ITEM #:	**33**
DATE:	**05-28-24**
DEPT:	**ELEC**

COUNCIL ACTION FORM

SUBJECT: **2025 NATURAL GAS SUPPLY CONTRACT**

BACKGROUND:

The Power Plant typically burns between 8,000 and12,000 MMBtu of natural gas daily in either of its two boilers. The natural gas, along with refuse-derived fuel (RDF), are combusted to generate electricity. On October 15, 2015, Macquarie Energy LLC was awarded a 5-year fixed price contract for the purchase of 12,000 MMBtu/per day of natural gas for Electric Services. Subsequently, a 3-year and 1 year extensions was added which brought contract period through December 31, 2024. The contract has created efficiency, flexibility, and affordability in the purchase of a valuable commodity, ensuring that the City has reliable service while creating stable generation costs.

In consultation with the City's natural gas consultant, City staff has determined that between now and September is a prudent time to secure a price and add one to two years of supply to the existing contract. There are several aspects of a natural gas contract extension which need to be explained further. These include the price volatility, impact on electric rates, and impacts to the Resource Recovery utility.

The challenge in arranging a contract extension or soliciting bids for a new gas contract is determining the price at which to commit. In the natural gas market, quoted prices expire within a 24-hour period, which is less time than is necessary to provide notice of a City Council meeting and approve the contract.

When staff negotiated the original contract, the process was handled similarly to the sale of the City's bonds. The Council Action Form did not have prices, nor did it identify the preferred supplier. Bidders faxed their prices to staff hours before the City Council meeting and a summary report was handed out during the Council meeting where a decision was made. Although this approach provides competitive pricing between several suppliers at a single point in time, it may lock the City into a price that would have been much lower if solicited at a different time of the year.

For the upcoming 2025 contract, staff is proposing to repeat the method used in 2023 which allowed the Director of Electric Services to obligate the City to purchase natural gas at previously Council authorized cap. The current contract has a fixed price for natural gas set at $3.60 per MMBtu. Future price estimates for one-to-two years out show natural gas futures in the $3.62 - $4.00 MMBtu range. The prices are higher than the current contract for a variety of reasons: customer demand, supply constraints, production cost increases, the uncertainty related to the Russia-Ukraine war, weather forecasts, and other factors.

As these prices fluctuate between Council meetings, staff is requesting the authority to commit the City to a one-, two-, or three-year extension with a goal to avoid cost increases to electric customers due to natural gas increases. At current natural gas contract prices, keeping cost flat is dependent on market timing and the amount of gas purchased.

It is important to note that the daily gas allotment, if unused by the Electric utility due to scheduled or

unscheduled outages, can be sold back to the market at spot prices. At times when the gas can be sold back and spot prices are high, this can be advantageous to the Electric utility. However, if the spot prices are very low, then the gas must be sold by the Electric utility to the market at a loss.

IMPACT TO ELECTRIC CUSTOMER BILLS:

The natural gas purchased by Electric represents more than 20% of the overall Electric utility budget. These natural gas fuel purchases (and sales, if they occur), along with the cost of purchased power from the market (and sales to the market) are summed monthly on a rolling 12-month basis and are converted into an Energy Cost Adjustment (ECA). The ECA can be either positive or negative and is an adjustment to the electric rates adopted by the City Council, applied to customers' bills each month. The approved FY2023/24 and FY2024/25 operating budgets include $13,980,000 for the purchase of natural gas to operate the Power Plant.

IMPACT TO RESOURCE RECOVERY/HAULERS/BOONE COUNTY LANDFILL:

The 12,000 MMBtu of natural gas per day that is currently procured during the non-winter months is sufficient to operate the Power Plant's Unit #8. This larger unit can consume approximately 30,000 tons of RDF per year if RDF is available and the unit is operating continually. Unit #7 consumes up to 8,000 MMBtu/day which would consume closer to 20,000-24,000 tons/year of RDF.

