

## Community Profile: Mekoryuk



### Alaska Native Name (definition)

N/A

### Historical Setting / Cultural Resources

Nunivak Island has been inhabited for 2,000 years by the Nuniwarmiut people, who are Cup'ik (Choop'ik) Eskimos. In the 1930s, the Evangelical Covenant Church was built, followed by a BIA school in 1939. Reindeer were introduced for commercial purposes in 1920 by an Eskimo-Russian trader. Musk-ox from Greenland were transferred to the island in 1934. An airstrip was built in 1957, and the Territorial Guard was formed. Men went to Fort Richardson in Anchorage for training. During this time, many families moved to Bethel to be near the high school, returning during late spring for fishing and sea mammal hunting.

**Incorporation** 2nd Class City, 1969

### Location

Part of the Lower Kuskokwim Subregion. Mekoryuk is at the mouth of Shoal Bay on the north shore of Nunivak Island in the Bering Sea. The island lies 30 miles off the coast. It is 149 air miles west of Bethel and 553 miles west of Anchorage. Mekoryuk is part of the Yukon Delta National Wildlife Refuge.

**Longitude** -166.185 **Latitude** 60.3881

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)** **Per-Capita Revenue**  
Sales, 4% \$230

### Economy

This Cup'ik Eskimo village maintains reindeer and musk ox herds and practices a subsistence lifestyle. The sale, importation, and possession of alcohol is banned.

**Climate** **Avg. Temp.** **Climate Zone** **Heating Deg. Days**  
76/-48 N/A N/A

### Natural Hazard Plan

N/A

### Community Plans

Mekoryuk Comprehensive Plan, 1993 **Year** 1993

Local Contacts	Email	Phone	Fax
Nima Corporation		907-827-8636	907-827-8639
Native Village of Mekoryuk	<a href="mailto:nativevillage.mekoryuk@yahoo.com">nativevillage.mekoryuk@yahoo.com</a>	907-827-8828	907-827-8133
City of Mekoryuk	<a href="mailto:cityofmekoryuk@yahoo.com">cityofmekoryuk@yahoo.com</a>	907-827-8314	907-827-8626

Demographics	2000	2010	2013
Population	210	191	Percent of Residents Employed 71.64%
Median Age	36	38	Denali Commission Distressed Community No
Avg. Household Size	3	3	Percent Alaska Native/American Indian (2010) 93.19%
Median Household Income		\$24,375	Low and Moderate Income (LMI) Percent (201x) 80%

Electric Utility	Generation Sources	Interties	PCE?
AVEC	Diesel	No	Yes

Landfill	Class	III	Permitted?	No	Location	3/4 mi. west of community
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Water/Wastewater System	Homes Served	System Volume
Water Haul	198	50,001-100,000
Sewer Haul	Water/Wastewater Energy Audit?	
Notes	Yes	

### Access

Road	No	Runway 1	3,070'x75'	Runway 2	N/A
Air Access	Mekoryuk Airport, gravel, fair condition	Runway 3	N/A	Runway 4	N/A
Dock/Port	Yes	Barge Access?	Yes	Ferry Service?	No

Notes

# Energy Profile: Mekoryuk

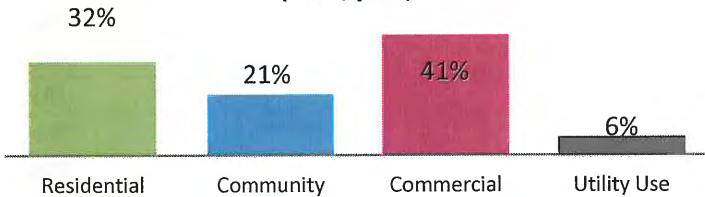
## Diesel Power System

Utility	AVEC		
Engine	Make/Model	Condition/Hrs	Gen Capacity
Unit 1	Detroit Diesel	Fair/20,604	236
Unit 2	Detroit Diesel	Fair/1,440	363
Unit 3	Cummins	Fair/13,702	250
Unit 4			
Line Loss	5.6%		
Heat Recovery?	No (AVEC); Yes (RPSU)		
Upgrades	Priority	Projects	Status
RPSU Powerhouse	Low	Heat/Wind Rec.	Planned
RPSU Distribution	Med.		Planned
Outage History/Known Issues			

<b>Operators</b>	No. of Operators	Training/Certifications
	14	APPO, BF Book/Manager, BFO,

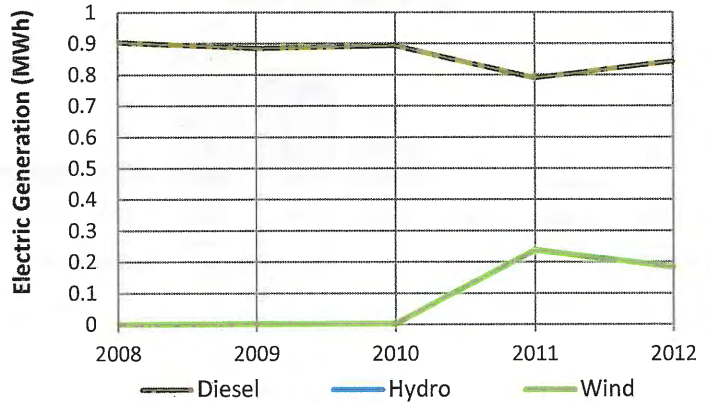
Maintenance Planning (RPSU)	Excellent		
<b>Electric Sales</b>	No. of Customers	kWh/year	kWh/Customer
Residential	91	305,522	3,357
Community	10	198,353	19,835
Commercial	27	392,725	14,545
Utility Use		59,563	

**Electric Sales by Customer Type  
(kWh/year)**



## Power Production

Diesel (kWh/yr)	825,971	Avg. Load (kW)	113
Wind (kWh/yr)	186,660	Peak Load (kW)	263
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	13.35
Total (kWh/yr)	1,012,631	Diesel Used (gals/yr)	61,864



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.19	Fuel Cost	\$0.26
Residential Rate	\$0.55	Non-fuel Cost	\$0.27
Commercial Rate		Total Cost	\$0.53
<b>Fuel Prices (\$)</b>	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$3.68	\$5.47	6-13; 8-13
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)		\$284.52	8-13
Wood (1 cord)			
Pellets			
Discounts?			

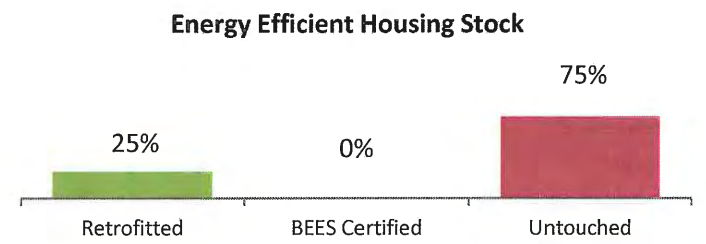
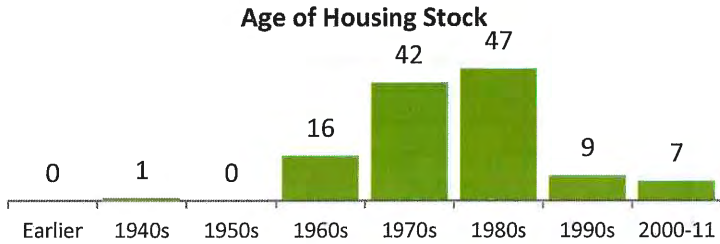
<b>Alternative Energy</b>	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	High	Wind Farm, Two 100 kW Turbines	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Medium	Wind to Heat at Washeteria	Operational
Energy Efficiency	High	VEEP/EECBG	Complete

<b>Bulk Fuel</b>			
Tank Owner	Fuel Type(s)	Capacity	Age/Condition
City	Heating Oil	54,000	New
NIMA Store	Heating Oil	86,000	Good
NIMA Store	Gasoline	81,000	Good
Bulk Fuel Upgrade	Priority	Project	Status

Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
By Barge			
By Air			
<b>Cooperative Purchasing Agreements</b>			
Notes			
Barge delivery throughout Summer.			

## Energy Profile: Mekoryuk

<b>Housing Units</b>	<b>Occupied</b>	<b>Vacant</b>	<b>% Owner-Occup.</b>	<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>		
	81	36	77%	AVCP	AVCP		
<b>Housing Need</b>		<b>Overcrowded</b>	<b>1-star</b>	<b>Energy Use</b>	<b>Average Home Energy Rating</b>	<b>Average Square Feet</b>	<b>Avg. EUI (kBtu/sf)</b>
		8.6%	N/A		3-star	1,040	129
<b>Data Quality</b>	Medium						



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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### Non-residential Building Inventory

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Armory					No
AVEC Power Plant, Crew Quarters, Storage					No
Church & Parsonage					No
City Fuel Tanks					No
City Garage					No
City Office		1,848			No
Community Hall					No
FAA Facilities					No
Fire Station					No
Fish Plant Storage					No
Fishery Plant					No
Fuel Pump Header					No
Game Room					No
Garage					No
Gas Station					No
High School, Tank Farm, Storage					No
New Clinic					No
NRSP Reindeer Plant					No
Office					No
Old City Garage					No
Propane Fill Station					No
School Sewage Lift Station					No
Sewer Transfer Station					No
SRE Bldg	2002	2,400			No
Storage					No
Storage Facility					No
Store					No
Store Fuel Tank					No
Store Storage					No
Store Warehouse					No
Teacher's Quarters					No

## Energy Profile: Mekoryuk

### Non-residential Building Inventory (cont.)

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Tribal Offices					No
US Post Office					No
Utilities Facilities					No
Warehouse					No
Washeteria					No



# Community Profile: Napakiak



**Incorporation** 2nd Class City, 1970

**Location**  
Part of the Lower Kuskowim Subregion. Napakiak is on the north bank of the Kuskokwim River, 15 miles southwest of Bethel. It is located on an island between the Kuskokwim River and Johnson's Slough. It lies 407 miles west of Anchorage.

**Longitude** -161.9519      **Latitude** 60.6967

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

<b>Taxes</b>	<b>Type (rate)</b>	<b>Per-Capita Revenue</b>
Sales, 4%		\$200

**Economy**  
This city is predominantly Yup'ik Eskimos who maintain a fishing and subsistence lifestyle.

<b>Climate</b>	<b>Avg. Temp.</b>	<b>Climate Zone</b>	<b>Heating Deg. Days</b>
	62/11	Continental	N/A

**Natural Hazard Plan**  
Napakiak Local Hazard Mitigation Plan, 2011

<b>Community Plans</b>	<b>Year</b>
Napakiak Community Plan, 2010	2010

**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

Yup'ik Eskimos have lived in this region since 1000 AD. The village was first reported in 1878 by E.W. Nelson. By 1910, the village had a population of 166. In 1926, the Moravian Church constructed a chapel. In 1939 a BIA school began operating, and in 1946 a Native-owned village cooperative store was opened. A post office was established in 1951. A National Guard Armory was built in 1960. The first airstrip was completed in 1973, enabling year-round access. The city's primary priority in 2009 was to relocate all public facilities and homes to a bluff across Johnson's Slough. The sandbar on which the city was built is severely eroding.

<b>Local Contacts</b>	<b>Email</b>	<b>Phone</b>	<b>Fax</b>
Napakiak Corporation		907-589-2227	907-589-2442
Native Village of Napakiak	<a href="mailto:naparyaraq@hughes.net">naparyaraq@hughes.net</a>	907-589-2135	907-589-2136
City of Napakiak	<a href="mailto:cityofnapakiak@hotmail.com">cityofnapakiak@hotmail.com</a>	907-589-2611	907-589-2612

<b>Demographics</b>	<b>2000</b>	<b>2010</b>	<b>2013</b>
<b>Population</b>	353	354	
<b>Median Age</b>	27	24	
<b>Avg. Household Size</b>	5	4	
<b>Median Household Income</b>		\$38,750	
<b>Percent of Residents Employed</b>			64.47%
<b>Denali Commission Distressed Community</b>			Yes
<b>Percent Alaska Native/American Indian (2010)</b>			97.18%
<b>Low and Moderate Income (LMI) Percent (201x)</b>			97%

<b>Electric Utility</b>	<b>Generation Sources</b>	<b>Interties</b>	<b>PCE?</b>
Napakiak Ircinraq Power Company	Diesel	No	Yes

<b>Landfill</b>	<b>Class</b>	<b>Permitted?</b>	<b>Location</b>
	III	Yes	Southwest of new housing developme

<b>Water/Wastewater System</b>		<b>Homes Served</b>	<b>System Volume</b>
<b>Water</b>	N/A	330	<10,000
<b>Sewer</b>	N/A		
<b>Notes</b>		<b>Water/Wastewater Energy Audit?</b>	
		No	

<b>Access</b>		<b>Runway 1</b>	<b>Runway 2</b>
<b>Road</b>	No		
<b>Air Access</b>	Napakiak Airport, gravel, fair condition	3,248'x60'	N/A
	N/A	N/A	N/A
<b>Dock/Port</b>	No	<b>Barge Access?</b>	<b>Ferry Service?</b>
		Yes	No

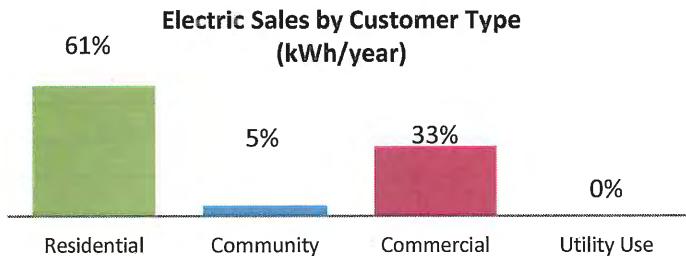
**Notes**

## Energy Profile: Napakiak

### Diesel Power System

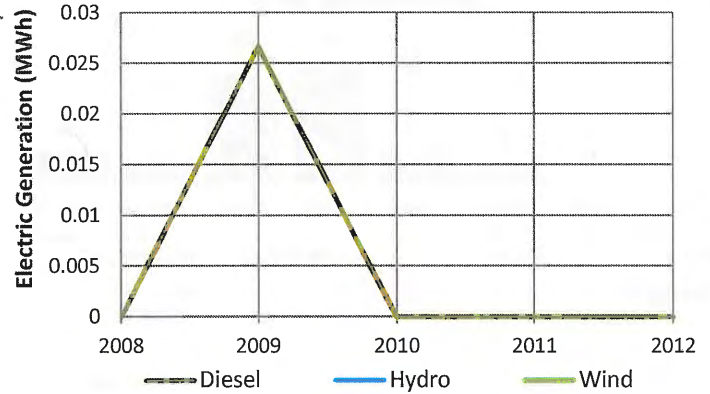
<b>Utility</b>	Napakiak Inricaq Power Company		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	John Deere	Good/35	250
Unit 2			
Unit 3			
Unit 4			
<b>Line Loss</b>	8.2%		
<b>Heat Recovery?</b>	No		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	Low		Complete
RPSU Distribution	Low		Complete
<b>Outage History/Known Issues</b>			
Intertie from Bethel, not running generator.			
<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>	
	3	BFO, Utility Clerk	

<b>Maintenance Planning (RPSU)</b>	Unacceptable		
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	111	349,462	3,148
Community	3	29,081	9,694
Commercial	27	188,058	6,965
Utility Use		2,022	



### Power Production (purchased)

<b>Diesel (kWh/yr)</b>	619,200	<b>Avg. Load (kW)</b>	56
<b>Wind (kWh/yr)</b>		<b>Peak Load (kW)</b>	124
<b>Hydro (kWh/yr)</b>		<b>Efficiency (kWh/gal)</b>	0
<b>Total (kWh/yr)</b>	619,200	<b>Diesel Used (gals/yr)</b>	0



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.24	<b>Fuel Cost</b>	
Residential Rate	\$0.84	<b>Non-fuel Cost</b>	\$0.26
Commercial Rate		<b>Total Cost</b>	\$0.26
<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.77	\$6.76	6/13; 8/14
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)			
Wood (1 cord)			
Pellets			
Discounts?			

