ISSUE DATE: March 11, 1996

DOCKET NO. E-002/M-95-1005

ORDER APPROVING DEMAND-SIDE MANAGEMENT INCENTIVE MECHANISM

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Joel Jacobs	Chair
Tom Burton	Commissioner
Marshall Johnson	Commissioner
Dee Knaak	Commissioner
Don Storm	Commissioner

In the Matter of Request by Northern Sates Power Company for Approval of a Demand-Side Management Incentive Plan for 1996 and 1997

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ORDER APPROVING DEMAND-SIDE MANAGEMENT INCENTIVE MECHANISM

PROCEDURAL HISTORY

On March 19, 1991 in Docket No. E-002/M-90-1159, the Commission issued an Order approving Northern States Power Company's (NSP's or the Company's) two-year demand-side management (DSM) financial incentive project mechanism. NSP's was the first DSM incentive pilot established in Minnesota. The approved DSM incentive included:

- a CIP tracker account
- capitalization and amortization of expenditures for direct impact CIP projects
- a five percent bonus return on equity for the unamortized portion of capitalized CIP expenditures
- expensing of research and load management expenditures in the year incurred; and, recovery of half of any interruptible rate discounts above levels built into the 1991 test year

On December 21, 1992, the Commission issued its ORDER EXTENDING DEMAND-SIDE MANAGEMENT INCENTIVE MECHANISM in Docket No. E-002/M-90-1159. The Commission noted that DSM is a relatively new field in utility regulation, and DSM financial incentive mechanisms are therefore experimental in nature. The Commission found that an additional year for NSP's plan would prove helpful to the Company and to the state agencies monitoring and evaluating the plan.

On May 23, 1994 in Docket No. E-002/M-93-1327, the Commission issued an Order deferring action on the merits of the Company's proposed two-year DSM financial incentives program[1] until it received the report of the work group that it had established to examine DSM-related issues. As an interim step, the Commission extended the Company's existing program through the end of 1994, adding 50 percent lost margin recovery to the incentive.

On December 30, 1994, NSP filed a request for a one-year extension of its existing incentive, (as approved by the Commission on May 23, 1994), for the period January 1, 1995 through December 31, 1995.

On March 21, 1995 in Docket No. E-002/M-94-1218, the Commission issued its ORDER GRANTING ONE-YEAR EXTENSION OF DSM MECHANISM. In the same Order the Commission noted its acceptance of the work group report on DSM financial incentives for electric utilities

On September 28, 1995, NSP filed the request currently before the Commission. In this filing, NSP requested approval of a modified DSM financial incentive for 1996 and 1997.

On October 30, 1995, the Minnesota Department of Public Service (the Department) filed its comments. The Department continued to support NSP's use of a DSM financial incentive mechanism as reasonable and consistent with the goal of promoting cost effective energy conservation investments. However, the Department recommended that certain aspects of NSP's proposed incentive be modified to more appropriately balance the interests of ratepayers.

On November 9, 1995, NSP responded to the Department's comments.

On January 11, 1996, the Commission met to consider this matter.

FINDINGS AND CONCLUSIONS

A. NSP's Proposal

NSP requested a new DSM incentive mechanism for 1996 and 1997 based on the report of the work group on DSM financial incentives for electric utilities. The key elements of the proposed incentive mechanism are as follows:

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[1] NSP's proposed program differed from the approved pilot project in three ways: (1) it added full recovery of margins lost due to conservation; (2) it replaced the 5% bonus return on equity with a shared savings mechanism for direct impact CIP programs; (3) it replaced the 5% bonus return on equity with a performance-based markup of up to 5% on indirect impact CIP programs.

- *Cost Recovery* NSP requested continuation of the existing deferred accounting for all DSM items. In addition, NSP requested a change in the amortization period for new ratebased expenditures from the current five to three years.

- *Lost Margin Recovery* NSP requested recovery of 75 percent of the lost margins due to its CIP projects starting in 1996. Lost margins from pre-1996 CIP projects will continue to be recovered at 50 percent.

- *Shared Savings Incentive* NSP requested a shared savings incentive that provides for a penalty for performance below a threshold of 75 percent of goal and an incentive above 100 percent of goal. The incentive/penalty would equal 10 percent of the shared savings above/below the goal/threshold.

  NSP proposed that goal and performance levels be measured using the net present value of savings resulting from NSP's CIP using a Utility Cost Test calculation. The Utility Cost Test is used in the calculation of NSP's overall performance in the current mechanism.