Unit #8 is relied upon to operate more frequently by the Power Plant because it is able to dispose of RDF at a faster pace than Unit #7. If Unit #7 is operating because Unit #8 is unavailable, the volume of RDF produced oftentimes outpaces the ability to burn it all, resulting in periods where Resource Recovery is unable to process all of the MSW which would result in additional material being diverted to the Boone County Landfill (BCL). Typically, this diversion is handled by instructing the haulers to transport MSW directly to the Boone County Landfill.

If haulers are diverted, there are a variety of impacts: First, although haulers save $5.50/ton on tipping fee costs at the Boone County Landfill compared to Resource Recovery, they must drive longer distances, resulting in higher labor and fuel costs. Second, the additional material being sent to the Boone County Landfill places additional pressure on the landfill operation (both in terms of using available capacity and the additional staffing the landfill needs to arrange to handle the influx of Story County garbage trucks). Third, recyclable material is not being removed from the solid waste through processing before it is landfilled.

Additionally, hauler diversions result in losses of revenue for the Resource Recovery operation since tipping fees are not being collected and RDF and recyclable materials are not being sold. Although there is less expense for Resource Recovery since it is not processing (less electricity and maintenance expenses), the fixed costs remain for the operation, and therefore the overall impact to the Resource Recovery utility can be significant.

ALTERNATIVES:

There are several alternative strategies that could be pursued to purchase the natural gas, each of which has different advantages and disadvantages. Under Alternatives 1, 2, and 4, the City Council would authorize staff to approve an amendment to the contract with Macquarie Energy LLC, Houston, TX, to extend the existing natural gas supply contract for a term of not less than one, but not more than three years for the gas quantities described in each alternative.

If staff is authorized to approve such an amendment, staff would then report back to the City Council after the contract has been approved. The report would include staff's estimates of cost impacts to the Electric customers and Resource Recovery Utility. The alternatives are:

ALTERNATIVE # 1: Purchase 12,000 MMBtu/day

In this option, enough natural gas would be purchased to combust a theoretical 30,000 tons of RDF in a year, meaning that any diversions of refuse haulers to the landfill would only be the result of planned or unplanned outages at either the Power Plant or at Resource Recovery. This option provides the most predictability to Resource Recovery, along with the haulers and Boone County Landfill, but will likely result the highest cost alternative to Electric customers. Gas allotments that are not used for the day can be sold back on the spot market; however, this alternative results in very little of the utility's gas allotment being sold back.

It is important to note that the adopted FY 2024/25 Electric Fuels budget contains only enough funding to purchase this quantity of gas if it was at or below $3.19/MMBtu. Based on current pricing, staff believes it is unlikely that gas can be secured at this price. **If the 12,000 MMBtu/day was purchased at the anticipated price of approximately $3.60/MMBtu, then the annual cost would be $15,768,000, which exceeds the Electric Fuels budget by $2,000,000. This excess cost would be offset by increased revenue from customers through the ECA; the result of this option is an approximately 3% increase in customer electric bills through ECA adjustments compared to the current natural gas contract.**

ALTERNATIVE # 2: Purchase only 8,000 MMBtu/day

In this option, enough gas would be purchased to guarantee the operation of Unit #7 for the entirety of the year (or at a reduced load level on Unit #8). This would allow for 20,000-24,000 tons of RDF to be consumed by the Power Plant, at a minimum. **This reduction in RDF throughput by approximately 1/4 would result in garbage haulers being diverted to the landfill approximately two days per week. These diversions would have the negative impacts to the haulers, Boone County Landfill, and the Resource Recovery operation as described earlier in this report.**

If the 8,000 MMBtu/day could be secured at the anticipated price of $3.60/MMBtu, the Electric Fuels budget would have approximately $3.5 million remaining. This funding could be held in reserve and used in one of two ways:

1. To purchase additional gas on the spot market when the pricing is favorable (most likely in summer months), increasing the amount of RDF that could be consumed from time to time. The result would be consumption of some amount of RDF greater than 24,000 tons per year.
2. Alternatively, if the long-term contract pricing for natural gas was to drop considerably, the $3.5 million could be used to purchase an additional supply of up to 4,000 MMBtu/day for the year. However, staff does not have confidence that such a dramatic price drop is likely to occur.

