



**ENERGY COMMITTEE
REGULAR MEETING AGENDA
Monday, October 12, 2015 7:00 pm
City Hall Council Chamber, Bethel, AK**

Members

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 October 12, 2015
- VI. UNFINISHED BUSINESS**
 - a. Alternative Energy Report Update
 - b. Pool Wind Turbine Data Collection and Display
 - c. City Progress on PCE Applications
 - d. Update on AVEC Met Tower Installation
- VII. NEW BUSINESS**
 - a. Election of officers (Chair & Vice-Chair)
 - b. Hydronic incinerator and its use in Bethel
 - c. Electricity-generating exercise equipment at YK Fitness Center (Jeff)
 - d. Pool Wind Turbine and AVEC grid tie
 - e. Review of BMC Chapter 13.08 Sewer Services
- VIII. COMMITTEE MEMBER COMMENTS**
- IX. ADJOURNMENT**

City of Bethel

Energy Committee

October 12, 2015

Regular Meeting

Bethel, Alaska

I. CALL TO ORDER

A regular meeting of the Energy Committee was held on October 12, 2015 at 6:30 pm in the City Hall Council Chambers, in Bethel, Alaska.

Vice-Chair Shari Neth called the meeting to order at 6:52 pm.

II. ROLL CALL

The following Committee members were present, demonstrating a quorum:

Shari Neth, Vice-Chair
Jody Drew
Jeff Sanders
Zach Fansler
John Sargent, Recorder

III. PEOPLE TO BE HEARD

None

IV. APPROVAL OF AGENDA

MOVED:	Zach	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 of September 14, 2015.
SECONDED:	Jeff	
VOTE ON MAIN MOTION	All in favor Motion passes; 4 and 0 opposed.	

VI. UNFINISHED BUSINESS

- a. Alternative Energy Report Update
 - John will call UAF to find out more about kinetic energy test project done on the Kuskokwim River. Shari emailed Natalie Hanson, hydrologist affiliated with UAF, but no response. Nuvista Energy might know something about it.
 - Correct #9 on list to reflect compatibility with AVEC wind farm.

- Gasification unit better for heat than generating electricity; cost could be minimal; likely to meet EPA standards; heating oil used to start process, not keep it going; need to know amount of ash resulting from burning municipal solid waste.
 - Add oil burners to the list
- b. Pool Wind Turbine Data Collection and Display
- No report on this item.

MOVED:	Jeff	
SECONDED:	Jody	
VOTE ON MOTION	All in favor Motion passes; 4 in favor and 0 opposed.	

- c. Pool Expenses to Date and Pool Budget
- Explanation given for high water cost: management used hot water and cold water to heat and cool the pool, rather than use boiler or correct self-regulating device; showers were left on, wasting water.
 - What is the cost of water applied to the pool?
 - There is no existing infrastructure at the pool to accommodate recovered heat.
 - City could give AVEC the wind turbine and ask for discounted electricity for the pool.
 - Another wind turbine could be put up at the pool site; pool facility is the load.
 - City Manager to speak with CEO of AVEC about giving AVEC the wind turbine.
- d. City Progress on PCE Applications
- John was assigned responsibility to complete PCE applications for City.
- e. Update on AVEC Met Tower Installation
- No report given; need to speak with Steve Gilbert.

VII. NEW BUSINESS

- a. Approval of Resignation of Mary Weiss from Energy Committee

MOVED:	Jody	Approve resignation of Mary Weiss from Energy Committee
SECONDED:	Jeff	
VOTE ON MOTION	Motion fails; 3 in favor and 1 opposed.	

MOVED:	Jeff	Reconsider the vote that just took place.
SECONDED:	Jody	
VOTE ON MOTION	Motion passes; 4 in favor and 0 opposed.	

- b. Pool Wind Turbine Sole Source Justification
- John summarized reasons for Northern Power Systems as sole source provider of City's wind turbine maintenance and repair: (1) proprietary software, (2) exclusive monitoring rights; and (3) only NPS employees can reset faults.
- c. Tall Tower Ordinance
- Zack spoke on the development of the ordinance at council level and summarized the content of the ordinance. Energy Committee could always recommend exemptions for AVEC alternative energy projects, if needed. AVEC to pay \$1/yr. for the lease.

