage cost-effective end-use fuel conversions by the following targeted customer groups (defined by housing status):

- a. Low-income²¹ single-family owner-occupied or low-income single-family or two-family rental units where the tenant pays the electric bill will be eligible for a direct payment of 40 percent of the installation cost with the remainder financed at zero percent interest over four to six years.
- b. Low-income multi-family (defined as three or more units) and low-income single-family or two-family rental units where the owner pays the electric bill will be eligible for incentives of at least 25 percent of the installation cost. The DPS and CVPS will negotiate a redesign of this program for 1996, with a budget of \$100,000 for incentives.
- c. Single-family, electrically heated dwellings, throughout the CVPS service territory, at the time of sale or refinancing (*i.e.*, "lost opportunities") will be eligible for a free energy rating and, if a predetermined package of efficiency and fuel-switching measures is installed, will receive a \$300 payment.
- d. Non-low-income single-family, electrically heated dwellings in constrained transmission and distribution areas (defined as CVPS's "Southern Loop") will be eligible for a \$400 incentive for space-heat fuel-switching.
- e. Non-low-income multi-family, electrically heated units in the CVPS Southern Loop will be eligible for a \$100 incentive for space-heat fuel-switching.

Stipulation at 4-5 (§§ 3.1-3.5).

19. The Stipulation sets out the following targets for the number of units to be switched during 1995 and 1996:

	<u>1995</u>	<u>1996</u>
Low Income:	85	80
Constrained T&D Area		
Space Heat only:	53	85

Id. at 5-6 (§ 3.6).

20. These targets may be refined during negotiations on final program delivery details. In the Residential High-Use Program, in no case shall the Company be obligated to perform more than 100 low-income fuel switches or more than 137 space-heat fuel-switches in the Transmission Constrained area for 1996. *Id.* at 4 (§ 3.1).

21. As used in the Stipulation and this Order, the term "low-income customer" refers to customers with household incomes at or below 150 percent of the federal poverty guideline (as amended from time to time).

21. Where appropriate, customers will be encouraged to utilize state weatherization services. In addition:

The DPS agrees to support CVPS in its efforts to obtain weatherization tax credits to reimburse the Company for 105% of the direct cost of audits, materials, and measure installation, provided that the expenditures were prudently incurred, cost-effective and that the weatherization services followed a comprehensive energy audit and work plan (or that the Company and the weatherization staff had jointly concluded that the need for weatherization services could be determined without a comprehensive energy audit), and that services were targeted toward income-eligible households.

Id.

Discussion

Historically, utility sponsorship of energy efficiency, load management, and other demand-side programs was justified in part by the existence of significant market barriers to economically efficient consumer behavior. Docket 5270, Order of 4/16/90, Vol. III at 24-27. Those barriers—high transaction costs, lack of information, low-incomes, and unavailability of capital, to name a few—continue to obstruct the efficient operation of our energy markets. Much of the evidence in this case focussed on the appropriate design and level of incentives necessary to surmount those barriers. *See* Plunkett pf., Parlin pf., and Gamble pf.

The Stipulation identifies the customer groups most affected by market barriers to their least-cost use of electricity and energy services. The agreement sets out the incentive levels and the mechanisms for financing cost-effective water and space-heat fuel-switches. By targeting low-income households, for whom energy consumption constitutes a relatively large portion of disposable income, the DPS and CVPS have designed a program that attacks the greatest inequities resulting from market barriers—and does so in a way that reduces the total cost of electricity production for *all* of the Company's ratepayers.²² In addition, the program

22. In this way, the financial incentives for fuel-switching function in precisely the same way that rate discounts for load management do. The utility's total system costs can be reduced, *to the benefit of all ratepayers*, through careful management of its customers' demand. There is a value to load management that can be quantified, and the utility is therefore willing to pay for a customer's agreement to interrupt service or permit direct load control. Such utility payments often take the form of discounted rates, but they are, in effect, just the same as direct payments for energy efficiency measures or fuel-switching. For this reason, I reject the argument of VSAA/VCC and other intervenors that incentives for fuel-switching are merely "artificial subsidies" from one set of customers to another. Tr.

identifies potential lost opportunities throughout the residential housing market and specifies mechanisms that CVPS will use to capture those opportunities at the lowest cost, *e.g.*, at a time when the incremental transaction and financing costs of switching are minimal.

The incentives that the Stipulating Parties have developed are reasonably calculated to overcome the market barriers that customers face. I recommend that the Board approve them. After two years' experience with this design, the incentives can be reviewed and, if necessary, adjusted in order to improve the efficacy of the Company's fuel-switching programs.²³

7/1/94 at 138-147, 246-249; Moot pf. at 2; Savage pf. at 1-8; VSAA/VCC Brief at 5-6. No intervenor asserted that utility incentives for interruptible service or high-efficiency light-bulbs were improper. Tr. 7/1/94 at 148-149, 246-249; Moot pf. at 2-4.

23. Several of the intervenors argued that incentives for fuel-switching are qualitatively different from those for energy efficiency measures on the ground that, by encouraging a customer to switch energy sources, a utility will be "giving business to a competitor." This, in their view, can be differentiated from utility-sponsored energy efficiency, which seeks only to reduce consumption of electricity. Tr. 7/1/94 at 36-37, 47-48, 93-95, 247-248; City Letter, 7/30/93, at 2.

This argument is unpersuasive for two reasons. First, because the objective of integrated resource planning and management is to provide utility services at the lowest total societal cost, both energy efficiency and fuel-switching—where cost-effective—are rightly components of a utility's resource portfolio. See Docket 5270, Order of 4/16/90 at I-6. A kilowatt-hour produced by an electric generator, by a compact-fluorescent light bulb, or by removing an electric space-heating system is still a kilowatt-hour: it is in the best interests of society to acquire that kilowatt-hour from the least costly source. (I note also that some efficiency measures, such as lighting improvements, can reduce electricity consumption by as much as 75 percent; *i.e.*, reductions of similar magnitude to those of fuel-switching. Plunkett pf. at 23-24.) And second, although producers do not yet compete against each other in the electric retail market, they nonetheless face many different kinds of competitors in the market for *energy services*. Electric utilities compete with propane, natural gas, biomass, and fuel oil suppliers in the space- and water-heating markets. They also compete with manufacturers of light bulbs, gas lamps, and candles in the lighting market. In all cases, the utilities' competitors seek to reduce customers' reliance on electricity in the provision of particular end-use services. Fuel-switching is not unique in this regard and, therefore, there is no justification for omitting it (when cost-effective) from a portfolio intended

E. Electrical Efficiency Incentives

Findings

22. The High-Use Program will be targeted to high-use, low-income customers throughout the CVPS system and to all high-use customers in stressed T&D areas. Stipulation at 6 (§ 4.1).

23. The Stipulation states that:

The High-Use Program will be offered reactively to very high-use, non-low-income customers in non-T&D-stressed areas. CVPS will seek DPS concurrence in the protocols to be used for defining eligibility.

Id.

Discussion

The Stipulation details the terms and conditions under which electric efficiency measures (as distinct from fuel-switching measures) will be provided to high-use customers. The agreement reflects an attempt to differentiate among customers on the basis of two relevant criteria. The first is their location which, in areas marked by transmission constraints, will strongly affect the value of the power savings to the utility. The second is the market barriers that vary in significance for differing customers (*i.e.*, low-income). I find that the agreement is reasonable: it assists those customers whose consumption places the greatest strains on the transmission system and those that are least able to respond to market signals.²⁴

F. The Residential New Construction Program

Findings

24. CVPS's Residential New Construction Program will use both assessment fees and incentives to encourage cost-effective energy consumption in new homes. This approach is

to provide service at the lowest societal cost. See also Section IV.B., below.

24. It is for this reason that I reject VSAA/VCC's arguments that the Stipulation targets low-income customers for fuel-switching assistance simply "because their incomes are low." VSAA/VCC Reply Brief at 3. While the moral appeal of helping the less affluent amongst us is very powerful, it is not, in this context, within the powers granted to the Board by the Legislature. Rather, it is because low incomes pose a significant barrier to the acquisition of least-cost resources by utilities that we identify such customers for specific, remedial treatment.

similar to efforts by other Vermont utilities (*e.g.*, Washington Electric Cooperative and Green Mountain Power Corporation). The essential features of the program are:

- a. a \$300 assessment fee;
- b. the provision of an energy rating (comparable to that provided by Energy Rated Homes of Vermont under the WEC program) which will have educational value and give customers access to Energy Efficient Mortgages ("EEM");
- c. the use of a "scorecard" which can identify electrical efficiency and fuel choice opportunities in a flexible manner;
- d. the provision of an incentive which reimburses participating customers for the full cost of the assessment fee and pays an additional amount adequate to ensure acceptance of a cost-effective package of electrical efficiency measures; and
- e. implementation of the program in a manner consistent with similar residential new construction programs provided elsewhere in Vermont, and which seeks to attain long-term market transformation.

