

**DENALI
COMM-
MISSION**

4/5/01



ALASKA INDUSTRIAL DEVELOPMENT
AND EXPORT AUTHORITY



813 WEST NORTHERN LIGHTS BLVD. • ANCHORAGE, ALASKA 99503 • 907 / 269-3000 • FAX 907 / 269-3044
TOLL FREE (ALASKA ONLY) 888 / 300-8534

March 28, 2001

The Honorable Mary Kapsner
Alaska State Legislature
State Capitol
Juneau, AK 99801-1182

Subject: Rural Fuel and Gasoline Prices

Dear Representative Kapsner :

Per your request, enclosed are the current prices of fuel and gasoline in rural communities. As you are aware, unit prices vary per season and shipment mode. These prices are current as of March 23, 2001.

If I can be of further assistance, please contact me at 907)269-3000.

Sincerely,

A handwritten signature in cursive script that reads 'A. Bruce Tiedeman'.

A. Bruce Tiedeman
Manager, Rural Energy Programs

MM

Enclosure

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Fuel/Gas Prices in Rural Communities

| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|----------------|--------|-------------------------------|----------|---------|---------|----------|------------------|
| Akhiok | SC | City of Akhiok | 836-2209 | \$1.90 | \$1.80 | | Fuel sales only. |
| Akiachak | SW | Akiachak Gas | 825-4228 | \$2.94 | | \$3.39 | |
| Akiak | SW | Kokarmiut Corp | 765-7228 | \$2.75 | | \$3.00 | |
| Akutan | SW | City of Akutan | 698-2228 | \$1.75 | \$1.70 | \$1.71 | |
| Alatna | YK | Purchase in Allakaket | | | | | |
| Aleknagik | SW | Moody's Marina | 842-5988 | \$2.60 | | \$2.75 | |
| Allakaket | YK | City of Allakaket | 968-2241 | \$2.50 | | \$3.25 | |
| Alqasuk | ANW | Corp Office | 633-6414 | \$4.68 | | \$4.60 | Commercial |
| Alqasuk | ANW | Corp Office | 633-6414 | \$1.40 | | \$3.83 | Residential |
| Ambler | ANW | Ambler Trad'l Council | 445-2196 | \$3.60 | | \$3.65 | |
| Anaktuvuk Pass | ANW | Co-op | 661-3026 | \$1.10 | | \$3.35 | |
| Angoon | SE | Angoon Oil & Gas | 788-3436 | \$1.90 | \$1.85 | \$1.93 | |
| Aniak | SW | Moffit Fuel Service | 675-4525 | \$2.55 | | \$2.85 | |
| Anvik | YK | Anvik Commercial | 663-6396 | \$2.30 | | \$2.75 | |
| Arctic Village | YK | Arctic Village Trad'l Council | 587-5990 | \$3.78 | | \$4.00 | |
| Alka | SW | Alka Native Store | 839-2230 | \$2.50 | | \$3.00 | |
| Atmautluak | SW | Atmautluak Trad'l Council | 553-5428 | \$2.12 | | \$2.35 | |
| Beaver | YK | Inuit Store Fuel | 628-6127 | \$2.50 | | \$3.00 | |

Unit prices vary per season and shipment mode.

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|----------------|--------|-------------------------|----------|---------|---------|----------|---------------------------|
| Betties | YK | | 692-5191 | | | | Unable to make contact. |
| Birch Creek | YK | Purchase in Ft. Yukon. | | | | | |
| Brevig Mission | ANW | City of Brevig Mission | 642-3851 | \$2.02 | | \$2.63 | |
| Buckland | ANW | IRA Council | 494-2126 | \$2.40 | | \$2.81 | |
| Chalkyitsik | YD | Native Corp Store | 848-8112 | \$3.05 | | \$3.70 | |
| Chefornak | SW | Chefarnmute Inc | 867-8010 | \$2.70 | | \$2.77 | |
| Chenega Bay | SC | IRA Council | 573-5132 | \$2.40 | | \$2.80 | |
| Chevak | YK | Wayne Hill | 858-7815 | \$2.30 | | \$2.70 | |
| Chevak | YK | Chevak Co. Corp | 858-7011 | \$2.35 | | \$2.68 | |
| Chignik Bay | SW | Chignik Pride Fisheries | 749-2264 | | | | Unable to make contact. |
| Chignik Bay | SW | Norquest | 749-2276 | | | \$2.00 | Gas sales only |
| Chignik Bay | SW | City Office Fuel | 749-2280 | \$1.74 | \$1.48 | | Fuel oil only. |
| Chignik Lagoon | SW | Clem Grunert | 840-2214 | | | | Gas sales only. |
| Chignik Lagoon | SW | Chignik Lagoon Corp | 840-2555 | \$2.30 | \$2.15 | | Fuel oil only. |
| Chignik Lake | SW | Tribal Council | 845-2212 | \$2.22 | | \$2.22 | |
| Chuathbaluk | SW | City Office | 467-4115 | \$2.50 | | \$2.75 | Out of fuel/source Aniak. |
| Clarks Point | SW | Trident Seafoods | 236-1404 | \$1.95 | | \$2.32 | |
| Coffman Cove | SE | Gas Plus | 329-2268 | | | \$1.90 | Fuel/Thorne Bay |
| Cold Bay | SW | Frosty Fuel | 532-2467 | \$2.78 | | \$2.95 | |
| Craig | SE | Petro Marine | 826-3296 | \$1.75 | \$1.65 | \$1.86 | |
| Crooked Creek | SW | Thomas Fuel Sales | 432-2224 | \$2.70 | | \$2.75 | |

Unit prices vary per season and shipment mode.

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|--------------|--------|-----------------------------|----------|---------|---------|----------|-------------------------|
| Deering | ANW | Native Village of Deering | 363-2138 | \$2.65 | | \$2.95 | |
| Diomedede | ANW | Tribal Council Store | 686-3611 | \$2.72 | | \$2.72 | |
| Eek | SW | Iqfijouaq Co (Village Corp) | 536-5211 | \$2.62 | | \$2.68 | |
| Egegik | SW | City of Egegik | 233-3421 | \$1.35 | | \$2.75 | |
| Ekwok | SW | City of Ekwok | 464-3311 | \$2.60 | | \$2.85 | |
| Elfin Cove | SE | Unable to make contact. | 239-2211 | | | | Unable to make contact. |
| Elim | ANW | Elim Native Store | 890-3281 | \$2.40 | | \$2.60 | |
| Emmonak | YK | Emmonak Corp | 949-1411 | \$2.50 | | \$2.50 | |
| False Pass | SW | Peter Pan Seafoods | 548-2208 | \$1.69 | | \$2.16 | |
| Fort Yukon | YK | Yukon Fuel | 662-2672 | \$2.55 | | \$3.17 | |
| Fort Yukon | YK | Trader Dan's | 662-2482 | | | \$2.75 | Gas sales only. |
| Fort Yukon | YK | ANICA | 662-2582 | | | \$3.05 | Gas sales only. |
| Galena | YK | Galena Liquor | 656-1246 | | | \$3.05 | Gas sales only. |
| Galena | YK | Yukon Fuel | 656-1852 | \$2.51 | | \$2.68 | |
| Gambell | ANW | Native Store | 985-5211 | \$2.25 | | | Commercial |
| Gambell | ANW | Native Store | 985-5211 | \$2.00 | | \$2.60 | Residential |
| Golovin | ANW | City of Golovin | 779-3211 | \$3.50 | | \$3.00 | |
| Goodnews Bay | SW | Mumtram Pikkai, Inc | 967-8520 | \$2.00 | | \$2.15 | |
| Grayling | YK | | 453-5153 | | | | Unable to make contact. |
| Gustavus | SE | Dray Gas Station | 697-2481 | \$1.88 | \$1.65 | \$1.89 | |
| Hollis | SE | No info available. | | | | | |

Unit prices vary per season and shipment mode.

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|------------|--------|---------------------------|----------|---------|---------|----------|-------------------------|
| Holy Cross | YK | Deloycheet Inc | 476-7155 | \$2.14 | | \$2.50 | |
| Hoonah | SE | Hoonah Trading Co. | 945-3211 | \$1.84 | \$1.74 | \$1.87 | |
| Hooper Bay | YK | Yukon Fuel | 758-4007 | | | | Unable to make contact. |
| Hughes | YK | City of Hughes | 889-2206 | \$3.00 | | \$3.50 | |
| Huslia | YK | City of Huslia | 829-2266 | \$3.00 | | \$3.00 | |
| Hydaburg | SE | Haida Oil | 285-3283 | \$1.91 | \$1.78 | \$1.57 | Station Prices |
| Hydaburg | SE | Haida Oil | 285-3283 | \$2.06 | \$1.89 | \$1.68 | Delivered Prices |
| Igiugig | SW | Igiugig Village Council | 533-3211 | \$2.94 | | \$3.63 | |
| Illiamna | SW | Yukon Fuel | 571-1278 | \$2.99 | | \$2.98 | |
| Illiamna | SW | Illiamna Trading | 571-1225 | | | \$2.99 | Gas sales only. |
| Ivanof Bay | SW | | 669-2205 | | | | Unable to make contact. |
| Kake | SE | Kake Tribal Fuel | 785-6427 | \$1.74 | \$1.54 | \$1.94 | |
| Kaktovik | ANW | Kaktovik Inupiat Corp Fue | 640-6011 | \$1.56 | | \$2.72 | Residential |
| Kaktovik | ANW | Kaktovik Inupiat Corp Fue | 640-6011 | \$3.47 | | | Commercial |
| Kaltag | YK | Kaltag Coop Industries | 534-2235 | \$2.50 | | \$2.85 | |
| Karluk | SC | Native Village of Karluk | 241-2218 | \$1.75 | | | Fuel sales only. |
| Kasaan | SE | Kasaan Bulk Fuel | 542-2211 | \$1.57 | | \$1.90 | |
| Kasigluk | SW | Kasigluk Corp | 477-6113 | \$2.50 | | \$2.55 | |
| Kiana | ANW | City of Kiana | 475-2136 | \$3.50 | | \$3.75 | |
| King Cove | SW | AJ's Fuel | 497-2445 | \$1.75 | | | Fuel sales only. |
| King Cove | SW | Peter Pan Seafoods | 497-2234 | \$1.55 | | \$2.17 | |

