



## MURRAY CITY MUNICIPAL COUNCIL COMMITTEE OF THE WHOLE

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The Murray City Municipal Council met as a Committee of the Whole on Tuesday, March 1, 2016, in the Murray City Center, Conference Room #107, 5025 South State Street, Murray Utah.

### Council Members in Attendance:

Blair Camp, Chair	District #2
Diane Turner, Vice-Chair	District #4
Dave Nicponski	District #1
Jim Brass	District #3
Brett Hales	District #5

### Others in Attendance:

Ted Eyre	Mayor	Jan Wells	Chief Admin. Officer
Janet M. Lopez	Council Administrator	Janet Towers	Exec. Asst. to the Mayor
Blaine Haacke	Power Department	Greg Bellon	Power Department
Jennifer Kennedy	City Recorder	Pattie Johnson	Council Office

Chairman Camp called the Committee of the Whole meeting to order at 5:15 p.m. and welcomed those in attendance.

### 1. Approval of Minutes

Mr. Camp asked for approval on the minutes from February 2, 2016. Mr. Hales moved approval. Ms. Turner seconded the motion. All were in favor.

### 2. Business Items

#### 2.1 Power Department Quarterly Report – Blaine Haacke

In lieu of having a Power Board, Mr. Haacke stated the report was generated from a meeting with the Mayor's Electrical Utility Council (MEUC), including the Mayor and Council Chairman Camp.

The department is financially in good standing. Intentions are to pay off the remaining \$8 million bond by the end of March. Savings of \$700,000 are anticipated and the bond would be paid off one

year earlier than anticipated. Due to plummeting natural gas and petroleum prices, reserves have accumulated over time, allowing for the savings and payoff. Paying 3.5 cents per kW, instead of 5 cents per kW, power costs have been half of the anticipated cost. The department will be completely debt free by the first of June.

A few small outages were reported caused by five to ten trees, affecting only two or three homes; this was higher than the four tree related outages during 2015. Mr. Camp reported during the last storm many power outages had been reported, but Murray fared quite well comparatively. Mr. Haacke stated there were 20 other outages reported.

Once again, the tree planting program is up and running. Mr. Haacke said he was not aware of any other city who offered a similar tree program. When planted between the sidewalk and curb, the City maintains the trees. For an upfront cost of \$45, a dedicated tree crew would be taking reservations with a variety of tree choices. Most are a good shade tree and not too messy; a crab tree would also be offered. Hundreds of orders would be anticipated within the next week. Orders would be taken until May first, with planting in June and July. The summer program would keep one crew of two employees very busy. Trees are purchased and subsidized by the City, at a cost of \$80 per tree. The City will maintain all trees, as well as, replace one should it die. The program is a good one and puts value back into the City.

Completed big projects include: TOSH, the 5300 South and 700 West project and the 5900 South and 700 West intersection project. Upcoming larger projects are: the Metro and the Pinemont complex. Also, with a few others not mentioned, the summer looks to be very busy.

The ten year contract with **Salt Lake County Landfill**, near Codale, expires in 2017. Future negotiations are anticipated about the project, consisting of a three megawatt (MW) unit. Caterpillar engines process captured methane from the landfill facility. After drying out, processed, and pressurized, methane continues through the Caterpillar engines; producing about 3,000 kilowatts (kW), which provides power to approximately 400 to 500 homes. The operation runs beautifully. With the contract in place, maintenance is taken care of. The power is reliable and operates at approximately 90% capacity.

**Trans Jordan Landfill** is the larger of the two plants, located near Bingham Highway. Allowing for more time, the 15 year contract expires in 2023. The landfill had realized the production of extra gas, was much more than what was actually being produced. Since 2007, engines have operated to the maximum of 3 MW. For the past nine years, excess methane has been flared with a 20-30 foot standpipe. Given the cost, thoughts have often been directed towards constructing another engine. To determine the actual amount of extra available gas, what the viability would be and longevity of the landfill, a recent study was conducted. During a previous small meeting, Mr. Camp had inquired about the longevity of the landfill. Mr. Haacke stated after closing the landfill, it would emit methane for another 30 years, providing a very long-term source of methane.