Id. at 7 (§ 5.1).

25. Detailed implementation plans will be negotiated by the DPS and Company. *Id.*

26. The Stipulation contemplates that the DPS and CVPS will actively participate in a statewide cooperative effort to institutionalize a cost-effective new construction program along the lines of the stipulated programs. *Id.* at 8 (§ 5.6).

Discussion

The Board has approved other residential new construction programs whose essential features are found also in the stipulated program in this case. On the basis of the record evidence of CVPS's power needs and customer characteristics, I recommend that the Board approve the program for CVPS. Plunkett *pf.* at 36-46 (and associated exhibits); Docket 5270-WEC-2, Order of 1/8/93; Docket 5780 (*Re GMP Rate Increase Request*), Order of 6/9/95.

G. Other Residential Programs

Findings

27. The Stipulation provides that direct installation services for a core package of efficiency measures will be provided free of charge to CVPS Residential High-Use Program participants. Stipulation at 9 (§ 6.1).

28. For low-income customers, the Direct Installation Program will be implemented utilizing a "piggyback" delivery mechanism in cooperation with local community action programs. Similarly, for other customers, this program will be "piggy-backed" on the efforts of SmartEnergy Services Corporation ("SmartEnergy").²⁵ No costs of SmartEnergy, other

25. SmartEnergy is a wholly-owned subsidiary of CVPS which, among other services, rents electric water heaters to customers.

than the actual costs of materials and labor, are to be charged to any DSM account. Furthermore, SmartEnergy will be reimbursed only for those measures that are the subject of the Stipulation. *Id.* (§ 6.1).

29. In addition, CVPS will take steps to develop and offer cost-effective solar water-heating and heat recovery heat pump technologies under the High-Use and New Construction Programs. *Id.* (§ 6.3).

Discussion

Direct installation of energy efficiency measures can be a cost-effective approach for ensuring that a utility acquires a minimum level of resources from its customers. The essential aspect of this program, like that of the others addressed by this Stipulation, is that CVPS will take only those actions that promise net savings to it and its ratepayers or, in other words, that reduce the total societal cost of providing service. There is little doubt that such actions are consistent with the public good and should therefore be approved.

H. Rate 3

Findings

30. CVPS will continue to offer Rate 3 off-peak water heating service as currently designed, subject to certain conditions. Stipulation at 9 (§ 7.1).

31. Enrollment under Rate 3 will not exceed 26,830 customers at any one time during calendar years 1995 and 1996. During this period, CVPS may offer Rate 3 service and provide information about the service for current or prospective customers. Pursuant to the Hearing Officer's Orders of June 7 and 28, 1994, CVPS will no longer be required to provide special notice to customers.²⁶ No DSM incentives will be offered to customers for a conversion to Rate 3 service during that period, but information about Rate 3 availability and its costs and benefits will be presented as part of CVPS's DSM programs. *Id.*

32. The design, terms, conditions, and charges for Rate 3 service will be examined in CVPS's next rate design case. Upon approval of the Stipulation, Rate 3 will not be changed prior to January 1, 1997, unless so ordered by the Board. *Id.* (§ 7.2).

Discussion

The propriety of Rate 3 was debated in this case. The DPS originally argued that the service no longer was justified by the economics of CVPS's system and, therefore, should be

26. See Docket 5686, Order of 6/7/94. CVPS was instructed to notify new controlled water-heating customers that Rate 3 was under investigation by the Board and might be withdrawn.

closed to new customers. The Company opposed the Department's recommendation, asserting that the off-peak management of residential water heaters provided quantifiable system benefits. In settling their differences, CVPS and the Department have agreed to put off final resolution of Rate 3 issues to the Board's investigation into the Company's overall rate design (Docket 5835).

The evidence in this case demonstrates that a rate structure that encourages the shifting of demand from peak to off-peak periods can provide system benefits (reductions in total cost). The dispute here centered not so much on the question of whether electric water heating demand can be cost-effectively shifted to the off-peak period but rather on whether it is more cost-effective to fuel-switch customers' water heating altogether. In light of the fact that CVPS's Rate 3 enrollment has been steadily falling and that the stipulated DSM program design calls for water-heat fuel switches where cost-effective, I conclude that the agreement on Rate 3 issues is reasonable. Furthermore, in the comprehensive review of CVPS's overall rate structure (Docket 5835), the parties will have an opportunity to revisit Rate 3 questions. For these reasons, I recommend that the Stipulation be approved.²⁷

I. Total DSM Expenditures

33. CVPS's DSM spending will be \$5.9 million for 1995 and \$4.8 million for 1996.²⁸ These spending levels are adjusted for assessment fees actually retained, plus Low-Income Weatherization Tax credits actually received. Stipulation at 10 (§ 8.1).

34. Beginning in March 1996, the Stipulating Parties will begin discussions concerning DSM spending in 1997 and after. *Id.* (§ 8.2).

35. If CVPS's DSM program energy savings targets have been met prior to the end of a year for a given retrofit program, that program may be suspended for the remainder of that year, provided that this action is taken in a manner that reasonably preserves the Company's capability to restart the program, does not create significant lost opportunities, and does not result in any significant additional costs for doing so. If the overall DSM program budget for a year is not fully expended, the excess will be carried over and added to the next year's DSM program budget. *Id.* at 10-11 (§ 8.4).

27. The Stipulating Parties agreed to incorporate the record developed in this proceeding in the rate design docket, as necessary. Stipulation at 10 (§7.3).

28. Section 8.1 of the Stipulation states that the 1995 DSM spending level is \$5.8 million. The Stipulating Parties point out that the correct level for 1995, as reflected in Attachment B of the Stipulation, is \$5.9 million. Joint Brief at 31.

36. For 1996, DSM incentives that CVPS may offer as part of any Economic Development Incentive Program ("EDIP") contract (except for amounts already approved by the Board and one-half of the 1996 uncommitted Large Commercial and Industrial Program amount) shall be in addition to the overall annual DSM spending level stipulated in the agreement, unless otherwise agreed by the Stipulating Parties. *Id.* at 11 (§ 8.5).

Discussion

The Company and the Department agreed to overall levels of spending on energy efficiency and conservation programs that appear reasonable and sufficient to enable the Company to deliver those services cost-effectively. The projected annual expenditures amount to less than 3.0 percent of CVPS's annual revenues (in the two years that investments will be made pursuant to the Stipulation)²⁹ and are likely to reduce its power costs by approximately \$43 million over the lives of the measures (at least \$15 million present value).³⁰ Furthermore, the annual average of the totals agreed to by the Stipulating Parties in this docket is essentially equal to the DSM levels already approved by the Board in Dockets 5701/5724.³¹ Therefore, I conclude that the Stipulation will create no incremental impacts upon current rates. This should alleviate the concerns expressed by several of the intervenors in this docket.

As a general rule, it is inappropriate to arbitrarily set DSM spending levels; rather, a company should develop a plan to acquire all available, cost-effective efficiency resources (by which I mean those whose value exceeds their cost). In practice, this requires consideration of

29. I note also that the projected expenditures will be markedly less, as a percentage of revenues, than the Company's peak spending on DSM: approximately 3.9 percent in 1993 (based on the adjusted test year cost of service of \$201.04 million [$5.9/201.04 = 3.9$ percent]). Dockets 5701/5724, Order of 10/31/94 at Att. A-1.

30. This estimate is based on simple arithmetic calculations, as follows. Total savings (in dollars) were derived by multiplying the expected megawatt-hour savings in each year by the avoided cost per MWh in each year, as set out in Attachment B to the Stipulation. Megawatt-hour savings were taken as given in Attachment A; for all years after 1996, the 1996 savings levels were assumed (*i.e.* 13,447 MWh/year). The calculation was performed for the years 1995 through 2017, *i.e.* , 23 years in accordance with Section 12.2 of the Stipulation. The sum of these nominal annual savings is \$43 million; their present value in 1995 at 9.0 percent is \$14.8 million.

31. The Board approved an adjusted test-year total expenditure of \$5.433 million in Dockets 5701/5724; the annual average in this case is approximately \$5.4 million.

a host of factors that will affect the efficacy of the resource acquisition strategy, such as incremental labor costs, marketing, financial transaction costs, and near-term rate impacts, among others. Careful budgeting, consistent with reasonable expectations of achievements in the year, is a part of this process. In this case, the evidence supports a conclusion that the budgeted expenditures are reasonable and sufficient for the purposes to which they will be put.

J. Promotion of Electrotechnologies

37. The DPS and CVPS agree that:

electricity can be an economically and environmentally preferable alternative to fossil fuels for meeting selected end uses. They also agree that for selected electric or other end uses, electric technologies may exist or appear that are economically, technically and environmentally preferable to existing end uses. Research and demonstration of emerging electrotechnologies is in the public interest, where such options show promise of reducing total societal costs. It is also in the public interest for CVPS to encourage substitution of electricity for non-electric end uses, using commercially available technologies, if such increased sales are shown to reduce total societal costs and not to increase rates to other customers.