<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	Medium	Met Tower installed in 2014	Reconnaissance
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
Energy Efficiency	High	EECBG	Complete

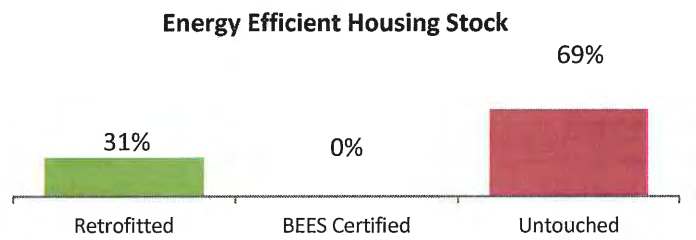
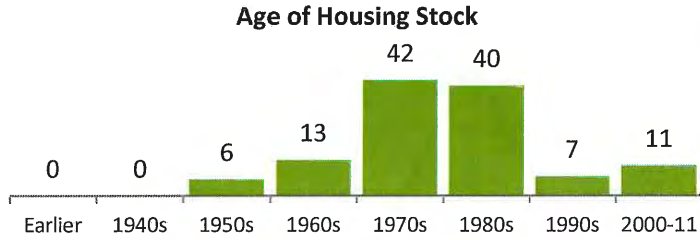
<b>Bulk Fuel</b>			
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>
Vill. of Napakiak	Diesel	63,000	Good
Vill. of Napakiak	Gasoline	43,000	Good
L Kuskokwim SD	Diesel	140,000	5 yrs/active
Napakiak Corp.	Diesel/Gas	103,000	4 yrs/active
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
By Barge	June thru Oct		
By Air			
<b>Cooperative Purchasing Agreements</b>			
<b>Notes</b>			

# Energy Profile: Napakiak

<b>Housing Units</b>	<b>Occupied</b>	<b>Vacant</b>	<b>% Owner-Occup.</b>
	94	14	76%
<b>Housing Need</b>	<b>Overcrowded</b>		<b>1-star</b>
	37.2%		12.4%
<b>Data Quality</b>	High		

<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>		
AVCP	AVCP		
<b>Energy Use</b>	<b>Average Home Energy Rating</b>	<b>Average Square Feet</b>	<b>Avg. EUI (kBtu/sf)</b>
	2-star	834	159



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
Street lights		27	Yes		24 replaced with LEDs

## Non-residential Building Inventory

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
SRE Bldg 1	2002	1,200			Yes
SRE Bldg 2 (Heated)		1,200			Yes
Washeteria			Yes, EECBG	No	No

# Community Profile: Napaskiak



**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

The area has historically been occupied by Yup'ik Eskimos. Napaskiak was first reported by the U.S. Coast & Geodetic Survey in 1867. The 1880 U.S. Census reported a population of 196. By 1890, the population had dropped to 97 and was as low as 67 in 1939. The city was incorporated in 1971.

**Incorporation** 2nd Class City, 1971

**Location**

Part of the Lower Kuskokwim Subregion. Napaskiak is located on the east bank of the Kuskokwim River, along the Napaskiak Slough, 7 miles southeast of Bethel.

**Longitude** -161.7661 **Latitude** 60.7081

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)** **Per-Capita Revenue**  
Sales, 3% \$60

**Economy**

Napaskiak is a traditional Yup'ik Eskimo village dependent upon fishing and subsistence activities. The sale and importation of alcohol is banned.

**Climate** **Avg. Temp.** **Climate Zone** **Heating Deg. Days**  
62/-2 Continental N/A

**Natural Hazard Plan**

N/A

**Community Plans**

N/A

**Year**

N/A

Local Contacts	Email	Phone	Fax
Napaskiak Incorporated		907-737-7413	
Native Village of Napaskiak	<a href="mailto:fjenkins@napaskiak.org">fjenkins@napaskiak.org</a>	907-737-7364	907-737-7039
City of Napaskiak	<a href="mailto:cityofnapaskiak@live.com">cityofnapaskiak@live.com</a>	907-737-7626	907-737-7412

Demographics	2000	2010	2013
Population	390	405	Percent of Residents Employed 73.25%
Median Age	22	32	Denali Commission Distressed Community No
Avg. Household Size	5	5	Percent Alaska Native/American Indian (2010) 96.54%
Median Household Income		\$41,563	Low and Moderate Income (LMI) Percent (201x) 80%

Electric Utility	Generation Sources	Interties	PCE?
Napaskiak Electric Utility	Diesel	No	Yes

Landfill	Class	Permitted?	No	Location	1,000 feet from river bank
	III				

Water/Wastewater System		Homes Served	System Volume
Water	Haul	200	10,000-50,000
Sewer	Haul	Water/Wastewater Energy Audit?	
Notes		Yes	

Access	Runway 1	Runway 2	Runway 3	Runway 4
Road	No			
Air Access	Napaskiak Airport, gravel, fair condition	3,000'x60'	N/A	N/A
	N/A			
Dock/Port	No	Barge Access? Yes	Ferry Service? No	

Notes



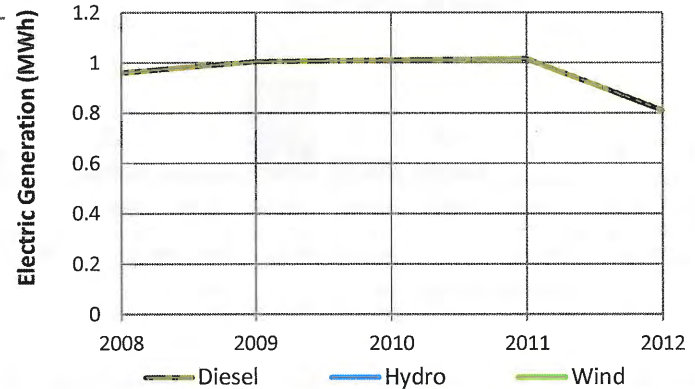
# Energy Profile: Napaskiak

## Diesel Power System

<b>Utility</b>	Napaskiak Electric Utility		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	John Deere	Fair/26,881	230
Unit 2	John Deere	Fair/4,565	117
Unit 3	John Deere	Fair/16,534	230
Unit 4			
<b>Line Loss</b>	24.7%		
<b>Heat Recovery?</b>	No		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	In Progress		
RPSU Distribution	High		
<b>Outage History/Known Issues</b>			
Fuel quality issues in past, unknown if outages resulted.			
<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>	
	24	APPO, BFO, PFO, Clerk	

## Power Production

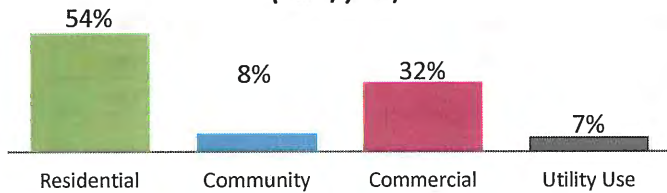
<b>Diesel (kWh/yr)</b>	992,964	<b>Avg. Load (kW)</b>	91
<b>Wind (kWh/yr)</b>	0	<b>Peak Load (kW)</b>	203
<b>Hydro (kWh/yr)</b>	0	<b>Efficiency (kWh/gal)</b>	14
<b>Total (kWh/yr)</b>	992,964	<b>Diesel Used (gals/yr)</b>	69,767



<b>Maintenance Planning (RPSU)</b>	Unacceptable		
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	109	401,211	3,681
Community	8	62,079	7,760
Commercial	30	235,723	7,857
Utility Use		48,824	

<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.31	Fuel Cost	\$0.44
Residential Rate	\$0.70	Non-fuel Cost	\$0.24
Commercial Rate		Total Cost	\$0.68
<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.40	\$5.98	6-13; 8-14
<b>Other Fuel? (1 gal)</b>			
Gasoline (1 gal)		\$7.89	1-12
<b>Propane (100#)</b>			
<b>Wood (1 cord)</b>			
<b>Pellets</b>			
<b>Discounts?</b>			

**Electric Sales by Customer Type (kWh/year)**



Alternative Energy	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	Low	Met Tower Installed; Feasibility Study	Closed
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Medium	Feasibility Study Commissioned	
Energy Efficiency	High	1)Streetlights 2)Sanitation EE 3)Clinic EE	1&2 Complete, 3 Funded

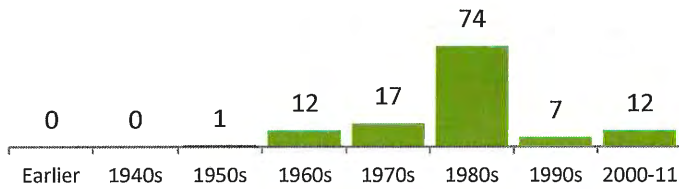
Bulk Fuel	Fuel Type(s)	Capacity	Age/Condition	Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner				By Barge			
				By Air			
<b>Cooperative Purchasing Agreements</b>							

Bulk Fuel Upgrade	Priority	Project	Status	Notes

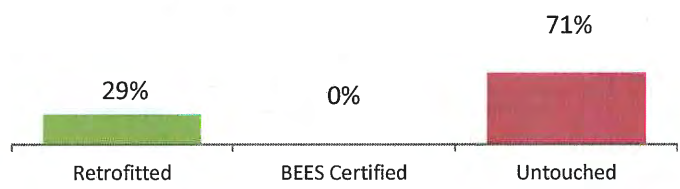
## Energy Profile: Napaskiak

<b>Housing Units</b>	Occupied 78	Vacant 36	% Owner-Occup. 88%	<b>Regional Housing Authority</b> AVCP	<b>Weatherization Service Provider</b> AVCP
<b>Housing Need</b>	Overcrowded 53.8%		1-star N/A	<b>Energy Use</b>	Average Home Energy Rating 3 star
<b>Data Quality</b>	Medium			Average Square Feet 993	Avg. EUI (kBtu/sf) 126

**Age of Housing Stock**



**Energy Efficient Housing Stock**



<b>Street Lighting</b>	Owner City Napaskiak	Number/Type 46	Retrofitted? Yes	Year	Notes All 46 lights replaced with LEDs
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**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
City Office		912			Yes
East Watering Point		608			Yes
Napaskiak Clinic	2005	2,295	Yes		No
Napaskiak East Wellhouse Water Plant	2006	585	Yes		Yes
Napaskiak West Well Water Plant	1985	1,053	Yes		No
Public Safety Building/Jail	1980	1,200			Yes
SRE Bldg.	1992	1104			No
Tribal Council	1970	920	Yes		No
Washeteria & Lift Station	2006	1,323	Yes		Yes
West Watering Point		1,050			Yes

# Community Profile: Newtok



<b>Incorporation</b>	0		
<b>Location</b>	Part of the Lower Kuskokwim Subregion. Newtok is on the Ninglick River north of Nelson Island in the Yukon-Kuskokwim Delta Region. It is 94 miles northwest of Bethel.		
<b>Longitude</b>	-164.6294	<b>Latitude</b>	60.9428
<b>ANCSA Region</b>	Calista Corporation		
<b>Borough/CA</b>	Wade Hampton		
<b>School District</b>	Kashunamiut School District		
<b>AEA Region</b>	Lower Yukon-Kuskokwim		
<b>Taxes</b>	<b>Type (rate)</b>	<b>Per-Capita Revenue</b>	
	N/A	N/A	

**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

The people of Newtok share a heritage with Nelson Island communities; their ancestors have lived on the Bering Sea coast for at least 2,000 years. The people from the five villages are known as Qaluyaarmiut or "dip net people." In the late 1950s, the village was relocated to its present location to escape flooding. The city was incorporated in 1976, but it was dissolved on January 28, 1997. In November 2003, the 108th Congress passed S. 924, allowing the village to relocate to Nelson Island. The legislation authorizes an exchange of lands between the U.S. Fish and Wildlife Service and the Newtok Native Corporation to allow villagers to relocate.

**Economy**

Newtok is a traditional Yup'ik Eskimo village, with an active subsistence lifestyle.

