

# Alternative Approaches to Administering DSM in Colorado

Final Report to the National Association of  
Regulatory Utility Commissioners  
and  
The Colorado Public Utilities Commission

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## SUMMARY

To provide support to the Colorado Public Utilities Commission (COPUC) in assessing the potential for developing alternatives to utility-administered demand side management (DSM) in Colorado, the National Association of Regulatory Utility Commissioners (NARUC) contracted with Keith Hay (the consultant) and the Regulatory Assistance Project. The consultant conducted interviews with 17 of the state's largest gas and electric utilities as well as with the Colorado Association of Municipal Utility (CAMU), the Colorado Rural Electric Association (CREA) and Tri-State Generation and Transmission (Tri-State) to determine this potential (See Appendix I for a complete list of the utilities interviewed). This report integrates the information provided in these interviews with findings from research conducted by the consultant and the Regulatory Assistance Project (RAP) into the characteristics that make a DSM administrative model successful.

### **Does a Colorado Approach Exist?**

No consensus around a single "Colorado Approach" emerged from the interviews conducted. However, the conversations revealed several possible paths forward by providing both a list concerns that any third party model would have to overcome and a list of characteristics preferable to the utilities.

Utilities were not universal in their attitudes toward a third party model or in the issues that it might raise. However, many of the utilities expressed a concern about their relationship to their customers under a third party administrator model. Specifically, several viewed a third party administrator as a potential competitor for customer loyalty and expressed reservations that the competition might harm that relationship. For regulated entities, the second most prevalent set of concerns involved the transition from utility administration of DSM to a new administrator. These included delays in achieving DSM goals, integrating DSM planning with resource planning, responsibility for compliance with state statutes or rules and additional costs associated with DSM programming. Unregulated entities raised concerns about losing local control under a

statewide regime. In addition, both groups foresaw the need to resolve questions involving the potential for additional regulatory or other reporting requirements.

In interviews, each utility identified a set of criteria that would make an alternative third party administrator potentially more acceptable to them. Overlap existed in some

**Aspects of a Preferred Administrator**

- Governance by an independent, non-governmental third party administrator.
- Oversight provided by a board of participating utilities.
- Control of setting the DSM budgets remains with the utilities.
- Determination of mission and programs by utilities.
- Use of each utility's funds within its service territory.

aspects of a preferred administrator (such as a rejection of a governmental model) but not in others (such as what market segments might be served best by a third party). In the end, not enough of a consensus on a single set of preferred characteristics emerged to state that a “Colorado Approach” exists. However, discussions provide some clear directions as well as a possible starting point. In aggregate a model that satisfied the criteria listed in the “Aspects of a Preferred

Administrator” dialogue box present a solid starting point for discussion.<sup>a</sup>

Of the entities interviewed, all expressed some level of interest in continuing discussions about the possibility of moving toward an alternative administrative model. Most agreed to participate in round-table discussions with other utilities and stakeholders. The Commission may wish to explore with all of the interested parties the most appropriate vehicle for continuing this discussion. The Commission may also wish to have the participants discuss the following issues that may need to be resolved as part of this process.

- Creating additional policies that support DSM efforts;
- Standardizing programs and metrics for evaluation(where possible);

<sup>a</sup> No utility expressed a preference for a third party provider suggesting that they would not voluntarily seek this arrangement. Responses presenting “preferred characteristics” arose out a question asking each utility to speculate about the kind of model that would be most workable to them if they were compelled to enter into such an arrangement. The third party models discussed in this report are an interpolation of the most preferred qualifies across the largest number of discussants.

- Establishing statewide goals or targets for DSM programs; and,
- Developing a shared vision and process for achieving these goals.

Each of these items represents an important step toward developing a coherent plan for delivering consistent and comprehensive DSM in Colorado. In addition, these steps are important building blocks in moving forward with an alternative administrative model if that emerges as the preferred method of administering DSM.

### **Evaluating a Colorado Approach**

That the state's utilities may find a particular approach or set of characteristics potentially more acceptable to them does not ensure the success of that administrator (or that approach). Therefore, NARUC requested that the consultant work with the Regulatory Assistance Project (RAP) to develop a set of criteria for evaluating possible models. Based on discussions with RAP, the consultant integrated their rubric for assessing models for DSM administration. This approach considers the potential models against four criteria: Compatibility with Broader Public Policy Goals, Accountability and Oversight, Administrative Effectiveness and Transition Issues. In addition, the consultant included any salient findings from an update to RAP's 2003 report *Who Should Deliver Ratepayer Funded Energy Efficiency?*.

Despite finding benefits and challenges for the existing utility model of DSM administration, RAP's 2010 update concluded that utility administration of DSM has proven successful historically. According to the report, "The single strongest feature favoring utility implementation of energy efficiency is that the utility has the relationship with the customer (usually a relationship of trust and perhaps familiarity) and is knowledgeable about customer's individual energy use." The report also found that utility administration facilitated the integration of DSM planning with long-term resource planning. While this integration is simplified in the case of utility administration, careful planning of third party administration could lead to successful integration. Clear and sustained regulatory policy, proper incentives and stakeholder support of programs were integral to utilities achieving the highest level of success, proving a clear lesson for Colorado.

Research identified several issues that need to be resolved to ensure that utility administration of DSM is successful. First, RAP recognized potential incompatibility between state policy goals (e.g., carbon reduction or market transformation) and the current utility business model as a primary concern. Second, both RAP and Eto 1998 presented conflicts within the utility (i.e., between their interest in making more profit through increasing sales and the conflicting goal of reducing sales through DSM) as an additional area of concern. Third, some research suggests an additional internal conflict may exist between management who favor supply side and those that favor DSM even within a utility. In that non-utility administrators have a different business model (one not driven by sales of kWh or therms), research suggest that they may be immune to both these internal and external conflicts.

Despite the benefits and challenge to utility administration, in a conversation RAP stated that its latest research confirms that there is no single set of “best practices” that could be applied easily from one state to another. This is consistent with the findings of their 2003 report as well as with findings from other reports that have examined administrative models for DSM. In their 2003 report RAP concluded, “the more robust ratepayer funded efficiency programs are less the result of an administrative structure *per se*, than the clear and consistent commitment of policy makers.”<sup>1</sup> In his 2010 paper *Models for Administering Rate-Payer Funded Energy Efficiency Programs*, Matthew Brown concurs that there is no single “best” model for providing DSM stating, “The structure most appropriate for a state depends largely on the situation of the state[.]” Brown goes on to suggest a set of criteria that can be used to determine if a particular structure would be appropriate for a state including:<sup>2</sup>

- Whether and to what extent political and regulatory support for DSM exists;
- The presence of other policies and structures to support DSM (such as funding and clear goals); and,
- The presence (or absence) of procurement regulation.

Taken together, these findings point to one important lesson for Colorado— the success of any administrative model for DSM will require significant groundwork to determine and establish a clear set of statewide goals and priorities.

## INTRODUCTION

### Background

In its 2009 report *Energy Efficiency and Colorado Utilities: How Far We've Come; How Far We Need to Go* the Colorado Public Utilities Commission identified several factors influencing the development and integration of demand side management in the state. These include the development of energy efficiency programs by the Governor's Energy Office (in response to opportunities presented by the American Recovery and Reinvestment Act), new federal laws (e.g., the federal lumen standard for light bulbs) and improved building efficiency codes. Even as these elements shift the marketplace toward homes that are more efficient and appliances other challenges will continue to present a barrier to achieving robust, cost-effective DSM statewide including:

- A lack of a comprehensive statewide goal or target for energy reduction.
- A variety of levels of commitment to DSM among the state's utilities.
- A patchwork of programs and offerings that is dependent on service territory.

### Scope and Process of the Project

In August 2010, the consultant (Keith Hay) developed an interview and process guide for the COPUC and NARUC. From August through early October the consultant conducted a series of interviews with executives and staff from 12 regulated and unregulated electric service providers including Investor Owned Utilities (IOUs) and municipal suppliers. Conversations also included five of the state's regulated gas providers, the Colorado Association of Municipal Utilities (CAMU), the Colorado Rural Electric Association (CREA) and Tri-State Generation and Transmission. In some cases more than one utility participated in a conversation. The interviews were intended to provide the consultant, NARUC and the COPUC with information about each entity's views regarding the potential for instituting a non-utility, third party administrative model for delivering DSM in Colorado. Included in each interview was a more general discussion of the most appropriate administrative structure to achieve successful development and deployment of robust demand side management statewide. In each case these discussions were guided by a document entitled "Determining a Structure for

Delivering DSM in Colorado: Process Guide and Questions,” which the consultant provided to each utility prior to the first meeting (included here as Appendix II).

**What Counts as DSM?**

The term “demand side management” is not used in a single way among the state’s gas and electric providers.

In the context of this report (and in the discussions with utility executives), DSM was used to refer to all possible energy savings programs with a primary interest in energy savings and a secondary interest in load management.

Respondents used the term in a number of different ways, including referring just to load management, peak shaving or even commercial retrofit programs. Others use it to refer to what might be called energy conservation—changes in customer behavior.

To assess the potential for reaching consensus on a single “Colorado Approach” to an alternative model the consultant presented each utility with the same list of alternatives. However, as an initial starting point—and to avoid challenges specific to a particular type of administrator—the consultant asked each utility about the merits and scope of work for a generic third party administrative structure as outlined in Figure 1. While this served as an initial starting point for all discussions it also represented the key administrative structures and roles common among the different models reviewed.

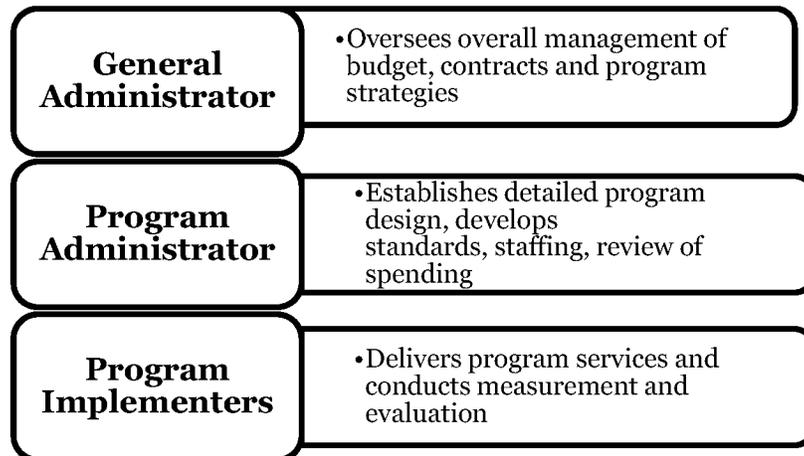
The consultant provided each utility with several additional pieces of information to facilitate the discussion including a list of key aspects of administrative structures, a breakdown of possible ways of segmenting DSM delivery and a list of potential administrative models (adopted from RAP’s 2003 report).