Stipulation at 11 (§ 9.1).

38. The Stipulation sets out a general methodology for determining when an electrotechnology is a societally preferred end-use:

A showing that an electrotechnology will lower total societal costs will generally require an economic comparison between the electrotechnology and the competing alternatives, using the costs of the measures, the incremental cost of electricity, the avoided costs of non-electric energy sources, and net external environmental costs incurred and avoided by the electrotechnology and its alternatives.

Id.

39. When considering the promotion of an electrotechnology, CVPS will use a figure ten percent higher than the expected actual dollar cost for the incremental electricity used by that electrotechnology; this will be done in order to adjust for the comparative risk benefits of non-electric energy consumption, consistent with the Board's Order in Docket 5270. *Id.*

40. Since the research into and promotion of electrotechnologies do not constitute traditional demand-side management activities, funds expended by CVPS in such endeavors will be incremental (*i.e.*, in addition) to the stipulated DSM budgets.³² Electrotechnology

32. With the exception of any costs incurred in the marketing of the Company's DSM programs: such costs (which may include the characterization and delivery of societally cost-effective electrotechnologies) may be considered as part of the DSM budgets for 1995 and 1996. Stipulation at 12-13 (§ 9.3).

expenditures will not be eligible for "distinctive" rate treatment, pursuant to the Board's Order in Docket 5270. *Id.* at 12; *see* Finding 33.

41. Potentially cost-effective electrotechnologies on which CVPS has developed preliminary information include:

- a. certain emerging industrial electrotechnologies;
- b. technologies which have a potential to solve certain environmental compliance problems;
- c. energy efficient commercial cooking technologies;
- d. electric forklifts;
- e. commercial and residential electric heat pump water heaters;
- f. dual-fuel heat pumps;
- g. solar/electric water heating; and

- h. farm ventilation equipment.

Id. (§ 9.2).

Discussion

The evidence in this docket did not establish whether and to what extent any particular electrotechnology is societally cost-effective. This, of course, does not mean that there are no such opportunities: it is certainly conceivable that there are end-uses that would be optimally served by electricity. The Stipulation reaches no conclusions on this point, and merely sets out the procedures and methods to be employed in developing and delivering such services.

This is reasonable. Managing customer demand is by no means limited to energy efficiency and conservation measures that reduce energy consumption. Rate design and direct controls have long been used to economically manage load. Appropriate, societally cost-effective electrotechnologies can be another component of integrated resource management.³³

I recommend that the Board approve this section of the Stipulation, particularly in light of the fact that it does not bind the parties or the Board in the case of future litigation of these issues.

33. Mr. Savage argued that the Department, by supporting the development of electric cars while simultaneously advocating fuel-switching, is being inconsistent, particularly with respect to the environmental effects of the two policies. Tr. 7/1/94 at 217-218. This is not necessarily the case. The evidence demonstrates that fuel-switching, by and large, will displace fossil-fuel fired generation in New England. Electric vehicles may be less costly on a societal basis (including net environmental effects) than fossil-fuel powered vehicles. In any event, this question, certainly amenable to empirical analysis, is not at issue in these dockets.

K. Commercial and Industrial Programs

42. As part of the comprehensive agreement, the Department and CVPS set out procedures and deadlines for the revision of the Company's commercial and industrial ("C&I") programs. The C&I programs to be revised are:

- a. the C&I Market-Driven Program (§ 10.1);
- b. the C&I New Construction Program (§ 10.2);
- c. the Small Commercial and Industrial Retrofit Program (§§ 10.3-10.5);
and
- d. the Large Commercial and Industrial Programs (§ 10.6).

In addition, CVPS will continue to aggressively offer its Dairy Farm Program to customers.³⁴ Stipulation at 13-15 (§ 10).

43. CVPS will continue to provide funding for electric energy efficiency measures in buildings owned or leased by the State or federal governments. Such funding will be provided only after all other available funding sources have been exhausted. The Company's funding for such measures is part of the overall DSM spending levels as stipulated. *Id.*

44. CVPS will continue to offer its Dairy Farm Program. *Id.*

1. The C&I Market-Driven Program

45. With the Department's assistance, CVPS will redesign its Commercial and Industrial ("C&I") Market-Driven Program by January 1, 1996. The intent is to make the program more comprehensive, to make it available to both large and small C&I customers, and to offer incentives that cover the incremental cost of higher efficiency equipment and technologies installed by participants. *Id.* at 13 (§ 10.1).

46. The C&I Market-Driven Program will be redesigned to reach all (or very nearly all) of the C&I equipment replacement and facility remodeling and renovation market by December 31, 1996. *Id.*

2. The C&I New Construction Program

47. The Stipulating Parties will negotiate the redesign of CVPS's C&I New Construction Program, with the intention of completing the process by July 30, 1995.³⁵ Here

34. However, as the Dairy Farm Program achieves greater penetration rates, less savings per customer and per dollar invested are expected to be obtained from these services. Stipulation at 14-15 (§ 10.7).

35. The new program descriptions were filed on October 23, 1995.

again the objective is to restructure the program so as to reach the greatest fraction of the eligible market.³⁶ *Id.* (§ 10.2).

3. The Small Commercial and Industrial Retrofit Program

48. The Stipulating Parties also propose to redesign and refocus CVPS's Small Commercial and Industrial Retrofit Program. At a minimum, the redesigned program should offer participating eligible customers with facilities located with the CVPS Southern Loop the following:

- a. comprehensive energy-efficient lighting audits and prompt installation arrangements of qualifying lighting measures;
- b. comprehensive fuel-switching analysis for electric space and water heating, and analysis of other electric efficiency measures; and
- c. technical assistance and education regarding the benefits of cleaning refrigeration condenser coils, and other low-cost operating and maintenance ("O&M") measures.

In addition, CVPS will catalogue, as appropriate, refrigeration and other electrical efficiency opportunities which may be addressed by means of custom follow-up DSM services or the C&I Market Driven program. *Id.* at 13-14 (§§ 10.3-10.5).

49. CVPS will offer an incentive which will "buy down" the customer's share of the project cost to a one-year payback.³⁷ The Company will also offer or arrange for market-based financing which will provide a positive cash flow for the customer's portion of project costs (that is, the annual financing costs will be less than the projected energy savings). In addition, CVPS will directly install, at no charge to the customer, electric hot water efficiency measures for facilities with electric water heat. *Id.* at 14 (§ 10.4).

50. For the term of the Stipulation (i.e. through December 31, 1996), CVPS will target the Small Commercial and Industrial Retrofit Program to:

- a. businesses in at least one mutually agreeable town per year in the Southern Loop; and
- b. businesses in other locations which have previously been audited and have a high potential for cost-effective energy savings.

36. The Stipulation contemplates that "CVPS will actively participate in joint efforts with other utilities to promote this type of approach statewide and to promote effective building standards, and improved effectiveness and consistency in Act 250 Land Use Permit proceedings." *Id.* (§ 10.2).

37. Subsequent to the execution of the Stipulation, CVPS and the DPS agreed that for targeted small C&I customers located on the Southern Loop, CVPS will pay the full costs of all applicable measures, including direct installation. These services will be subject to the DSM spending levels contained in the Stipulation. Joint Brief at 29.

For businesses outside the Southern Loop, the incentive offered by CVPS will be for a 1.5 year "buy-down" for eligible measures, with an accompanying offer of positive cash flow financing for the customer's portion of the costs as described above. *Id.* (§ 10.5).

4. Large Commercial and Industrial Programs

51. CVPS will negotiate, on a case-by-case basis, the incentives to be offered to qualifying projects with its large commercial and industrial customers and with customers participating in the C&I New Construction Program. The incentives may include direct bill financing, bank financing, or other third-party financing, all of which will be offered to customers in 1996.³⁸ *Id.* (§ 10.6).

52. In addition, CVPS and the DPS propose to review the targeting of the current Large Commercial and Industrial programs, to evaluate the services provided through the program, and to develop program enhancements through which customers may be treated more comprehensively and cost-effectively by CVPS's Market Driven program (as revised under the terms of the Stipulation). *Id.*

Discussion

In the main, the purpose of the proposed changes to the Company's C&I programs is to reduce CVPS's power costs and make its DSM programs more cost-effective by maximizing customer participation during 1995 and 1996. The efforts that the Stipulating Parties envision focus on ways to reduce administrative costs and overcome market barriers. I recognize that final program designs have not in all cases been settled, but I am persuaded that the Stipulation sets out a reasonable process for achieving the stated ends. Both the DPS and Company have strong incentives to resolve any outstanding program design issues (among which the avoidance of further litigation looms large).³⁹

38. If CVPS elects bank or third-party lending, CVPS will prearrange all financing and do so in a manner reasonably calculated to ensure that the financing mechanism is not a barrier to program participation. *Id.* (§10.6).

