Evaluation Report Summary

OFFICE OF THE LEGISLATIVE AUDITOR

STATE OF MINNESOTA

Energy Conservation Improvement Program

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The Conservation Improvement Program (CIP) is cost effective.

Major Findings

- The benefits of the Conservation Improvement Program (CIP) are greater than its costs, and the program has the potential to provide cost-effective energy conservation in the future.
- On balance, the methods and assumptions used by investor-owned utilities to calculate the benefits and costs of their 2003 conservation activities tended to understate CIP's cost effectiveness.
- While cost-effective energy conservation is a primary goal of CIP, some Minnesota laws, rules, and procedures reduce the cost-effectiveness of the program to achieve a desired distribution of program benefits.
- Utilities, low-income advocates, environmental groups, and the Department of Commerce have concerns about how conservation projects for low-income households are being carried out and evaluated.
- The Department of Commerce conducts relatively thorough reviews of investor-owned utilities' conservation plans and activities, but the review process has some deficiencies.
- A Department of Commerce policy that limits communication within the department about CIP plans makes the department's review process inefficient and creates confusion.

Key Recommendations

- The Legislature should give the Department of Commerce the authority to switch CIP from a two-year to a four-year program, and the department should increase the level of scrutiny that each CIP plan receives.
- The Department of Commerce should work with the investor- owned utilities to eliminate the problems in the methodologies and assumptions that the utilities use to estimate CIP's benefits and costs.
- The Department of Commmerce should submit to the 2006 Legislature a plan for improving the performance, evaluation, and oversight of CIP projects for low-income households.
- The Department of Commerce should eliminate the restriction on communication within the department about CIP.

Minnesota utilities annually spend roughly $91 million on CIP projects.

Report Summary

Under the Conservation Improvement Program (CIP), state law mandates that energy utilities dedicate a portion of their revenues for projects that will reduce the consumption of electricity and natural gas. The utilities collect these additional funds by adding an adjustment or surcharge to the electric and natural gas rates that they charge their customers. The utilities use the conservation funds primarily to provide their customers with rebates and other financial incentives to purchase energy-efficient products, such as furnaces, refrigerators, air compressors, and motors. The utilities also use CIP funding for home energy audits, consumer education, and research & development. In 2003, investor-owned utilities spent approximately $65 million carrying out CIP, while municipal and cooperative utilities spent roughly $26 million.

While the Department of Commerce oversees the CIP activities of both investor-owned and municipal/cooperative utilities, the department only has the authority to order changes in the conservation programs of the investor-owned utilities. The department's oversight of municipal and cooperative utilities is only advisory. Our evaluation focused primarily on the CIP requirements and activities of the investor-owned utilities. As a group, these utilities dominate CIP and are the focus of the department's oversight efforts.

The Department of Commerce oversees the investor-owned utilities' conservation activities by reviewing biennial CIP plans, plan modifications, and annual status reports that the utilities file with the department. In these reviews, the department ensures that the utilities are meeting their program requirements. One of the key factors that the department examines is the cost-effectiveness of the utilities' conservation efforts.

In 2003, the Legislature debated whether to reallocate some CIP funding from conservation to renewable energy projects. During the debate, the Department of Commerce told the Legislature that CIP's benefits were seven times greater than its costs. However, some legislators have questioned the accuracy of this figure because they had seen benefit-cost ratios closer to two-to-one or three-to-one. In addition, they had heard that CIP has probably become less effective over time as the program funds the most cost-effective projects and leaves the less effective projects for the future. Consequently, they wondered how much longer CIP will be cost-effective and whether the state should change the program. To address these issues, the Legislature Audit Commission, at the request of the Department of Commerce, directed the Office of the Legislative Auditor to carry out an independent evaluation of CIP.

CIP is Cost-Effective

Analyses carried out by Minnesota's investor-owned utilities indicate that CIP's societal benefits were two or three times greater than its costs in 2003. The seven-to-one ratio reported by the Department of Commerce during the 2003 legislative session was based on benefits and costs from a utility perspective rather than a societal one. If the department had reported benefit-cost figures from both the societal and utility perspectives, the confusion would have been avoided.

While the benefit-cost figures reported by the investor-owned utilities show that CIP is cost effective, we found several problems in the methodologies and assumptions that they used in these calculations. However, on balance, these problems tended to understate the cost effectiveness of CIP's 2003 projects and do not undermine the overall conclusion that CIP is cost effective. For example, if the investor-owned natural gas utilities had used up-to-date gas prices to assess their 2003 projects, their benefit-cost ratios would have been about 48 percent higher. Not all the estimation problems were the fault of the utilities. In some cases, the Department of Commerce required the utilities to use an assumption that created an estimation problem. In the case of gas prices, the department required the utilities to use 2002 prices rather than current prices.