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|-----------------|--------|--------------------------|----------|---------|---------|----------|-------------------------|
| King Salmon | SW | Peninsula Auto | 246-8222 | | | \$2.41 | Gas sales only |
| King Salmon | SW | Naknek Engine | 246-6120 | | | \$2.42 | Gas sales only |
| King Salmon | SW | City Market | 246-6109 | | | \$2.43 | Gas sales only |
| King Salmon | SW | B&B Contractors | 246-3360 | \$2.12 | | \$2.41 | |
| King Salmon | SW | King Salmon Trad'l Counc | 246-3553 | | | \$2.41 | Gas sales only |
| Kipnuk | SW | Kugkaklik Ltd | 896-5415 | \$2.85 | | \$3.15 | |
| Kivalina | ANW | Kvalina Native Store | 645-2131 | \$2.45 | | \$2.99 | |
| Klawock | SE | Klawock Island Fuels | 755-2909 | \$1.81 | | \$1.91 | Fuel oil is delivered. |
| Kobuk | ANW | City of Kobuk | 948-2217 | \$3.85 | | \$3.50 | |
| Kobuk | ANW | Kobuk Store | 948-2234 | \$3.80 | | \$4.30 | |
| Kokhanok | SW | No info available. | | | | | |
| Koliganek | SW | Koliganek Village | 596-3434 | | | | Unable to make contact. |
| Kongiganak | SW | Qemirtalek Corp | 557-5428 | \$2.33 | | \$2.69 | |
| Kotlik | YK | Kotlik Yupik | 899-4014 | \$2.55 | | \$2.65 | |
| Koyuk | ANW | Koyuk Native Corp | 963-3551 | \$2.85 | | \$2.90 | |
| Koyukuk | YK | City of Koyukuk | 927-2215 | | | \$3.10 | Fuel available Galena. |
| Kupreanof | SE | No info available. | | | | | |
| Kwethluk | SW | Kwethluk Corp | 757-6412 | \$2.61 | | \$3.36 | |
| Kwigillingok | SW | Kwig Inc. | 588-8112 | \$2.05 | | \$2.35 | |
| Lake Minchumina | YK | No info available. | | | | | |
| Larsen Bay | SC | City of Larsen Bay | 847-2211 | \$1.75 | | \$1.85 | |

| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|--------------------|--------|-----------------------------|----------|---------|---------|----------|--------------------------|
| Larsen Bay | SC | Kodiak Salmon Packers | 847-2250 | \$1.85 | | | Fuel sales only. |
| Levelock | SW | Levelock Village Council | 287-3030 | \$2.25 | | \$2.75 | |
| Lime Village | SW | Lime Village Trad'l Council | 526-5236 | \$4.66 | | | Gas available Sleetmute. |
| Lower Kalskag | SW | City of Lower Kalskag | 471-2228 | \$0.00 | \$0.00 | \$0.00 | Unable to make contact. |
| Mauney Hot Springs | YK | Stracks Texaco | 672-3211 | \$1.45 | | \$1.90 | |
| Manokotak | SW | Manokotak Natives Ltd | 289-1062 | \$2.10 | | \$3.60 | |
| Marshall | YK | Maserculiq Inc | 679-6512 | \$2.46 | | \$2.76 | |
| McGrath | SW | Ben Magnuson | 524-3545 | \$3.51 | | \$2.99 | |
| Mekoryuk | SW | Nima Corp | 827-8313 | \$2.49 | | \$2.96 | |
| Mentasta | | No info available | | | | | |
| Mellakatta | SE | Annette Island Gas Svc | 886-7851 | \$1.75 | \$1.65 | \$2.01 | 100 gal or more |
| Metlakatla | SE | Annette Island Gas Svc | 886-7851 | \$1.80 | \$1.70 | \$2.01 | 50-99 gal |
| Metlakatla | SE | Annette Island Gas Svc | 886-7851 | \$1.85 | \$1.75 | \$2.01 | 49 gal or less |
| Minto | YK | North Fork Fuel | 798-7512 | \$1.50 | | \$1.80 | |
| Mountain Village | YK | Azachorak Native Corp | 591-2573 | \$2.70 | | | Delivered price. |
| Mountain Village | YK | Azachorak Native Corp | 591-2573 | \$2.55 | | \$2.82 | |
| Naknek | SW | SEE KING SALMON | | | | | |
| Nanwalek | | No Info available. | | | | | |
| Napakiak | SW | Napakiak Corp | 589-2227 | \$2.17 | | \$2.99 | |
| Napaskiak | SW | Purchase in Bethel. | | | | | |
| Nelson Lagoon | SW | Nelson Lagoon Ent | 989-2305 | | | | Unable to make contact. |

Unit prices vary per season and shipment mode.

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|--------------|--------|---------------------------|----------|---------|---------|----------|-------------------------|
| New Stuyahok | SW | Stuyahok Ltd | 693-3158 | | | | Unable to make contact. |
| Newhalen | SW | Illiamna Trading | 571-1226 | \$2.99 | | \$2.99 | |
| Newtok | SW | Newtok Corp | 237-2512 | \$2.63 | | \$2.74 | |
| Newtok | SW | Tom's Store | 237-2626 | | | | Unable to make contact. |
| Nightmute | SW | Nightmute General Store | 547-6813 | \$2.75 | | \$2.90 | |
| Nikolai | SW | City of Nikolai | 293-2113 | \$3.00 | | \$3.50 | W/ gas key |
| Nikolai | SW | City of Nikolai | 293-2113 | | | \$4.00 | W/out gas key |
| Nikolski | SW | Nikolski Native Store | 576-2225 | \$1.85 | | \$3.00 | |
| Noatak | ANW | Noatak Native Store | 485-2173 | \$3.25 | | \$2.85 | |
| Nondalton | SW | Reel Alaskan Lodge | 294-2335 | \$3.05 | | \$3.30 | |
| Noorvik | ANW | Morris Trading Post | 636-2161 | \$3.16 | | \$3.21 | |
| Noorvik | ANW | Noorvik Native Store | 636-2212 | \$3.10 | | \$3.15 | |
| Nuiqsut | ANW | Nuiqsut Fuel Station | 480-6711 | \$1.25 | | \$4.00 | Residential |
| Nuiqsut | ANW | Nuiqsut Fuel Station | 480-6711 | \$2.75 | | | Commercial |
| Nulato | YK | City of Nulato | 898-2237 | | | | Unable to make contact. |
| Nunapitchuk | SW | Nunapitchuk Ltd | 527-5717 | \$2.50 | | \$2.55 | |
| Old Harbor | SC | City of Old Harbor | 286-2204 | \$2.10 | | \$2.45 | |
| Oscarville | SW | Oscarville Trad'l Council | 737-7099 | \$2.46 | | \$5.27 | |
| Ouzinkie | SC | Ouzinkie Native Corp Fuel | 680-2208 | \$1.72 | | | Fuel sales only. |
| Pedro Bay | SW | Pedro Bay Village Council | 850-2225 | \$2.62 | | \$2.78 | Delivered price. |
| Pedro Bay | SW | Pedro Bay Village Council | 850-2225 | \$2.47 | | \$2.63 | |

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|-----------------|--------|------------------------------|----------|---------|---------|----------|----------------------------|
| Pelican | SE | Pelican Seafoods | 735-2211 | | | | Unable to make contact. |
| Perryville | SW | Native Village of Perryville | 853-2203 | | | \$2.96 | Fuel rec'd individually. |
| Pilot Point | SW | City of Pilot Point | 797-2200 | \$1.78 | \$1.37 | \$1.92 | |
| Pilot Station | YK | Pilot Station Inc | 549-3512 | \$2.30 | | \$2.60 | |
| Pitka's Point | SW | Purchase in St. Mary's. | | | | | |
| Platinum | SW | Arviq Inc. | 979-8113 | | | | Unable to make contact. |
| Point Baker | SE | Trading Post | 559-2204 | \$2.50 | \$2.45 | \$2.60 | |
| Point Hope | ANW | Tikigag Corp | 368-2126 | \$1.44 | | \$3.07 | |
| Point Lay | ANW | Point Lay Fuel Station | 833-2230 | | | | Unable to make contact. |
| Port Alexander | SE | FV/Eyak | 747-6110 | | | | Fuel delivered from Sitka. |
| Port Alsworth | SW | Lake & Peninsula Air | 781-2228 | | | | Unable to make contact. |
| Port Graham | SC | Port Graham Corp | 284-2212 | \$1.82 | | \$1.81 | |
| Port Heiden | SW | City of Port Heiden | 837-2209 | \$1.90 | | \$2.25 | |
| Port Lions | SC | Kizhuyak Oil Sales | 454-2422 | | | | Unable to make contact. |
| Port Moller | | No data available. | | | | | |
| Port Protection | SE | SEE KETCHIKAN | | | | | |
| Portage Creek | SW | No data available. | | | | | |
| Quinhagak | SW | Qanirtuuq Inc | 556-8712 | \$2.35 | | \$2.47 | |
| Rampart | YK | Village Council | 358-3312 | \$2.50 | | | Gas @Yukon R Bridge |
| Red Devil | SW | Red Devil Trad'l Council | 447-3223 | \$2.90 | | \$3.95 | |
| Ruby | YK | Dineega Fuel | 468-4405 | \$2.70 | | \$2.95 | |

| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|-----------------|--------|--------------------------------------|----------|---------|---------|----------|------------------|
| Russian Mission | YK | Russian Mission Native C | 584-5885 | \$2.30 | | | Fuel sales only. |
| Saint George | SW | St. George Delta Fuel | 859-2456 | \$1.98 | | \$2.80 | |
| Saint Marys | YK | Yukon Fuel | 438-2593 | \$2.77 | | \$2.98 | |
| Saint Michael | ANW | AC Co. | 923-3451 | \$2.99 | | \$2.99 | |
| Saint Paul | SW | City of St. Paul | 546-2331 | \$1.99 | | \$2.26 | |
| Sand Point | SW | Aleutian Commercial | 383-3111 | \$2.00 | | \$2.15 | |
| Savoonga | ANW | Savoonga Native Store | 984-6134 | \$2.15 | | \$2.60 | |
| Scammon Bay | YK | Askinuk Corp | 558-5211 | \$2.90 | | \$3.00 | |
| Selawik | ANW | Selawik IRA | 484-2121 | \$3.00 | | \$3.15 | |
| Seldovia | SC | Seldovia Fuels | 234-7622 | \$1.89 | | \$1.98 | |
| Shageluk | YK | City of Shageluk Shageluk Zoo Tse | 473-8229 | \$3.00 | | \$2.50 | |
| Shaktolik | ANW | Shaktolik Native Corp | 955-3241 | \$2.38 | | \$2.90 | |
| Sheldon Point | ANW | Swan Lake Corp | 498-4219 | \$2.50 | | \$2.73 | |
| Shishmaref | ANW | IRA Native Store | 649-3741 | \$2.20 | | \$2.50 | |
| Shishmaref | ANW | Nayokpuk Trading Post | 649-3191 | \$2.25 | | \$2.50 | |
| Shungnak | ANW | Shungnak IRA | 437-2148 | \$3.55 | | \$3.25 | |
| Sleetmute | SW | Hill Enterprises | 449-4227 | \$3.60 | | \$3.20 | |
| South Naknek | SW | See King Salmon | | | | | |
| Stebbins | ANW | Ferris General Store | 934-3131 | \$2.30 | | | Fuel sales only. |
| Stevens Village | YK | Stevens Village | 478-7501 | \$3.00 | | \$3.00 | |
| Stony River | SW | Purchase in Sleetmute. | | | | | |

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|-----------------|--------|------------------------|----------|---------|---------|----------|--------------------------|
| Takotna | SW | Takotna Comm | 298-2211 | | | | Unable to make contact. |
| Tanana | YK | Don Johnson | 366-7145 | | | \$2.65 | |
| Tanana | YK | Tozitna dba Tanana Gas | 366-7255 | | | \$2.59 | Gas sales only. |
| Tanana | YK | Tanana Commercial Co. | 366-7188 | \$2.79 | | \$2.69 | |
| Tatitlek | SC | Tatitlek IRA | 325-2311 | | | | Unable to make contact. |
| Telida | SW | See Nicolai or McGrath | | | | | |
| Teller | ANW | Teller Native Store | 642-4011 | \$2.33 | | \$2.58 | Out/waiting for shipment |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.78 | \$1.74 | \$1.87 | 200-400 Gallons |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.84 | \$1.80 | \$1.93 | 20-49 Gallons |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.87 | \$1.83 | \$1.96 | 5-19 Gallons |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.92 | \$1.88 | \$2.01 | 2-4 Gallons |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.97 | \$1.93 | \$2.06 | 1 Gallon |
| Tenakee Springs | SE | Snyder Merchantile | 736-2205 | \$1.81 | \$1.77 | \$1.90 | 50-199 Gallons |
| Tellin | SC | Purchase in Tok | | | | | |
| Thorne Bay | SE | Bayview Fuel | 828-3345 | | | \$1.94 | Gas sales only. |
| Thorne Bay | SE | Petro Alaska | 828-3900 | \$1.57 | | \$1.92 | |
| Togiak | SW | Togiak Lumber | 493-5120 | | | | Unable to make contact. |
| Togiak | SW | City of Togiak | 493-5820 | \$2.30 | | \$2.60 | |
| Tooksook Bay | SW | Nunakauiak Corp | 427-7929 | \$2.50 | | \$2.80 | |
| Tuluksak | SW | Tulkisarmute | 693-6420 | | | | Unable to make contact. |
| Tuntutuliak | SW | Qinarmut Corp | 256-2315 | \$1.95 | | \$2.50 | |

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| Community | Region | Fuel Retailer | Phone # | Fuel #1 | Fuel #2 | Gasoline | Notes |
|----------------|--------|--------------------------|----------|---------|---------|----------|-------------------------|
| Tutunak | SW | Tununmiut Rinit Corp Sto | 652-6311 | \$2.09 | | \$2.45 | |
| Twin Hills | SW | Purchase in Togiak | 525-1820 | | | | |
| Tyonek | SC | No info available. | | | | | |
| Unalakleet | AC | Unalakleet Native Corp | 624-3300 | \$2.35 | | \$2.85 | |
| Upper Kalskag | SW | Kalskag Store | 471-2350 | | | | Unable to make contact. |
| Venetie | YK | Venetie Village Council | 849-8212 | \$3.25 | | \$3.75 | |
| Wainwright | ANW | Olgoonik Fuel Station | 763-2832 | \$1.45 | | \$3.05 | |
| Wales | ANW | Wales Native Store | 664-3351 | \$2.49 | | \$3.00 | |
| White Mountain | | White Mountain Native St | 638-3451 | \$2.10 | | \$2.50 | |

Efficient Management, Maintenance and Operation of Rural Alaska Utilities

(electric, water, sewer, bulk fuel, solid waste)

Briefing Notes

April 4, 2001

1. Project Intent

- Adequate utilities are a basic foundation of American communities
- Large (\$1.5-2 billion) and rapidly growing (\$60-\$100 million per year) public investment in utility infrastructure is at risk
- System failures can cost between \$1 and \$10 million to replace. Examples: Kotzebue (3 freeze-ups in past 20 years), Venetie (freeze-up 1980s)
- Focus on sustainability of capital equipment and operations in rural Alaska

2. The Setting

Alaska rural utilities are generally:

- Remote
 - No road access
 - Not interconnected in power grids or fuel delivery networks
- Very small (very limited economies of scale)
- In harsh climates (cold, permafrost, spring flooding)
- In places with diverse cultural values
- In low income communities
 - Per capita income of VSW communities = \$13,000, vs. \$30,000 in Anchorage

3. How do Costs and Consumption Levels Compare in Alaska?

- Even after PCE, in rural Alaska customers pay about 25 cents per kWh for electricity (vs. 10 cents in Anchorage) and up to \$120 per month for water and sewer (vs. \$50 in Anchorage).
- Rural Alaskans consume only about 4,000 kWh electricity per year, less than 40% of the Anchorage or U.S. levels
- Users of flush haul water systems probably consume less than 6 gallons per person per day, compared to Anchorage consumption of about 100 gallons.
 - Medical data show a significant increase in infectious disease below 15 gallons per day
- Rural Alaskans pay between 2.5 and 5% of income for electric/water/sewer, while Anchorage residents pay about 1.5%

4. The Rural Economy

- Importance of transfer payments [see figure 1, below]
- Limited economic base / limited market economy
- Reliance on capital projects to sustain local economy
 - Most capital \$\$ leak out of local economy and flow back to Anchorage
- Significant population growth continues to increase utility demand

5. How Other Places Address These Challenges – No Silver Bullets
 - Subsidies – Northwest Territories subsidizes water and sewer costs above 1% of household income, often paying 90% of the full cost of service
 - Management structures – Finland uses a wide variety of cooperative and municipal management that evolved over 100 years
 - Volunteerism – Long history in Finland; Virginia Self Help program and Colonias programs encourage local community ownership and volunteer labor
 - Technology – Canada uses flush haul as primary technology

6. Current Subsidies and Incentives in Rural Alaska
 - All utilities are subsidized in all places
 - Four dam pool: \$485 million, or \$16,000 per person
 - Alaska's telephone system: about \$100 million subsidy from out of state. Typical rural household gets about \$1,000 per year in reduced phone costs.
 - Anchorage water and sewer: capital is 80-95% publicly funded (more than \$200 million between 1979 and 1985), and a critical EPA exemption avoids the huge cost of secondary treatment
 - Rural power upgrades: State capital funds go to regional coops and private utilities, not just single villages (see figure 3)
 - Subsidies are often disincentives to sustainability
 - PCE is cost-based, does not reward cost-cutting
 - For water and sewer, capital is "free," providing no incentive to economize in design
 - For water and sewer, consumers receive zero support for O&M, which makes a piped ("automatic") system appear more economical.

