

G-007/M-89-191 ESTABLISHING CONSERVATION IMPROVEMENT PROGRAM,
ACCEPTING END-USE INEFFICIENCY STUDY, AND SETTING REQUIREMENTS FOR
FUTURE FILINGS

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Barbara Beerhalter	Chair
Cynthia A. Kitlinski	Commissioner
Norma McKanna	Commissioner
Robert J. O'Keefe	Commissioner
Darrel L. Peterson	Commissioner

In the Matter of the Implementation of the Annual Conservation Improvement Program for Northern Minnesota Utilities, a Division of UtiliCorp United, Inc.

ISSUE DATE: September 12, 1989

DOCKET NO. G-007/M-89-191

O R D E R E S T A B L I S H I N G
C O N S E R V A T I O N I M P R O V E M E N T
P R O G R A M , A C C E P T I N G E N D - U S E
I N E F F I C I E N C Y S T U D Y , A N D S E T T I N G
R E Q U I R E M E N T S F O R F U T U R E F I L I N G S

PROCEDURAL HISTORY

On May 1, 1989 Northern Minnesota Utilities (NMU 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 four individual CIP projects during the 1989-90 CIP year, at a total CIP budget of \$171,160. On June 20, 1989 the Company made a supplementary filing proposing a \$14,000 budget increase for one project, the Home Energy Check-up Project.

The Department of Public Service (the Department) filed comments on the Company's original and supplemental filings. The Department recommended approving the Company's proposal, including the \$14,000 budget increase. The Department also advocated requiring the Company to develop, for inclusion in next year's Conservation Improvement Program, a project based on end-use inefficiency data it had collected during the past year under an earlier Commission Order.

No other party commented on the Company's filings.

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 four projects, which are described below.

RESIDENTIAL CONSERVATION SERVICE PROJECT -- This project is open to all residential customers living in one to four unit buildings or in larger buildings where living units have individual gas meters. The project consists of a comprehensive energy audit performed for a \$10 fee by a state-certified energy auditor employed by NMU.

The auditor visits the customer's home, examines the structure, determines the customer's energy use patterns, and provides an analysis of the household's conservation potential. This analysis addresses all conservation measures the household could undertake, e.g., major weatherization, caulking and weatherstripping, thermostat control, and includes recommendations on which measures would be most practical for that particular household.

This will be the fourth time the Company has offered this project over nine years. Although many customers have already received audits, the Company views the Residential Conservation Service audit as the kind of basic conservation service which should be offered frequently. The Company expects about 48 audit requests. Approximately 5.6% of participating households are expected to be low income, and about 5.2% are expected to be rental households. Project-related fuel savings should average approximately 5.2% per participating household. The Company proposed a budget of \$8,640.

FURNACE TUNE-UP PROJECT -- This, too, is a continuation of an existing project. In this project the Company plans to offer residential customers a furnace or boiler tune-up and cleaning for \$5.00. Services will be provided by any participating heating dealer or an NMU employee, at the customer's option.

The Company anticipates a 30% response rate. Approximately 6.6% of participating households are expected to be low income and approximately 5.2% are expected to be rental households. Heating bill reductions are projected to average 5% per participating household. The proposed budget is \$96,000.

CONSERVATION GRANT PROGRAM PROJECT -- This a continuation of an existing six-year project, under which NMU provides funding to weatherize the homes of low income customers. Services are provided by seven non-profit organizations under contract with NMU.

This project provides grants of up to \$1,000 per household to deliver comprehensive weatherization services. Services offered include attic insulation, wall insulation, foundation insulation, rim joist insulation, floor insulation, caulking and weatherstripping, replacement of storm doors and storm windows, and duct and pipe insulation. If the \$1,000 grant is insufficient to adequately weatherize a participating home, the non-profit organization locates additional funding from complementary programs.

The Company anticipates serving 70 customers this CIP year, all of them low income, approximately 11.6% of them renters. Energy savings are expected to average 15 MCF per participating household. This year's budget is set at \$59,000.