<b>Climate</b>	<b>Avg. Temp.</b>	<b>Climate Zone</b>	<b>Heating Deg. Days</b>
	59/2	Marine	N/A

**Natural Hazard Plan**

Local Hazards Mitigation Plan, 2008

<b>Community Plans</b>	<b>Year</b>
N/A	N/A

<b>Local Contacts</b>	<b>Email</b>	<b>Phone</b>	<b>Fax</b>
Newtok Native Corporation		907-237-2200	907-237-2710
Newtok Village		907-237-2202	

<b>Demographics</b>	<b>2000</b>	<b>2010</b>	<b>2013</b>
<b>Population</b>	321	354	<b>Percent of Residents Employed</b> 82.21%
<b>Median Age</b>	21	17	<b>Denali Commission Distressed Community</b> Yes
<b>Avg. Household Size</b>	6	6	<b>Percent Alaska Native/American Indian (2010)</b> 96.05%
<b>Median Household Income</b>		\$43,056	<b>Low and Moderate Income (LMI) Percent (201x)</b> N/A

<b>Electric Utility</b>	<b>Generation Sources</b>	<b>Interties</b>	<b>PCE?</b>
Ungusraq Power Company	Diesel	No	Yes

<b>Landfill</b>	<b>Class</b>	III	<b>Permitted?</b>	No	<b>Location</b>	N/A
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<b>Water/Wastewater System</b>	<b>Homes Served</b>	<b>System Volume</b>
<b>Water</b> Washeteria	435	50,001-100,000
<b>Sewer</b> Honey Bucket	<b>Water/Wastewater Energy Audit?</b>	
<b>Notes</b>	Yes	

<b>Access</b>	<b>Road</b>	No
<b>Air Access</b>	Newtok Airport, gravel, poor condition	<b>Runway 1</b> 2,202'x35'
	Seaplane Base	<b>Runway 3</b> 5,000'x400'
<b>Dock/Port</b>	No	<b>Runway 2</b> N/A
		<b>Runway 4</b> N/A
<b>Notes</b>		<b>Barge Access?</b> Yes
		<b>Ferry Service?</b> No

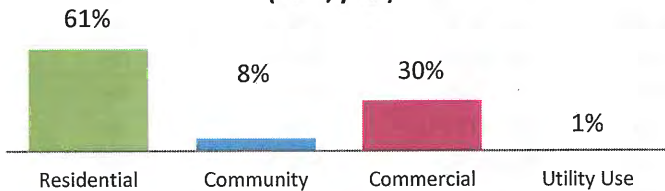
## Energy Profile: Newtok

### Diesel Power System

<b>Utility</b>	Ungusraq Power Company		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	John Deere	Poor/6,265	100
Unit 2	John Deere	Poor/9,212	120
Unit 3			
Unit 4			
<b>Line Loss</b>	2.3%		
<b>Heat Recovery?</b>	Yes; Water Holding Facility		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	High		
RPSU Distribution	High		
<b>Outage History/Known Issues</b>			
Inadequate capacity, school uses own gens.			
<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>	
	6	PPO, BFO, APPO, Utility Clerk	

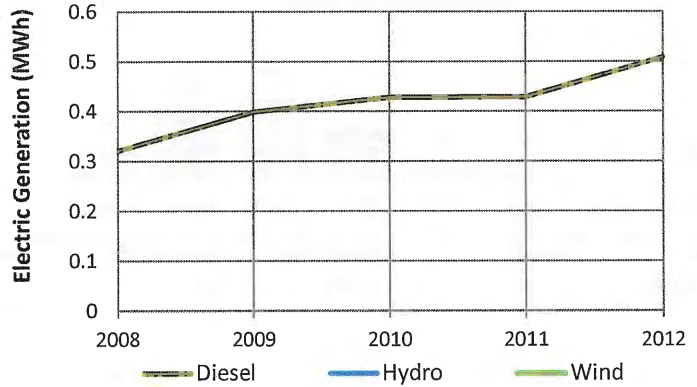
<b>Maintenance Planning (RPSU)</b>	Acceptable		
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	66	276,720	4,193
Community	3	34,057	11,352
Commercial	23	137,729	5,988
<b>Utility Use</b>	3,462		

**Electric Sales by Customer Type  
(kWh/year)**



### Power Production

<b>Diesel (kWh/yr)</b>	462,408	<b>Avg. Load (kW)</b>	42
<b>Wind (kWh/yr)</b>	0	<b>Peak Load (kW)</b>	94
<b>Hydro (kWh/yr)</b>	0	<b>Efficiency (kWh/gal)</b>	10.8
<b>Total (kWh/yr)</b>	462,408	<b>Diesel Used (gals/yr)</b>	42,851



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.18	Fuel Cost	\$0.43
Residential Rate	\$0.80	Non-fuel Cost	\$0.34
Commercial Rate		Total Cost	\$0.77

<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.56	\$6.68	6/13; 8/14

Other Fuel? (1 gal)	
Gasoline (1 gal)	
Propane (100#)	
Wood (1 cord)	
Pellets	
Discounts?	

<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	Low	Met Tower Installed	Collecting data
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	Water system	Operational
Energy Efficiency	High	1) Sanitation/Health Clinic EE; 2) VEEP	Both Complete

<b>Bulk Fuel</b>			
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>
Newtok Village	Diesel/Gas	30,000	Fair
Newtok Village	Gasoline	25,000	Fair
Tom's Store	Diesel	6,000	Good
Tom's Store	Gasoline	20,000	Good
Ungusraq Power	Diesel	65,000	Fair
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
By Barge	July		
By Air			
<b>Cooperative Purchasing Agreements</b>			

### Notes

Permafrost is widespread, causing problems with power house infrastructure.



# Energy Profile: Newtok

<b>Housing Units</b>	<b>Occupied</b>	<b>Vacant</b>	<b>% Owner-Occup.</b>
72	72	4	68%

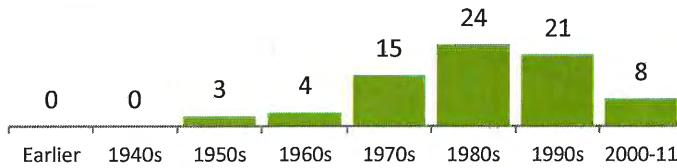
<b>Housing Need</b>	<b>Overcrowded</b>	<b>1-star</b>
	79.2%	

<b>Data Quality</b>	Low
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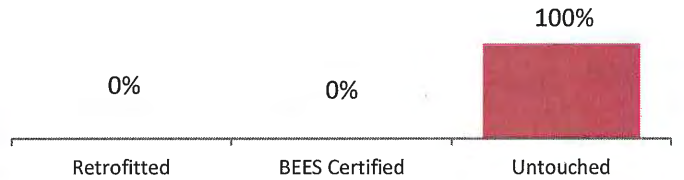
<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>
AVCP	AVCP

<b>Energy Use</b>	<b>Average Home Energy Rating</b>	<b>Average Square Feet</b>	<b>Avg. EUI (kBtu/sf)</b>
	N/A		

**Age of Housing Stock**



**Energy Efficient Housing Stock**



<b>Lighting</b>	<b>Owner</b>	<b>Number/Type</b>	<b>Retrofitted?</b>	<b>Year</b>	<b>Notes</b>
Streetlights		17/HPS	Yes		17 LED lights installed

**Non-residential Building Inventory**

<b>Building Name or Location</b>	<b>Year Built</b>	<b>Square Feet</b>	<b>Audited?</b>	<b>Retrofits Done?</b>	<b>In ARIS?</b>
Bingo and Community Hall	1970	1,269	Yes, AHFC-C	No	Yes
Community Center		1,000	Yes, VEEP	1 of 2	No
Community Store		1,600	Yes, VEEP	1 of 2	No
Manguan Newtok Health Clinic	2007	2,422	Yes, AHFC-C	No	No
Newtok Tribal Court	1980	437	Yes, AHFC-C	No	No
Newtok Tribal Office and IGAP	1980	1,152	Yes, AHFC-C	No	Yes
Newtok Washeteria and Water Plant	1980	784	Yes, AHFC-C	No	No
School		20,000	Yes, VEEP	1 of 2	No
Tom's Store		800	Yes, VEEP	2 of 3	No
Tribal Council Office		875	Yes, VEEP	Yes	No
Unusraq Power Company Office		750	Yes, VEEP	Yes	No
Washeteria		1,100	Yes, VEEP	only 1	No
Sre building	1997	1,104	No		No

# Community Profile: Nightmute



**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

Nelson Island has been inhabited by the Qaluyaarmiut ("dip net people") for 2,000 years. The area was relatively isolated from outside contact and has kept its traditions and culture. Umkumiut is the traditional fish camp. In 1964, several residents moved to Toksook Bay to obtain more cost-effective goods. The city was incorporated in 1974.

**Incorporation** 2nd Class City, 1974

**Location**  
Part of the Lower Kuskokwim Subregion. Nightmute is located on Nelson Island, in western Alaska. It is 18 miles upriver from Toksook Bay and 100 miles west of Bethel.

**Longitude** -164.7239 **Latitude** 60.4794

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

Taxes Type (rate)	Per-Capita Revenue
Sales, 2%	\$10

**Economy**  
Nightmute is a traditional Yup'ik Eskimo village, active in subsistence. The sale, importation, and possession of alcohol is banned.

Climate	Avg. Temp.	Climate Zone	Heating Deg. Days
	57/6	Marine	N/A

**Natural Hazard Plan**  
N/A

Community Plans	Year
Nightmute Traditional Council Action Plan, 2004	2004

Local Contacts	Email	Phone	Fax
Chinuruk Incorporated		907-647-6813	907-647-6814
Native Village of Nightmute	<a href="mailto:negtemiut_tribe@live.com">negtemiut_tribe@live.com</a>	907-647-6215	907-647-6112
City of Nightmute	<a href="mailto:nmcityclerk@yahoo.com">nmcityclerk@yahoo.com</a>	907-647-6426	907-647-6427

Demographics	2000	2010	2013
Population	208	280	Percent of Residents Employed 80.13%
Median Age	22	22	Denali Commission Distressed Community Yes
Avg. Household Size	5	5	Percent Alaska Native/American Indian (2010) 94.64%
Median Household Income		\$59,063	Low and Moderate Income (LMI) Percent (201x) 75%

Electric Utility	Generation Sources	Interties	PCE?
AVEC	Diesel, Wind	No	Yes

Landfill	Class	III	Permitted?	No	Location	1/2 mi upriver
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Water/Wastewater System	Homes Served	System Volume
Water Haul	243	N/A
Sewer N/A	Water/Wastewater Energy Audit?	
Notes	No	

Access	Road	No	Air Access	Nightmute Airport, gravel, fair condition	Runway 1	N/A	Runway 2	N/A
				N/A	Runway 3	N/A	Runway 4	N/A
			Dock/Port	No	Barge Access?	No	Ferry Service?	No

Notes

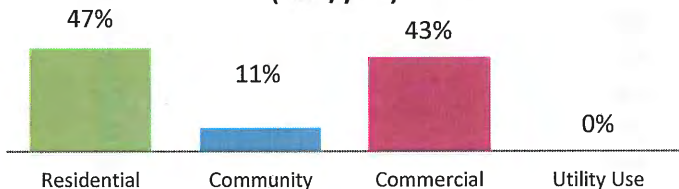
## Energy Profile: Nightmute

### Diesel Power System

Utility	AVEC		
Engine	Make/Model	Condition/Hrs	Gen Capacity
Unit 1	Detroit Diesel	Good/663	344
Unit 2			
Unit 3			
Unit 4			
Line Loss	N/A		
Heat Recovery?	No		
Upgrades	Priority	Projects	Status
RPSU Powerhouse	Low		
RPSU Distribution	Med.		
Outage History/Known Issues			
Power from Toksook Bay via intertie, back-up generator in place			
Operators	No. of Operators	Training/Certifications	
	8	BF Book, Manager, BFO, PPO	

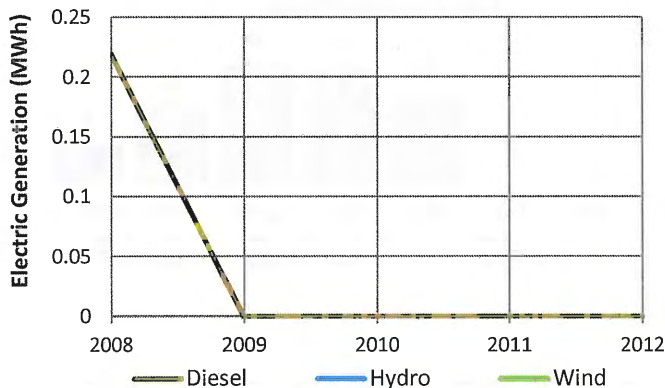
Maintenance Planning (RPSU)	Good		
Electric Sales	No. of Customers	kWh/year	kWh/Customer
Residential	57	280,777	4,926
Community	8	63,551	7,944
Commercial	19	256,510	13,501
Utility Use	0		

**Electric Sales by Customer Type (kWh/year)**



### Power Production

Diesel (kWh/yr)	0	Avg. Load (kW)	0
Wind (kWh/yr)	0	Peak Load (kW)	0
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	N/A
Total (kWh/yr)	0	Diesel Used (gals/yr)	0



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.19	Fuel Cost	N/A
Residential Rate	\$0.55	Non-fuel Cost	\$0.27
Commercial Rate		Total Cost	\$0.27
<b>Fuel Prices (\$)</b>	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$4.23	\$8.67	6-13; 8-14
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)			
Wood (1 cord)			
Pellets			
Discounts?			

