

G-011/M-89-190 ESTABLISHING CONSERVATION IMPROVEMENT PROGRAM AND
REQUIRING ADDITIONAL 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 an Energy Conservation Program for Peoples Natural Gas Company, a Division of UtiliCorp United, Inc.

ISSUE DATE: September 12, 1989

DOCKET NO. G-011/M-89-190

ORDER ESTABLISHING
CONSERVATION IMPROVEMENT
PROGRAM AND REQUIRING
ADDITIONAL FILINGS

PROCEDURAL HISTORY

On May 1, 1989 Peoples Natural Gas Company (Peoples 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 eleven individual CIP projects during the 1989-90 CIP year, at a total CIP budget of \$134,280.

The Department of Public Service (the Department) filed comments on the Company's proposal on May 31, 1989. The Department recommended approving all the proposed projects, increasing the budget of the Commercial Business Tune-up Project by \$8,600, and upgrading the energy efficiency standards for replacement water heaters in two residential projects.

No other party commented on the Company's filing.

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 eleven projects, which are described below.

CANNON FALLS ENERGY EFFICIENCY PROJECT -- This project will be conducted in conjunction with the Cannon Falls Community Energy Council and will offer free Residential Energy Retrofits to customers in Cannon Falls. The Residential Energy Retrofit is a combination of services traditionally associated with Home Energy Check-up and House Doctor projects. The Home Energy Check-up portion of the project consists of a home energy audit; the House Doctor portion consists of the installation of air filtration reduction materials and water heater blankets.

This project was scheduled to end with the current CIP year, but is being continued at the request of the City of Cannon Falls due to continuing demand. The Company anticipates 75 participants, of whom 25% to 30% are expected to be low income people, senior citizens, disabled persons, or renters. Participants are expected to realize an average reduction in heating costs of 5% to 10%. The Company proposes a \$7,090 budget.

ROCHESTER ENERGY WELLNESS PROJECT -- This project is a cooperative effort between the Company and the City of Rochester. The project will offer home energy audits to all customers in the City of Rochester for a \$10 fee. It will also offer free energy audits and free weatherization kits to senior citizens and disabled persons. The Company anticipates 50 participants in the audit portion of the project and 100 in the weatherization portion. Average gas savings are estimated at 5% per household, and the total budget for the project is \$8,510.

LA CRESCENT PROJECT -- This project will be conducted in conjunction with the La Crescent Community Energy Council and will offer free home energy audits and weatherization services to all customers in LaCrescent. The basic services provided under this project will be the same as those provided under the Cannon Falls Energy Efficiency Project. This project, however, will also offer an additional \$100 worth of weatherization materials to customers who are low income, senior citizens, or disabled.

Participation is estimated at 100 households in the main portion of the project and 25 in the portion where eligibility is limited. The Company estimates that 15% of project participants will be renters. Gas consumption reductions of 5% to 10% are expected from the main portion of the project and 10% to 20% for households participating in both portions. The proposed budget is \$18,900.

LAKEFIELD HOME ENERGY AWARENESS TRAINING PROJECT -- This project will be

conducted in conjunction with the Lakefield Energy Commission and the Western Community Action Council, Inc. It will offer free Home Energy Check-ups and weatherization services to all customers in Lakefield. The sponsors intend to make special efforts to market the project among low income customers, renters, senior citizens, and disabled persons, and anticipate that 40-45% of the participants will be members of these groups. The Company has budgeted \$6,300 and intends to provide services to 100 households. Participants are expected to reduce their gas usage by 2% to 8%.

COMMERCIAL BUSINESS TUNE-UP PROJECT -- This project will offer free energy audits to commercial customers who use natural gas to meet at least 75% of their space heating needs and who use 20% or less of their total energy usage to operate processing equipment. Audits will be performed by state-certified auditors with specialized training and experience in commercial energy usage. Auditors will review their findings and recommendations with participants both orally and in written reports.

The project will be offered in limited geographical areas to assure prompt responses to audit requests and to allow the Company to gain some experience with the project under controlled conditions. The Company will determine where the project should be offered on the basis of recommendations by its District Managers and the results of a commercial customer survey conducted in 1987.

The Company intends to perform 50 audits, estimates average gas savings between 10% and 15%, and has budgeted \$7,880 for the project.