- *Duration* NSP requested that the incentive be effective January 1, 1996 for a two-year period with the option to request an extension.

- *Measurement and Evaluation* NSP proposed that it continue to submit reports to the Commission on April 1 of each year, for the preceding year as currently required. NSP proposed to adjust impacts in each year for any impact evaluations that are completed including free riders, free drivers and other misattributions as it did in its most recent reports.

NSP explained that it designed its incentive proposal based on the evaluation the Company did for its 1993 financial incentive proposal, work group recommendations, and additional experience gained across the country with DSM incentive mechanisms in the past several years.

B. The Department's Comments in General

The Department stated that continued use of a DSM financial incentive mechanism for NSP was reasonable and consistent with the goal of promoting cost effective energy conservation investments. However, the Department recommended that certain aspects of NSP's proposed incentive be modified to more appropriately balance the interests of ratepayers, as set forth more specifically in **Section D**, below.

C. Commission Analysis in General

On the whole, NSP has proposed a reasonable financial incentive. In designing a new incentive, the Company has made good use of its experience, past comments of interested parties, and the Electric DSM Financial Incentive Work Group. There are two aspects of NSP's proposal which warrant separate mention and two additional items that require modification. The two issues which require modification are addressed below in **Section D**.

Those deserving mention are as follows:

1. Lost Margin Recovery

NSP proposed that it be allowed to recover 75 percent of the lost margins due to its CIP projects starting in 1996 and that lost margins from pre-1996 CIP projects continue to be recovered at 50 percent.

NSP stated that the lost margin recovery component of the financial incentive plan works in concert to produce a financial return that is both fair and reasonable. According to NSP, a 75 percent level helps to ensure that the CIP Resource Adjustment Clause remains stable. NSP asserted that the other components will not compensate for lost margins if lost margin recovery is limited to a level below 75 percent.

In addition, NSP argued that it has met the standard recommended by the DSM Financial Incentive Work Group for justifying up to 100 percent of lost margins. The work group concluded that "...savings estimates should be developed based upon sound evaluation principles and planning and not simply use engineering calculations."

In fulfillment of that goal, NSP stated that it has maintained an active load and market research effort that has produced both baseline and impact data for the Company using a variety of metering and survey techniques. Since 1991, the Company has refined its historical evaluation planning process. The Company noted that twenty formal impact evaluation and market assessment projects have been completed since 1983 or are now in process. The Department did not disagree with NSP's proposal in this regard.

The Commission finds that the Company's lost margin recovery proposal (75 percent of lost margins) is reasonable and will approve it.

2. Duration

NSP requested that the incentive be effective January 1, 1996 for a two-year period with the option to request an extension.

The Department commented that, given the Commission's recent decision to allow Minnesota Power to implement its DSM financial incentive mechanism on an ongoing basis, the Commission should also allow NSP to implement it, as modified, on an ongoing basis.
The Commission will accept the Department's recommendation on this subject and approve NSP's incentive on an ongoing basis, i.e. until modified or revoked by the Commission. NSP's incentive can be reexamined at any time similar to other ratemaking tools. Annual reviews of NSP's incentives should provide adequate oversight to determine whether the program remains reasonable.

D. Aspects Requiring Modification

The Commission's more detailed discussion focuses on two central issues: the length of the amortization period or cost recovery in general and the size of the bonus.

1. Cost Recovery

a. NSP's Request

NSP requested that most DSM expenditures for 1996 and beyond be amortized over three years, rather than five. The shorter amortization period for expenditures in 1996 and beyond would apply to direct-impact and indirect-impact program costs. NSP argued that this would be a prudent step to reduce the potential for stranded assets in the future. NSP claimed that it is the only Minnesota utility that amortizes DSM expenditures and faces the issue of potential stranded assets due to a DSM ratebase.

NSP argued that shorter amortization periods bring two key benefits. First, they prudently reduce the risks of potential stranded DSM assets. Second, shorter amortization periods provide improved cash flow to the utility by allowing recovery of costs more quickly.

b. The Department's Comments

The Department recommended that NSP modify its proposal to retain the five-year amortization period for ratebased DSM expenditures, instead of the proposed three-year amortization period. According to the Department, NSP failed to provide persuasive evidence substantiating its accelerated amortization proposal. The Department provided three reasons for this position. First, allowing NSP to recover costs more quickly involves issues of intergenerational ratepayer concerns. Although accelerated recovery increases cash flow, there is no evidence that the cash flow benefits to NSP outweigh the intergenerational ratepayer concerns that result from a shorter amortization period.

