

E-002/N-89-400 ESTABLISHING CONSERVATION IMPROVEMENT PROGRAM,
REQUIRING ADDITIONAL FILINGS, AND DEFERRING CONSIDERATION OF CERTAIN
ISSUES TO THE COMPANY'S GENERAL RATE CASE

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Cynthia A. Kitlinski	Commissioner
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In the Matter of the Implementation of an Energy Conservation Improvement Program for Northern States Power Company Electric Utility

ISSUE DATE: February 6, 1990

DOCKET NO. E-002/N-89-400
E-002/GR-89-865

ORDER ESTABLISHING
CONSERVATION IMPROVEMENT
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TO THE COMPANY'S GENERAL RATE
CASE

PROCEDURAL HISTORY

On August 1, 1989 Northern States Power Company Electric Utility (NSP or the Company) made its annual Conservation Improvement Program (CIP) filing under Minn. Stat. § 216B.241 (1988) and Minn. Rules, parts 7840.0200 *et seq.* The Company proposed to fund 25 individual CIP projects during the 1990 CIP year, at a total CIP budget of \$12,320,320. The Company also proposed to shift the cost of its Load Management Rates Promotion program from its general budget to its CIP budget, and to increase those costs from \$156,000 to \$655,000.

The Department of Public Service (the Department), the Residential Utilities Division of the Office of the Attorney General, the Self-Reliance Center, West Hennepin Human Services, the City of Shorewood, and the City of Richfield filed comments on the Company's filing.

The matter came before the Commission on December 13, 1989.

FINDINGS AND CONCLUSIONS

I. Statutory Background

The CIP statute, Minn. Stat. § 216B.241 (1988), requires all public utilities with annual operating revenues exceeding \$50,000,000 to make significant investments in and expenditures for energy conservation improvements. CIP utilities are required to make annual filings describing proposed conservation projects for the coming year. Minn. Rules, part 7840.0500. The statute provides that such projects should generally cost less than it would cost the utility to produce or purchase the amount of energy saved. The statute also requires the Commission to give special consideration to the needs of renters and low income households when acting on CIP filings.

II. An Overview of the Program Proposed by the Company

The Company's proposed program consists of 25 projects, briefly described below.

Appliance Efficiency Improvement Project -- This project provides cash rebates to customers who purchase high-efficiency refrigerators, refrigerator/freezers, water heaters, or room or central air conditioners.

The Company anticipates making 31,500 rebates, has budgeted \$2,987,000, and hopes to achieve a 6,310 kW demand reduction. The project is expected to result in energy savings of 4.0 GWH.

Performance Plus Project -- This project provides cash incentives to builders of single family or multifamily electrically heated homes which meet specified energy efficiency standards.

The Company expects to provide rebates for 20 single family homes and 100 multifamily dwellings. The proposed budget is \$47,000. The Company expects the project to result in a 86.8 KW reduction in winter demand.

Chiller Efficiency Improvement Project -- This project is intended to educate commercial and industrial customers about the availability of high efficiency chillers and to provide rebates to customers who purchase them.

The Company expects the project to serve 30 customers, with total qualifying chiller capacity of 35,000 tons, and to achieve a summer demand reduction of 1,750 kW. The proposed project budget is \$435,000.

Commercial/Industrial Voluntary Time-of-Day Rate Project -- The purpose of this project is to increase the use of time-of-day rates, shifting load to off-peak hours. This will be accomplished by

contacting customers with significant load-shifting potential and helping them analyze the effect of changing to time-of-day rates.

The goal is to convert 300 customers to time-of-day rates, shifting 1,500 kW from peak to off-peak hours. The proposed budget is \$90,000.

Cool Storage Air Conditioning Project -- This project would provide rebates for commercial and industrial customers who install cool storage systems, an alternative, energy-efficient air conditioning system.

The Company anticipates 10 project participants and shifting 1,200 KW of summer peak demand to off-peak periods. The proposed budget is \$408,000.

Easy Energy Financing Project -- This project will provide financing to encourage the installation of conservation improvements promoted in the Company's other commercial and industrial projects. The Company would lend participants the cost of such conservation improvements at 16% interest. The loans would be repaid in monthly installments approximately equal to the monthly bill reduction the conservation improvement(s) produced.

