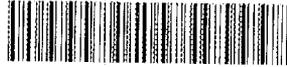


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Public Involvement in Integrated Resource Planning: A Study of Demand-Side Management Collaboratives

Jonathan Raab
Martin Schweitzer

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ENERGY DIVISION

PUBLIC INVOLVEMENT IN INTEGRATED RESOURCE PLANNING:
A STUDY OF
DEMAND-SIDE MANAGEMENT COLLABORATIVES

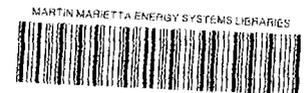
Jonathan Raab*
Martin Schweitzer

February 1992

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Prepared by the
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee 37831
managed by
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*Consultant, Boston, MA



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EXECUTIVE SUMMARY

INTRODUCTION

In recent years, many utilities and nonutility parties (NUPs) across the country have tried a new approach to reaching agreement on Demand-Side Management (DSM) program design and policy issues. Through this new approach, which is called the DSM collaborative process, parties who have often been adversaries in the past attempt to reach consensus rather than using traditional litigation to resolve differences. We examined nine cases of DSM collaboration involving 24 utilities and approximately 50 NUPs in 10 states. This is the first comprehensive, in-depth review and assessment of collaboratives and it allows conclusions to be drawn about the collaborative process and the factors that contribute to successful efforts of this type.

Collaboratives are described in terms of four major contextual and organizational characteristics:

- regulatory and legal history,
- parties involved and parties excluded,
- collaborative scope, and
- the collaborative process itself.

Under regulatory and legal history, we examined how collaboratives were initiated, the importance of the relative influence exercised by the interested parties, the role played by financial incentives for utilities, and the history of conflict among the participants. Included in the analysis of parties involved and excluded were the number and types of NUPs represented in the collaboratives, the expectations of the parties and their willingness to compromise, the parties' commitment of time and resources to the collaborative, and the advantages and drawbacks of limiting the number of participating parties. The study of scope included the overall goals of the collaborative and the nature of the program design and policy issues examined. Finally, as part of the collaborative process, we studied the organizational structure of collaboratives; their length of operation; and the use of coalitions, consultants, consensus, mediation, and time constraints.

Collaborative success is evaluated in terms of eight measures of performance:

- achievement of consensus by participants,
- approval of the resulting DSM plan by state regulators and courts (if appealed),
- satisfaction of participants' objectives,
- savings of time and money compared to the likely results of traditional litigation strategies,
- comparison of the outputs of the collaborative with those likely to result from the traditional adversarial process,
- changes in historic relations among the parties,

- plan implementation, and
- collaborative longevity.

FINDINGS AND RECOMMENDATIONS

In general, the collaboratives were quite successful according to the criteria listed above. A high degree of consensus was observed across the collaboratives, although they did better at resolving technical issues than at achieving consensus on DSM policy issues. While virtually all collaborative plans were approved by the Public Utility Commission (PUC), substantial changes were ordered in some states.

Collaboratives worked well in satisfying participants' objectives. In nearly all cases, multiple parties reported high overall satisfaction of their objectives. In over half the cases, most or all of the participants reported high overall satisfaction. Utilities had their interests satisfied more than any other party while large industrial users were the least satisfied.

DSM collaboratives are resource-intensive but promise to save time and money in the long term and lead to outcomes that are qualitatively superior to the expected results of litigation. Substantial increases in utility DSM expenditures were observed at all the case study sites, and the programs approved were more comprehensive than those that preceded the collaborative. Also, most participants believed that their relationships with other parties in their collaborative improved substantially as a result of the process.

In general, collaboratively-approved plans are being implemented as planned. While less than half of the collaboratives are still functioning, about half of those that are on-going have consciously decided to maintain their collaborative even after the initial objectives were accomplished. Overall, the study indicates that DSM collaboratives have been successful according to a broad array of criteria. The potential rewards from participating in a DSM collaborative outweigh the risks, but collaboratives should be used selectively due to the cost and effort involved.

A number of relationships between successful outcomes and various contextual and organizational characteristics of collaboratives were identified. Based on these findings, Table ES-1 suggests ways in which successful DSM collaboratives can be initiated and structured.

DSM collaboratives have proven to be effective in satisfying the objectives of various participants and achieving positive outcomes that would not otherwise have occurred. We expect the use of collaboratives, both to design DSM programs and to address other Integrated Resource Planning (IRP) issues, to increase with time.

Table ES-1. Major recommendations for initiating and structuring successful DSM collaboratives

- Before making substantial commitments of time and money to the collaborative process, prospective participants should determine whether or not there are overlapping interests among the interested parties that would make it possible for consensus to be achieved.
 - All parties should discuss goals and processes and the rights and responsibilities of participants prior to collaborative formation and should record the resulting agreements in a memorandum of understanding (MOU).
 - Collaboratives should attempt to include the full spectrum of societal interests.
 - PUCs should provide clear direction on contentious policy issues prior to collaborative formation or in the collaborative's early stages.
 - Participating organizations should select representatives who are knowledgeable on DSM issues, can conduct policy negotiations, and can avoid conflicts with participants from other groups.
 - Collaborative participants should seek information on past experience at other collaboratives to avoid common mistakes and to optimize results.
 - Participants should enter the collaborative with a willingness to compromise on important issues.
 - Collaboratives should use a consensual model of plan development rather than an advisory one.
 - Utilities should fund NUPs' consultants to help equalize the expertise of the different parties.
 - State regulators should be involved in the collaborative process, either through direct staff participation (as observers or full members) or other mechanisms (such as interim rulings by the PUC) because this can help improve programs, resolve controversial policy issues, and increase the likelihood that collaborative programs will be accepted with minimal change.
 - Collaborative functions should be structured to maximize the opportunity for interaction and communication among participants.
 - Joint fact finding should be held early in the collaborative as a way of building trust and sharing information among participants.
 - Early in the process, collaborative participants should decide on interim and final products and should establish deadlines for near-term deliverables.
 - Collaboratives should have a strong coordinator/facilitator in all cases, and should consider using a third-party mediator.
 - Collaborative participants should keep all levels of their organization informed about the collaborative process and should work to build internal consensus on DSM programs and priorities.
 - Critical policy issues (like the nature of cost-effectiveness tests to be used) should be addressed early in the collaborative process, but potentially less pressing issues (like fuel switching) can be deferred until later.
 - Collaboratives should involve senior members of participating organizations in helping resolve difficult issues that day-to-day participants cannot settle.
 - Participants should maintain an on-going commitment of time and resources to the collaborative process.
 - Collaboratives should be continued (though perhaps less intensively) through the initial fielding of programs and the establishment of an evaluation and monitoring system.
-

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LIST OF ACRONYMS

AG	Office of the Attorney General
BECo	Boston Edison Company
CEC	California Energy Commission
CEO	Chief Executive Officer
CG&E	Cincinnati Gas and Electric Company
CL&P	Connecticut Light and Power Company
CLF	Conservation Law Foundation of New England, Inc.
COM/Electric	Cambridge Electric Company and Commonwealth Electric Company
CPUC/DRA	California Public Utilities Commission - Division of Ratepayer Advocate
CV	Central Vermont Public Service Corporation
DNR	Department of Natural Resources
DOER	Division of Energy Resources
DPS	Department of Public Services
DPU	Department of Public Utilities
DPUC	Department of Public Utility Control
DSM	Demand-side management
Eastern	Eastern Edison Company
ERAM	Electric Revenue Adjustment Mechanism
EUA	EUA Service Corporation
EVH	Energy Value Home
FERC	Federal Energy Regulatory Commission
FG&E	Fitchburg Gas and Electric Company
ICF	ICF Resources, Inc.
IRP	Integrated resource planning
MASSPIRG	Massachusetts Public Interest Research Group
MECo	Massachusetts Electric Company
MG&E	Madison Gas and Electric Company
MI	Multiple intervenors
MOU	Memorandum of Understanding
Nantucket	Nantucket Electric Company
NEES	New England Electric System
NRDC	Natural Resources Defense Council
NU	Northeast Utilities Service Company
NUP	Nonutility party
NYSEG	New York State Electric and Gas Corporation
NYSEO	New York State Energy Office
OCC	Office of Consumers' Counsel
OPC	Office of Peoples' Counsel
OPM	Office of Policy and Management
PEPCo	Potomac Electric Power Company
PG&E	Pacific Gas and Electric Company
PSB	Public Service Board
PSC	Public Service Commission
PUC	Public Utility Commission
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SoCalGas	Southern California Gas Company
SOAP	Son of Advanced Plan
TURN	Toward Utility Rate Normalization
VNRC	Vermont Natural Resources Council
VPIRG	Vermont Public Interest Research Group
WCDSR	Wisconsin Center for Demand-Side Research
WEPCo	Wisconsin Electric Power Company
WMECo	Western Massachusetts Electric Company
WP&L	Wisconsin Power and Light Company

1. INTRODUCTION

Since 1988, a new approach to reaching agreement on DSM program design and policies has been tried by many utilities and NUPs across the country. This new approach, called a DSM collaborative process, attempts to reach consensus among oftentimes adversarial parties rather than using traditional litigation to resolve differences. In this report we present findings from a study of nine cases of DSM collaboration that have involved 24 utilities and approximately 50 NUPs in 10 states.

This study is the first comprehensive review and assessment of DSM collaboratives. Unlike individual case studies that have been done in the past, this multicase overview allows us to synthesize findings from many different locations and draw general conclusions about the collaborative process and the factors that contribute to its success. The primary purposes of the study are to describe key characteristics of the collaboratives, assess past successes and failures, and offer advice for those contemplating establishment of new collaboratives as well as those involved in on-going collaborative efforts.

BACKGROUND AND DEFINITIONS

During the 1970s and through the mid-1980s the development of utility DSM programs was limited in most of the country — often focusing on just a few programs that relied heavily on information, rate changes, and modest incentives to encourage customer participation. Though some utilities attempted to involve the public (both their customers and traditional intervenors) informally in their DSM decision-making process, DSM issues were often contentiously litigated before state regulators.

Since 1988, when the Connecticut Department of Public Utility Control (DPUC) ordered Connecticut Light and Power Company (CL&P), in the aftermath of a contentious rate case, to work jointly with the intervenors to enhance its DSM efforts, a wave of DSM collaboratives has swept the country. Though no two DSM collaboratives have been exactly the same, they share many similarities (Raab 1991). The collaboratives are often preceded by a history of litigation on DSM and other resource issues. Parties to the efforts include a utility or group of utilities; and various NUPs such as environmental and consumer groups, state agencies, and sometimes the staff of the regulatory agencies. Parties attempt to reach consensus on DSM program designs and related DSM policy matters. The negotiations generally last from half-a-year to several years, and utilities usually provide financial resources for the NUPs to hire their own consultants on technical matters. When a consensus is reached or the allotted time has expired, regulatory review commences, after which an order is issued delineating the regulators' decisions with respect to the initial filing and any subsequent litigation. Many of the collaboratives are on-going.

We believe that DSM collaboratives generally differ from other public participation processes such as technical sessions, working groups, advisory boards, and even formal settlement procedures that have been used in the context of utility DSM programs in four important respects:

1. DSM collaboratives are more comprehensively focused in trying to design DSM programs that address all end uses in each customer class and attempting to resolve related DSM policy matters.
2. DSM collaboratives are more proactive in that they attempt to design DSM programs and resolve policy issues prior to a utility filing with the regulators (as would be the case in settlement) and even prior to a utility formulating new or expanded programs on their own (as is often the case in working groups and advisory boards).
3. DSM collaboratives almost always use consensus decision making where all participants must agree for a decision to be reached, compared to other forms of public participation which seek general agreement, but often do not have any decision-making authority (except postfiling settlement processes which actively seek settlement), do not have consensus as a formal goal, or both.
4. DSM collaboratives often include utility funding for NUPs to secure any reasonably necessary outside technical expertise, while more traditional public involvement processes usually require NUPs to either rely on the expertise provided by the utility and its consultants or pay for expertise with their own funds.

We analyzed nine cases of DSM collaboration¹ in ten states (Fig. 1.1). Table 1.1 lists the collaboratives, showing their respective starting dates, the state(s) in which they operated, and the NUPs involved. The table indicates that the CL&P Collaborative, which began in February 1988, was the oldest and the Wisconsin Collaborative, formed in October 1990, was the newest. The collaboratives have involved 24 utilities and over 50 NUPs in 10 states. The size of the collaboratives ranged from just two parties in the New England Electric System (NEES) — Conservation Law Foundation of New England (CLF) Collaborative to as many as 10 in Phase I of the Massachusetts Collaborative, 15 in the California Collaborative, and 28 in the Wisconsin Collaborative. While the collaboratives included in this study do not constitute all the DSM collaboratives currently underway, they constitute the majority and include those with the longest track records.

While the focus of this study is on DSM collaborative processes, we do not believe that such processes, to the degree that they are successful, need to be restricted to DSM issues alone. As listed in Table 1.2, we note that there are several other important places in the IRP process where consensus-based processes, such as the collaborative processes analyzed in this study, may be appropriate and beneficial.

¹The NEES Collaborative involved three states (Massachusetts, New Hampshire, and Rhode Island). We also note that after the first Phase of the Massachusetts Collaborative in which all the electric utilities participated [except Massachusetts Electric Company (MECo) which was involved in a separate but parallel collaborative], the collaborative split into five distinct collaboratives with the NUPs working individually with each of the utilities. Similar, but more limited, follow-up collaboratives occurred in California with each of the four utilities there. Therefore, the number of distinct collaboratives studied here is higher than the number of cases indicates.

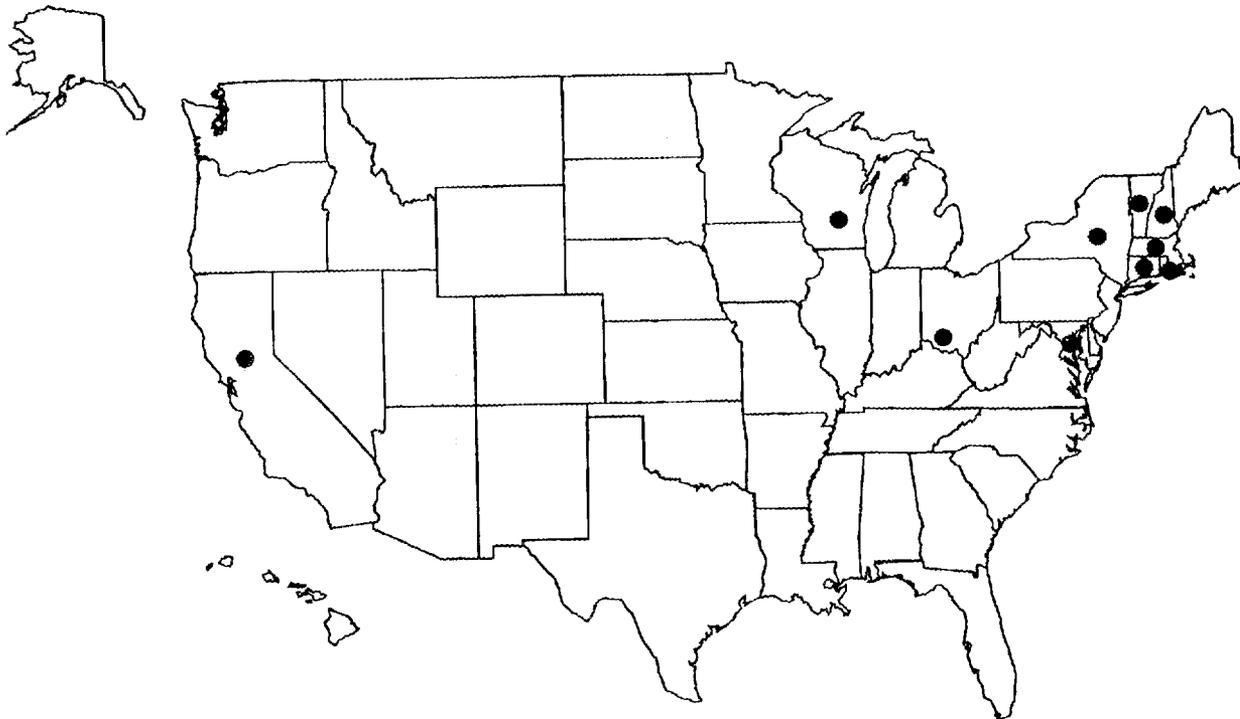


Fig. 1.1 Location of the DSM collaboratives studied.

RESEARCH METHODS

Identification of Key Variables

This study focused on two major subject areas: (1) the context and organization of DSM collaboratives and (2) the extent to which these collaboratives were successful. Studied separately, these topics can provide useful descriptive information on DSM collaboratives. The first topic describes the setting in which collaboratives took place and how they were organized. The second topic provides different perspectives on what was accomplished. By examining these two together, we can analyze which organizational and contextual characteristics were associated with successful collaboratives and which were not.

Based on a review of the relevant literatures on IRP and dispute resolution, and on our experience, four categories of contextual and organizational variables were chosen for study. These are: the regulatory and legal history of the collaborative, the parties involved and those excluded, the scope of the collaborative, and the collaborative process.

Regulatory and legal history includes the factors leading to initiation of the collaborative, the historic ability of different participating parties to influence PUC²

²In this report, PUC is used as a generic term to include all state agencies with primary responsibility for regulating electric utility rates. In practice, such agencies are known by a variety of names, including Public Service Boards (PSB), Public Service Commissions (PSC), and Departments of Public Utility Control.

Table 1.1. DSM collaboratives: utilities, starting dates, states, NUPs

Case study/utility	Begins	State	Nonutility parties ¹
California: PG&E SCE SDG&E SoCalGas	August 1989	CA	A&C Enercom, CA Water Agencies, Dept. of General Services, CEC Energy Coalition, Large Users, CA/Nevada Community Action, CPUC/DRA, NRDC, TURN
CG&E	September 1989	OH	OH OCC, Armco steel, OH PUC staff
CL&P	February 1988	CT	CT OCC, CT OPM, CLF, CT DPUC
CV	January 1989	VT	CLF, VT DPS, VPIRG, VNRC
Massachusetts: ² BECo COM/Electric Eastern FG&E Nantucket WMECo	August 1988	MA	MA AG, CLF, MA DOER, MASSPIRG
NEES	August 1988	MA, NH, RI	CLF
NYSEG	April 1990	NY	CLF, NYSEO, NY PSC staff, MI, Pace University
PEPCo	May 1990	MD	MD OPC, MD DNR, MD PSC staff
Wisconsin: MG&E WEPCo WP&L 5 others	October 1990	WI	20 different parties

¹See List of Acronyms for full names of all nonutility parties.

²In the Massachusetts Collaborative, all but one utility [Fitchburg Gas and Electric Co. (FG&E)] had separate collaboratives with NUPs after completion of the joint phase. These subsequent follow-up collaboratives also are covered here.

Table 1.2. Stages of IRP where consensus-based processes may be appropriate and beneficial

-
1. Designing IRP-related regulations and policies (e.g., bidding rules, environmental externality methodology, financial incentives, transmission access and pricing policy)
 2. Establishment of need (i.e., both demand and committed resource forecasts)
 3. Designing criteria for selecting resources (i.e., for Qualifying Facility bidding, all resource solicitations, or for traditional planning framework)
 4. Designing utility supply-side projects (and DSM projects — the subject of this study)
 5. Selection of a final resource portfolio from resources identified through bidding, planning, or both processes
-

Source: Raab 1989.

decisions, and other factors such as the existence of positive financial incentives to reward utilities for their DSM activities and the history of conflict among the various parties. For the parties involved and excluded, we examined the types of participants, their expectations and willingness to compromise (among other things), and the attributes of those who did not participate. Under the topic of scope, the focus was on overall collaborative goals and on key issues tackled by the collaborative. Finally, the variables selected in the process arena included organizational structure, the use of outside consultants, the use of consensus, and the use of third-party neutrals.

As with contextual and organizational variables, the selection of measures of success was based on a literature review and our experience. The following eight performance measures were selected:

- achievement of consensus by collaborative participants,
- approval of the resulting DSM plan by state regulators and courts (if appealed),
- satisfaction of participants' objectives,
- savings of time and money compared to the likely results of traditional litigation strategies,
- comparison of the outputs of the collaborative with those likely to result from the traditional adversarial process,
- changes in historic relations among the parties,
- plan implementation, and
- collaborative longevity.

The achievement of consensus in collaboratives and subsequent approval of the plan by state regulators and courts are considered to be key indicators of collaborative performance. The first measure (consensus) is an important, but imperfect, measure of

success. It is helpful to know whether or not consensus was reached, but it is not the only information that is required to evaluate collaboratives (Raab 1991). For example, consensus might be reached on all issues addressed in those cases where the scope and detail of issues is limited or the number of participants is relatively low. In such cases, complete consensus might be less beneficial than a more limited consensus in a more ambitious or widely representative collaborative. Also, lack of consensus on difficult issues can be extremely informative to the participants and to regulators, and early disagreement may even lead to a durable consensus later on. Similarly, the significance of PUC and court approval of a consensus filing can vary from case to case. Especially difficult to interpret are those cases where regulators substantially alter the collaborative filing before granting final approval.

Measuring the extent to which the collaborative process satisfied participants' objectives allows us to see how well the collaborative worked from the perspective of the interested parties. By looking at overall satisfaction and satisfaction on individual objectives, by participant and by collaborative, an understanding can be gained of how well collaboratives worked for specific types of participants, on specific objectives, and at specific sites.

The remaining measures of success provide additional information on collaborative performance. Comparing the time and money invested in the collaborative and its substantive output to what would have happened without it, along with an examination of changes in historic relations among the participating organizations and the implementation track record, provides us with a comparative vantage point to view the cases. None of the measures we used, by themselves, tells all that we need to know about the collaboratives studied. In combination, however, these factors help flesh out our understanding of the success of the cases studied.

Data Collection and Analysis

Initially, descriptive materials were collected for each of the nine cases; these included both primary (e.g., PUC orders) and secondary (e.g., journal articles) sources. After these written materials were reviewed, collaborative participants were interviewed. In three of the cases — California, Massachusetts, and NEES-CLF — face-to-face interviews were conducted, with telephone follow-up as necessary. In the other six cases — Central Vermont Public Service Corporation (CV), Cincinnati Gas and Electric Company (CG&E), CL&P, Potomac Electric Power Company (PEPCo), New York State Electric and Gas Corporation (NYSEG), and Wisconsin — telephone interviews alone were employed. Eighty-seven interviews were conducted in total. No interviews were conducted after fall 1991, so this study generally does not encompass collaborative activities that occurred after that time. In all cases, the same general interview protocol was used, although questions were tailored to fit the expertise of the respondent and to follow up on points made earlier in the interview or in previous interviews with other participants. In most cases, one or more representatives from each of the participating groups were interviewed. Only when two groups represented similar interests or the number of participating organizations was high were any participating groups excluded; in such cases, we interviewed representatives from the most active organizations involved.

After descriptive data were collected from key participants at all the collaboratives studied, a qualitative analysis was performed to identify contextual and organizational characteristics that appear to be related to collaborative success. Success was defined as positive performance according to a combination of the criteria described in the previous section.

The first step in the analysis was to examine those factors that respondents claimed were important correlates of collaborative success. Where there was widespread agreement across cases and types of participant, the suggested relationship was considered reliable. The next step was to verify these relationships, and identify any additional ones, by examining each case for instances in which a particularly noteworthy success (or lack thereof) was accompanied by a unique set of contextual or organizational circumstances. Following this, more common sets of contextual/organizational characteristics were identified and relationships between these and notable successes (or the opposite) were sought across multiple cases. The final step was to combine these findings to produce the conclusions presented at the end of this report.

SCOPE OF REPORT

Chapter two discusses the context and organization of each of the DSM collaboratives studied, including how it was initiated, what parties were involved, what issues were covered, how the process was structured, and how much time and money were expended. The next three chapters examine the success of the collaboratives in reaching consensus, withstanding regulatory and judicial scrutiny, satisfying the interests of the participants, saving resources and achieving more than might have been achieved without the collaborative, improving historic relations among parties, implementing the DSM plan, and continuing the collaborative process as necessary. The final chapter discusses the success of DSM collaboratives to date (in terms of all the performance measures examined) and presents our conclusions concerning the initiation and structuring of successful collaboratives. Appendix 1 describes participating parties and respondents and presents a brief chronology of key events for each of the cases studied.

2. CONTEXT AND ORGANIZATION OF DSM COLLABORATIVES

The context in which a collaborative operates and the way in which it is organized are potentially important determinants of what is accomplished and how satisfied the participants are with the process and outcomes. This chapter describes four major characteristics of the case study collaboratives: (1) regulatory and legal history; (2) parties involved and parties excluded; (3) collaborative scope, which includes overall goals and the key issues addressed; and (4) the collaborative process itself.

REGULATORY AND LEGAL HISTORY

Initiation of Collaborative

Six of the nine cases were initiated following extensive intervention by NUPs on the topic of DSM (Table 2.1). In many of these cases, litigation had been on-going for a number of years. Only the CG&E, CV, and NYSEG Collaboratives were formed in an atmosphere that was not characterized by frequent litigation by environmental advocates, consumer advocates, or both. In four of the nine cases, the agreement to collaborate was part of a settlement between the utility and NUPs on a current issue of contention. The PEPCo Collaborative, for instance, was created in a settlement resolving the NUPs' intervention in a rate case and plant licensing application. In the cases of Massachusetts and NEES, the Massachusetts Department of Public Utilities (DPU) was considering an intervenor's request to order a collaborative (as part of the Integrated Resource Management rule-making procedure) when the parties settled and agreed to form such an arrangement voluntarily.

The preceding discussion of litigation should not be interpreted to mean that pressure from intervenor groups, by itself, is sufficient to lead utilities to participate in DSM collaboratives. The ability of such pressure to result in a utility decision to collaborate will be determined in large measure by the utility's own strategic needs. For instance, one condition of the settlement that resulted in formation of the PEPCo Collaborative (mentioned above) was that intervenor groups would not oppose the utility's plan to build four combustion turbines at Chalk Point. In the case of the CG&E Collaborative, the utility's decision to collaborate was predicated on the Ohio Office of Consumers Counsel's (OCC) agreement to support the utility's efforts to obtain approval for 12 combustion turbines at its proposed Woodsdale Generating Station and to endorse CG&E's proposed long-term electric forecast. In these cases and others, utilities were allowed to satisfy various high priority corporate objectives in return for their participation in a collaborative. Utility agreement to collaborate on DSM programs also can reflect the utility's own appraisal of the benefit of increased DSM investment in light of its overall capacity situation. In other words, while litigation can press the issue, whether or not a utility enters into a collaborative is strongly influenced by the utility's strategic needs and objectives at that particular historical juncture. Other influences on the decision to collaborate are discussed below.