Alternative Energy	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	High	Intertie to Toksook Bay Wind Farm	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
Energy Efficiency	High	1) Sanitation Energy Efficiency 2) VEEP	1) Funded 2) Complete

Bulk Fuel			
Tank Owner	Fuel Type(s)	Capacity	Age/Condition
City	Heating Oil	54,000	Good
City	Gasoline	30,000	Good
School Dist.	Diesel	27,000	
School Dist.	Diesel	4,000	
AVEC	Diesel	40,000	
Bulk Fuel Upgrade	Priority	Project	Status

Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
By Barge			
By Air			
Cooperative Purchasing Agreements			

### Notes

## Energy Profile: Nightmute

<b>Housing Units</b>	Occupied	Vacant	% Owner-Occup.
	60	5	87%

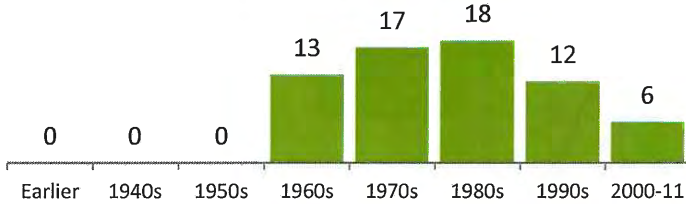
<b>Housing Need</b>	Overcrowded	1-star
	66.7%	6.2%

<b>Data Quality</b>	Medium
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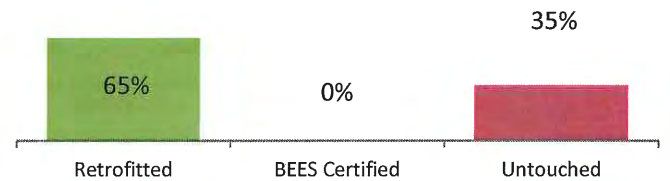
<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>		
AVCP	AVCP		

<b>Energy Use</b>	Average Home Energy Rating	Average Square Feet	Avg. EUI (kBtu/sf)
	2-star plus	796	113

**Age of Housing Stock**



**Energy Efficient Housing Stock**



<b>Lighting</b>	Owner	Number/Type	Retrofitted?	Year	Notes
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**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Chinuruk Inc. Village Store	1970	1,901		Yes	No
City Office Bldg.	1983	1,053		Yes	No
Community Catholic Church	1947	1,107		Yes	No
Community Catholic Church Housing	1970	537		Yes	No
Community Hall	1970	1,728		Yes	No
Headstart Bldg	1985	805		Yes	No
Health Clinic	2002	1,740	Yes		No
Joseph Post Memorial Bldg.	1980	2,000			No
Native Village of Umkumiut Office Bldg	~1970s	696		Yes	No
Nightmute School		9,554			Yes
Post Office	1972	529		Yes	No
SRE Bldg. 1 (Heated)		1,250			Yes
SRE Bldg. 2		1,250			Yes
Traditional Council	1976				No
Traditional Council Offices	1983	989		Yes	No
Tribal Office		1,141	Yes		No
VPSO Bldg.	1991	361		Yes	No
Warm Storage				Yes	No
Water Treatment Plant/Bunkhouse				Yes	No
Watering Point	1990	450	Yes		No



# Community Profile: Nunapitchuk



**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

It is an Eskimo village first listed in the 1939 U.S. Census with a population of 121. The community was incorporated as a second-class city in 1969. During the 1970 U.S. Census, Nunapitchuk and the nearby villages of Atmautluak and Kasigluk were enumerated as "Akolmiut."

**Incorporation** 2nd Class City, 1969

**Location**

Part of the Lower Kuskokwim Subregion. Nunapitchuk is located on both banks of the Johnson River, 22 miles northwest of Bethel in the Yukon-Kuskokwim Delta.

**Longitude** -162.4568 **Latitude** 60.8969

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)** **Per-Capita Revenue**  
Sales, 4% \$100

**Economy**

Nunapitchuk is a Yup'ik Eskimo village, and residents are involved in commercial fishing and subsistence activities. The sale, importation and possession of alcohol is banned.

**Climate** **Avg. Temp.** **Climate Zone** **Heating Deg. Days**  
62/-2 N/A 3,259

**Natural Hazard Plan**

N/A

**Community Plans** **Year**  
N/A N/A

Local Contacts	Email	Phone	Fax
Nunapitchuk Limited		907-527-5717	907-527-5229
Native Village of Nunapitchuk	<a href="mailto:tribaladmin@yupik.org">tribaladmin@yupik.org</a>	907-527-5705	907-527-5711
City of Nunapitchuk	<a href="mailto:cityofnunap@yahoo.com">cityofnunap@yahoo.com</a>	907-527-5327	907-527-5011

Demographics	2000	2010	2013
Population	466	496	Percent of Residents Employed 76.21%
Median Age	23	24	Denali Commission Distressed Community Yes
Avg. Household Size	5	4	Percent Alaska Native/American Indian (2010) 95.77%
Median Household Income		\$42,778	Low and Moderate Income (LMI) Percent (201x) 87%

Electric Utility	Generation Sources	Interties	PCE?
AVEC, Diesel Generator	Diesel, Wind	No	Yes

Landfill	Class	III	Permitted?	No	Location	N/A
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Water/Wastewater System	Homes Served	System Volume
Water Haul	496	10,000-50,000
Sewer Haul		
Notes	Water/Wastewater Energy Audit?	Yes

Access	Road	Air Access	Runway 1	Runway 2	Runway 3	Runway 4	Barge Access?	Ferry Service?
Road	No	Nunapitchuk Airport, gravel, fair condition	2,420'x75'	3,000'x300'	N/A	N/A	No	No
Air Access								
Dock/Port	Yes							

Notes

# Energy Profile: Nunapitchuk

## Diesel Power System

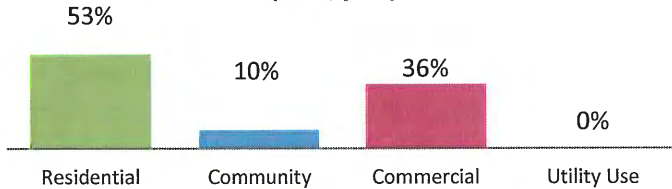
<b>Utility</b>	AVEC		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	Cummins	Good/1,433	484
Unit 2			
Unit 3			
Unit 4			
<b>Line Loss</b>	N/A		
<b>Heat Recovery?</b>	Yes; AVEC		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	Low		
RPSU Distribution	Med.		
<b>Outage History/Known Issues</b>			
Connected to Kasigluk via intertie			

<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>
	2	BFO, PPO, Itin BFO

<b>Maintenance Planning (RPSU)</b>	Unacceptable
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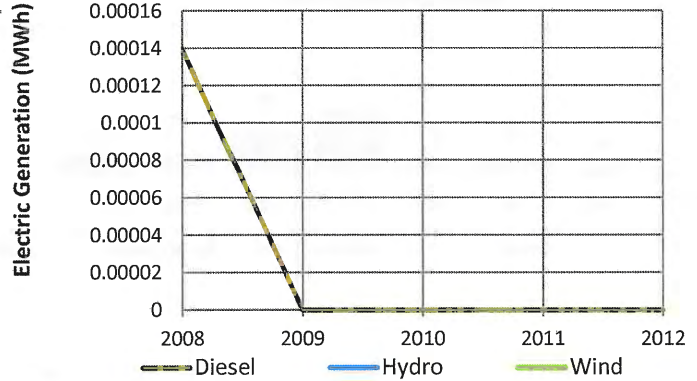
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	134	639,293	4,771
Community	10	124,905	12,491
Commercial	24	437,544	18,231
Utility Use	0		

**Electric Sales by Customer Type (kWh/year)**



## Power Production

Diesel (kWh/yr)	0	Avg. Load (kW)	0
Wind (kWh/yr)	0	Peak Load (kW)	0
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	0
Total (kWh/yr)	0	Diesel Used (gals/yr)	0



<b>Electric Rates (\$/kWh)</b>	<b>Rate with PCE</b> \$0.19	<b>Residential Rate</b> \$0.58	<b>Commercial Rate</b>	<b>Cost per kWh Sold (\$/kWh)</b>	<b>Fuel Cost</b> N/A	<b>Non-fuel Cost</b> \$0.27	<b>Total Cost</b> \$0.27
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<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.23	\$7.30	6/13; 8/14

Other Fuel? (1 gal)	
Gasoline (1 gal)	
Propane (100#)	
Wood (1 cord)	
Pellets	
Discounts?	

<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	High	Intertie to Kasigluk, Wind 300 kW	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
Energy Efficiency	High	1) Sanitation Energy Efficiency, 2) VEEP	1) Funded, 2) Complete

<b>Bulk Fuel</b>	<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>	
Nunapitchuk, Ltd.	Diesel	54,000		By Barge
City Nunapitchuk	Diesel	15,750	24 yrs/active	By Air
AVEC	unknown	27,000	7 yrs/active	<b>Cooperative Purchasing Agreements</b>
L Kuskokwim SD	Diesel	10,000	16 yrs/active	
Old Elem. Tank	Diesel	44,750	active	<b>Notes</b>
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>	

# Energy Profile: Nunapitchuk

<b>Housing Units</b>	Occupied	Vacant	% Owner-Occup.
	104	23	52%

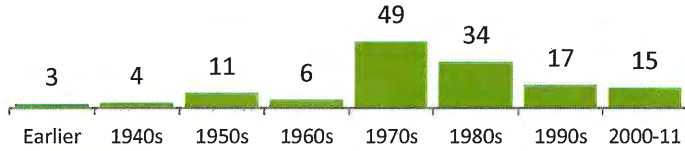
<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>
AVCP	AVCP

<b>Housing Need</b>	Overcrowded	1-star
	48.1%	44.1%

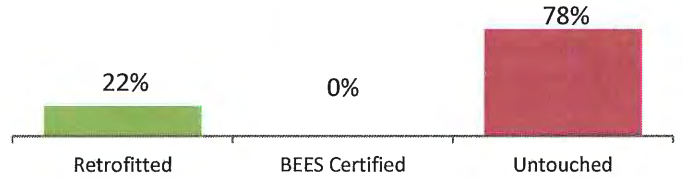
<b>Energy Use</b>	Average Home Energy Rating	Average Square Feet	Avg. EUI (kBtu/sf)
	1-star	830	205

<b>Data Quality</b>	High
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Age of Housing Stock



Energy Efficient Housing Stock



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Nunapitchuk IRA Bingo Hall	1972	1,200	Yes	No	Yes
Sre Building #1					No
Sre Building #2					No
Tribal Office Building	1976	1,824	Yes	No	Yes
WTP-Washeteria	1978		Yes	No	No
Watering Plant		2,262			No
Watering Point		1,008			No

## Community Profile: Oscarville



### Alaska Native Name (definition)

"Kuiggayagaq"

### Historical Setting / Cultural Resources

In 1908, Oscar Samuelson and his wife, a Yup'ik from the Nushagak region, moved from Napaskiak across the river and opened a trading post. A few Native families settled nearby and the site came to be known as Oscarville. Samuelson managed the store for 45 years, until his death in 1953. By 1955, there were 13 homes and two warehouses in the village. The Samuelsons continued to operate the store until 1975 when it was sold; it was closed in the early 1980s. A school was built by the BIA in 1964.

**Incorporation** Unincorporated in Bethel Census Area

### Location

Oscarville is located on the north bank of the Kuskokwim River, opposite Napaskiak. It lies 6 miles southwest of Bethel and 401 miles west of Anchorage.

**Longitude** -161.7700      **Latitude** 60.7228

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)**      **Per-Capita Revenue**  
N/A      N/A

### Economy

The year-round population of Oscarville is primarily Yup'ik Eskimos. Subsistence is an integral part of the lifestyle, and some commercial fishing occurs. 79% residents employed: 73% in private sector, 27% in local government.

**Climate**      **Avg. Temp.**      **Climate Zone**      **Heating Deg. Days**  
-0.032258065      Transitional      N/A

### Natural Hazard Plan

N/A

### Community Plans

N/A

Local Contacts	Email	Phone	Fax
Oscarville Native Corporation		907-737-7090	
Oscarville Traditional Village	<a href="mailto:mstevens@avcp.org">mstevens@avcp.org</a>	907-737-7099	907-737-7428

Demographics	2000	2010	2013
Population	61	70	Percent of Residents Employed 79.00%
Median Age	26	23	Denali Commission Distressed Community Yes
Avg. Household Size	5	5	Percent Alaska Native/American Indian (2010) 91.78%
Median Household Income	N/A	\$39,583	Low and Moderate Income (LMI) Percent (201x) N/A

Electric Utility	Generation Sources	Interties	PCE?
Bethel Utilities Corporation	Diesel	Yes, Bethel	Yes

Landfill	Class	Permitted?	No	Location	1,000 feet southwest of village
	III				

Water/Wastewater System		Homes Served	System Volume
Water	None due to well damage	0	N/A
Sewer	Honey Buckets, 100%	Water/Wastewater Energy Audit?	No
Notes	School has piped water and sewer. Unavailable to public.		

Access	Road	Air Access	Runway 1	Runway 2	Runway 3	Runway 4	Dock/Port	Barge Access?	Ferry Service?	Notes
	No	N/A	N/A	N/A	N/A	N/A	No	Yes: 1 service/yr	No	Oscarville relies on Napaskiak for passenger, mail, and cargo services. Residents use skiffs to reach Napaskiak and Bethel.



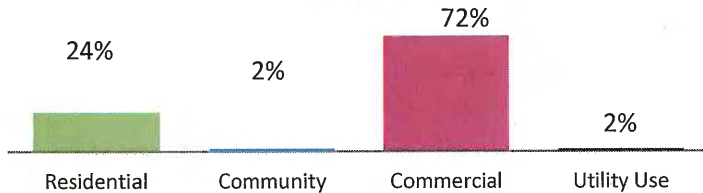
# Energy Profile: Oscarville

## Diesel Power System

Utility	AVEC (in 2014)		
Engine	Make/Model	Condition/Hrs	Gen Capacity
Unit 1	None		
Unit 2			
Unit 3			
Unit 4			
Line Loss	5.5%		
Heat Recovery?	N/A		
Upgrades	Priority	Projects	Status
RPSU Powerhouse			
RPSU Distribution			
Outage History/Known Issues	Power from Bethel via intertie. PCE data for both.		
Operators	No. of Operators	Training/Certifications	
	No Record		

Maintenance Planning (RPSU)	N/A		
<b>Electric Sales</b>	No. of Customers	kWh/year	kWh/Customer
Residential	1,743	10,258,912	5,886
Community	16	735,422	45,964
Commercial	1,010	30,252,426	29,953
Utility Use	647,200		

**Electric Sales by Customer Type  
(kWh/year)**



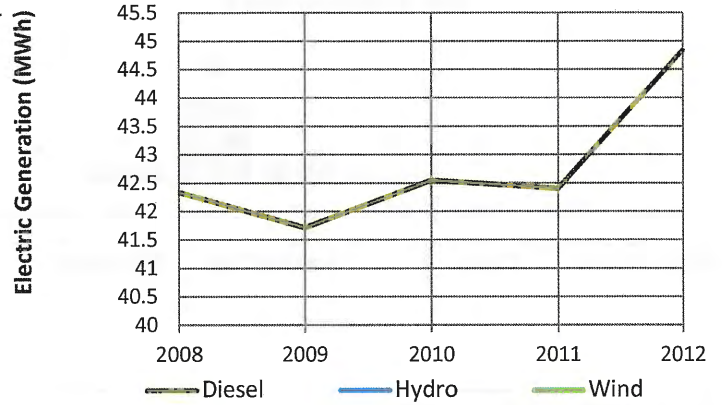
Alternative Energy	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	High	Intertie to Bethel Wind Farm/Turbine	Final Design
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
Energy Efficiency	Medium	None	

Bulk Fuel			
Tank Owner	Fuel Type(s)	Capacity	Age/Condition
Native Corp.	Heating	10,000	
School Dist.	Heating	Unknown	

Bulk Fuel Upgrade	Priority	Project	Status
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## Power Production

Diesel (kWh/yr)	44,326,400	Avg. Load (kW)	64
Wind (kWh/yr)	0	Peak Load (kW)	141
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	14
Total (kWh/yr)	44,326,400	Diesel Used (gals/yr)	3,197,401



Electric Rates (\$/kWh)		Cost per kWh Sold (\$/kWh)	
Rate with PCE	\$0.17	Fuel Cost	\$0.47
Residential Rate	\$0.60	Non-fuel Cost	\$0.11
Commercial Rate		Total Cost	\$0.57
Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$6.07	\$6.40	6-13; 8-14
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)		\$148.81	8-14
Wood (1 cord)			
Pellets			
Discounts?			