The Company expects this project to result in a 6.82 MW demand reduction above the demand reductions which would have resulted from the other projects without the financing. The Company has budgeted \$180,000 for the project.

Industrial Demand-Side Management Incentive Pilot Project -- This project will provide rebates to very large industrial customers for installing conservation improvements which do not qualify for rebates under other CIP projects. Qualifying improvements must have payback periods exceeding two years.

The Company believes the project will result in a 4,000 KW demand reduction and will shift 1,800 KW of demand from peak to off-peak periods. The proposed budget is \$531,000.

Lighting Efficiency Improvement Project -- This project will provide rebates to commercial and industrial customers who install high-efficiency lighting equipment.

The Company expects the project to produce a demand reduction of 19.1 MW and has budgeted \$2,884,500.

Load Management Rate Promotion Project -- This project is designed to encourage customers to use the Company's load management rates (peak-controlled, peak-controlled time-of-day, time-of-day, and energy-controlled rates). The Company would promote the rates primarily through direct customer contact and secondarily through direct mail, the Company magazine, customer brochures,

and a newsletter for load management rate customers.

In the past, the cost of promoting load management rates has been part of the Company's general operating budget. This year the Company proposes shifting the item to its CIP budget and increasing anticipated expenditures from \$156,000 to \$655,000.

The Company expects the project to reduce peak demand by 50 MW.

Minneapolis Electric Conservation Pilot Project for Small Businesses -- This project would be administered by the Minneapolis Energy Office and would provide small businesses in Minneapolis with a lighting system audit, high efficiency fluorescent lamps, and, in certain cases, new efficient lighting systems at reduced cost.

The goal is to serve 375 small businesses and to supply them with 52,500 high efficiency lamps. The Company expects to achieve a 527 diversified KW reduction and energy savings of 1,800 MWH. The proposed budget is \$225,050.

Motor Efficiency Improvement Project -- This project provides rebates to commercial, industrial, and farm customers for the purchase of high efficiency motors.

The Company anticipates 195 project participants and has budgeted \$300,000. The project should result in a demand reduction of 1,500 kW.

Rooftop Air Conditioner Rebate Project -- This project will provide rebates to contractors and commercial and industrial customers who install high efficiency rooftop air conditioning systems.

The Company expects to provide rebates on 7,000 tons of cooling capacity, to realize a 945 kW reduction in summer demand, and to spend \$438,000 on the project.

Citywide Advisory Committee on Home Improvement Education Project -- This project provides classes on home repair and maintenance, with a conservation emphasis, to homeowners, landlords, and renters in the City of Minneapolis.

Approximately 500 people are expected to attend classes. The Company has budgeted \$3,500. Energy savings resulting from the project are hard to quantify, but the Company estimates the average attendee could save 8% on fuel costs by installing the low cost energy improvements the classes promote.

Community Energy Council Residential Weatherization Project -- This residential project

provides conservation workshops, energy audits, auditor training, and weatherization materials. It is administered by local Community Energy Councils, which tailor their programs to suit the needs of their communities.

The Company expects the project to deliver 4,940 energy audits in 1990 and has budgeted \$390,800.

Electric Conservation Pilot Project for Low Income Households -- This project is designed to help high usage low income households reduce their electric bills through energy audits and budget counseling.

The Company expects the project to serve 350 households, who are expected to reduce their electric bills by an average of 10%. The project's budget is \$23,000.

Electric Conservation Brochure for Low Income Households -- In this project the Company will develop a brochure with practical information on conserving electricity, for distribution to participants in the Company's Consumer Program, Energy Assistance recipients, and inability-to-pay customers.

The project will serve 35,000 households, and the Company has budgeted \$36,000.

Electric Heat Conservation Pilot Project for Low Income Households -- This project is designed to serve the residents of St. Paul's Liberty Plaza, a large housing complex in which most units have electric heat. Most complex residents are first generation immigrants from countries in Southeast Asia. The Company plans to offer workshops, House Doctor services, and home energy audits, in the native languages of the residents.

The project is expected to serve 130 households with a total project budget of \$31,100.

Home Energy Audit Project -- This project will provide home energy audits, formerly known as Residential Conservation Service audits, to customers throughout NSP's service area.

The Company expects to provide 2,350 Home Energy Audits and has budgeted \$211,500.