First, in order to determine whether enough gas was available, and to justify adding additional engines, it was agreed to share the cost of the study, which would be \$10,000 to \$12,000. The second step would be signing another interconnection agreement with Rocky Mountain Power (RMP), who transmits the power. Enlarging the substation might be required. RMP was paid to do the now completed study. Results confirmed substantially enough extra gas to justify adding two

800 MW engines. The process is currently underway which would provide another 1600 MW to the plant.

Mr. Nicponski asked how many MW are produced at the plant. With two engines at 1,500 MW each, Mr. Haacke stated a total of approximately 3000 MW would be produced.

Mr. Brass asked if this would keep the plant under 5 MW. Mr. Haacke confirmed it keeps them at 4.6 MW and stated Mr. Brass raised a good point. With a 5 MW plant, the Federal Energy Regulatory Commission (FERC) becomes involved, requiring annual licensing regulations.

Aria Energy (previously known as DTE Energy) is currently operating the plant. Renegotiations are expected within the next few months. Decisions by the Council and the Mayor would determine if the City remains with the project after 2017. Trans Jordan Landfill is currently the most expensive resource. However, there is great value, as well, with public relations and attaining a "green" resource in the City's portfolio. Three percent of City energy comes from the two landfills. Additionally, the green resources, along with the green tags can be sold to other entities.

Mr. Camp addressed the high cost of the resource, asking if loss of money was an issue. Mr. Haacke replied, the only loss of money at this time, would be to utilize the market right now, buying power for three cents a kW hour, instead of six cents per kW. Currently, the cost is twice as much without using the market, however, the market could change overnight. A set contract price of six cents a kW is in place with the landfill until 2017.

Mr. Brass stated it was the only renewable energy credit in the City's portfolio and available daily. He said, as Mr. Haacke had stated, renewable energy credits (green tags), generated can be sold and fluctuate in value. When we say we have X percentage of our energy resources renewable, this would be it.

Mr. Haacke stated that Truckee City, California does realize the value of having this power, and a portion of our Trans Jordan Landfill has been sold to them with a renewable energy credit, (green tag) attached.

It will be the Council's decision whether to stay in the project and what should be done with the expansion. We have the first right of refusal on the two new engines. The price may be so high, we are not interested; he was not sure. Negotiations need to be made about whether we would keep the old plant, with the higher price of the new plant. Trans Jordan Landfill may come back suggesting combining the two plants at a blended cost. Briant Farnsworth, in the attorney's office will be busy over the next couple months negotiating this project.

Mr. Nicponski asked if this was all pending the 2017 contract closure. Mr. Haacke confirmed expansion needs to be considered. They are on a fast track to get it completed by the end of this calendar year. Mr. Haacke expects to sign a new contract and continue with the project, with the expanded 1500 MW-1600 MW. He mentioned the old engines are very high maintenance due to the type of gas used and they have probably replaced a couple of engines in the last ten years. The City is in a good position with this renewable resource.

Mr. Brass stated, regarding food waste, new legislation might change future results at landfills. He was not sure if it had gone through legislation yet, but was aware that food waste could become eliminated from landfills. More and more cities are restricting green waste from landfills. As organics are being eliminated from landfills, the breakdown process of creating methane is greatly affected. He wondered, long term if methane would be a viable product from landfills and still worth the investment. A discussion would be needed with the Salt Lake County Landfill and Aria. For now, the landfill will produce methane, into the foreseeable future, because green waste is already present. He stated adding new engines was a great idea, as well as, keeping the contract current. However, long term, he believes as a generation source, it might eventually terminate.

Mr. Brass reported he had taken a tour of the Salt Lake City Landfill 10 to 15 years ago; they were packing the landfill very tight at that time. He had inquired then, if it would affect the amount of methane being produced in the future. It was confirmed that it might indeed. Overall, Mr. Brass stated he prefers this landfill and it is a green resource.

Mr. Haacke believes it could be a factor also and stated Trans Jordan Landfill is much more aggressive and waste is separated more efficiently than it is at Salt Lake County Landfill. Mr. Haacke agreed and reminded the council that Murray is part owner of Trans Jordan.