COMMERCIAL NON-PROFIT PROJECT -- This project is designed to provide free comprehensive conservation services to non-profit organizations in the communities Peoples serves. Services will include furnace cleanings, tune-ups, and efficiency modifications, weatherization services, and replacement of furnaces and water heaters which fail to meet minimum efficiency standards. Total expenditures per participant will generally be limited to \$1,500. For individual conservation projects with costs exceeding \$1,500, the Company will consider granting additional funds on a matching dollar for dollar basis, as the project budget allows.

The Company has budgeted \$10,500 for the project and estimates that gas savings will range from 10% to 20% per participant.

DETROIT LAKES NORTHSIDE NEIGHBORHOOD IMPROVEMENT PROJECT -- This project was developed at the request of the City of Detroit Lakes. The City plans to rehabilitate 50 to 70 older homes, all belonging to low income persons or senior citizens, as part of its community redevelopment plan. Funding is not available to replace the water heaters in these homes. The Company has agreed to provide new, energy-efficient gas water heaters for 25 homes. Participating homes must currently have gas water heaters. Water heaters purchased with project funds would have energy efficiency ratings exceeding those of standard water heaters by at least 10%.

The Company believes the new water heaters would reduce participants' water heating gas usage by

10% to 20%. The proposed budget is \$3,940.

DODGE CENTER COMMUNITY ENERGY PROJECT -- This project, to be offered in conjunction with the Dodge Center Energy Council, will serve both residential and commercial customers in Dodge Center.

The residential portion of the project will provide Home Energy Check-ups, conservation education, and basic weatherization services to all participants. Renters, low income persons, disabled persons, and senior citizens will receive additional services and materials, such as rim joist insulation, water heater blankets, and more extensive air filtration reduction measures. All services will be provided free of charge. The Company expects 80 participants, of whom 20 are expected to be low income persons, renters, senior citizens, or disabled persons.

Participants are expected to realize energy savings of 3% to 7%, or 5% to 10%, depending upon whether they receive the additional services available to low income persons, renters, senior citizens, and disabled persons.

The commercial portion of the project will provide the same services provided under the Commercial Business Tune-up Project, and will provide them free of charge. Participants' gas savings should average 10% to 15%. The Company anticipates eight participants.

The proposed budget for the entire project is \$7,560.

FRAZEE COMMUNITY ENERGY CONSERVATION PROJECT -- This project was developed in cooperation with Otter Tail Power Company and the Perham/New York Mills/Frazees Community Energy Council. The project will provide comprehensive energy services to residential and commercial customers in Frazee. (The project is part of the larger Perham/New York Mills/Frazees Community Energy Conservation Project, which will also provide services to the other two communities, which are not in Peoples' service area.)

The residential portion of the project will provide an energy audit, a furnace efficiency test, and weatherization services free of charge. The Company expects 132 participants, approximately 12 of them renters. The Company estimates that 30% to 40% of project participants will be low income persons, senior citizens, disabled persons, or renters. Estimated annual gas savings are 5% to 10%.

The commercial portion of the project will provide the same services provided under the Commercial Business Tune-up Project, free of charge. The Company anticipates 8 commercial participants, who can expect annual energy savings between 10% and 15%.

The total budget for the Frazee project is set at \$9,680.

HARMONY COMMUNITY ENERGY PROJECT -- This project will be offered in conjunction

with the Energy Task Force of the Harmony Economic Development Commission. The project will provide home energy audits and basic weatherization services free of charge to all residential customers in Harmony. Senior citizens, renters, low income persons, and disabled persons can also choose to receive more extensive weatherization materials and services, such as water heater blankets, rim joist insulation, and furnace and water heater efficiency tests.

Residential participants are expected to realize heating bill reductions of 3% to 7% or 5% to 10%, depending upon whether they received services under the more extensive portion of the project. The Company expects 80 residential participants, of whom approximately 30 will be renters, low income persons, senior citizens, or disabled persons.

The commercial portion of the project will provide free of charge the services available under the Commercial Business Tune-up Project. The Company expects 8 participants, who should realize gas savings of 10% to 15%.

The proposed budget for the Harmony project is \$11,870.

