

**THE ECONOMIC SIGNIFICANCE  
OF THE  
POWER COST  
EQUALIZATION PROGRAM**

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PREPARED FOR  
**THE POWER COST EQUALIZATION  
BLUE RIBBON PANEL**

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## **EXECUTIVE SUMMARY**

### **WHAT IS THE PROGRAM ?**

In FY 1996 the Power Cost Equalization (PCE) Program provided \$19.202 million of financial assistance to electric utilities in 190 rural Alaska communities where the cost of electric power is greater than urban Alaska because of small market size, dependence on expensive fuel oil for generation, and the high cost of doing business in remote areas.

The PCE program is designed to pay a portion, currently 95 percent, of the legitimate electric generation costs between a floor and a ceiling, for a basic level of electric service for residential and commercial customers (including public schools) and community facilities. The floor is set at a level equal to the cost for electricity generation in urban areas, 9.5 cents in 1996, and the ceiling is set at the level of reasonable maximum cost for a small utility, 52.5 cents. In recent years PCE budget restrictions have kept payments to eligible utilities below 95 percent of legitimate costs.

Thus rural utility customers pay at least as much as urban consumers for their electricity, but a portion of the extra cost of generation is covered by the PCE program. Furthermore only the first 700 kwh per month of use by each residential or commercial customer is eligible for the program, and only 70 kwh per month for each community member for community facilities is eligible. As a result, only 38 percent of all electricity sold in PCE communities in 1996 qualified for assistance. In addition only legitimate costs are covered, as determined by Alaska Public Utilities Commission (APUC).

### **WHO DOES IT SERVE ?**

The typical (median) community served by PCE has a population of 264. Bethel, with a population of 5,195, is the largest, and only 8 other communities (Unalaska, Nome, Kotzebue, Cordova, Dillingham, Craig, Naknek, and Haines) have a population greater than 1,000. The total population served is 75,767.

The assistance provided to the utilities is primarily targeted toward residential customers in the PCE communities. The average income of PCE households is \$49,825 compared to \$65,054 for non PCE communities. (Although the average income in the typical PCE community is considerably less, \$35,203, because average incomes are higher in the larger PCE communities.) The unemployment rate among PCE households is 15 percent compared to 8 percent for non PCE communities. 18 percent of families in PCE communities have incomes below the poverty level compared to 6 percent in non PCE communities.

The typical PCE utility generates about 652,000 kwh annually, about the amount that Chugach Electric Association, the largest electric utility in the state, sells in a typical 6 hour period. The 9 largest utilities that serve the communities of greater than 1,000 population account for just over 50 percent of the generation of all the PCE utilities which in 1996 totaled 369 million kwh. The cost of electricity provided by the typical PCE utility is \$.42 per kwh. This is the amount per kwh the residential customer would need to pay to cover all costs of production. Because of differences in size and location, some utilities have a lower cost, although none are as low as Anchorage where the average cost is about \$.10 per kwh. At the other extreme some utilities report an average cost in excess of \$.60 per kwh.

## **WHAT BENEFIT DOES IT PROVIDE ?**

The typical community gets \$71 thousand per year in financial assistance through the PCE program, and this covers about 31 percent of the total costs of providing electricity.

About 68 percent of the total, \$13.092 million, in FY 1996 supported sales to residential customers. Financial assistance under the PCE program reduces each eligible kwh of electricity to residential customers by an average of \$.22. (87 percent of residential sales are eligible for PCE.) Residential customers in PCE communities still pay twice the urban average for electricity after the PCE assistance--\$.20 for the average kwh. This is because not all consumption is eligible, not all reported costs are approved by the APUC, the program pays only 95% of legitimate costs between the floor and the ceiling, some utilities have costs above the ceiling, and the program has not been fully funded in recent years. The range of residential rates after application of the PCE assistance is from \$.10 to \$.35 per kwh.

Because of the high cost of electricity, even with PCE assistance, and the low household income, the average residential customer in the PCE communities uses 4,933 kwh of electricity in a year, about 65 percent as much as the typical customer in Anchorage, who uses 7,619. (The average in the typical PCE community is less, 3,921 kwh per year, because average consumption is higher in the larger PCE communities.)

In spite of lower consumption, residential monthly bills are higher in PCE communities, even with PCE. The average residential customer of a PCE utility has a monthly bill of \$75, after receiving assistance, compared to \$61 for Anchorage. (The average in the typical PCE community

is less, \$66, because average consumption is higher in the larger PCE communities.) Without PCE the monthly bill would have been \$121.