A review of the literature on existing DSM models revealed the following as key aspects of any

models: Structure, Mission, Governance, Budget and Programs. Utilities were asked which of the administrative levels outlined in Figure 1 (e.g., general versus program administrator) should assume which duties (e.g., deciding on the mission or controlling the budget). They were asked to provide details about the role that the utility should

play in deciding how these duties are assigned to a particular level and what role the utility should play in the long-term planning of the administrator.

Figure 1: General Administrative Structure. Source Blumstein et. al. 2003



In addition to being asked about the structure and duties for a third party administrator, the consultant asked each utility about its interest in allowing a third party entity to administer several different segments of Colorado's DSM market including the possibility that a new administrator would be given responsibility for any one of the following DSM programs:

- Fuel – A third party administrator could be given responsibility for the gas and electricity markets, just gas or just electricity.
- Market Segment – A third party administrator could be given responsibility for low-income programs, customer self-direct programs or some other market segment or customer class.
- Strategy – A third party administrator could be given responsibility for DSM programs that seek quantifiable reductions in kWh over a specified period, for market transformation activities or both.

As with the overall models, no consensus about using a third party administrator to delivering DSM in a particular part of the Colorado market emerged. Some parties viewed segmentation by fuel type as the best approach because of the different requirements for gas and electric DSM. This view was not held by all. Several parties

suggested that they might be open to a conversation about allowing a third party to administer low-income DSM programs. These entities typically cited Energy Outreach Colorado (EOC) as providing excellent low-income DSM programs and expressed an interest discussing possibly expanding the work that they are doing with EOC. .

The remainder of this report considers the possibility of developing a non-utility model for delivering demand side management in Colorado. Because no consensus on a model arose, the consultant does not recommend a single model to the Commission. Instead the report examines the potential benefits and challenges of three different options for non-utility administration. The two listed below represent the most plausible alternatives based on the interviews conducted. Whether or not any of these approaches would succeed in Colorado may depend less on the particular administrative model chosen than on the other legislative and regulatory policies put in place to support DSM in the state. The approaches assessed later in the report include the:

- **Utility Governance Model:** Governance remains with the utilities. Each contracts independently with a third party provider to deliver preferred DSM programs.
- **Board Governance Model:** Governance is done by a board composed of participating utilities with the third party administrator responsible for program design and implementation.

In addition to looking at which alternative administrative model best fits Colorado, the Commission may wish to consider which utilities (or utility's customers) might benefit most from the implementation of a multi-utility DSM program administrator.<sup>b</sup> The third approach discussed is the "all in" approach where a third party administers gas or electric DSM for all of the state's utilities. No party preferred this approach. However, it is included here because its history of successful delivery of DSM in other states and its ability to most easily align state policy goals with DSM programming. Despite these benefits, this approach would likely face significant opposition among utility stakeholders and therefore is not recommended.

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<sup>b</sup> The term "multi-utility" is used here so as not to beg the question against whether or not a statewide administrator is, in fact, the most appropriate models for achieving the policy goals in question.

## THE NEED FOR A NON-UTILITY MODEL IN COLORADO

This section of the report answers three questions that may be instrumental in determining if a workable non-utility model for DSM administration could be developed in Colorado:

- What are the existing alternative models?
- What are the benefits of third party administration?
- Would non-utility DSM help Colorado achieve robust energy savings?

### **Existing Models for DSM Administration and Some Lessons for Colorado**

Existing models for DSM administration can provide an important starting point for Colorado as it considers alternative approaches. Initially, based on the research by RAP, four different models were considered. A fifth—a hybrid approach—emerged quickly from discussions with the utilities and staff at the COPUC.<sup>3</sup> Of these five possible approaches to DSM administration, three models were presented to the early interviewees. The governmental model, however, was quickly dropped from that list and was not presented at later meetings. (For a discussion of why, see below.)

Following RAP's lead from its 2003 report the various models were characterized by the entity with primary responsibility for administration of DSM programs. Models presented to the utilities included the following:

- Third party model – A non-governmental, non-utility entity administers DSM programs under a contract, MOU or similar relationship. Funding is provided by utilities. Vermont and Oregon use this model.
- Government model – A new or existing state agency administers DSM programs. New York uses this model.
- Utility Model– Distribution utilities (IOUs, municipal suppliers or rural coops) administer DSM programs. This model most closely approximates the existing structure in Colorado.
- Hybrid model – A combination of entities shares overall responsibility for delivering DSM. Maryland, Illinois and Michigan are all using this approach. Indiana is considering it.

The consultant did not present the utility model as a model for discussion because it is the current paradigm in Colorado; however it was used as a foil in discussion with utilities. Several things are worth noting in regards to discussion about the existing model. First, many of the utilities expressed strongly the view that they are the best entity to deliver DSM programming citing many of the same reasons presented above. For example, they have data on current customer energy use patterns and would be better able to integrate DSM with resource planning. Second, several parties expressed the reservation that a third party might be given incentives for DSM that utilities are not currently receiving and that utilities should be given those opportunities first. Finally, discussions did not include adapting the utility model in response to challenges outlined elsewhere in this report with one exception— a hybrid approach where administration for some parts of utility’s DSM programming would be given to a third party entity.

While assessment of many of these alternative structures in the states that have adopted them is ongoing, Colorado can gain some insights from these processes.<sup>4</sup> For example, Indiana’s investigation into non-utility administration of DSM suggests an important principle—start with changing what is not working but not what is. As the Indiana Regulatory Commission was considering changing the approach to DSM administration from the utility model, they asked The Energy Center of Wisconsin (Energy Center) to undertake a workshop process with the utilities to discuss both the eventual structure of the entity and issues related to the transition. As part of its findings, the Energy Center recommended to the Indiana Commission that it consider a hybrid approach to administering DSM in the state. This approach would build on existing utility experience and expertise by allowing some utilities to maintain administration of some programs or markets sectors. Other less successful programs would be put under third party administration (Stratton and Cowan 2009).

According to Stratton and Cowan, the advantage of this approach is that the state could better achieve its energy efficiency objectives by letting utilities that are doing well delivering DSM continue to run their programs.<sup>5</sup> Allowing these utilities to retain control would ensure short-term targets are met by avoiding hurdles related to

transferring administration from the utility to the third party. That these utilizes appear to be both capable of administering programs and committed to doing so suggested to the authors that the utility (and the state) would achieve long-term energy savings goals as well. In the case where utilities were not achieving the desired savings (whether because of the existence of internal conflicts or a lack of adequate resources), the long-term benefits of the third party were believed to outweigh any potential short-term drop in energy savings.

In suggesting the hybrid model Cowan and Stratton provided an additional suggestion to the Indiana Commission that might be useful to Colorado. Where utilities were running programs alongside a third party administrator the entities should work to create standardized programs.<sup>c</sup> Again, the expressed goal was to facilitate achieving energy savings targets faster. Other reports have suggested that standardization of offerings can make it easier to compare program success statewide or across utilities. It may also lower costs for measurement and verification of programs by allowing utilities to partner on a contract to perform this work.

These points are instructive for Colorado. As is the case in Indiana, some of Colorado's utilities have the experience, expertise and resources necessary to administer successful DSM programs. In addition, as with the working group in Indiana, conversations with executives here revealed an interest in working together to leverage resources, a perception that shared centralized resources could provide benefits (if structured correctly) and a tension between that insight and the desire for flexible, locally controlled programs.

This report recommends dropping the government model from any further consideration. In early discussions utilities expressed a lack of support for this approach. The primary concern was that ratepayer funds for DSM programs could be

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<sup>c</sup> This same process of standardization could be employed where multiple utilities are delivering similar programs. Creating a common set of metrics would allow state policy makers to better assess one utility's program offerings against another's and potentially facilitate statewide analysis and planning of DSM. Having a consistent set of programs and evaluative metrics need not mean having identical programs.

put at risk in a case where the state sought money to meet other budget priorities. Several utilities also suggested that there would be little interest at the legislature for creating a new state entity or for assigning this task to an existing agency in the current fiscal climate.

### **Benefits of Third party Administration**

While research suggests strongly that any actual benefits from a DSM administrative structure will depend on the alignment of the structure with existing factors in the state (e.g., strong political support for DSM), it is possible to suggest some potential benefits that a well-designed approach might have in Colorado.<sup>d</sup> These benefits can be classified in two broad categories: utility-level and state-level (or public policy level) benefits.

An alternative administrative structure may facilitate the implementation of robust DSM programs by eliminating potential conflicts that may exist in the more traditional utility model.<sup>e</sup> RAP and other have identified several barriers that can impede development and deployment of robust DSM within a utility including the following: incompatibility of state and utility goals, conflicting financial motives and a corporate culture that favors supply-side solutions to meeting energy needs with increased efficiency. Since a non-utility DSM administrator's profit does not depend on increasing sales of gas or electricity there is no inherent conflict between its motives to make money and reduce sales (which would be required to reach DSM targets or goals) as there might be with a more traditional utility. Second, because the efficiency provider's only mission is to deliver DSM, there is no conflict with other parts of the organization that may have a different focus or mission (such as building new generation). RAP's 2010 update confirmed the finding of its earlier report that, "The strength of the independent administration model is the ability to focus its mission

#### **Utility Level Benefit**

Closer alignment of mission (achieving all cost effective DSM) to goal (energy savings)

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<sup>d</sup> By well designed we mean that the process for selecting the structure achieves consensus and that the eventual outcome of that process aligns closely with state DSM goals and have broad policy and regulatory support.