39. The Stipulation does not set out a minimum level of incentives which, in a program that allows for case-by-case negotiations, might be necessary to prevent potential undue discrimination among customers. This is not, in itself, a reason to deny the proposed program, but it is worth further consideration in the context of the review of CVPS's annual DSM reports.

L. DSM Penalty on CVPS's Rate of Return

53. In CVPS's last rate case, Dockets 5701/5724, the Board imposed a 75 basis-point penalty against the Company's otherwise allowed return on equity ("ROE"). The Board found that the Company had mismanaged its DSM programs. The penalty was applied concurrently with an equivalent but independent penalty for failures related to CVPS's management of its power supply costs. Dockets 5701/5724, Order of 10/31/94 at 171.

54. "[U]pon a showing that CVPS is successfully pursuing agreed upon targets. . . and upon a demonstration of effective, good faith and prudent implementation" of the stipulated programs, the Department will "support the lifting of half of the DSM penalty upon approval of this Stipulation with the other half of the DSM penalty to be lifted at the end of 1995." Stipulation at 15 (§ 11.1).

55. This provision will have no effect on the current rates charged by CVPS. *Id.*

Discussion

In Dockets 5701/5724, the DPS argued that CVPS should be penalized for the mismanagement of DSM programs and services. In support of that position, the DPS presented the testimony and evidence of witnesses Parker, Plunkett, and Parlin, who also testified in the instant dockets.⁴⁰ On the basis of the evidence in those dockets, the Board reduced CVPS's allowed return on equity by 75 basis points (.75 percent). It did so for two separate and independently adequate reasons. The Stipulation in this case addresses one of those two reasons, but does not affect the other one. Thus, the penalty will remain in effect even if the Stipulation is approved.⁴¹ Finding 53, above.

The Stipulating Parties agree that if the Company acts in good faith to meet the terms of the Stipulation, the DSM-ROE penalty should be removed. The Company and the DPS have developed a sensible procedure and reasonable criteria for the lifting of the penalty: complying with the Stipulation will be critical to a demonstration that the Company is committed to meeting its statutory obligations under 30 V.S.A. § 218c. I therefore recommend that the Board approve this provision of the Stipulation.⁴²

40. CVPS does not concede that its conduct warranted sanctions. Joint Brief at 47.

41. The penalty was imposed concurrently with an equal penalty for the Company's mismanagement of its power supply portfolio. By itself, the lifting of the DSM penalty will therefore have no effect on the allowed rate of return or, ultimately, on retail rates.

42. In fact, this has already happened. See Footnote 1.

M. Societal Cost-Effectiveness Testing

56. Section 12.1 of the Stipulation states that:

CVPS agrees to use and not to challenge the societal test as defined by the Board in Docket No. 5270, without amendment or modification, for the screening and design of DSM measures and programs, and for the screening of electric technologies and load control measures. The Department agrees that societally cost-effective measures other than the optimal measure under the societal test should be eligible for incentives in properly designed DSM programs. It is, however, the ongoing obligation of CVPS to seek to ensure that the structure of incentive offerings is sufficient to overcome market barriers for the optimally cost-effective measures, and does not artificially promote sub-optimal measures.⁴³

Id. at 15 (§ 12.1).

57. For the purposes of the Stipulation, societal-test screening of space heat measures (including weatherization measures) shall be based on an analysis period of 23 years. In such analysis, each measure will be represented with its own measure life up to that limit, and the screening of water heating measures and all other competing measures shall similarly use an analysis period equal to the lifetime of the longest lived measure being compared (taking into account the cost and likelihood of renewal for shorter lived measures). *Id.* (§ 12.2).

Discussion

These provisions of the Stipulation conform to the general principles for cost-effectiveness testing set out in the Board's Order of April 16, 1990, in Docket 5270 (as amended 6/6/90). In reaching the agreement, the DPS and CVPS obviated the need (for the present at least) for the Board to rule on the myriad and complex questions raised by the testimony of witnesses Chamberlin, Plunkett, and Deehan.⁴⁴

I recommend that the Board approve this section of the Stipulation. Two elements of it deserve comment. Section 12.1 requires that CVPS design its incentives so as to assure that optimal measures are not foregone in favor of cost-effective *but sub-optimal* measures. This is an important and welcome feature of the agreement. I recognize, however, that the objective will pose certain difficulties that may only be overcome through trial and error efforts. The

43. Except as discussed above in connection with the Rate Design case in paragraph 7.3 of the Stipulation.

44. With respect to, among other things, the secondary elasticity effects of electricity price changes due to decreased consumption. For the purposes of these dockets, the question of whether the economic concept of reduced consumer surplus (resulting from a shift in the demand curve) should be taken into account in societal cost-effectiveness testing shall be considered moot.

Board has addressed this and related issues in greater detail elsewhere. *See* Docket 5270-WEC-2, Order of 1/30/92 at 21-25 and Docket 5270-BED-1, Order of 10/17/91 at 21-35.

Section 12.2 states that CVPS will apply a 23-year "analysis period" when testing the cost-effectiveness of space heat measures. The Stipulating Parties acknowledge that this differs from the 30-year horizon required by the Board in its Order of May 5, 1993, in this proceeding, but they assert that, in the context of the overall settlement, the reduced period is nevertheless reasonable. Joint Brief at 43.

As a general matter, it is proper to evaluate the economics of an investment in relation to the expected costs of alternatives over the entire lifetime of the investment. Space heating systems are routinely long-lived assets of twenty to thirty years (and perhaps longer). The evidence in this docket does not demonstrate precisely why the DPS and the Company settled on a period of 23 years, but it is certainly within the range of reasonableness and I recommend that it be approved.⁴⁵

N. Disconnection

58. Section 13.1 of the Stipulation provides that:

in the event that the Board finds that CVPS has the right to disconnect for [a failure to pay an amount due for on-the-bill DSM financing], the Parties agree that any such finding shall constitute a waiver of Board Rule 3.302(B)(4), and that any such waiver shall not be a precedent for or in any other way support the Company's disconnection of a customer for any other non-recurring charge.

Stipulation at 16 (§ 13.1).

59. The DPS and CVPS will negotiate protocols for determining when and how any such disconnection shall be exercised.⁴⁶ *Id.*

Discussion

Board Rule 3.302 details the conditions under and the procedures by which a utility may disconnect a customer for non-payment of a valid bill. Section 3.302(B) of the rule sets

45. I am sanguine that a 23-year analysis period carries with it a low probability of unnecessarily screening out cost-effective fuel-switches in part because standard economic analysis requires that future cash flows be discounted to reflect their riskiness and decreasing relative value over time. The differences in benefits and costs in years 24-30 are likely to have an immaterial impact on the net benefits of a potential fuel-switching measure.

46. The protocols were filed on September 20, 1995.

out the exceptions to this disconnection policy, and it states, in pertinent part, that disconnection shall not be permitted if:

the delinquency is due to a failure to pay a line extension, special construction charge, or other non-recurring charge except that this exception shall not apply to reconnection charges, or charges for personal visits to collect delinquent amounts. . . .

Board Rule 3.302(B)(4).

The Department and the Company request that the Board expressly rule on the question of whether a customer's failure to pay an amount due for on-the-bill DSM financing may be considered cause for disconnection (after appropriate notice). Joint Brief at 35. Specifically, "CVPS seeks the right to disconnect electric service on grounds that the DSM measure is a substitute for the provision of energy." *Id.* In addition, the Stipulating Parties agree that such a ruling by the Board "shall constitute a waiver of Board Rule 3.302(B)(4), and that any such waiver shall not be a precedent for or in any other way support the Company's disconnection of a customer for any other non-recurring charge." *Id.*

This request raises several interesting issues, and it appears that even the Stipulating Parties are not entirely of like minds on the question. In the Stipulation, they seek a ruling and, if the ruling is that disconnection is allowable, they ask that such disconnection be considered a waiver of Board Rule 3.302(B)(4). In their joint brief, they restate this request, but add a statement that implies that CVPS believes that on-the-bill financing constitutes a *recurring* charge and should therefore be subject to disconnection for non-payment.

The Rule does not define "recurring charge." Relying therefore upon the plain language rule, I conclude that it describes a charge that occurs repeatedly.⁴⁷ The on-the-bill financing mechanisms at issue here will involve repeated monthly charges. Although such monthly charges will ultimately cease after a specified period (the financing term), it seems clear that they are "recurring" during that time. If, however, there is only *one* month of on-the-bill DSM charges, the argument that they are non-recurring is much stronger: but then the Board is left with the unenviable task of rationalizing different disconnection practices for the same services merely because they differ in the time periods over which they will be paid for. CVPS's assertion that the financing is in payment for an alternative service that is expressly intended to substitute for recurring electricity consumption is persuasive. However, because

47. *Webster's II New Riverside University Dictionary* defines recur as "to occur or come up again repeatedly" (1988: Houghton Mifflin).

the Stipulating Parties' request that disconnection be allowed by waiver of the Rule, they have attempted to relieve the Board of the need to reach a final decision on this question.⁴⁸

In light of these considerations, I conclude that CVPS should be empowered to disconnect customers for non-payment of on-the-bill financing charges associated with the Company's DSM services. I recommend that the Board affirm this conclusion and state furthermore that such disconnections shall be allowed under Rule 3.302.⁴⁹

O. CVPS's 1994 Integrated Resource Plan

60. CVPS will file an update to its 1994 Integrated Resource Plan ("IRP") to reflect the changes to its DSM programs as set out in the Stipulation. In addition, the Evaluation Plan included with the 1994 IRP will be amended.⁵⁰ Stipulation at 16 (§ 14.1).