Mayor Eyre inquired if Murray was utilizing all of the 3 MW from the Salt Lake County Landfill or was some of it being sold. Mr. Haacke confirmed Murray is utilizing all of the 3MW. Mayor Eyre asked how many MW was coming from Trans Jordan Landfill and if some of it was being sold. Mr. Haacke replied a little over 4 MW was produced and 70% of it was sold. Mayor Eyre confirmed only 1% of the power was coming to Murray. Mr. Haacke agreed, but stated the power can always be called back if the governor issues a mandate to require a green portfolio. The option to call back power is in the contract, and currently selling the power was strictly voluntary.

Mayor Eyre asked if Trans Jordan Landfill had only one engine. Mr. Haacke confirmed there are three engines located at Trans Jordan. He explained walls separate the engines, which would give the appearance of only one. Production amounts vary, depending on the day, humidity, approaching storm fronts and temperature, various quantities of methane are extracted. Consistency is not an easy task and adjusting the wells is a challenge. Fine tuning varies from season to season; there are 70 movable punctured pipes available for extracting gas, removing various amounts. It may produce 4 MW one day and 3.7 MW the following day; or it could be 4.3 MW. He explained the process was really a science itself.

Mayor Eyre asked if the City can claim to get 4 MW of power from landfill gas, because 3 MW is sold. Mr. Brass replied this was accurate. Mr. Haacke agreed stating we can say we get 4 MW of landfill counting the two together, which is about 4% of our total load. Mr. Brass stated if the renewable energy credits are not under our ownership, we cannot call it green. Mr. Haacke agreed and stated we are getting green power from landfill.

Mr. Haacke explained UAMPS was given the opportunity by the landfill for the methane gas, but refused the offer. Murray decided to take advantage of the opportunity, but only if the renewable energy credits (green tags) were included. Mr. Haacke explained without the tags it is just another expensive resource. Mayor Eyre said Murray is the only city in the state who operates in this manner. Mr. Haacke described there are only a few landfills that are EPA approved to operate this

way and they are not just dumping trash and covering them over with dirt. He explained a rubber bladder goes up over the top of the landfill and was required for this type of operation.

### **Nuclear Reactors**

Utah Associated Municipal Power Systems (UAMPS) held a meeting on Small Nuclear Reactors (SNR), which are self-contained nuclear capsules, about the size of a semi-truck. It was hoped to have 12 reactors that would be installed in a pool of water. Each capsule has a 60 MW capacity, which is the size of the turbine plant. This new technology prototype is watched very closely by the Department of Energy (DOE) and it is very tough to attain a nuclear license for these reactors. It is even more of a challenge when considering a new type, first time, off the shelf reactor of this kind. UAMPS signed an agreement for the reactors. Recently, an announcement was made by the DOE that an allowance would be made for UAMPS and their group NuScale. It would allow access to the Idaho National Laboratory (INL) site in Idaho Falls to survey the area and locate a place where the nuclear facility could be built. Mr. Haccke explained UAMPS would have to partner with other entities and could not accomplish the construction of the massive resource. Currently, they are looking for partners and have a few interested parties. The first step is to complete a site study. The DOE, UAMPS and NuScale are funding this first type study and \$6 million of the project. The DOE has agreed to pay half on site selection and engineering, to determine if this prototype and technology is going to be successful. It is a good opportunity and phenomenal to attain \$3 million from the DOE. UAMPs will come up with one fourth of the remaining cost and NuScale is paying one fourth as well, approximately \$1.5 million each for their portions of the study. UAMPS members are deciding for themselves how much they want to be involved. In talking with several of the Council members, and the Mayor, Mr. Haccke explained it would be beneficial to remain partially involved, but not overly committed. Putting too much into the study phase and walking away from it in the end would not be beneficial. Murray will attain about 1 -3 MW depending on the outcome.

Mr. Nicponski asked if one capsule produced 60 MW. Mr. Haacke confirmed it would with the desire was to install 12 capsules, providing 700 MW, which would be half the size of the Intermountain Power Project (IPP). Mr. Nicponski asked if Murray would utilize only three MW. Mr. Haacke confirmed three was the plan, with an opportunity to buy-in at a later time.

Ms. Turner asked what the value of the project would be. Mr. Haacke stated, when all was said and done, it would be in the low 70's or seven cents a kilowatt hour, twice the cost of a coal fired plant.