7. True Cost vs. Book Cost
 - True cost includes the full cost of operations, maintenance, and capital
 - "Book cost" includes only the actual expenditures recorded by the utility, and excludes grant-funded capital, in-kind assistance, and deferred maintenance
 - These costs vary by utility and place
 - Example 1: Electric service in PCE communities:
 - In some places (Venetie) the true cost vastly exceeds the book cost due to emergency generator replacement funded by public \$\$
 - Among all PCE communities, however, our findings show that about 94% of the total true cost of \$87 million per year is carried on utility books, with only 5% paid by government capital upgrades and only 1% paid in the form of O&M assistance programs.
 - Example 2: Piped water and sewer:
 - True cost is about \$700 per household per month, while book cost reflects only \$100 per month for bare bones O&M.
 - The difference is due to the immense government-funded capital investment.

8. Potential Collapse of Rural Utility Infrastructure

- As in 1980s, massive inflow of capital dollars without resources or strategy for O&M
- Demand for service and cost of service is increasing but economic base is not
- There is little or no connection between utility cost and rates
- Problems are becoming more acute because we are now putting projects into smaller places with lower capacity
- Designers and builders are not responsible or accountable for achieving the design life of the system (should be 10-30 years)
- In the past, failure often resulted in a new facility, but there are now too many facilities and too few resources to continue that pattern.

9. How do We Fix This / Establishing Standards for Sustainability

- Three action levels affect sustainability
 - Day to day operations
 - Scheduled maintenance
 - Capital replacement
- Standards for successful utility operation and maintenance
 - Achieve design service life of capital investments based on preventative maintenance plan
 - Provide adequate reliable service that meets customer expectation and major regulatory requirements
 - Fiscal capacity to ensure sufficient revenue is collected for operation and maintenance including a community business plan which includes collections, insurance, and replacement parts reserve accounts
 - Community commitment/ownership resulting in full participation in all phases of utility design, construction, and operation
 - Community capacity ensuring adequate knowledge base and human resource base to manage and operate efficient and sustainable utilities

10. How do We Fix This / Core Elements that Can be Changed to Improve Sustainability

- Management structure
 - Municipal, tribal, cooperative, private, other
 - Standalone, regional, or consolidated
- Subsidies and incentives
 - Water & sewer: capital is free but zero support for O&M
 - Electricity: PCE partly covers capital and O&M, discourages cost-cutting
- Technology and engineering
 - Link between designer accountability and long-term performance
 - Link between community capacity and resources and appropriate design
 - Development of new technologies, discouraged by lack of profit opportunities
- Community capacity and capacity support systems
 - Support for utility boards
 - RUBA, RMW, and circuit rider programs
 - Non-profit community support systems (TCC, AVCP)
 - Training programs for utility workers

11. Essential Elements of a Sustainable Solution

- A "no infrastructure failure" policy underlies resource allocation decisions
 - One size does not fit all -- communities select management structure appropriate for them – standalone, coop, private, or other
 - Stable source of O&M funding to make up shortfall between true cost and affordable cost and to pay for community capacity development
 - Subsidy structure rewards -- rather than discourages -- sustainable utilities
 - New utility capital projects only occur in communities which demonstrate capacity to manage sustainable utilities
 - Annual review determines whether or not the utility is sustainable
 - A fail-safe management backup system operates utilities when annual review indicates local capacity and resources cannot meet sustainability requirements
 - Community subsidies are transferred to the fail safe management backup system until the community develops capacity (or contracts with another entity) to run its own sustainable system
 - Training and resources are available to increase community capacity
 - Rates reflect true and full cost of service
 - Policies determine who pays full cost and who is subsidized

12. Draft Criteria for Sustainability Evaluation¹

- Reliability -- Utility service reliability meets or exceeds accepted industry or regulatory standards, e.g., no more than 87 hours of planned and unplanned outages per year (99% availability)
- Maintenance capability -- Work force is certificated, is paid a competitive wage, and has demonstrated the ability to conduct preventative and scheduled maintenance and to troubleshoot, repair and replace system components
- Financial capability -- Utility has a functioning double-entry bookkeeping system, has implemented adequate financial controls, and maintains adequate financial reserves, including working capital
- Economic capability -- Consumers pay reasonable utility rates that cover the full difference between ongoing subsidy programs and the true cost of service – including operations, maintenance, management, and capital charges.
- Risk Management -- Utility maintains insurance coverage that meets prevailing industry standards
- Community Participation and Guidance – Community participates in management structure, project development, and review of ongoing operations through a utility board, local or regional advisory council, or effective regulation of private providers.

¹ Includes items from November 22, 2000 Discussion Draft "Criteria for Sustainable Rural Alaska Public Utility Systems" distributed by C. Walls, and draws on discussion in National Regulatory Research Institute, NRRI – 91 – 17: *Viability Policies and Assessment Methods for Small Water Utilities*.

Major Data and Information Sources

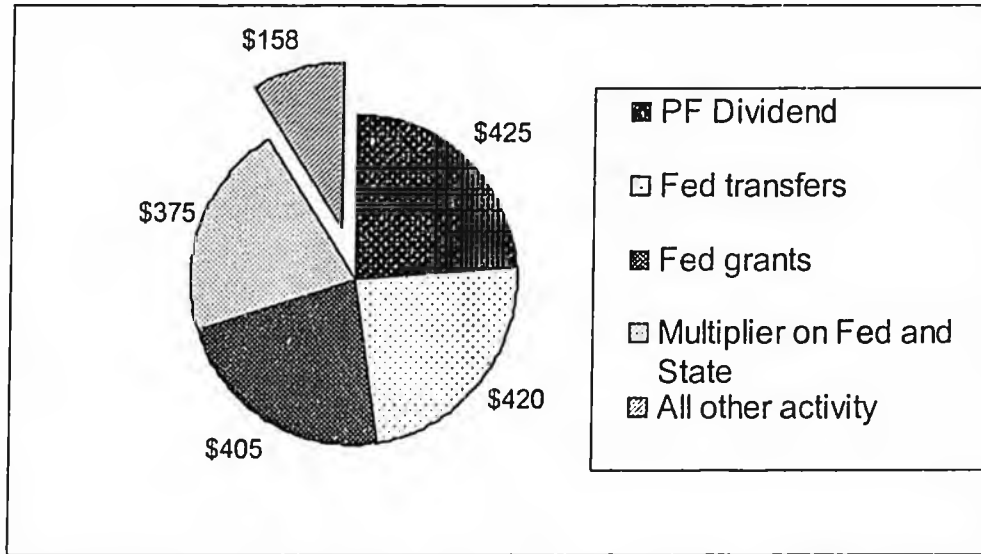
- Original data development:
 - Database covering 150 communities on true cost of electric service developed from annual and monthly PCE filings during 1997-99
 - Division of Energy / AIDEA grants records for 1995-2000
 - Denali Commission project files
 - Individual rate filings
 - Data on true cost of water and sewer systems developed from previous ISER studies and actual project experience
 - Key informants: extensive interviews with utility professionals from public and private sectors, from Alaska, Canada, Finland, Virginia, Texas, New Mexico
- Community visits: site visits to Deering, Venetie, Napaskiak, Tuntutuliak
- Existing databases used:
 - PCE annual statistical reports
 - AIDEA bulk fuel database
 - AIDEA / AEA electric system condition assessment
 - ISER / ANHB O&M Demonstration Project including in-depth interviews with 33 communities
 - 1999 RUBA Survey of 168 community water and sewer utilities
- Literature review: more than 100 technical and management documents from other places, technical, trade, and professional associations, and government agencies.

Steering Committee Participants

Johnny Adams (North Slope Borough)
Michael Black (Department of Community and Economic Development)
Tom Coolidge (Alaska Area Native Health Service)
Lamar Cotter (AIDEA)
Dan Easton (Department of Environmental Conservation)
Richard Emerman (AIDEA / Alaska Energy Authority)
Steve Forthun (Alaska Native Tribal Health Consortium)
Bill Gordon (Utility Services of Alaska)
Jamie Kenworthy (Alaska Science and Technology Foundation)
Meera Kohler (Alaska Village Electric Cooperative)
Joel Neimeyer (Denali Commission)
Brent Petrie (Alaska Village Electric Cooperative)
Pat Poland (Department of Community and Economic Development)
Joe Sarcone (Environmental Protection Agency)
Antony Scott (Regulatory Commission of Alaska)
Sheila Selkregg (USDA Rural Development)
Nan Thompson (Regulatory Commission of Alaska)
Pete Wallis (Tanana Chiefs)
Charles Walls (Denali Commission)
Virginia Washington (resident, St. Michael)
Steve Weaver (Alaska Native Tribal Health Consortium)
Eric Yould (Alaska Rural Electric Cooperative Association)
Alan Yost (Rural Utilities Service)