HOME ENERGY CHECK-UP PROJECT -- This project provides conservation education and low cost conservation materials to residential customers. Services include an energy audit, which focuses on low cost, easy-installation conservation measures; provision and installation of low cost infiltration materials; identification of any major weatherization projects appropriate for the dwelling and discussion of any available funding sources; and a follow-up contact to address any remaining questions or concerns.

The Company expects to serve 269 households and to achieve average energy savings of 5.5%. Approximately 17.8% of participants are expected to be low income persons, and approximately 8.9% are expected to be renters. The project will be jointly funded by NMU and by the Community Energy Program. All funding provided by NMU, \$21,520, will be used to deliver services to low and moderate income households.

III. Commission Action

Furnace Tune-Up Marketing Budget Reduced -- The Company originally proposed to spend 5% of the Furnace Tune-up budget to promote the project. During the last CIP year, however, the Company has spent roughly 1% of the Furnace Tune-up budget on marketing, and has still achieved projected participation levels. In subsequent discussions with Commission staff, the Company agreed to reduce its proposed marketing expenses to 2.5%, or \$2,250. The Commission accepts the revised marketing budget as appropriate and will approve it.

End-Use Inefficiency Study Approved -- In the Order establishing the Company's 1988-89 Conservation Improvement Program, the Commission required the Company to undertake a study of end-use inefficiency among its customers:

The Company shall work with the Department to develop reliable and comprehensive end-use inefficiency data for use in its conservation planning process and shall file a report including such data with its 1989-90 CIP filing.

In the Matter of the Implementation of an Energy Conservation Improvement Program for Northern Minnesota Utilities, a Division of UtiliCorp United, Inc., Docket No. G-007/M-88-259, ORDER APPROVING CONSERVATION IMPROVEMENT PROGRAM AND REQUIRING ADDITIONAL FILINGS (September 29, 1988), at 8.

The Company filed the required end-use inefficiency data with its annual CIP filing on May 1. The data was comprehensive and detailed and should substantially assist the Company in its conservation planning process. The filing meets the requirements of the September 29 Order and will be accepted.

New Project to be Based on End-Use Inefficiency Data -- The 1989-90 CIP year is scheduled to be the last year of the Furnace Tune-up Project. The Commission agrees with the Department that the Company should use the end-use inefficiency data collected under the September 29 Order as the basis for developing a replacement project. That data should help the Company determine which conservation strategies have the greatest likelihood of producing substantial energy savings. It should also allow the Company to begin serious examination of the conservation potential among its commercial and industrial customers. (Since NMU has not consistently been a CIP utility, the Company is just beginning to address conservation in the commercial/industrial sector.)

The Commission will require the Company to develop a new project based on the end-use inefficiency data for inclusion in its 1990-91 annual CIP filing. The Commission will also require the Company to explain in the filing its reasons for selecting the customer class(es) the project will serve, and to relate that decision to the end-use inefficiency data.

Project Evaluations and Future Annual Filings to Contain Greater Detail -- Under Minn. Rules, part 7840.0500, item J., CIP utilities must include in their annual filings outlines of proposed plans for evaluating the effectiveness of all proposed projects. The outline submitted by NMU was not sufficiently detailed. For effective evaluation of Company projects, the Commission believes the Company's evaluations of its projects should also include the following items:

- a. project description and objectives;
- b. projected and actual participation levels;

- c. projected and actual numbers of low income and rental households served;
- d. actual dollar expenditures compared to total projected budget;
- e. the number of conservation improvements completed;
- f. an analysis of project impact on peak and average consumption, and of consumption changes for individual participants;
- g. a discussion of unanticipated barriers to participation and strategies to remove such barriers;
- h. a discussion of any unforeseen project problems or project changes.

The Company should also include the above items in future annual CIP filings, in its outline of proposed plans for evaluating the effectiveness of its CIP projects.

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. Northern Minnesota Utilities' CIP fares well when evaluated in light of these criteria.

The Company's program demonstrates an integrated, broad-based approach to delivering conservation services. Two projects, the Residential Conservation Service Project and the Furnace Tune-up Project, are multi-year projects designed to offer basic conservation services to every residential customer over the course of the projects. Clearly, providing fundamental conservation education and basic services to all before focusing on specialized needs is a sound strategy for a utility reinstating a Conservation Improvement Program. Since the program is designed to reach all the Company's residential customers, it is obviously also geographically balanced, another consideration required under the rule.

