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.

Mekoryuk Airport, gravel, fair condition

Incorporation	2nd Class City, 1969
Incorporation	Ziiu Class City, 1303

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 Corpo	ration				
Borough/CA	Bethel Census	Bethel Census Area				
School District	Lower Kuskokwim School District					
AEA Region	Lower Yukon-	-Kuskokwim				
Taxes Type (rat	te)	**************************************	Per-Capita Revenue			

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			

Year

N/A

N/A

No

Runway 2

Runway 4

Ferry Service?

Natural Hazard Plan

Community Plans

N/A

				Mekoryuk Compre	hensive Plan, 1	.993	1993
Local Contact		Email	AMONGO SAMON SISTEMO (NO CASO SISTEMO SISTEMO E PROPERCIONE APPENER LA PROPERTICA DE L'APPENER PROPERTICA DE L	Phone	***************************************	Fax	negodjagokanojajokjet ije bakoja kizanojaka anizokja bije tezake az om mierak pozna
Nima Corpora	ation			907-827-8636		907-827-8639	
Native Village	of Mekoryuk	nativevillage	e.mekoryuk@yahoo.com	907-827-8828		907-827-8133	
City of Meko	ryuk	cityofmekor	yuk@yahoo.com	907-827-8314		907-827-8626	
Demographic	CS .	2000	2010		NAMES OF THE PROPERTY OF THE P	no escues com es es esperante escala roberto esta e un escuente de productivo e de contrace pos e secues con e	2013
Population		210	191	Percent of Reside	nts Employed		71.64%
Median Age		36	38	Denali Commissio	n Distressed Co	ommunity	No
Avg. Househo	old Size	3	3	Percent Alaska Native/American Indian (2010)		93.19%	
Median Hous	sehold Income		\$24,375	Low and Moderat	e Income (LMI	Percent (201x)	80%
Electric Utilit	y	<u> </u>	Generation Sources		Interties	**************************************	PCE?
AVEC			Diesel		No		Yes
Landfill	Class	III	Permitted?	No	Location	3/4 mi. west of	community
Water/Wast	ewater System	3334333435564466665364644444466664444444646444646444644		Homes Served	MASS OF A BENCH AND PROPERTY AND RESIDENCE OF THE ARTHROPORTY		System Volume
Water	Haul			198			50,001-100,000
Sewer	Haul			Water/Wastewat	er Energy Audi	t?	
Notes				Yes			
Access	35,000 \$3 \$ 100 \$100 \$100 \$100 \$100 \$100 \$1			***************************************	1000000010003090010030002010000000000000	CHAILMANNAIDHAANNAINNAINNAINNAINNAINNAINNAINNAINNAIN	
Road	No						

Runway 1

Runway 3

Barge Access?

3,070'x75'

N/A

Yes

Air Access

Dock/Port

N/A

Yes

Energy Profile: Mekoryuk

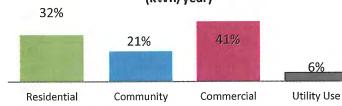
Diesel Power System

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	Cummins Fair/13,702			
Unit 4					
Line Loss		5.6%			
Heat Recovery?	N	o (AVEC); Yes (RPSU	I)		
Upgrades	Priority	Projects	Status		
RPSU Powerhouse	Low	Heat/Wind Rec.	Planned		
RPSU Distribution	Med.	Med. P			
Outage History/Known Issues					

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

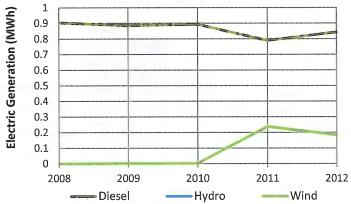
Maintenance Planning (RPSU) Excellent						
Electric Sales	No. of Customers	kWh/year	kWh/Customer			
Residential	91	305,522	3,357			
Community	10	198,353	19,835			
Commercial	27	392,725	14,545			
Utility Use		59,563				

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



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

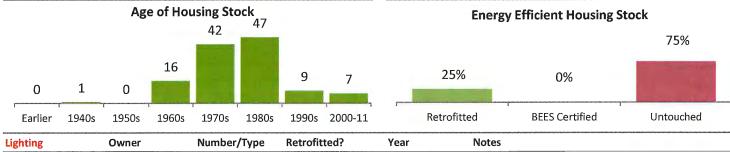
Alternative Energy	Potential		Projects			Status	
Hydroelectric	Low		None				
Wind Diesel	High		Wind Farm, Two	100 kW Turbines		Operational	
Biomass	Low		None				
Solar	Medium		None				
Geothermal	Low		None				
Oil and Gas	Low		None				
Coal	Low		None				
Emerging Tech	Not Rated		None				
Heat Recovery	Medium		Wind to Heat at \	Washeteria		Operational	
Energy Efficiency	High		VEEP/EECBG			Complete	
Bulk Fuel	\$5000000A500000000A4000A400A400A400A400A4	#19900000000000000000000000000000000000		Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
	E - 1 T (-)	C	Anna (Compliation	D D			

chergy chiciency	IIIgii		VLLI / LLCDO			complete	
Bulk Fuel	99999999999999999999999	99999999999999999999999999999999999999		Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge			
City	Heating Oil	54,000	New	By Air			
NIMA Store	Heating Oil	86,000	Good	Cooperative Pu	rchasing Agreements		
NIMA Store	Gasoline	81,000	Good				
Bulk Fuel Upgrade	Priority	Project	Status	Notes			

Barge delivery throughout Summer.

Energy Profile: Mekoryuk

Housing Units	Occupied 81	Vacant 36	% Owner-Occup.	Regional Hous AVCP	ing Authority	Weatherization Se AVCP	ervice Provider
Housing Need		Overcrowded 8.6%	1-star N/A	Energy Use	Average Home Energy Rating	Average Square Feet	Avg. EUI (kBTU/sf)
Data Quality	Medium				3-star	1,040	129
	Age of I	Housing Stock			Energy Efficie	nt Housing Stock	
		42					75%



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	1				No
Storage Facility					No
Store					No
Store Fuel Tank	- Company of the Comp				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



Alaska Native Name (definition)

N/A

Local Contacts

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.

Email

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 Corpora	ation				
Borough/CA	Bethel Census	Bethel Census Area				
School District	Lower Kuskok	t				
AEA Region	Lower Yukon-Kuskokwim					
Taxes Type (rat	e)	**************************************	Per-Capita Revenue			
Sales, 4%			\$200			

Economy

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

Climate	Avg. Temp.	Climate Zone	Heating Deg. Days
	62/11	Continental	N/A
Natural Haza	rd Plan		
Napkiak Loca	l Hazard Mitigation P	lan, 2011	
Community I	Plans		Year
Napakiak Cor	mmunity Plan, 2010		2010
DI	UA-15575544 SEL7544 SE-SONET BIS BASIN PLANS PROPRIES PRO		
Phone		Fax	
907-589-2227 90		907-589-2442	
907-589-2135 90		907-589-2136	
907-589-261	1	907-589-2612	

Napakiak Co	poration			907-589-2227	907-589)-2442
Native Village of Napakiak naparyaraq@hughes.net		@hughes.net	907-589-2135	907-589	0-2136	
City of Napal	iak	cityofnapak	iak@hotmail.com	907-589-2611	0-2612	
Demographi	CS	2000	2010	4004 PRESIDENTI PRESIDENTI PRESIDENTI A TRESIDENTI PRESIDENTI PRES		2013
Population 353		354	Percent of Residents Employed		64.47%	
Median Age		27	24	Denali Commission	Yes	
Avg. Househ	old Size	5	4	Percent Alaska Nat	97.18%	
Median Hou	sehold Income		\$38,750	Low and Moderate	Income (LMI) Percent (20	01x) 97%
Electric Utilit	y		Generation Sources	\$	nterties	PCE?
Napakiak Irci	nraq Power Compar	ηγ	Diesel	1	No	Yes
Landfill	Class	ÍII	Permitted?	Yes	ocation Southwe	est of new housing developme
Water/Wast	ewater System	nedalessack coort reason as stands se na h ood de dri d at 4 con 4 co n 4 con	ACCOUNTS OF THE PROPERTY OF TH	Homes Served		System Volume
Water	N/A			330		<10,000
Sewer	N/A			Water/Wastewate	r Energy Audit?	

Notes
Access

Road	No				
Air Access	Napakiak Airport, gravel, fair condition	Runway 1	3,248'x60'	Runway 2	N/A
	N/A	Runway 3	N/A	Runway 4	N/A
Dock/Port	No	Barge Access?	Yes	Ferry Service?	No

No

Energy Profile: Napakiak

Diesel Power System

Utility Napakiak Inricaq Power Company					
Engine	Make/Model	Condition/Hrs	Gen Capacity		
Unit 1	John Deere	Good/35	250		
Unit 2					
Unit 3					
Unit 4					
Line Loss	8.2%				
Heat Recovery?		No			
Upgrades	Priority	Projects	Status		
RPSU Powerhouse	Low		Complete		
RPSU Distribution	Low Complete				
Outage History/Know	un Issues				

Outage History/Known Issues

L Kuskokwim SD

Napakiak Corp.

Bulk Fuel Upgrade

Diesel

Diesel/Gas

Priority

140,000

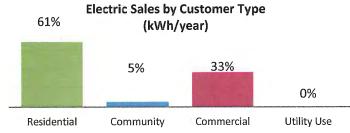
103,000

Project

Intertie from Bethel, not running generator.