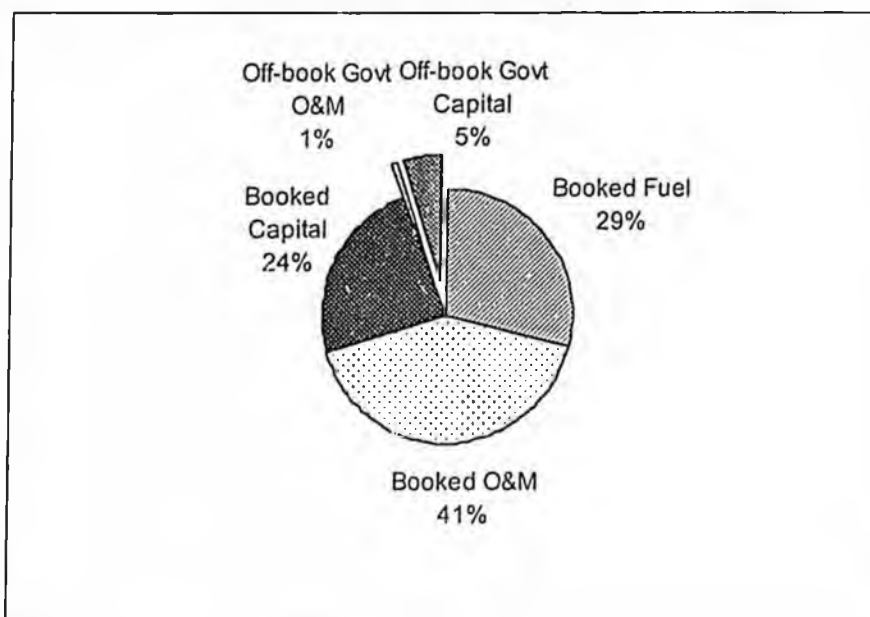
Supporting Tables and Figures

Figure 1:
Sources of Growth in Alaskans' Real Income from 1990 to 1999
(millions of inflation-adjusted dollars)



- More than 90% of total growth in Alaska real income during the 1990s is due to growth in federal transfers, federal grants, Permanent Fund dividends, and associated economic multiplier effects.
- Less than 9% of total income growth is due to growth in all other sources of economic activity, which would include federal government military and agency expenditures and all private sector activity.

**Figure 2:
Components of the True Cost of Electric Service
in PCE Communities**



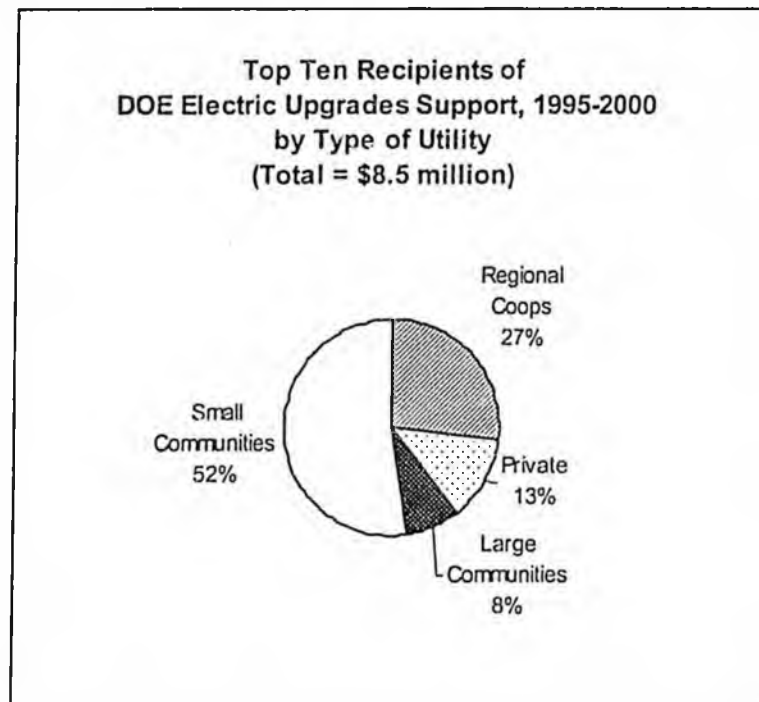
- The total cost of providing electric service to PCE communities in Alaska is currently about \$87 million per year.
- Of this, about 94% is carried on utility books and covered through customer payments and PCE.
- About 5% of the true cost is incurred in the form of grant-funded capital projects, and about 1% of the cost is in the form of government-funded O&M assistance programs such as the circuit rider program.

**Table 1:
Income, Electric Consumption, and Utility Payments as a Percentage of
Household Income**

| | Rural AK | Anchorage | US |
|---|------------|-----------|--------|
| Per Capita Income 1999 | 13,000 | 30,000 | 28,500 |
| Residential Electric Consumption (kWh/yr) | 4,000 | 10,500 | 10,100 |
| Percent of Household Income Spent on electric/water/sewer | 3.2 - 5.1% | 1.6% | N/A |

- Rural Alaskans (defined here as communities eligible for Village Safe Water program assistance) have per capita incomes about 60% below Anchorage or U.S. levels.
- They consume about 40% as much electricity as Anchorage residents and pay two to three times the Anchorage percentage of household income for electric, water, and sewer.

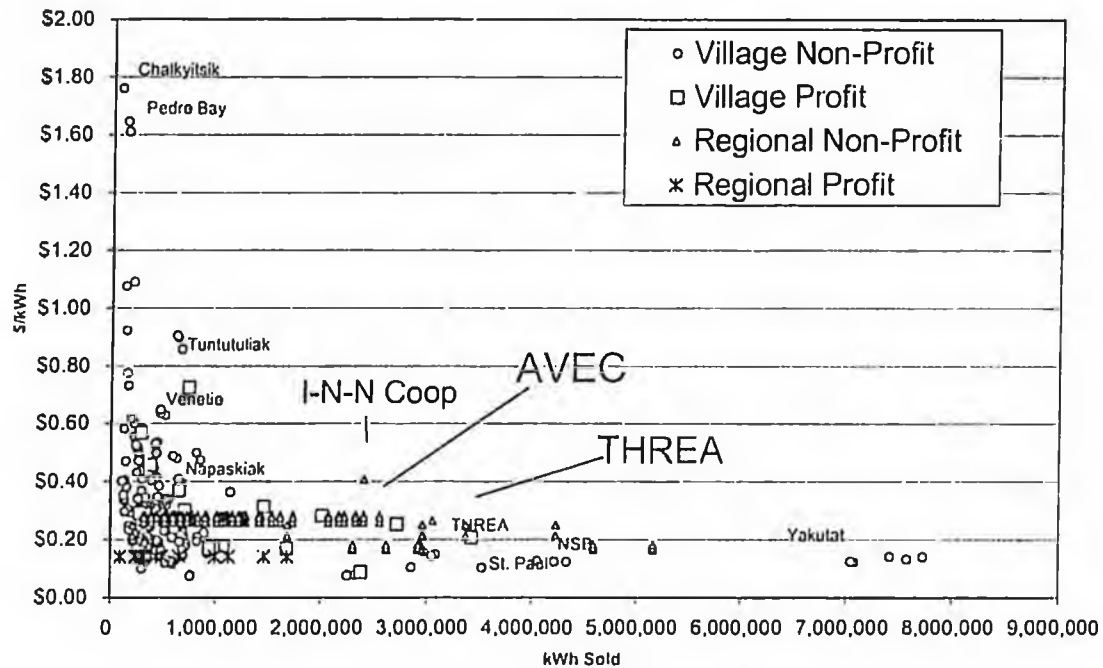
Figure 3:
Top Ten Recipients of Rural Electric Upgrade Support, 1995-2000



- The State of Alaska spent about \$14.2 million on small electric utility upgrades and emergency replacements between 1995 and 2000.
- About 60 percent (or \$8.5 million) of these funds went to ten utilities. Among this group of ten, regional coops and regional private utilities received \$3.3 million, while small communities received about \$4.4 million.
- The remaining 40 percent of the upgrade funds went to 45 smaller utilities.

**Figure 4:
Variation in the True Cost of Electric Service
Among Smaller PCE Utilities**

Total or "True" Non-Fuel Cost per kWh vs kWh Sold,
all PCE Communities, based on FY97-FY99 data



- Among all PCE utilities selling fewer than 10 million kWh per year, there is a wide variation in the cost of electric service, even after adjusting for fuel costs and including the costs paid by government, such as capital upgrades and O&M assistance programs.
- The greatest variation occurs among very small single village utilities.
- Regional cooperatives have relatively low non-fuel costs, but many single village utilities appear to have significantly lower costs than some regional cooperatives.
- The average non-fuel cost for Alaska Village Electric Coop (AVEC) and Tlingit Haida Regional Electrical Authority (THREA) is about 26 cents per kWh, for the smaller I-N-N Coop it is about 40 cents – about the same cost as Napaskiak's standalone utility.
- Additional analysis (not shown in this figure) shows no significant correlation between the costs shown here and the physical condition of the utility plant, as recently assessed by independent engineers.

**Denali Commission Federal Co-chairman
Jeff Staser**

April 5, 2001

Background

Congress established the Denali Commission to address some of Alaska's most stubborn infrastructure challenges. The innovative feature of the Denali Commission Act was that it moved decision making out of Washington D.C. and into the hands of statewide non-governmental organizations, subject to applicable federal funds management laws. The Act provided for the fusion of state and federal agency interests through co-chairmanship.

This year the Commission will obligate \$65,000,000 federal funds, not including cost sharing. By unanimous vote, seventy-five percent of those funds will go to infrastructure construction – focusing on critical bulk fuel storage tank systems, energy generation and distribution projects, and health care facilities. Ten percent of available funds are dedicated to capacity building and training relating directly to sustaining these projects, and another ten percent was allocated for closely related economic development activities, consistent with the purposes of the Act.

By law, not more than five percent of appropriated funds may be used for overhead. This constraint compels the Commission to seek existing delivery systems, such as through agencies like the Alaska Energy Authority, as opposed to building a new bureaucracy.

After extensive public process, the Commission adopted specific values, themes and definitions to accomplish its purposes, and widely disseminated its operating concepts. Commissioners agreed on criteria that favor distressed rural communities, that are consistent with the Commission's published values and principles, and that seek teamwork and cost sharing. Key among the principles was sustainability.