P. Cost Recovery

61. Section 15.1 of the Stipulation states that the redesigned programs: should be deemed to meet the requirements for preapproval, and that Central Vermont's recovery of the costs of its DSM expenditures pursuant to this stipulation and related ACE amounts should be accorded the treatment set out in the Board's Docket No. 5270 Order for preapproved programs. The Parties agree that, subject only to the requirement that CVPS diligently pursues and implements these programs and makes appropriate changes to increase program cost effectiveness during the term of this Stipulation as necessary, CVPS will be entitled to that cost recovery treatment for the costs of these programs incurred for the duration of this Stipulation.

Stipulation at 16 (§ 15.1).

48. The Stipulating Parties did not address the question of whether DSM activities constitute "special construction" and whether therefore DSM charges should be considered exceptions to the general disconnection rule.

49. In effecting such disconnections, the Company shall of course be bound by all other applicable terms and conditions set out in Rule 3.302. In this context, the Stipulating Parties are currently negotiating specific "protocols for the applicability and implementation of any such disconnection right prior to the Company's exercising any such disconnection right." Stipulation at 16 (§13.1). The Stipulation also provides that CVPS will "carry out any and all actions related to, anticipating or implementing any such disconnection right in a manner reasonably calculated to ensure that its actions do not create a barrier to program participation. If such barriers are created, the Company will seek to revise its program designs, in consultation with the DPS, to eliminate or overcome such barriers." *Id.*

50. These updates were filed on October 23, 1995.

Q. Term of the Stipulation

62. The Stipulation will become effective upon its approval by the Board. It will expire on December 31, 1996. Stipulation at 17 (§ 16.1).

63. Several provisions of the Stipulation will remain in force after December 31, 1996. They are:

- a. CVPS's agreements regarding the propriety of fuel-switching and fuel-choice measures;
- b. the DPS's agreements regarding DSM cost recovery for costs incurred during 1995 and 1996;
- c. the DPS's agreement regarding the removal of the DSM ROE penalty imposed in Dockets 5701/5724; and
- d. such disconnection rights as the Board approves, but only with regard to collection of "on-the-bill" financing of DSM measures as provided for in the Stipulation.

Id. (§ 16.2).

R. Financing Issues

On September 15, 1995, CVPS filed a petition requesting a declaratory ruling as to whether the proposed customer financing guarantees that the Company will provide for fuel-switching services require Board approval under 30 V.S.A. § 108.⁵¹ Filed in support of the petition were a memorandum of law and the prefiled testimony and exhibits of Jonathan W. Booraem, the Company's Treasurer.

30 V.S.A. § 108(a) states in part that:

A domestic corporation subject to the jurisdiction of the public service board shall not mortgage nor pledge any of its corporate property nor issue any stocks, bonds, notes or other evidences of indebtedness or change its shares as provided in section 270 of Title 11 without the consent of the public service board given on petition and after opportunity for hearing of the corporation or its incorporators and a finding of the board that the proposed action will be consistent with the general good of the state.

Because the petition was filed under 30 V.S.A. § 108 and involves additional questions not at issue in this case, it is appropriate that the request be reviewed in a separate proceeding. This proposal for decision should be considered notice to the parties that the Board intends to process this petition, pursuant to 30 V.S.A. § 108, and that, at present, there appear to be no genuine issues of material fact requiring hearing upon the petition. The Department shall notify the Board within thirty (30) days of the final Order as to whether it supports the

51. The petition is not limited to fuel-switching financings only. CVPS also proposes to guarantee third-party financing for the construction of new customer line extensions. Petition of 9/15/95 at 6ff.

Company's request.⁵² Comments on the petition by other interested persons should also be filed within fifteen days of the Board's Order.

S. Program Reference Manuals

64. By July 30, 1995, CVPS will file program reference manuals containing detailed energy savings calculation methodologies and assumptions for the programs offered to customers pursuant to the Stipulation. The DPS will assist in the development of these manuals.⁵³ Stipulation at 3-4 (§ 2.5).

65. The program reference manuals will be used by CVPS for the calculation of energy savings and related amounts under the account correcting for efficiency ("ACE") resulting from the provision of services pursuant to the Stipulation. *Id.*

T. Monitoring, Evaluation, and Reporting

66. CVPS will monitor and evaluate the fuel-switching and fuel-choice measures to be designed and implemented pursuant to the Stipulation. Stipulation at 2-3 (§ 2.3).

67. By January 30, 1996, and January 30, 1997, CVPS will file with the Board and DPS a summary of fuel-switching activity. At a minimum, the filings will include the following:

- a. detailed information on requests for service (which meet program guidelines);
- b. the number of audits performed;
- c. participating customer recommendations;
- d. the number of customers who converted their end uses;
- e. the installed measure costs and projected savings; and
- f. the acceptance rates of fuel-switching, in total and for each of the following groups: single-family low-income housing units, multi-family low-income housing units, housing units located within transmission constrained areas, and others, as contemplated by the Stipulation.⁵⁴

52. Section 15.2 of the Stipulation implies that the Department supports the Company's request under § 108; however, since the petition will be handled in a separate docket, an affirmative statement by the DPS of its position in this matter is required.

53. The manuals were filed on October 16, 1995.

54. "Acceptance rate" is defined by the Stipulation as the ratio (expressed as a percentage) of the number of customers who fuel-switch to the number of customers to whom CVPS made a recommendation to fuel-switch. More specifically, the numerator consists of those customers to whom a recommendation was made who

Id. (§ 2.3).

68. For the purposes of these reporting requirements, stand-alone water-heat conversions will be identified and counted separately. Where space- and water-heat systems were both converted, both measures will be identified. *Id.*

69. If the 1995 targets for (i) low-income space- and water-heat fuel switching and (ii) space-heat fuel-switching in the Company's T&D-constrained area of the Southern Loop are not met, the Company and the DPS will redesign the program and incentives for those customers for 1996. These targets are intended to be met separately, with any one implementation counted under only one of the agreed-upon categories. *Id.*

70. By March 1996, CVPS will provide an analysis of the potential for DSM strategies to help improve the reliability of the Southern Loop, including but not limited to:

- a. the characterization of DSM savings potential in affected areas;
- b. the projected timing and avoidable costs of specific T&D investments which may be deferrable or avoidable; and
- c. a schedule for resource acquisition which is designed to actually avoid or defer investments.

This analysis may also consider the potential for strategic T&D efficiency investments, and small-scale generation or co-generation projects in combination with DSM efforts. *Id.* at 10 (§ 8.3).

71. CVPS will maintain accounting records of all its expenses associated with its electrotechnologies activities. These expenditures and activities shall be reported to the Board and Department 90 days after the end of each calendar year (April 1). *Id.*

U. Environmental Issues

72. Cost-effective fuel-switching will reduce the net environmental impacts (*i.e.*, airborne emissions) caused by space- and water-heating demand in CVPS's service territory. Chernick pf. at 34-41 (and associated exhibits).

Discussion

The parties presented extensive evidence on the potential environmental effects of fuel-switching in Vermont. The Department developed a record that demonstrates that cost-effective fuel-switching will reduce the net emissions from fossil-fuel combustion in the

then (within two years) actually make the switch. The denominator consists of the total number of customers who received such a recommendation. Stipulation at 2-3 (§2.3).

provision of water- and space-heating service.⁵⁵ This fundamental conclusion flows from two facts. The first is that the thermal efficiency of electric space- and water-heating is generally less than that of direct combustion at the point of end-use. Docket 5270-CV-1, Order of 3/19/91 at 31; *see* Chernick pf. at 38. The second is that fuel-switching will reduce electric generation *at the margin*, not on the average: which is to say that mostly peaking and intermediate fossil-fuel fired generation—not baseload hydro-electric or nuclear generation—will be avoided. Plunkett pf. at 21; Chernick pf. at 36.

Several parties raised concerns that, despite the overall net reduction in air emissions from fuel-switching, increased local combustion of fossil fuels will diminish the quality of Vermont's air. CVPS presented evidence on this point, but the DPS raised credible challenges to the methods and assumptions underpinning it. Chernick pf. at 34-41. No other party presented any analyses in this regard.