Table 2.1. Key items of collaborative history

Case study site	Date collaborative began	Date collaborative ended	Did collaborative follow extensive history of DSM intervention?	Was collaborative part of settlement in a formal case between utility and NUPs?	Was collaborative ordered by PUC?	Had PUC aggressively promoted DSM prior to collaborative?	When were financial incentives approved?
California	Aug. 1989	Phase I: Jan. 1990 Phase II: April 1990	Yes	No	No ¹	Yes	After collaborative ²
CG&E	Sept. 1989	On-going	No	Yes	No	No	Before first filing ³
CL&P	Feb. 1988	On-going	Yes	No	Yes	Yes	None enacted ⁴
CV	Jan. 1989	June 1991	No	No	No	Yes	None enacted
Massachusetts	Aug. 1988	Phase I: Dec. 1988 Phase II: On-going for 2 utilities ⁵	Yes	Yes	No	Yes	After first Phase II filing
NEES-CLF	Aug. 1988	On-going	Yes	Yes	No	MA-Yes RI-Yes NH-No	After first filing
NYSEG	April 1990	March 1991	No	No	No ¹	Yes	Before collaborative
PEPCo	May 1990	On-going	Yes	Yes	No	Yes	Before first filing
Wisconsin	Oct. 1990	On-going	Yes	No	Yes	Yes	None in effect during collaborative period

¹Collaboration was strongly encouraged by state regulators but no order was issued.

²Strong encouragement for financial incentives was provided prior to the collaborative, but with no official ruling on the subject.

³While it is true that incentives were approved before the completion and filing of the CG&E plan, it should be noted that the collaborative process was well under way before the incentives were passed.

⁴Toward the end of the collaborative, the Vermont PSB declared its willingness to approve shared-savings-type incentives.

⁵Boston Edison Company (BECo) and Western Massachusetts Electric Company (WMECo) Collaboratives are on-going. FG&E never entered Phase II. Cambridge Electric Company and Commonwealth Electric Company (COM/Electric), Eastern Edison Company (Eastern), and Nantucket Collaboratives all were over by early 1991.

In several cases the formation of DSM collaboratives was preceded by a NUPs' study of utility DSM efforts that described the potential for additional DSM programs. The results were then disseminated to interested parties in both the regulatory and utility communities. Such an approach was followed by the New England Energy Policy Council whose "Power to Spare" report (Cohen and Chaisson 1987), calculating regional DSM technical potential, was published in July 1987, and was used a few months later by some of its member organizations to intervene in a CL&P rate case. The expertise shown by these organizations probably was a factor in the Connecticut DPUC's decision that CL&P should cooperate with these groups in the expansion of the utility's DSM programs. The same report was used in other New England states as well. In California, research performed by the Natural Resources Defense Council (NRDC) on the decline of DSM in California (Calwell and Cavanagh 1989) also generated public attention and interaction with the state PUC which helped lead to the creation of the California Collaborative.

In two cases (CL&P and Wisconsin), utility participation in the collaborative was ordered by the PUC. In two other instances (California and NYSEG), formation of a collaborative was strongly encouraged by PUC members but not formally ordered. Finally, as mentioned previously in the Massachusetts and NEES cases, the Massachusetts Commission was considering a request to order a collaborative when the utilities volunteered. These historic facts suggest that PUC action (or the prospect of such action) can lead utilities to participate in a collaborative arrangement whereby nonutility interests can gain increased and more continuous representation in all phases of DSM planning and implementation.

In most of the cases studied, the birth of the collaborative was signaled by the development of a MOU or similar document that presented the overall goals of the collaborative and its general structure. However, informal meetings and negotiations often preceded the signing of the MOU by a few months. We believe that formalizing group goals, processes, and responsibilities early, and making sure that the stated arrangements are acceptable to all parties, is critically important. In the CG&E Collaborative, for example, it appears that some of the NUPs expected more decision-making authority than was actually specified in the MOU, which might have led to subsequent dissatisfaction.

Influence of Key Parties

An important determinant of a utility's decision to participate in a collaborative and of the decisions that ultimately are made by the collaborative body is the relative influence exercised by the other interested parties. The influence of the PUC with respect to collaborative formation is determined by its willingness and ability to aggressively promote utility adoption of DSM programs. The influence of the other NUPs derives from how closely their positions parallel those of the PUC, how well they can convince commissioners to adopt their positions, or both.

As described in the preceding section, PUCs sometimes require utilities to participate in collaboratives with key NUPs. In these cases, one kind of PUC influence on collaborative formation is clear. In those cases where direct PUC encouragement leads to collaboration,

even in the absence of a direct order, the influence of regulators also is clear. However, PUCs also can exert substantial influence without directly addressing the issue of collaboratives. Where a PUC has historically been aggressive in promoting DSM, utilities can be influenced to participate in a collaborative in an effort to improve relations with regulators. Also, in such a situation, utilities can be fairly certain that they will be expected to aggressively pursue DSM in the future, so that participation in a collaborative is not likely to lead to an extensive (or expensive) departure from the direction that the utility would probably have to take anyway. Table 2.1 (column 7) shows that nearly all the collaboratives studied took place in states whose PUCs had aggressively promoted DSM prior to the collaborative. Of course, all these states had not been equally aggressive. Massachusetts, for instance, had a substantially longer and more aggressive history of encouraging DSM programs than did Maryland.

As mentioned earlier, the influence of various NUPs is determined by how likely they are to get the PUC to side with them instead of with the utility. Where a utility can be fairly sure that NUPs will not be able to effectively intervene to block the utility's desired course of action, much of the incentive to participate in a collaborative evaporates. If a utility does participate in a collaborative under such circumstances, it is unlikely to depart significantly from its intended course of action, since it would expect PUC resolution of contested issues to be decided in the utility's favor. The CG&E Collaborative appears to be an example of this situation.

If intervenors cannot muster the resources necessary for effective intervention, this too could limit their effectiveness in the collaborative process. Where utilities and NUPs each consider the influence of their traditional adversaries to be roughly the same as their own, the incentive to seek mutually agreeable solutions through the collaborative (as opposed to seeking one's own ideal solution through litigation) is likely to be greatest.

Other Important Factors

Regulations and policies that specify if and how utilities can receive positive financial incentives based on the performance of their DSM programs (e.g., share-savings, or bonus incentives) contribute to the profitability of a company's DSM endeavors. However, the question of whether or not early enactment of such incentives stimulates collaboratives to more aggressively pursue DSM options is unclear from this study. The last column in Table 2.1 shows when, if at all, state regulators enacted provisions allowing utilities to receive a positive financial incentive based on the effectiveness of their DSM programs. In about half the cases there was an incentive mechanism in place before a DSM plan was collaboratively developed; such a mechanism came later, or not at all, in the remaining cases. In some of the cases where incentives were in place (e.g., NYSEG, PEPCo), an aggressive DSM portfolio was developed. However, the same can be said for several cases (e.g., CL&P, NEES), where there was not early passage of such a mechanism. And in the case of CG&E, where incentives went into effect during the collaborative, postcollaborative DSM expenditures increased dramatically but were still substantially less than in the other cases studied. These ambiguous findings are further confused by the fact that utility actions can also be influenced by the existence of direct cost recovery and lost revenue recovery

mechanisms, which varied from case to case, as well as by the many other factors discussed in this study. However, several studies (Calwell and Cavanagh 1989; Moskowitz 1989; Nadel and Jordan 1992) argue that incentives are required to sustain aggressive utility commitment to DSM.

Another factor that could seemingly help determine collaborative outcomes is the history of conflict among the participating parties. In the CG&E Collaborative, the desire to avoid negative effects from past animosities led to the creation of a working group that excluded individuals who had previously been involved in heated adversarial relations with each other. However, such precautionary steps were not taken in other collaboratives with little (if any) ill effect on the ability of the parties to interact. The message seems to be that successful collaboratives do not have to exclude conflicting parties; rather, a well-run collaborative can turn conflict into consensus.

PARTIES INVOLVED AND PARTIES EXCLUDED

Number and Types of Participants

In addition to utilities, five different types of NUPs were represented in the collaboratives studied: consumer/public advocates (often representing the interests of residential, and especially low-income, customers); environmental/conservation advocates; large industrial electricity users; state regulatory advocacy staff; and state energy offices. In some cases, the same group represented more than one set of interests (e.g., environmental and consumer interests) although often one of these interests comprised the primary focus of the group in question. Also, state regulatory advisory staff often acted as observers, facilitators, or nonsignatory parties to the collaborative.

The first three of the nonutility categories listed above can include both government and nongovernment organizations. For example, the consumer advocate in the CG&E and CL&P collaboratives was the state OCC, while Towards Utility Rate Normalization (TURN) (a nongovernment organization) represented consumer interests in the California Collaborative along with the California Public Utilities Commission, Division of Ratepayer Advocate (CPUC/DRA). In the New England and New York Collaboratives, the CLF, a nongovernment public-interest group, participated as an environmental/conservation advocate; but in the PEPCo Collaborative, environmental interests were represented by the Maryland Department of Natural Resources (DNR). As for large electricity users, these were represented in the California Collaborative by both the privately-funded Large Energy Consumers Association and the state Department of General Services, which is the single largest electricity user in California. The last three NUPs (state regulatory advisory staff, regulatory advocacy staff, and state energy offices) all are government organizations, but their functions vary from state to state.

Fig. 2.1 shows the frequency with which the seven types of organization participated in the cases studied. Utilities participated in all nine cases, followed closely by environmental/energy advocates (eight cases) and consumer advocates (seven cases). State

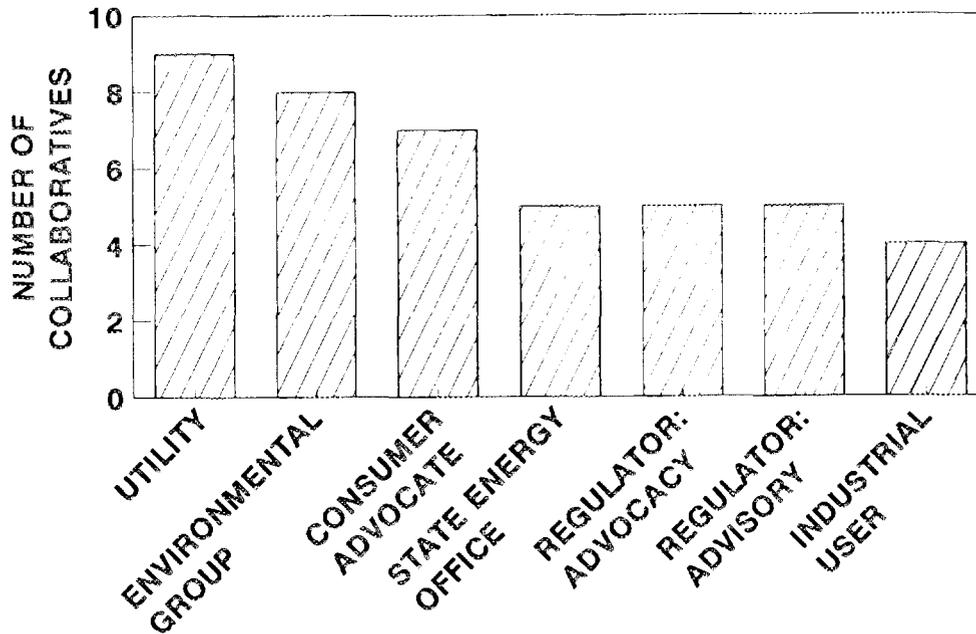


Fig. 2.1 Collaborative participants.

energy offices and regulatory staff were represented in five cases and large electricity users had direct representation in four cases. In many cases there were multiple groups representing the same general interest (e.g., multiple utilities in California, Massachusetts and Wisconsin).

The number of different interests represented in a single collaborative varied substantially from case to case. In the California and Wisconsin cases, there were representatives from all seven different types of organization, while the NEES-CLF Collaborative had direct representation from only two parties (utility and environmental advocate). The CL&P Collaborative had representatives from all interests except large electricity users, while the remaining cases each had four or five different types of participating organization. All of the collaboratives had a mix of government and nongovernment NUPs except for NEES-CLF (nongovernment only) and PEPCo (exclusively government).

The role played by PUC advisory staff differed in many cases from that played by regulatory advocacy staff. Advocacy staff generally argue cases before the PUC and play the same adversarial role as do the representatives of any other distinct interest. In all five cases where they participated, advocacy staff were full parties to the collaborative and behaved basically like the other participating organizations. Unlike the advocacy staff, regulatory advisors act as staff members to the regulatory commissioners and do not take independent stands on issues that will eventually come before the PUC. In most of the cases where advisory staff participated, it was as observers or facilitators. The only exceptions to this were in the CG&E case (where the advisory staff have since expressed reservations about their full participation) and in Wisconsin (where the staff acts in both an advocacy and an advisory role). The awkwardness associated with full participation by advisory staff comes

from the necessity for such staff, when acting as advisors to the PUC, to objectively judge the merits of a DSM plan that, in their role as collaborative participants, they helped to develop.³ Also, other collaborative parties often expect PUC advisory staff to speak for the commissioners, which they cannot do since commissions legally cannot be bound by their staffs. However, even when their role in a collaborative is officially that of observer, advocacy staff can illuminate and clarify commission views, which in itself is useful.

Behavioral and Attitudinal Characteristics

As discussed above, collaboratives can be described in terms of the number and types of participants, as well as by these organizations' roles and functions. Another important set of descriptors relates to the behavioral and attitudinal characteristics of the parties involved. These include the following: the parties' expectations; their willingness to compromise; the similarity or divergence of positions at different levels of the same organization; the parties' commitment of time, attention, and resources to the collaborative; their competence and knowledge concerning DSM issues; and the standing of participating organizations in the local area.

Expectations concerning the operations of the collaborative and what it should accomplish can affect the collaborative process and participant satisfaction. For example, a major difference in expectations was reported in the CV Collaborative, where the utility appeared to see the collaborative as a substitute for litigation, while CLF saw it as a complement to litigation, narrowing the scope of contested issues but not necessarily eliminating the need for subsequent adversarial proceedings. In such a case, the party that expected the collaborative to signal a new, more cooperative relationship among parties can feel betrayed when one of the other participants intervenes against them. Another important difference in expectations can involve the range of issues that will be resolved by the collaborative.

The willingness of the various parties to retreat from their initial positions and find mutually acceptable compromise solutions was cited by many participants as an important component of collaborative success. This willingness to compromise might be influenced to some extent by the individual characteristics of the participants and, to a greater extent, by the charter and mission of the organization they represent. However, it is probable that the most powerful factor influencing an organization's willingness to compromise is its power and influence relative to the other parties and its perception of what it could gain through the collaborative compared to what it could accomplish by sticking to its position and seeking a litigated solution.

In a few cases, participants mentioned that the interests held at one level of a collaborative organization differed from those held at another level. In one instance, a respondent noted that collaborative negotiators sometimes expressed opinions that seemed

³Most states' laws prohibit PUC advisory staffs from participating as full parties and perhaps even as observers when a DSM collaborative takes place in the context of adjudication.

different than those expressed by upper management. In another case, an intervenor group was concerned that the commitment to DSM expressed by the utility's collaborative representative might not be echoed by the operations staff involved in program implementation. This kind of disparity between different organizational levels could cause confusion or anxiety among negotiators and make it more difficult to establish mutual trust and reach agreements.

The commitment of time, attention, and resources by participating organizations can be an important determinant of how well, or even whether, a collaborative continues to function. In the case of the CL&P Collaborative, the functions of the group slowed to a near standstill after its first successful development of a DSM plan due to the shifting of the utility's attention to other pressing business and the difficulty of several NUPs in mustering sufficient resources to devote to the collaborative. In Phase II of the Massachusetts Collaborative, where the NUPs worked with each utility individually, the NUPs were spread too thin to actively participate with each utility in a timely manner. This appeared to be a problem both for the NUPs and for their consultants. Not only can insufficient resources or attention injure the collaborative as a whole, but it also may diminish the influence of whichever groups reduce their level of participation.

The competence of participating groups' representatives and their knowledge of DSM issues is another factor affecting success. The Wisconsin Collaborative might have been adversely affected by the participation of many individuals representing a variety of groups without the assistance of outside consultants to bolster their technical expertise. In California, the other case where no consultants were used, many of the NUPs had over a decade of experience on DSM issues and were technically competent.

The final characteristic of participating organizations discussed here is their standing in the local area. This issue was raised by several participants in the NYSEG Collaborative concerning the key role played by an environmental advocacy group from outside the local service area (CLF) and the alleged lack of familiarity with local conditions exhibited by some of its consultants. The involvement of organizations with a strong stake in local issues and with substantial understanding of local conditions and concerns could avoid some of the dissatisfaction expressed in the NYSEG case.

Excluded Parties

Although the collaboratives generally included a variety of organizations, most of these efforts did not allow (or could not succeed in gaining) direct representation by every conceivable group with an interest in DSM issues. In many cases, the participating organizations were those that had been involved in past litigation leading to formation of the collaborative. Residential, commercial, and industrial interests were all commonly mentioned as having not been directly represented in collaboratives, although public advocacy organizations like state public advocates and PUCs can be said to often represent these groups as part of their charge to serve the broad public interest. Low-income groups, building design professionals, and energy service companies also were not directly represented in many of the cases studied. In some cases, efforts were made by collaborative

participants to get input from parties not directly represented in the collaborative through other mechanisms, such as the Residential Energy Advisory Panel organized by OCC for the CG&E Collaborative and CV's pre-existing customer advisory panel. However, these efforts were generally perfunctory and were not comparable to direct involvement in the collaborative.

Limiting the number of participating parties in a collaborative can have both positive and negative results. On the positive side, the number of viewpoints to be reconciled is kept low, increasing the likelihood that a mutually acceptable solution can be reached. And if the participating groups are carefully chosen to speak for a broad range of consumer and environmental interests, the fact that only a limited number of groups takes part in the collaborative does not have to mean that entire categories of interests are sacrificed. On the negative side, those groups that are not directly represented do not have the opportunity to participate in the process and to express their unique concerns and priorities, raising the possibility that the collaborative plan will not optimally serve all societal interests. Also, the exclusion of certain groups increases the likelihood of intervention by these outside interests against the collaboratively-developed plan. This seems to have been the case in the NEES Collaborative, where only two parties took part and extensive intervention occurred when the plans were filed with the regulators. However, NUPs' participation in the PEPCo Collaborative also was relatively limited (only three groups — all government agencies — took part), yet there was no intervention against the collaborative filing.

SCOPE OF COLLABORATIVES

Overall Goals

Each collaborative had its own goals, which represented the common intent of the collaborative group. Typically, these goals were more limited than the objectives held by the individual participants (see Chapter 4). Most often, the jointly-held collaborative goal was to design and implement a comprehensive package of cost-effective DSM programs and resolve relevant policy issues. The Wisconsin Collaborative, with its emphasis on identifying the market potential of cost-effective DSM programs through demonstration projects, and the CG&E Collaborative, which only made recommendations to the utility on potential DSM programs, stood apart from the other collaboratives.

The shared goals described above generally were developed at the time of the collaborative's inception and formalized in a MOU or other document that established the collaborative.

Key Issues

The types of issues addressed by the collaboratives studied were basically the same from case to case. In all instances but one (CG&E, whose collaborative efforts were confined largely to the screening and recommendation of DSM options), both program

design and policy issues were addressed. Typically, monitoring and evaluation strategies were addressed as well.

Program design issues included the establishment of cost and savings data for various DSM options, the combination of related options into programs, and the development of customer incentives. Often a great amount of technical detail was involved in these program design discussions, so that the assistance provided (especially to the NUPs) by outside experts was of considerable importance. The establishment of specific customer incentive levels (which many considered to be a cross-over into the policy arena) was often a difficult issue on which to reach consensus.

In most of the cases studied, a variety of policy issues were addressed. These included: methods for determining cost-effectiveness (including approaches to calculating long-run avoided costs and factoring in environmental externalities); rate-making treatment (program cost recovery, lost revenue recovery, and positive financial incentives); prioritization of potential DSM programs; and fuel switching. In many cases, the resolution of these policy issues proved more difficult than reaching consensus on program design questions. This is not surprising, since the decisions reached on the policy issues listed above have the power to greatly influence subsequent utility actions and market share well into the future. While most collaboratives tackled issues related to cost effectiveness and rate-making, nearly all shied away from dealing with fuel switching. Where fuel switching was the subject of negotiations (CV and Wisconsin), it proved difficult to resolve (see chapter 3).

Collaborative participants expressed different opinions on whether or not policy issues should be resolved early in the collaborative process. Many respondents said that early resolution was desirable, because policy decisions can have considerable effect on program design. For example, the method chosen to calculate long-run avoided costs or to account for environmental externalities can be significant in determining which DSM programs are cost effective. Also, some maintain that the nature of the cost-recovery and incentive mechanisms that are enacted can influence utility willingness to aggressively pursue DSM. On the opposite side of the issue, several respondents maintained that early attempts to solve difficult (and often divisive) issues like fuel switching and cost recovery can result in the establishment of bad feelings among participants and can delay, or even preclude, the development of mutual trust and respect. This, in turn, can make it more difficult to reach subsequent consensus in areas of potential agreement.

THE COLLABORATIVE PROCESS

Organizational Structure

The decision-making structure of the collaboratives was similar from case to case. All the collaboratives had multiple organizational levels (Table 2.2), and each level had distinct responsibilities (Fig. 2.2). The most common arrangement (followed in the CL&P, CV, Massachusetts, NYSEG, and PEPCo cases) was a three level structure. On top was a committee, with names like "Steering Committee" or "Oversight Committee," that was

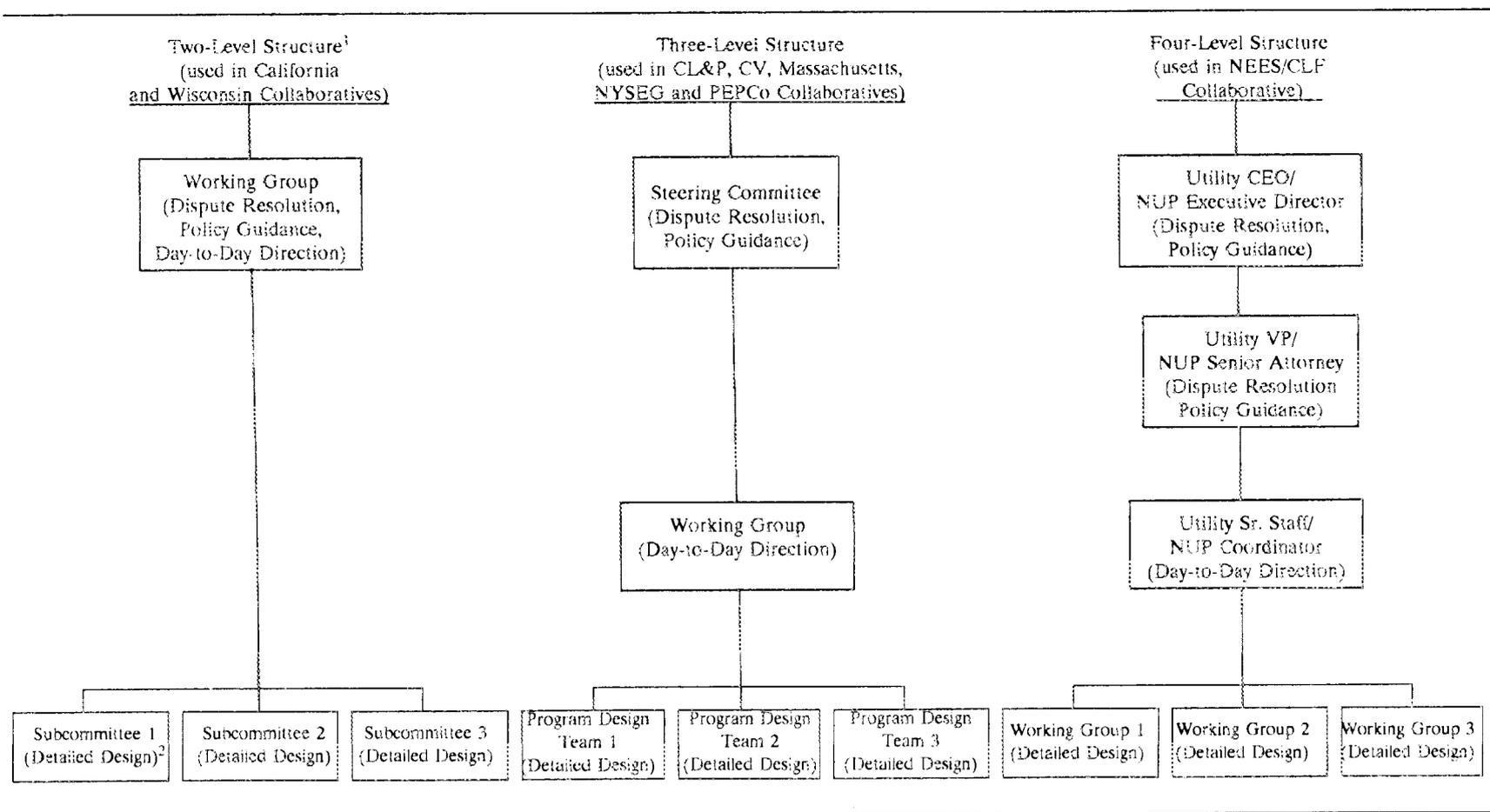
Table 2.2. Major features of the collaborative process

Case study site	Organizational levels—from top down	Funding of consultants	Selection of consultants	Control of consultants	Use of consensus?	Substantial use of time constraints?
California	Working group Subcommittees	by utility ¹	—	—	Yes	Yes
CG&E	Management group (met once) Working group	by utility	by working group	by working group	No ²	Yes
CL&P	Policy committee Working group Program design teams	by utility	by NUPs (with utility veto)	by all parties; then NUPs alone	Yes	Yes
CV	Steering committee (never met) Working group Program design/resource allocation teams	by utility	by NUPs (with utility veto)	by NUPs	Yes	Yes
Massachusetts	Oversight committee (met once) Working group Program design/policy teams	by utility	by NUPs (with utility veto)	by NUPs	Yes	Yes
NEES-CLF	CEO/Executive director VP/Sr. attorney DSM manager/NUPs' coordinator Program design/policy teams	by utility	by CLF (with utility veto)	by CLF	Yes	Yes
NYSEG	Collaborative committee Working group Program design staff	by utility	by CLF	by CLF	Yes	Yes
PEPCo	Steering committee (never met) Policy & resource allocation team Program design teams	by utility	by OPC	by OPC	Yes	Late in process
Wisconsin	Demonstration panel committees	by utility ³	Not applicable	Not applicable	Yes	Yes

¹The California Collaborative made very limited use of consultants, and this was primarily for help with document preparation for the entire group.