Today I would like to focus on the principle of sustainability as it relates to the Commission's energy program and respond to your questions on statewide energy planning.

Sustainability

All Denali Commission projects must be sustainable. This guiding principle involves two levels of analysis: policy and implementation. The policy level issue is easily settled since both federal and state laws mandate sustainability of capital projects involving public funds.

In fact, since its inception, the policy of the Commission has been to champion sustainability. It is a prerequisite for all of our projects.

The implementation of this sustainability principle is tricky, since there are diverse views on what criteria should be applied to effectively link this policy to various implementation approaches. Ultimately the test of what really works in rural Alaska is highly site dependent, and can only be verified over time. We do, however, clearly understand that properly maintained infrastructure costs significantly less over time.

We do know what does not work. We know what we cannot afford. We also know that reliable and affordable power is essential to the well being of every community. So the challenge boils down to how to fairly allocate Denali Commission funds in the most cost effective manner possible, in order to help the greatest number of people for the longest possible future.

The first task we faced was to establish proscriptive criteria for project selection that would lead to sustainable projects.

The Commission first turned to the Alaska Energy Authority (AEA) to learn how they did it. Working with AEA, the Commission learned that there were gaps in statewide energy planning, that there were no workable sustainability criteria, and that the relative needs for over 180 rural communities had yet to be assessed. In 1999, the Commission initiated and funded a joint effort between federal and state agencies, and set milestones, to fill in these gaps.

U.S. Department of Agriculture – Rural Development (USDA-RD) was charged to lead the utilities Operations, Maintenance and Management effort. Their final report was due on March 1, 2001. The draft report for public review will not likely be complete until sometime in April. Therefore the final report will not be complete until sometime this summer, after public comment.

Meanwhile the Commission staff shared existing federal sustainability standards, derived from the Rural Utility Service (RUS), with both AEA and USDA-RD in November 2000, anticipating the need to have something in place for FY 2001 spending decisions, our third construction season. Those criteria are attached.

Alaska's successful rural electric cooperatives attribute sustainability to these criteria, as do rural utilities nationwide. They are the only time tested criteria available to the Commission that are proven to work in rural Alaska. They do not impede the State or anyone else from funding guarantees of sustainability, but they clearly encourage specific best business practices on the part of federal fund recipients.

On January 18th, the Commission voted to support 24 energy projects managed by Alaska Village Electric Cooperative (AVEC) in 22 villages; all projects were derived from the same priority list used by AIDEA. The terms negotiated with AVEC included zero percent overhead and a 10% cost share match, and our criteria were readily accepted as both familiar and necessary. Those projects are proceeding to construction this summer.

At the same January meeting the Commission also added funding for 5 new projects to the existing management agreement with AIDEA, with the same sustainability criteria applied. That \$7 million award has yet to be accepted by the State, although at least one of the communities affected already meets the criteria. We are prepared to assist all communities with various strategies to achieve these criteria, should that be necessary, or to reallocate funds to other communities with sustainable projects ready to move into construction this summer.

Statewide Energy Planning

In 1999 AEA and the Alaska Industrial Development and Export Authority (AIDEA), took the lead and funds from the Commission to develop a process and plan to integrate programs to deliver projects. The purpose was to identify what needed to be done and in what order. This statewide energy plan was to be completed by January 1, 2001.

The first item on the scope of work was a capital project selection process and recommended list of projects. This was to be completed by August 1, 2000. As of today, AIDEA reports the initial field assessment work is now complete and will be shared shortly.

A draft "screening report" was published for public review in November 2000. The public comment period closed January 31, 2001. The final screening report is expected sometime in April. This report considered all of the known alternatives including diesel/solar/hydro/wind/geothermal/fuel cells/coal/biomass/coal bed methane/electric interties, etc. The screening found improving diesel efficiencies, recovering and utilizing heat from the diesels, increased end user conservation, and wind generation all merit further study. The screening report evaluated alternatives in the absence of any government subsidies, since virtually all provide benefits to consumers if based on grants.

AIDEA is considering the screening report's recommendations. AIDEA is also seeking Commission funding for a request for proposal strategy that would ask the electric utilities and communities to submit projects they believe will reduce energy costs, consistent with our sustainability standards. The Commission meets in Kotzebue on April 19 to consider this request among other new approaches under consideration. As with the AVEC model, we are hopeful the private sector will rise to the challenge.

The Commission appropriately defers to the state to develop a statewide energy plan. Since the Commission will benefit from the direction such a plan could provide, we will assist in any way we can to facilitate producing one. In the meantime, the Denali Commission will push forward, in coordination with any appropriate public, non-profit, private, tribal or other governmental entity, to accomplish our goal of helping to provide reliable, affordable and sustainable power to as many rural Alaskan households as possible.

As Federal Co-chair I believe all Alaskans need to work together on these challenges. Thank you for your continued interest and support of our mutual goals for rural Alaskans.

Criteria for Sustainable Rural Alaska Public Utility Systems

The criteria for determining a sustainable public utility in rural Alaska includes:

1. The economics of the utility's operations and service area are such that consumers can reasonably be expected to pay the proposed rates required to cover all expenses, including the renewal and replacement of plant.
2. The experience and performance of the system's management has been acceptable as evidenced by consistently providing adequate and reliable utility service that meets or exceeds industry and regulatory standards.
3. The utility has a stable maintenance force that has demonstrated the ability to conduct preventative and scheduled maintenance, and to troubleshoot, repair, and replace system components.
4. The utility has implemented adequate financial and management controls and there are and have been no significant financial or other irregularities.
5. The utility's projected capitalization, measured by its equity as a percentage of total assets, is adequate to enable the utility to meet its financial needs and to provide service consistent with industry and regulatory standards.
6. Risks of possible loss of large consumers will not substantially impair the economics of a utility's operations.
7. The utility maintains adequate business insurance covering all significant risks.
8. The utility has credible long range system plans that includes projections of service requirements, rates, revenues, expenses, margins and other factors for the present system and proposed additions that are based on reasonable assumptions and adequate supporting data and analysis, including analysis of a range of assumptions for the significant variables.
9. In the case of joint ventures, the utility has sufficient management control or other contractual safeguards with respect to the construction and operation of jointly owned facilities to ensure that the utility's interests are protected and the utility lender's credit risk is minimized.
10. Where rates or investment decisions are subject to approval by state regulatory authorities, there is reasonable expectation that such approvals will be forthcoming to maintain utility feasibility.

Robert Poe
AIDEA/AEA

Alaska Energy Plan
Outline and Status
April 2, 2001

- I. The Alaska Energy Authority (AEA), the Denali Commission, and the U.S. Department of Agriculture – Rural Development agreed in 1999 to cosponsor a statewide energy planning process.
- II. Three regions were defined, each of which is considered separately for purposes of energy planning:
 - A. Railbelt
 - B. Four Dam Pool, Juneau, Sitka
 - C. Rural Alaska
- III. For each of the three regions, a Phase 1 report was produced that includes background information, identification of major energy problems, and a listing of possible approaches and solutions.

The Phase 1 draft reports were circulated for public comment in fall 1999. Following receipt of these comments, the sponsors agreed to go forward with the energy plan for rural Alaska but to defer further work on the other two regions until the rural plan is completed.

- IV. Phase 2 of the rural energy plan includes the following components:
 - A. Screening Analysis. The main purpose of the screening analysis is to evaluate the possible approaches and solutions to the problem of high energy cost in rural Alaska. The product of this evaluation is a short list of strategies that, if implemented aggressively, have the greatest potential to reduce costs quickly on a broad scale.

A draft of the screening analysis was circulated for public comment in November 2000. A final report will be issued in April 2001. The short-listed strategies include:

 - Efficiency upgrades to conventional diesel power plants.
 - Energy conservation measures for end users.
 - Expanded use of "waste heat" from diesel power plants.
 - Possible use of wind energy (pending better cost information from current demonstration projects).
 - B. Final Review and Implementation Report. The short-listed strategies identified in the Screening Report will be refined and evaluated in greater depth. Detailed implementation plans will be

developed for those that continue to show significant cost reduction potential.

- C. Rural Electric Utility Condition Assessments. During the past year, AEA sent its contractors to each rural community to acquire detailed, first hand information on the condition of rural power systems as well as the level of operations and maintenance expertise. AEA already maintains an extensive database on the condition of bulk fuel storage facilities throughout rural Alaska.

This information provides an empirical basis for our energy planning studies and also serves both AEA and the Denali Commission as the primary basis for selecting electric utility and bulk fuel storage upgrade projects.

- D. Rural Utility Operations, Maintenance, and Management (OM&M) Study. The U.S. Department of Agriculture – Rural Development, one of our energy plan cosponsors, decided to retain the Institute of Social and Economic Research (ISER) to conduct a rural utility OM&M study. The premise of the study is that many rural utilities do not currently have adequate OM&M capability. The goal of the study is to recommend how best to address this problem.

ISER is preparing to issue its draft report in April 2001. AEA and the Denali Commission have been considering various options to ensure that new electric utility and tank farm projects are properly managed and maintained throughout their expected service lives. We anticipate that the ISER report will provide relevant ideas and guidance.

- E. RFP for Energy Cost Reduction Projects. AEA has proposed an RFP process to identify energy cost reduction projects that will provide significant near-term benefits to consumers and are ready to proceed quickly into final design and construction. The Denali Commission will review the RFP proposal for funding at its April meeting and the RFP could be issued by the end of the month.