The Department of Commerce should make sure that the investor-owned utilities use appropriate and consistent methods and assumptions. In some cases, this will involve improving the assumptions and methods established by the utilities. In other cases, the department needs to improve the methods and assumptions that it establishes.

Minnesota Has More Opportunities for Cost-Effective Conservation

CIP should continue to provide Minnesota with cost-effective conservation into the future. Over the last several years, the effectiveness of CIP has not declined much, if at all, with its societal benefit-cost ratios remaining in the range of two-to-one or three-to-one. In addition, studies carried out by three of Minnesota's investor-owned utilities indicate that, in 5 to 20 years, cost-effective conservation will have the potential to reduce the state's energy needs by between 10 and 30 percent.

State laws, rules, and procedures reduce the cost-effectiveness of CIP.

CIP Can Be Improved

Although CIP is cost-effective, it has requirements and procedures that reduce its effectiveness. For example, the Department of Commerce expects investor-owned utilities to carry out conservation projects for a broad range of customers, including commercial, industrial, and residential. However, conservation projects for residential customers are generally less cost-effective than projects for commercial and industrial customers. If the utilities carried out CIP to maximize the net benefit to society as a whole, they would devote all or most of the program funding to the commercial and industrial projects. While this distributional provision reduces the overall cost-effectiveness of CIP, it ensures that all types of customers who pay into the program have adequate access to the program's benefits. If the Legislature considers eliminating this provision, it needs to weigh its advantages against its disadvantages.

Utilities, environmentalists, low-income advocates, and the Department of Commerce have concerns about how CIP's low-income projects are operating. State law requires utilities to devote a portion of their CIP funding to conservation projects that assist low-income households. However, as measured in 2003, these projects were generally not cost effective. According to some stakeholders, the agencies that carry out these low-income conservation projects could do a better job selecting projects and houses. Others contend that that the current methodology for measuring cost-effectiveness is inadequate. For example, the model does not include the utilities' benefits of lower bill collection costs and payment arrears and the broader societal benefits of greater housing stability. We recommend that the department submit a plan to the 2006 Legislature for addressing these issues and improving the performance of the low-income CIP projects.

The Department of Commerce also needs to be more efficient and thorough in reviewing the investor- owned utilities' CIP activities. According to the utilities, the current review process can be burdensome because it requires them to file hundreds of pages of documents every two years and often to respond to more than a dozen additional information requests. Even with all this information, the department's review process has deficiencies. For example, the department does not have a copy of the model/software package that the investor-owned electric utilities use to estimate the benefits and costs of CIP. Thus, the department has a limited understanding of how these estimates are derived. We recommend that the Legislature give the Department of Commerce the authority to switch CIP

The Department of Commerce needs to be more efficient and thorough in reviewing the utilities' CIP plans.

from a two-year to a four-year program, which would allow the utilities to file CIP plans every four years rather than every two years. We also recommend that the department use the time and resources saved by reviewing fewer plans each year to review the plans more thoroughly. Because switching from a two-year program to a four-year program will substantially change the review process, the department should make the change gradually and test the longer filing cycle with one or two utilities first.

Finally, the Department of Commerce has a policy that restricts communication between its policy staff and analysts. When a CIP plan from an investor-owned utility is being reviewed, the two sides have traditionally only communicated through public documents. The restriction is intended to keep the department's review process impartial and open. While the policy staff (which includes the Commissioner and Deputy Commissioner) makes the department's final decisions about the investor-owned utilities' CIP plans, the analysts evaluate the utilities' plans and make recommendations to the policy staff. Consequently, some people see the analysts as another advocacy group, similar to the utilities, environmental groups, low-income advocates, and business organizations.

However, we recommend that the Department of Commerce eliminate the communication restriction because it makes the department's review process inefficient and creates confusion. The restriction makes the department go through two discovery processes with the policy staff and analysts separately learning about each utility's CIP plan. Furthermore, the restriction limits the access that the Commissioner and the Deputy Commissioner, who are the department's final decision makers, have with their analysts. Within the department, the analysts have the greatest understanding of the CIP plans and conservation issues. Finally, eliminating the restrictions should not harm the public interest. In their recommendations, the analysts "advocate" for the investor-owned utilities to meet the program's requirements and for CIP to increase the net benefits of all Minnesotans combined, not the benefits of one particular segment of society.

The full evaluation report, *Energy Conservation Improvement Program* (#pe05-04), includes the agency's response and is available at 651/296-4708 or:

www.auditor.leg.state.mn.us/ped/2005/pe0504.htm

Summary of Agency Response:

In a letter dated January 14, 2005, Deputy Commissioner of Commerce Edward Garvey wrote, "The Department appreciates the thorough and insightful evaluation of the Conservation Improvement Program (CIP) undertaken by the Office of the Legislative Auditor . . .The report identifies many areas that deserve our attention. The Department has already begun addressing many of them; some we shall begin addressing soon; and others we will have to thoroughly examine to ensure that the benefits of any changes outweigh any potential costs."