²In the CG&E Collaborative, some decisions were made consensually, but program design decisions were made by the utility acting alone.

³The Wisconsin Collaborative did not use consultants per se but did pay nonutility panel members for attending meetings.



¹The CG&E Collaborative differed significantly from this structure because detailed program design activities were performed by the utility alone.

²Detailed design tasks can include program design, resource allocation, and design of monitoring and evaluation strategies.

Fig. 2.2 Illustration of various organizational structures used by case study collaboratives, with typical names (and responsibilities) for each level.

made up of representatives from upper management of the participating organizations. This body had the authority to resolve disputes that could not be decided at lower levels of the collaborative and, in some cases, it provided high-level policy guidance. In many of the collaboratives, this committee met rarely or not at all. Most of the day-to-day direction of collaborative activity was provided by the middle organizational level, most typically referred to as the Working Group. This group frequently dealt with policy issues, identified the specific programs to be included in the collaborative plan, and set general guidelines for their design. Like the top tier, it typically contained representatives from all major parties to the collaborative. The third level generally consisted of Program Design Teams (usually subgroups of the Working Group), staffed by technical experts representing the various parties. These expert groups performed the detailed tasks necessary to flesh out individual programs in preparation for their subsequent adoption and implementation and often addressed other issues as well, such as resource allocation and monitoring and evaluation.

In three cases, a two-level structure was used. In the California Collaborative, many of the responsibilities described above for the top two organizational levels resided in a single powerful Working Group, while some detailed policy and program design issues were addressed by subcommittees (e.g., evaluation and monitoring) comprised of selected members of the Working Group. Similarly, the Wisconsin Collaborative's Demonstration Panel provided general guidance and attempted to resolve all difficult issues, while detailed design tasks were carried out by committees of panel members. The CG&E Collaborative differed from the other two-tier structures in that its two organizational levels were basically the same as the top two levels in a three-tier system, with detailed program design activities performed solely by the utility with no direct involvement from the collaborative.

A four-tier system was used in one case, the NEES-CLF Collaborative. In this case, the responsibilities of the two lowest levels were much the same as for the two lowest levels in a three level arrangement, but two upper tiers [consisting of pairings of NEES's Vice President and CLF's Senior Attorney on one level and NEES's Chief Executive Officer (CEO) and CLF's Executive Director on the uppermost level] were available for high-level policy guidance and dispute resolution. While some issues actually rose all the way up the decision-making chain to the top, most issues were resolved at lower levels.

In all the organizational arrangements discussed above, staff from the various parties had the opportunity to communicate with their counterparts from the other organizations on an informal and on-going basis. Participation in collaborative groups often led to increased understanding of the other parties' interests and the enhancement of personal relations.

In most of the cases, only two organizational levels (the lower ones) addressed the various issues that came before the collaborative. However, evidence of successful use of upper organizational levels to provide high-level guidance and resolve contentious issues, most notably in the NEES-CLF case, suggests that active involvement by upper management might help the participating parties reach consensus in those instances where a mutually acceptable solution eludes the Working Group.

Use of Coalitions

Where more than two parties were involved (all cases except for NEES-CLF), the formation of coalitions represented a way to reduce the number of divergent opinions expressed on key issues and to magnify the influence of individual groups. In the CV, CL&P, and Massachusetts Collaboratives (all of which included CLF), a coalition was formed involving all the NUPs and this remained stable over time and for most important issues. In these cases, the collaboratives had the characteristic of a two-party negotiation on many issues. In the remaining cases (California, CG&E, NYSEG, PEPCo, and Wisconsin), coalitions shifted over time depending on the nature of the issue and the interests of the participants. While two-party negotiations have the advantage of focusing the discussion and narrowing choices, it also can eliminate the range of options and the representation of minority opinions that a true multiparty negotiation makes possible.

Outside Consultants

Two key features of nearly all the collaboratives studied was the use of consultants by the NUPs and the funding of these consultants by the utilities. Except in the California and Wisconsin cases, the use of these outside experts was considered necessary so that the NUPs would not be at a significant disadvantage relative to the utility in terms of technical knowledge and experience. In California, most of the NUP representatives had over a decade of California-specific DSM experience, reducing the need for outside technical expertise.

Utility funding of outside experts was initiated in the CL&P Collaborative, a practice that was followed in all other collaboratives where experts were used. In those cases, utilities provided virtually all funding of NUPs' experts. In almost all these cases, the outside consultants were selected by, and reported to, one or all of the NUPs (see Table 2.2). The principal exception was the CG&E Collaborative, where all parties to the collaborative, including the utility, selected and helped manage the outside expert. In the early years of the CL&P Collaborative, the NUP consultants reported to all parties, including the utility; more recently, this was changed so that control of the consultants was exercised by the NUPs alone. Even though the selection of NUP consultants typically was made by the NUPs themselves, this decision often was subject to a veto by the utility if it had strong objections to the individuals recommended by the NUPs. In all cases, the utilities agreed to fund the NUP consultants without being ordered to do so by the PUC.

The costs of NUP consultants over the life of the collaboratives is shown in Table 2.3. In total, nearly \$6 million has been spent to date by the utilities for these outside experts. The CG&E Collaborative, with only \$150,000 paid to consultants in 22 months of operation, spent far less than any other collaborative that employed outside experts. The greatest expenditures, both in absolute terms and on a monthly basis, were made in the Massachusetts case (\$385,000 in Phase I and \$2,000,000 in five separate Phase II collaboratives). Elsewhere, consultant costs on the order of \$250,000 or \$300,000 a year were common. The expenditures in the Wisconsin Collaborative were for fees paid to panel members; consultants were not employed in this case. The California Collaborative used less

Table 2.3. Consultant costs and elapsed time, by collaborative

Case study site	Consultant costs (for NUPs) ¹		Elapsed time
California	Phase I:	<\$100,000	Phase I: 5 months
	Phase II:	0	Phase II: 3 months
CG&E		\$150,000 ²	22 months ³
CL&P		\$600,000	45 months ³
CV		\$500,000	29 months
Massachusetts	Phase I:	\$385,000	Phase I: 5 months
	Phase II:	\$2,000,000	Phase II: 21-32 months ⁴
NEES-CLF		\$1,000,000	39 months ³
NYSEG		\$380,000	11 months
PEPCo		\$450,000 ⁵	18 months ³
Wisconsin		\$225,000 ⁵	13 months ³
Total		\$6,000,000	

¹In nearly all cases, consultant costs are approximations.

²These expenditures were for consultants to the entire group and not for the NUPs alone.

³Collaborative is continuing. Elapsed time represents the period from the date collaborative began through November 1991.

⁴This elapsed time (through November 1991) is different for each of the five utilities that entered a separate Phase II collaborative. Only WMECo and BECo are on-going.

⁵Expenditures are for the period running through the summer of 1991 (and not through November 1991). In the case of Wisconsin, these funds go to pay nonutility panel members for attending meetings and for other administrative costs, and are not actual consultant costs.

than \$100,000, primarily to pay for consultants to help with document preparation for the entire group.

It could be argued that collaboratives as we know them would not be possible without utility funding of NUP consultants, since NUPs often do not command sufficient resources to hire their own experts and generally do not possess the expertise necessary to engage utilities in meaningful technical discussion on program design issues. By hiring and controlling their own consultants, the NUPs assure that their underlying interests can be translated into programs and policies through the collaborative process.

In addition to using their own in-house staff, utilities often hired their own consultants. The use of "opposing" sets of experts (NUPS' and utilities') does not necessarily transform the collaborative from a cooperative to an adversarial process because, even without the use of consultants, the various parties still have their own interests to advocate. In fact, often the "opposing" experts are given substantial room to find common ground, reporting any tentative agreements back to their clients for final approval.

All processes required a joint fact-finding effort early in the collaborative, during which technical facts were established to the satisfaction of all participants. As long as the NUPs had access to their own experts, the joint fact-finding phase worked smoothly and was critical for establishing a common base prior to program design and in building trust among members, regardless of utility use of its own experts. This phase was valuable because it provided a nonthreatening way for the different parties to interact, create a positive group dynamic, and become familiar with everyone's interests without any issues being explicitly negotiated.

Use of Consensus

In nearly all the collaboratives, DSM plans and related policies were developed by consensus. This means that all parties must agree in order for plans and policies to be submitted to the state PUC as a consensus filing. Of course, nothing prohibited a utility or a subset of collaborative participants from submitting a plan or a portion of a plan to which there was not universal agreement, but this submittal would not be considered a consensus filing. In Wisconsin, the collective goal was to design demonstration projects instead of a complete DSM plan, and this too was done by consensus.

The only departure from the consensus model among the collaboratives studied was the CG&E case. There, the model employed can be characterized as "advisory," since the NUPs were allowed to provide input to the utility but did not participate in detailed program design decisions, which were made by the utility alone. Those decisions that the collaborative was allowed to make, such as the selection of a set of options to be subjected to CG&E's assessment, were made consensually. However, plan development itself was not conducted consensually.

The use of a consensual model does not assure that consensus will be reached on all issues. However, the absence of such a model means that the NUPs will have less power in the collaborative process and less influence on utility decision making. Where the consensual model is used, the process can be assisted by holding consensus training sessions for participants early in the life of the collaborative, as was done in Wisconsin. As in the CL&P case, the use of outside mediation also can assist the parties in reaching consensus.

Facilitation and Mediation

Third party neutrals from outside the pool of collaborative participants were used as facilitators or mediators only in the CL&P case, and this arrangement was not adopted until after two and a half years of operation without third-party assistance. In all other cases, the functions of facilitation and mediation were provided by the participants themselves. Facilitation functions include the scheduling of meetings, exchange of information, delineation of issues, and establishment of internal deadlines and responsibilities. These functions generally were provided by the participants, often on a rotating basis. Where the NUPs were served by a number of different consultants, a NUPs' coordinator frequently was hired to oversee and organize the NUPs' work. In some cases, a utility coordinator also was employed to coordinate the utility effort and work with the NUPs' coordinator.

Though it is often a fine line, mediation differs from facilitation in that mediators actively assist parties in reaching consensus, often working individually with parties outside the larger group meetings. Accordingly, mediation is generally more challenging and also more controversial than facilitation. Only the CL&P case had an outside mediator. In some cases, the mediation function was absorbed by those parties without a strong stake in the specific outcome of a given issue who could mediate between parties with clearly opposing views. With this approach, often used in the California Collaborative, the party playing the role of mediator could vary from issue to issue. Another option for mediating difficult issues was to refer the problematic issue to an oversight group, where senior representatives of the participating organizations could attempt to reach a solution. This option was available to most of the collaboratives but was widely used only in the NEES-CLF Collaborative.

Although a high degree of consensus was reached in most of the collaboratives, and outside third party neutrals were used in only one of the cases, the successful use of third party neutrals in resolving other contentious public policy disputes suggests that on-going collaboratives may benefit from such assistance. On-going collaboratives are often faced with resolving difficult issues that they have been unable to resolve to date or are expanding to include new parties, raising the possibility that consensus may be more difficult to achieve. New collaboratives also may benefit because they are likely to arise in areas with less of a DSM track record and less developed historic relations (however contentious) between parties than in the cases studied here. However, any third party chosen should have a good understanding of key technical and policy issues as well as knowledge and experience with mediation techniques.

Elapsed Time

As shown in Table 2.3, there has been substantial variation in the length of time covered by the collaboratives studied. The Phase I and Phase II efforts in California and the Massachusetts Phase I Collaborative, at less than half a year each, were the shortest lived. The NYSEG Collaborative, completed in less than a year, also was short. The longest-lived collaborative is the one begun at CL&P over three and a half years ago, which continues to this date. Other long-running collaboratives include NEES-CLF (over three years), Phase II of BECo and WMECo in Massachusetts (just under three years), and the recently-completed CV Collaborative (two and a half years). In more than half of the cases, collaborative activities are still continuing. While the continuing communications among parties allowed by collaborative longevity can be positive, shorter collaboratives also can lead to important products and agreements.

Use of Time Constraints

Many respondents mentioned the use of time constraints as an important tool for keeping the collaborative process moving along without excessive delays. These constraints can take the form of deadlines for interim products (e.g., development of work plans; agreement on a cost-effectiveness screening tool) and final products (e.g., first filing of a DSM plan). Limits also can be set on the amount of time to be spent on the treatment of specific issues (e.g., long-run avoided costs; environmental externalities). In some of the

collaboratives, time constraints were imposed internally; in others, these time constraints were imposed by PUCs. In some cases, for example the Massachusetts and NEES-CLF Collaboratives, a combination of internally- and externally-imposed time limits were used (i.e., the early time constraints were internally set while the on-going collaboratives were subject to annual pre-approval filing requirements).

Table 2.2 shows that all the collaboratives made extensive use of some form of time constraint. However, even though much use was made of such constraints, the established deadlines were often missed and requests for extensions on externally-imposed deadlines were not uncommon.

The effect of deadlines on collaborative outcomes is unclear. Continuing reminders of the need for timely completion of collaborative tasks should help prevent those delays that stem from the parties losing track of their mission, becoming unduly absorbed in minor details, or being drawn away to other activities. On the other hand, some respondents pointed out that unrealistically strict deadlines can lead to morale problems, and that such deadlines are often more burdensome for NUPs than for utilities because of the greater resource constraints faced by the former. Also, overly strict deadlines can result in a situation where some issues are settled while others remain unresolved, resulting in the need for collaborative follow-up.

3. KEY INDICATORS OF COLLABORATIVE PERFORMANCE

REACHING CONSENSUS AMONG PARTICIPANTS

A critically important feature of the DSM collaboratives is that they explicitly sought to attain consensus on all issues by all participants. This, in our opinion, represents a major departure from the "majority-rule" character of most decision-making processes in this country. Consensual processes necessitate that the interests of each party be satisfied, since any one party has the power to block consensus. While traditional settlement procedures used in rate cases and in other matters before the PUCs also strive for consensus, the collaborative process appears to depart from traditional settlement largely in its use of consensus-building processes prior to a utility filing of its DSM programs. The DSM collaboratives have also all attempted to reach consensus on a broader range of DSM program design and policy issues than is typical either in traditional settlement procedures related to DSM or in other types of informal DSM-related public involvement processes.

The DSM collaboratives successfully reached a high degree of consensus given (1) the range and complexity of the issues addressed, (2) the number of participants and their oftentimes historic animosities, and (3) the relatively short time-frames set aside in many of the collaboratives. While, as discussed in prior chapters, the collaboratives varied somewhat in scope, participation, and timing, all of the processes reached consensus on most issues that they set out to address, among most if not all of the parties, and often even within the original time horizon.

Table 3.1, listing the seventeen consensus programs submitted by WMECo and four NUPs in Massachusetts, indicates that the scope and comprehensiveness of the agreement can be impressive. Included in the WMECo Collaborative's consensus was also agreement on customer incentives for each program, WMECo's DSM budget, and its cost-recovery proposal including lost revenue and a financial incentive. While the 1991 WMECo filing perhaps represents the highest level of consensus on the broadest scope of issues we found (with the possible exception of NEES which involved only one other NUP), most of the other collaboratives also achieved a high degree of consensus on a broad scope of issues.

A Spectrum of Issues

Despite the high degree of consensus attained, certain issues, particularly those that focused more on policy matters rather than those of a technical nature (i.e., the application of policy), proved difficult to resolve, and some proved elusive across virtually all collaboratives. Table 3.2 includes a representation of the diversity of issues that most, but not all, of the DSM collaboratives addressed. The list is arranged in ascending order of difficulty with respect to achieving consensus. While the specific ordering may have differed among collaboratives, this basic pattern held between collaboratives.

As the list implies, the collaboratives seemed to reach consensus more easily, and we might add often quite creatively, on basic program design issues. For instance, the

Table 3.1. Summary of estimated costs and savings for 1991 Collaborative DSM programs for WMECo¹

Program	Total 1991 costs (\$000)	1991 energy savings (MWh)	1991 capacity savings (MW)	Lifetime benefit/cost ratio
Electric space heat	1,008	2,525	0.8	2.95
Domestic hot water	184	1,036	0.3	2.48
Multifamily	473	1,010	0.3	1.03
Public housing	248	944	0.3	2.65
Neighborhood	492	1,710	0.7	2.53
Lighting	546	1,641	0.6	2.30
Appliance pick-up	499	3,010	0.6	4.80
Energy crafted home	345	38	0.0	1.05
Energy value water heater	219	0	0.2	1.39
Total residential	4,012	11,914	3.8	n/a
Energy check	1,543	4,804	1.4	3.38
Lighting rebates	4,485	4,010	1.0	1.83
Energy conscious cons.	1,164	2,172	0.6	4.02
Comm. energy action plan	1,014	2,477	0.8	1.97
Comm. customer init. plan	503	327	0.1	2.39
Ind. energy action plan	1,271	5,096	1.3	2.62
Ind. customer init. plan	388	1,050	0.3	2.35
Street lighting	368	1,579	0.3	2.12
Total non residential	10,736	21,515	5.8	n/a
Other energy alliance	1,274			
TOTAL	16,023	33,429	9.6	n/a

Source: Massachusetts DPU Order D.P.U. 91-44 (July 1, 1991).

¹While most of the programs listed are new, even the ones that WMECo was running prior to the collaborative all were substantially revised during the collaborative. Prior to the collaborative, in 1987, WMECo spent \$2.4 million on its DSM programs representing 0.8% of its operating revenues compared to a proposed \$16.0 million (3.8% of revenue) in 1991.

Table 3.2. Spectrum of issues addressed by DSM collaboratives

Least Difficult:

1. Identifying potential DSM technologies and inefficient end uses
2. Designing research and development efforts
3. Packaging measures into programs and designing marketing and delivery strategies
4. Screening measures and programs for cost-effectiveness (using previously adopted cost-effectiveness tests)
5. Designing evaluation and monitoring plans
6. Choosing customer incentives for programs
7. Detailing cost-effectiveness tests for measure and program screening (including method for determining long-run avoided cost)
8. Selecting annual budgets for individual DSM programs and overall DSM effort
9. Ratemaking and cost-recovery issues (also in ascending order):
 - A. Allocating DSM expenditures to rate classes
 - B. Expensing vs. amortizing DSM expenditures
 - C. Recouping lost revenue caused by DSM savings
 - D. Other utility incentives (i.e., shared-savings, bounty)
10. Environmental externalities
11. Fuel switching

Most difficult:¹

¹Other issues that were fairly controversial but not widely discussed among the collaboratives included the role of DSM bidding/performance contracting (California, Massachusetts), and the role of load building programs [e.g., electric space heating, electro-technologies (California, Massachusetts, CL&P)].

identification of DSM opportunities, the screening of measures and programs where clearly defined screening methods were adopted prior to the collaborative (usually by the regulators), and bundling measures into focused programs that included marketing and delivery strategies were often agreed to fully. While these efforts took substantial time, the collaboratives seemed well suited for these activities which generally focused on transferring and adapting technology and program design ideas, and applying already established DSM policies.

The collaboratives experienced much greater difficulties and less consensus on a range of policy issues that were necessary to resolve in determining the scope and detail of the utilities' DSM efforts. In the middle of the list, for example, is the issue of designing customer incentives (e.g., rebates, loans, direct utility investment), which proved quite contentious in many cases and required litigation and a PUC ruling in several instances (WMECo, NEES-CLF, CV). This issue was contentious not just because of the technical question regarding how much utilities need to pay (and in what form) to engender customer participation, but because it embraces a more fundamental policy issue regarding how the costs of DSM should ultimately be distributed between participants and nonparticipants.

While the NUPs generally pushed for greater direct investment by the utilities (i.e., the utilities covering the entire incremental cost of DSM measures), many of the utilities argued that the participants should bear more of the costs.

As we move down the list from the customer incentives issue, the issues become increasingly more contentious, while also becoming increasingly less technical in nature and more political, if not philosophical. Although ultimately resolved in most cases, many of the collaboratives spent enormous amounts of time debating the merits of alternative screening tools (CG&E, Massachusetts, NYSEG, PEPCo), including methods for calculating avoided cost and various cost-effectiveness tests (e.g., societal test vs. utility test), which could greatly affect the amount and type of DSM pursued. Even after programs were designed, many of the collaboratives remained deeply divided about the implementation pace in terms of annual budgets and ramp-up — with the NUPs often arguing for utilities to run the programs "full-throttle" and utilities often arguing that they should proceed more slowly for various reasons including rate impact concerns (California, Massachusetts, CL&P).

Despite the fact that one of the first shared-savings financial incentives in the country was designed during a DSM collaborative (NEES), utility incentives and other cost-recovery and ratemaking issues such as whether utilities should expense or amortize DSM expenditures, whether they should collect lost-revenue, and how DSM costs should be allocated have proven extremely controversial and have often been litigated rather than consented to in many of the collaboratives — particularly the early ones (Massachusetts, CV, CL&P). These issues often split the NUPs more than other issues where consensus was difficult, and often resulted in strong utility-environmental alliances in opposition to the other NUPs (e.g., NRDC and California utilities, and CLF and New England utilities). Two of the most recent collaboratives, NYSEG and PEPCo, guaranteed utilities (either at the outset or relatively early in the collaborative process) the opportunity of gaining positive financial incentives for delivering satisfactory DSM programs.

Finally, the issues engendering the greatest political and philosophical disparities between parties, namely environmental externalities and fuel switching, proved the most difficult issues to reach consensus on. With respect to including environmental externalities in a utilities' cost-effectiveness screening tool (effectively raising the avoided cost and allowing more DSM to be cost-effective), only two of the collaboratives could reach consensus on a mechanism for incorporating them (NYSEG, PEPCo). Parties to the PEPCo Collaborative were able to reach consensus on externalities by agreeing to a relatively crude 20 percent credit for DSM resources compared to supply-side resources, while the NYSEG Collaborative agreed to carry over a 1.4 cent adder developed for the state's all-source bidding process.

Fuel switching (e.g., changing electric space and water heating to other fuels) proved to be so controversial that, while most of the collaboratives discussed its inclusion at the outset, it was only actively pursued in the CV Collaborative. In all the other collaboratives where it was discussed, the NUPs agreed not to pursue the issue after the utilities essentially threatened not to participate in the collaborative if the issue was put on the table (NEES, Massachusetts, CL&P, Wisconsin, PEPCo). In CV's case, however, because of the NUPs'

insistence on pursuing fuel switching and the Vermont PSB's interest in seeing cost-effective fuel switching pursued, fuel switching was debated for several years. During those years, little else got finalized, and the entire process turned rather acrimonious. In the end, however, CV did come to a consensus with the Department of Public Service (DPS) in which CV agreed to include fuel switching in its programs and to broker contracting and financing but not to provide its own funds for financial incentives.⁴

While the DSM collaboratives to date have done a better job applying policies and resolving technical issues than they have resolving DSM-related policies that often touch on important distributional issues and philosophic underpinnings, we do not conclude that future collaboratives should avoid difficult policy issues. To the contrary, we believe that the resolution of these underlying policy issues is essential to the effective design and implementation of comprehensive DSM programs, and that collaborative processes are appropriate and potentially effective places to do so. In the conclusions section, we offer several recommendations, based on our observations of what appeared to work well in certain collaboratives, to improve DSM collaboratives' ability to resolve policy issues.

APPROVAL OF COLLABORATIVE AGREEMENTS BY THE REGULATORS AND COURTS

Once consensus is reached in a DSM collaborative, it must be approved by the regulators and, if appealed, sustained by the courts before utilities can implement the programs.⁵ DSM collaboratives do not exist in a vacuum; rather, most of the collaboratives as noted in Chapter 2 grew out of regulatory proceedings, and all must stand the test of regulatory scrutiny. As such, we believe that the interface between the collaborative and the regulators is critically important. If, for instance, a collaborative agreement is largely rejected by regulators or overturned by the courts, it would be difficult to consider the collaborative successful in the short-run however comprehensive or creative it appears, because of its failure to adequately reflect political and judicial reality.

Regulatory Response

As Table 3.3 indicates, the agreements forged during the DSM collaboratives were essentially approved by the regulators in all cases which we studied (except for four cases where the regulators have not yet ruled). However, nearly all the approvals came only after contested hearings during which parties intervened to protest various aspects of the agreements. To date, only the PEPCo Collaborative filing was approved by the regulators without hearings and with no outside intervention. In the CL&P case, hearings were held but there was no formal intervention. In all the other cases, there was intervention by either

⁴CLF, while not a party to the consensus, did not oppose it before the Board, which accepted the proposed concept but has not yet approved specific programs with fuel-switching for CV.

⁵Although utilities are generally free to implement programs prior to receiving PUC approval, they run a greater risk of future cost disallowances — a risk most of the utilities are unwilling to take.

parties that were not part of the collaborative, parties that were part of the collaborative but did not consent to one or more issues included in a utility's filing, or by both types of intervenors. This intervention is indicative of the facts that (1) many of the collaboratives failed to reach consensus on all issues with all the parties, and (2) in many instances the agreements that were reached during some of the collaboratives did not necessarily satisfy the interests of those not represented in the collaboratives.

In several of the contested cases, the parties to the collaborative plus additional intervenors were able to settle all or virtually all of the outstanding issues (California, NEES in both New Hampshire and Rhode Island in both 1989 and 1990). In those cases, as in the PEPCo case, the respective commissions approved the collaborative filings as modified by the settlements without change. As Table 3.3 shows, in all the other contested cases that were not settled, the commission's approval included changes to the utility's original filing. It appears from these data that commissions are generally more willing to approve a utility's DSM plan without modification when all interested parties support it, either through a collaborative process or through more traditional settlement agreements, than when the plans face opposition.

