

AGENDA
SPECIAL MEETING OF THE AMES CITY COUNCIL
COUNCIL CHAMBERS - CITY HALL
APRIL 21, 2026

NOTICE TO THE PUBLIC: The Mayor and City Council welcome comments from the public during discussion. The Standards of Decorum, posted at the door and available on the City website, define respectful conduct for public participation. If you wish to speak, please fill out the form on the tablet outside the door to the Council Chambers or scan the QR Code to the right to fill out the same form on a personal device. When your name is called, please step to the microphone, state your name for the record, and keep your comments brief so that others may have the opportunity to speak.



CALL TO ORDER: 6:00 p.m.

CONSENT AGENDA: All items listed under the Consent Agenda will be enacted by one motion. There will be no separate discussion of these items unless a request is made prior to the time the Council members vote on the motion.

1. Resolution approving Change Order No. 16 with Van Maanen Electric, Inc., of Newton, IA, for the Fitch Family Indoor Aquatic Center Bid Package 26-1 in the amount of \$17,430

WORKSHOP:

2. New Thermal Generation Project Update
3. Solar Energy Project at Ames Municipal Airport

COUNCIL COMMENTS:

ADJOURNMENT:

Please note that this agenda may be changed up to 24 hours before the meeting time as provided by Section 21.4(2), Code of Iowa.

ITEM #:	1
DATE:	04-21-26
DEPT:	P&R

COUNCIL ACTION FORM

SUBJECT: FITCH FAMILY INDOOR AQUATIC CENTER BID PACKAGE 26-1 - CHANGE ORDER #16

BACKGROUND:

On January 23, 2024, the City Council approved the award of contracts for construction of the Fitch Family Indoor Aquatic Center. Since the City elected to use a Construction Manager (CM) approach for this project, fourteen different bid packages were issued for prospective bidders. As a reminder, this approach is different from bidding under the General Contractor (GC) method, where one bid package would have been distributed and each bidder would be responsible for the various subcontractors. Thus, with fourteen bid packages, the City entered into a contract with each of the fourteen successful bidders.

Bid Package: 26-1, Electrical, Communications, Electric Safety & Security Work: The low bidder, Van Maanen Electric, Inc., Newton, Iowa was awarded the Base Bid plus Alternate #1 and 2, in the amount of \$1,477,436. (Please note: alternate #1 is the addition of two multipurpose rooms, a walking area, and two gender neutral restrooms, and alternate #2 is adding heated sidewalk in front of the main entrance.)

The City requested mechanical equipment relocation; adding a stainless-steel rail at water slide; adding boiler e-stops and carbon monoxide detectors; and making miscellaneous electrical changes. The electrical bid package contractor will complete the electrical modifications within the facility. Potential change orders (PCO-069, PCO-084, PCO-088, and PCO-089) were issued by the design team with work completed once approved.

Change orders #1-6 and #8-15 were previously approved and reported on the bimonthly change order report and **change order #7** was approved by City Council on October 14, 2025 and are summarized below:

Change Order #	Work Completed	Amount
1	Pool Permit, Structural & Mechanical Revisions	\$21,953
2	Transformer Relocate	\$14,237
3	Electrical Revisions for AHU-1, Fixture SWA Dimming	\$ 4,679
4	Exterior Signage Lighting Controls	\$ 1,007
5	Pool Trench Float Alarm	\$ 1,356
6	Auto Door Operators Corridor 108	\$ 959
7	ICN Fiber Optic	\$ 9,040
8	New Fixture Type DB	\$ 2,411
9	TV Mount Heights	\$ 1,049

10	Thickened Slab at 110	\$ 483
11	Audio/Visual Media, Touch Pads, Antenna, Mic	\$15,144
12	Aquatic Storerooms HVAC & Boiler Breaker Voltage	\$ 8,348
13	Distributed Antenna Systems & Combo Starter EF-1A	\$(2,412)
14	Admin Suite Microwave Circuit & BFP Flood Prevention Valve Alert	\$ 1,524
15	Emergency Stops Added Location & AV Webcast Change	\$ 7,233
	Total of previously approved change orders	\$87,011

Staff is seeking approval of **Change order #16** for the mechanical equipment relocation; adding a stainless-steel rail at water slide; adding boiler e-stops and CO detectors; and making miscellaneous electrical changes in the amount of \$17,430. This cost is inclusive of the labor, equipment and materials needed to complete each of these four items identified above.