- City Council approved Met Tower before Tall Tower Ordinance, so unaffected.

VIII. COMMITTEE MEMBER COMMENTS

- Jody – Happy with the meteing.
- Jeff – Nothing to say.
- Zach – Can we move the meeting to start at 7 pm? I cannot be here any sooner on Monday nights. I teach a course at KUC and don't get out until 6:45 pm.

MOVED:	Jeff	Move the regularly scheduled meeting time to 7 pm.
SECONDED:	Jody	
VOTE ON MAIN MOTION	All in favor Motion passes; 4 and 0 opposed.	

IX. ADJOURNMENT

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

Meeting adjourned at 8:06 pm.

Shari Neth, Vice-Chair

ATTEST:

John Sargent, Recorder

**City of Bethel
Energy Committee
Renewable/Alternative Power Options
Updated November 5, 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; demonstrates use of 900 kw or larger turbine in rural Alaska; will allow more alt. energy to be connected to grid.	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 to help AVEC.	Grant deadline: Dec. 31, 2015	Two sites for two met towers; best dataset may indicate where big turbine goes.	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, power aerators at sewage lagoon, or work in conjunction with wind farm run by AVEC.	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; If located at landfill, then close to PW bldg. or potential wind turbines behind recycle center.	Potential high costs: air monitoring, heating oil to fire it, 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.

charges in relation to the annual frequency with which a grinder pump is rebuilt, repaired or replaced: If the property that receives the repair or replacement is a multi-dwelling unit, then the person whom the water account's name is in is responsible for the expense.

- A. First rebuild/repair/replacement per \$50.00
twelve (12) month period
- B. Second rebuild/repair/replacement \$225.00
per twelve (12) month period
- C. Third and all subsequent \$450.00
rebuilt/repairs/replacements per
twelve (12) month period

[Ord. 13-07 § 2; Ord. 09-46 § 2; Ord. 09-36 § 2.]

13.08.130 Service connection – Charge.

At the time the applicant files for sewer service where service has previously existed, or if the applicant is filing for a change in service, class, size, or location, the applicant shall submit with his application a service connection charge which will cover the actual cost to the department of the connection, plus twenty-five (25) percent. [Prior code § 11.12.060(2).]

13.08.140 Service connection – Installation.

Regulations, orders or procedures governing installation of customer service lines shall be promulgated by the department, subject to approval of the council by resolution. All customer service lines and repairs, modifications or disconnections thereof shall be made only on the terms and conditions set forth in the Uniform Plumbing Code (current edition) and such further regulations, orders, or procedures as the council may approve by resolution. [Prior code § 11.12.060(3).]

13.08.150 Multiple service on one (1) line.

A. The department may, at its option, serve two (2) or more premises or customers with one (1) customer service line; provided, that such joint service customer service lines shall be of such a size to provide a capacity of not less than the combined capacity of individual customer service lines. No customer service line shall be permitted to serve other customers except under written contract approved by the council.

B. The owner of a single parcel of property may apply for and receive as many customer service lines as he and his tenants may require, provided his application or applications meet the requirements of this chapter. [Prior code § 11.12.060(4), (5).]

13.08.160 Holding tanks.

A. All persons required to subscribe to sewer collection services but to whom a sewer is not available shall have sewage collected from their property or residence; provided, that the location, type of holding tank, and access thereto is approved by the department. Quantity and frequency of sewer services shall be determined by regulations or orders of the department and approved by the council by resolution, and the rate charged for such sewage collection services shall be determined by the council by ordinance. Sewage tanks must be a minimum of two hundred (200) gallons above the required water tank size.

B. All sewage holding tanks shall be equipped with an operating, three- (3-) inch, female camlock device. No evacuation service may be provided after October 30, 1999, to a holding tank unless it is equipped with a properly operating, compatible camlock. [Ord. 07-03 § 2; Sub. Ord. 05-08 § 3; Ord. 98-26 § 2; Ord. 98-18 § 2; Ord. 94-12S § 8; prior code § 11.12.060(6).]