Mr. Brass stated it would be less than wind or solar. Mr. Haccke confirmed it would be less and it would be clean resource; he is not afraid of nuclear. He firmly believed it was worth looking into with a minor commitment, allowing involvement in all meetings and acquiring facts. Otherwise, the project is a closed door opportunity and if it becomes an executive session type of situation, progress would remain unknown.

Mr. Nicponski asked about the option to buy-in and how much that option would cost. Mr. Haacke stated if the plant was a 700 MW plant, UAMPS has commitments for about 300 MW from their members, leaving 400 MW up for market. People in the region, such as Californians are jumping on the opportunity. If Murray desired another 10 MW it is available for buy-in. This could be attained immediately, by way letter, or 10 years from now also. However, back study costs would be imminent after 10 years. Currently, Murrays payment is for the study cost, as it continues, providing

the 3 MW. He stated it would not be fair to join the study five years from now and request another 20 MW at cost. Paying for the cost of the study now is the correct thing to do.

Ms. Turner asked what is meant by a clean resource, when referring to nuclear reactors. Mr. Haacke explained one meaning was a non-emission resource. The repository for the spent fuel would be on-site in Idaho Falls. Other areas were considered, but the Idaho Falls site seemed to be the best because transmission was already available. Idaho Falls would offer a community that is already employed by INL projects and public relations are positive.

He explained City involvement should be minimal, because Murray is already set for decades with plenty of resources, such as, IPA, gas turbines, the Hunter plant (with a life expectancy of another 40 years) and the Colorado River Storage Project (CRSP). Other cities, such as Lehi and Springville are scrambling for anything they can get. These cities are growing 10-15% annually with no resources and no place to buy power; they are at the whim of the market. Therefore, they are big players in this resource. He said of the 45 UAMPs members, 35 are trying to get more resources and the other ten are taking a very cautious approach like Murray.

Mr. Nicponski affirmed it would only be an additional 10 MW buy-in, if necessary down the road. Mr. Haacke replied it depends on what happens at the Hunter facility and EPA tightened emissions. If that plant closes, Murray would need to replace 20 MW.

Ms. Turner expressed her concern over the project being nuclear, resulting in nuclear tailings. Mr. Haacke replied it was definitely nuclear. Mr. Brass stated nuclear was branded as a carbon free alloy.

Mr. Hales inquired what the meaning of carbon free alloy is. Mayor Eyre replied it meant the burning of coal was not involved. Mr. Haacke also added, it was not natural gas. Ms. Turner stated her concern about nuclear. Mayor Eyre stated it was all about marketing strategies.

## **2.2 Discussion of the Power Impact Fee Ordinance and the Fifth Amendatory Agreement with Intermountain Power Agency – Blaine Haacke**

Mr. Haacke covered two separate items in relationship to the Power Impact Fee:

1. Impact Fee Analysis. The Utah Code Impact Fee Act requires the City to conduct a study on impact fees and similar studies were done in 2003, 2010. The Council will consider the Impact Fee Analysis, including the plan, current protocol and statistics. Mr. Haacke and Mr. Crutcher had participated in the study, along with Christine Richards; she was very economical, handling all consulting, and had previous experience. The cost of the plan was \$3,000, which was very inexpensive.
2. Request of an ordinance amendment. After accepting the analysis and the plan, an ordinance change requested would be to lower the impact fees based on the results of the study.

Mr. Haacke explained the definition of an impact fee, as a one-time fee for construction of a capital project. Impact fees cannot be utilized to construct an operation and maintenance

(O&M) project. We cannot pay for gasoline or small materials with impact fees, only payments on very large City projects.

Mr. Haacke explained a big project, such as, the 3,700 feet of a new circuit built at the Riding Substation. Months of work had been required at the substation. Also a large 46 KD transmission system was rebuilt at Riding, requiring a bond of \$6-\$7 million. Another very large project requiring a bond, was along 5300 South, where 70 foot poles were replaced with 90 foot poles. The bond has been repaid, partially with appropriately assessed impact fees.

Mr. Haacke explained, any time extensive underground installment is required, such as conductors, relays and boxes, it is considered a capital project and the contractor or owner would be assessed for part of it as impact fees.

The decision for an Impact Fee Assessment in Murray first occurred during 2003. A political decision was made when the Council decided to separate the impact fees from the power rates. Mr. Haacke explained other cities, unlike Murray, have impact fees already embedded in their rates.