However, it is also important to point out that two of the three states that ordered utilities to make "many" changes to their filings — Massachusetts and Vermont, are the only states in which staff from the regulatory agencies did not directly participate in the collaborative processes (either as a full party or an observer) nor in postfiling settlement discussions.⁶ It is our belief that this lack of direct participation in the collaborative or in the postcollaborative settlement by representatives of the regulators was primarily responsible for the failure of those collaboratives to adequately reflect the interests and concerns of the regulators. Conversely, lack of direct staff participation can result in the regulators' failure to sufficiently appreciate the nature of the compromises made during the processes. While recognizing that independent review by the regulators of the final collaborative agreements is necessary and desirable, we believe that better linkages between the collaboratives and the regulators (and their staff) both before and during the collaboratives is essential. Improving those linkages without violating existing laws is the responsibility of not just the utilities and NUPs, but of the regulators themselves.

Where regulators have required changes to the collaborative filings, or approved postfiling settlements often negotiated by their own staffs, they have not always pushed their respective utilities in the same directions. In Massachusetts, for instance, where the commission has consistently ordered the greatest number of changes, the thrust of those changes has generally been to get the utilities to proceed faster and more comprehensively with their DSM efforts — requiring that measures be added to programs, that customer incentives be enriched, that penetration be accelerated, and that new programs not

⁶Staff at both the Massachusetts DPU and the Vermont PSB historically act in an advisory capacity only (as opposed to advocacy staff that take positions before the commissioners), and as such were not permitted to participate either in the DSM collaboratives or the post-filing settlement discussions.

Table 3.3. Regulatory response to collaborative filings

Collaborative	Intervention against filing	Hearings	Changes ordered ¹		
			None	Some	Many
California 1990	Yes/settled	Yes	X		
CG&E 1991 ²					
CL&P:					
1988 filing	No	Yes	X		
1990 filing	No	Yes		X	
1991 filing	No	Yes			X
CV 1990	Yes	Yes			X
Massachusetts:					
Phase I (all utilities)	FYI				
BECo 1990	FYI				
BECo 1991	Yes	Yes	U	U	U
COM/Electric 1989	Yes	Yes			X
COM/Electric 1990	Yes	Yes	U	U	U
Nantucket 1991	Yes	Yes	U	U	U
WMECo 1989	Yes	Yes			X
WMECo 1990	Yes	Yes		X	
NEES:					
Massachusetts 1989	Yes	Yes			X
Massachusetts 1990	Yes	Yes			X
New Hampshire 1989	Yes/settled	Yes	X		
New Hampshire 1990	Yes/settled	Yes	X		
Rhode Island 1989	Yes/settled	Yes	X		
Rhode Island 1990	Yes/settled	Yes	X		
NYSEG 1990	Yes ⁴	No		X	
PEPCo 1991	No	No	X		
Wisconsin 1991 ³					

¹"Some" changes indicate that the utility was required to increase expenditures or redesign only a few programs. "Many" changes indicate that modifications were required on more than a few programs, or on the accompanying cost-recovery proposals.

²It is too early to tell about the CG&E Collaborative, because the first filing was not made until mid-September 1991.

³The Wisconsin Collaborative, which is a demonstration project, does not involve the filing of complete DSM plans for individual utilities.

⁴Comments were filed protesting the settlement.

Notes: U = commission has not decided case yet. FYI = filings were for informational purposes only. Yes/settled = although parties intervened, issues were settled.

considered by the collaborative be added [e.g., streetlighting, conservation voltage reduction (NEES, WMECo, COM/Electric)]. In contrast, the Connecticut regulators have often ruled to curb efforts agreed to during CL&P's Collaborative (WMECo's sister retail utility) such as reducing the number of houses targeted by a proposed new residential construction program, reducing sample sizes for end-use metering, and most recently, by ordering the utility to decrease its DSM budget 13 percent while finding ways to have participating customers bear more of the direct cost. Rhode Island, also, after evaluating the same NEES programs that Massachusetts did, approved a postfiling settlement negotiated primarily by its own staff which required the utility to shift resources to programs and measures within programs that were the most cost-effective (as opposed to attempting to pursue all cost-effective resources as in Massachusetts), and also requiring program participants in some cases to absorb a larger percentage of the cost. This divergence of views among regulators reinforces our conclusion that regulators' interests cannot necessarily be presupposed, and that collaboratives can be improved by finding better ways to infuse those interests in the process as early and as often as possible.

The Judicial Response

Decisions made by PUCs are subject to appeal to the state supreme court by any party to the case. While the frequency of appeals differs from state to state and utility to utility, they are not uncommon. To date, only two rulings on collaborative filings have been appealed to the courts for review. CV appealed the Vermont PSB's authority to require the company to pursue fuel switching options, and DSM generally. However, that appeal was withdrawn by CV after it settled with the DPS on fuel switching despite CLF's attempt to have the court resolve the issue once and for all. In the WMECo case, Monsanto Company, which was not a party in the collaborative, appealed on a narrow issue regarding whether a provision to curtail self-generation in one of WMECo's approved DSM programs violated state antitrust and discrimination laws. The limited appeals of regulators' decisions regarding DSM collaboratives, in our opinion, supports our conclusion that the collaborative agreements as amended by the regulators have been reasonably acceptable to all parties.

4. SATISFACTION OF PARTICIPANTS' OBJECTIVES

The previous chapter discussed two key indicators of collaborative performance, group consensus and plan approval. Chapter 5 presents other standards by which success can be measured. In this chapter, we examine how well participants' objectives were satisfied through the collaborative process. By allowing individual participants to tell what they had hoped to accomplish and the extent to which their objectives had been realized, we can get a sense of how well the collaborative worked in providing outcomes that were meaningful to those who took part in the process.

PARTICIPANTS' OBJECTIVES

Collaborative participants were asked to describe their organizations' key objectives in undertaking the collaborative process. This open-ended question was intended to elicit descriptions of both underlying interests and strategic objectives and did, in fact, yield a broad range of answers (Table 4.1).

By far the most frequently-mentioned objective was to design a comprehensive set of DSM programs. This was mentioned for all the cases studied, generally by multiple respondents. The related objectives of implementing DSM programs and achieving rapid adoption of these programs were mentioned less often, perhaps because many respondents considered them implicit in the objective of aggressive program design. The objective of

Table 4.1. Commonly-mentioned objectives of collaborative parties

More-frequently mentioned

- Design comprehensive DSM programs
- Avoid or reduce litigation
- Implement DSM Programs
- Achieve rapid adoption of DSM Programs
- Assure cost-recovery and profitability of DSM programs
- Increase utility knowledge of DSM programs
- Get multiple perspectives on key issues
- Avoid "excessive" adoption of DSM
- Avoid or minimize rate increases
- Create precedent for aggressive DSM programs
- Achieve equitable treatment for all end use sectors
- Improve utility relations with regulators and nonutility parties
- Improve communications and relations among parties in general
- Defer need for new power plant construction

Less-frequently mentioned

saving energy is not listed separately in the table because we assume that it was an implicit part of the program design and implementation objectives, even when not explicitly stated. Not surprisingly, many participants (covering nearly all the case study sites) acknowledged their desire to avoid or reduce litigation. Very few respondents directly mentioned their desire to resolve key policy issues, but this was probably included under the broader umbrella of program design. The desire to settle a case pending before the state PUC was mentioned by only two respondents, and accordingly does not appear in our table of commonly-mentioned objectives. Only one respondent reported wanting to test the collaborative approach against other methods of designing DSM programs, but this objective might have been implicitly shared by others, especially regulators. Participants in the Wisconsin Collaborative, which was established as a multiutility demonstration program, shared some of the objectives raised in the other collaboratives but also added a number of their own goals related to identifying the market potential of cost-effective DSM programs and improving DSM marketing techniques.

Examining a list of commonly-held objectives shows us the motives of collaborative participants as a whole, but it does not indicate how the objectives of the various participants may differ from each other. A disaggregated examination is important because collaboratives, by their nature, involve a number of different parties, each of which brings its own set of interests to the collaborative. As described in chapter two, seven different types of participants were represented in the collaboratives studied: utilities, consumer/public advocates, environmental/conservation advocates, large electricity users, state regulatory advisory staff, state regulatory advocacy staff, and state energy offices.

Table 4.2 presents the most frequently-mentioned objectives for each of the seven different types of participants. Clearly, the design of a comprehensive set of DSM programs was important for all types of participants except some large electricity users. For the NUPs (except some large users), designing DSM programs was the most-frequently mentioned objective. For utilities, it was the second most common objective, falling just behind the avoidance or reduction of litigation. We note that the utilities' interest in avoiding litigation was not cited by substantial numbers of respondents from any other type of participating organization as an important reason for taking part in a collaborative. Perhaps this is because many NUPs, even those that often find themselves embroiled in litigation, have more freedom to pick and choose their legal battles than do utilities. Utilities also were the only party for which assuring cost-recovery and profitability of DSM programs and increasing utility knowledge of such programs were frequently-mentioned objectives.

Among consumer advocates, environmental advocates, and state energy offices, the implementation of DSM programs was a frequently-cited objective. Consumer advocates and environmental advocates also stressed the rapid adoption of these programs, while environmental advocates and state energy offices explicitly stated their desire to save energy. The objectives of the advisory and advocacy staffs of state PUCs were basically the same as the other NUPs described above. The only radically different perspective was expressed by large electricity users, whose dominant objectives were to avoid rate increases and the "excessive" adoption of DSM programs. Even these concerns were not unique, however, being shared by some consumer advocacy groups.

Table 4.2. Most common objectives of specific types of participant

Type of participant	Most-frequently mentioned objectives
Utilities	<ul style="list-style-type: none">● Avoid or reduce litigation● Design comprehensive DSM programs● Assure profitability of DSM programs● Increase utility knowledge of DSM programs
Consumer/public advocates	<ul style="list-style-type: none">● Design DSM programs● Implement DSM programs● Achieve rapid adoption of DSM programs
Environmental/conservation advocates	<ul style="list-style-type: none">● Design DSM programs● Implement DSM programs● Achieve rapid adoption of DSM programs● Create precedent for aggressive DSM programs● Defer need for new power plant construction
Large electricity users	<ul style="list-style-type: none">● Avoid or minimize rate increases● Avoid "excessive" adoption of DSM
Regulatory advisory staff	<ul style="list-style-type: none">● Design DSM programs
Regulatory advocacy staff	<ul style="list-style-type: none">● Design DSM programs● Include multiple perspectives
State energy office	<ul style="list-style-type: none">● Design DSM programs● Implement DSM programs

From the above discussion, we can see that utilities and all NUPs (except for some large electricity users) tend to enter collaboratives with a common interest in designing a comprehensive portfolio of DSM programs. This common objective bodes well for the ability of different parties to work productively together, because all participants can focus their energies on the collective development of a comprehensive DSM plan. Beyond this single, important common goal, the participants cast their attention in different directions although the different objectives are not necessarily mutually exclusive and, in most cases, the various parties tend not to be hostile to the interests of their fellow collaborators. Most NUPs explicitly focus on corollaries of the program design objective, most notably program implementation. Meanwhile, the utilities are concerned with matters related to the viability of their enterprise, such as avoiding litigation and assuring the profitability of the programs that are developed. Large users generally stand apart from the utilities and some of the other NUPs, striving to protect their own economic interests by limiting the rate impacts associated with any DSM programs that are adopted. The above-mentioned differences in emphasis and objectives provide fertile ground for trade-offs between parties, raising the possibility that all (or most) parties can be satisfied without injuring any of the other participants.

The overall goals or purposes established for each collaborative at its inception was another set of objectives that was briefly discussed in Chapter 2. These objectives (generally listed in the jointly-prepared MOU) typically are a subset of the full range of objectives discussed here, focusing on the common purpose of the collaborative group to design a mutually acceptable set of DSM programs. The overall purpose represents the public face of the collaborative, presenting a truncated view of what the process is designed to achieve since it is limited to those desires held in common by most participants. The individual objectives discussed above flesh out that picture to show the many and complex interests of the various participants. Accordingly, the following discussion of the satisfaction of participants' objectives will focus on their individual interests rather than the more narrow set of collective objectives.

SATISFACTION OF OBJECTIVES

Overall Satisfaction

Collaborative participants were asked whether the process had resulted in the satisfaction of their objectives (including underlying interests and strategic objectives). In answering this open-ended question, many respondents indicated a high level of overall satisfaction, either by explicitly stating that all of their objectives had been met or by expressing a profound satisfaction that went beyond the attainment of individual objectives. This high overall satisfaction was reported by multiple parties at nearly all the case study sites. In only one case, a respondent (representing large electricity users in the NYSEG Collaborative) indicated a strong overall dissatisfaction with the collaborative process and its outcomes because the settlement represented an aggressive DSM effort which the group had historically opposed. The second and fourth columns of Table 4.3 show the types of participant that expressed high overall satisfaction (and dissatisfaction) at each of the nine case study sites. If a party is not listed as highly satisfied, this means that substantial overall satisfaction with collaborative outcomes was not expressed. Even so, the absence of stated high overall satisfaction does not necessarily mean that a party was not satisfied on some of its objectives or that this party considered the collaborative to be a failure.

By comparing the number of different parties in a given case whose representatives expressed overall satisfaction with the total number of different types of participants interviewed for that same case, we get a picture of the proportion of satisfied parties at each site (shown in column 3 of Table 4.3). Those cases with the highest degree of overall participant satisfaction were Massachusetts (where four different interests were directly represented and all were satisfied during Phase I and at one or more of the Phase II collaboratives) and NEES-CLF (both of whose participating parties were highly satisfied). These were followed by PEPCo (three out of four parties highly satisfied), California (five out of seven highly satisfied), and CL&P (four highly-satisfied parties out of six). In other words, all or most of the participants interviewed reported high overall satisfaction in more than half of our cases. Some participants were highly satisfied at most of the remaining cases. At only one case study site (Wisconsin) did none of the participants report high

Table 4.3. Satisfaction of objectives by type of participant and collaborative

Case study site	Type of participant highly satisfied overall	Proportion of participants highly satisfied	Type of participant dissatisfied overall	Objectives on which multiple parties expressed satisfaction	Objectives on which multiple parties expressed dissatisfaction
California	Utility State energy office Consumer advocate Regulator-advisory Environmental advocate	Most	None	Design DSM programs Limit litigation	Design DSM programs
CG&E	Large user	Some	None	No common objectives satisfied	None
CL&P	Utility Consumer advocate Regulator-advisory Regulator-advocacy	Most	None	Design DSM programs Implement DSM programs Avoid litigation	None
CV	Utility Environmental advocate	Some	None	Design DSM programs	Implement DSM Rapid adoption of DSM
Massachusetts	<u>Phase I and Phase II</u> Utility Consumer advocate Environmental advocate State energy office	All	None	<u>Phase I:</u> Design programs Improve relations <u>Phase II:</u> Design programs Implement programs Rapid adoption of DSM Set precedent for DSM Improve communications	Assure profitability
NEES-CLF	Utility Environmental advocate	All	None	Design programs Implement programs	None
NYSEG	Utility Regulator-advisory	Some	Large industrial user	Design DSM programs	Get multiple perspectives (on continuing basis)
PEPCo	Utility Consumer advocate Regulator-advocacy	Most	None	Design DSM programs Avoid litigation Assure profitability Rapid adoption of DSM	None
Wisconsin	None	None	None	Get multiple perspectives	None

overall satisfaction (probably due to the early stage of the collaborative at the time of the interviews).

In addition to a case-by-case disaggregation, overall satisfaction can be determined for each different type of participant. Based on our interviews, utilities experienced overall satisfaction with the collaborative process and its outcomes more often than any other parties. Utility representatives expressed substantial overall satisfaction in seven of the nine cases. They were followed by environmental advocates, who expressed overall satisfaction in four of the eight cases, and consumer advocates, who were substantially satisfied in three cases out of the six in which they were interviewed. On the opposite end of the scale, representatives of large industrial electricity users reported substantial overall satisfaction in only one (CG&E) out of four cases.⁷ As mentioned earlier, a representative of large electricity users in the NYSEG Collaborative was the only party to express overall dissatisfaction with collaborative processes and outcomes.

Although they were not actual participants, and were interviewed in only some of our cases, public utility commissioners (e.g., in Massachusetts and California) tended to be quite positive regarding collaborative results. Intervenor groups that did not participate in the collaborative effort also were interviewed in two cases (NEES and Massachusetts). In both instances, their review of collaborative results was mixed, with praise given for some outputs and reservations expressed about others.

Thus, these DSM collaboratives resulted in high overall satisfaction for a substantial portion of the participating organizations, while overall dissatisfaction was extremely rare. However, reported satisfaction has not been uniform, either for all the cases or all the different types of participants. The variation from case to case is not surprising, since the varying contextual and organizational environments in which collaboratives take place can be expected to lead to nonuniform results. But what about the fact that some participants (e.g., utilities) were consistently satisfied more frequently than others (e.g., large electricity users)? It is our belief that collaboratives can provide substantial societal benefits even when those benefits are not shared equally by all participants (or nonparticipants). As long as greater benefits are realized by participation in a collaborative than by pursuit of traditional litigation, the outcomes can be considered successful and the participating organizations can be expected to continue their involvement in this process, even if some parties consistently experience greater satisfaction than others.

Satisfaction of Specific Objectives

In addition to indicating overall satisfaction, respondents identified the specific objectives that were satisfied through the collaborative process as well as those objectives that were clearly not satisfied. If the same objective was satisfied for more than one type

⁷The number of cases in which each type of participant expressed high overall satisfaction was calculated by summing the entries in the second column of Table 4.3. The number of cases in which a specific type of participant took part is shown in Table 2.2. Consumer advocates participated in seven cases, but only were interviewed in six of those cases.

of participant in a given case, it was considered noteworthy. The fifth column of Table 4.3 lists these commonly-satisfied objectives for each case. The last column lists those objectives that the collaborative had clearly failed to meet⁸ for multiple interest groups.

The objective of designing comprehensive DSM programs was much more widely satisfied than any other, having been reported by multiple parties in seven of the nine cases (i.e., all cases except CG&E, Wisconsin). Multiple parties also reported the satisfaction of their desire to avoid or lessen litigation in three cases (CL&P, PEPCo, California) out of the seven where this objective was expressed. The objective of implementing DSM programs also was reported by multiple interests as having been satisfied in three cases (CL&P; NEES-CLF; Massachusetts, Phase II). The satisfaction of other objectives was reported less frequently. Some objectives (like program implementation and energy savings) might have been implicitly included in more frequently-stated objectives (like the design of DSM programs) and their satisfaction might go unreported because they were never explicitly acknowledged as objectives.

The listing in column 6 reveals much less reported dissatisfaction and no clear pattern. However, NUPs in several cases where high satisfaction was reported expressed some uncertainty and concern over whether the utility was currently doing as much as possible in the DSM arena (CL&P) or whether the utility commitment to DSM programs would continue in the future (NEES-CLF, Massachusetts).

Some objectives (i.e., designing comprehensive DSM programs, avoiding litigation, implementing programs) were commonly satisfied at more case study sites than were other objectives. To a large extent, this reflects the fact that these objectives were more widely held by multiple groups than were others, making their widespread satisfaction more likely. It also shows that DSM collaboratives are well-suited to designing and implementing comprehensive programs and avoiding litigation, but it does not automatically indicate that other objectives cannot likewise be satisfied through collaboration.

With the exception of designing comprehensive programs (which was commonly satisfied for most participants), different types of participants tended to report satisfaction on different objectives. This probably was because different groups had differing objectives. It is not necessarily true that the same objective is more easily satisfied for one type of participant than for another, although differential levels of satisfaction of the same objective (e.g., program design) can result.

⁸Participants reported that they were uncertain how well some objectives had been met or that it was too early in the life of the collaborative to tell whether a particular objective would be satisfied. Such objectives are not included in column 6. That column contains only those objectives that the collaborative clearly had failed to meet, to the clear consternation of respondents.

Collaboratively-Induced Changes in Objectives

As a follow-up to questions on participants' needs and their satisfaction, respondents at many collaborative sites were asked whether the interests of the various parties had grown closer together as a result of the collaborative process. Respondents in a number of cases noted that the parties had gotten to understand each other better and increased their appreciation of each others' concerns, but this does not indicate that their basic interests and objectives had changed. In most cases where this question was asked, those who answered were fairly evenly split over whether participants' interests and objectives had actually been altered. Many said that no such change had occurred or, in a few cases, that some of the participants actually had moved further apart. Of those who reported that participants' interests and objectives had grown closer as a result of the collaborative, about half believed that this change applied only to some parties or some issues, while the remainder seemed to feel that, to some extent, a greater uniformity of purpose had emerged.

The above discussion indicates that most respondents did not feel that a basic realignment of participants' underlying interests or strategic objectives had taken place, even though greater mutual understanding might have been reached or a confluence of opinion might have occurred among some parties or on some issues. This fits well with the literature on negotiations (Susskind and Cruikshank 1987), which maintains that parties to a dispute do not have to abandon their own needs and self-interest in order to reach a mutually agreeable solution.

5. OTHER MEASURES OF SUCCESS

In the previous two sections we assessed the collaboratives with respect to several measures of success including: (1) whether consensus was reached during the collaboratives; (2) whether the agreements were approved by the regulators, and sustained by the courts; and (3) whether the interests of the participants were satisfied by the collaboratives. In this section we examine several other measures of success which we think are important in assessing the overall value of DSM collaboratives.⁹ These other measures include:

1. Whether time and money were saved by using collaborative processes instead of pursuing traditional litigation strategies,
2. Whether the substantive results of the collaboratives are better than what would likely have occurred without them,
3. Whether the historic relations between the parties improved or worsened as a result of the collaboratives,
4. Whether the plans are being implemented as intended, and
5. Whether the collaboratives are on-going.

SAVING TIME AND MONEY

As demonstrated in Section II, the collaboratives to date have required extensive investments of both time and resources by the participants. While the shortest collaborative has been approximately half a year, several have been on-going for over three years (CL&P, BECo and WMECo in Massachusetts, NEES-CLF). Our best estimate is that the collaboratives together cost about \$6 million to secure outside expertise for the NUPs, (Table 2.3) and perhaps an equivalent amount to cover the staff time of the utilities and the NUPs.

Consensus-building techniques such as collaborative processes are often advocated, at least in part, on the premise that they save time and money when compared to more traditional, adversarial processes. To assess this claim, we asked participants whether they felt the collaborative they took part in was less or more resource intensive than if they had pursued litigation.

⁹The basis of our assessments is qualitative, and is primarily based on the testimony of the participants themselves. Since most collaboratives are relatively new, our assessments are necessarily preliminary. These questions should be reassessed in several years and, at that time, additional qualitative and quantitative measurement techniques could be added to those used here.

Although a majority of those interviewed claimed that their respective collaborative saved resources, not everyone agreed on this question. The parties' views on this question differed across collaboratives, among parties within individual collaboratives, and sometimes even among representatives of the same organization in the same collaborative [NEES, Pacific Gas and Electric Company (PG&E), WMECo]. We believe that the variability of responses is in large part due to the difficulty in determining a clear benchmark for comparison (i.e., is the benchmark simply the development and litigation of a utility plan, or of a utility plan that is comparable to the ones developed during the collaboratives?).

None-the-less, we have several observations to make. First, DSM collaboratives are resource-intensive regardless of whether they result in resource savings associated with the process of formulating and implementing DSM programs and related policies. However, if the intensive DSM litigation that has occurred recently outside of the collaboratives for some of these utilities is any indication of the resources that would have been necessary without the collaborative in the short-run, the collaboratives look more like a bargain.¹⁰ Still, due to the intensive resources required during the initial phases of the collaboratives, significant resource savings associated with the process may be more clearly realized in a longer time horizon than the first few years (i.e., five – ten years).

Second, collaboratives that do not result in a high-degree of consensus are often more resource-intensive than those that do, and may even be more resource-intensive than those that go straight to litigation. This last point underscores the importance of using collaborative-type processes selectively — i.e., where there appears to be some possibility of convergence on important issues between most parties. While we believe that properly structured collaboratives are appropriate and useful for tackling even difficult DSM policy issues, we stress the importance of parties conducting a careful precollaborative assessment to determine the possibilities for consensus prior to investing substantial time and resources on intractable issues.

Third, although most of the utility representatives indicated that they believed that collaboratives would generally require no more of their own resources than using litigation to resolve comparable issues even in the short-run, this was not so clear with the NUPs. While most NUPs believed that litigation could be more resource-intensive overall than a collaborative, many of the NUPs maintained that their own efforts would have been necessarily constrained in a litigation mode. Unlike utilities who are required to make filings, prepare testimony, respond to questions, and write briefs, NUPs can generally pick-and-choose their litigation battles. Many NUPs, particularly the nongovernmental ones, claimed that given the cost of litigation (i.e., staff costs and the cost of witnesses), they would

¹⁰COM/Electric's DSM preapproval case in Massachusetts, on the heels of that collaborative's disintegration, required more hearing days (17), more discovery requests (over 300), and more of CLF's resources (over \$100,000 for expert witnesses, etc.) than any prior DSM case in the Commonwealth. Even where collaboratives end amicably, as was the case with Southern California Edison Company (SCE) in California, subsequent DSM-related litigation has been among the longest and most resource-intensive in that state's history.

be much more selective both in choosing cases and issues within cases to pursue if DSM was litigated.

Lastly, we were surprised by the large number of respondents who told us that this question was irrelevant given their opinion that the collaborative process produced substantial net benefits compared to litigation despite the time and resources invested.

COMPARISON WITH NONCOLLABORATIVE RESULTS

As Table 5.1 below indicates, DSM expenditures for each of the utilities we studied increased substantially after the collaboratives. Taken together, the utilities' expenditures increased from approximately \$250 million/year before the collaboratives to almost \$650 million/year after the collaboratives. Measured as a percent of total revenue, expenditures increased from an average of 0.8% prior to the collaboratives (with a range of less than 0.1% to 1.6%) to an average of 2.7% after the collaboratives (with a range of 0.5% to 6.0%). Projected energy and demand savings also increased substantially, and all of the utilities offered more comprehensive and diversified programs after the collaboratives than before in terms of the end uses covered in specific programs as well as the customers covered by each utility's program portfolio.