13.08.170 Temporary service.

Temporary sewer extensions and sewer connections may be provided by the department for a period not to exceed six (6) months, unless an extension is granted by the department. Cost of connection, deposits, charges for installation and removal of equipment shall be established by the department, subject to approval by the council by ordinance. [Prior code § 11.12.060(7).]

13.08.180 Customer plumbing.

A. The customer's plumbing, which shall include the sewer extension lines and all plumbing, piping, fixtures and all other appurtenances carrying or intended to carry sewage on property owned or controlled by the customer, shall comply with the plumbing regulations of the city.

B. Customers shall install a suitable control valve on the sewer extension line at a location approved by the department, the operation of which valve will control the entire sewage supply from the premises served. It will be a violation of this chapter for the customer to operate, cause or permit unauthorized operation of the control valve, except in the case of emergencies.

C. Customers installing new sewage tanks shall install a camlock compatible with the city's plumbing regulations on the evacuation pipe of the sewage holding tanks. [Ord. 96-30 § 3; prior code § 11.12.060(8).]

13.08.190 Rates.

The manager or the council may introduce an ordinance to increase or decrease the sewer rates by May first (1st) of each year or at any other time in order to charge reasonable sewer rates. The sewer rates shall be available in the city clerk's office for public inspection during regular business hours. [Ord. 04-24 § 3; prior code § 11.12.070.]

13.08.200 Notices.

A. To Customers. Notices from the department to a customer will normally be given in writing, and either mailed to or delivered to the customer at his last known address. Where conditions warrant and in emergencies, the department may notify the customer either by telephone or messenger.

B. From Customers. Notices from customers to the department shall be given by the customer in writing on a city utility form to the utility/finance office or to the utility services foreman of the department duly authorized to receive notices or complaints.

C. Notice of Discontinuance for Repairs. Notices from the department to a customer providing for the discontinuance of service for the purpose of repairs shall be given to a customer in writing twenty-four (24) hours prior to such discontinuance, except in the case of emergencies. [Ord. 02-10 § 4; prior code § 11.12.080.]

13.08.210 Billing.

A. All bills, except the connection fee, shall be included in the bill for city water service. Customers receiving the sewer service, but who do not receive water service, shall be billed separately. All bills shall be mailed on or before the fifth (5th) day of each month.

B. Each bill entered shall be due upon receipt. If the bill is not paid by the twenty-fifth (25th) day of the month in which it is mailed, or twenty (20) days after the date the bill is mailed, whichever is later, the account shall be considered delinquent.

C. If the date upon which a bill would be considered delinquent falls on a day that the city does not conduct business, the bill will become delinquent at the end of the next day that

the city conducts business.

D. Payments sent by mail and postmarked on or before the day that a bill would be considered delinquent will not be considered delinquent.

E. Allowances for late payments from circumstances that delay normal payment of bills and delays in the mail, such as bad weather, volcanic eruptions or national emergencies, can be made by appropriate city staff.

F. Customers shall have ninety (90) days beyond the current payment due date for any corrections or adjustments. [Ord. 09-13 § 2; Ord. 02-10 § 4; Ord. 93-38 § 4; Amd. 10 to Ord. 85; prior code § 11.12.090(1), (2).]

13.08.220 Delinquency.

A. The city shall send a notice of account delinquency to each customer on or after ten (10) days after the account becomes delinquent.

B. On or before fifteen (15) days after an account becomes delinquent, a notice of delinquency and public nuisance shall be sent to the customer and to the owner of the premises. The notice shall state a date on or after which the premises will be declared a public nuisance if the delinquent account is not paid in full prior thereto. Such date shall not be less than five (5) nor more than fifteen (15) days from the date of the notice. The delivery to the premises served or mailing to the address on record of the customer and of the owner shall be considered a delivery to the customer and to the owner.

C. If the delinquency has not been cured by the date stated in the notice, the city may declare the premises a public nuisance and proceed to abate said nuisance in accordance with BMC 13.08.241.