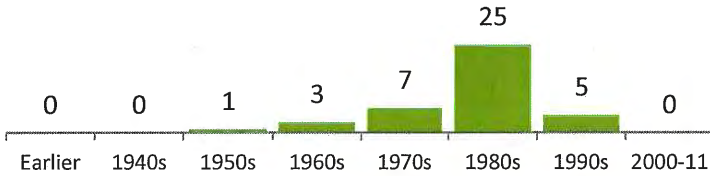
Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
By Barge			
By Air			
Cooperative Purchasing Agreements			

Notes
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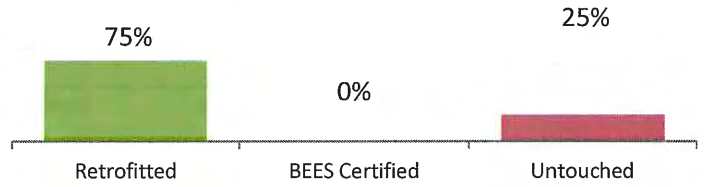
# Energy Profile: Oscarville

<b>Housing Units</b>	<b>Occupied</b> 16	<b>Vacant</b> 25	<b>% Owner-Occup.</b> 81%	<b>Regional Housing Authority</b> AVCP	<b>Weatherization Service Provider</b> AVCP		
<b>Housing Need</b>		<b>Overcrowded</b> 43.8%	<b>1-star</b> N/A	<b>Energy Use</b>	<b>Average Home Energy Rating</b> N/A	<b>Average Square Feet</b> N/A	<b>Avg. EUI (kBtu/sf)</b> N/A
<b>Data Quality</b>	Medium						

**Age of Housing Stock**



**Energy Efficient Housing Stock**



Street Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Clinic	1980	520	Yes		Yes
Qugcuun Memorial School					No
School Greenhouse					No
School Warehouse/Pump/Generator					No
Tribal Office	1970	420	Yes		No
United Utilities					No
Watering Point/Warehouse					No

## Community Profile: Platinum



### Alaska Native Name (definition)

N/A

### Historical Setting / Cultural Resources

Platinum is near a traditional village site called Arviq. The community was established shortly after traces of platinum were discovered by an Eskimo named Walter Smith in 1926. The "big strike" occurred in October of 1936, which brought a stampede of prospectors for "white gold." Goodnews Mining Company constructed bunkhouses, a recreation hall, offices, shops, and a cafeteria. Platinum developed as a "company town," with the store, water, and electricity supplied by the mine. A school opened in 1960. By 1975, 545,000 ounces of platinum had been mined at the site. The mine ceased operations in 1990.

**Incorporation** 2nd Class City, 1975

### Location

Part of the Lower Kuskokwim Subregion. Platinum is located on the Bering Sea coast, below Red Mountain on the south spit of Goodnews Bay. It lies 11 miles from Goodnews Bay, 123 miles southwest of Bethel, and 440 miles west of Anchorage.

**Longitude** -161.8164 **Latitude** 59.0131

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)** **Per-Capita Revenue**  
Sales, 0% N/A

### Economy

The community was founded as a commercial center and has always seen an influx of outsiders. The economy is primarily cash-based.

**Climate** **Avg. Temp.** **Climate Zone** **Heating Deg. Days**  
57/6 Marine 4,147

### Natural Hazard Plan

N/A

### Community Plans

N/A

### Year

N/A

Local Contacts	Email	Phone	Fax
Arviq Incorporated		907-979-8113	907-979-8229
Platinum Traditional Village	<a href="mailto:ptutribal@hotmail.com">ptutribal@hotmail.com</a>	907-979-8220	907-979-8178
City of Platinum		907-979-8114	907-979-8210

Demographics	2000	2010	2013
Population	41	61	Percent of Residents Employed 74.42%
Median Age	33	46	Denali Commission Distressed Community No
Avg. Household Size	3	4	Percent Alaska Native/American Indian (2010) 88.52%
Median Household Income		\$16,875	Low and Moderate Income (LMI) Percent (201x) 100%

Electric Utility	Generation Sources	Interties	PCE?
City of Platinum	Diesel	No	No

Landfill	Class	III	Permitted?	No	Location	N/A
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Water/Wastewater System		Homes Served	System Volume
Water	Washeteria	51	N/A
Sewer	N/A	Water/Wastewater Energy Audit?	
Notes		No	

### Access

Road	No				
Air Access	Platinum Airport, gravel, fair condition	Runway 1	3,300'x75'	Runway 2	N/A
	Platinum Mine Airport	Runway 3	2,000'x75'	Runway 4	N/A
Dock/Port	No	Barge Access?	Yes	Ferry Service?	No

Notes

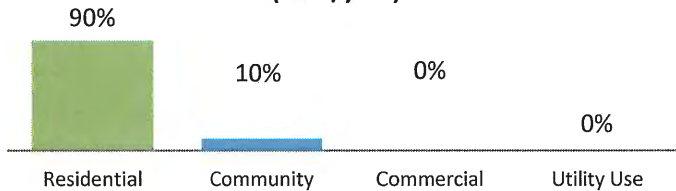
# Energy Profile: Platinum

## Diesel Power System

Utility	City of Platinum		
Engine	Make/Model	Condition/Hrs	Gen Capacity
Unit 1			
Unit 2			
Unit 3			
Unit 4			
Line Loss	N/A		
Heat Recovery?			
Upgrades	Priority	Projects	Status
RPSU Powerhouse	High		
RPSU Distribution	High		
Outage History/Known Issues	PCE Eligible Inactive, No RPSU Data		
Operators	No. of Operators	Training/Certifications	
	2	Utility Clerk	

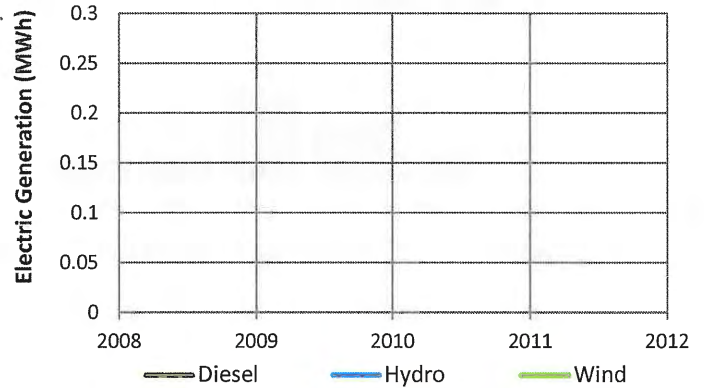
Maintenance Planning (RPSU)	N/A		
Electric Sales	No. of Customers	kWh/year	kWh/Customer
Residential	27	7,443	276
Community	4	812	203
Commercial	N/A	N/A	
Utility Use	N/A	N/A	

Electric Sales by Customer Type (kWh/year)



## Power Production (2009)

Diesel (kWh/yr)	49,615	Avg. Load (kW)	16
Wind (kWh/yr)	0	Peak Load (kW)	35
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	9.6
Total (kWh/yr)	49,615	Diesel Used (gals/yr)	5,170



Electric Rates (\$/kWh) in 2009		Cost per kWh Sold (\$/kWh)	
Rate with PCE	\$0.128	Fuel Cost	\$0.90
Residential Rate	\$0.50	Non-fuel Cost	\$0.89
Commercial Rate		Total Cost	\$1.79

Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)		\$5.35	8/14
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)		\$13.77	8/14
Wood (1 cord)			
Pellets			
Discounts?			

Alternative Energy	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	Low	None	
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Medium	None	
Energy Efficiency	High	None	

Bulk Fuel			
Tank Owner	Fuel Type(s)	Capacity	Age/Condition
Platinum Comm.	Diesel	44,000	2 yrs/active
Platinum Trad.	Stove Oil/Gas	20,000	37 yrs/Fair
L Kuskokwim SD	Diesel	30,000	35 yrs/active
CVRF	Diesel	164,000	5 yrs/active
Hanson Industries	Diesel	60,000	10 yrs/active
Bulk Fuel Upgrade	Priority	Project	Status

Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
By Barge	Spring & Fall		
By Air			
Cooperative Purchasing Agreements			

Notes  
Delivered by barge or truck

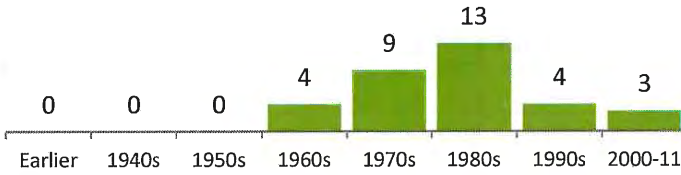


# Energy Profile: Platinum

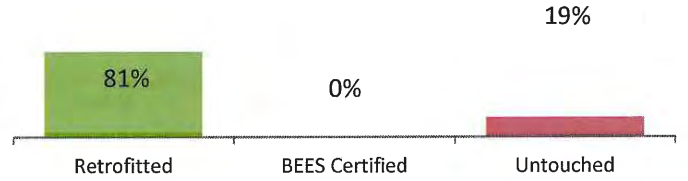
<b>Housing Units</b>	Occupied 16	Vacant 14	% Owner-Occup. 25%
<b>Housing Need</b>		Overcrowded 12.5%	1-star N/A
<b>Data Quality</b>	Low		

<b>Regional Housing Authority</b>	AVCP		
<b>Weatherization Service Provider</b>	AVCP		
<b>Energy Use</b>	Average Home Energy Rating N/A	Average Square Feet	Avg. EUI (kBTU/sf)

### Age of Housing Stock



### Energy Efficient Housing Stock

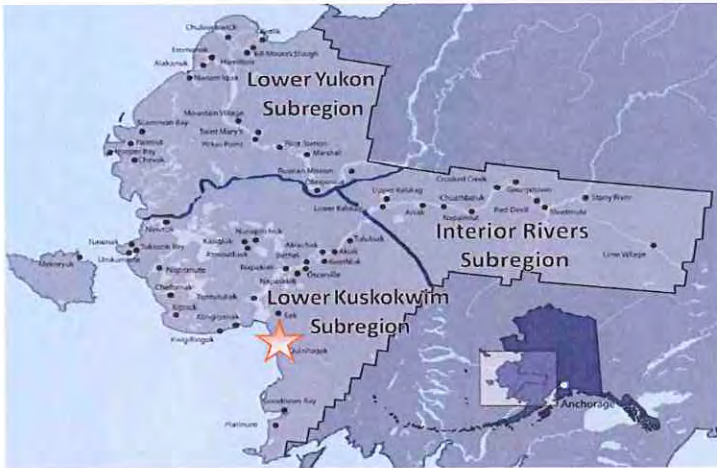


Lighting	Owner	Number/Type	Retrofitted?	Year	Notes

### Non-residential Building Inventory

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Arviq Inc.		1,600			No
SRE Building (Heated)		2,200			Yes

# Community Profile: Quinhagak



**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

Quinhagak is a long-established village whose origin has been dated to 1000 AD. Gavril Sarichev reported the village on a map in 1826. After the purchase of Alaska in 1867, the Alaska Commercial Company sent annual supply ships to Quinhagak with goods for Kuskokwim River trading posts. A Moravian mission was built in 1893. In 1904, a mission store opened, followed by a post office in 1905 and a school in 1909. Between 1906 and 1909, over 2,000 reindeer were brought in to the Quinhagak area. In 1915, the Kuskokwim River was charted. In 1928, the first electric plant opened; the first mail plane arrived in 1934.

**Incorporation** 2nd Class City, 1975

**Location**

Part of the Lower Kuskokwim Subregion. Quinhagak is on the Kanektok River on the east shore of Kuskokwim Bay, less than a mile from the Bering Sea coast. It lies 71 miles southwest of Bethel.

**Longitude** -161.9158      **Latitude** 59.7489

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)**      **Per-Capita Revenue**  
 Sales, 3%      \$290

**Economy**

The community is primarily Yup'ik Eskimos who fish commercially and are active in subsistence food gathering.