None of those we interviewed from any of the collaboratives maintained that the utilities' DSM programs would have been developed and implemented further or faster without the collaboratives.¹¹ Instead, most of those interviewed claimed that the collaboratives successfully "jump-started" the utilities' DSM efforts in a way that would not have been possible through traditional litigation. Although representatives of several utilities maintained that the collaboratives may make little long-term difference in their overall DSM effort, they agreed with everyone else that their programs may not have been as comprehensive nor as rapidly deployed without the collaboratives in the short-run (NYSEG, WMECo, BECo). Only CV's representative argued that its collaborative may make little overall difference in its DSM effort.

While we ultimately concur with the majority of those interviewed in this study that the collaboratives played a critical role in instigating significant, positive changes to utilities' DSM efforts, we note the potential importance of at least three other factors that were occurring simultaneously with the collaboratives that could complicate the assignment of causality. First, most of the utilities were already ramping-up their DSM efforts prior to the collaborative processes as a result of resource need, customer service, regulatory and intervenor pressure, and other factors. Despite this pre-existing ramp-up, the collaboratives appear to have accelerated DSM acquisition in the short-run beyond the levels anticipated prior to the collaboratives.

¹¹Some collaborative participants, such as the Multiple Intervenors in NYSEG, agreed with the finding that collaboratives increased the comprehensiveness and rate of implementation of utility DSM efforts but noted that they do not see that as necessarily positive or indicative of success.

Table 5.1. DSM expenditures: before and after the DSM collaboratives

Utility	Precollaborative annual DSM expenditures (\$ million)	Precollaborative expenditures as percent of revenue	Postcollaborative annual DSM expenditures (\$ million)	Postcollaborative expenditures as percent of revenue	Ratio post/pre percent of revenue
California:					
PG&E	93	1.5	149	2.1	1.4
SCE	36	0.5	82	1.1	2.1
SoCalGas	40	1.1	56	1.7	1.6
SDG&E	5	0.4	24	1.7	4.2
CG&E	<1	0.02	6	0.5	25.0
CL&P	13	0.7	71	2.9	4.1
CV	1	0.9	6	3.1	3.4
Massachusetts:					
BECo	7	0.6	40	3.2	5.3
COM/Electric	2	0.4	28	6.0	15.0
Eastern	1	0.3	5	2.0	7.2
WMECo	3	0.9	16	3.8	4.2
NEES	25	1.6	120	5.8	3.6
NYSEG	12	0.9	25	1.8	2.0
PEPCo	9	1.1	20	2.4	2.2
Total	247		648		
Average		0.8		2.7	5.8

Notes: BECo, WMECo, COM/Electric, CL&P, NEES 1988 (actual)/1991 (estimated)
 California Utilities 1989 (actual)/1991 (budgeted)
 CG&E 1990/1992 (projected)
 CV 1990 (actual)/1991 (estimated); 1992 (budgeted)
 NYSEG 1989/1991 (budgeted)
 PEPCo 1991/1992 (budgeted)

Second, it could also be argued that regulators were increasingly ordering utilities to pursue more DSM and those directives would probably have only increased over time, resulting in greater DSM even without the collaboratives. Our interviews with regulators and others lead us to conclude that while it is probably true that regulatory directives at the end of litigated cases would have continued to require greater utility DSM efforts even without the collaboratives, we doubt, as did most of the regulators, that regulatory push alone would have resulted in substantially increased efforts in the short-run, nor necessarily sustained DSM efforts in the long-run. We believe that this observation may be even more accurate with respect to other program design issues besides program budget levels because regulators do not usually have the time, skills, or inclination to micro-manage utility DSM decision-making.

Lastly, some may argue that it is the new-found ability of most of the utilities we studied to earn positive financial incentives on their DSM investments (e.g., shared-savings, bounty) rather than the collaboratives that deserve credit for recent changes to the utilities' DSM efforts. Since in every case where financial incentives were awarded to a utility it was essentially done within the context of a DSM collaborative, except for NYSEG which was determined prior to the collaborative, this issue is difficult to settle. However, without the collaborative, as many regulators we interviewed indicated, financial incentives may not have been as readily forthcoming. Also, as noted in Chapter 2, several utilities are not currently receiving positive financial incentives, yet continue to mount aggressive DSM efforts (BECO, CL&P, CV, COM/Electric), and others were not assured incentives until after they had already agreed to extensive acceleration and program design changes (NEES, WMECo).

CHANGES IN HISTORIC RELATIONS

Most collaboratives followed several years of contentious litigation on DSM and other resource-related issues, during which tensions between organizations and individuals grew. Still, the vast majority of those interviewed maintained that their relationships with other collaborative participants improved significantly as a direct result of the processes. These people cited improved communication between parties, better understanding and respect for each others' interests and positions, and the discovery of a surprising amount of common ground as reasons for the improved relationships. For those who did not claim that relationships had improved with all those they collaborated with, but that relationships remained the same, these people were split between some feeling their relations were good prior to the collaborative and others feeling pre-existing tensions remained. Although only a few indicated that relations had worsened as a result of the collaborative, in all cases, the relations had improved initially and then faltered over one or more issues.¹²

Our study leads us to several observations with respect to changes in historic relations. First, while collaboratives tend to improve relations between participants, that

¹²In this case we suspect that expectations had been significantly raised due to early improvements in relations, making subsequent disagreements harder to take personally. We would not be surprised if more of this phenomenon appears in the future with some of these collaboratives.

need not be the case. Collaboratives that do not reach a high degree of consensus seem to suffer many of the same tensions and animosities between participants experienced in traditional litigation. Second, relations between parties in collaboratives, like between individuals generally, appear to change over time and to be rather fragile. Strained relations at the end of Phase II of the WMECo Collaborative between the utility and the NUPs and positive relations at the end of Phase II of the COM/Electric Collaborative were reversed a year later by the subsequent pre-approval filing. Third, many of those we interviewed stressed the importance of good chemistry between individuals. While it was not always obvious to us the degree to which interpersonal dynamics, organizational conflicts, or structural issues were responsible for causing impasses within certain collaboratives, we stress the importance of parties carefully selecting their own representatives, and as best they can, the other participants. The California Collaborative is one example of a process that successfully solicited representatives from diverse organizations with an eye towards creating consensus while still being inclusive of all major interests.

Fourth, improved relations between individuals in the collaboratives are not necessarily institutionalized — particularly in larger organizations, such as utilities, with diverse internal interests. Since failure to institutionalize any improvements in relations between collaborative participants could result in lost opportunities for organizations to work together on DSM and other issues, and also makes the organizational relationships more vulnerable to personnel changes, we believe that it is essential for collaborative representatives to keep their organizations informed about the collaborative process (both up and down the organization) and spend time building the necessary internal consensus.

Fifth, the relationships between collaborative participants can be greatly affected by events and disputed issues that arise outside the immediate purview of the DSM collaboratives. In several collaboratives, contentious disputes about supply-side resources in separate proceedings but with many of the same parties appeared to cause antagonisms between the parties in the DSM collaboratives (e.g., CV's Hydro-Quebec purchase, and BECo's 306-MW Edgar Station pre-approval request). It is not clear what can be done to minimize this effect except for possibly broadening the collaboratives to deal with both DSM and supply-side issues together. In the PEPCo case, parties reached an agreement on a supply-side resource during negotiations leading to the DSM collaborative.

Sixth, although antagonistic relationships were most often found between utilities and various NUPs, strained relations also appeared among the NUPs in many of the collaboratives both for substantive reasons such as disagreements over program scale (NYSEG) and cost-recovery issues (Massachusetts, California, CV), and for process reasons such as when a particular NUP was perceived as too controlling (Massachusetts, CL&P). Lastly, collaboratives that are successful in improving relationships between individuals and organizations can be extremely valuable if they spark positive spillover effects into other joint endeavors. We found positive spillover occurring in the wake of some of the collaboratives not only on DSM-related utility matters, but on other utility matters such as broader resource planning matters and rate cases, energy-related legislation, and even on federal energy matters (e.g., the filing of joint testimony on the National Energy Strategy by PG&E and NRDC).

PLAN IMPLEMENTATION AND ON-GOING COLLABORATION

The programs designed during the collaboratives are being implemented consistently with the agreements reached (often as amended during the postfiling settlement process or by the regulators in some cases) for most of the collaboratives. For three of the collaboratives that began recently (i.e., CG&E, PEPCo, and Wisconsin) and one that experienced substantial delays throughout the process (CV), it is too early to judge the implementation results. For most of the others, except for small changes that are to be expected in fielding new or expanded programs, the implementation appears to be proceeding as planned.

In the few cases where significant changes from the collaborative agreements (as approved by the regulators) have been necessary mid-stream, they were accomplished far more smoothly where an on-going collaborative existed than when the collaborative had been terminated. For example, both NEES and COM/Electric were forced to deal with massive and unpredicted oversubscription to their respective commercial and industrial programs. NEES was able to work out a resolution with CLF in their collaborative that was accepted by regulators in three states. COM/Electric, which had terminated its collaborative, made some unilateral and substantial changes without informing either the NUPs or the regulators which prompted CLF to ask the Massachusetts DPU to find the company's actions imprudent and to request that the future implementation of COM/Electric's DSM programs be placed in outside receivership. Similar intensive and rather acrimonious litigation accompanied requests for program and incentive changes by California utilities after the end of that collaborative.

As Table 5.2 indicates, nine of the utilities are no longer engaged in collaboratives. Almost all of these efforts ended amicably after accomplishing most of the goals they set for themselves. Of the seven collaboratives that are still in progress, three are new and have not yet accomplished all of their initial goals (CG&E, PEPCo, Wisconsin). Collaboratives involving four utilities, all of which are in New England and include CLF, have completed their initial collaborative objectives and have decided to continue working together (CL&P, BECo, WMECo, NEES).

As noted above, where collaboratives have been terminated, participants have often reverted back to contentious litigation strategies. Where utilities have replaced the collaboratives with advisory board structures as in California, most NUPs either chose not to participate or were frustrated with what many considered a loss of power and focus. While properly-structured DSM advisory boards can be useful as a means of building consensus, they are not substitutes for DSM collaboratives. Advisory committees usually do not rely on consensus, nor do they bind utility actions as collaboratives can.

While we do not believe that DSM collaboratives should be continued indefinitely, there appear to be certain advantages to maintaining collaboratives for some time beyond the initial round of program design, program scale, and cost-recovery agreements. We agree with many of those interviewed that collaboratives should be continued, albeit less intensively, through the initial fielding of programs and the institutionalization of a reliable

evaluation and monitoring system. Once the initial bugs have been worked out of programs, and the monitoring and evaluation system is operating, we believe collaboratives can probably be significantly scaled back if not eliminated. However, we imagine that there will always be issues that would benefit from continued consensus-building outside the litigation process.

Table 5.2. Status of DSM collaboratives (November 1991)

Utility ¹	On-going	Ended
California:		
PG&E		X
SCE		X
SoCalGas		X
SDG&E		X
CG&E	X	
CL&P	X	
CV		X
Massachusetts:		
BECo	X	
COM/Electric		X
Eastern		X
Nantucket		X
WMECo	X	
NEES	X	
NYSEG		X
PEPCo	X	
Wisconsin	X	
Total	7	9

¹See List of Acronyms for full names of utilities.

6. SUMMARY AND CONCLUSIONS

On the whole, we found that the nine cases of DSM collaboration that we analyzed performed quite well according to the criteria we used for measuring success. Even the few collaboratives that resulted in more modest enhancements to utility DSM programs, or have lapsed back to contentious litigation, seem to have provided benefits to the participants. Our study indicates that the potential up-side reward for participating in a DSM collaborative outweighs any potential down-side risk. However, because such efforts are neither easy nor inexpensive, it is critical that DSM collaboratives be used selectively, and that when they are used, they are structured to foster consensus-building. In the first part of this section we review our findings with respect to key indicators of success, while in the second part we offer observations and recommendations on initiating and structuring successful DSM collaboratives.

SUCCESS OF THE DSM COLLABORATIVES TO DATE

DSM collaboratives are unique in their attempt to strive for consensus prior to a utility's DSM filing, rather than after it is already formulated and filed, as is the case in traditional settlement. We found a high degree of consensus across the collaboratives. However, the collaboratives tended to do better at resolving technical issues surrounding program design and the application of DSM policies, than at resolving contentious DSM policy issues. Agreement on appropriate cost-effectiveness tests for evaluating DSM resources, whether and in what form utilities should receive positive financial incentives, and the appropriate role of fuel switching proved contentious in many collaboratives and usually necessitated decisions by the regulators. While lack of consensus was usually between the utilities and the NUPs, in some of the collaboratives, NUPs also failed to reach consensus on certain issues (particularly on cost-recovery), occasionally resulting in coalitions between the utility and select NUPs.

In nearly all cases, there were some interventions against portions of the collaborative plans either by parties that were not part of the collaborative, by parties that did not consent to one or more issues, or both. Where there was a consensus filing or where outstanding issues were settled with intervenors after the filing, the regulators approved the plans (as amended during settlement) without changes. In all other cases, though essentially approving the plans, PUC approval included changes to the DSM plans. The most changes were ordered in states with the least direct regulatory participation (Massachusetts, Vermont), and PUC-ordered changes in neighboring states did not always push multijurisdictional utilities' DSM plans in the same directions [e.g., NEES in Rhode Island and Massachusetts; Northeast Utilities Service Company (NU), which operates CL&P and WMECo, in Connecticut and Massachusetts].

Despite the high degree of consensus reached in virtually all the collaboratives, some of the collaboratives have benefited from including a broader spectrum of interests in their collaboratives (e.g. NEES). At the least, broader representation may have reduced

subsequent litigation. Nonetheless, it is important to understand that in the end, the collaborative DSM plans were approved by the regulators (even when modifications were made) indicating that the collaboratives succeeded in implementing regulatory policy and satisfying the regulators. In turn, only two PUC orders were appealed by disgruntled parties to a state supreme court, and one appeal was withdrawn after the utility settled the disputed issue. The lack of appeals indicates that the collaborative results as modified by any postfiling settlement and PUC orders were reasonably acceptable to all interested parties.

Except for a few cases where it is too early to tell, the utilities involved in DSM collaboratives appear to be implementing the DSM programs as planned except for small changes that are to be expected in fielding new or expanded programs. In programs where significant changes from the approved plans have been necessary, such changes have been accomplished far more smoothly where an on-going collaborative has existed. This suggests that although collaboratives need not continue forever, there is some value in continuing DSM collaboratives through the early stages of implementation and evaluation.

Less than half of the collaboratives we studied are still functioning. Half of the on-going collaboratives, however, started more recently and have not yet completed their initial objectives. The other half have consciously decided to maintain an on-going collaborative even after the accomplishment of their initial objectives (i.e., development of a DSM plan). Parties from many of the collaboratives that are not on-going, while often ending on amicable terms, are again engaged in litigation. Although utilities in some of the collaboratives that chose not to maintain an on-going formal collaborative have initiated advisory boards, such efforts are meeting with mixed success and do not compare to collaboratives in intensity or influence.

DSM collaboratives are resource-intensive. To date, the collaboratives have lasted from a half-year to over three-and-a-half years, and have together cost about \$6 million to secure outside expertise (primarily for the NUPs but in some cases also for the utilities) and a comparable amount to cover the staff time of the utilities and the NUPs. Although there was not unanimity among those we interviewed on whether DSM collaboratives save time in the short-run compared to a strictly litigious path, most parties felt that collaboration did not cost more than litigation. If the extensive historic DSM-related litigation or the litigation that occurred when the collaboratives ended or broke down is any indication of what the alternative to collaborating would have been like, the collaboratives begin to look like they saved both time and money. It may, however, turn out that collaboratives are better at saving process-related resources in a longer timeframe than the first year or two because of the relatively high initial time investments that many of the collaboratives we studied required. It may also be that this question is somewhat unimportant, as a surprising number of those interviewed speculated, if the substantive outcome of the collaboratives is qualitatively superior to a litigated result and provides net benefits despite high initial investments.

Each of the utilities that participated in the collaboratives did, in fact, substantially increase their DSM expenditures. Together the expenditures rose from approximately \$250

million per year immediately preceding their respective collaboratives to almost \$650 million immediately following the filing of a DSM plan, representing an increase from an average of 0.8% of total operating revenue to an average of 2.7% of total operating revenue. In addition to the increases in energy and capacity savings projected to result from the higher DSM budgets, the programs are targeted to distribute direct benefits to more customers.

While one cannot automatically attribute these changes solely to the collaboratives, the vast majority of those we interviewed claimed that the collaboratives effectively "jump-started" the utilities' DSM efforts. Despite the fact that many of the utilities were already ramping-up their DSM programs, and would likely have continued to do so, the collaboratives accelerated that process well beyond the levels anticipated prior to the collaboratives. We also doubt, as did most of regulators we interviewed, that additional regulatory directives following contentious litigation in the absence of collaboratives would have resulted in comparable changes to the utilities' DSM efforts in the same timeframe. This is particularly true regarding the myriad of program design innovations made during the collaboratives, which the regulators generally neither have the time nor the expertise to micro-manage. Finally, although it is difficult to sort out the relative role that the collaborative had vs. the emergence of utility financial incentives which occurred concurrently in many cases (often because of the collaboratives), several of the utilities are not receiving such incentives but continue to mount aggressive efforts (BECo, CL&P, CV, COM/Electric), while others were not assured incentives until well after they had agreed to extensive enhancements to their DSM efforts (NEES, WMECo).

Most of the collaboratives followed several years of contentious litigation on DSM and other resource issues that often left relations between parties strained. The vast majority of those interviewed maintained that their relationships with other parties in their respective collaboratives improved considerably as a result of the process, citing improved communications, better understanding of and respect for each others' interests, and the discovery of a surprising amount of common ground. In several cases where relationship improvements were noted, we found signs of parties subsequently working together not only on DSM-related matters, but on other areas in ways that were not contemplated prior to the collaboratives. These improved relations and positive spill-over effects may turn out to be one of the most important long-term benefits of the DSM collaboratives.

However, improvements in relations among traditional adversaries can be quite fragile and subject to change. The few participants who claimed that their relationships with one or more parties may have actually deteriorated through the process all maintained that in the early stages of their collaboratives, relationships had actually improved. Similarly, we observed collaboratives where relationships appeared to deteriorate rapidly at points only to be mended later on. Also, while the improvement of personal relations can be one of the greatest benefits of a DSM collaborative, personal goodwill is not automatically institutionalized but must be fostered.

One of the most important criteria overall for measuring success is the degree to which the participants' original objectives (i.e., underlying interests and strategic objectives) were satisfied through the collaborative process. In nearly all of the collaboratives, multiple parties reported high overall satisfaction of their objectives; in over half the cases, most or all of the participants reported high overall satisfaction. In no case, not even the ones that ended acrimoniously, did the majority of those interviewed report that they were highly dissatisfied with the way in which the collaborative addressed their needs. In fact, such dissatisfaction was reported only once (in the case of the industrial intervenors in the NYSEG case who did not sign the final settlement). Several participants, however, did express a concern that it was premature to evaluate their satisfaction, either because they were still collaborating or they wanted to wait and see if things worked out as designed. The utilities tended to have their interests satisfied most often, with the large industrial users being the least satisfied and other groups tending to fall between these two extremes. Finally, of all the objectives mentioned by the participants, that of designing aggressive DSM programs was much more widely satisfied than any other. Although some objectives were reported by some participants as not having been satisfied, there was no pattern across sites or customer types.

We conclude that these DSM collaboratives generally were successful according to a broad array of criteria. We found that:

- a high degree of consensus was achieved during the processes,
- the DSM plans formulated by the collaboratives were approved by the regulators (occasionally with some modifications),
- there was only one appeal of a regulatory decision approving the collaborative results to the courts (that was not withdrawn),
- the approved plans are largely being implemented as planned,
- the collaboratives may have saved time and resources in the short-run compared to a litigated alternative and should save resources in the long-run,
- the utilities' DSM programs are more aggressive and comprehensive than they would have been without the collaboratives,
- the historic relations of most participants have improved, and
- most participants reported substantial overall satisfaction of their objectives through the collaborative process.

INITIATING AND STRUCTURING SUCCESSFUL DSM COLLABORATIVES

Based on the information presented in the preceding chapters, a number of relationships between collaborative success and various contextual and organizational characteristics were identified. Many of these relationships are likely to hold for other (non-DSM) types of collaborative as well. The findings are presented below under four headings: (1) necessary preconditions for initiating collaboratives, (2) selecting parties, (3) defining collaborative scope, and (4) structuring the process.

Necessary Preconditions for Initiating Collaboratives

The conditions preceding collaborative formation were similar for many of the cases in several ways. While these contextual characteristics were not identical for all the cases, a number of relationships between the precollaborative environment and subsequent success could be identified.

NUPs' Intervention and Utility Strategic Interests. Most of the collaboratives were initiated in the aftermath of extensive intervention on DSM issues by NUPs from the public sector, the private sector, or both. In some cases, the initiation of collaboratives also was preceded by NUPs' preparation of detailed reports on the technical potential of DSM programs to save energy in a cost-effective manner and a critique of the history of utility DSM efforts. While these kinds of NUPs' actions can press the issues of DSM planning and collaborative formation, a utility's decision to collaborate also will strongly reflect its own strategic objectives, as in those cases where collaborative formation accompanied the settlement of an important power plant siting dispute in a manner highly favorable to the utility.

PUC Interest in DSM. The historic interest shown by PUCs in promoting aggressive DSM programs by utilities also can be an important stimulus for the formation of DSM collaboratives and may be a necessary precondition. Except in two instances (CG&E, NEES in New Hampshire), all the collaboratives were located in states where the PUC has a history of encouraging DSM. In a few states, utilities were ordered to participate in a collaborative but, in most cases, the participating parties chose to collaborate based on their understanding of the PUC's interest in DSM and the regulators' desire for aggressive DSM activities.

PUCs should provide clear direction on contentious policy issues where feasible prior to the collaborative (as was done in California with incentives) or in the collaborative's early stages (as in Massachusetts with cost-effectiveness testing), since this can help avoid or reduce conflict that can delay or even derail the DSM planning process.

Utility Interest in Collaboration. A prerequisite for collaborative formation (in those cases where utilities are not ordered to participate) is the willingness of the utility to participate in such a process. This willingness could stem from pre-existing utility policies

toward DSM or public involvement, or could derive from the predispositions of key executives. In many cases, however, utilities' interest in participating in a collaborative (like that of all other participants) owes a lot to the perception by key decision makers that the utility's interests are likely to be better served through collaboration than through the traditional adversarial process.

Relative Power of Prospective Participants. Where the ability of the various interested parties to influence PUC decisions is roughly equal, no single interest can be assured of satisfying its own agenda through the traditional adversarial approach. In such a situation, the prospect of achieving a mutually advantageous negotiated settlement through the collaborative process can be desirable for all parties. Where the ability of a single party to realize its organizational objectives through litigation is much greater than the ability of other important parties to foil these objectives, the stronger party is less likely to find advantages in collaborative participation. Still, even where parties (particularly NUPs) were confident that regulators would be more sympathetic to their DSM positions than to those of their traditional adversaries, they often saw benefits to be gained from collaborating, both in terms of their ability to influence detailed plans and to minimize litigation.

Existence of Financial Incentives. The effect of positive financial incentives to utilities (i.e., shared savings and bonuses) on the amount and type of DSM chosen through the collaborative process is uncertain. In a few cases, early passage of such mechanisms was followed by aggressive pursuit of DSM programs. In other cases, however, utilities agreed to aggressive DSM programs prior to, or in the complete absence of, gaining financial incentives from regulators. Still, other studies have indicated the importance of incentives for sustaining long-term utility commitment to DSM. One point on which many regulators agreed is that financial incentives may not have been as readily forthcoming in the absence of a collaborative effort.

Exposure to Past Experience. It is likely that the availability of information on past experiences at other collaboratives can help participants avoid common pitfalls and accomplish their collective goals in a timely fashion. Therefore, this information should be sought and studied at the beginning of the collaborative process, where possible.

Selective Use of the Collaborative Process. Properly structured collaboratives can be effective for addressing a wide range of DSM program design and policy issues. However, collaborative processes are best used only where convergence on important issues by most parties seems possible. Accordingly, prospective participants should conduct a careful precollaborative assessment to determine the possibilities for consensus before substantial amounts of time and money are invested on intractable issues.

Selecting Participants

The nature of the parties that are chosen to participate in a collaborative and of those that are excluded can be important determinants of collaborative success. Key

characteristics of participating organizations are (1) their number and type and (2) their behavioral and attitudinal characteristics, which include their expectations, willingness to compromise on important issues, and commitment of time and resources to the collaborative process.

Number of Parties Involved. The number of parties involved in the collaboratives ranged from two to 28, with most of the cases clustering toward the lower end of the scale. In general, it is easier to reach consensus when the number of participants is kept small. However, we note a high degree of consensus in some of the larger collaboratives as well (e.g., California and Massachusetts Phase I).

Excluding Parties. When the number of participating parties is limited (either by design or by the unwillingness of certain prospective participants), both positive and negative results are possible. The likelihood of reaching a mutually acceptable solution may be increased by keeping the number of different viewpoints to a minimum and including only groups with broad interests, excluding more limited, single-issue groups like energy service companies and industrial intervenors. However, a plan that is developed by a few groups might not serve all societal interests and is more likely to be challenged by intervenors. On balance, we believe that a collaborative should attempt to include the full spectrum of societal interests.

Involving State Regulators. The establishment of closer ties between state regulators and collaborative participants could help improve programs and resolve controversial policy issues. Failure to establish closer ties could result in plans that do not adequately reflect the interests and concerns of the regulators. It also could result in the regulators' failure to sufficiently appreciate (and thus accept without changes) the compromises made by collaborative participants during the processes. Closer ties can be maintained either through direct representation of staff in the collaboratives (as observers or full participants), by holding periodic technical sessions with PUC staff and possibly commissioners, through interim rulings by the PUC, or by some combination of the three.