All resource decisions involve trade-offs. On the basis of the record before me, I conclude that the expected benefits associated with the overall reductions in air emissions resulting from fuel-switching outweigh any potential local impacts. Moreover, since the Stipulation contemplates only 138 fuel-switches in 1995 and 165 in 1996, any local impacts will surely be negligible.

IV. OTHER ISSUES

A. Anti-Trust Issues

In light of concerns raised by several of the parties with respect to the competitive implications of fuel-switching (*see* Footnote 23), it is appropriate here to review the conclusions of the Board five years ago. *See* Docket 5270-CV-3, Order of 5/20/91 at 86-92.

In Docket 5270-CV-3, CVPS asked the Board to find that its proposed DSM programs will not cause it to gain monopoly control over prices and competition within the markets in which it will operate. In its May 20, 1991 Order, the Board concluded "that even if CVPS's design and implementation of DSM programs should be shown to produce anti-competitive effects, CVPS will be immune, based on the doctrine of 'state action', from antitrust claims." *Id.* at 87-88; *California Retail Liquor Dealers Association v. Midcal*, 445 U.S. 97 (1980).

55. The Department used conservative estimates for the emissions that would be avoided by the fuel-switching programs that it had originally proposed. These conservatisms had the effect of *reducing* the expected emissions savings of the programs. Chernick pf. at 36-38.

The Board went on to say that "There is significant evidence to suggest that utility-sponsored DSM programs will actually *stimulate* the market for professional engineering and efficiency services." Docket 5270-CV-3, Order of 5/20/91 at 89 (emphasis in original).

Specifically, the Board found that:

A large portion of [CVPS's DSM] work will be performed by private contractors employed by utilities and their customers, and much of it will be subject to competitive bidding procedures.

* * *

The requirement that utilities use incentives only to overcome market barriers and that utilities evaluate and revise their DSM programs on a periodic basis will reduce the likelihood of anti-competitive effects on other market participants. The Board is ordering utilities to invest in DSM programs precisely because the free market has been unable to stimulate similar investment by individual utility customers. Should that situation change, utility programs can be scaled back or even eliminated as the circumstances warrant.

In addition, both in the Board's Order of April 16, 1990, and in the program descriptions filed in this docket, the implementation of DSM programs will likely involve numerous private contractors. Energy providers, consultants, and equipment suppliers in the private sector may find that DSM programs actually stimulate competition instead of creating a utility monopoly of services.

Id. at 89, 91-92 (citations omitted).

The record in the instant dockets is consistent with the Board's findings in 1991. There is no evidence today that the stipulated programs will have anti-competitive impacts in CVPS's service territory; rather, because the programs will be delivered in conjunction with local contractors, state weatherization services, and private financial institutions, they will likely have the opposite — and beneficial — effects.

B. Regulatory and Policy Issues

For all the reasons set out in this proposed decision, I conclude that the Stipulation represents a sensible, low-cost approach to overcoming market barriers to the efficient use of energy in Vermont homes and businesses. Several of the parties suggested that a state

requirement that utilities provide and pay for demand-side services is, in effect, a form of taxation. On the basis of the record in this case, I am firmly convinced that that suggestion is incorrect.

Public utilities provide services that are marked by two characteristics which, together, justify governmental regulation of the prices and terms of those services. The first is that their services are considered *essential*. The second is that the economics of the services are such that they are most efficiently provided by a *single supplier*. Economists generally refer

to this second condition as "natural monopoly." In certain markets, we might tolerate the exercise of market power: consider, for example, Microsoft's patent on its Disk Operating Software (DOS) and the effective monopoly that it therefore enjoys. But, because a monopolist can actually increase its profits by raising prices above marginal cost and reducing output, in the delivery of an essential service our society has concluded that the public welfare will suffer by such behavior.

Seen in this light, it is therefore incumbent upon policy-makers, regulators, and utility managers to take all reasonable steps to minimize the total cost of meeting present and future demand for service. Market barriers that might be considered mere annoyances in other industries become intolerable in the public utility arena, because they impose real costs upon our society: costs that cannot, by virtue of the lack of competitive alternatives and the essential nature of the product, be avoided without appropriate intervention.⁵⁶

Administrative rate-making, facilities siting, prudence reviews, and integrated resource management are all examples, among many others, of necessary public intervention to correct market failures and promote the general good. DSM is one component of a least-cost resource strategy. If a kilowatt-hour produced by a utility's purchase of efficiency savings on a customer's premises is less expensive than a kWh generated by a fossil-fuel fired plant, then the utility should make the DSM investment. All ratepayers benefit from such actions in the long run; and the inclusion in rates of the utility's DSM expenditure no more constitutes a

56. This may not remain the case for long, however. The economics of electricity generation (as distinct from transport and delivery) have changed in recent decades, such that it appears no longer to manifest the characteristics of a natural monopoly. The Board is currently investigating this question in Docket 5854.

"tax" than would similar treatment of its purchase of electricity created from coal or oil.⁵⁷ See generally Docket 5270, Order of 4/16/90, Vol. III.

Lastly, I note that the evidence in this case demonstrates that the short-term rate impacts of the stipulated programs will be negligible. The programs have been designed to overcome barriers to customers' *own* investment in efficiency and alternative fuels. In the main, this means that CVPS will assist customers in securing financing (third-party or on-the-bill, as appropriate), provide energy audits to determine the least-cost end-uses, and offer discounts for high-efficiency lighting and water-heating measures. Most of the direct measure costs will be borne by the participating customers. In this way, CVPS's total costs of providing power will be reduced, and the impacts on non-participant ratepayers will be minimized.

V. CONCLUSION

The Stipulation executed by the DPS and CVPS is, in its totality, a reasonable approach to providing energy services, including fuel-switching, to customers. It is a comprehensive settlement to a complex case, and it resolves the scores of issues that have arisen during these proceedings. The evidence demonstrates that the actions to be taken in accordance with its terms are likely to significantly reduce the cost of providing power to CVPS's customers.

For all the reasons set out in this proposed decision, I recommend that the Board approve the Stipulation.

The foregoing is hereby reported to the Public Service Board in accordance with the provisions of 30 V.S.A. § 8.

57. Black's *Law Dictionary* defines tax as follows:
A ratable portion of the produce of the property and labor of the individual citizens, taken by the nation, in the exercise of its sovereign rights, for the support of government, for the administration of the laws, and as the means for continuing in operation the various legitimate functions of the state.

Black's *Law Dictionary*, 5th ed., at 1307. In this light, it is difficult to see how a utility investment, cost-effective and made for the legitimate purpose of meeting demand for service, can be described as a tax. Quite the contrary, in my view, since fuel-switching (or any other DSM investment) acquired according to the principles of least-cost planning will have the effect of *reducing* costs to ratepayers.

This Proposal for Decision has been served on all parties to this proceeding in accordance with 3 V.S.A. § 811.

DATED at Montpelier, Vermont, this _____ day of _____, 1996.

Frederick W. Weston, III
Hearing Officer

VI. BOARD DISCUSSION

Over the past decade, Vermont's energy utilities have invested in numerous energy efficiency and load management resources in order to provide energy services to households and businesses at the lowest reasonable cost. In this docket, we approve a stipulation between the Department of Public Service and Central Vermont Public Service Corporation that is consistent with Vermont law and the principles of energy efficiency, cost-effectiveness, and environmental responsibility.

The Stipulation describes a comprehensive set of energy-efficiency programs for CVPS's residential, commercial, and industrial customers. Among them is a program for end-use fuel-switching measures that is modest in scope and is strategically targeted to areas of transmission and distribution system constraints and to the needs of low-income households — households that historically have faced high winter electric bills but that have limited opportunities to change to more efficient heating systems. The Hearing Officer concludes that fuel-switching, like other forms of energy efficiency and load-management, can be a cost-effective means of providing energy services and lowering a utility's high-cost peak demand, thereby benefitting the overall utility system and decreasing the total cost of service.

We agree with this conclusion. Over the past decade, CVPS's customers have benefitted significantly from lower peak demand and improved system capacity factor. As a result of these achievements, the differential between winter and summer residential rates has dropped by 27 percent, from a ratio of 2.45 in 1974 to 1.93 today.⁵⁸

Today we issue a final Order in this docket. As described in the procedural history, this investigation has been long, complex, and contentious. Upon our independent review of the record and in careful consideration of the parties' positions, we hereby adopt the Hearing Officer's detailed findings and conclusions, and approve the Stipulation between CVPS and the Department.

The DPS and the Company developed detailed records in support of their different proposals on how to identify and deliver cost-effective fuel-switching and other energy efficiency services to CVPS's ratepayers. Ultimately, through negotiation, they were able to sufficiently reconcile their positions in order to design relatively low-cost and practical programs that will acquire fuel-switching resources where they are most cost-effective and where customers' barriers to conservation and efficiency are highest.

58. A proposal to further reduce that differential to approximately 1.62 is currently pending before the Board in Docket 5835.