To date, the Company's Conservation Improvement Program has focused solely on the residential customer class. This is a concern, since both the rule and Commission practice encourage companies to develop programs which include diverse customer classes. The residential customer class is a logical starting point, however, for utilities which are just beginning CIP programs, or for utilities, such as NMU, which have not consistently been CIP utilities.

Residential customers have substantial conservation potential and typically lack the incentive, resources, and expertise to carry out effective conservation measures on their own. Addressing their conservation needs before those of commercial and industrial customers, for whom conservation is likely to be a business priority, is reasonable. Furthermore, residential conservation projects may be easier to develop and administer than commercial/industrial projects. Workable conservation strategies do not vary from one residential customer to another as much as from one business customer to another. Finally, the Company now has the benefit of end-use inefficiency data, which will enable it to address commercial/industrial conservation in the same comprehensive manner it has addressed residential conservation in the past. Under these circumstances, the limitation of this year's CIP to residential customers does not require Commission action.

The Company's program will deliver valuable conservation services to approximately 2,507 households. Roughly 13% of the Company's residential customers will receive direct conservation benefits. Annual energy savings are projected at approximately 13,287 MCF. Clearly, the program will make a meaningful contribution to energy conservation in Minnesota. Also, total projected CIP expenditures of \$182,410 are reasonable in relation to Company revenues, constituting approximately .5% of the Company's 1988 gross revenues.

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 "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 NMU's CIP makes adequate provision for the special needs of renters and low income households.

Of the Company's four projects, one, the Conservation Grant Program Project, serves only low income people. The project is designed to overcome barriers traditionally associated with providing services to low income people; it provides services free of charge and is administered by non-profit organizations with close ties to the low income community. Another project, the Home Energy Check-up Project, serves customers at all income levels. CIP funding, however, goes exclusively for services provided to low and moderate income participants. Services to other participants are funded through another state program. Such leveraging of CIP funds can be an especially effective tool for broadening participation in the CIP program and serving larger numbers of low income and rental households.

The Company anticipates that 10.4% of all participants in its 1989-90 CIP program will be low income persons and that 5.8% will be renters. 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. Gas utilities have therefore been operating Conservation Improvement Programs while working with the Department, Commission staff, and one another to refine useful cost-effectiveness models. This consultative process is now substantially complete.

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 NMU'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:

Residential Conservation Service Audit	\$ 8,640	
Furnace Tune-up		93,250
Conservation Grant Program	59,000	
Home Energy Check-up		<u>21,520</u>
TOTAL		\$182,410

2. When submitting evaluations of projects approved herein, the Company shall include the following information in addition to that proposed in the project evaluation plan in its May 1 filing:
 - a. project description and objectives;
 - b. projected and actual participation levels;
 - c. projected and actual numbers of low income and rental households served;
 - d. actual dollar expenditures compared to total projected budget;
 - e. the number of conservation improvements completed;
 - f. an analysis of project impact on peak and average consumption, and of consumption changes for individual participants;
 - g. a discussion of unanticipated barriers to participation and strategies to remove such barriers;
 - h. a discussion of any unforeseen project problems or project changes.
3. In future annual filings, the Company shall include the items listed in paragraph 2 in the outline of its proposed plan for evaluating the effectiveness of its proposed projects.
- 4.4 The end-use inefficiency data filed by the Company pursuant to the Commission's Order of September 29, 1988 in docket number G-007/M-88-259 is accepted as in compliance with the terms of that Order.
5. 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.
6. 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.
7. The Company shall develop a new project based on the end-use inefficiency data collected pursuant to the Commission's Order of September 29, 1988 in docket number G-007/M-88-259. The Company shall include that project in its 1990-91 annual CIP filing, shall explain in the filing its reasons for selecting the customer class(es) the project will serve, and shall relate that decision to the end-use inefficiency data.
8. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Mary Ellen Hennen
Executive Secretary

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