This option results in the least potential for electric bill increases, but results in the greatest amount of material being sent to the landfill, impacting the haulers, Resource Recovery, and Boone County.

ALTERNATIVE # 3: Purchase gas only on the spot market (no secure gas contract)

This option would eliminate the use of a secure contract and would require the daily gas needs to be

purchased on the spot gas market. **The Electric Utility would be subject to considerable volatility in gas prices, particularly in the winter months when demand for gas is the highest.** It is not possible to project the potential cost to customers for this alternative.

Because of the time required to startup and shutdown the Electric boilers and Resource Recovery operation, it would not likely be feasible to plan for purchasing electricity on the market when electric grid prices are low and burning RDF only when electric grid prices are high. **Therefore, this option exposes the City to extreme volatility with little potential benefit. The only real benefit that can be seen today is that spot gas prices have remained below $2.75/MMBtu since early February 2023.**

ALTERNATIVE # 4: Purchase 8,000 MMBtu/day for November through March, and 12,000 MMBtu/day for April through October at a cost not to exceed $3.60/MMBtu (with slight variations due to market conditions) and divert haulers directly to Boone County Landfill approximately 2 days/week in winter months

This option allows the seasonal differences in gas prices to be "smoothed out" or blended to arrive at a consistent price per MMBtu. This option would allow RDF to be burned at full capacity for April through October, and at reduced capacity for November through March.

The adopted amount in the natural gas fuels budget would allow for this gas to be purchased for calendar year 2025 at a price of $3.68/MMBtu, which is slightly above the price being paid for calendar year 2024. Assuming Electric is able to contract at $3.60/MMBtu, customers would experience no Electric bill increase for 2025 based on natural gas costs. Actual expenditures will not be known until a contract is executed.

Staff believes approximately 27,000-27,500 tons of RDF (2,500-3,000 tons of RDF less than Alternative #1) could be consumed by this approach. During the time when capacity is reduced (November through March), Resource Recovery would have to increase diversion directly to the landfill approximately two days each week. Although this option does not provide the guaranteed ability to burn all of the RDF generated, it makes the timing of diversions more predictable. The Power Plant and Resource Recovery could also use this timing predictability to schedule planned outages at optimal times (Unit 7 in the summer, Unit 8 and/or Resource Recovery in the winter).

With insufficient gas to consume all the RDF generated during January-March and November-December 2025 under this alternative, there are economic impacts to the Resource Recovery Utility with lost revenue from tipping fees during the winter months.

Since this alternative is the same as was adopted for calendar year 2024, Resource Recovery assumed this same alternative would be adopted for the next fiscal year and budgeted accordingly. If haulers are not allowed to tip their MSW approximately two days per week during the reduced-throughput winter months because of the high price of gas, the Resource Recovery utility would not incur a budget impact in FY 2024/25. However, haulers and the Boone County Landfill will continue to be impacted as a result of drive times to the landfill and increased material quantities disposed of there, respectively.

CITY MANAGER'S RECOMMENDED ACTION:

Over the past several years, the City has benefited from extremely advantageous guaranteed natural gas prices through the expiring long-term contract. The natural gas futures pricing is considerably higher than the expiring terms. Staff is concerned that the window for prices to drop is closing, and prices will again begin rising as summer hot weather and market uncertainty approach. There does not appear to be

a risk-free option available to the City Council since the strategy with the least impact to electric customers, also has the highest impact to Resource Recovery System, and vice versa.

Staff believes the best strategy is Alternative #4 (same as current year), which calls for a blended cost not to exceed $3.60/MMBtu, and secures enough natural gas on contract to burn 90% of the RDF that could be consumed in a typical year. Under this alternative staff will continue to pursue options for reducing the volume of waste received through recycling and other waste diversion programs.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 4, the same as was approved by Council for calendar year 2024. Under this recommendation, Council is thereby authorizing the Electric Director to approve an amendment to the contract with Macquerie Energy LLC, Houston, TX, to extend the existing natural gas supply contract for a term of not less than one, but not more than three years at a price of not more than $3.60/MMBtu or a total cost of not more than $13,980,000.