The other active parties oppose the Stipulation. In the main, their positions have already been addressed in the proposal for decision ("PFD"); however, several additional points were raised at the June 11th oral argument that deserve comment here.

A. VSAA/VCC's Motion to Vacate Interim Order

CVPS's New Residential Construction Program is described in § 5.1 of the Stipulation (see pp. 22-23 of the PFD). Under the program, CVPS will provide an energy rating (to determine whether the new home is eligible for an Energy Efficient Mortgage), will identify cost-effective electrical efficiency and fuel choice options, and will provide incentives that will encourage adoption of the identified options. In addition, CVPS will collect a \$300 new customer assessment before connecting the new residences to the electric grid; this fee will be reimbursed upon acceptance (by the builder or owner) of the identified package of electrical efficiency measures.

CVPS's residential new construction program is similar to others currently offered by other utilities in the state. 30 V.S.A. § 218c requires that "Each regulated electric or gas company shall prepare and implement a least cost integrated plan for the provision of energy services to its Vermont customers" and that the plan shall include a "coordinated set of investments or program expenditures . . . to meet the public's need for energy services through efficiency, conservation or load management" The Company's residential new construction program is just such a program, and an assessment combined with other forms of customer assistance is a reasonable element of the program. Cost-effective investments in demand-side measures lowers both the customer's energy bills and the electric system's total costs.

On November 6, 1995, CVPS and the DPS jointly filed a request that the Board grant interim authority to CVPS to collect the \$300 assessment, stating that they were "concerned that Central Vermont cannot legally collect such a fee in the absence of explicit PSB approval." Joint Letter, 11/6/95, at 1. On December 4, 1995, the Hearing Officers granted the Stipulating Parties' request.

On December 26, 1995, VSAA/VCC filed a motion to vacate the December 4th interim approval or, in the alternative, to treat it "as a Proposal for Decision and solicit comments and hear oral argument thereon." VSAA/VCC Motion at 1. The movants argued that the interim approval was not a Procedural Order, but rather one that "requires payment by certain customers without review of the record by the Board." *Id.* at 2.

On January 10, 1996, we issued an Order in which we stated:

As a general matter, a hearing officer has the authority to manage a docket and issue Orders as necessary to effect the fair and reasonable resolution of a case. The [VSAA/VCC] motion raises two questions. The first is whether the

Board should (or must) review a hearing officer's Order upon a party's objection to it. The second question, which is substantive in nature, is whether the Board, having decided to review the Order, should affirm, modify, or vacate it.

Order of 1/10/96 at 2. We then invited the parties to comment on these and other issues directly relevant to the motion.

On January 19, 1996, the Department and CVPS jointly filed a response to our Order. With respect to the first question, they argued that:

the decision to hear an interlocutory appeal from a hearing officer's Order rests in the sound discretion of the Board. Such discretion should be exercised with due consideration of the nature of the ruling and the circumstances of the case.

DPS/CVPS Letter, 1/19/96 at 1. They went on to assert that "few, if any, of the traditional criteria for interlocutory appeal are met here." *Id.* They reasoned that, because the Hearing Officer's Order explicitly reserved final judgment on the entire Stipulation, VSAA/VCC "cannot show that they will be prejudiced in any fashion by the partial interim approval" *Id.* at 2.

As to the second point, the Company and DPS urged the Board to affirm the Interim Order. They pointed out that the Stipulation called for its implementation pending final approval by the Board and that any disruption of the New Residential Construction Program would be "likely to affect both its cost and overall effectiveness." *Id.* at 2-3.

On February 2, 1996, VSAA/VCC responded to the Stipulating Parties' letter, stating that "the Department and CVPS concede the point that the Hearing Examiner's 'Interim Order' should not determine whether CVPS should be allowed to collect fees and force potential homebuilders into the Department's program." VSAA/VCC Letter, 2/2/96, at 1. VSAA/VCC then argue that continuing delivery of the New Residential Construction Program is *not* the "status quo" that deserves protection from disruption, but rather it "is the situation before the case began" *Id.* at 1-2 (emphasis in original).

The issuance of the proposal for decision and our approval of the Stipulation render moot the question of whether we should affirm the Hearing Officers' Interim Order. We note, however, that we concur with the DPS's and the Company's argument that the decision to hear an interlocutory appeal is within our discretion. Furthermore, in this instance, the Hearing Officers acted within their authority when they granted interim approval of the New Residential Construction Program. 30 V.S.A. § 8 grants a hearing officer broad powers to manage a docket so as to effect its fair and reasonable resolution, while explicitly reserving to a majority of the Board final judgment on findings of fact. 30 V.S.A. § 8(c).

In this case, VSAA/VCC argue that, by granting CVPS interim approval to administer the Company's DSM programs, the Hearing Officers had rendered a final judgment on the propriety of the New Residential Construction Program. We do not agree. The Hearing

Officers' Order clearly states that it is *not* a final judgment and that it is simply intended to enable the Company to implement the terms of the Stipulation pending a Final Order of the Board. Order of 12/4/95 at 2. Furthermore, 30 V.S.A. § 218c requires utilities to implement cost-effective DSM programs pending final approval by the Board. 30 V.S.A. § 218c(c); *see also* § 209(d). In this light, the Interim Order functioned in the same way as the Hearing Officer's *Order re: Motion for Preliminary Injunction and Motion to Dismiss* (June 7, 1994), which no party argued he lacked the authority to issue.

B. Environmental Issues

CVPS generally supports the PFD. CVPS Comments at 1. The Company takes exception, however, to Finding 72. CVPS argues that the finding is not consistent with the Stipulation in that it states that "[c]ost-effective fuel-switching will reduce the net environmental impacts (*i.e.*, air-borne emissions) caused by space- and water-heating demand in CVPS's service territory." *Id.* at 2 (emphases in original). The Company argues, first of all, that the evidence does not establish that fuel-switching will reduce the overall net emissions associated with a given amount of water- and space-heating. Moreover, CVPS also suggests that, even if such a finding were justified, the level of net emissions *in its service territory* (as opposed to the northeastern region in general) may very well increase by virtue of fuel-switching. But in any event, argues the Company, the record simply does not support the finding as written, and it proposes alternative language. *Id.* at 3-5.

During oral argument, the Department stated that it does not support CVPS's request to modify Finding 72 and that, in fact, the record does support such a finding. In this instance, the DPS argued, the Hearing Officer, faced with conflicting positions on an issue, made a reasoned decision given the preponderance of the evidence. Tr. 6/11/96 at 19-22.

As a general matter, there is strong evidence in the record that cost-effective fuel-switching reduces overall emissions associated with demand for space- and water-heating service. Chernick pf. at 34-41; Bennett/Hanisch pf. at 4, 6-8; exhs. CVPS-JLH-2 and 3; Chernick reb. pf. at 42-43, 83; tr. 8/3/94 at 287-288. Furthermore, there is no detailed evidence that emissions reduction benefit is outweighed by undue, adverse localized impacts on air quality.⁵⁹ The expected gross emissions impact in Vermont of the fuel-switching programs *as originally proposed* by Department was in the range of 46-120 tons per year of criteria pollutants (carbon monoxide, nitrogen oxides, sulfur dioxide, particulate matter, and volatile

59. We note that there could exist micro-climate or other local environmental effects that, if demonstrated, would cause us to modify the implementation of a fuel-switching program in a particular area.

organic compounds), which is roughly equivalent to the output of 100-240 cars per year.⁶⁰ Bennett/Hanisch pf. at 3; tr. 8/3/94 at 287-290; tr. 8/4/94 at 72-76, 122-123; tr. 8/15/94 at 75-76. However, the stipulated programs that we approve today will yield a total number of annual fuel-switches (in the range of 130 to 160 units in each of the two years) that is less than a tenth of the number of switches that the DPS originally proposed. Tr. 8/4/94 at 99, 107. We can foresee no serious environmental impacts resulting from the stipulated fuel-switching programs. Finding 72 should be interpreted in this light.

C. Avoided Costs

The VSAA/VCC argue that the finding that the stipulated programs will be cost-effective is incorrect, because the avoided costs upon which that conclusion is based are not reflective of the true costs avoided by fuel-switching and other DSM measures. *See* PFD Footnote 30; VSAA/VCC Brief (attached to Comments) at 3-5.

The evidence in these dockets does not support the assertion of the VSAA/VCC. It goes without saying that any prediction is inherently uncertain, but it does not necessarily follow that we cannot make reasoned judgments about the future. Customers and utilities every day make choices about suppliers and alternative investments. Those decisions are informed by their expectations of future fuel prices, construction costs, and demand for service. And, with the help of powerful accounting tools, utilities can compute the anticipated costs of electricity in the years to come in an effort to determine which of a variety of alternatives is the more cost-effective.

The Department and CVPS are both experts in this kind of analysis. Their differences in opinion during the case-in-chief turned on reasonable disagreements over the expected "year of need" for new generating facilities in the New England region. The stipulated avoided costs represent a compromise on this point, and they are well within the range of reasonableness.