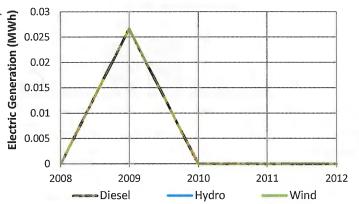
Operators	No. of Operators	Training/Certifications
	3	BFO, Utility Clerk

Maintenance Planning (RPSU) Unacceptable					
Electric Sales	No. of Customers	kWh/year	kWh/Customer		
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)

Total (Reelly 91)	013,200 Diesei Oscu (gais) yii	
Total (kWh/yr)	619,200 Diesel Used (gals/yr)	0
Hydro (kWh/yr)	Efficiency (kWh/gal)	0
Wind (kWh/yr)	Peak Load (kW)	124
Diesel (kWh/yr)	619,200 Avg. Load (kW)	56



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

Residential	Community	Commercial	Utility Use				
Alternative Energy	Potential	······	Projects			Status	
Hydroelectric	Low		None			•	
Wind Diesel	Medium		Met Tower insta	alled 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	
Bulk Fuel				Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge	June thru Oct		
Vill. of Napakiak	Diesel	63,000	Good	By Air			
Vill. of Napakiak	Gasoline	43,000	Good	Cooperative I	Purchasing Agreement	ts	

Notes

5 yrs/active 4 yrs/active

Status

Energy Profile: Napakiak

Housing Ur	nits	Occupied 94	d	Vacant 14		% Own e	er-Occup.	Regiona AVCP	al Housi	ng Autho	ity	Weatheria AVCP	zation Sei	vice Provider
Housing Ne	eed			Overc 37.2%	rowded	1. 12.4%	·star	Energy	Use	Average Energy F		Average Square Fe	et	Avg. EUI (kBTU/sf)
Data Qualit	ty	High	***************************************		***************************************	******************************				2-star		834		159
		Age	e of Ho	using St	ock		no accomplisación de conferencia con escargo con escar	***************************************		Energ	v Efficie	nt Housin	g Stock	and the second desired
				42	40						,		0	69%
0	0	6	13			7	11		31%	%		0%		呼鳴
Earlier	1940s	1950s	1960s	1970s	1980s	1990s	2000-11		Retrofit	tted	BEE	S Certified		Untouched
Lighting	***************************************	Owner	*************************	Number	/Type	Retrofit	ted?	Year	CALLES CONTROL OF THE	Notes	***************************************		*************************	
Street ligh	ts			27		Yes				24 repla	aced with	n LEDs		
Non-reside	ntial Bui	lding Invei	ntory											
Building Na		ocation					r Built		e Feet	Aud	lited?	Retrofit	s Done?	In ARIS?
SRE Bldg 1						2	002		200					Yes
SRE Bldg 2		d)						1,2	200					Yes
Washeteri	а									Yes,	EECBG	N	lo	No
														(
										100				
														·

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Community Profile: Napaskiak



Alaska Native Name (definition)

N/A

Historical Setting / Cultural Resources

No

Dock/Port Notes

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 Corpor	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	wim School Distri	ct
AEA Region	Lower Yukon-l	Kuskokwim	
Taxes Type (rat	:e)		Per-Capita Revenue
Sales, 3%			\$60

Economy

Climate

N/A

Natural Hazard Plan

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

Climate Zone

Ferry Service?

No

Continental

Heating Deg. Days

N/A

Avg. Temp.

62/-2

				Community Pl	ans	**************************************	Year
				N/A			N/A
Local Contact	<u> </u>	Email	ORGONOMINA DE COMPANDA DE LA CARRA DE LA CARRA DE COMPANDA DE COMPANDA DE LA COMPANDA DE COMPA	Phone	00000000000000000000000000000000000000	Fax	
Napaskiak Inc	orporated			907-737-7413			
Native Village	of Napaskiak	fjenkins@na	apaskiak.org	907-737-7364		907-737-7039	
City of Napasl	kiak	cityofnapas	kiak@live.com	907-737-7626		907-737-7412	
Demographic	\$	2000	2010	***************************************	noquoloonaannaanaanaanaanaanaanaanaanaanaanaan	2513044F 5 4 10 25 10 10 10 10 10 10 10 10 10 10 10 10 10	2013
Population		390	405	Percent of Res	sidents Employed		73.25%
Median Age		22	32	Denali Commission Distressed Community			No
Avg. Househo	old Size	5	5	Percent Alaska Native/American Indian (2010)			96.54%
Median Hous	ehold Income		\$41,563	Low and Mod	erate Income (LMI)	Percent (201x)	80%
Electric Utility	/	39455399 MM 399539480 V M	Generation Sources		Interties	anns annaen verere encelement dem 2 (mans aus encelement en de san des encelements (men an ement)	PCE?
Napaskiak Ele	ctric Utility		Diesel		No		Yes
Landfill	Class	111	Permitted?	No	Location	1,000 feet fron	n river bank
Water/Waste	ewater System	oc <u>esconos con escriptos e tecnos con escap</u> e de contenção de 100	4222220000000 T 20000000 1 50000 1 50000 1 50000 1 50000 1 50000 1 50000 1 50000 1 50000 1 50000 1 50000 1 5000	Homes Served	3		System Volume
Water	Haul			200			10,000-50,000
Sewer	Haul			Water/Waste	water Energy Audi	t?	
Notes				Yes			
Access			geogrammen bekennte het en een een een een een een een een ee		eden er staten er st		
Road	No						
Air Access	Napaskiak A	irport, gravel, fair	condition	Runway 1	3,000'x60'	Runway 2	15,000'x2,000'
	N/A			Runway 3	N/A	Runway 4	N/A
	- 4						

Barge Access?

Yes

Energy Profile: Napaskiak

Utility	Napaskiak Electr	ic Utility		Diesel (kWh/yr)	992,964	Avg. Load (kW)	9
Engine	Make/Model	Condition/Hrs	Gen Capacity	Wind (kWh/yr)	0	Peak Load (kW)	20
Unit 1	John Deere	Fair/26,881	230	Hydro (kWh/yr)	0	Efficiency (kWh/gal)	1
Unit 2	John Deere	Fair/4,565	117	Total (kWh/yr)	992,964	Diesel Used (gals/yr)	69,76
Unit 3	John Deere	Fair/16,534	230	- 1.2			
Unit 4				¥ 1.2			4444
Line Loss		24.7%		E 1			
Heat Recovery?		No		1.2 1.2			
Upgrades	Priority	Projects	Status	arat		3	
RPSU Powerhouse	In Progress			0.6 ene			
RPSU Distribution	High			0.4			
Outage History/Kno	own Issues			to a			
-	in past, unknowr	if outages resul	ted.	0.2			
Operators	No. of Operators		ertifications	0			
•		APPO, BFO, PFC		2008	2009	2010 201	
				-	Diesel	— Hydro —	Wind
Maintenance Plann	ning (RPSU)	Unacceptable		Electric Rates (\$	5/kWh)	Cost per kWh Sold	(\$/kWh)
Electric Sales	No. of Customers	kWh/year	kWh/Customer	Rate with PCE	\$0.31	Fuel Cost	\$0.44
Residential	109	401,211	3,681	Residential Rate	s \$0.70	Non-fuel Cost	\$0.24
Community	8	62,079	7,760	Commercial Rat		Total Cost	\$0.68
Commercial	30	235,723	7,857	Fuel Prices (\$)	Utility/Wholesale	L	Month/Year
Utility Use		48,824	.,,,,,	Diesel (1 gal)	\$4.40	\$5.98	6-13; 8-14
	la stata Calaa baa			Other Fuel? (1 g		ψ0.00	0 10,0 1.
E	ectric Sales by ((kWh/ر			Gasoline (1 gal)		\$7.89	1-12
54%	(KAAII)	/ear /		Propane (100#)		ψ,105	2 22
3470				Wood (1 cord)			
3470	8%	32%		Wood (1 cord)			
3470	8%	32%	7%	Pellets			
	7-4		7%				
Residential	8% Community	32% Commercial	7% Utility Use	Pellets			
Residential	Community			Pellets		Status	
Residential Alternative Energy	Community		Utility Use	Pellets			
Residential Alternative Energy Hydroelectric	Community Potential		Utility Use Projects	Pellets Discounts?	Study	Status Closed	
Residential Alternative Energy Hydroelectric Wind Diesel	Community Potential Low		Utility Use Projects None	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass	Community Potential Low Low		Utility Use Projects None Met Tower Insta	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar	Community Potential Low Low Low		Utility Use Projects None Met Tower Insta	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal	Community Potential Low Low Low Medium		Utility Use Projects None Met Tower Insta	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas	Community Potential Low Low Low Medium Low		Utility Use Projects None Met Tower Insta None None None	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas Coal	Community Potential Low Low Low Medium Low Low		Utility Use Projects None Met Tower Insta None None None None	Pellets Discounts?	Study		
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas Coal Emerging Tech	Community Potential Low Low Medium Low Low Low Low		Projects None Met Tower Insta None None None None None None	Pellets Discounts?			
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas Coal Emerging Tech Heat Recovery	Community Potential Low Low Low Medium Low Low Low Not Rated		Utility Use Projects None Met Tower Insta None None None None None None None	Pellets Discounts? alled; Feasibility Commissioned			unded
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas Coal Emerging Tech Heat Recovery Energy Efficiency	Community Potential Low Low Low Medium Low Low Low Mot Rated Medium		Projects None Met Tower Insta None None None None None None None Feasibility Study	Pellets Discounts? alled; Feasibility Commissioned		Closed	·unded Vendor(s)
	Community Potential Low Low Low Medium Low Low Low Mot Rated Medium		Projects None Met Tower Insta None None None None None None None Feasibility Study	Pellets Discounts? alled; Feasibility Commissioned (Sanitation EE 3))Clinic EE	Closed 1&2 Complete, 3 F	***************************************
Residential Alternative Energy Hydroelectric Wind Diesel Biomass Solar Geothermal Oil and Gas Coal Emerging Tech Heat Recovery Energy Efficiency Bulk Fuel	Community Potential Low Low Low Medium Low Low Low Mot Rated Medium High	Commercial	Projects None Met Tower Insta None None None None None None Sone None Sone None None Sone Sone Sone Sone Sone Sone Sone S	Pellets Discounts? alled; Feasibility Commissioned Sanitation EE 3)Clinic EE	Closed 1&2 Complete, 3 F	***************************************

Priority

Bulk Fuel Upgrade

Project

Status

Notes

Energy Profile: Napaskiak

Housing Units	Occupied	Vacant	% Owner-Occup.	Regional Hous	sing Authority	Weatherization :	Service Provider
	78	36	88%	AVCP		AVCP	
Housing Need		Overcrowded	1-star	Energy Use	Average Home	Average	Avg. EUI
		53.8%	N/A		Energy Rating	Square Feet	(kBTU/sf)
Data Quality	Medium	***************************************	***************************************		3 star	993	126
MODELLO CONTROL DE LA CONTROL	B£1	In Charalt		***************************************			_

Age of Housing Stock Energy Efficient Housing Stock 74 71% 29% 17 0% 12 12 0 0 1 **BEES Certified** Untouched 1990s 2000-11 Retrofitted Earlier 1940s 1950s 1960s 1970s 1980s

Street Lighting	Owner	Number/Type	Retrofitted?	Year	Notes
	City Napaskiak	46	Yes		All 46 lights replaced with LEDs

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



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.

n	cor	201	rati	an	(
ш	w	PU	au	VII	

Location

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.