Quest Audit Project -- This project offers computer-generated analyses of individual customers' energy use patterns and conservation potential, based on responses to a questionnaire completed by the customer.

The Company expects 6,305 participants and has budgeted \$90,500.

Commercial and Industrial Audit Services -- Under this project the Company will provide four types of audits to commercial and industrial customers. The type of audit provided will be determined by the needs and desires of individual customers.

The Company expects to deliver 36 Industrial Audits, 425 Energy Checkups, 2,760 Quick-Check Audits, and 677 Do-It-Yourself Audits. The project's proposed budget is \$1,052,000.

Commercial and Industrial End-Use Study -- This project is a three year study of the energy usage patterns of the Company's commercial and industrial customers. The Company hopes to develop a database which will be useful in designing future conservation programs for these customers. The project's budget is \$15,000 for 1990.

Demand-Side Management Potentials Study -- This project is designed to assemble, categorize, and analyze information on the demand-side management conservation potential of the Company's customer base. The information is expected to benefit the Company in developing future CIP projects and to increase the projects' cost-effectiveness. The project's proposed budget is \$248,000.

Miscellaneous Research, Planning, and Development Project -- The purpose of this project is to conduct generalized conservation research. The Company intends to focus this research in the following areas: heat water pump heater research, water heater and air conditioner load management research, high efficiency fluorescent bulb residential research, demand-side management planning, miscellaneous program development, information services subscriptions, and market research data development.

The Company proposes a project budget of \$623,000.

Peak Load Reduction Appeal Research -- This project is to analyze the effect of peak load reduction advertising, by quantifying energy use before and after a peak load reduction advertising campaign. The proposed budget is \$357,000.

Technology Transfer Project -- This project is intended to assemble and make available to local architects and design professionals comprehensive information on designing commercial buildings using 25% to 33% less energy than those currently being constructed. This year's proposed budget is \$28,870.

III. Commission Action

Agreement Between Department and Company Adopted -- The Department's comments raised

ten issues which were subsequently resolved by agreement between the Department and the Company. Those issues were as follows:

1. The Company agreed to file within 90 days a plan to track project participation by low income and rental households.
2. The Company assured the Department it would not issue any Well Water Chiller rebates for installations not in compliance with state law.
3. The Company agreed to maintain its current \$125 reimbursement level for Quick-Check Audits.
4. The Company agreed to file a more detailed description of the demand-side management recommendations in its Energy Check-Up audit by April 2, 1990.
5. The Company agreed to develop a new low income project along the lines suggested by the Department within six months.
6. The Company agreed to file full information on its Industrial Audit Pilot Project in its next status report.
7. The Company agreed to make certain technical revisions in its Performance Plus Project.
8. The Company agreed to continue including reports on its water heater research and air conditioning/water heater load management development projects in its future status reports.
9. The Company agreed to submit its evaluation plan for the Minneapolis Energy Conservation Pilot Project for Small Businesses with its August 1, 1990 CIP filing.
10. The Company agreed to develop thorough audit specifications for its Electric Heat Low Income Conservation Pilot Project by July 1, 1990.

The Commission finds that the parties have reached reasonable, workable resolutions of these issues. The Commission approves and adopts the agreement of the parties.

1989 Budget Levels Retained for Motor Efficiency Improvement and Rooftop Air Conditioner Rebate Projects -- The Company proposed substantial budget increases for its Motor Efficiency Improvement and Rooftop Air Conditioner Rebate Projects. Neither project met its 1989 participation goals or spent its full 1989 budget. Under these circumstances, the Commission agrees with the Department that budgets for these projects should remain at 1989 levels.

The Company is committed to increasing project participation to levels where the requested budget increases will be necessary and urges their approval in light of this commitment. The Commission

applauds the Company's commitment and will increase budget levels when the Company can show such increases are necessary. In the meantime, however, accuracy in budgeting requires that the 1989 levels be retained.

Energy Checkup Audit Fee Halved -- The Department recommended that the Company waive the fee for the Energy Checkup audit for participants who installed at least one of the conservation measures recommended during the course of the audit. The Company stated the costs of administering waivers would be prohibitive and proposed decreasing the fee by 50% instead.

The Commission agrees with the Company that the cost of monitoring and verifying responses to audit recommendations makes waiver impractical. Reducing the fee for the audit should similarly increase interest and participation in the project, without requiring the Company to monitor its customers' behavior. The Commission will approve the Company's proposal to reduce the audit fee by 50%.