When a new home is constructed, the new owner would be assessed a Utility Impact Fee. The amount of electricity needed is determined by the size of the system and panel. An average home, at most, uses 3 kilowatts (kW). This new assessment shows a total cost of \$118 per kW would be charged. Three kW times \$118, provides the \$355 cost for the average residence to establish a connection to our system. All capital costs were divided by the capacity of what will build up the system. Impact Fees are assessed in this manner, either when a business owner upgrades a system, or a brand new home is constructed. A business owner might purchase a strip mall, upgrade the system from a small panel to larger panel. The difference in power, between the two panels, would be the cost. The impact fee assures that we can provide the required capacity to customers.

Mr. Nicponski asked what the average annual take on the fees was. Mr. Bellon shared that so far this fiscal year, \$100,000 had been collected, fiscal year 2015, \$148,000 and in 2014, \$195,000 was collected.

Mr. Haacke stated with the coming spring, he believed the total would be \$120,000. The plan proposes to lower the amount by 25%, ending those large revenues from coming in. Expenses are not as high for capital projects, which is the beauty of the project plan.

The goal of the impact fee is to provide funding for new usage and capital expense of the system from new subdivisions or businesses. It is a more effective way to buy into the system rather than have existing customers subsidize from their fees. The current study reflects a 1% growth.

Mr. Haacke described the flow of electricity. Beginning from Lake Powell, where it is generated, it is transmitted to various areas before it actually arrives to the neighborhood substation. From there, the electricity is transformed through relays, conductors, then finally through to the curb side transport. The impact fee allows for that construction.

Mr. Nakamura stated there are different ways of paying impact fees, such as, they may choose to dedicate property. Other options can also be considered in lieu of the impact fee. Power rates are calculated very differently than impact fees and he would never suggest combining them. The basis of the two are very different; one is a recoupment of the capital and the other is based on resource costs. Mr. Hales reiterated several other cities have the fee embedded into their rate.

Mr. Haacke mentioned the capacity of the substations. A peak load of 107 MW occurs during summer months. Including all substations, Murray capacities are 300 MW. If every substation ran at full capacity, there would be an enormous surplus of power, not even touching the capacity of conductors and substations. A few circuits in the 30% over capacity rate exist, which was the purpose of the study, to determine which capital projects will need an increase. In order to assume the liability for the service, money will need to be put back into the service. The City system is not over built, but has a lot of flexibility.

The City is sitting in a very good position with substations built to capacity, plus 200% in some cases. In five years, Mr. Haacke fully expects impact fees to decrease even more; the current fee is already 25% lower than the previous one. There are no foreseeable problems for future large project requirements; everything is going in the right direction. If, however, a transformer needed replacing, the cost would be approximately \$1 million.

Mayor Eyre commented the six block area of the new downtown, was a project of substantial size. Mr. Haacke agreed, as would be, a possible high rise at Intermountain Medical Center (IMC) should it arise. The Pinemont project, Security National, was also mentioned as an example of a considerably large size project, where required power was already available. Both potential projects were mentioned as examples of providing power to the property line and having owners pay for part of the cost with impact fees.

Ms. Turner stated there would be a lot business growth and ask if it would be a concern. Mr. Haacke agreed with increased business growth and stated no concerns. It would be a case by case basis within the City, where conductors might need to be boosted up two blocks away, with other areas requiring only a smaller amount of line. Ms. Turner asked if the impact fee would cover all required costs. Mr. Haacke stated it was exactly what the impact fee was designed to do.

Mr. Nicponski inquired, with the new business growth, are we trying to maintain the 200 MW buffer and would this require the nuclear buy-in that we have discussed.

Mr. Haacke stated, as far as the capacity of the system, it is exactly where it should be. In fact, it was a little overbuilt. Other cities are operating at 110% of their substations, which is not enough. Nuclear buy-in should not be confused with this situation, it is on the side.

Another discussion for another day would be, where nuclear power fits into our resource mix. We are tighter on the resources because sometimes we are buying from the market.

Mr. Nicponski asked if expanding capacity, as demand increased, was the goal. Mr. Haacke confirmed it was the goal. Mr. Nicponski thought the buy-in from nuclear, if needed, would

expand the capacity. Mr. Haacke explained the capacity was from the present resource mix, not the capacity of the line. For example, if a load demand goes from 107 MW, up to 150 MW, then a definite increase would be necessary from 300 MW to 350 MW. This buffer would still be required. However, the City is well suited into the next decade, as far as magnitude of the load, not only on the resource load, but assurance that power is distributed to the people.