Longitude	-164.6294	Latitude	60.9428
ANCSA Region	Calista Corpora	tion	
Borough/CA	Wade Hamptor	1	
School District	Kashunamiut So	chool District	
AEA Region	Lower Yukon-K	uskokwim	
Taxes Type (rat	e)		Per-Capita Revenue
N/A			N/A

Economy

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

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

N/A

No

Runway 4

Ferry Service?

Natural Hazard Plan

Local Hazards Mitigation Plan, 2008

				Community Pl	lans	ant a constant from the profession of the forest from the standard of the state of the constand to the	Year
				N/A			N/A
Local Contacts	······································	Email		Phone	NASAGE POS LANCONACE ARTA ARRESTA DE CADARESTO COLARROS TOCAMACIONACIONACIONACIONACIONACIONACIONACION	Fax	TTT GOOD ZOOD ZOON THE TO ZOON TO CONTRACT HE SECURE SECURE THE AMOUNT OF BUILDING A COLOR OF SOME
Newtok Native	e Corporation			907-237-2200		907-237-2710	
Newtok Village	е			907-237-2202			
Demographics	***************************************	2000	2010	***************************************	opponyst kynnesossi paramininka akkenninka nintininka nintininka nintininka nintininka nintininka nintininka n		2013
Population		321	354	Percent of Res	sidents Employed		82.21%
Median Age		21	17	Denali Commission Distressed Community			Yes
Avg. Househo	ld Size	6	6	Percent Alaska Native/American Indian (2010)			96.05%
Median House	ehold Income		\$43,056	Low and Mod	erate Income (LMI)	Percent (201x)	N/A
Electric Utility		CEESCANSIS EUROOMOON ASCALA ESCANA SONO SERVINO DE CONTRACTOR ACTIVACIONA CONT	Generation Sources		Interties	en von en verse om en se en verse et som en en en verse	PCE?
Ungusraq Pow	ver Company		Diesel		No		Yes
Landfill	Class	III	Permitted?	No	Location	N/A	, , , , , , , , , , , , , , , , , , ,
Water/Waste	water System	**************************************	CONCERNO DO COMPOSICIO CARROLLA DE LA CONCESCIONA DE CONCESCIONA D	Homes Served	d		System Volume
Water	Washeteria			435			50,001-100,000
Sewer	Honey Buck	et		Water/Waste	water Energy Audi	t?	
Notes				Yes			
Access			**************************************	ONNECONO DE PARA COMPONICIO ES ESTADA COMPONICIO DE PARA COMPONICIO DE PARA COMPONICIO DE PARA COMPONICIO DE P			**************************************
Road	No						
Air Access	Newtok Airp	oort, gravel, poor c	ondition	Runway 1	2,202'x35'	Runway 2	N/A

Runway 3

Barge Access?

5,000'x400'

Yes

Dock/Port

Seaplane Base

Energy Profile: Newtok

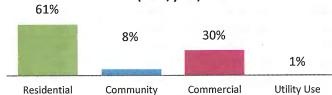
Diesel Power System	n						
Utility	Ungusraq Power Company						
Engine	Make/Model Condition/Hrs Gen Capac						
Unit 1	John Deere	Poor/6,265	100				
Unit 2	John Deere Poor/9,212 120						
Unit 3							
Unit 4							
Line Loss		2.3%					
Heat Recovery?	Yes	; Water Holding Fac	ility				
Upgrades	Priority	Projects	Status				
RPSU Powerhouse	High						
RPSU Distribution	High						
Outage History/Kno	own Issues						

Inadequate capacity, school uses own gens.

Operators	No. of Operators	Training/Certifications
	6	PPO, BFO, APPO, Utility Clerk

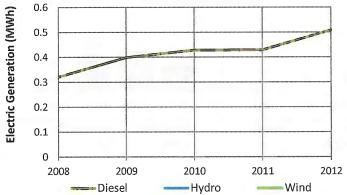
Maintenance Planning (RPSU) Acceptable				
Electric Sales	No. of Customers	kWh/year	kWh/Customer	
Residential	66	276,720	4,193	
Community	3	34,057	11,352	
Commercial	23	137,729	5,988	
Utility Use		3,462		

Electric Sales by Customer Type (kWh/year)



Power Production

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



Electric Rates (\$/kWh)	Cost per kWh Sold (\$/kWh)			
Rate with PCE \$0.18	Fuel Cost	\$0.43		
Residential Rate \$0.80	Non-fuel Cost	\$0.34		
Commercial Rate	Total Cost	\$0.77		
Fuel Prices (\$) Utility/Wholesale	Retail	Month/Year		
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?				

Alternative Energy	Potential		Projects			Status	
Hydroelectric	Low		None				
Wind Diesel	Low		Met Tower Insta	lled		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/He	alth Clinic EE; 2)	VEEP	Both Complete	
Bulk Fuel	***************************************	***************************************	**************************************	Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
			. (0. 10.1		trake		

111911		
Fuel Type(s)	Capacity	Age/Condition
Diesel/Gas	30,000	Fair
Gasoline	25,000	Fair
Diesel	6,000	Good
Gasoline	20,000	Good
Diesel	65,000	Fair
Priority	Project	Status
	Fuel Type(s) Diesel/Gas Gasoline Diesel Gasoline Diesel	Fuel Type(s) Capacity Diesel/Gas 30,000 Gasoline 25,000 Diesel 6,000 Gasoline 20,000 Diesel 65,000

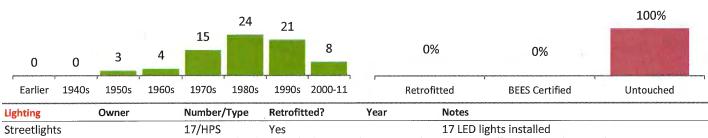
th Clinic EE; 2)	VEEP	Both Complete			
Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)		
By Barge	July				
By Air					
Cooperative F	Purchasing Agreement	S			
Notes		,			
Permafrost i	s widespread, causir	ng problems with pov	ver house		

Permafrost is widespread, causing problems with power house infrastructure.

Energy Profile: Newtok

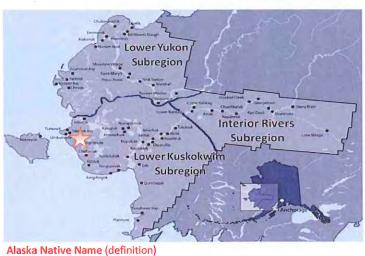
Housing Units	Occupied	Vacant	% Owner-Occup.	Regional Hou	sing Authority	Weatherization S	Service Provider
	72	4	68%	AVCP		AVCP -	
Housing Need		Overcrowded	1-star	Energy Use	Average Home	Average	Avg. EUI
		79.2%			Energy Rating	Square Feet	(kBTU/sf)
Data Quality	Low				N/A		
***************************************	Age of	Housing Stock		***************************************	Energy Effici	ent Housing Sto	ck

Energy Efficient Housing Stock



Non-residential Building Inventory	V n. 11.		A !!! !D	D	1. ADIO
Building Name or Location	Year Built	Square Feet	Audited?	Retrofits Done?	in ARIS
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
			Y-		

Community Profile: Nightmute



Historical Setting / Cultural Resources

Notes

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 costeffective goods. The city was incorporated in 1974.

	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 Corpor	ation			
Borough/CA	Bethel Census	Bethel Census Area			
School District	Lower Kuskok	Lower Kuskokwim School District			
AEA Region	Lower Yukon-	Kuskokwim			
Taxes Type (rat	e)	order etter git i i i de de engle i kun berg de opgen i i de president et end opgen etter gibt i i i by de e	Per-Capita Revenue		
Sales, 2%			\$10		

Economy

Climate

N/A

Natural Hazard Plan

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

Climate Zone

Marine

Heating Deg. Days

N/A

Avg. Temp.