The Commission will also require the Company to examine the feasibility of increasing the project's effectiveness by installing simple conservation improvements as part of the on-site audit.

Software Budget Item for Energy Checkup Audits Disallowed -- The Department also recommended that the Commission disapprove, pending further investigation, the Company's request to include \$200,000 in its Energy Checkup budget for software to identify demand-side management measures project participants might profitably implement. The Commission agrees with the Department.

Demand-side management is an integral part of any enterprise's efficient use of energy resources. Not all demand-side management measures are conservation measures, however. Many, such as valley filling, may actually increase energy usage. This does not necessarily make such measures undesirable. It does, however, mean that CIP funds should not be used in promoting them.

The Commission will disapprove the additional \$200,000 budgeted for demand-side management software until the Company has set forth with greater precision the specific components of the software and the cost of each.

Peak Load Reduction Appeal Project Disapproved -- The Company proposed spending \$357,000 to conduct research on the effectiveness of advertising campaigns urging residential customers to reduce electric usage during summer peak. The Company would conduct research on consumer awareness prior to the advertising campaign and after the campaign to determine which advertising media and formats were most effective.

The Department recommended disapproving the project pending more detailed development, such as submission of proposed advertising texts. The Company replied that developing the advertising without project approval would not be cost-effective.

The Commission believes the Company has not submitted sufficient information to justify a \$357,000 budget and will disapprove the project. The Commission agrees with the Department that it would be prudent to begin such a project with an initial survey, focus groups, an advertising campaign in a non-metropolitan market, or similar measures. The Commission will not approve a financial outlay of the requested magnitude without more detailed information.

The Commission will, however, approve an initial \$5,000 expenditure, should the Company choose to conduct limited, highly focused research on the topic or to conduct the research necessary to develop a more detailed project proposal.

Reporting Requirements Established for Miscellaneous Research, Planning, and Development Project -- The Department expressed concern about this project's large budget (\$623,000) and relatively undefined evaluation standards. The Department recommended requiring the Company to file detailed evaluation plans, including an evaluation of the effect of each individual research project on the Company's CIP as a whole. The Company stated it planned to use a qualitative evaluation approach, continuing each individual research project as long as it appeared likely to result in the development of a viable CIP project.

The Commission is sensitive to the size of the Company's research budget, as its disallowance of the Peak Load Reduction Appeal Project indicates. Nevertheless, research is a crucial part of any broad-based conservation effort. The Commission believes the Company's plan for evaluating the research conducted under this project is basically sound.

One of the risks of any comprehensive research program, however, is the risk of duplicating research which has already been done. To guard against this possibility, and to ensure that the Company continues to subject its research to stringent evaluation, the Commission will require detailed reports on Company research with its six month status reports. These reports should describe the research completed in the last six months, its results, the Company's evaluation of each research effort, and descriptions of similar and related research conducted elsewhere, such as by other utilities, trade organizations, government agencies, and independent laboratories.

Rebates for Energy Management Systems Not Required -- The Department recommended requiring the Company to include Energy Management Systems in the conservation measures eligible for rebates in the Industrial Demand-Side Management Incentive Pilot Project. The Company stated its experience shows that such systems do not consistently produce long-term conservation benefits, largely because they are often disconnected when higher usage levels are desired.

The Commission will defer to the Company's expertise on this issue. The rebates available under this project are relatively high, which counsels against allowing them for measures with a high likelihood of disuse. The Company will continue recommending such systems, however, and it is reasonable to assume they will be installed even without rebates by motivated customers.

Load Management Rates Promotion Issues Deferred to General Rate Case --In both its CIP filing and in its interim rates filing in its pending general rate case¹, the Company proposed shifting the expense item for its Load Management Rates Promotion program from its general budget to its CIP budget. The Company also proposed to increase this budget item from approximately \$156,000 to \$655,000. As the Commission explained in its December 29, 1989 ORDER SETTING INTERIM RATES, these two proposals raise issues which are best addressed in the general rate case.

First of all, it is unclear whether these expenses are properly classified as CIP expenses. Although Load Management Rates may result in reduced energy usage, their primary purpose is to shift existing usage to non-peak periods. As the earlier discussion of demand-side management software indicates, it is important for all parties to the CIP process to remain focused on CIP's central goal, conservation, and not be diverted by related matters, no matter how important or intriguing.