<sup>e</sup> It is worth noting that this assumes such conflicts exist within the utility. At least some utilities appear to have moved DSM into a more central role on their business model.

and eliminate conflicting business objectives, therefore achieving a high degree of compatibility with broader public policy goal.” In fact, RAP’s 2010 update sites interviews with decision makers in Hawaii, Oregon and Vermont that all point to the desire to avoid these conflicts as being significant in each state’s decision to move to third party administration.

**State Level Benefit**

Greater compatibility of DSM programs with state goals and simplification of oversight

The potential benefits of third party administration occur at the state or policy level as well as at the level of the individual utility. While Colorado does not have a single statewide goal for energy savings, which might be more easily met

with a single administrator, there are other benefits. The current paradigm where multiple entities play a role in delivering DSM programs can confuse customers, increase costs for programs and undermine achieving robust program penetration and energy savings. Evidence from other states suggests that reducing the number of providers and standardizing offerings can ameliorate these impacts. For example, reducing the number of entities administering DSM programs could reduce administration costs and confusion and increase energy savings. Eliminating redundancies in program administration and sharing the cost among multiple entities should lead to lower cost. Streamlining program development and marketing through fewer administrators should eliminate some of the present confusion resulting from some many parties offering different (though similar) programs or rebates.

Having a non-utility administrator could also increase energy savings statewide by allowing more utilities to offer programs to their customers. By providing program development, outreach and other administrative support, a non-utility DSM administrator would provide smaller utilities that do not have staff dedicated to DSM access to the resources needed to begin offering those programs to their customers. In addition, establishing a third party administrator could help resolve the question of who should implement programs in the portion of the state served by rural electric

cooperatives. However, it would leave unresolved the issue of what entity should take the lead in funding those programs.<sup>f</sup>

### **Would an Alternative DSM Model Help Colorado Achieve Robust Energy Savings?**

There is no single or simple answer to whether a non-utility model will create robust energy savings in Colorado. RAP's analysis shows that well run utility administered programs in states with clear oversight and supporting regulations can be successful. The COPUC 2009 report to the legislature on DSM in Colorado shows mixed results for the regulated gas and electric utilities that are administering their own programs. In aggregate the report appears to show that the utilities are hitting the mark (see COPUC2009A). In fact, the report finds that:

- Approved gas DSM programs are projected to yield approximately \$124.5 million in benefits on costs of \$75.5 million over the lifetime of the DSM investments. Thus, every \$1 invested yields \$1.65 in net economic benefits.
- Xcel's DSM program will provide \$3.38 in benefits for every \$1 invested.<sup>g</sup>

The apparent success demonstrated in these findings masks a series of challenges at the level of the individual utility. On the electricity side, only Xcel had reported the results of its first-year DSM programs. Black Hills did not provide data. On the gas, side only Xcel achieved beyond its required targets. In fact, the report makes it clear that the success of gas DSM in Colorado resulted from Xcel's accomplishments with most of the other utilities struggling to deliver programs.

Several reports suggest strongly that non-utility administration can help overcome potential barriers to developing robust DSM programs, especially at a statewide level. At the same time, research suggests that the particular administrative model for administering DSM programs may be less important than the other factors that support that administrative structure including: (1) having clearly articulated goals, (2) a

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<sup>f</sup> Colorado PUC2009 raised these issues.

<sup>g</sup> This is based on program costs of \$193 million in 2009-2010 projected savings of \$652 million from DSM measures.

framework to support these goals,(3) sufficient oversight and (4) utility commitment to those goals.

## **COLORADO APPROACHES TO THIRD PARTY ADMINISTRATION**

This section outlines possible approaches for delivering demand side management (DSM) in Colorado that are based on discussions with executives from 17 of the state’s largest gas and electric utilities as well as with the Colorado Association of Municipal Utilities, the Colorado Rural Electric Association and Tri-State Generation and Transmission.

The report considers three different models for non-utility administration. The “utility governance model” and the “board governance model” are names given to two different hybrid approaches where responsibility for DSM is divided between the utility and some other entity. The report also considers the adoption an “all-in” approach. Under this approach a single third party administrator would oversee the DSM programs for all of Colorado’s gas and electric utilities. As noted above, none of the utilities interviewed expressed a preference for a single statewide third party administrator. However, the report considers this approach because of the long history of success of this model, its use in other states and its ability to ensure a comprehensive approach to robust DSM goals.

Each of the three models is evaluated against its ability to achieve compatibility with DSM goals, presence of an accountability structure, administrative effectiveness and issues related to the transition.<sup>6</sup>

### **Colorado’s Utility Sector**

This section provides a snapshot of Colorado’s electricity and natural gas supply sectors. While much of this information is readily available in other locations it is presented here to provide context to addressing the potential for developing an alternative model for DSM administration in Colorado. Specifically, would the size of Colorado’s gas or electric sectors draw sufficient interest from high quality third party administrators?

This issue might become more critical if some of the state's largest suppliers continue to administer their own programs, thus reducing the potential size of the particular DSM market. Despite this concern, it is likely that Colorado's gas and electric markets would remain large enough to attract interest from high quality administrators even in the absence of the largest providers. In addition, as suggested below, the number of entities and the concentration of market share in both the gas and electric sectors present both challenges and opportunities for the possibility of developing a third party administrative model in Colorado.

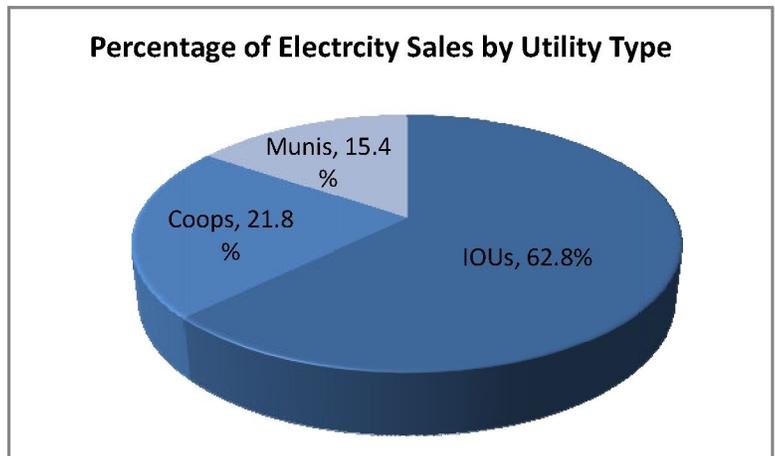


Figure 3: Source- 2010 Colorado Electric Utilities Report

Colorado has a large and varied utility sector. Fifty-seven different utilities provide electricity (Navigant 2010). Nineteen utilities provide natural gas service, though some overlap exists with the electricity providers (Navigant 2010). Colorado regulates just six of these providers. Xcel and Black Hill provide gas and electric service. Figure 3 shows the share of electricity sales provided by these two. The four additional regulated gas only utilities are Atmos, SourceGas, Colorado Natural Gas and Eastern Colorado Utilities. Unregulated municipal providers and rural electric cooperatives serve the remainder of Colorado's markets. In addition to the distribution utilities, Tri-State Generation and Transmission (Tri-State) serves as a wholesale electric provider to 18 of the state's rural electric cooperatives.

Despite the large number of providers, Colorado's electricity and gas markets are highly concentrated. Figure 3 shows the results for the electricity sector. On the gas side, Xcel accounted for 73 percent of the customers and 70 percent of the therms sold in 2009 (Navigant 2010). Even the electricity sector is not as diverse as Figure 3 at first makes it appear. An analysis of the data in the *2010 Colorado Utilities Report* reveals that Colorado Springs Utility accounted for 55.2 percent of the total municipal electricity

sales in the state in 2009. Combined with Fort Collins and Longmont, these three municipal electric suppliers accounted for 77.7 percent of total sales by municipal suppliers that year. The picture among the rural cooperatives is only slightly less concentrated. The top three rural electric cooperatives account for one third of total sales.<sup>7</sup>

Because of this concentration among a handful of gas or electric suppliers, decision makers may wish to consider whether Colorado's gas and electric DSM markets would be large enough to attract substantial interest among third party administrators. To date, an independent analysis of a "minimum market size" necessary to attract multiple bids from highly qualified contractors to administer DSM has not been done in Colorado or elsewhere. However, as a first pass at addressing this issue it may be illustrative to compare electricity sales in Colorado to sales in one of the states that have adopted a non-utility administrative model. While electricity sales do not represent the market potential for DSM, it may at least provide a picture of the relative sizes of that potential. According to the Vermont Public Service Board, in 2005 Vermont had total electric sales of 5,882,483,281 kWh.<sup>8</sup> Since that time sales have declined reaching 5,743,863,352 kWh in 2008. By comparison total sales in Colorado in 2009 were 60,986,928,682 kWh with the municipal and rural electric suppliers accounting for 22,687,137,470 kWh (Navigant 2010). Colorado's electricity sales would still be roughly twice the size of Vermont's in 2005 even if the top three municipal providers and REAs in terms of sales did not participate in a third party administrator.

In addition to market size, the diversity and number of providers in Colorado presents both challenges and opportunities to developing non-utility administration of DSM. Because each of the non-regulated providers is responsible for developing, marketing and implementing its own DSM programs, the DSM efforts in the parts of Colorado served by REAs and municipal providers has been uneven (COPUC 2009). As the COPUC noted in its 2009 report, "What is clear is that this portion of the state's total electric market needs to be incorporated into a comprehensive statewide DSM strategy." This suggestion remains true. In the context of this report, state decision makers may

wish to examine the considerable value both to the state and to these providers of participating in an alternative, non-utility model of administering DSM.

**Increasing Participation**

The following may increase participation by smaller providers:

- Requiring them to meet statewide DSM goal.
- Ensuring a menu of programs that can be adapted to meet local needs.
- Allowing utilities to retain control of their programs and budgets.

Looked at another way, the concentration among a handful of suppliers may ease the process of developing a statewide goal for energy reductions and for creating the most effective administrative model to achieve that goal. On the electric side just six utilities represent half of the non-IOU (i.e., muni and rural cooperative) electricity sales in the state.<sup>9</sup> This suggests that it may be possible to develop a third party model based on these six entities without having to find consensus among all of the non-IOU electricity providers. Based on the interviews conducted, if such a third party

entity existed it is likely that some (if not several) of the smaller providers in the state would seek to participate on a voluntary basis. Several of these entities expressed the view that they might be willing to pay into such an entity in order to gain program experience and staffing that they could develop internally. Because of their current business model many of these smaller providers were more focused on demand response strategies than using assistance from a third party to reduce sales. In addition to ensuring that a third party can provide support for demand response programs, the text box “Increasing Participation” list several other factors that could increase participation by the smaller service providers.