57/6

				•			
				Community Plan		cerkuonintee dat decendrad telenomico asciante sidore tota entretributada activista con contrato de la contratorio del la contratorio de la contratorio del la contratorio de la contratorio del la cont	Year
				Nightmute Traditional Council Action Plan, 2004		tion Plan, 2004	2004
Local Contacts	00000559653000000559651204A22344602000022222224224484894949	Email	DODONO O PORO DO PORO DO PORO DE PORO	Phone		Fax	
Chinuruk Incor	porated			907-647-6813		907-647-6814	
Native Village	of Nightmute	negtemiut t	ribe@live.com	907-647-6215		907-647-6112	
City of Nightm	ute	nmecitycler	@yahoo.com	907-647-6426		907-647-6427	
Demographics		2000	2010				2013
Population		208	280	Percent of Resid	ents Employed		80.13%
Median Age		22	22	Denali Commission Distressed Community		ommunity	Yes
Avg. Househol	d Size	5	5	Percent Alaska Native/American Indian (2010)		94.64%	
Median House	hold Income		\$59,063	Low and Moderate Income (LMI) Percent (201x)		75%	
Electric Utility	<u></u>		Generation Sources	**************************************	Interties		PCE?
AVEC			Diesel, Wind		No		Yes
Landfill	Class	Ш	Permitted?	No	Location	1/2 mi upriver	,
Water/Waster	water System			Homes Served			System Volume
Water	Haul			243			N/A
Sewer	N/A			Water/Wastewa	iter Energy Audi	t?	
Notes			-	No			
Access							
Road	No						
Air Access	Nightmute A	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

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 Recov	ery?		No	
Upgrades		Priority	Projects	Status

Outage History/Known Issues

RPSU Powerhouse

RPSU Distribution

Power from Toksook Bay via intertie, back-up generator in place

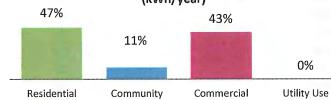
Low

Med.

Operators	No. of Operators	Training/Certifications
	8	BF Book, Manager, BFO, PPO

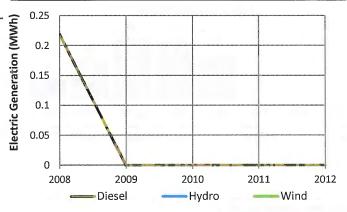
Maintenance Planning (RPSU) Good					
Electric Sales	No. of Customers	kWh/year	kWh/Customer		
Residential	57	280,777	4,926		
Community	8	63,551	7,944		
Commercial	19	256,510	13,501		
Utility Use		0			

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



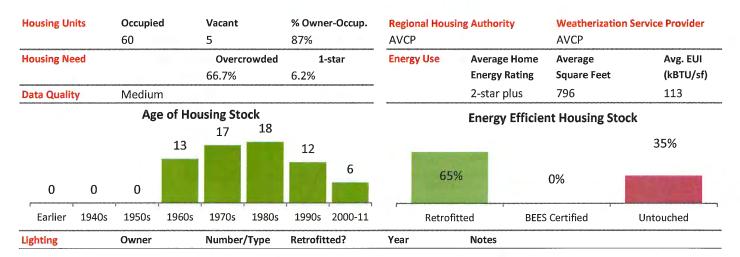
Electric Rates (\$/	kWh)	Cost per kWh Sold	(\$/kWh)
Rate with PCE	\$0.19	Fuel Cost	N/A
Residential Rate	\$0.55	Non-fuel Cost	\$0.27
Commercial Rate	•	Total Cost	\$0.27
Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year
Diesel (1 gal)	\$4.23	\$8.67	6-13; 8-14
Other Fuel? (1 ga	ıl)		
Gasoline (1 gal)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

Alternative Energy	Potential	Projects			Status	
Hydroelectric	Low	None				
Wind Diesel	High	Intertie to Toksook E	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) VE	EP	1) Funded 2) Comple	ete
Pulk Fual	0.000 T T T T T T T T T T T T T T T T T		Purchasing	Deliveries/Vear	Gallons/Delivery	Vendor(s)

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

gy Efficiency 2) VEEP		1) Funded 2) Complete		
Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)	
By Barge				
By Air				
Cooperative Pu	rchasing Agreements			
Notes				

Energy Profile: Nightmute



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."

ENTREM DESCRIPTION OF THE PROPERTY OF THE PROP	
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 Corpora	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	vim School Distri	ct
AEA Region	Lower Yukon-k	Cuskokwim	
Taxes Type (rat	:e)	MINISTER CONTROL OF CO	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 Haza	rd Plan		7514-06.00 20 30 40 60 60 50 50 50 50 50 50 50 50 50 50 50 50 50
N/A			

N/A

No

Runway 4

Ferry Service?

				Community F	Plans		Year
				N/A			N/A
Local Contacts		Email	CONTENTE CON	Phone	ON DICENTIAL PROPERTY OF THE P	Fax	no escapa de la compansión de la compans
Nunapitchuk L	imited		•	907-527-571	7	907-527-5229	
Native Village	of Nunapitchuk	tribaladmin	@yupik.org	907-527-570	5	907-527-5711	
City of Nunapi	tchuk	cityofnunap	@yahoo.com	907-527-532	7	907-527-5011	
Demographic		2000	2010		ANAROLINI MISANI LIPISAS SI OLIVI LIPISAS SI OLIVI ANTRO DESCRIPTO DE CONTRO DE CONTRO DE CONTRO DE CONTRO DE		2013
Population		466	496	Percent of Re	esidents Employed		76.21%
Median Age		23	24	Denali Comm	nission Distressed C	ommunity	Yes
Avg. Househo	ld Size	5	4	Percent Alaska Native/American Indian (2010)		95.77%	
Median House	ehold Income		\$42,778	Low and Moderate Income (LMI) Percent (201x)		87%	
Electric Utility	***************************************	99003 (440, 440, 440, 440, 440, 440, 440, 440	Generation Sources		Interties	2011 BARANCE CO E 2011 BARANCE CONTRA E 1800 CONTRA E	PCE?
AVEC, Diesel G	Generator		Diesel, Wind		No		Yes
Landfill	Class	III	Permitted?	No	Location	N/A	07134340 1903 0001 044 04304 1 344 1 0000 0913 1 400 0 3 40 0 3 40 0 0 0 0 0 0 0 0 0 0 0
Water/Waste	water System	######################################	<u>anni mari ma canana ma no ma na manana ma manana ma ma</u>	Homes Serve	ed		System Volume
Water	Haul			496			10,000-50,000
Sewer	Haul			Water/Wast	ewater Energy Audi	t?	
Notes				Yes			
Access	1444. HANS STANKES OVER 1860 (2000) 43.53 (2010) 1000 (23.33) (145.25) 125.55 (23.45) (2010) 125.55 (23.55) (2				23/23/2012		
Road	No						
Air Access	Nunapitchuk A	irport, gravel, fa	ir condition	Runway 1	2,420'x75'	Runway 2	3,000'x300'

Runway 3

Barge Access?

N/A

No

Notes

Dock/Port

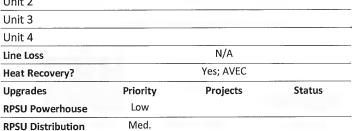
N/A

Yes

Energy Profile: Nunapitchuk

Diesel Power System

Utility Make/Model Condition/Hrs **Gen Capacity** Engine 484 Unit 1 Cummins Good/1,433 Unit 2



Outage History/Known Issues

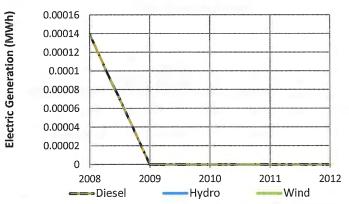
RPSU Distribution

Connected to Kasigluk via intertie

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

Power Production

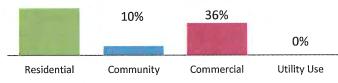
-		
Total (kWh/yr)	0 Diesel Used (gals/yr)	0
Hydro (kWh/yr)	0 Efficiency (kWh/gal)	0
Wind (kWh/yr)	0 Peak Load (kW)	0
Diesel (kWh/yr)	0 Avg. Load (kW)	0



Maintenance Pla	nning (RPSU)	Unacceptable	
Electric Sales	No. of Customers	kWh/year	kWh/Customer
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)

53%



Electric Rates (\$/kWh)	Cost per kWh So	ld (\$/kWh)
Rate with PCE \$0.19	Fuel Cost	N/A
Residential Rate \$0.58	Non-fuel Cost	\$0.27
Commercial Rate	Total Cost	\$0.27
Fuel Prices (\$) Utility/Wholesale	Retail	Month/Year
Diesel (1 gal) \$4.23	\$7.30	6/13; 8/14
Other Fuel? (1 gal)		
Gasoline (1 gal)		
Propane (100#)		
Wood (1 cord)		
Pellets		

Alternative Energy	Potential	Projects		Status	
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) Complet	te
Bulk Fuel		Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)

Discounts?

Fuel Type(s)	Capacity	Age/Condition
Diesel	54,000	
Diesel	15,750	24 yrs/active
unknown	27,000	7 yrs/active
Diesel	10,000	16 yrs/active
Diesel	44,750	active
Priority	Project	Status
	Diesel Diesel unknown Diesel Diesel	Diesel 54,000 Diesel 15,750 unknown 27,000 Diesel 10,000 Diesel 44,750

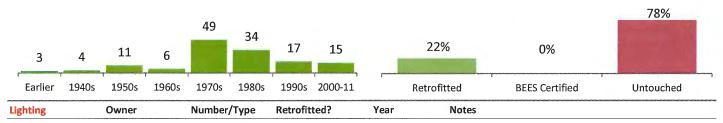
by Efficiency, 2, VEE		z, ranaca, z, complete		
Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)	
By Barge				
By Air				
Cooperative P	urchasing Agreement	S		
Notes				

Energy Profile: Nunapitchuk

Housing Units	Occupied	Vacant	% Owner-Occup.	Regional Hous	sing Authority	Weatherization S	ervice Provider
	104	23	52%	AVCP		AVCP	
Housing Need	***************************************	Overcrowded	1-star	Energy Use	Average Home	Average	Avg. EUI
		48.1%	44.1%		Energy Rating	Square Feet	(kBTU/sf)
Data Quality	High				1-star	830	205

Age of Housing Stock

Energy Efficient Housing Stock



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
	<u> </u>				

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 Corpora	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskoky	vim School Distric	ct
AEA Region	Lower Yukon-k	luskokwim	
Taxes Type (rat	e)		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 Hazar	d Plan		
N/A			

Community Plans	Year
N/A	

Local Contacts	Email	Phone	Fax	
Oscarville Native Corporation		907-737-7090		
Oscarville Traditional Village	mstevens@avcp.org	907-737-7099	907-737-7428	

Demographi	cs	2000	2010				2013
Population		61	70	Percent of	Residents Employed		79.00%
Median Age		26	23	Denali Com	mission Distressed Co	mmunity	Yes
Avg. Househ	old Size	5	5	Percent Ala	ıska Native/American	Indian (2010)	91.78%
Median Hou	sehold Income	N/A	\$39,583	Low and M	oderate Income (LMI)	Percent (201x)	N/A
Electric Utilit	ty		Generation Sources		Interties		PCE?
Bethel Utiliti	es Corporation		Diesel		Yes, Bethel		Yes
Landfill	Class	III	Permitted?	No	Location	1,000 feet soutl	nwest of village
Water/Wast	tewater System	2000-1-1:-C-00:200222222222222222222222222222222	<u></u>	Homes Serv	ved		System Volume
Water	None due to	well damage		0			N/A

water/ waster	water 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.			