**Climate**      **Avg. Temp.** 57/6      **Climate Zone** Marine      **Heating Deg. Days** 10,466

**Natural Hazard Plan**

City of Quinhagak Hazard Mitigation Plan, 2012

**Community Plans**      **Year**  
 Quinhagak Community Development Plan, 2008      2008

Local Contacts	Email	Phone	Fax
Qanirtuuq, Incorporated		907-556-8290	907-556-8713
Native Village of Kwinhagak	<a href="mailto:jmark.nvk@gmail.com">jmark.nvk@gmail.com</a>	907-556-8165	907-556-8166
City of Quinhagak	<a href="mailto:fmooore.nvk@gmail.com">fmooore.nvk@gmail.com</a>	907-556-2181	907-556-8166

Demographics	2000	2010	2013
Population	555	669	Percent of Residents Employed 67.85%
Median Age	27	29	Denali Commission Distressed Community Yes
Avg. Household Size	5	5	Percent Alaska Native/American Indian (2010) 93.42%
Median Household Income		\$35,208	Low and Moderate Income (LMI) Percent (201x) 84%

Electric Utility	Generation Sources	Interties	PCE?
AVEC	Diesel	No	Yes

Landfill	Class	III	Permitted?	Yes	Location	2.5 mi south of community
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Water/Wastewater System	Water	Circ	Sewer	Pressure	Homes Served	700	Water/Wastewater Energy Audit?	Yes	System Volume	10,000-50,000
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Access	Road	No	Air Access	Quinhagak Airport, gravel, fair condition	Runway 1	4,000'x75'	Runway 2	N/A
				N/A	Runway 3	N/A	Runway 4	N/A
	Dock/Port	Yes	Barge Access?	Yes	Ferry Service?	No		

Notes

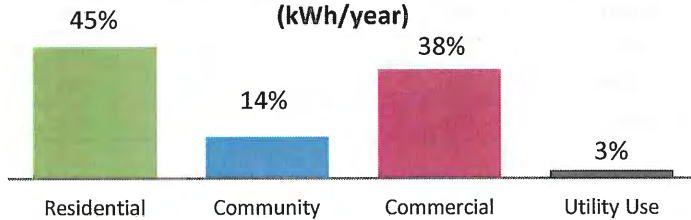
# Energy Profile: Quinhagak

## Diesel Power System

<b>Utility</b>	AVEC		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	Cummins	N/A	350
Unit 2	Detroit Diesel	N/A	363
Unit 3	Cummins	N/A	499
Unit 4			
<b>Line Loss</b>	4.9%		
<b>Heat Recovery?</b>	No		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	N/A		
RPSU Distribution	N/A		
<b>Outage History/Known Issues</b>			
Oversized generator, low efficiency			
<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>	
	12	PPO, APPO, BFO, APPO 1, APPO 2, Itin BFO	

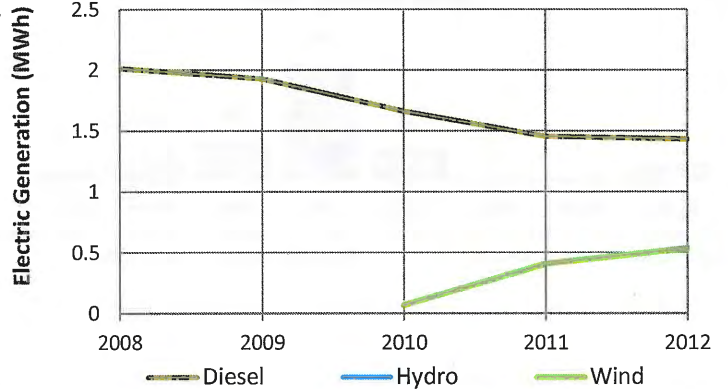
<b>Maintenance Planning (RPSU)</b>	N/A		
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	174	882,047	5,069
Community	25	279,409	11,176
Commercial	19	729,921	38,417
<b>Utility Use</b>	52,881		

**Electric Sales by Customer Type (kWh/year)**



## Power Production

<b>Diesel (kWh/yr)</b>	1,415,362	<b>Avg. Load (kW)</b>	5
<b>Wind (kWh/yr)</b>	628,961	<b>Peak Load (kW)</b>	349
<b>Hydro (kWh/yr)</b>		<b>Efficiency (kWh/gal)</b>	11.82
<b>Total (kWh/yr)</b>	2,044,323	<b>Diesel Used (gals/yr)</b>	119,788



<b>Electric Rates (\$/kWh)</b>	<b>Cost per kWh Sold (\$/kWh)</b>
Rate with PCE \$0.19	Fuel Cost \$0.25
Residential Rate \$0.52	Non-fuel Cost \$0.27
Commercial Rate	Total Cost \$0.52

<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$3.68	\$6.70	6/13; 8/14
<b>Other Fuel? (1 gal)</b>			
Gasoline (1 gal)			
Propane (100#)			
Wood (1 cord)			
Pellets			
Discounts?			

<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	High	Quinhagak Wind Farm, 400 kW	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	High	Heat Recovery to WTP	Construction
Energy Efficiency	High	VEEP	Complete

<b>Bulk Fuel</b>			
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>
Vill. Kwinhagak	Diesel	24,000	Active
Vill. Kwinhagak	Gasoline	10,000	Active
Qanirtuuq Inc.	Diesel	100,000	Active
AVEC	Diesel	176,468	Active
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
By Barge			
By Air			
<b>Cooperative Purchasing Agreements</b>			

Notes

## Energy Profile: Quinhagak

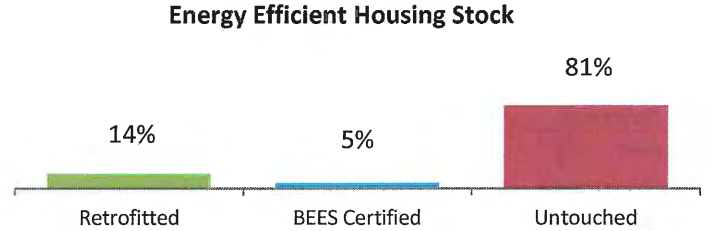
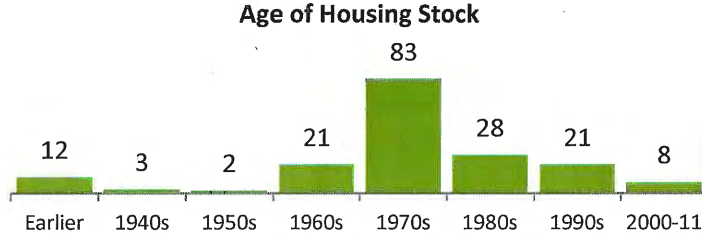
<b>Housing Units</b>	<b>Occupied</b>	<b>Vacant</b>	<b>% Owner-Occup.</b>
	154	18	80%

<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>
AVCP	AVCP

<b>Housing Need</b>	<b>Overcrowded</b>	<b>1-star</b>
	44.8%	N/A

<b>Energy Use</b>	<b>Average Home Energy Rating</b>	<b>Average Square Feet</b>	<b>Avg. EUI (kBtu/sf)</b>
	N/A		

**Data Quality** Medium



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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### Non-residential Building Inventory

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
NVK Main Building	1982	1,920	No		No
Public Safety	1994	1,104	No		Yes
Quinhagak Bingo Hall	1980	1,200	No		No
Quinhagak Kindergarten		1,200			Yes
Quinhagak Police Station	1975	1,196	No		No
Quinhagak School		16,054			Yes
Quinhagak Teen Center	1994	2,400	No		No
Quinhagak Washeteria	1994	3,040	No		No
Quinhagak Water Plant	1994	1,800	No		No
Water Treatment Plant	1994	3,072	No		Yes



# Community Profile: Toksook Bay



**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

The area has been inhabited and utilized by Yup'iks for thousands of years. Toksook Bay was established in 1964 along the Tuqsuk River by residents of Nightmute. Cyril Chanar, Tom Sunny, and Nasgauq Tangkaq were the earliest inhabitants. Toksook Bay was settled to be more accessible to the annual freighter ship, the North Star.

**Incorporation** 2nd Class City, 1972

**Location**  
Part of the Lower Kuskokwim Subregion. Toksook Bay is one of three villages located on Nelson Island, which lies 115 miles northwest of Bethel. It is on Kangirvar Bay, across the water from Nunivak Island. Tununak is about 8 miles to the northwest.

**Longitude** -165.1025      **Latitude** 60.5303

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

Taxes	Type (rate)	Per-Capita Revenue
Sales, 2%		\$50

**Economy**  
Toksook Bay is a traditional Yup'ik Eskimo community with a reliance on fishing and subsistence activities. The sale, importation and possession of alcohol is banned.

Climate	Avg. Temp.	Climate Zone	Heating Deg. Days
	57/6	Marine	11,275

**Natural Hazard Plan**  
N/A

Community Plans	Year
Toksook Bay Community Plan 2008	2008

Local Contacts	Email	Phone	Fax
Nunakauiak Yupik Corporation		907-427-7929	907-427-7326
Nunakauyarmiut Tribe	<a href="mailto:nunakauyaktc@hotmail.com">nunakauyaktc@hotmail.com</a>	907-427-7114	907-427-7714
City of Toksook Bay	<a href="mailto:cityfookclerk@yahoo.com">cityfookclerk@yahoo.com</a>	907-427-7511	907-427-7811

Demographics	2000	2010	2013
Population	532	590	
Median Age	23	27	
Avg. Household Size	6	5	
Median Household Income		\$54,464	
			Percent of Residents Employed 72.80%
			Denali Commission Distressed Community Yes
			Percent Alaska Native/American Indian (2010) 92.03%
			Low and Moderate Income (LMI) Percent (201x) 73%

Electric Utility	Generation Sources	Interties	PCE?
AVEC	Diesel, Wind	No	Yes

Landfill	Class	III	Permitted?	No	Location	N/A
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Water/Wastewater System		Homes Served	System Volume
Water	Circ	600	10,000-50,000
Sewer	Gravity		
Notes		Water/Wastewater Energy Audit? Yes	

Access		Runway 1	Runway 2	Runway 3	Runway 4
Road	No				
Air Access	Toksook Bay Airport, gravel, fair condition	3,218'x60'		N/A	N/A
	N/A	N/A			
Dock/Port	No	Barge Access? Yes	Ferry Service? No		

Notes

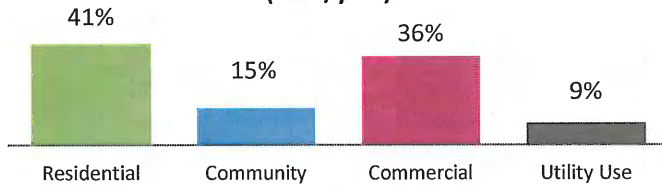
## Energy Profile: Toksook Bay

### Diesel Power System

<b>Utility</b>	AVEC		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	Detroit Diesel	Good/16,132	363
Unit 2	Cummins	Good/37,885	499
Unit 3	MTU	Good/14,436	756
Unit 4			
<b>Line Loss</b>	47.2%		
<b>Heat Recovery?</b>	Yes; Power plant, water plant, & AVEC connex		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	Low		
RPSU Distribution	High		
<b>Outage History/Known Issues</b>			
Intertie to Tununak and Nightmute.			
<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>	
	10	APPO, BF Book, BF Manager,	

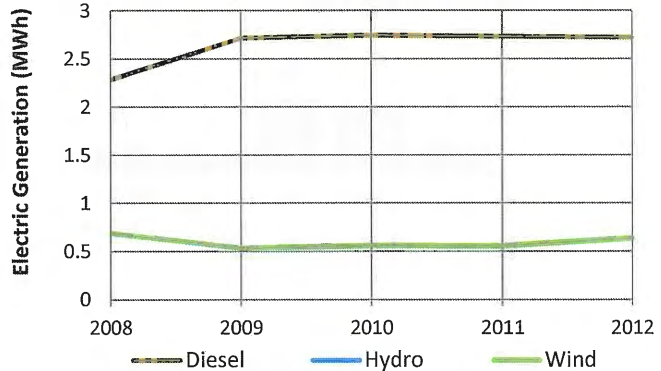
<b>Maintenance Planning (RPSU)</b>	Good		
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	136	713,904	5,249
Community	12	263,681	21,973
Commercial	29	626,370	21,599
Utility Use		156,858	

**Electric Sales by Customer Type  
(kWh/year)**



### Power Production

Diesel (kWh/yr)	2,609,319	Avg. Load (kW)	375
Wind (kWh/yr)	726,450	Peak Load (kW)	729
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	13.79
<b>Total (kWh/yr)</b>	<b>3,335,769</b>	<b>Diesel Used (gals/yr)</b>	<b>189,212</b>



Electric Rates (\$/kWh)		Cost per kWh Sold (\$/kWh)	
Rate with PCE	\$0.19	Fuel Cost	\$0.45
Residential Rate	\$0.55	Non-fuel Cost	\$0.27
Commercial Rate		<b>Total Cost</b>	<b>\$0.72</b>

Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$4.23	\$7.67	6-13; 8-14

Other Fuel? (1 gal)

Gasoline (1 gal)

Propane (100#)

Wood (1 cord)

Pellets

Discounts?

Alternative Energy	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	High	Toksook Wind Farm 400 kW	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	High	Diesel generators heat recovery	Operational
Energy Efficiency	Medium	Sanitation Energy Efficiency	Funded

Bulk Fuel			
Tank Owner	Fuel Type(s)	Capacity	Age/Condition
City	Heating Oil	27,000	
Native Corp.	Heating Oil	96,000	Good
Native Corp.	Gasoline	86,000	Good
Tribe	Heating Oil	96,000	Good
Tribe	Gasoline	86,000	Good
AVEC	Diesel	324,000	
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
By Barge			
By Air			
<b>Cooperative Purchasing Agreements</b>			

### Notes

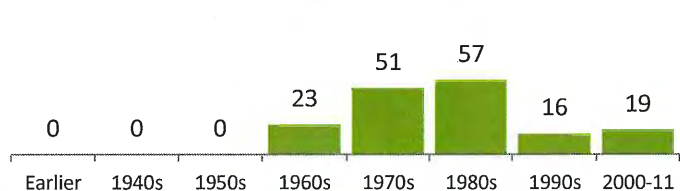
Barge delivery in Spring & Fall.