Colorado’s regulated gas sector appears to be moving in this direction. Four of the state’s regulated gas providers have begun working on a consortium under which they pool resource to hire a contractor to help develop programs, help market programs and provide administrative support. At present each utility retains control of its measurement and verification and is responsible for all regulatory filings.

## **DSM Delivery in Colorado**

Colorado currently operates largely under the utility model with the state’s electric and gas utilities having responsibility for administering their own DSM programs. As noted above, for the regulated entities this model has provided mixed results with only Xcel hitting the energy savings targets required under House Bill 07-1037. However, without legislative targets or other policy supports this model has been less clearly successful in parts of the state served by rural cooperatives or municipal suppliers. While some of the unregulated entities are active in pursuing DSM others have done little to develop DSM programs. Because of this uneven commitment to pursuing DSM (and a corresponding inconsistency in spending levels) the state has a patchwork of programs. This patchwork has several potential undesirable results for achieving robust DSM including higher administrative costs when compared with a centralized administration offered under one of the alternative models and creating confusion among customers about their eligibility for programs and rebates.

There is one exception to the utility administration model in Colorado. While Tri-State does not provide DSM programs directly to end-use customers it does provide support to its member cooperatives including assistance with program design, marketing and financial support for augmenting rebates. In this sense Tri-State serves some part of the functions of a third party aggregator for its members.

## **The Challenges**

Discussions with utilities revealed two sets of challenges facing any attempt to develop an alternative administrative structure for delivering DSM in Colorado. The first set of challenges arises from the number and number of types of gas and electric providers in the state. These challenges are independent of any particular administrative model and would likely shape any potential model.

### **Key Finding**

Most utilities expressed concern about facing new, increased or unforeseen regulatory burdens that could reduce the cost effectiveness of having a third party administrator.

Because of this, we call these “global” challenges. “Local” challenges then are defined as

hurdles faced by a particular model. In the absence of a candidate structure, these (local challenges?) will be hard to identify.

Based on the interviews conducted with the utilities, creating a non-utility entity to administer DSM would face the following global challenges:

- Reaching consensus on goals and process given the large number of participants.
- Ensuring the participation of municipal and rural electric providers.
- Balancing a strong commitment to local control with the benefits of centralized administration.<sup>h</sup>
- Meeting local needs while providing enough program standardization to achieve lower programs costs ease of implementation and potential to share measurement and verification.

The regulated and non-regulated entities each identified additional sets of concerns. For regulated entities, the most prevalent set of concerns related to issues surrounding the transition from utility administration of DSM to the new administrator including delays in achieving DSM goals, integrating DSM planning with resource planning, compliance with state statute and additional costs associated with DSM programming. Unregulated entities feared losing local control under a statewide regime. Both groups expressed concerns about the potential for additional regulatory or other reporting requirements.

Brown (Brown 2010) lists one additional condition for the success of DSM administrative programs that may be especially relevant to this discussion, the availability of third party entities that can assume administration duties. His review of states that have moved to non-utility DSM administration suggests that those states that have existing third party entities are more quickly (and more successfully) able to make this transition. With the exception of Energy Outreach Colorado, which serves part of the low-income market segment in the state, Colorado lacks a non-utility, non-governmental entity that could quickly ramp up administration of the vast range of DSM

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<sup>h</sup> This desire for local control would likely manifest itself as opposition to legislation or to any attempt to have oversight by the PUC of not already regulated entities.

programs being offered by the utilities in Colorado.<sup>10</sup> As a result, Colorado may face a delay in achieving any statewide DSM goals as a new entity is created, develops programs and establishes a market presence.

Discussions with utility executives revealed a tension between a desire to have support in developing and administering programs and ensuring sufficient flexibility to meet local needs (both utility and customer). Having a statewide administrator is one approach to resolving this tension. The collaborative effort being put forward by the regulated natural gas providers is another. Finally, it may be possible to release some of this tension by creating a core set of programs that are provided across interested utility service areas.<sup>11</sup>

### **Several Roads Ahead**

No single consensus about the road ahead emerged from discussion with the state's utilities. However, in aggregate, the responses from the utilities suggested that if a third party administrator were to be used then the following list of characteristics would be preferable:

- **Structure:** An independent, non-governmental third party administrator
- **Mission:** Utilities collectively determine the mission and programs
- **Governance:** Participating utilities establish a board
- **Budget:** Individual utilities retain control of setting their DSM budgets
- **Programs:** Each utility contracts for specific programs that will benefit their customers

Therefore, as Colorado explores the potential for developing alternatives to utility administered DSM programs they may wish to look further at each of the two hybrid models presented here. Each of these captures some aspects of this list and presents a picture of how the preferences for a non-utility administrator might look. As noted above, the “all-in” option was not preferred by any of the utilities but is considered here because of its success and the potential to align statewide energy savings targets with the mission of a single organization and to facilitate oversight in hitting those targets.

**Criteria for Evaluation**

While various criteria for evaluating the efficacy of different approaches to administering DSM exist, this report uses the following:<sup>12</sup>

- Compatibility with broader public policy goals
- Accountability and oversight
- Administrative effectiveness
- Transition issues

Under the rubric of potential considerations, Table 1 provides some examples of how these criteria might be used to compare potential models for DSM administration, including the existing model in Colorado (i.e., the utility model) as well alternative models. The considerations suggested are based on conversations between the consultant and utilities in the state but are meant to be illustrative of the kinds of objectives that decisions makers might wish to achieve under each of the criteria.

Table 1. Possible Considerations in Selecting an Administrative Model<sup>13</sup>

Evaluative Criteria	Possible Considerations
Compatibility with broader policy goals	<ul style="list-style-type: none"> <li>• Supports policy goals (e.g., CO climate action plan)</li> <li>• Balances local control with program effectiveness</li> </ul>
Accountability and oversight	<ul style="list-style-type: none"> <li>• Assures accountability for hitting program goals</li> <li>• Provides transparency in program funding and spending</li> </ul>
Administrative effectiveness	<ul style="list-style-type: none"> <li>• Reduces administrative cost and burdens—including regulatory reporting—relative to utility administration</li> <li>• Attracts highly qualified administrator and personnel</li> </ul>
Transition issues	<ul style="list-style-type: none"> <li>• Does not create a barrier to continued deployment of DSM in the state.</li> <li>• Time required to build a market presence.</li> </ul>

### *The “All In” Approach*

This is the simplest approach to describe and may be the most administratively simple as well. Under this model responsibility for all of Colorado’s gas or electric DSM rests with a single administrative entity. Based on interviews, the most likely scenario is that this would have to be an independent, non-profit entity with funding provided directly from utilities to the administrator.

The “all-in” approach has several potential benefits when evaluated against the criteria in Table 1. This approach also has several drawbacks, including a potential to slow down the deployment of DSM during the “handoff period” when responsibility for administration of existing DSM programs is shifted from utilities to the third party. It is also unclear that a third party administrator would achieve some of the possible considerations listed under “Administrator effectiveness” in Table 1.

Despite these potential drawbacks, this approach might be considered especially strong in its ability to align DSM with broader policy goals and to achieve clear oversight. First, a single statewide administrator would allow for the most direct alignment of state policy goals with the mission of the organization (a key factor in successfully hitting DSM targets). Second, it should be simpler to provide oversight and accountability for one entity delivering DSM than attempting to ensure program success for the large number of gas and electric providers currently running DSM programs in Colorado. This, however, depends on several assumptions including what entity has oversight for the administrator. While the simplest approach may be to put the administrator under the jurisdiction of the Colorado PUC, this would face significant challenge from the providers that are currently not regulated by the COPUC. If the PUC does not have oversight then decision makers may wish to consider what other mechanism might best achieve this goal. Based on a review of literature other possibilities might include using an independent board composed of participating utilities, including advocates on that board or using another entity to ensure that the administrator is meeting its goals. Finally, since one entity would be designing and delivering programs, it should be able

to do this at a lower cost than all of Colorado's utilities taken as a whole, especially when taking in to account the cost if each of the smaller utilities attempted to undertake the same set of processes. Despite all of these potential benefits, it is unclear that a significant number of parties would agree to this approach.

In addition, as already noted, the Commission may wish to consider the merits of including all of the state's regulated entities under a new, third party administrator. At least some of Colorado's electric and gas providers have the expertise and the resources to develop and consistently deliver robust programs. To the extent that these entities are under Commission jurisdiction clear oversight exists as well. In this regard, a hybrid model may provide a more appropriate roadmap for the state.

### *Hybrid Models*

There is no single hybrid approach; they are likely to be as varied as the state's needs that they are created to meet. Generically, this approach combines utility administration of DSM with one of the alternative models listed above (e.g., state or non-profit administration). Because this approach can take many different forms, it is not possible to evaluate it generically against the criteria list above. However, some variant of this shared responsibility may present the best option for moving forward with an alternative model of DSM administration in Colorado. This section of the report suggests two different hybrid approaches.

Several aspects of Colorado's electric and gas markets suggest that a hybrid approach may be most appropriate for Colorado. First, some of the state's providers are successfully implementing DSM programs. Second, many of the providers that are currently doing well with DSM programs are continuing to address any internal conflicts that would inhibit continued deployment of DSM programs.<sup>i</sup> Research suggests that in these cases it may be best for utilities to continue to administer their programs, especially where clear oversight exists in addition to these conditions. However, several

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<sup>i</sup> In some cases this resolution may be the result of outside forces such as responding to a climate action plan.

additional factors that suggest non-utility administration may achieve better results for other providers. At present, no single statewide goal for energy savings (or demand reduction) exists. Given the diversity of Colorado's gas and electric suppliers, it is unclear that a single goal would be achievable suggesting that it may not be possible to align statewide DSM programming with one goal. Since some of the municipal and rural electric providers share several characteristics (such as a lack of ability to dedicate significant staffing to creating or running DSM programs), it maybe both sensible and possible to find a single administrative approach that best suits their needs. The consortium currently being used by Atmos, SourceGas, Colorado Natural gas and Eastern suggests that such a model may exist for others.