Notes

Road	No				
Air Access	N/A	Runway 1	N/A	Runway 2	N/A
		Runway 3	N/A	Runway 4	N/A
Dock/Port	No	Barge Access?	Yes: 1 service/yr	Ferry Service?	No

Oscarville relies on Napaskiak for passenger, mail, and cargo services. Residents use skiffs to reach Napaskiak and Bethel.

Energy Profile: Oscarville

Diesel Power Syste				Power Productio			
Utility	AVEC (in 2014)			Diesel (kWh/yr)		Avg. Load (kW)	6
Engine	Make/Model	Condition/Hrs	Gen Capacity	Wind (kWh/yr)		Peak Load (kW)	14
Unit 1	None	-		Hydro (kWh/yr)		Efficiency (kWh/ga	
Unit 2				Total (kWh/yr)	44,326,400	Diesel Used (gals/y	r) 3,197,40
Unit 3				45.5	·		·
Unit 4				§ 45			
Line Loss		5.5%		E 44.5			
Heat Recovery?		N/A		5 44 43.5			
Upgrades	Priority	Projects	Status	43			
RPSU Powerhouse				45.5 44.5 44.5 43.5 43.4 42.5 42.5			
RPSU Distribution				42.5			
Outage History/Kn	own Issues			41.5 41			
Power from Beth	el via intertie. PCE	data for both.		40.5			
Operators	No. of Operators	Training/0	Certifications	40			
	No Record				008 2009		011 2012
					Diesel	— Hydro —	Wind
Maintenance Plan	ning (RPSU)	N/A		Electric Rates (\$/	′kWh)	Cost per kWh So	ld (\$/kWh)
Electric Sales	No. of Customers	kWh/year	kWh/Customer	Rate with PCE	\$0.17	Fuel Cost	\$0.47
Residential	1,743	10,258,912	5,886	Residential Rate	\$0.60	Non-fuel Cost	\$0.11
Community	16	735,422	45,964	Commercial Rate	2	Total Cost	\$0.57
Commercial	1,010	30,252,426	29,953	Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Yea
Utility Use		647,200		Diesel (1 gal)	\$6.07	\$6.40	6-13; 8-14
	Electric Sales by	Customer Type	1	Other Fuel? (1 ga	al)		
	(kWh/			Gasoline (1 gal)			
	(72%		Propane (100#)		\$148.81	8-14
24%	201			Wood (1 cord)			
	2%			Pellets			
		<u> </u>	2%	Discounts?			
Residential	Community	Commercial	Utility Use				
		ential	a) y y y y y za za san jenny szana szanda neurcsá szerentek neurcsán szerentek neurcsán elektrologia elektrologia.	Projects	\$	Sta	tuc
Alternative Energy		entiai	None	Projects		Sta	tus
Hydroelectric	Low	M-10-11-1		IMind Farm /Turk	ino	Final Docian	
Wind Diesel	High			Wind Farm/Turb	ine	Final Design	2400
Biomass	Low		None				
Solar	Medium		None				
Geothermal	Low		None		u		
Oil and Gas	Low		None				
Coal	Low		None				
Emerging Tech	Not Rated		None				
Heat Recovery	Low		None				
Energy Efficiency	Medium		None				
ALLELLUS CONTENTE DE CONTE				Purchasing	Deliveries/Year	Gallons/Deliver	y Vendor(s)
Bulk Fuel							
Bulk Fuel Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge			
	Fuel Type(s) Heating	Capacity 10,000	Age/Condition	By Barge By Air			

Status

Project

Notes

Bulk Fuel Upgrade

Priority

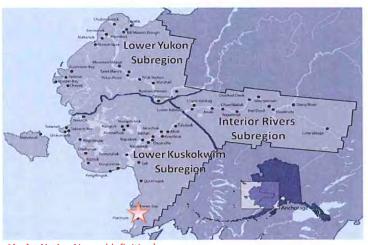
Energy Profile: Oscarville

Housing Un	its	Occupied	d	Vacant 25		% Owner-Occup.	Regional Hous	sing Authorit	У	Weatherization So	ervice Provider
Housing Ne	ed		***************************************	Overcrov 43.8%	vded	1-star N/A	Energy Use	Average Energy F		Average Square Feet	Avg. EUI (kBTU/sf)
Data Qualit	У	Mediun	1	***************************************		50030000000000000000000000000000000000		N/A		N/A	N/A
***************************************	***************************************	Ag	e of Ho	using Stoc	k			Energy	Efficie	nt Housing Stock	
					25					•	25%
					23	r	75	5%			
0	0	1	3	7		5 0				0%	
Earlier	1940s	1950s	1960s	1970s 1	980s	1990s 2000-11	Retro	fitted	BEES	S Certified	Untouched
Street Light	ing	Owner		Number/Ty	pe	Retrofitted?	Year	Notes			01-01-01-01-01-01-01-01-01-01-01-01-01-0
									7		
Non-resider	ntial Buil	ding Inver	ntory	***************************************	***************************************				······································		
Building Na						Year Built	Square Fee	t Aud	lited?	Retrofits Done	? In ARIS?
Clinic						1980	520	<u> </u>	'es		Yes
Qugcuun N											No
School Gre						A 0					No
School Wa		Pump/G	Generato	or							No
Tribal Offic						1970	420	. \	'es		No
United Util											No
Watering F	oint/W	arehouse	!								No
		-									
		•									

		-									
				1 1110							

	-										
						<u>e</u>				····	
							1.7				

Community Profile: Platinum



Alaska Native Name (definition)

N/A

Dock/Port Notes

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 cea

Platinum Mine Airport

***************************************	***************************************
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 Corpora	tion	
Borough/CA	Bethel Census /	Area	
School District	Lower Kuskokw	vim School Distri	ct
AEA Region	Lower Yukon-K	uskokwim	
Taxes Type (rat	:e)		Per-Capita Revenue
Sales, 0%	N/A		

Economy

Climate

Natural Hazard Plan

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

Climate Zone

Marine

Heating Deg. Days

4,147

N/A

No

Runway 4

Ferry Service?

Avg. Temp.

57/6

ceased operations	s in 1990.			N/A			
				Community Pla	ins	assentente et activació con especia escicio de mesos escuelados con el tenco cidado con con con especia con co	Year
				N/A			N/A
Local Contacts		Email		Phone		Fax	
Arviq Incorporate	d			907-979-8113		907-979-8229	
Platinum Traditio	nal Village	ptutribal@ho	tmail.com	907-979-8220		907-979-8178	
City of Platinum				907-979-8114		907-979-8210	
Demographics		2000	2010	estropogroppe de la companya del companya del companya de la compa	***************************************		2013
Population		41	61	Percent of Resi	dents Employed		74.42%
Median Age		33	46	Denali Commis	sion Distressed Co	mmunity	No
Avg. Household S	Size	3	4	Percent Alaska	Native/American	Indian (2010)	88.52%
Median Househo	ld Income		\$16,875	Low and Mode	rate Income (LMI)	Percent (201x)	100%
Electric Utility			Generation Sources	***************************************	Interties		PCE?
City of Platinum			Diesel		No		No
Landfill	Class	111	Permitted?	No	Location	N/A	***************************************
Water/Wastewa	ter System	- NA NOCOLOGIA EN COMENCIA DE COMENCIA PROCESSO EN CENSO DE LA COMENCIA DE CONTRACTOR PROCESSO DE COMENCIA DE	39 (1994) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Homes Served			System Volume
Water	Washeteria			51			N/A
Sewer	N/A			Water/Wastev	vater Energy Audit	?	
Notes				No			
Access		-					***************************************
Road	No						
Air Access	Platinum Airpor	t, gravel, fair cor	ndition	Runway 1	3,300'x75'	Runway 2	N/A

Runway 3

Barge Access?