Summary of Bid Package 26-1, Electrical, Communications, Electric Safety & Security Work

Original Contract Amount	\$1,477,436
Prior Approved Change Orders	\$ 87,011
Increase Contract by CCO-16	\$ 17,430
New Contract Value	\$1,581,877

ALTERNATIVES:

1. Approve Fitch Family Indoor Aquatic Center Bid Package, 26-1 Change Order #16 to Van Maanen Electric, Inc., in the amount of \$17,430.
2. Do not approve Fitch Family Indoor Aquatic Center Bid Package, 26-1 Change Order #16 to Van Maanen Electric, Inc.
3. Refer back to staff.

CITY MANAGER'S RECOMMENDED ACTION:

Design for the Fitch Family Indoor Aquatic Center Project began in 2023 with a goal of keeping construction costs for the base bid to under \$20.5 million. Staff had worked diligently with RDG Planning and Design and Story Construction during this time to design a project that will meet the needs of residents of Ames and central Iowa, yet be energy efficient, minimize maintenance needs, utilize quality materials, and maximize programming opportunities.

This change will address mechanical equipment relocation; adding a stainless-steel rail at water slide; adding Boiler e-stops and CO detectors; and making miscellaneous electrical changes within the facility. Therefore, it is the City Manager's recommendation that the City Council adopt Alternate No. 1 as stated above.

Staff Report

NEW THERMAL GENERATION PROJECT UPDATE

April 21, 2026

BACKGROUND:

The City's Electric utility is responsible for providing electricity to approximately 28,000 customers within a fixed electric service territory. To do so, the utility operates a Power Plant containing two natural gas-fired steam boilers to provide capacity and at times generate electricity, along with two combustion turbines that operate on fuel oil. Additionally, the utility has a Power Purchase Agreement (PPA) for wind energy and a PPA with a separate developer for solar energy.

The utility is a participant in the Midcontinent Independent System Operator (MISO) Regional Transmission Organization. MISO manages the transmission infrastructure to connect generating assets to loads and facilitates the transaction of energy on the day-ahead and real-time markets. MISO requires that a participant utility maintains enough firm electrical generating capacity to meet 109% of the peak day demand averaged over the previous five years.

It is anticipated that the City of Ames Electric utility's peak demand will continue to average higher, as more electricity is demanded for new construction, intensification of developments in the City's core, and the conversion of vehicles and appliances from fossil fuels to electricity. Current projections anticipate demand to grow 1% per year. Therefore, the Utility must continue to plan to install or purchase additional capacity.

The City and Iowa State University are reported to MISO as a single entity. The City and Iowa State's 5-year average coincident peak demand for Planning Year 2025-26 is 148.8 MW. The "coincident peak" is the peak demand of a utility at the time the MISO region is peaking. When the 9% reserve margin is included, plus accounting for losses, the City/ISU combined total peak demand is measured at 166.3 MW.

The combination of Ames and ISU's generation assets and PPAs result in 165.5 MW of generation, which is 99.5% of the required capacity. To address the 0.5% (0.8 MW) capacity shortfall that results from these measurements, Electric Services is obligated to make a payment to MISO. MISO totals up the available excess capacity on a state-by-state basis and determines the cost that must be paid by utilities that are "short" through an auction process. It is important to understand that this auction does not physically provide the City with any additional energy; it is simply a system-wide financial process to account for the available capacity and ensure that the overall MISO system remains reliable.