Second, the Department believes that it is inappropriate to adjust the amortization period based on issues that have not yet been resolved. Although NSP proposed to decrease DSM expenditures in its 1995 resource plan, the proposed plan remains pending before the Commission. The Department believes it is premature to adjust the amortization rate when the level of NSP's DSM expenditures has not yet been approved. Similarly, it is inappropriate to adjust the amortization level for electric industry restructuring proposals, given the uncertainty regarding the restructuring issues.

Third, the Department noted that NSP's claim that accelerated amortization would stabilize the CIP portion of the Resource Adjustment is contrary to the very nature of the Adjustment. Resource Adjustments are designed to be adjusted over time. NSP stated that its proposal will reduce the DSM ratebase by about $40 million by the end of 1999. However, the Department noted that only a portion of the $40 million is attributable to NSP's accelerated amortization proposal.

c. The Commission's Analysis of NSP's Cost Recovery Problem

At issue here is the appropriate policy for DSM cost recovery. In five years of operating its DSM incentive program, NSP has accumulated (by year-end 1995) almost $70 million in DSM expenditures that it has not been able to recover through the its current DSM mechanism:

amortization.

NSP was the first Minnesota utility to establish a DSM incentive pilot. At that time, one of the chief complaints about substituting DSM for supply-side resources was that the company earned no return on its demand-side investment. At that time, the prevailing thought on DSM incentives was that in order to create a level playing field between DSM and supply side resources, companies should treat the two equivalently, i.e that DSM resources should be rate based, amortized and allowed to earn an return. The tool selected to remove a potential disincentive to demand-side investment , therefore, was amortization of DSM expenditures.

No other Minnesota utility proposed this type of DSM incentive. The others proposed, and the Commission approved, expensing their DSM incentives. After three years of experience with the amortization mechanism, NSP also determined that it preferred expensing DSM over amortizing it. In its 1994 filing to modify its financial incentive (Docket No. E-002/M-93-1327) the Company noted the desirability of expensing DSM over amortizing it, but because the rate impacts of moving from the five-year amortization back to expensing were potentially large, NSP stated that it would maintain its amortization of DSM for the time being.

Over the years, sole reliance upon the amortization mechanism has allowed a substantial build-up in the level of DSM expenditures for which the Company has not been compensated. The possibility that these expenditures will become uncollectible (stranded investment) threatens to dampen the Company's vigorous pursuit of DSM activity. In addition, experience has shown that the largest disincentive to DSM investment is the loss of margins on unsold supply, not the lack of earnings on investment. Finally, the Commission notes that the amortization and maintenance of the DSM rate base is administratively complex.

For these reasons, the Commission finds that it is desirable to move from amortization of NSP's DSM expenditures to a direct expensing of those expenditures. The Commission realizes that such an approach will have a greater immediate impact upon current rates, but finds this impact preferable to the continuing build-up of uncompensated DSM expenditures and the inappropriate transfer of rate burden for current DSM expenditures to future generations of ratepayers.[2]

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[2] At stake is intergenerational equity. The principle is that the ratepayers who receive the benefit of an expenditure should pay for it. With DSM expenditures, this has generally meant that current ratepayers should pay current DSM costs.

d. Commission Action Regarding Cost Recovery

NSP's proposal to reduce the amortization period from five to three years would be a step in the right direction, but the Commission favors a more direct approach. The Commission will direct the Company to amortize the current CIP rate base balance over the next five years and expense its DSM costs, beginning with the 1996 costs.

2. Shared Savings Bonus

a. NSP's Proposal

NSP proposed a shared-savings shareholder incentive that allows the Company to earn a share of net benefits above target or pay a share of the shortfall in net benefits below a set threshold.

NSP proposed a bonus mechanism modeled after a performance-based ratemaking mechanism and the formula used by the DSM Financial Incentive Work Group. It included a performance deadband from 75 percent to 100 percent of target (in this case, the deadband is measured in dollars of net benefits) in which neither a bonus is earned nor a penalty assessed. Below and above the deadband NSP's shareholders and ratepayers would share in the shortfall or excess in net benefits relative to a threshold and target, respectively.

If NSP exceeded its net benefits targets, the Company would keep 10 percent of each additional dollar of net benefits produced above target. If NSP fell short of the deadband threshold (i.e. net benefits fall below 75 percent of target) NSP shareholders would be responsible for the same share, 10 percent, of the difference in net benefits between the 75 percent threshold and the actual net benefits achieved.

