Power Cost Equalization

Questions and Answers

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ALASKA ENERGY AUTHORITY

Power for Rural Alaska
30 year History

- **Statewide -almost no transmission in Alaska**
  - Chugach Electric owned a line from Beluga through Anchorage to Nikiski
  - Fairbanks relied on local heavy oil and coal
  - Diesel fuel was the primary energy source elsewhere
- **Very little hydropower**
  - Eklutna – 30 mw, serving ML&P, MEA, CEA
  - Cooper Lake – 20 mw, serving CEA
  - Snettisham – 52 mw, serving Juneau
  - ~20 mw of small projects scattered throughout SE Alaska

Power Development Begins -Oil started flowing down the Pipeline

The State began to spend its newfound wealth

- A transmission line to Fairbanks was started
- The Susitna mega-project design was started - 1981
- The Bradley Lake project was started - 1983
- Kodiak, Valdez, Ketchikan, Wrangell and Petersburg began work on 4 Dam Pool - 1983
- Studies were commissioned to identify projects to reduce the cost of electricity throughout Alaska

Alaska Rural Electrification The First Assistance program

- Oil prices peaked in 1979
- Diesel-fueled utilities were hit hard
- Legislature established the Power Production Cost Assistance Program in 1980 – a one year stop-gap
- In 1981, the program was amended into the Power Cost Assistance Program, which was designed to self-extinguish in five years

RPSU program: Golovin power house

Golovin Before and After

Alaska Rural Electrification And finally - PCE

- There was no silver bullet to cure rural Alaska's electric needs
- Small loads and small communities spread across thousands of miles could not be interconnected
- Legislature established Power Cost Equalization
  - Cost of power was to be equalized to the average of Anchorage, Fairbanks and Juneau – 8.5 cents per kwh
  - PCA was rewritten as PCE – effective October 1984
  - Utilities using diesel to generate at least 75% of power in October 1984 were eligible
  - Costs above 52.5 cents were not covered
  - All users were eligible for the first 700 kwh used

Power Cost Equalization

- Eligible electricity has been reduced 30% to 500 kwh
- Only one meter per resident
- Commercial customers are ineligible for PCE
- Fuel use the same, but cost up 150% since FY00
- FY09 funding ($28 million) is at 100% level
- More utilities crossing through the 52.5 cent ceiling

PCE Program Changes in Recent Years

	2000	2007
Population served	77,625	78,530
Total Sales (gWh)	391	416
Eligible Sales	116	122
Percentage eligible	29.7%	29.2%
Average Fuel Cost/gallon	$1.10	$2.78
Fuel Consumed – million gallons	27.7	27.6
Fuel cost – millions	$30.4	$75.3
Non-fuel cost – millions	$41.5	$67.4
Total PCE Appropriations– millions	$14.4	$25.6
Percent of costs	20%	18%

Qn. #1 – Does PCE Reduce Rural Power Cost to Urban Levels?

Residential Power Cost per 2007 PCE Report

Chugach Electric	Anchorage	.1205 kWh
Golden Valley	Fairbanks	.2030 kWh
AEL&P	Juneau	.1140 kWh
Kodiak Electric	Kodiak	.1831 kWh
Kotzebue Electric	Kotzebue	.1881* kWh
AVEC	52 Villages	.2362* kWh
Bettles	Bettles	.2859* kWh
MKEC	5 Villages	.4398* kWh
Napakiak	Napakiak	.6014* kWh

*after PCE

Cost of 700 Residential kwh

• Anchorage	$84.35
• Fairbanks	$142.10
• Juneau	$79.80
• Kodiak	$128.17
• Kotzebue	$171.05*
• AVEC Village	$219.56*
• Bettles	$268.63*
• MKEC	$374.88*
• Napakiak	$489.48*

*After PCE

Qn. #2 – Who gets PCE?

- **Every residential consumer**
  - Only one meter per consumer
  - Only the first 500 kWh
- **Community Facilities**
  - Up to 70 kWh/resident per month
    - Streetlights
    - Washeterias
    - Water and sewer facilities
    - Community buildings

Qn. #3 – Who doesn't get PCE?

- Schools
- State facilities
- Federal facilities
- Commercial consumers
- Consumers with seriously delinquent accounts

Qn. #4 – How does PCE work?

- Utility applies to RCA to participate
- Utility submits detailed cost and operational data
- RCA determines eligible costs and computes PCE by rate class
- Utility bills customers per normal tariff rates
- Utility applies PCE credit based upon actual consumption (subject to kWh limit)
- Consumer is responsible to pay bill after PCE credit
- Utility bills state (AEA) for all PCE credited
- Utility provides AEA with detailed billing records
- Utility files annual update of costs with RCA, per schedule established by RCA

Qn. #5 – Doesn't PCE discourage Conservation & Innovation?

- Only 29% of all electricity sold in eligible communities receives PCE
- But the smaller the community, the more kwh that are eligible (because of minimal commercial usage)
  - Akiachak 46%
  - Aniak 37%
  - AVEC 48%
  - Cordova 28%
  - Kotzebue 27%
  - Napakiak 72% (School is on own generation)
  - Tanana 38%

Non Fuel Costs –Overhead

- Operating and maintaining power plants
- Operating and maintaining tanks farms
- Operating and maintaining distribution lines
- Connecting customers, billing, collections
- Administration, accounting, engineering, warehouse
- Insurance, depreciation, cost of long-term debt
- Taxes and miscellaneous

Qn. #6 – Would PCE Money be better spent on Alternative Energy?

Wind generation costs 6 times diesel generation

- We cannot use ‘utility grade’ turbines as in Lower 48
- Average village load is ~150 kw
- There are only 1 or 2 manufacturers of 50-100 kw units
- To accommodate sophisticated integration needs, the existing generation and distribution must be upgraded
- Typical cost of an integrated project $4+ million
- Diesel generation and fuel tankage still needed for the 70%+ energy that wind cannot provide

PCE Utility Clerk Training

For more information, please contact…

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