The auction is held for spring, fall, summer, and winter seasons. Auction prices for summer-season capacity were most recently at \$666.50/MW-day. As an example, if Ames had been

obligated to cover 33 MW of summer capacity shortfall (the amount of capacity provided by Unit 7 if it was not available as a generating asset) during that most recent auction, then the Utility would have paid \$1,979,505 in last summer's season alone. With shortages of capacity continuing in Iowa, auction prices are expected to increase in 2026, and for years to come.

The Utility's two primary generating assets, Unit 7 (33 MW) and Unit 8 (65 MW), are critical to meeting the City's generating capacity obligations. Both units are also advanced in age and are susceptible to increasing reliability issues. If one or both of these units were unable to operate, the Utility would need to either: 1) purchase replacement capacity through the MISO auction, 2) purchase replacement capacity from another utility using a firm PPA, or 3) construct replacement generating capacity.

With increasing electrical demand throughout MISO, there is a greater number of utilities that are short of capacity, which results in increasingly higher prices in the MISO auction. Additionally, few projects exist to obtain replacement capacity from another utility on a firm basis through a PPA. **Therefore, staff has concluded that the most viable path forward is to construct replacement generating capacity.**

This "build" path also offers two additional significant benefits not available with the other options: 1) a stable, long-term cost of energy production as opposed to more volatile pricing from the auction or a series of PPAs, and 2) greatly improved service reliability to Ames' customers during storms and other emergency conditions since the generating units will be locally controlled and operated.

In 2025, City staff and consultants evaluated the health of Unit 7 (constructed in 1967) and Unit 8 (constructed in 1982), and analyzed the alternative technologies with which to replace them and provide additional capacity to accommodate growth. **Through these studies, it was determined that the best approach would be to construct new thermal generating capacity by installing reciprocating internal combustion engines (RICE units).** These RICE units:

1. Can be procured in different standardized capacity sizes,
2. Can be configured to operate on multiple fuels,
3. Respond more quickly to start up and shutdown than boilers (minutes vs. hours),
4. Produce more energy per unit of fuel consumed compared to boilers and therefore emit less carbon than the existing boilers for the same amount of energy produced, and
5. Can be operated and maintained with fewer people and with lower maintenance costs.

NEW THERMAL GENERATION:

In October 2025, the City retained Sargent & Lundy to design the future RICE generating facility, which the City Council approved to be located in the former coal yard site southeast of the existing Power Plant. Sargent & Lundy is designing for a site that will initially host three 18-MW RICE units (54 MW total), with expansion capability in the future for an additional three 18-MW units (additional 54 MW).

The initial three-unit project's 54 MW will serve as replacement capacity for Unit 7 (33 MW) and provide additional capacity for load growth. Ultimately, the final buildout of the facility is planned to replace Unit 7 and Unit 8's combined 98 MW with 108 MW of RICE generation.

The New Thermal Generation Project originally appeared in the 2025-2030 Capital Improvements Plan (CIP) at a total cost of \$84 million. Additionally, another \$1.25 million is reflected in the same 5-year CIP for Coal Yard Reclamation, which would be necessary for the New Thermal Generation Project to be completed. The Coal Yard Reclamation project was increased to a total of \$4,035,095 in the 2026-2031 CIP.

The \$84 million figure for New Thermal Generation represented the anticipated costs for engineering, constructing a building, and installing the first three RICE units. These totals were initially prepared by HDR two years ago as a "Class 5" estimate. A Class 5 estimate is an estimate that provides -50% to +100% accuracy, meaning the true cost could range from \$42 million to \$168 million.

Since late 2025, when Sargent & Lundy's contract was approved, the firm has been working to complete a General Arrangement of the new facility. This includes the location of the generators, the step-up transformer, fuel infrastructure, maintenance and control room areas, office areas, emissions control systems, and other project components.