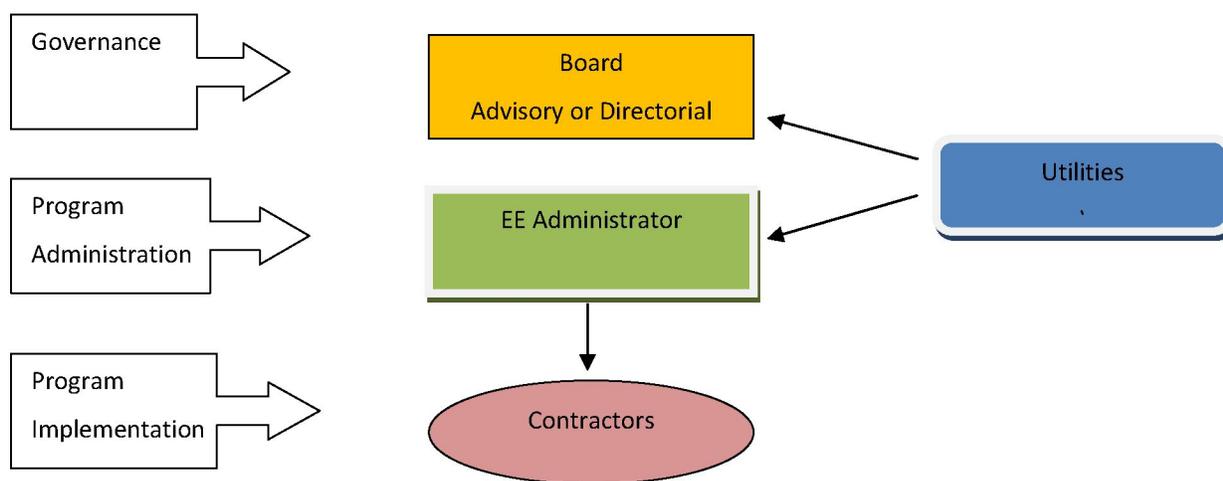
It is worth noting that several states (see above for a list of those states) have moved in the direction of hybrid approaches to administering DSM since RAP issued its 2003 report assessing DSM models in the states. Research suggests that in general states have moved in this direction to find the most appropriate balance among the four criteria presented in Table 1. For example, a report by the Energy Center of Wisconsin for the Indiana Public Utilities Commission suggested that the state could better achieve its energy efficiency objectives by letting utilities that are doing well delivering DSM continue to run their programs. Allowing these utilities to retain control would ensure short-term targets are met by avoiding hurdles related to transferring administration from the utility to the third party. That these utilizes appear to be both capable of administering programs and committed to doing so suggested that they (and the state) would achieve long-term goals as well. In the case where utilities were not achieving the desired savings (whether because of the existence of internal conflicts or a lack of adequate resources), the long-term benefits of third party administration outweighed any potential short-term drop in savings.

### **Board Governance Model**

The "Board Governance" model is considered a hybrid approach because it is envisioned that those suppliers that are currently running programs successfully would not be

required to participate in the structure. Under this approach responsibility for creating, marketing and delivering DSM programs in Colorado would be done by some third party administrator (with a non-profit being the most often preferred alternative). Oversight of that entity would be done by a board. Utilities were split over whether that board should include non-utility stakeholders or be composed of just the utilities providing financial support for the administrator.

### Board Governance Model

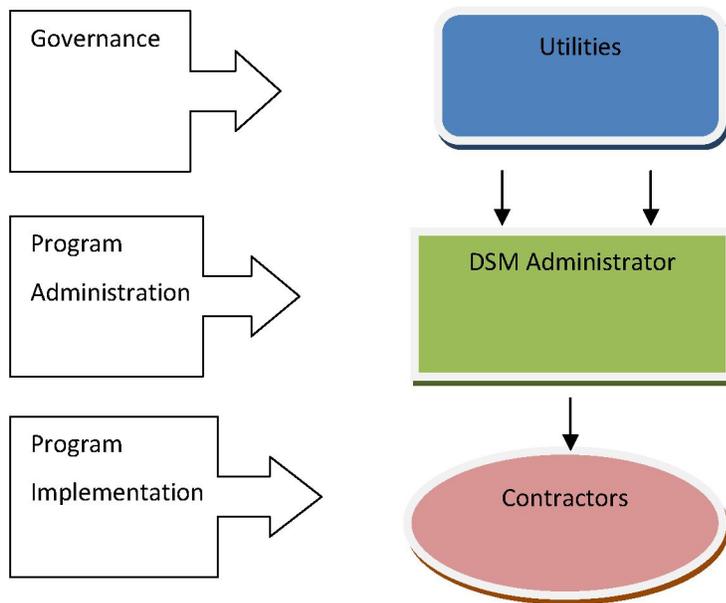


It is reasonable to assume that the board would work to align the DSM programs with state goals if all (or even many) of the utilities in the state had to comply with some energy savings target. The likelihood of this could be increased by adding efficiency advocates and other stakeholders to the board. In the absence of a statewide goal and a requirement for utilities to participate, the value of this model would depend on the nature and enforceability of the agreement (contract or MOU) creating the structure. Therefore, it may be desirable to have non-utility stakeholders participate in this process.

## Utility Governance Model

It is worth reconsidering whether the voluntary, collaborative approach being used by the gas utilities could provide a model for a third party administrator. Under this

### Utility Governance Model



approach, labeled the “Utility Governance” model, administration for DSM programs (including program development and marketing) would be done by a third party provider. As with the “board” model, this is envisioned as a hybrid approach because suppliers that are currently running programs successfully would not be required to participate in the structure. However, unlike a true third party model, utilities would retain

oversight of their own DSM portfolios and budgets and would contract separately with the administrator for certain programs of its choosing. While not expressly considered by the utilities, Colorado could facilitate this model by requiring a core set of programs to be offered by all utilities and requiring the utilities to use the third party administrator to oversee those programs.

An initial problem with the voluntary or collaborative approach is that it is unclear that enough utilities, especially enough of the larger utilities, would be willing to participate to make it viable. At least some of them already have staff dedicated to DSM and several expressed the view that they are able to create, manage and direct these programs as well as any outside entity could. In addition, the gas utilities that are already using this model moved in this direction because of a legislatively mandated energy reduction

target and the PUC rules set in place to ensure the utilities meet these. Prior to this legislation few of these organizations had any substantial DSM program and they were not working together. This suggests that a “voluntary” approach might be possible if utilities not currently subject to legislation were required to meet these existing goals.

## **FINAL ANALYSIS**

In Colorado, achieving the goal of delivering consistent, comprehensive and robust demand side management need not depend on having a single entity administer DSM for all of the gas and electric utilities in the state. The evidence suggests that successful DSM programming depends on having clearly articulated goals, a framework to support these goals and sufficient oversight (Stratton and Cowan 2009, Brown 2010). Largely these conditions exist for Colorado’s regulated gas and electric utilities. Therefore, it may be desirable to find an approach to DSM in Colorado that allows those regulated entities that have the resources and are successfully administering programs to continue to run their own programs. At the same time efforts should be made to find a third party administrator model that is sensitive to the needs and interests of the rural electric cooperatives and municipal suppliers. Regulated entities should be allowed to opt-in to this administration if they believe they will benefit from it. With fewer entities and more resources available to the smaller suppliers, it may be possible to develop a consistent set of goals and policies that would allow Colorado to move ahead with a robust, statewide DSM program.

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## **APPENDIX I: RESULTS OF INTERVIEWS WITH UTILITY EXECUTIVES**

### **Introduction**

#### Background and Process

This section provides original answers to questions asked during interviews conducted with utility executives to determine the possibility of developing a third party model for delivering demand side management (DSM) in Colorado. Discussions were held with executives from both regulated and unregulated gas and electric utilities as well as with outside experts. While the information and details have not been altered in respect to the information or views presented, the responses have had any characteristics that might identify a utility removed. This anonymity was provided to the utilities to encourage them to speak freely about factors influencing the current delivery of DSM in Colorado and factors that could be important to any alternative administrative structures.

As explained in the interview guide *Determining a Structure for Delivering DSM in Colorado* (see Appendix II), these meetings sought to:

- Identify barriers within the existing DSM structures in the state;
- Evaluate if existing barriers were internal (i.e., with the utility) or external (e.g., an issues in the market, a result of consumer preferences or the outcome of existing laws and regulations);
- Assess the level of interest in an alternative model for DSM program administration in Colorado; and,
- Determine the structure and characteristics of the third party DSM model that would be most achievable and successful in Colorado.

In addition to providing insights into achieving these goals, the information below follows the outline of the questions asked in the interview guide. This was done to assist in providing anonymity to the utilities and to make it easier for readers to find information related to a particular topic. The guide divided the discussion into two

broad areas: current demand side management and determining a structure for delivering DSM in Colorado. In many cases, the discussions did not follow neatly the questions provided in the guide. To account for this fact, each section has a list of “raw” inputs that provides details related to each of the broader discussion areas (e.g., issues related to current DSM in Colorado). Following each of the sections of more general observations is a section listing specific questions and answers.

### List of Participating Entities and Experts

In the electricity sector, participating entities included Xcel, Black Hills Corporation and the Colorado Rural Electric Association. In addition, interviews were conducted with the following municipal electric suppliers: the Colorado Association of Municipal Utilities, Municipal Energy Agency of Nebraska (MEAN), Fort Morgan, Colorado Springs Utility, Loveland, Las Animas, Burlington, Longmont, Fort Collins, Platte River Power Authority, Arkansas River Power Authority (ARPA). An interview was conducted Tri-State Generation & Transmission as well.

In the gas sector, participating utilities included SourceGas, Atmos Energy and Colorado Natural Gas. Meetings with Black Hills and Xcel included discussions of alternative DSM structures for gas as well. I did not discuss gas DSM with Colorado Springs or Fort Collins utilities though it is the recommendation of the consultant that they should be included in any future discussions of gas DSM programs or administration.