COMMUNITY ACTION PROGRAM AGENCY ENERGY CONSERVATION PROJECT --

This project will provide comprehensive energy services to low income customers through the Community Action Program (CAP) agencies in Peoples' service area. The project will have three components: heating system services, water heater replacement, and weatherization services. All services will be provided free of charge.

The heating system component of the project will include furnace inspection, cleaning, tune-up, and the installation of any conservation modifications recommended by the inspector. Project funds will pay up to \$250 per participant for services and materials provided under this component of the project.

In the water heater replacement component of the project, inefficient water heaters would be replaced by new ones with energy efficiency ratings exceeding those of standard units by at least 10%. CIP funds would pay up to \$150 per participant under this portion of the project.

The weatherization portion of the project would provide up to \$600 for weatherization materials and services. Covered conservation measures would include measures such as attic insulation, rim joist insulation, foundation insulation, and replacing storm windows and doors.

The project will be administered by the Community Action Program agencies, who will locate supplementary funding sources for those participants whose conservation needs cannot be met by the amounts available under the CIP project. The Company anticipates 40 participants and has budgeted \$42,000 for the project. Participants are expected to realize gas consumption savings averaging 20%.

III. Commission Action

Replacement Water Heaters to Meet Federal Standards -- The Company proposed that the efficiency ratings of replacement water heaters provided under the Detroit Lakes Northside Neighborhood Improvement Project and the Community Action Program Agency Energy Conservation Project exceed those of standard water heaters by at least 10%. To ensure a high and uniform standard, the Company has agreed instead to require replacement water heaters to exceed the minimum energy efficiency standards of the National Appliance Energy Conservation Act of 1987 by at least 10%.

Commercial Business Tune-up Project Budget Increased -- The Department expressed concern that Peoples' 1989-90 CIP budget reflects a decrease in the Company's expenditures for commercial conservation. The Commission shares this concern and will require a \$8,500 increase in the budget for the Commercial Business Tune-up Project. This increase will bring the number of commercial audits funded under the project to 104.

The Commission appreciates the Company's desire to gain some experience with the project before making it widely available, but does not believe this increase will render the project unmanageable. The Company's Commercial Non-Profit Project, which offers similar services, has been popular and successful, and commercial customers surveyed regarding the Commercial Business Tune-up Project have expressed a great deal of interest. Furthermore, the Commercial Business Tune-up appears to be the most cost-effective of the Company's projects. Under these circumstances, the Commission considers it appropriate to require a greater financial commitment to the project than was originally proposed by the Company.

Moorhead State Project to be Finalized -- In the Order establishing the Company's 1988-89 Conservation Improvement Program, the Commission required the Company to work with an institution of higher learning in its service area to develop a new CIP Project. In the Matter of the Implementation of an Energy Conservation Program for Peoples Natural Gas Company, a Division of UtiliCorp United, Inc., ORDER APPROVING CONSERVATION IMPROVEMENT PROGRAM, REQUIRING ADDITIONAL FILINGS, AND REQUIRING ADDITIONAL PROJECT, (September 28, 1988), at 5 and 8. The Company has been working with Moorhead State University, which offers a degree program in Energy Management, and reports that a project proposal should be ready for filing soon.

The Commission will require that the Company file such a project on or before October 31, 1989. In addition to providing the new project information required under Commission rules, the Company should also itemize expenses incurred to date in connection with the development of the project.

Interim Status Reports to be Filed; Interim Status Report Form to be Used for all Status Reports -- To fulfill its responsibility for ongoing review of the Company's CIP efforts, the Commission will require interim status reports on all projects approved herein on or before January 17, 1990. The Commission would also ask the Company to use its interim status report format for all status reports filed with the Commission. The status reports filed in May used an abbreviated format which was not as informative. It would facilitate Commission review to receive all reports in the longer format.

Status Report on West Concord CARE Project Required -- The Company's status report on the West Concord CARE Project submitted with its May 1 filing was incomplete. This was apparently due to administrative difficulties outside the Company's control. It is important, however, for full documentation of project participation levels, conservation improvements completed, and similar items to be submitted. The Commission will require a full status report on the West Concord CARE Project to be submitted with the interim status reports in January of 1990.