Sargent & Lundy was also asked to develop a more comprehensive and updated cost estimate by reviewing contractor information and the construction market to better understand the anticipated project costs. **On March 3, Sargent & Lundy informed City staff that the revised anticipated construction cost estimate totaled \$190 million. Staff and Sargent & Lundy have since continued to refine this number +/-5%.**

COST ESTIMATE VALIDATION:

Sargent & Lundy's estimate is substantially higher compared to the planning-level estimate previously obtained from HDR. The estimate reflects Sargent & Lundy's approach to furnish a conservative estimate of the project costs, to reduce the possibility that actual costs result in an infeasible project.

However, to better understand what range of costs can be expected, staff has consulted other sources that are familiar with similar projects in our specific construction market. One of the firms staff consulted with is DGR Engineering, of Rock Rapids, Iowa. DGR is currently working with another utility in Iowa to build a similar generation plant as the one the City is preparing to build. Electric Services staff has worked with DGR on numerous projects.

In consulting with DGR, it was staff's desire that DGR could provide an estimate with a better "local" understanding, reflecting the general labor costs seen in the Iowa area. DGR's estimate was \$161.358 million, or roughly \$29 million less when compared to Sargent & Lundy's estimate.

DGR's estimate provides staff confidence that Sargent & Lundy's estimate is appropriately conservative and the construction market in the Iowa area seems favorable for the City when comparing to other construction markets throughout the United States with which Sargent & Lundy has experience.

Staff also reached out to a local firm, Stecker-Harmsen, Inc., for an opinion. Stecker-Harmsen provides commercial and some heavy/industrial construction cost estimating services. The firm has helped the City with independent construction estimates on numerous projects in the last several years, including the Fitch Family Indoor Aquatic Center.

Stecker-Harmsen's review was limited to evaluating Sargent & Lundy's estimate and providing feedback, rather than producing their own separate estimate. Stecker-Harmsen's overall response was that Sargent & Lundy's estimate was very thorough and generally high. **This further supports staff's opinion that the Sargent & Lundy estimate is appropriately conservative.**

DEBT SERVICE OFFSET APPROACHES:

It has long been anticipated that issuing Electric revenue bonds would be necessary to finance the construction of the New Thermal Generation project. Even during the initial concept stages of the project, staff has attempted to identify approaches that would allow the needed replacement of capacity to move forward without increasing electric rates to an unacceptable level.

A significant part of the financial strategy moving forward is the reduction in operating costs by discontinuing the combustion of refuse-derived fuel (RDF). It is anticipated that RDF combustion will cease in spring 2027, as the new Resource Recovery & Recycling Campus begins operation.

Part of the savings related to ceasing RDF combustion comes from discontinuing the payment from the Electric utility to the Resource Recovery utility for the RDF as a fuel. This amounts to approximately \$900,000 annually. In addition, the end of RDF also means that RDF ash will no longer be produced and need to be conveyed and disposed of. RDF bin operating equipment and special emissions testing services will also no longer be necessary. These avoided costs total approximately \$1,650,000 annually.

Annual maintenance costs related to RDF combustion are expected to be avoided beginning in 2027, such as specialized service contracts, cleaning contracts, and contracts to repair unplanned outages that result from combusting RDF. These costs total approximately \$2.11 million annually, with a further \$500,000 in savings from annual capital investments. Staff has also been informed by the City's property insurance broker that more underwriters would be willing to quote property insurance for the City, and at lower premiums, once RDF is no longer present in the Power Plant. Staff anticipates premium savings of up to \$500,000 annually from this change.