The RFP will be issued statewide although priority for funding this year will be given to low income, rural communities. Proposals that are not funded this year may be included by the Denali Commission in its future Congressional funding requests.



Precision Power LLC

A Division of Peak Oilfield Service Company

FIELD TRIP REPORT

CIRCUIT RIDER PROGRAM

REGION 7 – LOWER KUSKOKWIM

NAPASKIAK

FIELD TRIP REPORT

NAPASKIAK - CRM 2000

Date: November 10, 2000

The purpose of the trip was to:

- Inspect the utility's power generation and electrical distribution systems.
- Evaluate power plant personnel and provide training, as needed.
- Perform minor maintenance and repairs.

The utility contact for the CRM was Martina Pitka.

Power Plant

The powerhouse is a metal building on a piling.

There are 3 diesel generator sets rated 80 kW, 125 kW, and 148 kW. The switchgear provides semi-automatic synchronizing.

All units are operational. Current meter readings of engine hours are #1 - 15,253, #2 - 18,318 and #3 - 24,270.

A waste heat recovery system is not installed.

The upkeep of the power plant appears to be good. There is not a formal training program in place.

Electrical Distribution System

The 7200 volt overhead electrical distribution system is generally in good condition. There are a few poles that appear to be leaning greater than 10 degrees.

Service Repairs Recommended

1. Recommend major overhauls on generators #2 and #3 engines in the near future due to excessive wear from improper maintenance.

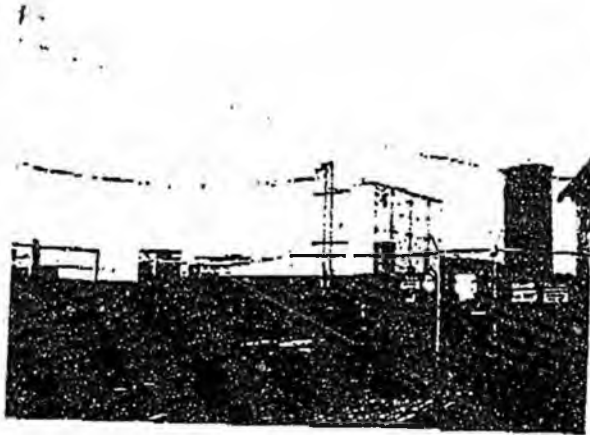
Recommended Improvements - Major Projects

1. Replacement of #1 generator due to higher demand on utility.

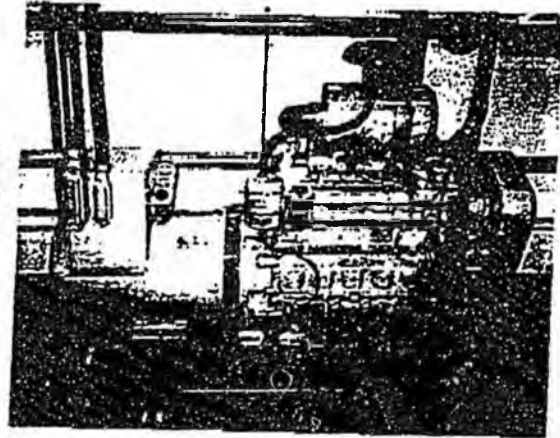
Electrical Utility Evaluation - Score Summary:

| | |
|------------------------------------|-----------|
| Powerhouse Building | 15 points |
| Generator Equipment & Installation | 60 points |
| Environmental | 30 points |
| Electrical Distribution | 60 points |

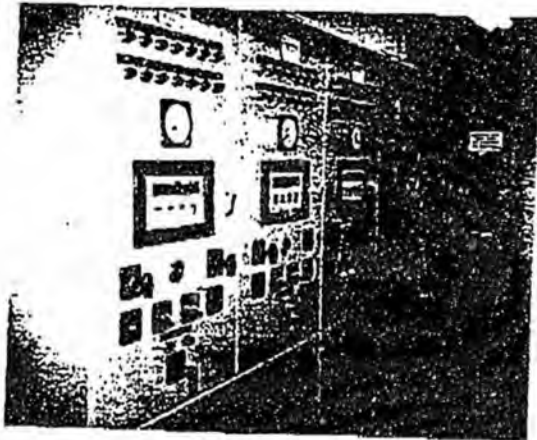
NAPASKIAK



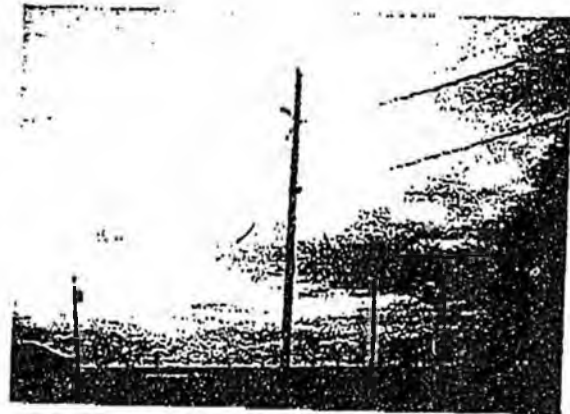
OUTSIDE VIEW OF POWER PLANT



GENERATOR SET



SWITCHGEAR



DISTRIBUTION SYSTEM

ALASKA ENERGY AUTHORITY RURAL UTILITY POWERHOUSE INVENTORY

| | | | |
|---------------------|--------------------------------|-----------------|---|
| COMMUNITY OWNERSHIP | Napaskiak City of Napaskiak | UTILITY CONTACT | Napaskiak Electric Utility Martina Pitka |
| DATE | 11/10/00 | PHONE | (907) 737-7432 |
| | G-1 | G-2 | G-3 |

| | | | |
|-----------------------------------|--------------------------------------|----------------------|----------------------|
| ENGINE MAKE | John Deere | John Deere | John Deere |
| ENGINE MODEL | 6059TF001 | 6076F030 | 6076AF030 |
| ENGINE RPM | 1800 | 1800 | 1800 |
| SERIAL NUMBER | T06059T507336 | RG6076T554009 | RG6076A554580 |
| GOVERNOR TYPE | Electronic | Electronic | Electronic |
| MODEL ACTUATOR | Woodward 8256-022 | Woodward 8256-017 | Woodward 8256-017 |
| MODEL SPEED CONTROL | Woodward 8290-140 | Woodward 8290-140 | Woodward 8290-140 |
| IXC VOLTAGE | 12V | 12V | 12V |
| UNIT CIRCUIT BREAKER | General Electric | General Electric | General Electric |
| TYPE AMP-VOLT | SRPF250A/150A/600VAC | SRPF250A/225A/600VAC | SRPF250A/250A/600VAC |
| CURRENT HOURS | 15,253 | 18,318 | 24,270 |
| GENERATOR MAKE | Marathon | Marathon | Marathon |
| GENERATOR MODEL # | 363PSL1607 | 431PSL1265 | 432PSL1266 |
| GENERATOR SERIAL # | LM-215536-0695 | LM-2155188-0695 | LM-215855-0695 |
| GENERATOR CAPACITY (kW) | 80 kW | 125 kW | 148 kW |
| GENERATOR VOLTAGE | 480V | 480V | 480V |
| VOLTAGE REGULATOR MAKE & MODEL | Baxter APR63-5 | Baxter APR63-5 | Baxter APR63-5 |
| PARALLEL SWITCH GEAR | Yes | Yes | Yes |
| DISTRIBUTION VOLTAGE | 7200 | | |
| OEM | | | |
| kWh METER (Yes or No) | Yes | | |
| POWERHOUSE kWh METER TYPE | ABB S/N 01463087 | | |
| CATALOG # or TYPE | Type A1D | | |
| DEMAND? | Yes | | |
| CT RATIO | 300:5 / 250:5 / 300:5 | | |
| STATION SERVICE METER (Yes or No) | Yes | | |
| STATION SERVICE METER TYPE | ABB S/N 01 420 658 | | |
| CATALOG # or TYPE | Type A1D | | |
| BATTERY CHARGER/TYPE/MODEL | 3 - SENS FCA12-6 2411U | | |
| FUEL DAY TANK TYPE | Pryco Model PY75 | | |
| PUMP # | Oberdorfer 991 61 | | |
| MOTOR # | General Electric 5KH39QN5508AX | | |
| FUEL DAY TANK METER | ABB 092138.00 / 160GGPH | | |
| WASTE HEAT RECOVERY OPERATIONAL | No | | |
| WASTE HEAT METER | N/A | | |
| FIRE PROTECTION TYPE-OPERATIONAL? | Halon | | |
| ORIGINAL CONTRACTOR | Emerson Power Products - Seattle, WA | | |

**ALASKA ENERGY AUTHORITY
CIRCUIT RIDER PROGRAM
UTILITY PROBLEM REPORT**

Utility Name: Napaskiak Electric Utility

Date: 11/10/00

Region Number: 7

Technician: M. Witham

BRIEF DESCRIPTION OF VISIT:

Evaluation of Napaskiak power system and distribution system.

