



**ENERGY COMMITTEE
REGULAR MEETING AGENDA
Monday, October 12, 2015 6:30 pm
City Hall Council Chamber, Bethel, AK**

Members

Mary Weiss
Chair
mtweiss@uaa.alaska.edu

Shari Neth
Vice-Chair
Shari_neth@lksd.org

Zach Fansler
Council Representative
zfansler@cityofbethel.net

Jeff Sanders
Jeefco2004@yahoo.com

Eddie Stanley
eddieselectric@gci.net

Jody Drew
Jody_drew@yahoo.com

Alternative Members:

None

Ex-Officio Member

John Sargent
Recorder
543-1386
jsargent@cityofbethel.net

- I. CALL TO ORDER**
- II. ROLL CALL**
- III. PEOPLE TO BE HEARD** – Fifteen minutes per person
- IV. APPROVAL OF AGENDA**
- V. APPROVAL OF MEETING MINUTES**
 - a. Regular Energy Committee Meeting September 14, 2015
- VI. UNFINISHED BUSINESS**
 - a. Alternative Energy Report Update
 - b. Pool Wind Turbine Data Collection and Display
 - c. Pool Expenses to Date and Pool Budget
 - d. City Progress on PCE Applications
 - e. Update on AVEC Met Tower Installation
- VII. NEW BUSINESS**
 - a. Approval of Resignation of Mary Weiss from Energy Committee
 - b. Pool Wind Turbine Sole Source Justification
 - c. Tall Tower Ordinance and Potential Impact on Wind Energy Development
- VIII. COMMITTEE MEMBER COMMENTS**
- IX. ADJOURNMENT**

City of Bethel

Energy Committee

September 14, 2015

Regular Meeting

Bethel, Alaska

I. CALL TO ORDER

A regular meeting of the Energy Committee was held on September 14, 2015 at 6:30 pm in the City Hall Council Chambers, in Bethel, Alaska.

Chair Mary Weiss called the meeting to order at 6:39 pm.

II. ROLL CALL

The following Committee members were present, demonstrating a quorum:

Mary Weiss, Chair
Shari Neth, Vice-Chair
Jody Drew
Jeff Sanders
John Sargent, Ex-Officio

III. PEOPLE TO BE HEARD

None

IV. APPROVAL OF AGENDA

MOVED:	Shari	Approve Agenda.
SECONDED:	Jody	
VOTE ON MAIN MOTION	All in favor Motion passes; 4 and 0 opposed.	

V. APPROVAL OF MEETING MINUTES

MOVED:	Jody	Approve Regular Energy Committee Meeting Minutes for May, June, July, and August 2015 meetings (items a, b, c, d).
SECONDED:	Jeff	
VOTE ON MAIN MOTION	All in favor Motion passes; 4 and 0 opposed.	

VI. UNFINISHED BUSINESS

- a. Alternative Energy Report Update
 - John read each item, added information for some projects.
 - Gasification unit costly in terms of oil cost to operate, air pollution, labor.
 - UAF still conducting hydrokinetic study on Kuskokwim River in front of Bethel. John to follow up and gather more information on this project.

- b. Pool Wind Turbine Data Collection and Display
- Need a “work-around” to get data displayed to the public and City management.

MOVED:	Jeff	City investigates how to allow the power generation data from the wind turbine to be displayed on the City website.
SECONDED:	Jody	
VOTE ON MOTION		
All in favor Motion passes; 4 in favor and 0 opposed.		

- c. AVEC’s Recovered Heat Program and Grant Funding
- John summarized AVEC’s grant from renewable energy fund in the amount of \$645,000 to conduct feasibility study and conceptual design for Bethel. Study includes reconnecting three city buildings and evaluating new pool connection.

d. **NEW BUSINESS**

- a. Approval of Resignation of Wade Ferdig from Energy Committee

MOVED:	Jody	Approve resignation of Wade Ferdig from Energy Committee
SECONDED:	Sharri	
VOTE ON MOTION		
All in favor Motion passes; 4 in favor and 0 opposed.		