Finally, most of the natural gas being purchased for the Electric utility is being burned in order to combust and dispose of the RDF. Once RDF is no longer being combusted, it will no longer be necessary to procure natural gas in order to operate Unit 7 or Unit 8 on a near-constant basis. Although the decrease in natural gas costs will be offset by an increase in purchased power costs to provide the electricity needed to meet Ames' demand, the reduced cost of natural gas is expected to far outweigh the cost of the grid energy, resulting in a net savings of at least \$6.42 million annually. **These anticipated annual operating expense savings total \$12.08 million annually.**

Under the adopted rate calculations, most of the anticipated annual savings from

discontinuing RDF combustion would be returned to customers via the Energy Cost Adjustment (ECA). The utility's ECA is a calculation which considers the variable costs to providing electricity, such as fuel and purchased power. The ECA adjusts the cost to a customer's bill on a per-kWh basis. When fuel or purchased power costs increase (or decrease), the additional costs are collected from (or credited to) customers through the ECA, without requiring the established rates to be constantly amended.

With the anticipated savings identified above, the ECA would become negative, decreasing the price per kWh of energy consumed. However, the increased debt service obligations for the new generating units will require rates to increase. Rather than refunding customers through the ECA, then increasing rates to pay the debt, staff recommends amending the ECA formula to allow the savings to be applied to debt service, mitigating the future rate increases needed.

As a secondary step to mitigate the rate increases necessary for the new generation, staff is evaluating the potential to retain Unit 7 as an operational unit for several years beyond 2027. Initially, it was anticipated that the age and condition of the unit would result in it being incapable of operation once the combustion of RDF concludes in 2027. That is still a possibility, depending on the unit's performance during the next 12 months. **However, if Unit 7 remains in operable condition at that time, it may be viable to retain it as an operating unit for several more years to count as a credit for capacity, and therefore receive capacity payments from MISO that could also be applied to debt service payments.**

In doing so, the unit could be placed "ahead of the meter," meaning the utility would establish a price per hour to operate it. The unit would only operate if the MISO market indicated market prices of energy met or exceeded that threshold. Given the costs to operate Unit 7, staff does not anticipate that it would be called to operate very frequently. The unit must simply be capable of operating to sell capacity; actual operation may be limited to only a handful of days each year.

It is likely that within a limited number of years Unit 7 will not be cost-effective to maintain. However, once the utility's new RICE units are operational, the unplanned loss of Unit 7's capacity would not have a detrimental affect on the utility's MISO capacity obligations. Staff will evaluate the costs to refurbish Unit 7 to a condition that would allow for this approach to be pursued.

FINANCING THE NEW GENERATION DEBT:

In spite of these strategies to mitigate rate increases related to the new generation, it must be emphasized that rate increases will still be required in order to fund the project. As part of the City's budget process, staff initially identified the need for 1.5% annual electric rate increases over a five-year period, beginning in FY 2026/27. These increases were intended to support financing of the New Thermal Generation Project.

At the time the 1.5% rate increases were proposed, the New Thermal Generation project cost included in the Capital Improvements Plan (CIP) was estimated at \$84 million, resulting in projected annual debt service of roughly \$6.7 million. As the scope and cost of the project evolved, City staff began working more closely with the City's financial advisor, Public Financial Management (PFM), with whom the City has a long-standing relationship.

Given the complexity of the project and its interaction with the MISO market, PFM recommended engaging both its local representatives and its national public power and utilities advisory team. **The objective of this effort was to develop a long-term financial plan that supports the new generation project while minimizing rate impacts to customers and maintaining the financial stability of the Electric Utility.**

Through this process, PFM developed a 30-year financial model to evaluate funding requirements and rate impacts. Consistent with standard utility financing practices, the model assumes the Electric Utility will maintain net operating income (operating revenues less operating expenses) sufficient to achieve a minimum Debt Service Coverage Ratio (DSCR) of 1.5x annual debt service. **This coverage level is a key metric used by bond investors and rating agencies to evaluate the utility's ability to meet its debt obligations from operating revenues, prior to consideration of non-operating items such as capital expenditures or transfers.**

It should be noted that as a result of the DSCR, staff expects that in almost all years of the analysis period, the Utility's undesignated fund balance will rise. **Even though the net position will continue to increase, future rate increases will continue to be necessary to maintain the DSCR, as required by the bond covenants.** However, the Utility's increased cash position will provide the Utility the necessary financial support for capital improvements, including future RICE units.