## **Responses Provided by Colorado Utilities**

### Current Demand side Management

The attitude of staff and executives within a utility toward DSM has been recognized as one of the factors in determining the success of DSM programs.<sup>14</sup> The questions in this section were written to provide the consultant, the PUC and NARUC with a high-level picture of the utility’s DSM program and the role that it plays within the organization. They were also intended to provide these groups with a view of how the utility integrates its DSM program goals of into its resource and business plans.

**Question:** *How do you use the term demand side management?*

The most immediate observation that arose from this initial question was the diversity of ways utilities use the term “demand side management”. From my discussion with staff at the Colorado PUC, they use DSM to refer to traditional customer-side energy efficiency programs. In only one instance did a utility seem to share the board definition used by the Commission? According to the other utilities I spoke with, DSM was used in the following ways:

- Load control strategies
- Peak shaving
- Commercial retrofit programming
- Rate structures that encourage changes in energy use (e.g., time of use rate)

**Question:** *What is the organizational view of the role of DSM? For example, it is seen as part of the organizational mission or as a requirement? Is this view shared by the board? By executives? By staff?*

In response to inquiries about the role of DSM in the corporate culture and existing business model, I received a range of answers including the following:

- We have over a 20 year history of delivering DSM and staff dedicated to it. It is part of our mission
- We are working to comply with state law. We understand the environmental and political realities in the state, but DSM is also an important part of what we want to deliver to our customers.
- Energy efficiency is a core value. We have expertise to deliver programs and the passion to do them. They are part of who we are.
- Efficiency programs are important to what we offer to our customers. We are the logical place for them to come to.
- It is an important part of our mission and how we relate to our customers.
- DSM enhances our relationships to our customers and we are concerned that we would lose that relationship if we give up DSM programming.
- As a result of the legislation, we have hired additional staff to meet our requirements.
- We are interested in DSM because our customers want it, but we do not have the resource for a large staff.
- We have not accepted DSM enough and as a result we do not have staff dedicated to running DSM programs.
- We have a strong brand and DSM is part of that. Giving up DSM would dilute that.

- We do not have a staff position dedicated to DSM because it would eat up too much of the overall DSM budget.
- We have only been doing DSM for about 18 months.
- We received guidance from our local community and respond to their needs and interest.
- Energy efficiency may take a backseat to the financial interest in building new generation.
- Energy efficiency is ingrained in our culture. We have been doing it for 25 years. It is part of what we provide to our customers to help keep energy costs low.
- We began seeing energy efficiency as a mandate we have to comply with. However, that has shifted. In a new rate case (in other state this utilities serves), we have filed an energy efficiency plan (which is not required by that state).

**Question:** *Are there any internal barriers (i.e., within the utility) to delivering energy efficiency in target markets (e.g., residential, commercial, industrial)? For a particular fuel?*

“No,” was the prevailing response to this question. After repeated asking, most respondents replied that the economy had made it difficult to hit targets for DSM programs. In some cases utilities also identified not being able to recovery program costs in rates (or in some other way) as a significant barrier to developing more DSM.

- How do you cost-effectively implement efficiency in small (sparsely populated) jurisdictions where there is low customer density?
- Large industrial loads (in our service area) are thought of as a resource base for local income.
- The biggest barriers are financial. If we are able remove the cost disincentives to do more efficiency we can go harder at delivering more efficiency.
- Internally we are looking for more predictability (in terms of rates and requirements) and a limit to the financial risk in doing efficiency. If you remove these two barriers, we can move forward with more efficiency programs.
- We do not have a big enough DSM budget for a sole DSM person. Hiring someone could take 30% of the total program budget.
- One of the benefits to a third party provider is that they can deliver the same programs across the state, but in states with large rural areas like Colorado this may not be the case. In rural markets the saturation of appliances is different. There is also a difference in how people make decisions in rural markets. They want to buy local so the approach to selling efficiency will be different.

- There are three external barriers to delivering DSM to customers: education and awareness, capital and the issues involved with leasing versus owning. We need to make sure that customers have the information that they need to make a decision (and that they will use that information when they are making the decision) or we have to insert ourselves in to the process. It can be a challenge on the customer side to make sure that they have access to the capital that they need to do projects. (This was said in reference to all customer classes.) The issues of leasing versus owning come in the industrial as well as the residential sectors.
- There is no consistent demand for services (and this is not because of the economy).
- We are struggling with our DSM plan. We are not getting uptake or interest from customers. At least some of this is the result of the economy, but we do not think that all of it is. We are doing measurement, evaluation and verification on the programs right now to see if there are any conclusions that we can draw.
- We support DSM, but it is only a small portion of a couple of people's jobs. It is a resource issue in terms of administration and program development.

**Question:** *Are you currently coordinating program development or deployment with other utilities or other entities?*

- We are working with the Governors' Energy Office (GEO). The relationship has been good and has been working. GEO is augmenting our efforts.
- We are working with Energy Outreach Colorado (EOC) and they are providing effective, cost-efficient programs.
- We have been working with GEO, but there has been a problem with consistency in delivering the programs. They seem to be overworked and lacking in focus. We are also concerned that if we turned over our DSM programs to GEO that its mission can change with a new governor.
- GEO approached us about working with us but there was strong concern about working with them and losing control of our programs.
- We have been working with EOC and GEO. EOC is the better partner. They are more proactive about getting projects established and completed. They are working to build new programs. We have no problem spending our low-income budget with EOC. GEO, however, has failed to hit its targets and deliver on its contracts.

**Question:** *Broadly, we might assume at least two potential goals for DSM programs. Resource acquisition focuses on achieving quantified, short-term reductions in energy demand. Market transformation focuses on the long-term removal of barriers to*

*customer investments in efficiency. What role, if any, does each of these goals play in your current DSM program?*

In most cases, respondents did not recognize this distinction as existing within their DSM programs. In some cases this resulted from programs being focused only on quantifiable (i.e., resource) energy reductions such as rebates. In other cases, utilities undertook more traditional market transformation activities (e.g., trade ally education) but since the costs for these programs were not in the DSM budget the utility did not count them as part of the DSM program.

- While we have a budget for marketing and promotion, about 80 to 90 percent of our DSM budget goes to incentives.

### Determining a Structure for Delivering DSM in Colorado

These questions focused on issues related to establishing a third party administration model for DSM in Colorado including the following areas: (1) the mission and governance of any new structure, (2) funding and finance, (3) the relationship of the new administrative structure to existing entities and processes such as utilities, the PUC, the legislature and the rule making process and (4) transitioning to the new structure.

#### *Mission and Governance*

Questions and discussion in this section focused on the structures of a possible third party entity. As suggested above, for a list of the questions asked during the interviews see

*Determining a Structure for Delivering DSM in Colorado* (Appendix II).

- The mission (or goal) for a third party DSM administrator should be to deliver cost-effective DSM. Utilities will need to have a big say in developing those goals.
- Any third party entity would have to be a not-for-profit. We cannot take move some of our funding to some other for-profit entity.
- Any third party administrator has to guarantee resources for rural areas (including taking account of the cost differential for serving these less densely populated regions). There needs to be equity.
- Any new third party administrator has to be statewide if it is a matter of policy.
- A third party administrator cannot be part of the state government. The state will not commit the resources to doing it.
- If you move the implementation of efficiency program away from the utilities then you have to take the requirement to hit mandates or goals away from the utilities as well.

- If you are going to take the money from utilities, the new administrator has to have a financial incentive.
- If there is a board, it makes sense to have participating utilities on the board directing the mission.
- A possible model is one where an outside entity compliments or supports what we are delivering in our DSM programs rather than takes them over.
- Any new administrative entity would have to do at least two things: be a benefit to ratepayers and reduce our regulatory burden.
- We need to look at the overall goal (or mission). If it is to achieve statewide reductions without regard to service territory then any system or service charge is a tax on ratepayers. If we are doing that then why not have a statewide energy tax and shift all the burdens to the new entity from the existing rate-regulated entities?
- If the reason to move forward toward an overall state goal of reducing energy demand, we are not achieving this because only the rate regulated entities are moving in that direction. It is hard to envision achieving a state goal with a third party entity if the non-regulated entities are not included.
- We have concerns about using a government entity for third party administration because of a fear of program funds being raided.
- We are interested in a possible third party entity because if it could provide consistency among programs, terms and expectations. There is less of a concern about program leakage.
- There will be least resistance to a model that we are comfortable with. Something like Vermont could be acceptable.
- Utilities need to keep control of the budgets, the mission and the kWh reductions, but we would be open to contracting out for services to hit those goals.
- There needs to be a long-term commitment (including financial) on behalf of the utilities as well as a long-term commitment from the state.
- We would like to see funding at a percent of utility sales and where utilities have separate contracts (including funding levels and reduction goals) with the third party.
- Using an energy efficiency utility in Colorado will not happen because Xcel will not be interested.
- An energy efficiency utility makes some sense if it is doing both gas and electric. However, if a third party administrator is doing gas only then it might not make sense to create a new utility.

- Any third party entity needs to provide a cafeteria-style plan where each utility can take programs A or B or C where they think that they can provide benefit to their customers.

**Question:** *Are you interested in a third party model? Would the choice of particular administrative model influence your level of interest?*

- We are very interested.
- We have no interest in a third party model.
- We are willing to participate and would be willing to cut the check.
- We have a general opposition to third party administration, but we might be willing to consider it if we can see a cost benefit to us and our customers.
- There is something to an E-Service type model. It should be membership or subscription based where we would get either stock or semi-customized information on programs.
- Any third party has to be a non-for-profit funded by some type of voluntary subscription fee (or potentially funded through energy savings).
- It has to be opt-in.
- Any attempt to introduce a rate-regulated energy efficiency utility will probably face resistance.
- We are not interested in a third party model. We have the history and resource to deliver these programs.
- There is no model that we can see that would benefit us.
- We might be interested in an aggregator type model.
- We would be interested in a consortium where interested parties could pool their resources to deliver similar programs where it makes sense.
- There would be strong resistance to a model that uses GEO as the third party administrator.

**Question:** *To which market segments (e.g., residential versus commercial or industrial) should this organization be responsible for delivering DSM?*

- What is the value to the utility of peeling off pieces of the DSM program? This does not change our regulatory burden on the overall DSM program.
- Maybe. We are looking at ways of lowering the administrative costs for program for low-income individuals.
- There is no natural reason for us to give up delivering low-income programs. We want to have a comprehensive set of offerings and this is part of that.
- We have possible interest in using a third party to administer and deliver some programs and that could include our low-income programs.