MOVED:	Jody	City prepares and sends out a letter to Wade and all all retiring members of the Energy Committee thanking them for their service.
SECONDED:	Sharri	

- b. Pool Wind Turbine Improved Blade Purchase
- Question asked: Is it compatible with the turbine we have?
 - Need cost to purchase the new blade and install it. Need to run the numbers to get the break-even amount and savings in years required to meet that amount.
 - Mike Salzbrun has a two-ton crane with 125 ft. boom to install blade.
- c. Operation and Maintenance Proposal for Pool Wind Turbine
- John summarized City’s two bid efforts to hire a company to maintain and repair wind turbine.
 - City Manager decided to pursue sole source option through Northern Power Systems, Inc.
- d. Pool Energy Use – the Cost of Operation
- Budget wanted that shows current year-to-date pool expenses vs. budgeted expenses.
 - How much revenue is from users?
 - What is the cost per gallon of heating fuel from City contract with Delta Western?
 - Can we put the pool on the “Pick – Click – Give” list for donations?

e. City PCE Report

MOVED:	Jody	Follow up with the Finance Department's PCE application effort.
SECONDED:	Jeff	
VOTE ON MOTION	All in favor Motion passes; 4 in favor and 0 opposed.	

VII. COMMITTEE MEMBER COMMENTS

Mary Weiss is resigning. She will not attend the next meeting.
Thank you to John for all the work he has done for the Energy Committee, especially uncovering the potential PCE credits the City might be able to get.

VIII. ADJOURNMENT

MOVED:	Jody	Adjourn meeting.
SECONDED:	Sharri	
VOTE ON MAIN MOTION	All in favor Motion passes; 4 and 0 opposed.	

Meeting adjourned at 8:20 pm.

Shari Neth, Vice-Chair

ATTEST:

John Sargent, Recorder

**City of Bethel
Energy Committee
Renewable/Alternative Power Options
Updated October 12, 2015**

Project	Description	State of Development (Timeline)	Pros	Cons
1. Wind Energy Construction Project (AEA & Denali Commission funding)	AVEC has \$2.9 million from City. They will use it to design upgrades to power plant to prepare to accept alt. energy.	City passed ordinance to allow AVEC to lease land for turbine. Lease to be signed and executed.	Potential to lower the increase of electricity cost.	Not enough money to pay for upgrades to generators/switch gear; may not lower cost of electricity.
2. Wind Energy Feasibility Study	City hired EPS to perform wind data analysis and wind data collection in Bethel. EPS working to satisfy AVEC. AVEC to have two met towers set up in Bethel in October 2015.	Grant deadline: Dec. 31, 2015	Helps AVEC move closer to providing wind energy in Bethel; can pay to set up and operate two met towers in Bethel.	Small amount of money, can't do large study.
3. LNG shipped to Bethel from Fairbanks	Carry LNG down Yukon River then overland on winter road to Kuskokwim River, then down to Bethel.	Proposal rejected in 2012	Potential to lower cost of fuel for heating; could be a "bridge" fuel between fossil fuels and other sources; one LNG plant in north slope could power the State.	Years away;
4. Large natural gas-fired plant located near North Slope	Large plant built near clean, cheap, natural gas sources. Power transmitted via DC power lines all over State.	Formal study expected. AVEC promoting project.	Stabilize electric power in many places; may be able to be delivered to Bethel.	Many years away; High cost; No support yet. Meera Kohler championing it.

Project	Description	State of Development (Timeline)	Pros	Cons
5. Bethel Natural Gas Development	Drill for natural gas in the YK Delta.	Find formal study of hole drilled near Bethel by Amoco.	Potential to lower cost of electricity; Bethel could make LNG in plant and ship to villages; run lines to villages.	Expensive; preliminary results do not support it; Need high population to make cost cheaper relative to demand.
6. City re-connect recovered heat lines from Bethel Power Plant.	AVEC has funding from State to conduct large recovered heat study in Bethel; Three City buildings have lines: Fire Station, Courthouse, City Hall. Pool facility also under consideration.	Study will run through summer 2016.	Savings over exclusive use of heating oil;	Price of recovered heat has risen over the years, lowering the benefit; heat may not be hot enough to heat building effectively with other demands on the system.
7. Natural Gas Pipeline to Donlin Creek Mine	If natural gas piped in to mine, then pipe could be extended to Bethel.	Planning stage. No timeline. Mine mostly shut down while they wait for NEPA approvals.	Natural gas is clean, plentiful, and may be cheaper than heating oil. Donlin hired MacDowell to survey region residents and this project mentioned.	Depends on NEPA approvals and mine going into operation.
8. Biomass System	AVCP project?		Willows and alders grow fast; Easy to transplant;	Alder and willow leave no coals, making them poor biomass contributors.