PFM's analysis included the savings described earlier in this report from the conclusion of combusting RDF, and utilizing those savings to assist with the debt service obligations. The analysis did not rely on selling Unit 7's excess capacity once the RICE units are operational.

Based on PFM's analysis, in coordination with City staff, a conservative projection indicates that, instead of the 1.5% rate increases presented to City Council during the adoption of the FY 2026/27 Budget, electric rates will need to increase by approximately 2.5% annually beginning in FY 2026/27 through FY 2043/44 (18 years), followed by 1.5% annual increases through the life of the bonds (FY 2056/57).

For context, an initial 2.5% rate increase is estimated to result in an average monthly electric bill increase of approximately \$1.44 for residential customers, \$15.43 for small commercial customers, and \$159.27 for large commercial customers.

The rate increase approach described above is consistent with staff's objective of avoiding significant single-year rate increases and instead implementing gradual, predictable adjustments that align with expected growth in operating expenses and long-term capital needs. It is important to note that this analysis relies on conservative measures and budgeting practices, and the actual rate increases needed in a given year will depend on the ultimate project cost, debt schedule, market conditions, and other factors. Therefore, subsequent analyses in future years will be needed to make rate adjustments accordingly.

To further mitigate near-term rate impacts and better align debt service with the timing of revenue increases, PFM recommended utilizing a drawdown borrowing structure for the initial phase of the project. Under this approach, rather than issuing the full principal amount of bonds at the outset of the project, the City would utilize a \$95 million line of credit, similar to a construction loan. This would allow funds to be borrowed incrementally as project costs are incurred, reducing interest expenses by limiting borrowing to only the amounts needed at a

given time and providing additional time for rate adjustments to take effect.

Upon full utilization of the line of credit, the City would execute a permanent financing through a fixed-rate Electric revenue bond issuance totaling approximately \$190 million, consistent with updated project cost estimates. Assuming a 5.0% interest rate over a 30-year term, the projected annual debt service would be approximately \$12.5 million. As a reminder, Electric staff projects annual savings of \$12.08 million from the discontinuation of waste-to-energy operations, which is a significant factor in maintaining the projected rate increases at 2.5% annually.

RENEWABLES, CARBON FOOTPRINT, AND OTHER IMPACTS TO RATES:

The Council should note that the rate impacts in the PFM analysis described above assume: 1) the installation of the new RICE units, 2) non-renewal of the existing wind PPA, and 3) the addition of 24.9 MW of solar as described in the other report on this agenda.

The Utility has not entered into the large-scale wind and solar PPAs that are in the process of being explored. Agreeing to one, both, or neither of these agreements will have significant impacts on the portion of the portfolio that is renewable. **Separately, the utility's carbon footprint will change not only with the addition of renewables, but with the elimination of combusting RDF. This is because the new engines and MISO grid electricity are both less carbon intensive.**

The information below outlines staff's estimates of these configurations, in case the Council wishes to consider different levels of renewable energy in the City's portfolio:

Table 1.

	Renewable % in Portfolio	% Carbon Footprint Reduction from Current Portfolio
Current Portfolio (RDF, Units 7/8, GT 1/2, Forefront Solar and NextEra Wind)	11.69%	--
With RICE Units, Units 7/8, GT 1/2, and Forefront Solar, AND:		
New Solar ONLY, no Wind Renewal	8.8%	27.3% Reduction
Renewal of Wind ONLY, no New Solar	11.69%	29.6% Reduction
BOTH Renewal of Wind and New Solar	20.5%	36.3% Reduction
No New Solar, No Wind Renewal	0.4%	20.5% Reduction

The impacts to electric rates are also different depending on the combination of RICE units and renewable energy PPAs.