2,000'x75'

Energy Profile: Platinum

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/Kno	wn Issues		
PCE Eligible Inactiv	e, No RPSU Data		

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					

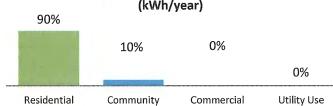
Utility Clerk

No. of Operators

Operators

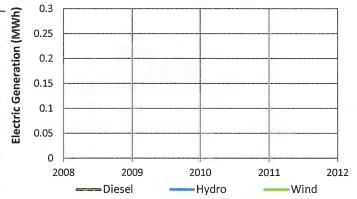
Training/Certifications

Electric Sales by Customer Type (kWh/year)



Power Production (2009)

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



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	

chergy chiciency	111811		NOTIC				
Bulk Fuel				Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge	Spring & Fall		
Platinum Comm.	Diesel	44,000	2 yrs/active	By Air			
Platinum Trad.	Stove Oil/Gas	20,000	37 yrs/Fair	Cooperative I	Purchasing Agreement	:s	
L Kuskokwim SD	Diesel	30,000	35 yrs/active				
CVRF	Diesel	164,000	5 yrs/active	Notes			
Hanson Industries	Diesel	60,000	10 yrs/active	Delivered by	barge or truck		
Bulk Fuel Upgrade	Priority	Project	Status				

Energy Profile: Platinum

Housing Un	nits	Occupie 16	d	Vacant 14		% Owne	er-Occup.	Regiona AVCP	l Housing	g Authority	Weatherization Se	ervice Provider
Housing Ne	ed			Overc 12.5%	rowded	1. N/A	-star	Energy (Average Home Energy Rating		Avg. EUI (kBTU/sf)
Data Qualit	у	Low						***************************************		N/A		
		Age	e of Ho	using St	ock					Energy Effi	cient Housing Sto	ck
					12							19%
0	0	0	4	9	13	4	3		81%		0%	1370
Earlier	1940s	1950s	1960s	1970s	1980s	1990s	2000-11	1	Retrofitt	ed	BEES Certified	Untouched
Lighting		Owner		Number	/Type	Retrofit	ted?	Year		Notes		
					· ··							
Non-reside	ntial Buil	ding Inve	ntory							***************************************		
Building Na	me or Lo	cation				Yea	r Built	Square		Audited?	Retrofits Done	
Arviq Inc.								1,6				No
SRE Buildir	ng (Heat	ed)						2,2	00			Yes
aver												
										American appropriate and the second s		
				AND AND THE RESIDENCE OF THE PERSON OF THE P								
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				- (A (A.) (A.)		, <u></u>						
							,					
									-			

Community Profile: Quinhagak



Alaska Native Name (definition)

N/A

Historical Setting / Cultural Resources

Yes

Dock/Port

Notes

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.

	2nd Class City, 1975
Name of the last o	

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 Corpor	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	wim School Distri	ct
AEA Region	Lower Yukon-l	Kuskokwim	
Taxes Type (rat	te)	***************************************	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.	Climate Zone	Heating Deg. Days
	57/6	Marine	10,466
**************************************	ertrettetationsken der sterrettet er sterrettet er sterrettet er sterrettet er sterrettet er sterrettet er ste		

Ferry Service?

Natural Hazard Plan

City of Quinhagak Hazard Mitigation Plan, 2012

				Community Pla	ins		Year
				Quinhagak Com	nmunity Developm	ent Plan, 2008	2008
Local Contacts		Email		Phone	***************************************	Fax	
Qanirtuuq, Inco	orporated			907-556-8290		907-556-8713	
Native Village o	of Kwinhagak	jmark.nvk@	gmail.com	907-556-8165		907-556-8166	
City of Quinhag	ak	fmoore.nvk(@gmail.com	907-556-2181		907-556-8166	
Demographics	***************************************	2000	2010	000000000000000000000000000000000000000	MANAGEMENT AND		2013
Population		555	669	Percent of Resi	idents Employed		67.85%
Median Age		27	29	Denali Commis	sion Distressed Co	mmunity	Yes
Avg. Household	d Size	5	5	Percent Alaska Native/American Indian (2010)		93.42%	
Median Housel	hold Income		\$35,208	Low and Moderate Income (LMI) Percent (201x)		Percent (201x)	84%
Electric Utility			Generation Sources	, yyst. 137-40 (Interties		PCE?
AVEC			Diesel		No		Yes
Landfill	Class	III	Permitted?	Yes	Location	2.5 mi south of	community
Water/Wastew	vater System	**************************************	00000000000000000000000000000000000000	Homes Served			System Volume
Water	Circ			700			10,000-50,000
Sewer	Pressure			Water/Wastev	vater Energy Audit	.?	
Notes				Yes			
Access	***************************************	CONTRACTOR TO SERVICE CONTRACTOR					
Road	No						
Air Access	Quinhagak Ai	rport, gravel, fair	condition	Runway 1	4,000'x75'	Runway 2	N/A
	N/A			Runway 3	N/A	Runway 4	N/A

Barge Access?

Energy Profile: Quinhagak

Utility Engine Unit 1 Unit 2 Unit 3 Unit 4	Make/Model Cummins Detroit Diesel	Condition/Hrs		Diesel (kWh/yr)		Avg. Load (kW)	
Unit 1 Unit 2 Unit 3		-	Gen Capacity	Wind (kWh/yr)	628,961	Peak Load (kW)	34
Unit 3	Dotroit Diocol	N/A	350	Hydro (kWh/yr)		Efficiency (kWh/gal)	11.8
Unit 3	Deti Oit Diesei	N/A	363	Total (kWh/yr)		Diesel Used (gals/yr)	119,78
Unit 4	Cummins	N/A	499				-
				₹ 2.5			
Line Loss		4.9%		E 2			
Heat Recovery?		No		e e			and the second
Upgrades	Priority	Projects	Status	1.5			
RPSU Powerhouse	N/A			9 1			
RPSU Distribution	N/A			2.5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
Outage History/Kno	wn Issues			0.5			
Oversized generate				ū			
Operators	No. of Operators	Training/C	ertifications	0			
	12	PPO, APPO, BFC	, APPO 1,	2008	2009	2010 201	
		APPO 2, Itin BFC)	etonos	- Diesel -	— Hydro —	Wind
Maintenance Plann	ing (RPSU)	N/A	*	Electric Rates (\$	s/kWh)	Cost per kWh Sold	(\$/kWh)
Electric Sales	No. of Customers	kWh/year	kWh/Customer	Rate with PCE	\$0.19	Fuel Cost	\$0.25
Residential	174	882,047	5,069	Residential Rate	\$0.52	Non-fuel Cost	\$0.27
Community	25	279,409	11,176	Commercial Rat	te	Total Cost	\$0.52
Commercial	19	729,921	38,417	Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year
Utility Use		52,881		Diesel (1 gal)	\$3.68	\$6.70	6/13; 8/14
F!	lectric Sales by C	ustomer Tyne		Other Fuel? (1 g	gal)		
45%	(kWh/y			Gasoline (1 gal)			
4370	(,)	38%		Propane (100#)			
1	4.40/	Taran Taran		Wood (1 cord)			
12	14%			Pellets			
	777		3%	Discounts?			
Residential	Community	Commercial	Utility Use				
Alternative Energy	Potential		Projects		***************************************	Status	
Hydroelectric	Low		None				
Wind Diesel	High		Quinhagak Wind	Farm, 400 kW		Operational	
Biomass	Low		None				
Solar	Medium		None				
Geothermal	Low		None				
	Low		None				
Oil and Gas	Low		None				
			None				
Coal	Not Rated		Heat Recovery to	WTP		Construction	
Coal Emerging Tech	Not Rated High						
Coal Emerging Tech Heat Recovery			VEEP			Complete	NAANTONOOTOO TONOOTOO
Coal Emerging Tech Heat Recovery Energy Efficiency	High	PROVINCE AND ADMINISTRATION OF THE PROVINCE AND ADM		Purchasing	Deliveries/Year	Complete Gallons/Delivery	Vendor(s)
Coal Emerging Tech Heat Recovery Energy Efficiency Bulk Fuel	High	Capacity		Purchasing By Barge	Deliveries/Year		Vendor(s)
Oil and Gas Coal Emerging Tech Heat Recovery Energy Efficiency Bulk Fuel Tank Owner Vill. Kwinhagak	High High	Capacity 24,000	VEEP		Deliveries/Year		Vendor(s)
Coal Emerging Tech Heat Recovery Energy Efficiency Bulk Fuel Tank Owner	High High Fuel Type(s)		VEEP Age/Condition	By Barge By Air	Deliveries/Year	Gallons/Delivery	Vendor(s)

AVEC

Bulk Fuel Upgrade

Diesel

Priority

176,468

Project

Active

Status

Notes

Energy Profile: Quinhagak

lousing U	nits	Occupie 154	d	Vacant 18		% Own 80%	er-Occup.	Region AVCP	nal Housin	g Authority	Weatherization AVCP	Service Provider
Housing No				Overc 44.8%	rowded	1 N/A	-star	Energy		Average Home Energy Rating	Average Square Feet	Avg. EUI (kBTU/sf)
Data Quali	ty 	Mediun Ag		using Sto	ock			***************************************		N/A Energy Efficie	ent Housing Sto	ock
				83	20							81%
12	3	2	21		28	21	8		14%		5%	
Earlier	1940s	1950s	1960s	1970s	1980s	1990s	2000-11	1	Retrofit	ted BE	ES Certified	Untouched
ighting	****************************	Owner		Number	·/Tvpe	Retrofit	tted?	Year		Notes		***************************************

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 Kangirlvar Bay, across the water from Nunivak Island. Tununak is about 8 miles to the northwest.

Longitude	-165.1025	Latitude	60.5303
ANCSA Region	Calista Corpor	ation	
Borough/CA	Bethel Census	Area	,
School District	Lower Kuskok	wim School Distric	t
AEA Region	Lower Yukon-	Kuskokwim	
Taxes Type (rat	e)		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 Haza	rd Plan		**************************************
N/A			

Community Plans	Year
Toksook Bay Community Plan 2008	2008

N/A

Runway 4

Ferry Service?

Local Contact	S	Email		Phone		Fax	
Nunakauiak Y	upik Corporation			907-427-7929	9	907-427-7326	
Nunakauyarm	kauyarmiut Tribe nunakauyaktc@hotmail.com		907-427-7114		907-427-7714		
City of Toksoc	ok Bay	cityofookcle	rk@yahoo.com	907-427-7511		907-427-7811	
Demographic	\$	2000	2010		00000000000000000000000000000000000000	400000 \$500 00050 \$164 00000 000 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 00 \$10 0	2013
Population		532	590	Percent of Re	sidents Employed		72.80%
Median Age		23	27	Denali Comm	ission Distressed Co	ommunity	Yes
Avg. Househo	old Size	6	5	Percent Alaska Native/American Indian (2010)		92.03%	
Median Hous	Nedian Household Income \$54,464		\$54,464	Low and Moderate Income (LMI) Percent (201x)		73%	
Electric Utility	**************************************	END MILESCONIC CONTROL OF THE PARTY OF THE P	Generation Sources		Interties		PCE?
AVEC			Diesel, Wind		No		Yes
Landfill	Class	[]]	Permitted?	No	Location	N/A	
Water/Waste	ewater System	00000000000000000000000000000000000000	555000000000000000000000000000000000000	Homes Serve	d		System Volume
Water	Circ			600			10,000-50,000
Sewer	Gravity			Water/Waste	water Energy Audi	t?	
Notes				Yes			
Access		(************************************			900423573003900011229000000000000000000000000000		
Road	No						
Air Access	Toksook Bay A	irport, gravel, fai	r condition	Runway 1	3,218'x60'	Runway 2	N/A

Runway 3

Barge Access?