Characteristics of Individual Participants. The collaborative process works best when the participating individuals possess substantial competence and knowledge concerning DSM issues, although a thorough command of detailed technical information (e.g., efficient industrial motors) is not necessary. Collaboratives also should have members who are capable of conducting policy negotiations and committing their organization on key issues. Finally, participating parties should carefully select their own representatives (and those of other participants, if possible) with an eye on avoiding interpersonal conflicts.

Use of In-state Personnel. The participation of parties without a strong constituent base in the state could alienate some participants and exacerbate conflict among participants. At times, even the use of out-of-state experts can be contentious, if these experts appear unfamiliar or unconcerned with local circumstances and important issues.

Commitment of Time and Resources. A continuing commitment of time, attention, and resources by key participants is an essential contributor to collaborative success. In some cases, NUPs engaged in too many collaboratives simultaneously and over-extended themselves. In other cases, utilities and NUPs had other noncollaborative-related issues arise that required their attention. Where various parties lost interest or were significantly constrained by their lack of resources, the collaborative process faltered. Also, parties that reduce their commitment to the collaborative tend to lose their influence over the process. Accordingly, participants are advised to maintain an on-going commitment to the collaborative process.

Participants' Expectations. Where different parties to the same collaborative have incompatible expectations concerning the role of the participants or the overall purpose of the collaborative, problems can develop. The potential loss of trust that accompanies widely differing expectations can lead to conflict and a reduced willingness to cooperate. To a large extent, these eventualities can be avoided by involving all parties in thorough discussions prior to initiation of the collaborative and by recording the resulting agreements in a MOU.

Willingness to Compromise. In order for a collaborative effort to succeed, all parties must be willing to compromise on important issues. A party's willingness to relax its position and seek compromise solutions is affected by its power and influence relative to the other parties to the collaborative. Organizational mission and the personalities of participants also can affect the willingness to compromise. Whatever the reasons, the lack of such a willingness can cripple the collaborative and make the search for consensus difficult and contentious.

Intra-Organizational Relations. Within each participating organization, clear communications between collaborative participants and both upper and lower levels of the same organization are important. Without such communication, collaborative participants might misstate their organization's interest in various policies and programs or might misread the likelihood that certain programs could be successfully implemented. Also, to help institutionalize improvements in relations that occur among the participating organizations, collaborative representatives need to keep all levels of their organizations informed about the process and to spend time building internal consensus.

Defining Collaborative Scope

Program Design Issues. In general, the collaboratives found it easier to reach consensus on program design issues than to resolve policy issues. The program design issues that generally cause the most problems are those that cross over into the policy arena, such as the establishment of customer incentive levels.

Timing of Policy Issues. Policy issues should be prioritized at the beginning of the process and those that are identified as critical should be resolved as soon as possible. In particular, reaching speedy agreement on the cost-effectiveness tests to be used by the

collaborative is critical so that measures and programs can be screened in a timely fashion. However, it is possible to agree on an interim screening tool to allow work to begin quickly, and then to hold continuous negotiations on the final balance of cost-effectiveness tests to be used. On other issues, such as fuel switching and environmental externalities, it may be possible to defer decisions. Such deferral might be wise because of the contentious nature of these issues and because agreement here may not be essential for the design of core DSM programs.

Treatment of Difficult Issues. DSM-related policy issues typically were more difficult to resolve than issues of program design. Environmental externalities and fuel switching engendered the greatest political and philosophical disparities between parties and proved to be the most difficult issues on which to reach consensus. Other policy issues, particularly those of a distributional nature (e.g., shared savings incentives for utilities) also proved difficult in many cases, not just between the utilities and NUPs but also among the NUPs. This does not mean that collaboratives should avoid difficult issues (although deferring them until later in the process might be wise). To the contrary, we believe that collaboratives are appropriate and potentially effective places to address issues that have proven difficult to resolve in other ways. And as these issues are resolved in some jurisdictions, precedents are likely to be established which will make it easier to reach agreement in subsequent collaboratives.

Structuring the Collaborative Process

Establishment of Time Constraints. The use of time constraints can be helpful in keeping a collaborative moving and preventing excessive delays. Early in the process, collaborative participants should decide on the interim and final products they will produce and establish deadlines for at least those deliverables that should be completed in the immediate future. By establishing deadlines only for those tasks that are easiest to envision, the possibility that unrealistic deadlines will be established can be reduced. However, the group must be conscientious about reviewing previously-established deadlines and setting new ones as appropriate so that the process is not allowed to lag.

Use of Consensus. Based on the collaboratives studied, we strongly recommend that collaboratives use a consensual model of plan-development rather than an advisory one. This means that all relevant policy and program design issues will be addressed by the group and that all parties must agree to the resulting plan or policy for it to be submitted to state regulators as a consensus filing. The consensual model allows NUPs to interact intensively with the utility in plan development and reduces the likelihood that important issues will remain unresolved. In addition, PUCs generally are more willing to approve a utility's DSM plan without modification when all interested parties support it than when the plan faces opposition. The formal training in consensus techniques provided in Wisconsin helped smooth the workings of the collaborative process, leading us to believe that such training may be useful elsewhere in helping parties improve their skills for reaching agreement.

Facilitation and Mediation. Strong and focused coordination and facilitation of collaborative activities is necessary to ensure that important tasks will be completed in a timely manner and that meetings run smoothly. This often can be handled adequately by the participating organizations themselves (including their consultants) or by outside facilitators hired to serve the entire group's interests. Mediation of difficult issues also can be provided by participants, but this is more problematic because each of these parties also is responsible for protecting its own interests. While only one collaborative (CL&P) used a third-party mediator, the results of this effort indicate that the use of outside mediation by a trusted and technically astute third party may be useful in helping parties reach agreement on contentious issues.

Inter-organizational Communication. The collaborative process allows representatives from all participating organizations to communicate with their counterparts from the other interested parties. The improved access to other groups and the increased understanding of other parties' interests fostered by such communications should be recognized and collaborative meetings and other functions should be structured so as to maximize the opportunity for this kind of interaction among participants.

Funding and Control of Consultants. Utility funding of NUPs' consultants is an essential component of collaboratives as they exist today, since many NUPs would not have the resources to obtain such assistance on their own. We recommend that such funding be used in subsequent collaboratives so that NUPs will be able to hire those with the expertise required to engage utilities on comparable terms. In order to ensure that NUPs' interests are directly represented, these experts should be controlled by the NUPs themselves. However, the information developed by these consultants should be available to all parties, to the extent that this does not compromise the NUPs' interests, so that all participants can benefit from the efforts of the outside experts. Utilities also may benefit from hiring their own consultants. A joint fact-finding effort early in the collaborative can be a valuable way to build trust and share information among the various participants. Finally, where the key parties already possess substantial inhouse expertise and comparable political power, it is possible to have a process where consultants are jointly selected and managed by NUPs and utilities together.

Use of Coalitions. The formation of coalitions allows collaborative participants to reduce the number of different positions on key issues. In some cases, the NUPs formed a single, stable coalition, giving the collaborative the characteristics of a two-party negotiation. Two-party negotiations, which allow participants to avoid the problems associated with disagreements between the various NUPs, can focus the discussion and make it easier to reach consensus. However, these two-party negotiations also can limit the expression of minority opinions allowed by a true multiparty negotiation. Participants in future collaboratives must weigh the advantages and disadvantages associated with the formation of large, formal coalition groups. They also should consider the model followed by several other collaboratives, where coalitions were used to limit the number of different

perspectives, but these coalitions shifted from issue to issue, depending on the specific interests of the participants.

Use of Upper Management for Dispute Resolution. The use of hierarchial structures with referral of difficult issues to senior members of the participating organizations is a promising arrangement that was not widely used in the collaboratives studied. Where it was used, however, the active involvement of senior management in addressing selected contentious issues was effective. Accordingly, we believe that future collaboratives should use this problem-solving mechanism and involve upper management as much as possible.

On-going Collaboration. Collaboratives should be continued, albeit less intensively, through the initial fielding of programs and the institutionalization of a reliable evaluation and monitoring system. After these stages, collaboratives can probably be scaled back or eliminated. However, some issues most likely would always benefit from continued consensus-building outside the litigation process.

CONCLUSION

DSM collaboratives can be effective in a number of ways, including achieving consensus among key interest groups, getting regulatory approval for the consensus filing, satisfying the objectives of various participants, and achieving outcomes that would not otherwise have occurred. We believe that the use of collaboratives, both to design DSM plans and to address other IRP issues, will increase significantly in the future. In this report, we suggested many ways in which current and future participants in collaboratives can improve their chances of achieving successful outcomes. We hope that these ideas will prove useful to those who engage in collaborative efforts and that the substantial promise presented by this new approach to inter-organizational problem-solving will be realized.

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APPENDIX

DESCRIPTIONS OF CASE STUDY SITES:

PARTICIPATING PARTIES, RESPONDENTS, AND CHRONOLOGY OF KEY EVENTS

CALIFORNIA DSM COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utilities

- PG&E
- San Diego Gas and Electric Company (SDG&E)
- Southern California Edison Company (SCE)
- Southern California Gas Company (SoCalGas)

2. NUPs

- A&C Enercom
- Association of California Water Agencies
- California Department of General Services
- California Energy Coalition
- California Energy Commission (CEC)
- California Large Energy Consumers Association
- California/Nevada Community Action Association
- CPUC/DRA
- Independent Energy Producers Association
- NRDC
- TURN

3. Others

- California PUC/Strategic Planning Division (acted as observers and facilitators)
- Lawrence Berkeley Laboratory (participated in evaluation and monitoring subcommittee)

LIST OF INTERVIEWS

Utilities:

Ziyad Awad	SCE, Manager of Strategic Planning
Petra Calabro	SoCalGas, Regulatory Administrator
Richard Clarke	SDG&E, Senior Resource Planner
John Fox	PG&E, Manager Energy Efficiency Services
Dan Gladen	SoCalGas, Core Markets Staff Manager
Steve Kline	PG&E, Assistant to Vice-President for Corporate Planning
Yole Whiting	SDG&E, Marketing and Regulatory Services Manager

NUPs:

Barbara Barkovitch	Private Consultant, Represented Large Energy Consumers Association
Ralph Cavanagh	NRDC, Senior Attorney
Dian Grueneich	Private Attorney, Represented Department of General Services
Michael Messenger	CEC, Chief Demand Side Planner
Don Schultz	CPUC/DRA, Demand Side Planner
Joel Singer	TURN, Staff Attorney

Others:

Charles Goldman	Lawrence Berkeley Laboratory, Staff Scientist
Gigi Coe	CPUC/Strategic Planning Division, Acting Assistant Director
Terri Willsie	CPUC/Strategic Planning, Division, Former Staff
G. Mitchell Wilk	CPUC, Commissioner (former President of the Commission)
Carol Matchet	CPUC/Administrative Law Judge Division, Attorney

CHRONOLOGY OF KEY EVENTS

1970s--

mid-1980s: California utilities receive pressure from intervenors and CPUC to pursue DSM. California considered leader in utility-related DSM programs. Utilities spend approximately \$1 billion on DSM to save 3,600 MW. CPUC adopts Electric Revenue Adjustment Mechanism (ERAM), a decoupling mechanism, in 1983.

Mid-1980s--

late 1980s: Utility DSM expenditures peak in mid-1980s and decline in the late 1980s. Four largest utilities' expenditures decrease 56% between 1984 and 1988 while sales increase 22%. In 1986, the CPUC opens up the 3-Rs proceeding (Risk, Return, and Ratemaking), during which some members of the CPUC staff recommend that utilities minimize electricity rates rather than cost of service, and propose abolishing ERAM and deregulating large users.

Jan. 1989: Los Angeles Times runs article that references work being done by NRDC, and severely criticizes SCE's fading DSM efforts — and by implication the conservation programs of other utilities and the policies of the CPUC.

Spring 1989: Ralph Cavanagh of NRDC begins meeting with other potentially interested parties and CPUC staff and commissioners to discuss DSM "problem" and what could be done about it.

June 1989: CPUC issues notice for En Banc Hearing (i.e., hearing in front of the commission) and request for comments on DSM in California. Notice acknowledges that to date CPUC has been pursuing policy of "fairly constant DSM budgets...policy of staying the course." Notice provides four reasons to re-examine CPUC's DSM policies: (1) environmental problems associated with fossil fuel burning coming to forefront of public concern (e.g., air pollution in South Coast District, greenhouse effect); (2) reduction of excess generating capacity;

(3) development of new DSM technologies; and (4) existence of new approaches to DSM acquisition and policies in other states.

July 1989: NRDC issues its study *The Decline of Conservation at California Utilities: Causes, Costs and Remedies* which documents the DSM decline in California, shows that utilities in other regions of the country are more aggressively pursuing DSM and that there is huge untapped potential in California, and recommends looking into positive financial incentives and initiating a collaborative process. Study portrays the decline as a "villianless crime."

July 1989: En Banc Hearing is held before the CPUC, during which 18 California-based parties and national DSM experts testify. Although the commission cannot formally vote, most of the commissioners let it be known that they look favorably on a collaborative process, and that positive utility incentives are acceptable to them and that therefore the collaborative should propose actual incentives and not debate whether or not incentives are appropriate.

August 1989–
January 1990:

Four utilities and eleven NUPs participate in the collaborative. Gigi Coe and Terri Wilsie of the CPUC's Strategic Planning Division act as facilitators and managers of the collaborative process. Group meets approximately every other week — more often near January deadline. Structured in three phases: (1) fact-finding on technologies and programs; (2) developing policy options; and (3) synthesis and writing. A subgroup develops evaluation and monitoring protocols. The cost of process is under \$100,000, plus time and travel expenses of participants.

January 1990:

Parties complete *An Energy Efficiency Blueprint for California: Report of the Statewide Collaborative Process*, and provide copies to the CPUC. There are 24 signatories from all 15 parties. Utilities agree to increase DSM investment 96% by end of 1991 to \$147 million. Consensus on 12 of 15 policy areas discussed. No consensus on (1) theoretically optimal funding level; (2) indirect costs and benefits; and (3) environmental externalities. Proposals for shareholder incentives for each utility submitted, but detailed proposal to be submitted by end of March. Agree to base shareholder incentives on estimated savings (as opposed to after-the-fact measurement).

January–
April 1990:

NUPs negotiate with each individual utility during this phase in preparation for utility DSM filings. CPUC/DRA, CEC and TURN are most active NUP negotiators, and many of the NUPs do not participate at all in this phase.

April–Aug. 1990:

Utilities file applications in late April. Prehearing conference held in June during which all utilities indicate their intent to settle outstanding issues with intervenors. Virtually all issues settled. The commission votes to approve the applications but requires that utilities file annual status reports and that the CPUC conduct an evaluation of the effectiveness of the adopted procedures to be completed in December 1992. Utility shareholder incentives as proposed vary significantly across utilities both in structure and in amount, ranging from a

projected percentage return on each utility's program expenditures from a low of 9% for SCE to a high of 66% for PG&E. While the approved 1991 DSM budgets of \$350 million represent a 150% increase over the 1989 DSM expenditure, it is still less than utility DSM expenditures in the mid-1980s. Utilities agree to give CPUC/DRA and CEC 1% of their evaluation and monitoring budgets to respectively verify the utilities' findings and to conduct studies on measurement of statewide significance.

Postcollaborative: The California Collaborative was not designed as an on-going process. Instead, utilities all formed advisory committees. The committees are more narrowly focused, meet less frequently, are open to more users and service providers, and are not based on consensus.

Some positive spillover effect into other joint endeavors was noted by those interviewed. Though settlements have been increasing in California anyway, people reported now trying to do more settlement prior to a filing rather than after filing on DSM and other rate case matters. Other areas of positive spillover include joint efforts on energy legislation, joint research, and joint comments by NRDC and PG&E on the proposed National Energy Strategy.

However, the resolution of outstanding utility DSM issues has largely been reverting back to litigation before the CPUC. SCE recently completed 20 days of DSM-related, contested hearings with many of the NUPs from the collaborative intervening. The majority of litigation was on SCE's proposal to enrich its incentives by requesting a restructuring of its incentive along the lines of PG&E's incentive. Similar contentious cases for the other utilities are also anticipated.

CV COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility
 - CV
2. NUPs
 - CLF
 - Vermont DPS
 - Vermont Natural Resources Council (VNRC)
 - Vermont Public Interest Research Group (VPIRG)

LIST OF INTERVIEWS

Utility:

Pat Wakefield CV, Vice President, Marketing and Customer Services

NUPs:

Joe Chaisson Consultant, Coordinator of NUPs' Consultants
Lew Milford CLF, Attorney
Lee Seddon VPIRG, Treasurer
William Steinhurst DPS, Director of Regulated Utility Planning

Other:

Richard Cowart Vermont PSB, Commissioner

CHRONOLOGY OF KEY EVENTS

- Feb. 1988: Order issued by PSB of Vermont (the Board), opening a major investigation in the area of Least Cost Planning and DSM.
- April 22, 1988: Prehearing order issued by the Board, encouraging CV and concerned NUPs "to resolve their differences wherever possible."
- Summer 1988: CLF submits filing asking Board to compel Vermont utilities to enter into collaborative. In response, hearing officer suggests that collaborative might be useful but that the Board might not have the authority to mandate this. Soon after, CLF moves to postpone action on its motion.

- Jan. 19, 1989: MOU signed by CV and four NUPs: Vermont DPS, CLF, VPIRG, and VNRC. The MOU describes a collaborative process to be used in designing DSM programs and developing DSM policy. This collaborative represents an alternative to the litigation in which the utility and intervenors have been involved. The collaborative is to be a "structured negotiation" whereby a comprehensive package of cost-effective DSM programs is designed and relevant policy issues (e.g., cost recovery, regulatory approval) are resolved. CV agrees to spend approximately \$50,000 to fund NUPs hired-and-supervised consultants to design workplans for program design and policy (e.g., cost recovery) development.
- Feb. 9, 1989: Vermont PSB approves MOU and the parties are instructed to engage in the DSM design process as provided in the MOU. Board specifies that ultimate responsibility for DSM programs (and all other programs) rests with the utility, with the Board having responsibility for seeing that these responsibilities are carried out adequately.
- April 10, 1989: Workplans and some cost-recovery provisions are filed with the Board by all collaborative parties. Parties do not agree on a number of items, such as incentive mechanisms or recovery of lost revenues. CV commits to spending nearly \$500,000 (including original \$50,000 from January) to design energy conservation and efficiency programs.
- July 1989: Hearing examiner issues Proposal for Decision in Docket 5270 that describes in detail the criteria for utility acquisition of comprehensive DSM resources. The Proposal for Decision sets out proposed cost-recovery procedure largely based on the April 10 filing and notes that collaborative negotiation is voluntary but can give rise to rebuttable presumption that programs are just and reasonable.
- Fall 1989: Hydro Quebec proceedings (a major purchase power contract review) begin and last through the winter, delaying the collaborative effort to some extent because of involvement in the adversarial, and very time-consuming, proceedings by collaborative participants.
- Feb. 26, 1990: Collaborative parties file detailed status report, containing a package of DSM program designs and related cost-effectiveness analysis and supporting documentation. Board action is not requested at this time since significant differences exist over the scope of the programs to be implemented, most notably over fuel switching. Parties also disagree about cost-recovery issues. It is noted, however, that substantial progress has been made and that consensus has been reached on many issues.
- April 16, 1990: Vermont PSB issues order (in 5270 rulemaking docket) requiring CV (and all other Vermont utilities) to make three increasingly detailed filings over the next 180 days, delineating the development and implementation of comprehensive DSM programs and a full least-cost IRP. This order requires CV to pursue all cost-effective DSM programs, including fuel switching.

- June 11, 1990: Disagreement between CV and NUPs over fuel switching becomes critical. The NUPs file a motion requesting the Vermont PSB to compel CV to keep negotiating on the fuel switching issue. According to the NUPs, CV threatens to end the collaborative should this request be sent to the Board. During this same time period, CV has a major rate case pending.
- June 14, 1990: CV writes to the Board, responding to the NUPs' June 11 motion. CV states that the impasse between the parties is not about fuel switching per se but about utility-funded incentives for fuel switching. According to CV, the NUPs say they will not support a collaborative consensus filing on other mutually-agreeable programs if an agreement on fuel switching is not reached. CV disagrees with the NUP position that the Board has jurisdiction to order funding of fuel switching, and it foresees a long legal battle on this point due to its intention to appeal to the Vermont Supreme Court. CV states its willingness to continue the collaborative if agreement on fuel switching is not a precondition for agreement on all other issues. Otherwise, CV would move quickly to file for Board approval of their programs, including Board determination of cost-recovery and incentive issues.
- June 25, 1990: NUPs respond to CV letter, saying that the NUP position has always been that a consensus program package can be filed with the board before fuel switching details are resolved, as long as CV commits to the principle of full utility funding of all cost-effective fuel switching measures.
- June 27, 1990: CV writes the Board, explaining that it (CV) has made a good faith effort to negotiate fuel switching with the NUPs. To support this assertion, CV includes a utility position paper on fuel switching presented to the NUPs two months earlier and a more recent CV position paper on fuel switching that documents key assumptions and defines cost-effectiveness.
- July 6, 1990: CV submits a portfolio of DSM programs to the Board, requesting its approval of these measures, including cost-recovery mechanisms. This is done without the approval or participation of the NUPs, but the filing shows which programs the utility says had the earlier consensus of the collaborative and which did not. This filing includes mechanisms for recovering program costs and lost revenues and utility incentives that differ from those contained in the April 10, 1989 consensus filing.
- July 20, 1990: The intervenors (excluding DPS) submit briefs to the Board supporting the Board's authority to order CV to implement all cost-effective DSM measures and to impose monetary penalties if this is not done. The DPS position is parallel but slightly different.
- July 26, 1990: All parties to the collaborative file a stipulation with the Board, requesting that it stop reviewing CV's July 6 proposal in order to enable the parties to continue negotiations on program design and other issues unrelated to the fuel switching dispute.

- Aug. 22, 1990: Board issues order granting the temporary stay requested by all parties on July 26.
- Sept. 7, 1990: A collaborative filing is submitted to the Board, containing agreed-upon DSM programs not substantially affected by the fuel switching dispute, an identification of those areas where consensus has been reached and where it hasn't, and a commitment to make certain related filings by Sept. 30, 1990. CV withdraws its July 7 filing as part of this settlement. Because of the fuel switching dispute, the consensus package has a much stronger emphasis on commercial and industrial than on residential programs, since residential programs are more directly affected by the fuel switching controversy. Four significant program and policy differences between the parties are identified (including fuel switching) that will require Board resolution before consensus programs can be implemented.
- Sept.-Dec. '90: Utility and NUPs try to reach consensus on which DSM expenses incurred during the collaborative process should be included in rates and how they should be collected. These costs were both for collaborative expenses and for on-going DSM programs, some of which CV claims had previously been approved by the collaborative.
- October 1990: Utility and NUPs submit to the Board a consensual filing on the residential solar water heating project, cost-effectiveness screening results, documentation of review of current DSM expenditures, and on-going collaborative design workplans and budgets, as promised on Sept. 7.
- Oct. 16, 1990: The Board approves Hydro Quebec contract, with explicit requirement that utilities design and implement comprehensive DSM programs.
- Oct. 30, 1990: NUPs submit position paper to the Board on program design disagreements with CV related to programs proposed in the Sept. 7, 1990 filing. In a separate filing, CV submits testimony supporting its position on these programs.
- Nov.-Dec. 1990: Utilities and NUPs each submit several filings to Board, presenting their own positions and rebutting the other's positions on various program design and policy issues.
- Dec. 17, 1990: Utility and NUPs jointly submit stipulation to the Board presenting their consensual agreement regarding the appropriateness of CV's past and prospective DSM program costs. This stipulation is to be binding only if it's accepted by the Board.
- Dec. 19, 1990: Board holds hearing on DSM cost recovery, at which time NUPs and CV disagree on the meaning of the December 17 stipulation. Consequently, Board does not approve the cost recovery plan.
- Jan. 4, 1991: CV files motion with Board requesting a hearing to determine which current utility DSM expenditures should be included in rates and how they should be collected.

- Jan. 19, 1991: CV files additional materials on behalf of itself and NUPs, presenting "a collaborative statement of the projected costs and savings of the consensus conservation and load management [DSM] programs"..."for the purpose of assessing the expected cost effectiveness of the programs and the appropriateness of their pre-approval."
- Feb. 1, 1991: CV submits prefiled testimony to Board, supporting recovery of current DSM expenditures.
- Feb. 8, 1991: DPS files its position on current cost recovery, which is that this issue should be resolved in an upcoming rate case. This position is later endorsed by CLF.
- Feb. 15, 1991: CV submits filing to the Board, requesting approval of Sept. 7, 1990 consensus plan and subsequent amendments and also requesting that current DSM expenditures be approved after completion of on-going Board review. NUPs also submit a brief, expressing their position on the design of several proposed programs and on utility incentive mechanism. NUP brief does not offer specific proposals on fuel switching or recovery of current costs.
- March 1, 1991: CV submits testimony to the Board, describing projected costs and savings of its DSM programs and explaining the incentive amounts requested and an adjustment methodology for reducing CV's request if the Board approves its rate approval process.
- March 19, 1991: Vermont PSB issues a ruling ordering all parties to the collaborative "to analyze the merits of specific fuel switching measures and to file, within 45 days, a plan for the acquisition of those energy efficiency resources, where cost-effective." These filings can be done jointly by all parties or by each party separately. At the heart of the Board's ruling is its assertion that it has the "authority to require specific utility actions, when...necessary for the provision of proper service at minimal cost." However, the Board further notes that "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." Board rejects CLF argument that MOU itself requires CV to implement fuel switching programs.
- March 20, 1991: CV says it will continue to challenge the Board's power to mandate specific measures (like fuel switching) in an appeal to the Vermont Supreme Court. However, CV will comply with the part of the order requiring it to study fuel switching.
- May 20, 1991: Board issues order approving the collaborative DSM plan filed the previous fall (which does not include fuel switching measures), with some minor modifications. CV is directed to implement the approved measures, which are projected to save almost 2 million MWh by 2010 and save ratepayers approximately \$150 million. The utility is expected to spend about \$56 million on this through the year 2000.