Project	Description	State of Development (Timeline)	Pros	Cons
9. Gasification unit to power public works building or aerators at sewage lagoon	Burn municipal solid waste in super hot incinerator (gasification unit) to create electricity and get rid of waste.	Planning stage.	Electricity may be cheaper; solid waste reduced to 5% ash; can provide power to a City building; Landfill close to PW bldg.	Environmental costs unknown (air monitoring); high cost of heating oil to operate unit; cost in City manpower and resources to operate.
10. Kinetic Energy from Kuskokwim River	Turbines placed on old barge and sunk to bottom where the river movement generates electricity.	UAF did a study 3 years ago on the Kuskokwim in Bethel. Need a copy of that study.	Potential for a cheap source of power; Power lines emanating from the river need a place for power to go: into grid, to buildings; may work under ice perfectly with little disturbance from above.	Shallow river may not lend itself to ideal locations for sunken barges; maintenance costs unknown; may present river navigation hazard.

CITY OF BETHEL
 REVENUES WITH COMPARISON TO BUDGET
 FOR THE 12 MONTHS ENDING JUNE 30, 2015

YK REG AQUA HLTH & SAFETY CTR

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
<u>SOURCE 42</u>					
40-42-411 SFY13 DESIGNATED LEGIS GRANT	1,364,646.70	2,055,056.18	3,123,988.42	1,068,932.24	65.8
TOTAL SOURCE 42	1,364,646.70	2,055,056.18	3,123,988.42	1,068,932.24	65.8
<u>SOURCE 43</u>					
40-43-430 PRO-SHOP REVENUE	33,419.61	33,419.61	20,000.00	(13,419.61)	167.1
40-43-435 CONCESSION REVENUE	36,471.72	36,471.72	57,531.00	21,059.28	63.4
40-43-460 ENTRY FEE	223,724.97	223,724.97	141,352.00	(82,372.97)	158.3
40-43-463 FACILITY RENTAL	10,333.93	10,333.93	44,398.00	34,064.07	23.3
40-43-465 PROGRAM FEES	25,100.74	25,100.74	88,099.00	62,998.26	28.5
TOTAL SOURCE 43	329,050.97	329,050.97	351,380.00	22,329.03	93.7
<u>TRANSFERS IN</u>					
40-46-412 LOCAL SOURCES-SALES TAX REV	.00	.00	993,767.00	993,767.00	.0
TOTAL TRANSFERS IN	.00	.00	993,767.00	993,767.00	.0
<u>MISCELLANEOUS</u>					
40-49-487 INVESTMENT INCOME	268.12	398.87	1,000.00	601.13	39.9
TOTAL MISCELLANEOUS	268.12	398.87	1,000.00	601.13	39.9
TOTAL FUND REVENUE	1,693,965.79	2,384,506.02	4,470,135.42	2,085,629.40	53.3

CITY OF BETHEL
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 12 MONTHS ENDING JUNE 30, 2015

YK REG AQUA HLTH & SAFETY CTR

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>LOCAL FUNDED EXPENDITURES</u>					
40-50-541 TRAVEL	(6,030.50)	.00	.00	.00	.0
40-50-561 SUPPLIES	(23,064.28)	.00	.00	.00	.0
40-50-621 ELECTRICITY	119,147.42	119,147.42	83,627.00	(35,520.42)	142.5
40-50-623 HEATING FUEL	222,626.39	222,626.39	213,407.00	(9,219.39)	104.3
40-50-624 WATER/SEWER/GARBAGE	44,129.03	44,129.03	19,440.00	(24,689.03)	227.0
40-50-646 CONTRACTOR'S FEES	477,766.58	644,671.88	996,917.00	352,245.12	64.7
40-50-649 PROFESSIONAL SVS	81,783.38	137,185.02	140,200.00	3,014.98	97.9
40-50-662 PROP MAINT	.00	.00	3,500.00	3,500.00	.0
40-50-669 OTHER PURCHASED SERVICES	(53.34)	.00	.00	.00	.0
40-50-721 INSURANCE	21,288.81	21,288.81	15,000.00	(6,288.81)	141.9
40-50-727 ADVERTISING/MARKETING	54.78	54.78	.00	(54.78)	.0
TOTAL LOCAL FUNDED EXPENDITURES	937,648.27	1,189,103.33	1,472,091.00	282,987.67	80.8
<u>STATE FUNDED EXPENDITURES</u>					
40-51-646 CONTRACTOR FEES	273,514.76	1,700,714.76	2,500,000.00	799,285.24	68.0
40-51-647 PROJECT MGR FEES	123,413.87	328,913.67	623,988.42	295,074.75	52.7
40-51-669 OTHER PURCHASED SERVICES	35,879.69	35,879.69	.00	(35,879.69)	.0
TOTAL STATE FUNDED EXPENDITURES	432,808.32	2,065,508.12	3,123,988.42	1,058,460.30	66.1
TOTAL FUND EXPENDITURES	1,370,456.59	3,254,611.45	4,596,079.42	1,341,467.97	70.8
NET REVENUE OVER EXPENDITURES	323,509.20	(870,105.43)	(125,944.00)	744,161.43	(690.9)