N/A

Notes

Dock/Port

N/A

No

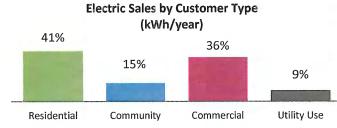
Energy Profile: Toksook Bay

Diesel Power System AVEC Utility Engine Make/Model Condition/Hrs **Gen Capacity** Unit 1 Detroit Diesel Good/16,132 363 Unit 2 Cummins Good/37,885 499 Unit 3 MTU 756 Good/14,436 Unit 4 47.2% Line Loss Yes; Power plant, water plant, & AVEC connex **Heat Recovery?** Upgrades **Priority Projects** Status Low **RPSU Powerhouse RPSU Distribution** High Outage History/Known Issues

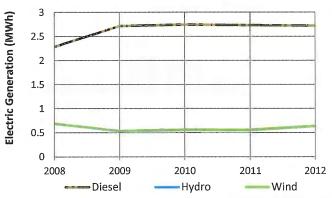


Intertie to Tununak and Nightmute.

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



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
Total (kWh/yr)	3,335,769 Diesel Used (gals/yr)	189,212



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	Total Cost \$0.72
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	1.11	Toksook Wind Fa	rm 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		***************************************		Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge			

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	
Bulk Fuel Upgrade	Priority	Project	Status

s/Year Gallons/E	Delivery Vendor(s)
	eements

Notes

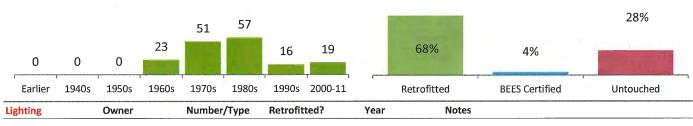
Barge delivery in Spring & Fall.

Energy Profile: Toksook Bay

Housing Units	Occupied	Vacant	% Owner-Occup.	Regional Hous	ing Authority	Weatherization Se	ervice Provider
	138	10	81%	AVCP		AVCP	
Housing Need		Overcrowded	1-star	Energy Use	Average Home	Average	Avg. EUI
		39.9%	N/A		Energy Rating	Square Feet	(kBTU/sf)
Data Quality	Medium				N/A	N/A	N/A

Age of Housing Stock

Energy Efficient Housing Stock



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



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.

Tuluksak Airport, gravel, fair condition

CHARLES THE CHARLES WAS ASSESSED.	
	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 Corpor	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	wim School Distric	ct
AEA Region	Lower Yukon-	Kuskokwim	
Taxes Type (rat	e)	221204 2004 5100 (2012)20050 2250 (ELEVISON 239005 99455) 9945910 (1912) 200	Per-Capita Revenue

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.

MANAGEMENT AND	CERCULAR AND	************************************	NAMES AND ADDRESS OF THE PARTY
Climate	Avg. Temp.	Climate Zone	Heating Deg. Days
	62/-2	N/A	N/A

Year

N/A

N/A

No

Runway 2

Runway 4

Ferry Service?

Natural Hazard Plan

Community Plans

Tuluksak Hazard Mitigation Plan, 2013

				N/A			N/A
Local Contac	cts	Email		Phone		Fax	
Tulkisarmut	e Incorporated			907-695-68	54	907-693-6932	
Tuluksak Na	tive Community	darlenepete	er7@yahoo.com	907-695-64	20	907-695-6932	
Demograph	ics	2000	2010	**************************************	TO THE PROPERTY OF THE PROPERT		2013
Population		428	373	Percent of F	Residents Employed		67.12%
Median Age	2	24	24	Denali Com	mission Distressed C	ommunity	Yes
Avg. Housel	hold Size	5	5	Percent Alaska Native/American Indian (2010) 94		94.91%	
Median Hou	usehold Income	, , , , , , , , , , , , , , , , , , , ,	\$26,500	Low and Mo	oderate Income (LM	l) Percent (201x)	N/A
Electric Utili	ity	**************************************	Generation Sources	***************************************	Interties	***************************************	PCE?
Tuluksak Tra	aditional Power Utility	•	Diesel		No		Yes
Landfill	Class		Permitted?	No	Location	2000 feet from	Tuluksak River
Water/Was	tewater System		NOOTOO OO O	Homes Serv	/ed	##049006900690000900361#95504009616#10965049916415015995596998641#EESET	System Volume
Water	Washeteria			373			10,000-50,000
Sewer	Honey Bucket			Water/Was	tewater Energy Aud	it?	
Notes				Yes			

Runway 1

Runway 3

Barge Access?

3,300'x60'

N/A

Yes

Dock/Port Notes

Access Road

Air Access

N/A

Energy Profile: Tuluksak

Diesel Power System

Utility	Tuluksak Traditional Power Utility						
Engine	Make/Model	Condition/Hrs	Gen Capacity				
Unit 1	John Deere	Poor/17,541	190				
Unit 2	John Deere	150					
Unit 3	John Deere Poor/19,184		165				
Unit 4	John Deere Poor/10,962 290						
Line Loss		14.8%					
Heat Recovery?		No					
Upgrades	Priority	Projects	Status				
RPSU Powerhouse	High						
RPSU Distribution	High						

Outage History/Known Issues

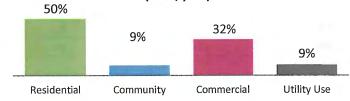
Significant outage in 2014

Utility Use

Operators	No. of Operators	Training/0	Certifications	
	11	BFO, APPO, Uti	lity Clerk,	
		Elec. Util. Bus.	Train, Itin BFP	
Maintenance Pla	anning (RPSU)	Unacceptable		
Electric Sales	No. of Customers	kWh/year	kWh/Customer	
Residential	96	307,903	3,207	
Community	5	55,862	11,172	
Commercial	18	195,795	10,878	

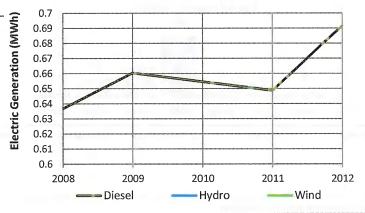
Electric Sales by Customer Type (kWh/year)

57,257



Power Production

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



Electric Rates (\$/	kWh)	Cost per kWh Sold (\$/kWh)				
Rate with PCE	\$0.16	Fuel Cost	\$0.43 \$0.11			
Residential Rate	\$0.60	Non-fuel Cost				
Commercial Rate		Total Cost	\$0.54			
Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year			
Diesel (1 gal)	\$4.34	\$6.85	6/13; 8/14			
Other Fuel? (1 ga	1)					
Gasoline (1 gal)						
Propane (100#)						
Wood (1 cord)						
Pellets						
Discounts?						

Status

Alternative Energy	Potential	Projects
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
Energy Efficiency	High	1) Sanitation EE,

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

2) VEEP		1) Funded 2) Comple	ete
******	Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
	By Barge	Spring and Fall		
	By Air			

Notes

Energy Profile: Tuluksak

Housing Ur	nits	Occupie	d	Vacant 21		% Ow n 79%	er-Occup.	Region AVCP	al Housing	Authority	Weatherizatio AVCP	n Service Provider
Housing Ne	eed			Overci 59.0%	rowded	1 N/A	-star	Energy	Use	Average Home Energy Rating	Average Square Feet	Avg. EUI (kBTU/sf)
Data Quali	ty	Mediun	n							N/A	N/A	N/A
		Ag	e of Ho	using St 45	ock					Energy Efficie	nt Housing Sto	ock
					22							90%
0	4	2	7		23	14	4		10%		0%	
Earlier	1940s	1950s	1960s	1970s	1980s	1990s	2000-11		Retrofitte	d BEE	S Certified	Untouched
Lighting		Owner		Number	/Type	Retrofi	tted?	Year	***************************************	Notes		
				-								

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.

Tuntutuliak Seaplane Base

No

Dock/Port

Notes

	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.

Longitude	-162.6631	Latitude	60.3431
ANCSA Region	Calista Corpor	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	wim School Distric	et .
AEA Region	Lower Yukon-l	Kuskokwim	
Taxes Type (rat	Per-Capita Revenue		
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.

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

Nativel Herard Dlan						

Year

2,000'x200'

Runway 4

Ferry Service?