## Energy Profile: Toksook Bay

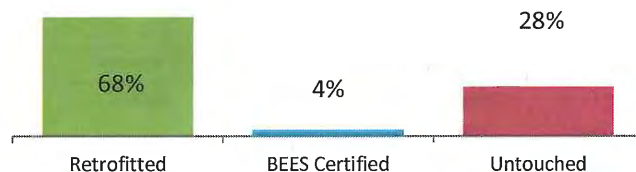
<b>Housing Units</b>	Occupied 138	Vacant 10	% Owner-Occup. 81%
<b>Housing Need</b>	Overcrowded 39.9%		1-star N/A
<b>Data Quality</b>	Medium		

<b>Regional Housing Authority</b>	AVCP		
<b>Weatherization Service Provider</b>	AVCP		
<b>Energy Use</b>	Average Home Energy Rating N/A	Average Square Feet N/A	Avg. EUI (kBTU/sf) N/A

**Age of Housing Stock**



**Energy Efficient Housing Stock**



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes

**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Building 1	1980	120,000			No
Building 2		2,000			No
Elementary School	1974	5,016			No
Generator/Warehouse	1964	1,560			No
Nelson Island Area School	2007	27,995			No
Special Ed. Building	1964	1,440			No
SRE Building (Heated)	2004	1,104			No
Sub-Regional Clinic		10,416			Yes
Tribal Office & Community Center	1996	4,530	Yes		Yes
Village Corporation					No
Warehouse	1982	1,000			No
Water Treatment Plant	1986	354	Yes		Yes

# Community Profile: Tuluksak



**Incorporation** Unincorporated in the Bethel Census Area

**Location**  
Part of the Lower Kuskokwim Subregion. Tuluksak lies on the south bank of the Tuluksak River at its junction with the Kuskokwim River. The village is 35 miles northeast of Bethel.

**Longitude** -160.9617      **Latitude** 61.1025  
**ANCSA Region** Calista Corporation  
**Borough/CA** Bethel Census Area  
**School District** Lower Kuskokwim School District  
**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)**      **Per-Capita Revenue**  
 N/A      N/A

**Economy**  
Tuluksak is a traditional Yup'ik Eskimo village with a fishing and subsistence livelihood. The sale, importation, and possession of alcohol is banned.

**Climate**      **Avg. Temp.**      **Climate Zone**      **Heating Deg. Days**  
 62/-2      N/A      N/A

**Natural Hazard Plan**  
Tuluksak Hazard Mitigation Plan, 2013

**Community Plans**      **Year**  
 N/A      N/A

**Alaska Native Name (definition)**  
"Tul'yagmyut," Related to Loon

**Historical Setting / Cultural Resources**  
The name was first published in 1861 as "Tul'yagmyut," an Eskimo word meaning "related to loon." The 1880 U.S. Census noted a population of 150 living in the village. A city government was formed in 1970 but was dissolved on March 7, 1997.

Local Contacts	Email	Phone	Fax
Tulkisarmute Incorporated		907-695-6854	907-693-6932
Tuluksak Native Community	<a href="mailto:darlenepeter7@yahoo.com">darlenepeter7@yahoo.com</a>	907-695-6420	907-695-6932

Demographics	2000	2010	2013
Population	428	373	Percent of Residents Employed 67.12%
Median Age	24	24	Denali Commission Distressed Community Yes
Avg. Household Size	5	5	Percent Alaska Native/American Indian (2010) 94.91%
Median Household Income		\$26,500	Low and Moderate Income (LMI) Percent (201x) N/A

Electric Utility	Generation Sources	Interties	PCE?
Tuluksak Traditional Power Utility	Diesel	No	Yes

Landfill	Class	III	Permitted?	No	Location	2000 feet from Tuluksak River
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Water/Wastewater System		Homes Served	System Volume
Water	Washeteria	373	10,000-50,000
Sewer	Honey Bucket	Water/Wastewater Energy Audit?	
Notes		Yes	

Access		Runway 1	Runway 2	Runway 3	Runway 4
Road	No	3,300'x60'	N/A	N/A	N/A
Air Access	Tuluksak Airport, gravel, fair condition				
	N/A				
Dock/Port	No	Barge Access?	Yes	Ferry Service?	No

Notes



# Energy Profile: Tuluksak

## Diesel Power System

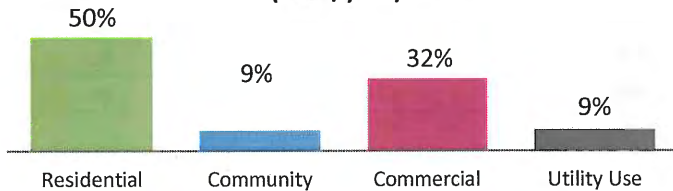
<b>Utility</b>	Tuluksak Traditional Power Utility		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	John Deere	Poor/17,541	190
Unit 2	John Deere	Poor/22,553	150
Unit 3	John Deere	Poor/19,184	165
Unit 4	John Deere	Poor/10,962	290
<b>Line Loss</b>	14.8%		
<b>Heat Recovery?</b>	No		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	High		
RPSU Distribution	High		
<b>Outage History/Known Issues</b>			
Significant outage in 2014			

<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>
	11	BFO, APPO, Utility Clerk, Elec. Util. Bus. Train, Itin BFP

<b>Maintenance Planning (RPSU)</b>	Unacceptable
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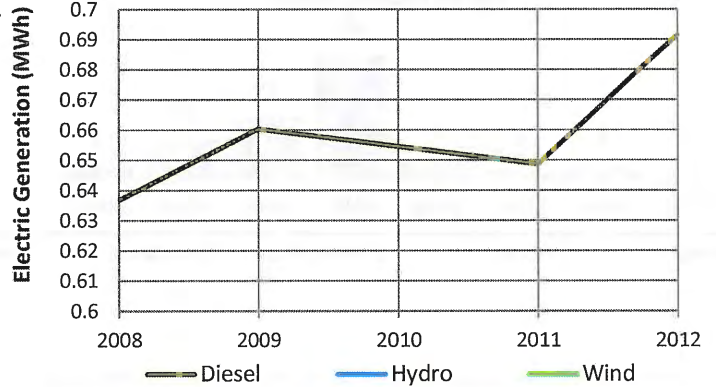
<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	96	307,903	3,207
Community	5	55,862	11,172
Commercial	18	195,795	10,878
<b>Utility Use</b>	57,257		

**Electric Sales by Customer Type (kWh/year)**



## Power Production

<b>Diesel (kWh/yr)</b>	723,787	<b>Avg. Load (kW)</b>	77
<b>Wind (kWh/yr)</b>		<b>Peak Load (kW)</b>	171
<b>Hydro (kWh/yr)</b>		<b>Efficiency (kWh/gal)</b>	12.91
<b>Total (kWh/yr)</b>	723,787	<b>Diesel Used (gals/yr)</b>	56,061



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.16	Fuel Cost	\$0.43
Residential Rate	\$0.60	Non-fuel Cost	\$0.11
Commercial Rate		Total Cost	\$0.54

<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.34	\$6.85	6/13; 8/14

<b>Other Fuel? (1 gal)</b>	
Gasoline (1 gal)	
Propane (100#)	
Wood (1 cord)	
Pellets	
Discounts?	

<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	Low	None	
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
<b>Energy Efficiency</b>	High	1) Sanitation EE, 2) VEEP	1) Funded 2) Complete

<b>Bulk Fuel</b>			
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>
Tuluksak Trd. P.U.	Diesel	57,000	
School	Unknown	Unknown	Active
Tuluksak Native	Gasoline	20,000	Active
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
By Barge	Spring and Fall		
By Air			
<b>Cooperative Purchasing Agreements</b>			
<b>Notes</b>			

# Energy Profile: Tuluksak

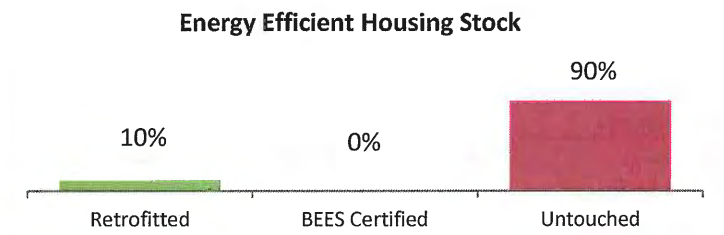
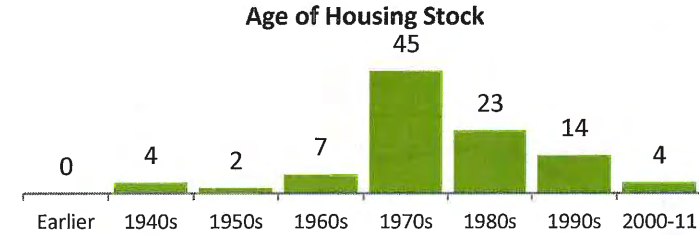
<b>Housing Units</b>	Occupied	Vacant	% Owner-Occup.
	77	21	79%

<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>		
AVCP	AVCP		

<b>Housing Need</b>	Overcrowded	1-star
	59.0%	N/A

<b>Energy Use</b>	Average Home Energy Rating	Average Square Feet	Avg. EUI (kBtu/sf)
	N/A	N/A	N/A

<b>Data Quality</b>	Medium
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Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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## Non-residential Building Inventory

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
High School Generator Bldg	1979	320			No
Jail		360			No
K-12 School	2004	42,404			No
Recreation Center	1970	1,152	Yes	No	Yes
Tuluksak Early Childhood Training Center	1970	738	Yes	No	Yes
Tuluksak Health Clinic	1995	768	Yes	No	No
Tuluksak Tribal Council	1990	1,800	Yes	No	No
Village Corporation					No
Voc Ed Building	1982	2,320			No
Water Plant & Wash		1,800			No

# Community Profile: Tuntutuliak



**Alaska Native Name (definition)**

"Tuntutuliaq," Place of Many Reindeer

**Historical Setting / Cultural Resources**

It was originally located four miles to the east and called Qinaq. In 1908, a Moravian missionary visited the village and reported 130 people living there. In 1909 a BIA school was built. The school was closed in 1917, and the building moved to the village of Eek. It is thought that some Qinaq villagers may have moved to Eek, so their children could attend school. In 1923 the first Moravian chapel was built with lumber and other support from Eek. In the late 1920s, a trading post and store was opened by John Johnson. The community moved to its present site on higher ground and was renamed Tuntutuliak in 1945. The BIA built a school in 1957.

**Incorporation** Unincorporated in the Bethel Census Area

**Location**  
Part of the Lower Kuskokwim Subregion. Tuntutuliak is on the Qinaq River, approximately 3 miles from its confluence with the Kuskokwim River and about 40 miles from the Bering Sea coast. It lies 40 miles southwest of Bethel and 440 miles west of Anchorage.

<b>Longitude</b>	-162.6631	<b>Latitude</b>	60.3431
<b>ANCSA Region</b>	Calista Corporation		
<b>Borough/CA</b>	Bethel Census Area		
<b>School District</b>	Lower Kuskokwim School District		
<b>AEA Region</b>	Lower Yukon-Kuskokwim		

<b>Taxes</b>	<b>Type (rate)</b>	<b>Per-Capita Revenue</b>
N/A		N/A

**Economy**  
It is a traditional Yup'ik Eskimo village with a fishing and subsistence lifestyle. Salmon and seal are important food sources. The sale, importation, and possession of alcohol is banned.

<b>Climate</b>	<b>Avg. Temp.</b>	<b>Climate Zone</b>	<b>Heating Deg. Days</b>
	62/-2	N/A	N/A

**Natural Hazard Plan**  
N/A

<b>Community Plans</b>	<b>Year</b>
N/A	N/A

<b>Local Contacts</b>	<b>Email</b>	<b>Phone</b>	<b>Fax</b>
Tuntutuliak Land, Limited		907-256-2315	907-256-2441
Native Village of Tuntutuliak	<a href="mailto:pparila@tuntutuliak.org">pparila@tuntutuliak.org</a>	907-256-2128	907-256-2080

<b>Demographics</b>	<b>2000</b>	<b>2010</b>	<b>2013</b>
<b>Population</b>	370	408	<b>Percent of Residents Employed</b> 70.67%
<b>Median Age</b>	23	21	<b>Denali Commission Distressed Community</b> Yes
<b>Avg. Household Size</b>	5	5	<b>Percent Alaska Native/American Indian (2010)</b> 95.03%
<b>Median Household Income</b>	\$35,972		<b>Low and Moderate Income (LMI) Percent (201x)</b> N/A

<b>Electric Utility</b>	<b>Generation Sources</b>	<b>Interties</b>	<b>PCE?</b>
Tuntutuliak Community Services Association	Diesel, Wind	No	Yes

<b>Landfill</b>	<b>Class</b>	III	<b>Permitted?</b>	No	<b>Location</b>	.35 mi north of town
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<b>Water/Wastewater System</b>		<b>Homes Served</b>	<b>System Volume</b> 10,000-50,000
<b>Water</b>	Haul	N/A	
<b>Sewer</b>	Haul	<b>Water/Wastewater Energy Audit?</b> Yes	

<b>Access</b>					
<b>Road</b>	No				
<b>Air Access</b>	Tuntutuliak Airport, gravel, good condition	<b>Runway 1</b>	3,025'x90'	<b>Runway 2</b>	N/A
	Tuntutuliak Seaplane Base	<b>Runway 3</b>	2,000'x200'	<b>Runway 4</b>	2,000'x200'
<b>Dock/Port</b>	No	<b>Barge Access?</b>	Yes	<b>Ferry Service?</b>	No

**Notes**

# Energy Profile: Tuntutuliak

## Diesel Power System

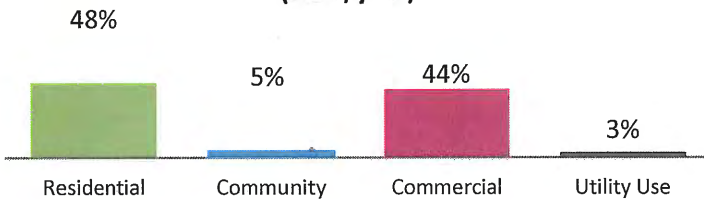
<b>Utility</b>	Tuntutuliak Community		
<b>Engine</b>	<b>Make/Model</b>	<b>Condition/Hrs</b>	<b>Gen Capacity</b>
Unit 1	John Deere	Fair/2,865	125
Unit 2	John Deere	Fair/2,854	190
Unit 3	John Deere	Good/9,838	275
Unit 4	John Deere	Fair/16,428	275
<b>Line Loss</b>	3.4%		
<b>Heat Recovery?</b>	No; Only used for internal plant use		
<b>Upgrades</b>	<b>Priority</b>	<b>Projects</b>	<b>Status</b>
RPSU Powerhouse	Med.		
<b>RPSU Distribution</b>	In Progress		
<b>Outage History/Known Issues</b>			
No fire suppr. system, high safety risk, no maintenance plan			