D. Interest on delinquent accounts shall be paid at the rate of fifteen (15) percent per annum. Delinquent payments, with interest, shall constitute a lien on real and personal property of the person or entity whose account is delinquent. [Ord. 95-24 § 5; Ord. 94-12S § 9; Amd. 10 to Ord. 85; Ord. 170, 1986; prior code § 11.12.090(3).]

13.08.230 Discontinuance – Customer request.

Each person who is moving from a premises for which they were required to subscribe for sewer service shall give the department written notice of their intention to move from the premises at least two (2) days prior to the date of their move. Said notice shall specify whether the premises will continue to be inhabited following their departure and the name of the owner of the premises. Failure to give the required notice means the person shall remain jointly and severally liable for all sewage removed from the premises until the department receives the notice required by this section. Upon receipt of the notice required by this section, a bill shall be rendered and such bill shall be payable immediately. In no case will the bill be less than the monthly minimum specified in the current sewer rate schedule for the class or classes of sewer service theretofore furnished. [Ord. 94-12S § 10; prior code § 11.12.100(1).]

13.08.240 Sanitary facilities nuisance declared.

Any building inhabited or owned by any person required to subscribe to sewage collection services for which no subscription for sewage service has been made, or for which delinquent charges for sewage services exist, or whose facilities for the disposal of sewage are not in serviceable working order, or have not been approved by either the city or the state, or whose sewage facilities consist solely of a sanitary can, or whose sewage facilities are unsanitary or dangerous to health or safety shall be and is deemed and declared a common or public nuisance. [Ord. 07-03 § 2; Ord. 94-12S § 11.]

13.08.241 Abatement of nuisance.

Any common or public nuisance as defined by BMC 13.08.240 shall be abated as follows:

A. The owner of the property and an inhabitant of the building shall be given a notice to abate by the city manager, by the police chief or by any of their designees.

B. The notice shall include:

1. The address of the property and the name of the record owner;
2. A short description of the nuisance;
3. An order to abate the nuisance in a manner acceptable to the city;
4. A statement that if such abatement is not completed within forty-eight (48) hours of service of the notice, the city is authorized to issue a citation for a violation and impose a fine of up to one hundred dollars (\$100) per day for each day abatement of the nuisance is not completed;
5. A statement that the city shall provide assistance to any subscriber proving financial need.

C. Forty-eight (48) hours after service of the notice to abate, the city shall inspect the premises and determine whether the nuisance is still present. If, in the best judgement of the city, the owner or any inhabitant of the premises has not acted to abate the nuisance or their actions to abate have failed, the city shall issue a citation to the owner and any inhabitant of the premises. [Ord. 94-12S § 11.]

13.08.243 Violation.

It is unlawful for any person to continue any violation of which they have received notice beyond the period specified in such notice. Each day for which any violation continues shall be considered a separate violation. [Ord. 94-12S § 11.]

13.08.245 Injunctive relief.

The city may seek injunctive relief to halt a continuing violation of this chapter or to mandate compliance with this chapter or both. [Ord. 94-12S § 11.]

13.08.247 Penalty.

Any person who violates any provision of this chapter shall be subject to a fine of not more than one hundred dollars (\$100). [Ord. 94-12S § 11.]

13.08.260 Access for inspection.

Employees of the department shall have free access at all reasonable hours to any and all parts and structures of the premises from which sewage is carried for the purpose of inspecting connections, the conditions of pipes and fixtures, and the quality and composition of the sewage. The department does not, however, assume the duty of inspecting customer service lines, plumbing and equipment, and shall not be responsible therefor. [Prior code § 11.12.110.]

13.08.270 Liability of city.

The city shall not be liable for any loss or damage of any nature whatsoever caused by any defect in the customer service line or the customer's plumbing or equipment, nor shall the city be liable for loss or damage due to interruption of sewer service. [Prior code § 11.12.120.]