2,000'x200'

Natural Hazard Plan

Community Plans

N/A

				N/A			N/A
Local Contact		Email	ONE DOWN STATEMENT COMMON COMMUNICATION REPORTED THE STATEMENT AND ALL	Phone		Fax	SONIACEROCONO SONIA CEMBERCA SI CESTA SONIA SONICI SA SECONIA MESA CESTA SENDENCIA SONIA MESA CESTA SONIA MESA
Tuntutuliak La	and, Limited			907-256-2315		907-256-2441	
Native Village	of Tuntutuliak	pparila@tun	tutuliak.org	907-256-2128		907-256-2080	
Demographic	::S	2000	2010		00040004004000000000000000000000000000	MATERIAN PROPERTIES CONTROL OF CO	2013
Population	ation 370		408	Percent of Res	idents Employed		70.67%
Median Age		21	Denali Commission Distressed Community			Yes	
Avg. Household Size 5		5	Percent Alaska Native/American Indian (2010)			95.03%	
Median Household Income		\$35,972	Low and Moderate Income (LMI) Percent (201x)			N/A	
Electric Utility	y		Generation Sources	999900097490481645044465040004446646666666666666666666	Interties	economica-co como economica de la como esta como esta como esta como esta esta esta esta esta esta esta esta	PCE?
Tuntutuliak C	ommunity Services	Association	Diesel, Wind		No		Yes
Landfill	Class	III	Permitted?	No	Location	.35 mi north of	town
Water/Waste	ewater System	2001-00-00-00-00-00-00-00-00-00-00-00-00-		Homes Served	OODECO POLOGO AND O POR O POR ESTAN ESTADO PLACE (HISTORIA SE TEACE ESTADO POR ESTADO POR ESTADO POR ESTADO PO		System Volume
Water	Haul			N/A			10,000-50,000
Sewer	Haul			Water/Waste	water Energy Audi	1?	
Notes				Yes			
Access		***************************************			90000000000000000000000000000000000000	STREET, THE STREET, AND CONTROL OF STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STR	
Road	No						
Air Access	Tuntutuliak Ai	rport, gravel, god	d condition	Runway 1	3,025'x90'	Runway 2	N/A

Runway 3

Barge Access?

Energy Profile: Tuntutuliak

Diesel Power System

Operators

48%

Utility	Tuntutuliak Community						
Engine	Make/Model	Condition/Hrs	Gen Capacity				
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				
Line Loss		3.4%					
Heat Recovery?	No; Onl	y used for internal p	lant use				
Upgrades	Priority	Projects	Status				
RPSU Powerhouse	Med.						
RPSU Distribution	In Progress						
Outage History/Kno	wn Issues						
No fire suppr. syste	em, high safety ris	k, no maintenanc	e plan				

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

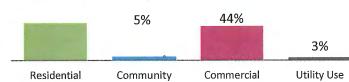
No. of Operators

14

Training/Certifications

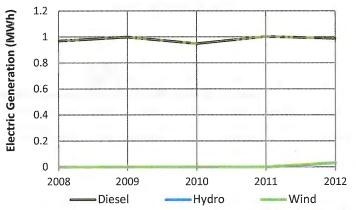
APPO, BFO, Utility Clerk

Electric Sales by Customer Type (kWh/year)



Power Production

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



Electric Rates (\$/	kWh)	Cost per kWh Sold (\$/kWh)			
Rate with PCE	\$0.19	Fuel Cost	\$0.41		
Residential Rate	\$0.65	Non-fuel Cost	\$0.35		
Commercial Rate	•	Total Cost	\$0.76		
Fuel Prices (\$)	Utility/Wholesale	Retail	Month/Year		
Diesel (1 gal)	\$4.53	\$5.97	6-13; 8-14		
Other Fuel? (1 ga	ni)				
Gasoline (1 gal)					
Propane (100#)	-	\$373.33	8-14		
Wood (1 cord)					
Pellets					
Discounts?					

Alternative Energy	Potential	Projects	Status
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
Bulk Fuel	1000-1000-1000-1000-100-100-100-100-100	Purchasing Deliveries/Yo	ear Gallons/Delivery Vendor(s)

Bulk Fuel				Purchasing	Deliveries/Year	Gallons/Delivery	Vendor(s)
Tank Owner	Fuel Type(s)	Capacity	Age/Condition	By Barge	4		
Village	Heating Oil	75,000	Good	By Air			
Utility	Heating Oil	75,000	Good	Cooperative P	urchasing Agreements		
School		50,000					
Bulk Fuel Upgrade	Priority	Project	Status	Notes			

Barge delivery in Spring & Fall to Village, June & Sept. to Utility.

Energy Profile: Tuntutuliak

Housing Un	its	Occupie 78	d	Vacant 23		% Own e	er-Occup.	_	Regional Housing Authority AVCP		Weatherization Service Provide AVCP			
Housing Ne	********************************			Overc 59.0%	rowded	1- N/A	-star	Energ	y Use	Average Energy R		Average Square Feet		Avg. EUI (kBTU/sf)
Data Qualit	у	Mediun	n					***************************************		N/A		N/A	**********************	N/A
Age of Housing Stock								Energy	Efficie	nt Housing Sto	ock			
									38%		3	38%		
					52				- 20	- 1	THE ST	1808	:	23%
0	0	5	10	27		7	11							
Earlier	1940s	1950s	1960s	1970s	1980s	1990s	2000-11	,	Retrofit	ted	BEES	Certified	Unt	ouched
Lighting		Owner		Number	/Type	Retrofit	ted?	Year		Notes			sseconi sersenesine menese soi n	**************************************
Non-reside	atial Ruil	ding Inver	ntony			***************************************				***************************************	***************************************		***************************************	
Building Na			itory			Yea	r Built	Squ	are Feet	Aud	ited?	Retrofits D	one?	In ARIS?
Communit							986		1,947		es			No
Health Clin							009		2,214		es			Yes
SRE Bldg. 1						9	60							No
SRE Bldg. 2		d)				9	60					-		No
VPSO Bldg							991		1,365	Y	es			Yes
Water Plan		chataria					987		2,240		es			No
					:									
														
												* *************************************		
											-			· · · · · · · · · · · · · · · · · · ·

Community Profile: Tununak



Alaska Native Name (definition)

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.

Email

2000

325

23

4

Ш

tribe2work@yahoo.com

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 Corpor	ation	
Borough/CA	Bethel Census	Area	
School District	Lower Kuskok	wim School Distri	ct
AEA Region	Lower Yukon-	Kuskokwim	
Taxes Type (rat	e)	ndúarásárást frást frásé a élek töléntél mádól a sistéré a ciaporolombol arabakozon.	Per-Capita Revenue
N/A			N/A

Economy

Climate

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

Avg. Temp.

Climate Zone

Heating Deg. Days

gh schools, and		59/2	Marine	N/A
rporated in 1975,	Natural Hazard P	lan	andro (etak etak eta 1979) etek 3000 gara (etak 300 0) eta joto (etak 5.55,500) con (etak 5.55,500) etak 5.500 g	andres autonomies sobretos concernos nobeles con escapates (no tables de sobretos en concernos de sobretos de s
	N/A			
	Manifestonia surfrance regional actività de la contractiva del la contractiva del la contractiva de la			
	Community Plan	S		Year
	N/A			N/A
#2547-02325-040-04-515225-040-0-14-347-0-04-03-04-04-04-04-04-04-04-04-04-04-04-04-04-	Phone		Fax	
	907-652-6311		907-652-6315	
oo.com	907-652-6527		907-652-6011	
2010				2013
327	Percent of Reside	ents Employed		83.20%
36	Denali Commissi	on Distressed Co	mmunity	Yes
4	Percent Alaska N	lative/American	Indian (2010)	94.50%
\$23,750	Low and Modera	ate Income (LMI)	Percent (201x)	N/A
Generation Sources		Interties		PCE?
Diesel, Wind		No		Yes
Permitted?	No	Location	1/4 mi east of ru	inway
***************************************	Homes Served			System Volume
	452			N/A

Notes Access

Local Contacts

Demographics

Population

Median Age

Electric Utility

AVEC

Landfill

Water

Sewer

Avg. Household Size

Median Household Income

Water/Wastewater System

Class

N/A

Washeteria

Tununrmiut Rinit Corporation Native Village of Tununak

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

Water/Wastewater Energy Audit?

Energy Profile: Tununak

Diesel Power System

Bulk Fuel Upgrade

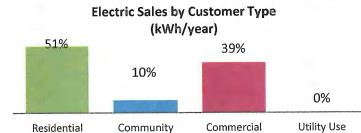
Priority

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.		
Outage History/Kno	own Issues		

Operators	No. of Operators	Training/Certifications
	1	BF Book, BF Manager

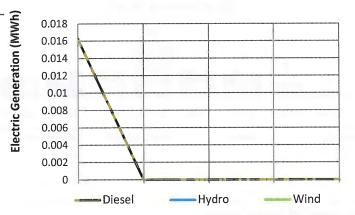
Intertie with Toksook Bay, Standby power plant in place.

Maintenance Planning (RPSU) Good					
Electric Sales	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			



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



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

Alternative Energy	Potential		Projects			Status		
Hydroelectric	Low		None					
Wind Diesel	High		Intertie to Toksoo	ok Bay Wind Far	m	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			
Bulk Fuel	**************************************			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				
				Cooperative P	urchasing Agreements			

Status

Project

Notes

Barge delivery to Native Corp. twice a year.

Energy Profile: Tununak

Housing Units	Occupied	Vacant	% Owner-Occup.	Regional Hous	ing Authority	Weatherization S	ervice Provider
	94	15	69%	AVCP		AVCP	
Housing Need		Overcrowded	1-star	Energy Use	Average Home	Average	Avg. EUI
		37.2%	21.6%		Energy Rating	Square Feet	(kBTU/sf)
Data Quality	Medium				2-star plus	763	131

Age of Housing Stock **Energy Efficient Housing Stock** 30 38% 62% 17 16 15 16 11 9 0% 2 Earlier 1940s 1950s 1960s 1970s 1980s 1990s 2000-11 Retrofitted **BEES Certified** Untouched Lighting Owner Number/Type Retrofitted? Year Notes

Year Built				
Voor Built		- 11. 10		
	Square Feet	Audited?	Retrofits Done?	In ARIS
		· · · · · · · · · · · · · · · · · · ·		No
		Yes		Yes
1988				No
				No
		Yes		No
1982	532			No
				No
				No
1962	960			No
1970	960			No
1982	2,048	Yes	W 1	No
	1970 1982	2007 2,422 1988 19,382 1,599 1980 768 1982 532 1962 960 1970 960 1982 2,048	2007 2,422 Yes 1988 19,382 1,599 Yes 1980 768 Yes 1982 532 1962 960 1970 960 1982 2,048 Yes	2007 2,422 Yes 1988 19,382 1,599 Yes 1980 768 Yes 1982 532 1962 960 1970 960 1982 2,048 Yes