OPERATOR PROFICIENCY: (Circle One)Meter Reading: 0 = Excellent 5 = Good 10 = Acceptable 20 = UnacceptableObservation: See below.Daily Logs: 0 = Excellent 5 = Good 10 = Acceptable 20 = UnacceptableObservation: See below.Routine Maintenance: 0 = Excellent 5 = Good 10 = Acceptable 20 = UnacceptableObservation: See below.Scheduled Maintenance: 0 = Excellent 5 = Good 10 = Acceptable 20 = UnacceptableObservation: See below.**GENERAL COMMENTS:**

Building and generators are kept clean. Operators are good with observation and taking scheduled readings. Majority of routine maintenance is performed as per maintenance schedule. Oil has been overfilled on all three generator sets and air filters have been overlooked. Scheduled maintenance has not been performed by operators. Operators need basic training in diesel engine operation and maintenance and generator set basic maintenance.

NOTES

Routine Maintenance (filter changes, oil changes, replace belts, etc.)

Scheduled Maintenance (valve adjustment, water pump replacement, injector replacement, etc.)

MAINTENANCE PLANNING

Do you have a written preventive maintenance plan? ___ Yes; No. If there is a plan, do you follow it closely? ___ Yes; ___ No.

If you have a maintenance plan but do not follow it closely, what problems prevent you from doing so?

TRAINING PERFORMED

Trained operator personnel on the effects of a plugged up air filter and how to tell if they are plugged up. Showed them how to read a restriction Indicator. Went over the effects of overfilling the oil and using dipstick to check level.

TRAINING GIVEN TO: James, Richard and Nelson

ROUTINE MAINTENANCE PERFORMED

Replaced air filter and adjusted valves on generator #1. Adjusted valves on generator #2.

GENERAL CONDITIONS OF

POWERHOUSE:

Powerhouse is generally clean and in good condition. Building and equipment are kept clean and all components seem to be completely operational.

ELECTRICAL DISTRIBUTION SYSTEM:

Seems to be in good overall condition.

HEALTH AND SAFETY ISSUES:

None.

OTHER REPAIRS NEEDED:

None.

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

ALASKA ENERGY AUTHORITY Electrical Utility Evaluation Form

Community: **Napaklak**
 Evaluation Date: **11/10/00**
 Evaluator: **M. Witham**

Powerhouse Building

(Circle or highlight the appropriate points.)

Site Location

| | |
|--|------------------|
| Site suitable for powerhouse | <u>0 points</u> |
| < 100 feet from a public well | 10 points |
| < 25 feet from an eroding bank or beach, or in a flood plain | <u>10 points</u> |
| 20 points max. | |

Foundation

| | |
|---|------------------|
| *Powerhouse on acceptable foundation (pad & post, piling, concrete, etc.) | <u>0 points</u> |
| *Powerhouse directly on gravel pad or light timbers (raised small timbers, on permeable gravel) | 5 points |
| *Powerhouse directly on tundra or natural soils (no foundation) | 10 points |
| Powerhouse leaning considerably or unstable foundations (seismic hazard) | <u>20 points</u> |
| 30 points max. | |

Flooring

| | |
|---|------------------|
| *Welded steel deck plate or concrete (sealed) | <u>0 points</u> |
| *Steel deck plate or concrete (unsealed) | 5 points |
| *Wood (sealed or painted) | 10 points |
| *Wood (non-sealed or bare) | <u>20 points</u> |
| 20 points max. | |

Interior Walls

| | |
|---------------------------------------|------------------|
| *Concrete or metal skin | 0 points |
| *Fiberglass reinforced paneling (FRP) | <u>5 points</u> |
| *Gypsum board | 5 points |
| Wood (painted or sealed) | 10 points |
| Wood (non-painted or bare) | <u>20 points</u> |
| 35 points max. | |

Exterior Walls

| | |
|-----------------------------|------------------|
| *Concrete or metal siding | <u>0 points</u> |
| *Wood (painted or sealed) | 5 points |
| *Wood (non-painted or bare) | <u>20 points</u> |
| 20 points max. | |

Roof Penetration

- *None 0 points
 - *Properly installed (rain tight) 5 points
 - *Minor leaks (repairable) 10 points
 - *Major leaks (not repairable) 20 points
- 20 points max.

Ventilation

- *Proper ventilation (air intake & exhaust fans, louvers & hoods) 0 points
 - *Adequate ventilation (air intake & exhaust fans) 5 points
 - *Minimum ventilation (air intake) 10 points
 - *No ventilation (doors or windows have to be left open) 20 points
- 20 points max.

Lighting

- *Excellent lighting 0 points
 - *Adequate lighting 5 points
 - *Poor lighting 10 points
 - *No lighting 20 points
- 20 points max.

Security

- Powerhouse fenced in & door locks 0 points
 - Door locks 5 points
 - No fence 5 points
 - No door locks 10 points
- 20 points total

Generator Equipment and Installation

Diesel Engine

| | Unit #1 | Unit #2 | Unit #3 | Unit #4 |
|--------------------|---------------|---------------|---------------|---------|
| kW | <u>80 kW</u> | <u>115 kW</u> | <u>148 kW</u> | _____ |
| Hours of Operation | <u>15,253</u> | <u>18,318</u> | <u>24,270</u> | _____ |

Diesel Engine

- < 10,000 hours of operation 0 points
- > 10,000 hours of operation 2 X 10 points
- > 20,000 hours of operation 20 points
- > 30,000 hours of operation 30 points

60 points max.

Generator Condition

| | Unit #1 | Unit #2 | Unit #3 | Unit #4 | |
|-------------------------------|---------|---------|---------|---------|------------------|
| Good, like new | X | X | X | | |
| Fair | | | | | |
| Poor, guards/covers missing | | | | | |
| Good, like new in appearance | | | 3 X | | <u>0 points</u> |
| Fair | | | | | 10 points |
| Poor, guards & covers missing | | | | | <u>20 points</u> |
| | | | | | 30 points max. |

Load Sizing

| | |
|---|------------------|
| Properly sized generation to meet the community loads | <u>0 points</u> |
| Undersized generation to meet the community loads | <u>10 points</u> |
| Oversized generation to meet the community loads | <u>10 points</u> |
| | 20 points max. |

Control Switchgear

| | |
|---|------------------|
| *Fully automatic synchronizing switchgear | <u>0 points</u> |
| *Semi-automatic synchronizing switchgear | <u>5 points</u> |
| *Manually synchronizing switchgear | 10 points |
| *Manual transfer switches | 20 points |
| *Manual mounted breakers | <u>30 points</u> |
| | 30 points max. |

Electrical

| | |
|--|------------------|
| *Wiring appears appropriate | <u>0 points</u> |
| *Exposed wiring, improper grounding, missing covers etc. | <u>20 points</u> |
| | 20 points max. |

Fuel System Inside Powerhouse

| | |
|-----------------------------|------------------|
| *Welded piping | 0 points |
| *Threaded piping | 10 points |
| *Welded & threaded piping | <u>5 points</u> |
| Rubber hose | 10 points |
| No daytank | 20 points |
| Additional for active leaks | <u>20 points</u> |
| | 60 points max. |

Totalizing & Station Service Meter

| | |
|--|------------------|
| *Properly installed and working totalizing & station service meter | <u>0 points</u> |
| No totalizing meter | 10 points |
| No station service meter | <u>10 points</u> |
| | 20 points max. |

Fuel Meter

- *Properly installed & working fuel meter
- *No fuel meter

~~0 points~~
~~20 points~~

20 points max

Environmental

Interior of Powerhouse

- Clean, well kept
- Old generator part stored inside facility
- Waste oil stored inside facility
- Apparent oil spills

~~0 points~~
~~10 points~~
~~10 points~~
~~20 points~~

40 points max.

Under Facility

- Clean, well kept
- Old generator part stored under facility
- Waste oil stored under facility
- Apparent oil spills

~~0 points~~
~~10 points~~
~~10 points~~
~~20 points~~

40 points max.

Surrounding of Powerhouse

- Clean, well kept
- Old generator part stored on site
- Waste oil stored on site
- Apparent oil spills

~~0 points~~
~~10 points~~
~~10 points~~
~~20 points~~

40 points max.

Waste Oil Disposal

- *Waste oil blending system
- *Waste oil incinerator
- *Drum or tank storage for waste oils

~~0 points~~
~~5 points~~
~~20 points~~

20 points max

Life, Health, & Safety

- *Code Compliant
- *Low risk
- *Medium risk
- *High risk
- *Potential for loss of life

~~0 points~~
~~10 points~~
~~20 points~~
~~30 points~~
~~40 points~~

40 points max.

*Indicates that only one of the group should be chosen. TOTAL 645 points max.

Electrical Distribution Line Evaluation

Overhead Distribution System

Pole Type

Fully treated poles

0 points

Butt treated poles

10 points

Native pole (trees)

20 points

30 points max.

Pole Installation

Proper depth (can be determined by the manufacture's mark or button on pole)

0 points

Within 12 inches of recommended depth

10 points

Within 24 inches of recommended depth

20 points

Greater than 24 inches of recommended depth

30 points

60 points max.

Pole Alignment

Poles straight

0 points

Poles leaning less than 10°

10 points

Poles leaning greater than 10°

20 points

30 points max.

Distribution Voltage

=>7200 volts

0 points

2400 volts

10 points

480/277 volts

20 points

208/120 volts

30 points

40 points max.

Anchors

Properly installed (<12 inches of the anchor rod exposed)

0 points

12 - 24 inches of the anchor rod exposed

10 points

>24 inches of the anchor rod exposed

20 points

30 points max.

Primary Conductor

Appears properly installed (sag, conductor size, etc)

0 points

Improperly installed (conductor needs resagging, etc)

20 points

20 points max.

Service Conductor

Appears properly installed (sag, conductor size, etc)

0 points

Improperly installed (conductor needs resagging, etc)

20 points

20 points max.