CITY OF BETHEL
 REVENUES WITH COMPARISON TO BUDGET
 FOR THE 4 MONTHS ENDING OCTOBER 31, 2015

YK REG AQUA HLTH & SAFETY CTR

	<u>PERIOD ACTUAL</u>	<u>YTD ACTUAL</u>	<u>BUDGET</u>	<u>UNEARNED</u>	<u>PCNT</u>
<u>SOURCE 43</u>					
40-43-430 PRO-SHOP REVENUE	.00	.00	48,000.00	48,000.00	.0
40-43-435 CONCESSION REVENUE	.00	.00	69,000.00	69,000.00	.0
40-43-460 ENTRY FEE	.00	.00	336,000.00	336,000.00	.0
40-43-463 FACILITY RENTAL	.00	.00	15,000.00	15,000.00	.0
40-43-465 PROGRAM FEES	.00	.00	110,000.00	110,000.00	.0
TOTAL SOURCE 43	.00	.00	578,000.00	578,000.00	.0
 <u>TRANSFERS IN</u>					
40-46-412 LOCAL SOURCES-SALES TAX REV	.00	.00	570,833.00	570,833.00	.0
TOTAL TRANSFERS IN	.00	.00	570,833.00	570,833.00	.0
TOTAL FUND REVENUE	.00	.00	1,148,833.00	1,148,833.00	.0

CITY OF BETHEL
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 4 MONTHS ENDING OCTOBER 31, 2015

YK REG AQUA HLTH & SAFETY CTR

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>LOCAL FUNDED EXPENDITURES</u>					
40-50-621 ELECTRICITY	11,922.90	11,922.90	120,000.00	108,077.10	9.9
40-50-623 HEATING FUEL	22,440.47	22,440.47	250,000.00	227,559.53	9.0
40-50-624 WATER/SEWER/GARBAGE	.00	.00	41,000.00	41,000.00	.0
40-50-646 CONTRACTOR'S FEES	166,383.27	166,383.27	903,694.00	737,310.73	18.4
40-50-649 PROFESSIONAL SVS	23,366.68	23,366.68	140,200.00	116,833.32	16.7
40-50-662 PROP MAINT	.00	.00	3,500.00	3,500.00	.0
40-50-669 OTHER PURCHASED SERVICES	.00	.00	15,000.00	15,000.00	.0
40-50-721 INSURANCE	.00	.00	21,000.00	21,000.00	.0
40-50-996 ADMINISTRATIVE OVERHEAD-IT	.00	.00	16,360.00	16,360.00	.0
TOTAL LOCAL FUNDED EXPENDITURES	224,113.32	224,113.32	1,510,754.00	1,286,640.68	14.8
<u>STATE FUNDED EXPENDITURES</u>					
40-51-646 CONTRACTOR FEES	3,000.00	3,000.00	.00	(3,000.00)	.0
TOTAL STATE FUNDED EXPENDITURES	3,000.00	3,000.00	.00	(3,000.00)	.0
TOTAL FUND EXPENDITURES	227,113.32	227,113.32	1,510,754.00	1,283,640.68	15.0
NET REVENUE OVER EXPENDITURES	(227,113.32)	(227,113.32)	(361,921.00)	(134,807.68)	(62.8)