60. In the New England region, however, the DPS's proposed fuel-switching programs were expected to yield a net *reduction* of 700 to 1,400 tons of criteria pollutants over the period 1994-2012. Bennett/Hanisch pf. at 4, 6-8; exhs. CVPS-JLH-2 and 3; Chernick reb. pf. at 42-43, 83; tr. 8/3/94 at 287-288. We note also that the Department presented evidence that credibly challenged CVPS's contention that, while region emissions would decrease as a consequence of end-use fuel-switching, total emissions in Vermont would not. Tr. 8/15/94 at 73-76 (DPS witness Chernick's testimony that CVPS failed to appropriately account for intra-regional transport of emissions from electric generating stations in Massachusetts and Connecticut). The point here is that negative air quality effects resulting from the stipulated programs, *if any*, will be very small. *Id.* at 75-76.

PFD at 16-17; tr. 5/3/94 at 60ff, 107, 120. The VSAA/VCC vigorously challenge those costs, but offered no evidence in support of their position. In the absence of record evidence demonstrating significant errors in the Stipulating Parties' methods and assumptions, we accept the parties' agreed-on avoided costs as reasonable, providing an acceptable basis for testing the cost-effectiveness of CVPS's DSM programs.

D. Other Issues

During oral argument, Mr. Savage and the Vermont Chamber of Commerce reiterated their opposition to fuel-switching. Specifically, both parties object to the notion of ratepayers paying, through rates, for a utility's investment in energy efficiency on the premises of particular customers. Tr. 6/11/96 at 44 (Savage) and 52-53 (Nichols). Mr. Savage also argues that the DPS never took into account the full range of societal costs when performing its cost-benefit analyses of fuel-switching and other DSM measures. Savage Comments at 2; tr. 6/11/96 at 40-41.

As we have stated in many orders over the past six years, the first principle by which we assess the propriety of a utility action is whether it promotes the general good. A chief, but by no means sole, determinant of the general good is the cost-effectiveness of the action in question. Under the law of the state of Vermont, utilities must acquire all cost-effective energy efficiency and load-management resources available in their service territories in order to meet present and future demand for service. 30 V.S.A. §§ 218c, 248. If it is *less costly* for a utility to meet its customers' demand for electricity services by, in fact, *reducing* that demand rather than by purchasing new supply resources, then it is incumbent upon that utility to do so. In this way, the total cost of utility services for *all ratepayers* will be lowered. *See generally*, Docket 5270, Order of 4/16/90.

The evidence in the instant dockets demonstrates that the stipulated programs have a high likelihood of reducing the costs of electricity in CVPS's service territory. In his testimony and briefs, Mr. Savage has failed to address this central point.⁶¹ VCC, in contrast, at least

61. Mr. Savage stated that he opposes end-use fuel-switching on the ground that "CVPS [is] being ordered to pay for my neighbor converting from electric heat to oil heat, and they send the bill to me for payment." Tr. 6/11/96 at 44. It is difficult to see how it is in the best interests of Vermont's economy to encourage utilities to send funds out-of-state to purchase power to meet customer demand when those energy needs could be met more cost-effectively by acquiring demand-side resources from Vermont families and businesses. Moreover, Mr. Savage does not oppose the granting of rate discounts to certain ratepayers, such as ski areas or other large commercial customers in return for their

concedes that cost-effectiveness is an appropriate standard by which to determine whether an action should be taken; but it argues that, if an efficiency measure is cost-effective, then the customer who benefits directly should pay for the investment.⁶² Tr. 6/11/96 at 52-53, 59. The DPS and Company have demonstrated that the stipulated programs are highly likely to be cost-effective. In the absence of any reasonable challenge to that demonstration, we conclude that the stipulated programs will promote the general good.

Lastly, Mr. Savage rightly points out that fossil-fuel heating systems carry certain health and safety risks that should be considered. Unfortunately, this is true of all energy-using systems. Leaks from propane and fuel oil systems pose potential fire and other hazards, as do electric systems. Mr. Savage presented no reliable data on the potential risks of either electric space- and water-heating or alternative systems.

The record in these dockets establishes that fuel-switching in these programs will be performed in accordance with all relevant engineering and building code requirements. There is no reason to conclude that utility-sponsored fuel-switching *because it is utility-sponsored* is inherently more risky in this respect than naturally occurring fuel-switching. Manufacturers, contractors, and installers are bound by the same legal requirements to meet specified standards in both instances.

E. Conclusion

commitment to interrupt service at times of system peak. Nor does he oppose other utility-sponsored conservation programs, such as those for high-efficiency lighting and variable-speed electric motor replacements. *Id.* at 44-47.

Footnotes 22 and 23 of the PfD explain how these and other such activities are equivalent, both in their overall objectives (to reduce the total cost of meeting demand) and in the manner in which they are funded. Service interruptions, high-efficiency electrical appliances, and end-use fuel-switching all have the potential to cost-effectively avoid the purchase of electric capacity (*i.e.*, peak requirements) and energy (*i.e.*, kilowatt-hours). Mr. Savage has offered no reasonable basis on which to differentiate among them, at least for the purpose of determining which should be pursued and which should not.

62. VCC objects to preferential treatment of particular customers with respect to energy efficiency and fuel-switching measures. It does not, however, oppose the granting of rate discounts to promote economic development so long as "the overall [benefit] is greater than what is being given up," *i.e.*, the discount is cost-effective. Tr. 6/11/96 at 59-60.

For the foregoing reasons, we adopt the Hearing Officer's findings and recommendations, and approve the Stipulation as filed by the Department and CVPS.

VI. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings and conclusion of the Hearing Officer are adopted.
2. The Stipulation offered by the Department of Public Service and Central Vermont Public Service Corporation is approved in its entirety.
3. The DSM program designs, customer incentives, implementation plans, and administration and targeting strategies as set out in the Stipulation are accepted and approved.
4. The avoided costs, fossil fuel escalators and residential fossil fuel starting prices set out on Attachment A are approved for use as contemplated by the Stipulation.
5. The Preliminary DSM budgets and MWh savings targets set out on Attachment B of the Stipulation by program for 1995 and 1996 are approved. These budgets may be adjusted by CVPS and the DPS, within the spending levels provided for in ¶ 8.1 of the Stipulation, as a result of further negotiation on program design and implementation as contemplated by the Stipulation.
6. CVPS shall continue offering electric service and informational programs for current or prospective customers pursuant to its controlled water-heating service Rate 3 as currently designed. No more than 26,830 customers will be able to receive service on Rate 3 at any one time as provided for in the Stipulation. Information about Rate 3 availability and its costs and benefits shall be presented as part of CVPS's DSM programs.
7. The record in Dockets 5270-CV-1, 5270-CV-3, and 5686 shall be closed. Upon request of either CVPS or the DPS, any specifically identified elements of such record shall be incorporated into Central Vermont's current rate-design investigation (Docket 5835). Neither CVPS or the DPS shall supplement the record with respect to the conceptual or methodological issues and empirical issues (other than time-specific data and calculations such as avoided or marginal costs) contained therein except to the extent that *other* parties raise issues to which the parties need to respond. Notwithstanding the above, the parties may provide testimony which appropriately applies the developed record in these Dockets to the redesign of rates.
8. The basis for one half of the DSM ROE penalty imposed pursuant to the Order of October 31, 1994, in Dockets 5701/5724 is no longer appropriate. The other half of the DSM penalty shall be deemed unnecessary, upon a showing that CVPS is successfully pursuing agreed upon targets provided for in the Stipulation and upon a demonstration of effective, good faith and prudent implementation of the matters described herein. These conclusions are

independent of, and shall not affect, the concurrent ROE penalty imposed by that Order with respect to power supply concerns.

9. CVPS shall be entitled to disconnect its provision of electric service to a customer on account of the customer's failure to pay an amount due pursuant to an "on-the-bill" financing for DSM measures as contemplated by this Stipulation. CVPS and the DPS shall file protocols for the applicability and implementation of any such disconnection right prior to the Company's exercise of such right.

10. Within thirty (30) days of this Order, CVPS and the DPS shall jointly file a status report detailing all actions so far taken and still to be taken pursuant to the terms of the Stipulation.

11. CVPS shall maintain accounting records of all its expenses associated with its electrotechnologies activities. These expenditures and activities shall be reported to the Board and Department 90 days after the end of each calendar year (April 1).

12. Within thirty (30) days of this Order, the DPS shall notify the Board whether it supports the Company's petition for a declaratory ruling on the question of whether customer financing guarantees require Board approval under 30 V.S.A. § 108.

DATED at Montpelier, Vermont, this _____ day of _____, 1996.

_____)	PUBLIC SERVICE BOARD OF VERMONT
_____)	
_____)	
_____)	

OFFICE OF THE CLERK

FILED:

ATTEST: _____
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board of any technical errors, in order that any necessary corrections may be made. Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.