<b>Operators</b>	<b>No. of Operators</b>	<b>Training/Certifications</b>
	14	APPO, BFO, Utility Clerk

<b>Maintenance Planning (RPSU)</b>	Unacceptable
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<b>Electric Sales</b>	<b>No. of Customers</b>	<b>kWh/year</b>	<b>kWh/Customer</b>
Residential	95	486,407	5,120
Community	7	52,157	7,451
Commercial	31	447,793	14,445
Utility Use		33,254	

**Electric Sales by Customer Type (kWh/year)**

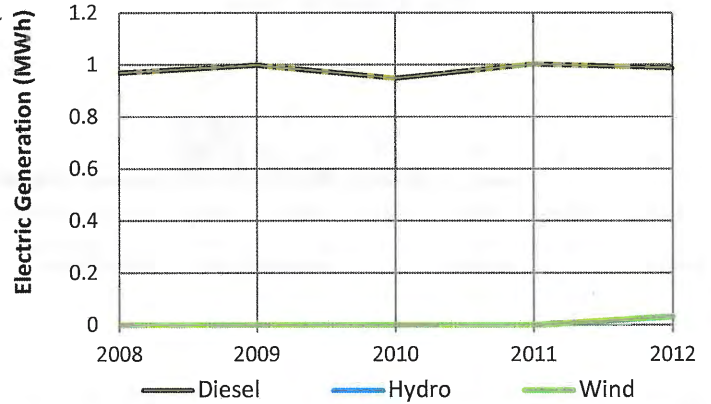


<b>Alternative Energy</b>	<b>Potential</b>	<b>Projects</b>	<b>Status</b>
Hydroelectric	Low	None	
Wind Diesel	High	High Penetration Wind-Diesel Smrt Grid, 450 kW	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	High	Excess wind to heat, washeteria	Funded
Energy Efficiency	Medium	1) Sanitation EE 2) Clinic EE & VEEP	1) Funded 2) Both Complete

<b>Bulk Fuel</b>			
<b>Tank Owner</b>	<b>Fuel Type(s)</b>	<b>Capacity</b>	<b>Age/Condition</b>
Village	Heating Oil	75,000	Good
Utility	Heating Oil	75,000	Good
School		50,000	
<b>Bulk Fuel Upgrade</b>	<b>Priority</b>	<b>Project</b>	<b>Status</b>

## Power Production

<b>Diesel (kWh/yr)</b>	859,558	<b>Avg. Load (kW)</b>	84
<b>Wind (kWh/yr)</b>	196,349	<b>Peak Load (kW)</b>	186
<b>Hydro (kWh/yr)</b>	0	<b>Efficiency (kWh/gal)</b>	9.94
<b>Total (kWh/yr)</b>	1,055,907	<b>Diesel Used (gals/yr)</b>	86,492



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.19	Fuel Cost	\$0.41
Residential Rate	\$0.65	Non-fuel Cost	\$0.35
Commercial Rate		Total Cost	\$0.76

<b>Fuel Prices (\$)</b>	<b>Utility/Wholesale</b>	<b>Retail</b>	<b>Month/Year</b>
Diesel (1 gal)	\$4.53	\$5.97	6-13; 8-14

<b>Other Fuel? (1 gal)</b>		
Gasoline (1 gal)		
Propane (100#)	\$373.33	8-14

<b>Wood (1 cord)</b>	
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<b>Pellets</b>	
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<b>Discounts?</b>	
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<b>Notes</b>	
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<b>Purchasing</b>	<b>Deliveries/Year</b>	<b>Gallons/Delivery</b>	<b>Vendor(s)</b>
By Barge	4		
By Air			

<b>Cooperative Purchasing Agreements</b>	
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<b>Notes</b>	
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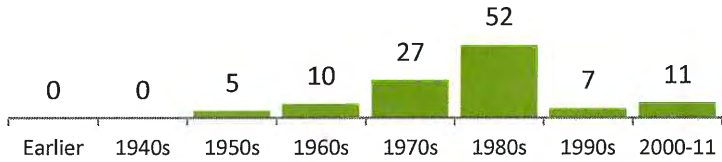
Barge delivery in Spring & Fall to Village, June & Sept. to Utility.
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# Energy Profile: Tuntutuliak

<b>Housing Units</b>	<b>Occupied</b> 78	<b>Vacant</b> 23	<b>% Owner-Occup.</b> 86%	<b>Regional Housing Authority</b> AVCP	<b>Weatherization Service Provider</b> AVCP		
<b>Housing Need</b>		<b>Overcrowded</b> 59.0%	<b>1-star</b> N/A	<b>Energy Use</b>	<b>Average Home Energy Rating</b> N/A	<b>Average Square Feet</b> N/A	<b>Avg. EUI (kBtu/sf)</b> N/A
<b>Data Quality</b>	Medium						

**Age of Housing Stock**



**Energy Efficient Housing Stock**



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes

**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Community Bldg.	1986	1,947	Yes		No
Health Clinic	2009	2,214	Yes		Yes
SRE Bldg. 1	960				No
SRE Bldg. 2 (Heated)	960				No
VPSO Bldg.	1991	1,365	Yes		Yes
Water Plant & Washeteria	1987	2,240	Yes		No

# Community Profile: Tununak



**Incorporation** Unincorporated in the Bethel Census Area

**Location**  
Part of the Lower Kuskokwim Subregion. Tununak is located in a small bay on the northeast coast of Nelson Island, 115 miles northwest of Bethel and 519 miles northwest of Anchorage.

**Longitude** -165.2555      **Latitude** 60.5851

**ANCSA Region** Calista Corporation

**Borough/CA** Bethel Census Area

**School District** Lower Kuskokwim School District

**AEA Region** Lower Yukon-Kuskokwim

**Taxes Type (rate)**      **Per-Capita Revenue**  
N/A      N/A

**Economy**  
Tununak is a traditional Yup'ik Eskimo village, with an active fishing and subsistence lifestyle. The sale and importation of alcohol is banned.

**Climate**      **Avg. Temp.**      **Climate Zone**      **Heating Deg. Days**  
59/2      Marine      N/A

**Natural Hazard Plan**  
N/A

**Community Plans**      **Year**  
N/A      N/A

**Alaska Native Name (definition)**

N/A

**Historical Setting / Cultural Resources**

In 1878 Nelson Island was named after Edward Nelson, a Smithsonian naturalist. In 1889 the Jesuits opened a small chapel and school. In 1925 a government school was built, and a Northern Commercial Company store was opened in 1929. From 1934 to 1962, a missionary named Father Deshout lived on Nelson Island who greatly influenced the area. The 1950s brought great changes to the islanders' lifestyle, through their involvement with the Territorial Guard and work in fish canneries, high schools, and healthcare treatment for tuberculosis. The city was incorporated in 1975, but it was dissolved on Feb. 28, 1997.

Local Contacts	Email	Phone	Fax
Tununmiut Rinit Corporation		907-652-6311	907-652-6315
Native Village of Tununak	<a href="mailto:tribe2work@yahoo.com">tribe2work@yahoo.com</a>	907-652-6527	907-652-6011

Demographics	2000	2010	2013
Population	325	327	Percent of Residents Employed 83.20%
Median Age	23	36	Denali Commission Distressed Community Yes
Avg. Household Size	4	4	Percent Alaska Native/American Indian (2010) 94.50%
Median Household Income		\$23,750	Low and Moderate Income (LMI) Percent (201x) N/A

Electric Utility	Generation Sources	Interties	PCE?
AVEC	Diesel, Wind	No	Yes

Landfill	Class	Permitted?	Location
	III	No	1/4 mi east of runway

Water/Wastewater System	Homes Served	System Volume
Water Washeteria	452	N/A
Sewer N/A	Water/Wastewater Energy Audit?	
Notes	No	

Access	Road	Air Access	Runway 1	Runway 2	Runway 3	Runway 4
	No	Tununak Airport, gravel, poor condition	1,778'x30'		N/A	N/A
		N/A	N/A			
	Dock/Port No		Barge Access? Yes	Ferry Service? No		

**Notes**

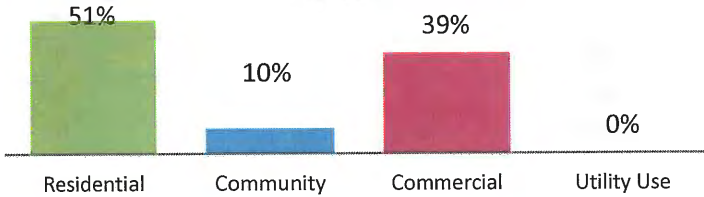
# Energy Profile: Tununak

## Diesel Power System

Utility	AVEC		
Engine	Make/Model	Condition/Hrs	Gen Capacity
Unit 1	Detroit Diesel	Good/1,418	344
Unit 2			
Unit 3			
Unit 4			
Line Loss	N/A		
Heat Recovery?	No		
Upgrades	Priority	Projects	Status
RPSU Powerhouse	Low		
RPSU Distribution	Med.		
<b>Outage History/Known Issues</b>			
Intertie with Toksook Bay, Standby power plant in place.			
<b>Operators</b>	No. of Operators	Training/Certifications	
	1	BF Book, BF Manager	

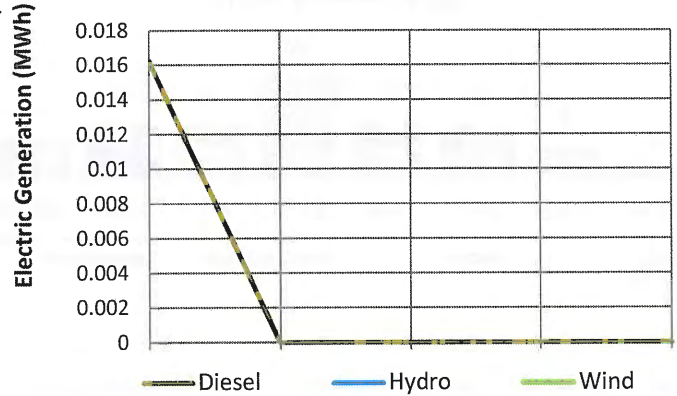
Maintenance Planning (RPSU)	Good		
<b>Electric Sales</b>	No. of Customers	kWh/year	kWh/Customer
Residential	92	435,279	4,731
Community	8	83,787	10,473
Commercial	20	327,894	16,395
Utility Use	0		

**Electric Sales by Customer Type (kWh/year)**



## Power Production

Diesel (kWh/yr)	0	Avg. Load (kW)	55
Wind (kWh/yr)	0	Peak Load (kW)	200
Hydro (kWh/yr)	0	Efficiency (kWh/gal)	N/A
Total (kWh/yr)	0	Diesel Used (gals/yr)	0



<b>Electric Rates (\$/kWh)</b>		<b>Cost per kWh Sold (\$/kWh)</b>	
Rate with PCE	\$0.19	Fuel Cost	N/A
Residential Rate	\$0.55	Non-fuel Cost	\$0.27
Commercial Rate		Total Cost	\$0.27
<b>Fuel Prices (\$)</b>	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$4.23	\$6.95	6-13; 8-14
Other Fuel? (1 gal)			
Gasoline (1 gal)			
Propane (100#)		\$252.14	8-14
Wood (1 cord)			
Pellets			
Discounts?			

<b>Alternative Energy</b>	Potential	Projects	Status
Hydroelectric	Low	None	
Wind Diesel	High	Intertie to Toksook Bay Wind Farm	Operational
Biomass	Low	None	
Solar	Medium	None	
Geothermal	Low	None	
Oil and Gas	Low	None	
Coal	Low	None	
Emerging Tech	Not Rated	None	
Heat Recovery	Low	None	
Energy Efficiency	High	Sanitation Energy Efficiency	Funded

<b>Bulk Fuel</b>				Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge	2		
Native Corp.	Heating Oil	81,000	Good	By Air			
<b>Cooperative Purchasing Agreements</b>							

Bulk Fuel Upgrade	Priority	Project	Status	Notes
				Barge delivery to Native Corp. twice a year.

# Energy Profile: Tununak

<b>Housing Units</b>	Occupied	Vacant	% Owner-Occup.
	94	15	69%

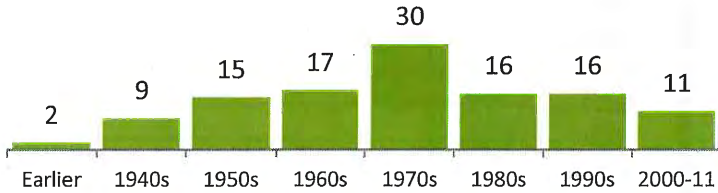
<b>Housing Need</b>	Overcrowded	1-star
	37.2%	21.6%

<b>Data Quality</b>	Medium
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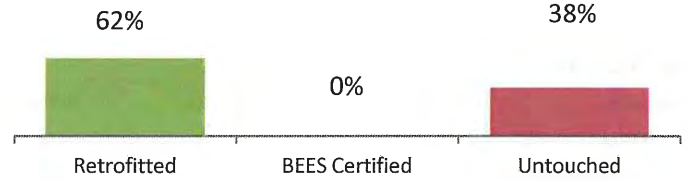
<b>Regional Housing Authority</b>	<b>Weatherization Service Provider</b>		
AVCP	AVCP		

<b>Energy Use</b>	<b>Average Home Energy Rating</b>	<b>Average Square Feet</b>	<b>Avg. EUI (kBtu/sf)</b>
	2-star plus	763	131

**Age of Housing Stock**



**Energy Efficient Housing Stock**



Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
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**Non-residential Building Inventory**

Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	In ARIS?
Generator Module	1980	160			No
Health Clinic	2007	2,422	Yes		Yes
Paul Albert Memorial School	1988	19,382			No
Tribal Office		1,599	Yes		No
Tribal Police Office	1980	768	Yes		No
Utility Building	1982	532			No
Village Corporation					No
Village Council					No
Warehouse	1962	960			No
Warehouse	1970	960			No
Water Plant, Washeteria & Well House	1982	2,048	Yes		No