Mayor Eyre stated his responsibility and that of the Council is to brag about Murray City and tell of wonderful things going on in the City. To be accurate, was Murray the only city utilizing gas turbines. Mr. Haacke stated many cities do, for instance, St. George, Provo, Logan, Payson, Springville and Heber to name a few. Larger cities use gas turbines and smaller cities rely on UAMPS.

Mayor Eyre inquired on average days, could gas turbines still generate 30 MW of power, which is the requirement for one third of the City. He asked if, theoretically, there was a massive earthquake, with all transmission lines lost, could Murray City generate enough of its own power from the gas turbines.

Mr. Haacke confirmed it definitely could. The major prioritized areas, such as, State Street, City Hall, Murray High School, and of course the hospital, would never be denied power. For the rest of the City, a rolling black out would be used providing power for five hours each in alternating areas of the City. This is a controlled situation. The term brown out would mean there was not enough power at all.

Mr. Brass stated after such a disaster, our closest resource, not located on 4800 South, would be the hydro plant in Cottonwood Canyon. Other resources were further away, as far as Price, Utah. Mr. Haacke agreed and stated even the landfill would be required to run through the PacifiCorp transmission first. Mr. Brass agreed and stated it is very nice to have something literally in our own backyard, assuming we had a good gas supply. Mr. Haacke agreed there could never be a value placed on the capability, with turbines only running two to three months per year due to peak load for pricing.

The Riding substation is a shared station with PacifiCorp. In 2003, in order for UPL to conduct repairs, a six hour blackout to Murray was required. It was decided to conduct the repairs beginning at midnight, when the affect would not be as great. In April, at 3:00 a.m. loads would be in the 35 MW range. The three turbines were started and ran at full load, providing power to everyone in the City during that time. This was not public knowledge and by 7:00 a.m., residents were beginning to turn on their power. It was close, but it was a success! The repairs occurred for two consecutive nights, while residents were unaware. Murray provided the much need assistance to PacifiCorp without any concerns.

#### **Fifth Amendatory Agreement with Intermountain Power Agency (IPA)**

Mr. Haacke explained a resolution to approve the Fifth Amendatory Agreement to the original IPA contract signed in 1980. Four previous amendments had been made to the original contract when signed in the early 80's. The second amendatory had already been discussed

and the Council had responded to it a few weeks prior. The second amendatory contained an amendment allowing IPA to refuel the plant.

The fifth amendatory, administrative in nature, described how a board of directors would make fiduciary decisions. Consisting of five or six different changes to the current amendment, it would allow Mr. Haacke, as a member of the Board of Directors, immunity. He commented that some directors on the board were concerned with being sued for decisions. As a \$5.5 billion project, going through hundreds of millions of dollars in bonds every year, the government immunity was important.

Mr. Nakamura stated it was important to make sure governmental immunity was not waived. He was confident in the decisions and stated his appreciation to IPA attorneys. Incorporating the procedural process and enhancing the governmental immunity is protection, should there ever be any allegation of wrong doing by the board. Bylaw changes and disposition of assets were also included.

Mr. Haacke reported that the other 22 Utah cities are requesting the same changes.

Mr. Camp thanked Mr. Haacke and stated the Council was very pleased with the information and his knowledge.

**3. Announcements:** Ms. Lopez made the following announcements:

- Friday, March 4, 2016, an Open House would be held for Intermountain Cottonwood Medical Clinic, Insta-Care, located at 181 East 5900 South. A light breakfast would be served at 8:30 a.m. with presentations at 9:00 a.m.
- Friday, March 11, 2016, The National Exchange Club would hold an Open House, celebrating the 105<sup>th</sup> Year Anniversary, in the Council Chambers from 11:00 a.m. to 1:00 p.m.
- Utah League of Cities and Towns, (ULCT) Mid-year Conference was April 6-8, 2016 in St. George, Utah. Commitments were requested from Council Members.

**4. Adjournment:** 6:18 p.m.

**Pattie Johnson**  
**Council Office Administrator II**