Demand-side management is clearly a concept whose day has come. Implementing demand-side management strategies will clearly foster conservation. The Commission is not ready, however, to find that demand-side management is conservation, at least not without the kind of factual demonstration which can most easily be made in full scale evidentiary proceedings. The ongoing rate case offers a perfect opportunity to examine the relationship between load management rates and conservation. The Commission will therefore defer its decision on whether promoting load management rates is an appropriate CIP project until it considers the general rate case.

Similarly, the Company's proposal to quadruple its spending on promoting load management rates is well suited for consideration in the general rate case, where financial experts are available to scrutinize proposed expenditures in light of the Company's overall budget and past performance.

Finally, if the Company plans a major campaign to substantially increase the number of customers using load management rates, it is important that those rates be accurately and equitably set. The Department has stated it intends to examine the Company's load management rates in the general rate case. Again, the general rate case is the ideal forum for that process.

The Commission will therefore defer consideration of all three issues -- the promotion of load management rates as a CIP project, the appropriate budget level for such promotion efforts, and appropriate load management rate design -- until the general rate case. The Commission will direct the Company to offer testimony on these issues.

Evaluation Budget for Lighting Efficiency Improvement Project Conditionally Approved --

The Company proposed to spend \$150,000 to evaluate its lighting efficiency improvement project, instead of the \$7,500 originally budgeted, due to a need to retain an independent research firm to conduct the evaluation. The Department challenged the reasonableness of this amount.

¹ In the Matter of the Petition of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota, Docket Number E-002/GR-89-865.

Adequate evaluation of CIP projects is crucial to the healthy development of conservation in Minnesota, the CIP program, and individual utilities' CIP efforts. Given the large financial commitment this project represents, \$150,000 is not necessarily an excessive evaluation budget. The Commission will therefore approve the evaluation budget, subject to the filing and approval of a detailed evaluation plan.

Budget Increase for Voluntary Time-of-Day Rates Project Disapproved -- The Company proposed to increase the budget for the Voluntary Time-of-Day Rates Project from \$60,000 to \$90,000. The Department opposed the increase, stating only 15% of project participants had actually shifted load to date. The Department also stated it intends to examine the appropriateness of the Company's load management rate schedule in the pending general rate case, and that full scale efforts to increase usage of those rates should await that examination and any rate adjustments which may result.

The Commission agrees with the Department. As the Commission noted in its January 20 ORDER APPROVING CONTINUATION OF VOLUNTARY TIME OF DATE RATES PROJECT², the results of this project have been disappointing to date. Many project participants have converted to time-of-day rates, and realized rate savings, without changing their usage patterns. This suggests that what the project is actually accomplishing is ensuring that customers receive service under the rate schedule most suited to their needs. This is a desirable result, but one the Company has an independent duty to help customers achieve. Minn. Rules, part 7820.3200. It is not within the stated purposes of the CIP program.

Furthermore, including this project in CIP raises the same policy issues discussed in disapproving the Load Management Rate Promotion Project. To the extent that conservation is incidental to demand side management strategies, such strategies should perhaps not be pursued with CIP funding. The Commission concludes that serious consideration of increased funding for the Voluntary Time-of-Day Rates Project should be deferred to the general rate case.

In the mean time, the Commission will require the Company to file a plan to target for participation in the project customers who are likely to shift load as a result of their participation.

Community Energy Councils Project Proposal Modified -- The Company proposed two changes to its ongoing Community Energy Councils Project, which provides conservation education, energy audits, and weatherization services through local community energy councils. The Company proposed to discontinue its \$10 participation fee, on grounds that collection costs exceeded amounts collected. The Company also proposed to stop negotiating the per-audit reimbursement amount it would pay each community energy council and pay a standard \$70 amount instead.

The Department supported the modifications in principle, believing they would increase the project's

² In the Matter of an Energy Conservation Improvement Program for Northern States Power Company Electric Utility, Docket No. E-002/M-88-253.

cost-effectiveness. The Department considered the \$70 reimbursement amount too low, however, and recommended an inflation-adjusted figure of \$81 instead.