13.08.280 Prohibited substances.

It is unlawful and a violation of this chapter for a customer or any other person to deposit or allow to be placed in the sewer system any of the following materials:

- A. Petroleum, coal tar, vegetable and mineral oils and products, and their derivatives and wastes;
- B. Greases, oils and sludges from service stations, garages, repair shops, machine shops, cleaning establishments or other industries or establishments;
- C. Explosives or flammable liquids and gases;
- D. Acids, alkalis or other corrosive liquids, gases or substances of sufficient strength to damage sewers, manholes, pumping stations or treatment plant units;
- E. Substances which will form deposits or obstructions in the sewage collection system or which, when mixed with sewage, will precipitate material and thus form deposits in the system;
- F. Ashes, cinders, sand, earth, coal, rubbish, or metals of any kind;
- G. Live steam, exhaust steam or water having a temperature above one hundred forty (140) degrees Fahrenheit;
- H. Ground or unground refuse, garbage or waste materials;
- I. Offal from slaughterhouses and fish processing plants;
- J. Dead animals;
- K. Feminine hygiene products, baby wipes and dental floss. [Ord. 09-36 § 2; prior code § 11.12.130(1).]

13.08.290 Unlawful sewage disposal.

It is unlawful for a person to dispose of sewage, liquid waste or human excreta from any premises by any method other than through utilization of the city sewer service or its appointed designee. [Ord. 94-12S § 12; prior code § 11.12.130(2).]

13.08.300 Individual sewer system.

It is unlawful for any person to operate or maintain an individual sewage disposal system, without a state wastewater discharge permit, 18 AAC 72.010. [Ord. 94-12S § 13; prior code § 11.12.130(3).]

13.08.310 Surface discharge.

It is unlawful for any person to discharge sewage on the surface of the ground within the city. [Prior code § 11.12.130(4).]

13.08.320 Drains.

It is unlawful for any person to connect drains from roofs, storm sewers, storm drains or drains carrying fluid from excavation sites to the sewer system. [Prior code § 11.12.130(5).]

13.08.330 Illegal connection.

It is unlawful for any person to connect a customer service line to an interceptor without first (1st) making application, paying the connection fee and securing a permit therefor. [Prior code § 11.12.130(6).]

13.08.340 Interference.

It is unlawful for any person to open any manhole or sewage lift stations, enter into or

interfere or tamper with any sewer, manhole, sewage lift station, property at the sewage treatment plant or stabilization pond. [Prior code § 11.12.130(7).]

13.08.350 Easement and right-of-way.

Each applicant and customer gives and grants to the city an easement and right-of-way on and across his property for the installation of interceptors and other appurtenances used in connection with a sewer system. [Prior code § 11.12.170.]

13.08.360 Experiments and innovations.

Nothing in this chapter shall be construed to prohibit the use of experimental and/or innovative processes or procedures for waste treatment. The operation of such device, process or procedure shall have the prior approval of the public works committee of the city council. The committee shall approve all such devices, processes and procedures that are not in conflict with the health and welfare of the city. Applications for approval of such devices, processes and procedures shall be made to the public works director and any appeal from a decision of the public works committee shall be to the council as a whole. [Prior code § 11.12.180.]

13.08.370 Suspension of provisions.

No employee of the department is authorized to suspend or alter any of the provisions of this chapter without specific approval or direction of the city council, except in cases of emergency involving the danger of loss of life or property, or which would place the sewer system operation in jeopardy. [Prior code § 11.12.160.]

13.08.380 Administration and enforcement.

This chapter shall be administered and enforced by the city manager. The city council shall have the authority to establish and regulate monthly rates for sewer services pursuant to AS 29.48. All rates and other charges adopted by the council shall be by ordinance and available for public inspection during regular business hours at the office of the city clerk. All moneys collected for sewer services will be separately accounted for by the city finance director and used for such purposes and disbursed by the council as it may deem appropriate. The city council may adopt such additional regulations, resolutions, orders, provisions and procedures pertaining to sewer service as it deems proper. [Prior code § 11.12.140.]

The Bethel Municipal Code is current through Ordinance 15-28, passed September 22, 2015.

Disclaimer: The City Clerk's Office has the official version of the Bethel Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

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(<http://www.cityofbethel.org/>)
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