If the PCE residential customer used as much electricity as the average household in Anchorage, the typical utility average monthly residential bill would be \$125 with PCE. In the absence of PCE the monthly bill at the Anchorage rate of use with all utility costs paid by the customer would be \$264, 433 percent of the Anchorage bill.

About 19 percent of PCE assistance, \$3.683 million in FY 1996, went to support electricity use in community facilities in PCE communities--an average of \$2,537 per facility per year. This assistance reduced the cost of 98 percent of the electricity used for this purpose. Since local residents bear the cost of electricity used by these facilities, the savings for the average PCE household from this assistance was \$158 per year.

The remaining 13 percent of PCE assistance, \$2.407 million in FY 1996, helped pay for about 10 percent of the electricity used by the commercial sector, including the public schools.

#### **WHAT WOULD HAPPEN IF PCE DISAPPEARED ?**

The typical PCE utility receives about \$71 thousand of PCE financial assistance annually which accounts for about 31 percent of the total cost of the providing electricity to the community. Elimination of that assistance would put many small utilities at financial risk and require electricity users to pay substantially higher electricity bills at the same time that it reduced the amount of electricity they used.

Without PCE the utilities would be forced to raise their rates substantially, and the resulting drop in sales would require further rate increases to generate sufficient revenues to cover all costs. Although reduced sales would lower costs because less fuel would be needed, a large share of utility costs are fixed. This results in the potential for a utility to fall into a "death spiral", in which continuously rising rates are never able to generate enough revenue to cover costs. A utility caught in a death spiral cannot survive without an external source of financial assistance.

The likelihood that a utility would fall into a death spiral is a function of how sensitive electricity sales are to the higher electricity prices necessitated by the elimination of PCE. If a doubling of the price paid by customers reduced sales by 20 percent, death spirals would be unlikely. But if a doubling of the price reduce sales by 30 percent, utilities in half the communities served by PCE would be unable to cover their costs through higher rates.

The burden of the loss of PCE financial assistance to utilities would fall primarily on the residents of the communities currently served by PCE. This burden would be a combination of higher electricity bills and less electricity use. Customers would be spending more for less

electricity and have less income available for other needs. For a representative community like Elim, the residential price of electricity would increase 190 percent--from \$.19 to \$.55. Average annual consumption would fall by 38 percent--from 4,202 to 2,608 kwh. The average monthly residential bill would increase by 80 percent--from \$66 to \$119. Without PCE the average residential customer would be devoting 4.4 percent of household income directly to paying for electricity. Including payments in support of community facility electricity use, 6.1 percent of household income would be devoted to payments for electricity.

Most of the remaining financial burden of the loss of PCE would fall on commercial users of electricity, and the higher costs imposed on them would be passed on to customers as higher prices and back onto workers as lower wages. Some of the burden would thus fall on local residents and some would be shifted outside the PCE communities. Since the public schools are included in this category for purposes of PCE, some of the burden, estimated at about \$1.406 million would fall on the state treasury.

The remainder of the financial burden would fall on state and federal government agencies operating in PCE communities. These government agencies do not qualify for PCE assistance so the rate they are charged covers the full cost of providing their electricity. However since elimination of PCE combined with reduced sales would drive up the average cost of electricity for the PCE utilities, the rates charged to all customer classes would rise. State government agencies would pay about \$.290 million in additional charges for electricity.

In addition to the quantifiable direct financial burden on local residents, utilities, and state government from the elimination of the PCE program, there are indirect burdens both for the PCE communities and for the state.

The public and private physical infrastructure necessary to deliver the educational, sanitation, health, transportation, and communication services to sustain rural Alaska communities, and enhance their opportunities for economic development, depends directly on the availability of a reliable and affordable source of electricity. Furthermore there are some special uses of electricity in rural areas that enhance the quality of life in ways urban residents often overlook, such as refrigeration for preserving subsistence harvested food and streetlights for additional safety during the long hours without sunlight in the winter.

The state which has paid for much of the investment in the public infrastructure in rural Alaska also has an interest in its continued ability to provide the services to sustain rural communities. Loss or deterioration of these services would be detrimental to the physical and psychological well being of rural Alaskans and responding to the problems this would create would put an additional burden on state financial resources.

## **WHAT IS THE ECONOMIC SIGNIFICANCE OF PCE ?**

Elimination of PCE assistance would draw \$19.202 million out of the rural Alaska economy. This loss of purchasing power translates into a loss of \$4.908 million in wages and 210 jobs (annual average) throughout Alaska. Because most of the PCE communities are too small to support much business activity locally, a large share of this loss would occur in urban Alaska.