The order also approves, in principal, a shared-savings mechanism to increase the utility's return on investment as a reward for superior performance on DSM programs, but it defers action on this until the utility files a comprehensive set of DSM programs. Additional residential programs are to be filed within 30 days (including fuel switching programs) and, within 60 days, CV is directed to file descriptions of program design changes and other relevant documentation for several programs. The Board finds that the DSM programs proposed by the collaborative parties (and approved here) will not have anti-competitive effects on other market participants. Finally, the Board congratulates all collaborating parties and commends the collaborative process as "a productive and efficient means for achieving the long-term goals of the parties and of this Board," and for avoiding litigation and delays, and notes the voluntary nature of the collaborative process. The budget suggested by participating parties for funding continued collaboration on program implementation, refinement, evaluation, and design of residential fuel switching programs is approved.

May 28, 1991: CV and DPS file a stipulation on fuel switching. The other NUPs (CLF, VPIRG, VNRC) are not parties to this. The stipulation states that the parties will complete a thorough analysis of specific fuel switching programs and submit a package of comprehensive programs by Sept. 1, 1991. Among the general principles laid out is that "to the extent possible, ...participating customers [will] pay for the costs of the measures they receive" in order to avoid burdening other customers. In general, assistance from the utility will consist of arranging for market-based financing. Also, it's stipulated that CV can provide fuel switching programs to electricity from other fuels, where these are cost-effective. If the stipulation is approved by the Board, CV agrees to withdraw its appeal then pending before the Vermont Supreme Court (but without waiving its position on the limits of the Board's authority to order fuel switching).

June 7, 1991: The intervenors (CLF, VPIRG, VNRC) file a letter with the Board commenting on the May 28 fuel switching stipulation, filing their own position paper on fuel switching, and noting that the collaborative process has been terminated. According to the intervenors, the primary reason that they did not agree to the fuel switching plan is that CV and DPS changed the collaborative procedure by cutting off funding to NUP-supervised experts, thereby depriving the NUPs of their ability to independently analyze the agreement. The intervenors also note that the stipulation does not resolve the issue of whether or not the Board has the authority to order fuel switching filings and other specific programs. For that reason, the intervenors express their disapproval of dismissal of the appeal then pending before the Supreme Court.

According to the intervenors, CV and DPS have decided that dedicating expert resources to public interest parties is no longer appropriate now that program implementation and monitoring is beginning. The public interest groups still can be involved, but without utility-funded experts. The filing parties refuse to participate without their experts, but they state their intention to "continue to monitor the programs and propose modifications where necessary through the normal process of Board litigation." They also ask the Board to reconsider its

previous approval of cost allowances and the shared savings mechanism in light of the termination of the collaborative.

- Summer 1991: CV and DPS continue to work together in a "cooperative" arrangement (without the other NUPs) on revisions to previously-designed programs, details of the fuel switching program, and design of a monitoring and evaluation plan.
- Mid-July '91: Board accepts the substance of the CV DPS fuel switching stipulation, approving the plan while pointing out that it did not get all that it wanted. The Board order also lays out a schedule for filing the remaining program pieces (including fuel switching, nonfuel switching, monitoring and evaluation, and the IRP).
- July 15, 1991: CV and DPS jointly file a stipulation to the rate case asking the Board to approve all past DSM expenditures, on-going DSM expenditures and related lost revenues.
- July 19, 1991: CV files changes to DSM programs approved by the Board in May.
- August 2, 1991: CV and DPS jointly file a conceptual outline of how the fuel switching service mechanism proposed in the fuel switching stipulation will work.
- August 9, 1991: CV files its fuel switching analysis answering the Board's questions posed in their order on March 19, 1991.
- August 22, 1991: Board approves the joint rate case stipulation approving past DSM expenditures, on-going DSM expenditures, and related lost revenues.
- August 27, 1991: CV files its proposal for the provision of fuel switching services for the 1991-1992 heating season.
- Sept. 3, 1991: CV files its detailed monitoring and evaluation plan for all of its conservation and load management programs, including fuel switching. CV also files its IRP incorporating all of the DSM programs.
- Early Sept. 1991: Board approves program changes filed in July.
- Early Fall, 1991: Vermont Supreme Court allows dismissal of CV's previous appeal of fuel switching case.
- October 15, 1991: CV files its detailed fuel switching program descriptions.

CG&E COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility

- CG&E

2. NUPs

- Armco Steel Company, L. P. (Armco) — a subsidiary of Armco Steel
- Ohio OCC
- PUC of Ohio Staff

LIST OF INTERVIEWS

Utility:

Victor Needham CG&E, Director of Marketing Programs, Marketing Services Department

NUPs:

Paul Centolella OCC, Senior Energy Policy Advisor
Steve Puican PUC of Ohio Staff, Supervisor, Division of Forecasting
Charles Robertson Armco, former Manager of Projects and Services, Purchasing and Transportation

CHRONOLOGY OF KEY EVENTS

- Summer 1989: Ohio PUC holds series of public meetings centering around prospective IRP rules. Ohio OCC states that the profitability issue should be addressed in order to stimulate utility interest in DSM, and offers to work collaboratively with any interested utility. CG&E contacts OCC and discusses collaborative planning as well as other current issues of interest to both parties.
- Sept. 19, 1989: CG&E enters into an agreement (stipulation) with OCC, PUC staff, and Armco to work together to evaluate and develop an aggressive portfolio of feasible and cost-effective DSM programs. In exchange, OCC agrees to support CG&E's efforts to obtain approval from the Ohio Power Siting Board for the proposed Woodsdale Generating Station (consisting of 12 CTs) and also agrees to the reasonableness of CG&E's 1989 long-term electric forecast.
- Oct. 30, 1989: The Siting Board approves the proposed Woodsdale Generating Station. Armco does not endorse this decision but a company spokesman states that the company does not believe that the project will significantly affect Armco's energy costs.

- Oct. 31, 1989: Ohio PUC revises rules for long-term forecast reports and IRP for electric utilities. Specifically, the PUC states that DSM programs are to be implemented by utilities whenever these are shown to be cost-effective in comparison with available supply-side alternatives. However, the ruling recognizes that even the implementation of cost-effective DSM programs could have adverse impacts on utility profits because of "certain fundamental disincentives" contained in the existing rate making process.
- Dec. 12, 1989: First meeting of management representatives of the four parties to the stipulation takes place. CG&E encourages all parties to express their expectations concerning the collaborative process. Each group agrees to designate an "operating representative" to participate in subsequent meetings (with whatever back-up staff they need).
- Dec. 19, 1989: First meeting of working group (i.e., operating representatives of each organization) takes place. This group agrees to meet as needed, largely to select a mutually agreeable consultant and, later, to review or act on the consultant's findings.
- April 10, 1990: ICF Resources, Inc. (ICF), is hired as the consultant to the collaborative. ICF is the unanimous choice from among seven companies to whom the working group sent RFPs. ICF begins work on Phase I, the selection of a screening methodology for determining the cost-effectiveness of potential DSM programs.
- May 14, 1990: PUC invites comments from interested parties on the impacts of DSM programs and power purchases on company profitability.
- Summer, 1990: Responses are received from a number of interested parties, including CG&E, other utilities, OCC, the Ohio Manufacturer's Association, the Alternative Energy Association, and the Ohio chapter of the Sierra Club. OCC proposes "customer-driven revenue adjustment."
- July 25, 1990: Cincinnati City Council, which previously had been invited to sign the stipulation that created the collaborative, requests full membership in working group on behalf of residential customers. The working group rejects this on the premise that residential interests already are represented by OCC.
- Sept. 26, 1990: ICF completes Phase I tasks and presents deliverable to working group.
- Fall 1990: OCC organizes separate panel (not part of collaborative) to study conservation programs, perhaps in response to the working group decision of July 25 naming OCC as the principal representative of residential interests.
- Oct. 1990: ICF begins work on Phase II tasks, centering on the screening of a broad array of DSM options.
- Nov. 1990: ICF suggests approximately 30 DSM options to the working group. The group adds some, deletes others, and ends up with 30 options that are thought to warrant further consideration during Phase II.

- Jan. 4, 1991: Phase II deliverable (i.e., the results of the screening of 30 options with DSManager software) is formally presented to the working group by ICF. ICF identifies about 20 options as being cost-effective according to the Total Resource Cost Test. CG&E agrees to review six options that are identified by the group as representing a good mix of programs. This reduced set of cost-effective measures is seen as being manageable at this time. CG&E states its intention of returning to the group at a later date to report on whether the package of options passes its own inspection.
- Feb. 7, 1991: Ohio PUC issues preliminary regulatory policy on DSM incentives and cost recovery mechanisms. These regulations include: provisions for utilities to recover all expenditures on qualifying DSM programs; provisions for the recovery of "lost revenues" resulting from successful conservation programs; and the establishment of incentive bonuses for successful implementation of DSM programs that allow utilities to receive a portion of net savings. To be approved for cost recovery, DSM programs must be included in the IRP filed by each utility every two years. The exact magnitude of the revenues allowed under each of these items is to be determined during subsequent rate case proceedings. This rule is to take effect in 60 days unless the PUC is persuaded otherwise through written comments received from individual utilities.
- April 1991: New PUC rule for DSM cost recovery, lost revenue recovery, and incentives goes into effect. Prior to this, CG&E tells PUC that it will suggest an alternative accounting adjustment mechanism in the context of its fall 1991 rate case.
- April 23, 1991: The set of six DSM programs suggested by the collaborative group in January is identified by CG&E as having passed its own screening analysis. The working group unanimously accepts these programs and recommends further consideration of them and development of detailed program designs for implementation by CG&E as soon as possible. The six options are: (1) interruptible rates; (2) direct load control of water heaters and air conditioners; (3) continuation of a pilot program on thermal energy storage; (4) residential high efficiency air conditioning; (5) residential weather stripping and caulking; and (6) commercial lighting. The working group further encourages the on-going examination of additional DSM options.
- CG&E restates its position that the working group is an advisory body to the utility. OCC objects to the utility's unwillingness to share the basis of its decisions on cost-effectiveness and points out that "the less access [we have] to information now, the more scrutiny we'll have to give it later."
- Spring-
Summer 1991: CG&E continues work on the six DSM programs accepted by the working group on April 23. This work is done without any input from the working group. No meetings of the collaborative are held during this time.
- Sept. 16, 1991: CG&E files with the PUC an IRP containing, with slight modifications, the six DSM programs previously accepted by the working group. This filing also

contains a listing of all 30 DSM options screened by ICF during Phase II and expresses CG&E's intention to assess all these options in the future.

Sept. 23, 1991: Collaborative meets for the first time since April 23. CG&E presents details of the six DSM programs filed with the PUC on Sept. 16. The future of the collaborative is discussed but not resolved. The utility expresses its intention to devote its DSM resources for the remainder of 1991 to assuring implementation of the six programs filed the week before. No deadlines are set for CG&E to assess additional DSM options. The group discusses the possibility of designing additional DSM programs on a pilot basis. OCC and PUC staff express concern that the level of effort devoted to screening and analysis by CG&E might not be sufficient.

CL&P COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility
 - CL&P
2. NUPs
 - DPUC, Prosecutorial Division
 - Connecticut OCC
 - Connecticut Office of Policy and Management (OPM), Energy Division
 - CLF
3. Other
 - DPUC Staff (acted nominally as observers)

LIST OF INTERVIEWS

Utility:

Michael Townsley NU, Manager of Demand Planning and Analysis

NUPs:

Joseph Belanger Former Director of Energy Research and Policy Development, OPM Energy Division
Roger Koontz Consultant, Coordinator of NUPs' Consultants
Eugene Koss OCC, Assistant to head of OCC
Dan Sosland CLF, Attorney
Richard Steeves DPUC Prosecutorial, Finance Specialist

Other:

Mark Quinlan DPUC Staff, Associate Rates Specialist

CHRONOLOGY OF KEY EVENTS

Late 1970s--
Early 1980s:

Connecticut OCC, OPM, and (occasionally) CLF intervene in rate cases throughout this time period, raising the issue of using DSM programs as an alternative to building power plants.

- 1986: New England Energy Policy Council is formed, with members from CLF, OCC, and other interested parties. The Council begins doing research on energy conservation and its potential savings.
- July 1987: New England Energy Policy Council issues *Power to Spare*, a report showing a bountiful potential for energy savings through DSM programs.
- Fall 1987: OCC, OPM, and CLF use arguments put forth in *Power to Spare* to intervene in CL&P rate case in which utility suggests reducing its DSM expenditure.
- Feb. 4, 1988: Connecticut DPUC issues decision in response to CL&P rate case. CL&P is ordered to develop an additional \$7.9 million of DSM programs in 1988 "in consultation" with the intervening NUPs (i.e., CLF, OCC, and OPM Energy Division) and the DPUC, Prosecutorial Division. This order does not specify a design for the collaborative process, but does express the DPUC's interest in "consensus development" of programs (Feb. 4, 1988 order, p. III-15). Utility agrees to put money in an escrow account to fund experts to be available to the NUPs, the first time ever for this type of funding arrangement and an arrangement that goes beyond what the utility is required to do by the DPUC order. These experts will be available to all parties to the collaborative (and not just to the NUPs).
- Because DSM expenditures are mandated by the DPUC, recovery of program costs by CL&P is assured. Lost fixed-cost revenues also are recoverable under existing rate-setting procedures, since rates are set based on projections of sales that are made in light of anticipated DSM-induced savings.
- March 1988: MOU establishing collaborative is signed by key parties.
- Early 1988: CL&P makes it clear that it will not deal with the issue of fuel switching. In return, NUPs insist that no large programs that could have the effect of promoting electric space heating be developed. CL&P wants to hire a mediator/facilitator, but this is vetoed by CLF.
- May 24, 1988: The parties to the collaborative submit a plan (*Conservation and Load Management Program Implementation Plan*) to the DPUC, containing details of mutually acceptable program content, resource allocation, and timetables for action. It is acknowledged that some issues were not resolved in the interest of reaching quick agreement.
- June 22, 1988: The Connecticut DPUC issues a decision approving the DSM plan developed through the collaborative process. Only one intervenor (Connecticut Farm Bureau) files written comments.
- Nov. 1988: CL&P submits a report to the DPUC (*Conservation and Load Management Program Status Report*) describing the progress of the DSM program plans submitted in May and briefly discussing other outstanding issues (e.g., CL&P's 1989 DSM budget; long-term program resource allocation; financial treatment of DSM expenditures; DSM impacts on the price of electricity).

- Late 1988: NU (parent company of CL&P) begins shifting its attention to collaborative efforts in Massachusetts.
- Feb. 1989 CL&P submits another report to the DPUC (*Conservation and Load Management Initiatives: Remaining Programs*), discussing remaining issues not previously covered in the May and November documents.
- April 1989: CL&P submits a DSM plan and Avoided Cost filing to DPUC, as required by law. DSM programs are largely a continuation of those programs designed collaboratively in 1988.
- May 17, 1989: The Connecticut DPUC issues a supplemental decision concerning a number of new DSM initiatives proposed in the February document.
- Much of 1989: Parties to the collaborative interact relatively little, spending much of the year trying to design a mutually acceptable Energy Value Home (EVH) program. The parties are divided over whether the EVH program is too much of an electric heat promotional effort. In general, the year is characterized by divergence of interests among the various parties, conflict, participant "burnout", infrequent meetings, reduction of commitment to the collaborative, and a lack of significant new programs. Specific differences among NUPs include disagreements over the relative importance of residential and commercial/industrial programs and concerns over the relative influence of participating organizations.
- March 1990: Connecticut DPUC issues a draft supplemental decision approving 75 homes for the EVH program for 1990. This is half of the 150 homes which had been proposed as a compromise among the parties, and even this modest demonstration program is a small portion of what CL&P had originally envisioned.
- April 1990: As always, CL&P submits a DSM plan and Avoided Cost filing to DPUC. These annual filings are long-range system planning filings, while the collaborative filings made at other times of the year are shorter-range (12-18 month) plans that are more like negotiated settlements.
- April-Aug. '90: With encouragement from commissioner Peter Boucher, parties negotiate on ways to revitalize the collaborative process.
- August 1990: A coordinator/facilitator (Peter Stern) is hired as a third party neutral to help improve communications among the collaborative parties.
- Aug. 28, 1990: All major parties to the collaborative develop a new MOU formalizing the structure and procedures to be followed henceforth by the collaborative. Previous conflicts among the participating parties and disagreements over the structure of the collaborative indicate a need for these new groundrules. The structure that is established is the same as for the other New England collaboratives, with experts serving NUPs exclusively.

- Sept. 1990: Workplans are approved guiding collaborative activities for the upcoming four to six months.
- October 1990: A NUPs' coordinator (Roger Koontz) is hired. The coordinator is based in Connecticut with strong ties to Connecticut parties, addressing the perceived disenfranchisement of Connecticut NUPs. He will subsequently work both with the individual experts and directly with the NUP participants. This individual serves the NUPs exclusively, as opposed to the neutral coordinator/facilitator, whose job is to help things run smoothly for all parties.
- Late 1990: CL&P files for significant rate increase. Some of the same individuals involved in the collaborative also become involved in litigation against CL&P.
- Fall 1990–
Spring 1991: Collaborative activities continue, with Working Group meeting once or twice a month. Group works on refinement of residential and commercial/industrial programs and addresses the future pace of DSM program funding and implementation in general. Other major issues include cost recovery, surplus capacity, and program evaluation.
- April 1991: CL&P submits DSM plan and Avoided Cost filing to DPUC.
- May 1991: The collaborative files DSM plan for upcoming rate year, proposing \$63 million of DSM programs in many end-use sectors. To a large extent, these programs are a refinement of existing programs. The new plan includes a cost-recovery mechanism that uses rate-basing and expensing to avoid increasing current revenue requirements and also suggests the outline of an incentive program to maximize net savings for rate payers. It is explicitly noted that the incentive program will be the topic of continued negotiation, since the collaborative parties don't yet agree on the magnitude of these incentives.
- June 1991: Connecticut legislature passes statute mandating the DPUC to investigate and take action regarding existing barriers to DSM. This statute references an existing Connecticut statute that would allow the recovery of revenues lost due to energy-efficiency efforts.
- July 19, 1991: Connecticut DPUC issues draft decision on a rate-case, proposing an \$8 million reduction in CL&P's \$63 million DSM program. The decision also rejects the proposed combination of rate-base and expense treatment for DSM costs in favor of rate-basing alone, increases the amortization period from five to ten years, and approves a conditional 3% bonus to be worked out by the collaborative group. The DPUC cites the radically changed conditions over the last few years, noting the lack of near-term need for new capacity, the economic recession, lower sales growth, and lower oil prices. The DPUC expresses its continuing belief in the benefits of conservation, but notes that "prudent management services and the efficient delivery of services are important in all areas, including conservation programs." It further states that "the collaborative group should consider creative methods to finance customer investment in conservation measures rather than always having the company pay incentives."

MASSACHUSETTS DSM COLLABORATIVE

COLLABORATIVE PARTICIPANTS¹

1. Utilities

- BECo
- COM/Electric
- Eastern [Massachusetts retail company for EUA Service Corporation (EUA)]
- FG&E
- Nantucket Electric Company (Nantucket)
- WMECo (Massachusetts retail company for NU)

2. NUPs

- CLF
- Division of Energy Resources (DOER), Commonwealth of Massachusetts
- Massachusetts (MASSPIRG)
- AG, Commonwealth of Massachusetts

LIST OF INTERVIEWS

Utilities:

John Cagnetta	NU, Senior Vice President for Corporate Planning and Regulatory Relations
L. Carl Gustin ²	BECo, Senior Vice President for Customer Savings, Marketing, and Corporate Relations
Kathleen Kelly	BECo, Manager of Evaluation and Monitoring
Earle Taylor	NU, Director for Conservation and Load Management
Wendy Watts	Nantucket, Director of Conservation
Carol White	EUA, Supervisor of Demand-Side Planning and Evaluation
Mort Zajac	COM/Electric, Manager of Demand Program Administration

NUPs:

Steve Burrington	CLF, Attorney
Joseph Chaisson	Consultant, Lead Coordinator of NUP Consultants
Susan Coakley	Consultant, Coordinator of NUP Consultants for BECo, COM/Electric, and EUA Collaboratives (Former Staff DPU)
Armond Cohen	CLF, Senior Attorney

¹Participants listed below were for Phase I of the Massachusetts Collaborative which involved all the utilities and NUPs working together and lasted approximately six months. After Phase I, all of the NUPs together entered into a separate collaborative process with each of the utilities, except for FG&E which decided not to continue.

²C. Ben Tucker, Technical Assistant to Gustin, was present at this interview and contributed numerous important insights.

Stephen Cowell	Conservation Services Group, Inc., President (Former Lead Residential Consultant)
Douglas Foy	CLF, Executive Director
Allan Noguee	MASSPIRG, Energy Policy Analyst
Jerrold Oppenheim	AG, Assistant Attorney General
Rachel Shimshak	DOER, Director of Policy and Planning

Intervenors:

Andrew Newman	Attorney, for Lighting Retailers and Large Industry
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Regulators:

Susan Tierney	Secretary for Environmental Affairs (Former Commissioner DPU)
Robert Werlin	Attorney, Private Law Firm (Former Commissioner and Chair DPU)

CHRONOLOGY OF KEY EVENTS

- 1984-1987: Intervenors criticize Massachusetts utilities for their lackluster DSM efforts in rate cases. Massachusetts DPU issues increasingly critical orders, and even penalizes BECo on its rate-of-return for its DSM performance.
- July 1987: New England Energy Policy Council, consisting of 26 environmental and consumer groups, publishes study called *Power to Spare* which claims large untapped DSM potential that should be more aggressively pursued by utilities in New England.
- May 1988: During a hearing before the Massachusetts DPU on DSM as part of its Integrated Resource Management rulemaking process, Doug Foy of CLF requests the DPU to order utilities to enter into a collaborative process to design and implement DSM programs and to provide funding for the NUPs to secure technical expertise.
- June 1988: Utilities, organized initially by John Cagnetta of NU, volunteer to participate in the process and provide funding for the NUPs' experts.
- August 1988: DPU approves the proposed "Agreement for Collaborative DSM Program Design and Implementation" submitted in July by seven utilities [BECo, COM/Electric (representing 2 utilities), Eastern, FG&E, Nantucket, WMECo], and four NUPs (AG, CLF, DOER, PIRG) with some recommendations. Agreement calls for a half-year, Phase I collaborative in which all parties work together to design a portfolio of DSM programs that could be adapted to each utility during a voluntary Phase II process. Utilities agree to provide \$385,000 for NUPs to secure expertise. Separate but parallel collaborative undertaken by just MECo and CLF. (SEE NEES-CLF Collaborative).

- Nov. 1988: DPU issues D.P.U. 86-36-F in which it makes key DSM policy decisions on cost-effectiveness testing and cost-recovery issues that are critical to breaking an impasse in the collaborative policy negotiations.
- Dec. 1988: Collaborative completes Phase I and files a consensus report detailing 25 different generic program designs. Does not reach consensus on all policy issues such as appropriate cost-recovery mechanisms. DPU holds a hearing and subsequently offers some informal staff comments which are generally positive but reiterate some long-standing DPU concerns (e.g., address all hard-to-reach sectors, avoid creating lost opportunities or cream-skimming).
- March 1989–
Sept. 1989: NUPs begin Phase II collaboratives with each utility individually — WMECo and COM/Electric begin in March, BECo and Eastern begin in June, and Nantucket begins in September. Each utility provides NUPs with money to secure technical expertise. FG&E decides not to pursue a Phase II collaborative.
- Fall 1989: Phase II concludes for WMECo and COM/Electric, and companies file at the DPU for pre-approval of their DSM programs and cost-recovery (as does MECo). WMECo (and MECo) but not COM/Electric request positive financial incentives. COM/Electric filing is largely a consensus filing with the NUPs; however, in the wake of large rate increases that were overturned by the legislature, residential customer groups intervene to protest raising rates for DSM and accuse the company of falsely advertising that it would install DSM for "free." The WMECo filing contains many contested issues with the NUPs, primarily regarding the company's customer incentives and its commitment to ramping-up its DSM programs.
- In a settlement approved by the DPU concerning an outage at the Pilgrim Nuclear Power Plant, BECo agrees to invest \$75 million in DSM that would not be recovered in rates.
- Spring 1990: DPU issues an order in MECo case approving most of the programs and the first financial bonus system for utility DSM effort in Massachusetts. DPU completes contested hearings on WMECo's and COM/Electric's pre-approval filings.
- BECo files its programs at the DPU for informational purposes only since it does not need to recover costs from ratepayers as per the Pilgrim Settlement. Eastern also files for informational purposes only as it decides to file at the Federal Energy Regulatory Commission (FERC) for cost-recovery of its DSM expenditures through its wholesale company, Montaup Electric.
- Summer 1990: In the COM/Electric case, the DPU issues fairly favorable order that rules company did not falsely advertise, but rejects several programs as not being cost-effective and several others for not being sufficiently detailed for review. Directs COM/Electric to redesign non-cost-effective programs and complete others.

In the WMECo case, DPU approves all programs but two not found to be cost-effective. However, DPU directs company to enrich the customer incentives in several of its programs, and to accelerate and expand others. DPU does approve company's request to recover its DSM expenditures in the year they are spent, to recover lost revenue associated with DSM, and to earn a bonus on its DSM investment. Bonus is similar to MECo bonus previously approved by DPU in terms of its overall structure and being based on measured savings, but has more stringent threshold because company's effort is seen as somewhat less aggressive.

DPU issues Integrated Resource Management Rules adopting an all-resource bidding process with an environmental externality adder method with the highest values used in the country to date (D.P.U. 89-239, August 1990).

Fall 1990-
Winter 1991:

COM/Electric Collaborative effectively ends after parties can not reach an agreement on an on-going relationship. WMECo Collaborative takes a hiatus for a while due to acrimony around Phase II filing and hearings, but restarts in time to prepare for next pre-approval filing.

Eastern and Nantucket Collaboratives wind down. BECo Collaborative continues. MECo files for second round of pre-approval and receives a favorable order from the DPU.

Spring 1991:

COM/Electric files for second preapproval and NUPs intervene to ask the DPU to find imprudence and to place the utility's DSM programs under outside receivership. NUPs point out that utility failed to develop or implement many programs that were approved by the DPU, and that it improperly managed those that it did implement. Company claims that the programs it did implement were extremely successful (e.g., it spent the most money on DSM as a percent of revenue in the state in 1990, and its expenditures in the residential electric space heat and small commercial and industrial programs had the highest participation rates), and that it was restricted from expanding its efforts beyond those programs. Fourteen days of evidentiary hearings are held, and over 300 information requests are issued --- far more than for any other DSM pre-approval case in Massachusetts.