### *Funding and Finance*

- There would have to be strong financial incentives. This would have to be more than recovery for lost revenue; it would have to include lost sales plus a percentage or mechanism like phantom rates.
- We are concerned that the startup costs would be prohibitive.
- It would be a mistake to give incentives to the new entity that you were not giving to existing utilities for their programs.
- A systems benefits charge is really an energy tax. In that case, should this come from the utilities or from the state?
- There needs to be clear financial oversight and this cannot come from the state.
- It needs to be affordable and there need to be incentives.
- We would want rate and performance incentives.
- We need to be able to cover our lost margins.
- We would like to be able to use future test years to determine the level of recovery for the third party administrator.

***Question:*** *How should funds be disbursed to achieve the mission and goals? What barriers do you foresee for this method of disbursement?*

- We need to ensure that we received one dollar in programming for every dollar that we put in. (The respondent recognized that they would have to pay a percentage of the administrative costs.)
- How is this going to be paid for? We are going to reject it if funding goes out and does not come back dollar-for-dollar.
- There has to be a return on investment to each utility.
- We have concerns about how the programs will be funded. If we are going to support something like this, we need to be assured a fair benefit (in terms of programs) and fair funding (although this does not have to mean the same funding).
- We do not see the need for all our money to be spent on our programs. We want to make sure that there is total resource cost return equal to our investment. Anything above the TRC could be put in to a state pot to deliver programs in other areas.

***Question:*** *Who or what entity should be responsible for ensuring appropriate use of funds and that program goals are achieved? What oversight mechanism(s) should be put in place?*

- Any funding or finance should be in a contractual relationship that avoids any state control of funding.

- The Commission should set the budget for the third party entity as a percent of sales revenue from each of the utilities. However, it should not be something that can be raised without oversight. We would be open to keeping the budget as long as there is some ability to protect against raise in the percentage cost or in the rate built in to the contract.

### *Relationships to Existing Structures*

These questions are intended to uncover how interviewees conceived of the possible relationships of a new third party entity to existing market, political and regulatory structures in the state. Of the total number of 17 interviewees, only five are under the jurisdiction of the Colorado Public Utilities Commission.

- Any third party entity should have to file its own DSM plan with the Commission. We do not want to have to do any more than file a report on our expenses related to that plan. If we have to do much more, this would be an increase in our regulatory burden and raise our program costs.

**Question:** *How should the model for a new administrator be chosen? What process should be used for selecting the agency or entity (e.g., administrative determination, legislative action, competitive bidding)? What role do you see for the PUC? For the legislature?*

- It has to be voluntary.
- We trust the Commission to do what is right by the utilities.
- There needs to be a stakeholder process of the interested utilities.
- We are not sure if there is a non-legislative answer to this if it is to be statewide. We would also need to address the existing mandates.
- It would be easier to change rules at the PUC than at the legislature. We would rather see a PUC rulemaking process on this.
- It has to be a democratic, participatory process.

**Question:** *What role do you foresee or would you want for your utility in deciding on the goals? The mission? The organizational structure?*

- Each utility needs to be able to decide what is appropriate in its area.
- If there is a board, it needs to ensure a shared voice for all the utilities. If the board is only determined by load or customer, count then it will be what Xcel wants.
- We would like to see funding at a percent of utility sales and where utilities have separate contracts (including funding levels and reduction goals) with the third party.

**Question:** *What role should utilities, regulators or other stakeholders play in determining program design, how the programs are implemented and how they are measured and verified?*

- If there is a third party, it needs to be responsible for hitting the legislative mandates. We cannot give up control of the programs and still have responsibility for the mandates.
- You have to let existing utilities bid in to the programs to deliver them.
- The utility has to oversight although we could accept that oversight at a higher level (like a board).

### *Transitioning to a new structure*

In all but a couple of interviews, we were not able to discuss the questions of how Colorado utilities could move from the existing model where they are delivering DSM programs to a third party administrator model. In those interviews where we did touch on some of these questions, utilities generally expressed a preference for a voluntary, stakeholder based process.

- We have concerns about transitioning to a new model. Would utilities be responsible for delivering programs while the new administrative structure is being put in place? Would we have to pay for two sets of programs? Would we be responsible for hitting our legislatively mandated targets even as we are handing off those requirements?
- How do we handle the start-up costs? Would we be required to cover those initial costs?

## **APPENDIX II: RESULTS OF INTERVIEWS WITH UTILITY EXECUTIVES DETERMINING A STRUCTURE FOR DELIVERING DSM IN COLORADO**

### **Process Guide and Questions**

Prepared by Keith Hay for the Colorado Public Utilities Commission

#### **Purpose and Outline of the Process**

This process is intended to engage Colorado’s utilities (investor owned, municipally owned and cooperatives) in a discussion about the most appropriate administrative structure to achieve successful development and deployment of robust demand side management (DSM) in the state. The following questions are intended to provide a starting point for identifying the most effective model for Colorado as well as the benefits and challenges of that model.

The questions are divided into two broad areas. The first section, “Current Demand Side Management” is intended to provide the consultant (and thus the Commission) with a high-level picture of the utility’s current view of DSM programming including how DSM fits in to their overall mission and business model and the role that DSM is expected to play going forward. The second section, “Determining a Structure for Delivering DSM in Colorado” provides an opportunity to discuss how DSM is being delivered and the possible advantages and disadvantages of an alternative model of DSM delivery. To help focus the discussion on some of the key issues that might be expected to emerge, this section is further divided into several additional subheadings including Mission and Governance, Funding and Financing, and Relationships. Time permitting, there is an additional section related to issues that could arise if Colorado were to move from the current model to an alternative structure.

#### **Introduction**

In *Energy Efficiency and Colorado Utilities: How Far We’ve Come; How Far We Need to Go* the Colorado Public Utilities Commission (PUC) identified several changes that are impacting the development and integration of demand side management statewide

in Colorado, including funds from the American Recovery and Reinvestment Act, new laws (e.g., the federal statute phasing out of the use of existing incandescent bulbs) and improved building efficiency codes. Even as these elements shift the marketplace toward more efficient homes and appliances, other challenges remain for integrating robust, cost-effective DSM.

*Who Should Deliver Ratepayer Funded Energy Efficiency?*, a 2003 report by the Regulatory Assistance Project (RAP), identified several additional barriers to DSM program development and delivery. At the level of the individual utility, these can include conflicting financial motives or a corporate culture that favors supply-side solutions to meeting energy needs with increased efficiency. At the state level, multi-party delivery of DSM programs may lead to a lack of a coordinated approach that can be confusing to customers (or in the case of REAs to members) and create redundancies in program administration. While the RAP report examined programs in other states, similar challenges may exist here. This process is intended to provide the consultant and the PUC with a clear picture of whether and to what extent these challenges are present in Colorado's utilities or in the existing models of DSM delivery.

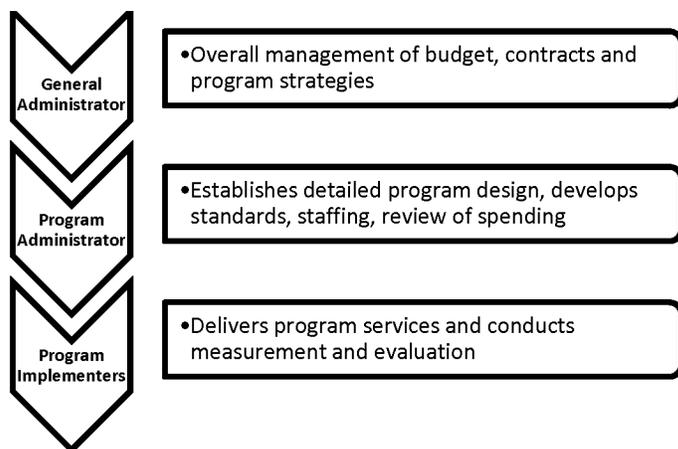
While identifying issues facing traditional models of DSM delivery, the RAP report also considered several alternative administrative structures that could overcome some of these barriers. During this process the Colorado PUC is interested primarily in understanding the utility's interest in or concerns about two of these models: a third party entity and governmental administration.

- **Third party entity** – Administration of rate-payer funded energy efficiency programs is given to an entity with a single mission— to deliver DSM. This could be a regulated energy efficiency utility, a non-profit entity or perhaps some other model. In each case the administrator can use its own staff or contract with outside agencies to perform necessary functions including program development and measurement and verification. As is done in Vermont, a separate fiscal agent may be used to administer program funds.
- **Governmental or quasi-governmental administration** (e.g., NYSERDA) – Administration for energy efficiency programs is done by either a new or

existing state agency. As in the above case, the entity can use its own staff or work with contractors to meet its obligations.

These are not the only possible models for DSM delivery. In addition to the two models just outlined, RAP considered administration of DSM programs by a vertically integrated utility (which is the existing case in much of Colorado’s electricity sector) or by a designated distribution entity. Other hybrid models that combine aspects of these four approaches may also be possible though the RAP report did not identify any. Because this process is designed to assess the ability of the current systems to deliver DSM and the potential for deployment of an alternative structure, initial focus will be placed on established alternate models—a third party entity and governmental administration.

The following diagram provides an outline of one possible generic administrative structure. In this case there are three levels (General Administrator, Program Administrator and Program Implementer) that each serve different roles. Some states that are using third party or state agency models have reduced the number of levels by combining some of these functions into one entity. For example, Vermont combines many of the Program Administrator and Program Implementer functions.



Source Blumstein et. al. 2003

Regardless of the administrative structure selected, three additional factors will influence the size, shape and scope of any new entity.

- **Fuel** – Should a new entity be responsible for natural gas and electricity DSM or just one?
- **Market Segment** – Should a new entity be responsible for all market segments or just some?
- **Strategy** – Should a new DSM administrator oversee just market transformation strategies or also be responsible for delivering DSM as a resource?