West Hennepin Human Services, the Self-Reliance Center, the City of Shorewood, and the City of Richfield filed comments opposing the proposed modifications. West Hennepin Human Services filed an alternative project proposal, but favored action recommended by Commission staff over the alternative proposal.

These parties emphasized the value of the audits provided by the local agencies, their low cost in comparison with Company-provided audits, and the existence of legitimate cost differentials between communities. They emphasized the importance of allowing local agencies to tailor their programs to the specific needs of their communities. They stated the \$70 figure was too low and that adopting it would cause declines in quality and disrupt program administration at the height of the conservation season.

The Commission shares the concerns of the communities and service providers regarding program continuity during the heating season. The Commission also believes there is value in local community energy councils designing programs to meet the specific conservation needs of their communities. At the same time, it is clear that standardizing reimbursement levels and eliminating participation fees would increase the cost-effectiveness of the project.

The project will continue along existing lines through the end of this heating season, April 15. The Company may cease collecting the \$10 participant fee, but may not thereby reduce individual councils' funding levels. The Company will operate the project through March 1 using last year's budget prorated to that date, or \$65,100.

The Commission will require the Company to work with the Department and other parties to implement the proposed changes in program administration and to use \$81 as the base line audit reimbursement level in these negotiations. The Commission will require the Company to file a proposal for implementing these changes on or before March 1. The March 1 filing should also include the Company's analysis of cost differentials between communities and its analysis of the cost and value of an electrical audit component being developed by the Department.

Status Reports to be Required -- The Commission will follow its usual practice of requiring the Company to file status reports on all ongoing projects on or before March 1, to allow prompt detection and resolution of any difficulties in implementing the 1990 program. The Company will also file status reports on or before August 1, 1990.

Company to Continue Cost-Effectiveness Discussions with the Department -- Like other utilities, NSP is engaged in ongoing discussions with the Department on methods of measuring the cost-effectiveness of CIP projects. This process should continue, and the Commission will so require.

Evaluation of the Program as a Whole -- The Commission finds that the Conservation Improvement Program proposed by the Company, as modified herein, meets the requirements of the CIP statute and rules. It represents a significant investment and expenditure on the part of the Company, it gives due consideration to the needs of renters and low income ratepayers, and it meets prevailing standards of cost-effectiveness. Each consideration will be discussed in turn.

Significant Investment and Expenditure -- Minn. Rules, part 7840.1150 sets forth factors to be considered in determining whether a Company's CIP meets the statutory requirement of being a significant investment in and expenditure for conservation. The Company's CIP fares well when evaluated under these criteria.

Approximately 76,572 customers, 8% of all NSP customers, will receive conservation services under this year's program. The Company expects the program to result in short-term and long-term peak reductions of 72 MWs and first-year energy savings of 117,527 MWH. The program's total budget constitutes 0.9% of the Company's 1988 gross revenues. Such monetary amounts and participation levels imply the existence of the serious commitment to conservation contemplated by the CIP statute.

Furthermore, the program itself demonstrates a serious and comprehensive effort to deliver effective conservation services within the Company's service area. It is geographically balanced. It serves diverse customer classes: residential, commercial, and industrial. It provides a wide variety of services, from education to minor conservation improvements to major renovations. Its research component provides a solid foundation for future conservation efforts.

Clearly, the Company's program will make a meaningful contribution to energy conservation in Minnesota. The Commission finds that the Company's CIP meets the "significant investment and expenditure" requirements of Minn. Stat. § 216B.241 (1988).

Special Consideration for Rental and Low Income Households -- The CIP statute requires that the Commission, when acting on CIP filings, "give special consideration to the needs of renters and low income families and individuals. . . ." Minn. Stat. § 216B.241, subd. 2 (1988). The Commission believes that NSP's CIP makes adequate provision for the special needs of renters and low income households.

Approximately 36,175 low income households and 27,291 rental households will receive services under the program. Three projects are targeted exclusively toward low income people. Another, the Community Energy Council Residential Weatherization Project, is administered by community organizations with close ties to the low income community. The Company has agreed to develop an additional project for low income customers, in conjunction with the Department, over the next six months.

The Commission concludes that the Company's CIP meets the statutory requirement of demonstrating special consideration for the needs of rental and low income households.