NSP argued that the proposed mechanism was balanced. The Company noted that the penalty component would provide ratepayers with an element of certainty that NSP will achieve a minimum of 75 percent of the level of net benefits forecast. At the same time, the bonus would provide ratepayers with an element of certainty that NSP will be motivated to cost effectively exceed the target net benefits forecast. Finally, the Company argued that the deadband would give NSP the flexibility to take reasonable risks in program design and implementation that might result in net benefits below target levels.

b. The Department's Comments

The Department stated that it supported the use of shared-savings incentives that encourage utilities to maximize energy-savings opportunities at a reasonable cost to the ratepayer. For this reason, the Department suggested that it is important to consider whether the level of the proposed shared-savings incentive is appropriate. According to the Department, this assessment is ultimately a matter of judgment.

To determine whether the level of the shared-savings incentive is appropriate, the Department stated that it is important to consider the incentive mechanism as a whole, the relative magnitude of any requested change in the incentive, and the unique circumstances of the utility.

The Department argued that the magnitude of NSP's proposed incentive should be limited because the proposed incentive package is disproportionately large at this time. NSP's request includes an increase in recovery of lost margins (post-1995, direct impact) from 50 to 75 percent. In addition, NSP requested a 10 percent incentive/penalty on incremental net benefits that are above/below the target threshold levels. It does not propose any limitations on the amount of the incentive or penalty that is ultimately awarded/incurred. Although the proposed mechanism will award a bonus of similar value to what might have been earned under the existing mechanism at a performance level of about 110 percent of target, NSP does not currently receive 75 percent lost margin recovery in addition to a bonus award.

According to the Department, NSP's methodology for calculating the shared-savings mechanism is consistent with the DSM Financial Incentive Work Group Report. However, the proposed incentive is disproportionately high. The Department stated that a 10 percent incremental benefit award/penalty was not necessary at this time to significantly foster conservation achievements. The Department recommended a five percent incremental award/penalty. This combined with the inherent incentive NSP has to achieve cost effective energy savings (due to projected capacity deficits), as well as 75 percent recovery of lost margins on post-1995 projects, and 50 percent recovery on earlier projects should be sufficient.

In sum, the Department argued that a five percent shared-savings approach would provide a strong incentive to achieve cost effective energy savings, while balancing the overall cost to ratepayers of achieving this savings.

c. Commission Analysis of NSP's Proposed Incentive

NSP's proposed shared savings bonus incentive on direct impact DSM projects is reasonable and will be approved. The Department argued for a reduction of NSP's proposed bonus from 10 percent to 5 percent of incremental net benefits based on a flawed analysis that the size of a shared savings bonus should be calculated in connection with the lost margin recovery that the Company is allowed. Lost margin recovery and bonuses should be considered separately. Lost margin recovery simply removes a disincentive to DSM investment while shared savings bonus is a positive reward for DSM investment.

Considered on its own, the bonus proposed by NSP in this matter is reasonable. It is calculated, not based on a percentage of all net benefits, but on a relatively small percentage of incremental net benefits over a pre-set goal. For further perspective, it should be noted that NSP is a large company with extensive commitment to DSM. Under its proposal, the Company will have to achieve more than $70 million in net benefits before it even begins to earn a bonus. At 110 percent of net benefits (the point that the bonus would take effect under NSP's proposal) the bonus incentive represents less than one percent of the total program benefits. The dollar level of the bonus at 110 percent of goal under this proposal is approximately $708,000, which compares favorably with the bonus the Company earned on direct impact projects in 1994, $701,000.

The Commission does agree with the Department, however, that NSP's bonus incentive should be capped at some level of achievement. The Commission finds that the cap applicable to several other utilities (120 percent of goal) is reasonable and should be applied to the Company's bonus. Capping the bonus safeguards against the risk that the goal was set incorrectly or that it was intentionally underestimated in order to increase the bonus return.

ORDER

1. NSP's proposal for a financial incentive is approved, subject to the following modifications and clarifications:

   a. NSP shall expense its DSM costs beginning in 1996 and amortize the current CIP rate base balance over the next five years;

   b. NSP's proposal to recover 75 percent of lost margins is approved;

   c. NSP's proposal for a bonus of 10 percent of the incremental net benefits over goal (with a corresponding penalty if the Company fails to reach at least 75 percent of goal) is approved; and

   d NSP's bonus shall be capped at 120 percent of goal.

2. NSP's incentive, as modified in this Order, is approved on an ongoing basis, that is, until modified or revoked by the Commission.

3. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

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