The governance structure along with these issues may be crosscutting. For example, a new entity might be tasked with delivering market transformation in gas DSM. As another example, Colorado's electricity and gas providers may all agree to use a third party administrator to provide programs to one customer class (e.g., low income customers) while each retaining individual existing programs in the other classes for their respective fuels. Alternatively, a new entity could be designated to handle all DSM for all market segments, all fuels and both strategies.

This list of topics and questions is intended to provide a guide for discussion of these issues as well as to provide the consultant with the utility's view of current DSM programs and markets. Because Colorado's utilities have widely varying characteristics and challenges in both their markets and in existing DSM programs, interviews may address additional issues or may address the following set of issues in different orders.

### **Current Demand Side Management**

As noted above, the following questions are intended to provide the consultant with a high-level picture of the utility's DSM program and the role that it plays within the organization. These questions are not aimed at getting detailed answers about all or any of the particular programs (e.g., available rebates) that are offered.

- To date, what role have regulatory or legislative influences, including incentive mechanisms, measurement and evaluation or state DSM policies played in the decision-making regarding program design and implementation? What additional factors have played a role in this process?
- What is the organizational view of the role of DSM? For example, it is seen as part of the organizational mission or as a requirement? Is this view shared by the board? By executives? By staff?

- Based on customer surveys and other feedback, how is DSM perceived by the utility's customers?
- Broadly, we might assume at least two potential goals for DSM programs. Resource acquisition focuses on achieving quantified, short-term reductions in energy demand. Market transformation focuses on the long-term removal of barriers to customer investments in efficiency. What role, if any, does each of these goals play in your current DSM program? What role should these goals play in the work or function of a new administrative structure? Would a new structure be more likely to succeed at one of these goals as compared with the current DSM model in the state?
- With respect to current program performance targets, what is the outlook for the current DSM structure to achieve these in two years? In five years?
- Are there any internal barriers (i.e., within the utility) to delivering energy efficiency in target markets (e.g., residential, commercial, industrial)? In a particular fuel?
- Are you currently coordinating program development or deployment with other utilities or other entities?
- To what extent has the current economic situation influenced DSM program participation in each customer class? What changes do you see in the market for DSM programs because of the current economic climate?

### **Determining a Structure for Delivering DSM in Colorado**

The following set of questions is focused on issues related to the alternative structures listed above for delivering DSM programs. These questions do not assume any of the models are preferable but are intended to frame a discussion of the various options including retaining the existing structures, using a state agency, creating a non-profit entity or creating an energy efficiency utility. The questions focus on several different areas that I would like to discuss including: (1) the mission and governance of any new structure, (2) funding and finance, (3) the relationship of the new administrative structure to existing entities and processes such as utilities, the PUC, the legislature and the rule making process and (4) transitioning to the new structure.

#### Mission and Governance

Within any of the possible administrative structures, there are various options for determining the role that the DSM administrator has. These include focusing on a

particular market segment, delivering DSM programs that are focused on market transformation versus more traditional resource acquisition or being tasked with delivering DSM for one or all fuels. The questions in this section are intended to provide a basis for a discussion of these issues as they relate to both existing and potential models for delivering DSM in Colorado.

- What criteria do you currently use to assess the success of your DSM program?
- What criteria would you suggest be used to evaluate the administrative structures or to compare the different structures being discussed? How would you weight the importance of these criteria in your organization's decision-making?
- With both sets of criteria in mind, what is working well with the existing structure for delivering DSM? What challenges can you identify for the existing structure in satisfying these? Would an alternative structure satisfy these more easily?
- What do you see as the advantages and disadvantages of the various administrative structures with respect to the criteria, your existing administrative structure and your business model?
- What would be the appropriate mission and goal(s) for a new administrative entity? Who should be responsible for establishing these goals?
- Who should have operational (or day-to-day) responsibility for the organization?
- To which market segments (e.g., residential versus commercial or industrial) should this organization be responsible for delivering DSM?
- Should a new administrator be tasked with providing DSM for gas, for electricity or for both?
- How would the choice of model influence your interest in participating in such a program? If the new entity focused on particular market segment or goal, would that influence your willingness to participate?
- Given your experience, please identify any internal or external barriers to the creation of the new organization?

### Funding and Finance

- What do you view as the benefits to the current model of funding DSM? What would you change in this process or structure?
- Would altering DSM funding or financing require a change in your business model or structure?
- What would be the most appropriate mechanism for funding any alternative DSM entity? What are the advantages or disadvantages to this model of funding compared with the current model?
- How should funds be disbursed to achieve the mission and goals? What barriers do you foresee for this method of disbursement?
- How should the budget for these programs be set?
- Who should administer the funds?
- Where should funds be held or deposited?

- Who or what entity should be responsible for ensuring appropriate use of funds and that program goals are achieved? What oversight mechanism(s) should be put in place?

### Relationships

- How should the model for a new administrator be chosen? What process should be used for selecting the agency or entity (e.g., administrative determination, legislative action, competitive bidding)? What role do you see for the PUC? For the legislature?
- What role do you foresee or would you want for your utility in deciding on the goals? The mission? The organizational structure?
- What role do you see for other stakeholders (including the public, legislators or consumer advocacy groups) in determining the structure and mission of a new administrator? How would this be realized in the decision making process?
- What role should utilities, regulators or other stakeholders play in determining program design, how the programs are implemented and how they are measured and verified?
- What role would the new administrative structure play in your internal resource planning process?
- What role should the new administrative body have in PUC hearings or processes including ratemaking or resource planning dockets?
- How would existing state statute or regulatory rulings regarding DSM apply to the new entity? Would utilities continue to be responsible for meeting those goals? Would transferring this responsibility require action by the legislature? By the PUC?
- Will a new entity hire its own staff or work with others on a contract basis? Who should establish those contracts?
- Should there be a contractual relationship between the utilities and the new DSM entity?

### Transitioning to a New Structure

- If Colorado moves toward an alternative model of delivering DSM, how should responsibility be transferred from utilities to the new administrative entity?
- What do you foresee as your timetable for being able transition from the current model to an alternative delivery structure?
- What hurdles do you anticipate in transferring programs and program responsibility to a new organization?
- Would moving to a non-utility DSM provider lead to job loss or other impacts to the company? Would you anticipate seeking compensation to lessen the impacts of this transition?

## Resources

Blumstein, Carl, et al. *Who Should Administer Energy Efficiency Programs?* Lawrence Berkeley National Laboratory. August 2003

Goldman, Charles. *Energy Efficiency Programs: Administration and Governance Options.* Lawrence Berkeley National Laboratory. April 2003.

Hamilton, Blair. *Thoughts on Alternative Models to Acquire Least Cost Demand Side Resources.* Vermont Energy Investment Corporation. June 2008.

Harrington, Cheryl. *Who Should Deliver Ratepayer Funded Energy Efficiency?* The Regulatory Assistance Project. May 2003.

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<sup>1</sup> The importance of clear regulatory and policy as factors in the success of DSM programs is supported by the Indiana Electric DSM Investigation: Phase II Report which states, “A recent study by the American Council for an Energy Efficient Economy (ACEEE) cited strong legislative and regulatory requirements in support of energy efficiency as two of the most important factors contributing to the success of top-performing utility sector energy efficiency initiatives. Without the guidance of clear policy objectives, utility-specific initiatives may pursue competing goals, or fail to accomplish the state’s greatest needs cost-effectively.”

<sup>2</sup> See also Barbose 2009 and Stratton and Cowan 2009 for similar lists of criteria that could be used to evaluate DSM administrative models.

<sup>3</sup> Four of these models were identified by RAP. The hybrid model emerged after RAPs 2003 report. Its inclusion was original the result of independent research conducted by the consultant. However, Rich Sedano at RAP provided insight in to how those models are working in states that have adopted them.

<sup>4</sup> For a fuller discussion of the various hybrid models see Brown 2010. For a complete explanation of the process and rationale for the hybrid approach in Indiana see Stratton and Cowan 2009.

<sup>5</sup> In their 2009 report Stratton and Cowan suggest that building on existing utility expertise by retaining utility led administration can facilitate reaching statewide goals.

<sup>6</sup> These four criteria were used by RAP in its 2003 and 2010 reports but were first suggested by Etc, et al in 1998. Eto, J, and Goldman, Charles, and Nadel, S. 1998. *Ratepayer-funded Energy Efficiency in a Restructured Electrical Industry: Issues and Options for Regulators and Legislators.* Lawrence Berkeley National Laboratory.

<sup>7</sup> According to the data in the 2010 Colorado Utilities Report, the rural electric cooperatives account for 21.8 percent of electricity sales in Colorado or 13,295,150,453 kWh. A review of the data in the report shows that Intermountain, United and Holy Cross accounted for 4,454,330,618 kWh of sales, or 33.5 percent of the total.

<sup>8</sup> Vermont Public Service Board. 2010. Biennial Report to the Vermont General Assembly. Pursuant to 30V.S.A. § 8004(f). Available at [http://psb.vermont.gov/sites/psb/files/publications/Reports%20to%20legislature/SPEED\\_biennial\\_report\\_2009\\_and\\_appendix.pdf](http://psb.vermont.gov/sites/psb/files/publications/Reports%20to%20legislature/SPEED_biennial_report_2009_and_appendix.pdf).

<sup>9</sup> Together IREA, United, Holy Cross, Colorado Spring, Fort Collins and Longmont account for 11.8 million of the 22.6 million kWhs sold by the REAs and Munis in the state in 2009. For comparison sake, in 2008 Vermont had 5,741,204,000 kWh of sales (Source [http://www.eia.doe.gov/cneaf/electricity/st\\_profiles/vermont.html](http://www.eia.doe.gov/cneaf/electricity/st_profiles/vermont.html)).

<sup>10</sup> The exception to this is Energy Outreach Colorado, a non-profit that administers low-income energy efficiency programs in the state. While they do serve this market segment, it is unclear that they have the capacity (or desire) to take over administration of all low-income DSM programs in the state.

<sup>11</sup> Stratton and Cowan 2009.

<sup>12</sup>The authored borrowed theses from the work done by RAP, which in term took them from a 1998 report by Eto et al., *Ratepayer-Funded Energy-Efficiency Programs in a restructured Electric Industry: Issues and Options for Regulators and Legislators*

<sup>13</sup>Taken from Eto et.al. 1998.

<sup>14</sup>Stratton and Cowan 2009 and Harrington 2003.