Report on Energy Consumption Database Required -- In the past, Peoples has had some difficulty determining energy savings attributable to its CIP projects due to limitations in its recordkeeping capabilities. The Company has therefore been working with the Department to develop a comprehensive database which will allow comparison of CIP participants' energy usage before and after their participation, and which will not be skewed by weather-related usage variations.

The Company reported in its May 1 filing that the database was nearly completed. The Commission urges the Company to continue its collaboration with the Department on this project and will require a complete report on the database with the interim status report filing in January.

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. Peoples' CIP fares well when evaluated in light of these criteria.

The Company's program demonstrates a community-based approach to conservation. The majority of its projects are conducted in cooperation with community groups, and two projects, the Detroit Lakes project and the Cannon Falls project, are the result of direct requests from municipalities the utility serves. These strong ties with the community are one of the program's strengths.

Another strength of the program is the thoroughness with which it addresses the conservation needs of the geographical areas designated to receive services. Peoples' projects typically offer basic conservation services to all residents in the communities in which the projects operate. Such inclusiveness can hardly fail to increase conservation awareness in project communities.

The Company's program is geographically balanced and includes diverse customer classes, as encouraged by the rule and Commission practice. The program provides a wide variety of conservation services. The comprehensive database, soon to be employed, will give the Company a valuable tool for evaluating the energy savings and cost-effectiveness of its projects.

The Company's program will deliver valuable conservation services to approximately 807 households, 74 businesses, and 6 non-profit organizations. Roughly .9% of the Company's customers will receive direct conservation benefits. Annual energy savings are projected at 10,129 MCF. Total projected CIP expenditures, not counting the Moorhead State University Project yet to be developed, constitute a reasonable .13% of the Company's 1988 gross revenues. The Company's program will clearly 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 "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 Peoples' CIP makes adequate provision for the special needs of renters and low income households.

Five of the Company's eleven projects either focus exclusively on low income customers and renters or have a separate component addressing their special needs. Furthermore, the Company anticipates high participation rates by low income and rental households even in those projects not specifically targeted toward them. The Company anticipates that 35% of all participants in its 1989-90 CIP program will be low income or rental households. This is apparently due both to the Company's marketing strategy and to the fact that services under most of the projects are provided free of charge or at very low cost.

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 Peoples' 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:

Cannon Falls Energy Efficiency	\$ 7,090	
Rochester Energy Efficiency	8,030	
La Crescent	18,900	
Lakefield Home Energy Awareness Training	6,300	
Commercial Business Tune-up	16,380	
Commercial Non-Profit	10,500	
Detroit Lakes Neighborhood Improvement	3,940	
Dodge Center Community Energy	7,560	
Frazee Community Energy Conservation	9,680	
Harmony Community Energy		11,870
CAP Agency Energy Conservation	<u>42,000</u>	
 TOTAL		 \$142,250

2. On or before September 20, 1989 the Company shall file a plan to require replacement water heaters provided under the Detroit Lakes Northside Neighborhood Improvement Project and the Community Action Agency Program Energy Conservation Project to exceed the minimum energy efficiency standards of the National Appliance Energy Conservation Act of 1987 by at least 10%.
3. 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.
4. On or before October 31, 1989 the Company shall file a proposed project to be conducted in cooperation with the Energy Management Department of Moorhead State University. At the

same time, the Company shall file an itemization of all expenses incurred to date in connection with the development of that project.

5. On or before January 17, 1990 the Company shall file interim status reports on all projects approved herein. Those reports shall contain at least the following information:
 - a. projected and actual participation levels;
 - b. projected and actual numbers of low income and rental households served;
 - c. actual dollar expenditures compared to total projected budget;
 - d. the number of conservation improvements completed;
 - e. an analysis of project impact on peak and average consumption, and of consumption changes for individual participants;
 - f. a discussion of unanticipated barriers to participation and strategies to remove such barriers;
 - g. a discussion of any unforeseen project problems or project changes.
 - h. an interim evaluation for each continuing project which will have been in effect for more than one year.
6. In the future, the Company shall use its interim status report format for all status reports filed with the Commission.
7. On or before January 17, 1990 the Company shall file a complete status report on its West Concord CARE Project.
8. On or before January 17, 1990 the Company shall file a detailed report on the operation of its energy consumption database.
9. 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.
10. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Mary Ellen Hennen
Executive Secretary

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