Cost Effectiveness Concerns -- The CIP statute provides that the Commission may require a utility to fund an energy conservation improvement whenever the cost of the improvement will be less than the cost of producing or purchasing the amount of energy the improvement will save. The statute also provides, however, that the Commission shall require all utilities with annual operating revenues exceeding \$50,000,000 to make energy conservation improvements, whether such improvements can meet this cost-effectiveness test or not. Minn. Stat. § 216B.241, subd. 2 (1988).

Evaluating cost-effectiveness has proven to be one of the most challenging features of the CIP review process. The statutory test, "total cost to the utility less than the cost to the utility to produce or purchase an equivalent amount of new supply of energy," has sparked controversy, particularly over whether "total cost" does or does not include revenues lost due to energy saved.

The Commission has acted on the assumption that conservation and the development of cost-effectiveness methodologies should proceed simultaneously. This was intended to allow the Commission to apply the best available knowledge on cost-effectiveness in acting on each year's CIP filings, while giving cost-effectiveness investigators actual data on the effectiveness of various conservation strategies. Utilities have therefore been operating Conservation Improvement Programs while working with the Department, Commission staff, and one another to refine useful cost-effectiveness models.

So far, five cost-effectiveness tests have evolved from this process: the cost comparison test, the utility/rate impact test, the participant test, the revenue requirements test, and the nonparticipant test. The Commission believes these five tests provide a serviceable, comprehensive framework within which to examine the cost-effectiveness of proposed projects. Using more than one test realistically reflects the complexity of cost-effectiveness issues, and the necessity to examine cost-effectiveness from more than one perspective to gain an accurate understanding of the costs and benefits of any particular project.

The Company and the Department have subjected NSP's proposed projects to these tests and have found the approved projects within acceptable cost-effectiveness norms. The Commission agrees, and would add that even these five tests do not succeed in quantifying all the benefits likely to result from these projects.

As the Commission has noted in previous Orders, the energy savings low income ratepayers realize through participation in CIP projects often translate directly into higher quality of life through lower arrearages, less frequent need for Fuel Assistance, and fewer utility-related financial crises. Similarly, residential CIP participants report increased comfort levels and higher property values as important results of their participation. In the Matter of the Implementation of an Energy Conservation Program for Minnegasco, Inc. ORDER APPROVING CONSERVATION IMPROVEMENT PROGRAM AND REQUIRING ADDITIONAL FILINGS (September 19, 1988), at 10.

CIP projects also benefit society generally, in ways which are no less real for being unquantifiable. They clearly raise public and utility awareness of conservation issues. They have ecological benefits. They benefit the local economy by allowing the diversion of energy dollars for other purposes. They help create the potential for long term price stability by limiting the need for new supplies. They provide data on usage patterns and particular conservation strategies which will increase in importance as conservation moves up on the national, state, and local agendas.

The Commission concludes that the projects approved herein meet reasonable and prevailing cost-effectiveness standards.

ORDER

1. The Commission approves the Company's CIP proposal, as modified herein. The approved plan consists of the following projects funded at the levels indicated:

Appliance Efficiency	\$2,987,000	
Chiller Efficiency	435,000	
Voluntary Time-of-Day Rates	60,000	
Cool Storage	408,000	
Easy Energy Financing	180,000	
Industrial Incentives	531,000	
Lighting Efficiency	2,884,000	
Minneapolis Electric Conservation Pilot	255,050	
Motor Efficiency	121,000	
Performance Plus	325,000	
Rooftop Air Conditioner Efficiency	325,000	
Citywide Advisory Committee	3,500	
Commercial and Industrial Audit Services	842,000	
Community Energy Councils Project	65,100 ³	
Electric Conservation Low Income Pilot	23,000	
Electric Conservation Low Income Brochure	36,000	
Electric Heat Pilot for Low Income Households	31,100	
Home Energy Audit	211,500	
Quest Audit	90,500	
Commercial and Industrial End-Use Study	25,000	
Demand-Side Management Potentials Study	248,000	
Miscellaneous Research, Planning, Development		
Demand-Side Management Planning	268,000	
Program Development		70,000
Residential Fluorescent Bulb Research	20,000	
Information Services	10,000	
Market Research Data	75,000	
Water Heater/Air Conditioner Research	180,000	
Peak Load Reduction Appeal Research	5,000	
Technology Transfer	<u>28,870</u>	
		\$10,465,520

³ Amount budgeted through March 1. Company will negotiate with interested parties and make filing enabling the Commission to set a budget level for the remainder of the CIP year.