WMECo, in contrast to its previous contested filing, files for its second pre-approval in first complete consensus filing with NUPs in Massachusetts. BECo files for its first pre-approval with almost complete consensus with NUPs. Nantucket files for first pre-approval but NUPs do not file in support or opposition, to the company's chagrin.

Summer-
Fall 1991:

WMECo receives favorable order from DPU. Orders on COM/Electric, Nantucket and BECo expected late fall. Only BECo, WMECo, and MECo Collaboratives are on-going.

NEES/CLF DSM COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility

- NEES (retail companies include MECo in Massachusetts, Narragansett Electric Company in Rhode Island, and Granite State Electric Company in New Hampshire; wholesale company is the New England Power Company).

2. NUP

- CLF

LIST OF INTERVIEWS

Utility:

Alan Destribats	NEES, Vice President for Planning
Peter Flynn	NEES, Director of Conservation and Load Management
Elizabeth Hicks	NEES, Director of Demand Planning
Lydia Pastuszek	NEES, President Granite State, former Director Demand Planning
John Rowe	NEES, President and CEO
Richard Sergel	NEES, Treasurer, former Director of Rates

CLF:

Joseph Chaisson	Consultant, Coordinator of CLF Consultants
Armond Cohen	Senior Attorney
Douglas Foy	Executive Director

Intervenors:

Andrew Newman	Attorney for Lighting Retailers and Large Industry
Jerrold Oppenheim	Assistant Attorney General (AG), Massachusetts AG

Regulators:

Mary Kilmarx	Lead Rhode Island Staff Person
Janet Besser	Lead New Hampshire Staff Person
Robert Werlin	Attorney, private law firm (former commissioner and chair Massachusetts DPU)

CHRONOLOGY OF KEY EVENTS

- 1979: NEES begins its active pursuit of DSM with NEESPLAN. Only pursues programs that are consistent with the "no-losers" test.
- 1987: NEES steps up its DSM efforts with "Partners in Energy Planning" campaign. Targets 230 MW of DSM by 1991. Primary focus is still on load management. NEES abandons "no-losers" test for minimizing "revenue requirements" test as required by regulators.
- July 1987: New England Energy Policy Council, consisting of 26 environmental and consumer groups, releases *Power to Spare*. Claims that total projected electricity demand (i.e., existing demand plus utility projections of 2% per year growth) in 2005 could be cut 37% to 57% through adoption of technically-feasible DSM measures.
- May 1988: During a hearing before Massachusetts DPU on DSM as part of its Integrated Resource Management rulemaking process, Doug Foy of CLF requests the DPU to order utilities (including MECo) to enter into a collaborative process to design and implement DSM programs, and to provide funding for the NUPs to secure technical consultants.
- Summer 1988: NEES and CLF agree to work collaboratively to develop comprehensive DSM programs and to fund experts for CLF. NEES and CLF submit their agreement to DPU and to Rhode Island and New Hampshire PUCs at same time that all the other Massachusetts electric utilities, together with four NUPs, submit a separate but parallel voluntary agreement to the DPU (see Massachusetts Collaborative). In August, the DPU approves the larger collaborative, and is silent on the MECo Collaborative (which it was not asked to approve). NEES also forms DSM Advisory Board comprised primarily of its consumers and advocates, which meets four times a year.
- Nov. 1988: Massachusetts DPU issues D.P.U. 86-36-F which requires electric companies to expand the cost-effectiveness test to include externalities, customer costs, and other societal effects. Opens door for DSM program pre-approval, and ratebase treatment and lost revenue adjustment for DSM investment.
- Feb. 1989: John Rowe becomes CEO of NEES (comes from Central Maine Power) after accidental death of Sam Huntington.
- April-
June 1989: Environmental externality collaborative attempted in Massachusetts with NEES, all other utilities, CLF, and numerous other NUPs. Goal is to design a method, or select values, or both for externalities to be used when comparing resources as required by the DPU. Everyone educated on options, but no consensus is reached. Parties largely divided on whether externalities should be monetized.
- May 1989: Settlement reached before the FERC to permit local jurisdiction over the implementation of non-dispatchable DSM programs if a "state commission has

in place retail rates to recover the costs...on or after January 1, 1990." Approved by FERC July 28.

- Fall 1989: NEES and CLF agree to collaborate on an environmental externality method and hire Paul Chernick as consultant to CLF. Decide to go separate ways by end of fall over disagreement on necessity of using the marginal cost of control as a proxy for environmental damage.
- Sept. 1989: NEES and CLF submit joint DSM filing with Massachusetts, Rhode Island, and New Hampshire PUCs delineating the results of their collaborative. Propose to spend \$65 million on ten DSM programs in 1990. Propose shared-savings incentive for utility (5% maximizing incentive and 10% efficiency incentive).
- Dec. 1989: Rhode Island PUC approves postfiling settlement on Narragansett Electric Company's proposal forged by NEES, CLF, commission staff, and intervenors (lighting retailers and large users) (Report and Order Docket No. 1939, issued May 1990). PUC does not require any program changes, except eliminating 100 KW participation threshold for its Energy Initiative program for large commercial and industrial customers. PUC becomes one of the first in country to approve a shared-savings incentive mechanism; however, approval changes original proposal in several significant ways (i.e., halves requested amount and puts in performance threshold).
- Jan. 1990: New Hampshire PUC approves postfiling stipulation by Granite State Electric Company in New Hampshire, CLF, the PUC staff, and the Consumer Advocate. Programs essentially approved as originally proposed. In August 1990 PUC approves financial incentives for company as originally proposed, within the context of a generic investigation (Doc. 89-187) on financial incentives for all utilities in New Hampshire.
- March 1990: Massachusetts DPU issues order for MECo after seven days of evidentiary hearings and intervention by the AG, the City of Worcester, retail lighting vendors, and a consortium of large industrial users. (Order D.P.U. 89-194/195 issued March 30, 1990). Pre-approves all programs as cost-effective (except one deemed by DPU as not sufficiently designed). However, orders company to accelerate the implementation of many of its programs, to make some programs more comprehensive, to re-evaluate its appliance program, and to examine the cost-effectiveness of streetlight conversion. The DPU also expresses concern over disproportionately high spending in commercial and industrial programs compared to residential programs.

While the DPU ultimately approves a financial incentive for MECo — considering its overall goals "exemplary," it directs the company to make several major changes including: (1) change the shared-savings formula to a bounty (i.e., fixed bonus on savings); (2) cut proposed incentive in half; and (3) base incentives on after-the-fact measurement rather than estimated savings. The DPU also approves the collaborative proposal to recover direct DSM expenditures in the year they are made, but rejects company's proposal to allocate costs to all

customers on an equivalent kwh basis, instead requiring allocation of DSM costs to eligible customer classes.

Aug. 1990: Massachusetts DPU issues Integrated Resource Management Rules adopting an all-resource solicitation process with an environmental adder method, based on the cost-of-control, with the highest values used in the country at the time (D.P.U. 89-239).

Oct. 1990: Collaborative process between NEES and CLF continues after first filing in September 1989. In October 1990, parties jointly file for 1991 DSM pre-approval in all three states. Propose increasing expenditures to \$85 million which represents a 30% increase over \$65 million in 1990 budget (20% over \$71 million actually spent in 1990). Propose increasing rebate levels in several programs, making some programs more comprehensive, and allocating a higher percentage of DSM expenditures towards residential customers than in 1990.

Dec. 1990-
Jan. 1991:

All three PUCs issue orders on second DSM collaborative filing. Cases in both New Hampshire and Rhode Island are essentially settlements, while in Massachusetts no settlement is offered and extensive contested hearings are held. After the Boston Gas Company intervenes in MECo's case in Massachusetts to get MECo to include fuel switching in its DSM programs, the PUC bifurcates the case and moves the fuel switching issue into a separate proceeding in which over 20 parties intervene (yet to be decided as of this writing).

While the New Hampshire PUC essentially approves the filing as proposed, Massachusetts and Rhode Island orders in many ways begin to push NEES programs in somewhat divergent directions. Rhode Island order gives priority to programs and measures within programs with the highest benefit/cost ratios. Massachusetts DPU continues to push NEES to make its programs as comprehensive as possible (i.e., pursue all cost-effective measures rather than merely the most cost-effective measures), to offer them to all customers as quickly as possible, and to continue to have the utility cover most of the measure costs through direct investment. Each PUC orders some changes to various programs along these divergent lines. All three PUCs essentially approve utility financial incentives as proposed with only relatively small reductions in Massachusetts and Rhode Island but no further structural changes.

1991: The NEES-CLF Collaborative is on-going. Since its inception, NEES has provided almost \$1 million for consultants that advise CLF. While the primary focus of the collaborative in 1989 and 1990 was program design, followed closely by financial incentives, current focus is more on implementation issues and program evaluation.

The collaborative deals with several difficult issues this year. First, by spring, NEES's Energy Initiative program (large commercial and industrial retrofit), in which the company pays the entire incremental cost, is so heavily subscribed that NEES has already made financial commitments that are 50% higher than the projected budget for all its programs for the entire year (i.e., \$120 million instead

of \$85 million). After discussions with CLF and emergency hearings in all three states, it is agreed that the program will be suspended until 1992 — allowing the company to service all those who had signed-on without adding additional customers to the queues and giving the parties time to redesign the program by 1992.

Second, in June the results from MECo's first ex post savings measurement effort show that the savings are generally lower than those originally filed at the DPU, and substantially lower than the company's most recent engineering estimates (e.g., lighting in Energy Initiative was measured at 51% of engineering estimates). Lastly, NEES and CLF are essentially in litigation on both environmental externalities and fuel switching matters in separate multiparty proceedings before the Massachusetts DPU.

NYSEG COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility
 - NYSEG
2. NUPs
 - CLF
 - Multiple Intervenors (MI)
 - New York State Energy Office (NYSEO)
 - Pace University Center for Environmental Legal Studies
3. Other
 - New York DPS (serve as staff to state PSC; acted in observer role)

LIST OF INTERVIEWS

Utility:

Merle Lessler NYSEG, Manager of Electric Marketing Services

NUPs:

Barbara Brenner MI, Attorney
Sharon Costello NYSEO, Director of Division of Conservation
Cort Richardson Consultant, Coordinator of NUPs' Consultants
Peter Smith NYSEO, Director of Planning

Other:

James Gallagher Public Service Commission (PSC) Staff, Chief of Planning and Evaluation,
Office of Energy Efficiency and Environment

CHRONOLOGY OF KEY EVENTS

- Early 1980s: The New York PSC requires state utilities to begin designing DSM programs.
- Fall 1987: PSC directs all utilities to move from research to implementation.
- Fall 1988: PSC invites all New York utilities to design and submit suggested DSM incentive mechanisms for PSC consideration. PSC rejects nonparticipant test as primary criteria for DSM program cost-effectiveness.

- May 23, 1989: PSC issues an opinion requiring utilities to submit combined long range and annual DSM program plans for commission review. PSC orders "core" DSM programs to be implemented statewide.
- Sept. 1989: State Energy Plan is finalized by the NYSEO, PSC staff, and state Department of Environmental Conservation, setting long-range goals of 10% reduction in forecast energy use by the year 2000.
- Dec. 29, 1989: The PSC issues an order concerning 1990 DSM plans. One finding in this order is that NYSEG will promptly establish a collaborative program design process to assist in the development of its next long range and annual DSM plan, and will submit this by January 30, 1990. The PSC notes that NYSEG recognizes the potential value of outside expertise and has volunteered to participate in a collaborative design process. [NYSEG was identified earlier by PSC staff as the utility that could benefit most from a collaborative. NYSEG, which claimed to have surplus generating capacity, volunteered for the project after informal talks with PSC staff, who encouraged the utility to participate.]
- Jan. 4, 1990: PSC issues order approving DSM rate incentive mechanism proposed by NYSEG. Mechanism covers cost recovery, recovery of lost net revenues, and shared-savings incentive.
- Feb. 26, 1990: NYSEG develops a process plan for the collaborative design of DSM programs and policies and submits it to the PSC.
- March 1990: CLF advisors and NYSEG personnel prepare proposed Work Plans and Budgets.
- April 1990: Collaborative Committee and Working Group hold their initial meetings. After this, each group meets periodically.
- April 5, 1990: NYSEG and CLF prepare a MOU expressing their agreement to the collaborative process described above.
- April–Oct. 1990: Collaborative Committee develops plan for 1991 DSM filing.
- Oct. 29, 1990: NYSEG files 1991 Short-Range DSM Plan and Long-Range DSM Plan. Plans have consensual approval of all collaborative parties except MI. Screening analyses use long-run avoided costs developed consensually by all parties (except MI), with concurrence of the PSC staff. Goal of 8 -- 10% peak and energy reduction by the year 2000 is consistent with State Energy Plan. DSM budget is \$25 million for 1991 and \$36.5 million for 1992 (up from \$13.5 million in 1990). Programs are offered for most of NYSEG's residential, commercial/industrial, and agricultural customers, and large-scale participation is expected. Relatively small rate increases (approximately 2 mills/kwh in 1991 and 3 mills in 1992) are expected for the targeted customer classes. NYSEG notes in its filing that it "was not possible to bring this [collaborative] process to a firm conclusion (i.e., a signed document) on the myriad of details normally needed to be filed in a DSM plan." One of these details is a thorough review of the impact on rates.

It also notes that "the costs and manpower requirements of a collaborative process tend to be greater than conventional DSM planning methods."

- Nov. 27, 1990: PSC issues order stating that all New York electric utilities should attempt to reach the State Energy Plan goals concerning DSM savings, "within the limits of maintaining cost-effective programs."
- Dec. 4, 1990: Several programs in October plans are amended by joint letter from all parties (except MI) to PSC. This filing contains information not available for the October 29 filing, including information on rate impact, revenue requirements, and program evaluation. The concurring parties note the effectiveness of the collaborative process and their satisfaction with the outcomes.
- Mar. 12, 1991: PSC approves NYSEG Short-Range DSM plan (with some modifications), noting that the submitted plan is sufficiently complete for the utility to proceed. However, the plan will be amended to provide details on its evaluation procedures. Also, NYSEG is instructed to analyze whether its DSM program costs should be recovered from all eligible customers or just from program participants. In general, the PSC notes that "the collaborative process has produced several innovative programs, and a more comprehensive approach in NYSEG's plan employs program delivery methods that attempt to reach all customers."

In contrast to the majority opinion, comments are included from two groups that are critical of the 1991-92 DSM plan. The Public Utility Law Project of New York asserts that the plan fails to provide adequate resources for low-income customers. MI, representing large industrial customers, argues that the plan should be scaled down and that the collaborative process should not be used in connection with future filings. MI maintains that the long-run avoided cost estimates developed through the collaborative process were too high, causing some programs to be found cost-effective that should not have been. One dissenting commissioner argues that the plan is "a half-baked blueprint for expensive confusion," doing far too much in the way of DSM at great profit for NYSEG and great expense for ratepayers. This commissioner notes the absence of "the benefits, protections, and assurances that the more detailed inquiry and analysis of a rate case would provide" and laments the collaborative's heavy reliance on experts and intervenors.

Following PSC approval of the plan, the collaborative is disbanded, since the MOU only contemplated a collaborative process extending through the filing of a DSM plan.

PEPCo MARYLAND COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utility
 - PEPCo
2. NUPs
 - Maryland DNR
 - Maryland Office of People's Counsel (OPC)
 - Maryland PSC Staff

LIST OF INTERVIEWS

Utility:

Ed Mayberry PEPCo, Manager of Market Planning and Policy

NUPs:

Paul Buckley OPC, Assistant People's Counsel
Matt Kahal Consultant to DNR
John Plunket Consultant to OPC
Mary Beth Tighe PSC Staff, Assistant Director for Least-Cost Planning, Rate Research and
Economics Division

CHRONOLOGY OF KEY EVENTS

- Late 1989: Maryland PSC holds an administrative hearing granting approval for four new PEPCo DSM programs. Following approval, PEPCo solicits input from the Maryland OPC concerning its DSM programs. During this same period, public hearings are held in response to PEPCo's proposal to build four combustion turbines at Chalk Point. These hearings involve a review of PEPCo's IRP and DSM programs.
- Early 1990: Discussions are held between PEPCo and OPC, and later with PSC staff and the Maryland DNR, leading to the decision to engage in a collaborative planning process. In return for PEPCo's participation in the collaborative, NUPs agree not to oppose the Chalk Point Certificate of Need and to settle key issues for a contemporaneous rate case. PEPCo agrees to fund consultants for OPC to use during the collaborative.

- May 22, 1990: PEPCo and three NUPs submit a MOU to the Maryland PSC, detailing a collaborative process (the first in Maryland) to be followed in the development of DSM programs and policies. The NUPs are OPC, DNR, and PSC staff.
- Sept. 26, 1990: Summary of workplans and all individual workplans are completed by consultants and submitted to all parties to the collaborative.
- Oct. 2, 1990: Collaborative parties submit to PSC a cost-recovery plan, including an incentive mechanism, for informational purposes. These mechanisms are to be applicable only for collaboratively-approved programs. Exact values will depend on the specific utility programs that are developed.
- Fall 1990–
Spring 1991: Collaborative parties spend considerable time discussing DSM screening issues (with strong emphasis on appropriate marginal cost values for DSM) and developing program concepts. The program concepts task includes the establishment of general program guidelines, the development of marketing approaches, and agreement on a range of prospective DSM measures (without detailed program specifics).
- June 1991: Collaborative parties establish an internal deadline of early August for their first filing of proposed DSM programs.
- July 1991: Collaborative parties reach final agreement on the cost-effectiveness screening tool to use for assessing those DSM measures identified during the program concepts task. Four general program areas are selected for screening with the new tool and for immediate additional work for the first filing; program specifics are developed very quickly. The four program areas are chosen because they are expected to contain cost-effective options, there is good agreement on them among the collaborative parties, and PEPCo already has some experience with similar measures.
- Aug. 7, 1991: Collaborative parties file with PSC four proposed DSM programs, showing prospective savings, that have the consensual approval of all parties. The four programs cover new residential construction, residential air conditioning, new commercial construction, and direct installation of DSM measures for small commercial customers. These programs more than double DSM expenditures and projected MWh reductions for the next five years over those levels contained in PEPCo's 1990 plan. The filing also includes the establishment of precise values for the Oct. 2 mechanism for recovery of program costs and lost revenues and the provision of incentives.
- Aug. 21, 1991: PSC approves, without change, the collaboratively-developed DSM programs and cost-recovery mechanisms filed on Aug. 7.
- Late Aug. '91: Screening of additional measures and development of additional program designs begin, with a final filing (containing additional programs) anticipated for mid-November.

WISCONSIN DEMAND-SIDE DEMONSTRATION COLLABORATIVE

COLLABORATIVE PARTICIPANTS

1. Utilities

- Madison Gas and Electric Company (MG&E)
- Manitowoc Public Utilities
- Marshfield Electric and Water Department
- Northern States Power Company
- Wisconsin Electric Power Company (WEPCo)
- Wisconsin Power and Light Company (WP&L)
- Wisconsin Public Power, Inc. System
- Wisconsin PSC

2. NUPs

- Bad River Tribal Community
- Badger Safe Energy Alliance
- Citizens' Utility Board
- Energy Saving Technology
- The Electromagnetic Research Foundation
- Lake Michigan Federation
- League of Women Voters of Wisconsin
- Milwaukee Urban League
- Midwest Renewable Energy Association
- National Center for Appropriate Technology
- Oneida Nation of Wisconsin
- Promoting Options for Wise Energy Regulation
- PSC of Wisconsin Staff
- Snow-Belt Energy Center
- Wisconsin Energy Bureau, Division of Energy and Intergovernmental Relations
- Wisconsin's Environmental Decade
- Wisconsin Greens
- Wisconsin Manufacturers and Commerce
- Wisconsin Utility Investors
- Xexoxial Endarchy, Ltd.

3. Other

- Wisconsin Center for Demand-Side Research (WCDSR) (acted in advisory capacity)

LIST OF INTERVIEWS

Utilities:

Lynn Hobbie MG&E, Supervisor in Market Planning and Evaluation
Dale Landgren WEPCo, Manager of Customer Research and Planning, Marketing
Department (former facilitator of demonstration panel)

NUPs:

Janet Herzog Wisconsin's Environmental Decade, Attorney
Nancy Korda Wisconsin Public Service Commission, Program and Planning Analyst, Electric
Division
Dennis Lawler Consultant to Wisconsin Manufacturers and Commerce
Mike Mett Wisconsin Utility Investors, Managing Director

Other:

Shel Feldman WCDSR, Executive Director

CHRONOLOGY OF KEY EVENTS

- Late Summer
1990: "Son of Advanced Plan" (SOAP) hearings are held to review a large number of applications from Wisconsin Utilities to construct electric generating plants that were not envisioned in their most recent Advanced Plan (AP 5). Wisconsin PSC staff propose a DSM demonstration program to promote greater use of DSM and slow rapid supply-side growth. Informal meetings are held among various interested parties to discuss this proposal.
- Oct. 12, 1990: A Working Group is formed with representatives from the utilities involved in the SOAP hearings (WEPCo, WP&L, MG&E, Wisconsin PSC, Wisconsin Public Power, Inc., Manitowoc Public Utilities, Marshfield Electric and Water Department), plus Northern States Power and a variety of public interest and government groups (Wisconsin's Environmental Decade, Wisconsin Utility Investors, Wisconsin Energy Office, Wisconsin Manufacturers and Commerce, Citizens' Utility Board), the WCDSR, and PSC staff.
- Nov. 1, 1990: Wisconsin PSC issues an order requiring all applicants involved in the SOAP hearings to participate in a three-year demonstration of DSM market potential as a condition of power-plant approval. The PSC finds that the rapid increase in peak loads since the filing of Advance Plan 5 "has resulted in an accelerated action approach to the supply-side options...." and that "the accelerated approach being applied to the supply-side also needs to be applied to demand side... ." It is hoped that a three-year demonstration of DSM market potential will provide valuable information for use in future advance plans and also will achieve substantial savings. It is estimated that the demonstration may require as much as \$50-100 Million of funding over its three-year life.

Dec. 5, 1990: Working Group files 30 Day Response to PSC, as required in Nov. 1 order. On the first page, DSM activities are defined as including "conservation, load management, and fuel switching options." The 30 Day Response covers: (1) goals and objectives; (2) recommended structure for management of the demonstration; (3) recommended role of WCDSR; (4) recommended relations between demonstration management group and PSC; (5) initial timeline; and (6) recommended approach to management of individual projects.

The management structure proposed (and subsequently approved by the PSC) maintains and broadens the base of public participation in the process. The panel that is subsequently formed operates on the basis of consensus, with decisions by the PSC when consensus cannot be reached.

A one-month delay in filing the 90-Day Response is requested to allow WCDSR to finish an analysis of gaps in information about the marketing of Wisconsin DSM programs. WCDSR sponsors this study and provides technical guidance to the consulting firm (National Analysis) that carries it out. This information is considered essential for designing a demonstration project that builds upon existing efforts and targets areas currently not being fully captured, but holding promise of cost-effective opportunities.

Jan. 8, 1991: First meeting of DSM demonstration panel is held. Panel is composed of representatives of every group that responded to a letter of solicitation issued by the PSC and that asked to be on the panel.

Jan. 31, 1991: Wisconsin PSC formally recognizes demonstration panel and grants 30 day extension on 90-Day Response, as requested in December by Working Group.

Feb 11, 1991: Demonstration panel decides that membership will be limited to 26 members, and that no new groups are to be added until the total number of representatives falls below 26.

Mar. 5, 1991: Demonstration panel files 90-Day Response to PSC, as required in Nov. 1 order. This filing presents a general methodological framework for the demonstration project, identifies a variety of potential projects that could be funded over the life of the demonstration, suggests a funding mechanism for shared expenses (based on the relative sizes of the participating utilities) and individual projects (paid by the "host" utility or utilities), discusses the role of the WCDSR, describes future reporting procedures (quarterly reports describing future progress will be presented to the PSC), presents a timetable for initiating action on first-year projects, and lays out important principles for subsequent evaluation of demonstration projects. The decision is made to hire an evaluation contractor and an evaluation director to conduct evaluations. Potential projects are divided into two major categories: first-year projects and second- and third-year projects. Within the first category, three types of activities are identified: developmental activities (consisting of public outreach to tap new ideas), demonstration projects, and research projects (to be administered by WCDSR). Activities of the latter two types are identified for the second and third years, but developmental

activities also are possible during this period. Activities are further broken down by market sector (e.g., residential, commercial, industrial, agricultural).

Fuel switching is identified as the single issue of contention among the participating parties. Four utilities state that fuel switching should not be included in the demonstration (except for customers being served electricity and natural gas by the same combined utility) until unresolved questions are settled by the PSC in an upcoming docket and in Advanced Plan 6. PSC does not intervene at this time, but it does rule that the collaborative parties should continue to investigate fuel switching and should present any issues to the PSC where consensus cannot be reached.

March 1991: PSC approves 90-day filing, with some very positive remarks about panel accomplishments. Panel wants PSC approval of project areas before starting work on RFPs.

Spring-
Summer 1991: Three RFPs for demonstration programs are issued by the panel. These comprise Round 1 of the first year of the demonstration project. Multiple rounds are possible within a single year. The RFPs cover: (1) residential cooling; (2) commercial lighting; and (3) community-based programs (covering many sectors and end uses for different sizes of community or a city neighborhood). In addition, two RFPs are issued by WCDSR for scoping studies, designed to generate more information on: (1) adjustable-speed drive industrial motors; and (2) reduced-pressure farm irrigation and load control.

June 1991: Panel selects RCG/Hagler, Bailly, Inc. as the primary evaluation contractor. The firm begins by gathering baseline data to allow for future evaluations. An evaluation director will be hired by the panel later in the year to oversee all evaluation and monitoring activities and to report to the panel as necessary.

July 31, 1991: First Quarterly Report is issued by the panel. Approval for this filing is not considered as urgent as in the case of the 90-day report.

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