2. Within 30 days of the date of this Order, the Company shall file verification that it has notified participating retailers that chillers and cool storage units which are not in compliance with state law do not qualify for rebates under the Chiller Efficiency Improvement Project.
3. Within 30 days of the date of this Order the Company shall file a revised budget for its Commercial and Industrial Audit Services Project, showing a \$125 reimbursement level for its Quick-Check audit.
4. Within 90 days of the date of this Order, the Company shall file a plan to track project participation by low income and rental households.
5. Within six months of the date of this Order, the Company shall file a new electric water heater project targeted toward low income customers, pursuant to its agreement with the Department.
6. Within six months of the date of this Order, the Company shall file audit specifications for its Electric Heat Low Income Conservation Pilot Project.
7. Within 90 days of the date of this Order, the Company shall file a report on the feasibility of installing simple conservation improvements as part of the on-site visit in the Energy Checkup.
8. Within 60 days of the date of this Order, the Company shall file a plan to target, for participation in its Voluntary Time-of-Day Rates Project, customers who are likely to shift load as a result of participation.
9. The Company shall file testimony in its pending general rate case regarding the propriety of shifting the cost of promoting its load management rates from its general operating budget to its CIP budget, the appropriate budget level for such efforts, and appropriate load management rate design. The Commission will determine these issues in its determination of the Company's general rate case.
10. The Company shall operate its Community Energy Council Residential Weatherization Project through the end of the heating season, April 15, 1990, using last year's budget levels and last year's operating criteria.
11. The Company may stop charging the \$10 participant fee in its Community Energy Council Residential Weatherization Project, but may not thereby reduce individual councils' funding levels.
12. The Company shall work with the Department and other interested parties to develop a budget for its Community Energy Council Residential Weatherization Project reflecting the requirements of paragraphs 10 and 11. The Company shall file such a budget on or before

March 1.

13. The Company shall work with the Department and other interested parties to develop a plan to eliminate the participant fee and to standardize audit reimbursement levels in its Community Energy Council Residential Weatherization Project during the next CIP year. The parties shall use \$81 as the base line audit reimbursement level in these discussions. On or before March 1, 1990, the Company shall file a proposal for implementing these changes.
14. In the March 1 filing required under paragraph 13, the Company shall include its analysis of cost differentials between communities and its analysis of the cost and value of the electrical audit component under development by the Department.
15. On March 1, 1990 and August 1, 1990 the Company shall file status reports on all ongoing and recently completed CIP projects.
16. With its March 1, 1990 status reports the Company shall include the following information on its Industrial Audit Pilot Project: the number of times auditors have recommended fuel switching or valley filling, the number of times these recommendations were implemented, and the resulting effect on kW and kW sales.
17. With its March 1, 1990 status reports the Company shall file the technical revisions to its Performance Plus Project which it agreed to make in negotiations with the Department.
18. With its March 1, 1990 status reports the Company shall file detailed information on expenditures and results achieved in the Water Heater Research and Air Conditioner/Water Heater Load Management Development components of its Miscellaneous Research, Planning and Development Project.
19. With its August 1, 1990 status reports the Company shall file the following information on its Miscellaneous Research, Planning, and Development Project: a description of all research completed to date, the results of all research completed to date, an evaluation of each research effort, and a description of similar and related research conducted elsewhere.
20. The Company shall continue to work with the Department, the Commission, and other interested parties to refine the cost-effectiveness analyses and models used in evaluating CIP projects for electric utilities.
21. To the maximum extent practicable the Company shall ensure that all CIP participants have free choice of the devices, methods, materials, sellers, installers, and contractors used in making conservation improvements to their property.
22. The Company shall serve the Department and any other party requesting service with all filings made hereunder. The Department and any other commenting party shall file any comments on such filings within 15 days of service, unless otherwise provided herein.

23. The Company shall continue to record and report CIP expenses incurred and revenues collected in its CIP tracker account.
24. In its next annual CIP filing, the Company shall provide detailed information regarding its evaluation plan for the Minneapolis Energy Conservation Pilot Project for Small Businesses.
25. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Lee Larson
Acting Executive Secretary

(S E A L)