Table 2.

PROJECTED RATE INCREASES PER YEAR:	FY 2026/27 - FY 2027/28	FY 2028/29	FY 2029/30 - FY 2043/44	FY 2044/45 - FY 2055/56
New Solar Only, no Wind Renewal	2.5%	2.5%	2.5%	1.5%
Renewal of Wind Only, no New Solar	2.5%	5%	2.5%	1.5%
Both Renewal of Wind and New Solar	2.5%	9.3%	2.5%	1.5%

IMPACTS TO CITY'S CREDIT RATINGS:

As anticipated, a financing of this magnitude is expected to impact the City's Electric revenue bond rating. The City's most recent Electric revenue bond rating, assigned by Moody's Investors Service in 2015, was Aa2. Based on the updated borrowing level and financial profile of the utility, PFM estimates the rating would likely be adjusted to A1. **While this represents a "two-notch" change, A1-rated bonds remain solidly within the upper-medium grade investment category and are commonly associated with strong municipal utilities.** The projected change in rating is expected to result in a modest increase in borrowing costs, estimated at approximately \$3 million on a present value basis over the 30-year financing period.

Finally, staff evaluated the potential impact of this financing on the City's general obligation (GO) bond rating. **Based on PFM's analysis of the City's overall financial position and key credit metrics, the issuance of Electric revenue bonds for this project is not expected to materially impact the City's GO credit profile, and Moody's Investors Service is expected to maintain the City's current GO bond rating of Aa1.**

NEXT STEPS:

The step-up transformer and RICE engines have substantial lead times to deliver. Therefore, an Invitation to Bid (ITB) for the transformer and a Request for Proposals (RFP) for the RICE engines have already been issued. It is anticipated that the proposals for the step-up transformer will be received in early May and a contract will be presented to the City Council for award in late May. **This transformer is estimated to cost \$3.6 million.**

The RICE engine RFP responses are due in late May. **These three units are anticipated to cost approximately \$61 million.** The responses will take considerable time to evaluate and determine the appropriate manufacturer and model. Therefore, the award of a contract for the engines is expected to occur in September 2026.

In late April or May, staff will be presenting to the City Council an action to approve the expenses for a MISO Generation Interconnection Application (GIA). The GIA is the tool used to obtain approval for connecting the new RICE engines to the transmission network. MISO performs the evaluation of a "batch" of generation proposals throughout the network, to determine the impacts to the overall transmission system's stability. **The GIA fees include a**

\$7,000 non-refundable application fee and a study fee of approximately \$270,000.

Once preliminary impacts to the MISO grid are better understood following the initial study, a separate deposit to MISO in the form of cash or a letter of credit is needed to perform further refinement of system impacts. This deposit is calculated at \$444,000 (\$8,000 per MW). However, much of this deposit is expected to be returned to the City as the study progresses, based on the assumed minimal impact of the proposed new generation on the overall MISO network.

Later this calendar year, staff anticipates bringing to the City Council a proposed modification to the Energy Cost Adjustment formula. This will be necessary to "bank" the savings created from discontinuing RDF combustion, allowing for some of the savings to return to customers and some of the savings to be put towards the future debt service. Choosing not to take this approach will require substantially higher rate increases in order to raise the funds needed to meet the utility's future debt service obligations.

Separately from the ECA, another policy issue that will require future direction from the City Council is whether to adjust service terms and rates for very large customers that may seek to locate in the City in the future (e.g., data centers, cryptocurrency miners, etc., that are not already customers). This is critical due to the minimal available capacity the utility has to serve growing demand. Although the utility offers an interruptible rate for large customers, it is a voluntary program, and a large customer could choose to continue to operate at a high demand and pay the financial penalties associated with the rate. Staff is exploring alternatives, such as an interruptible option that would allow the utility to cut off a large customer rather than relying on voluntary compliance, or adjustments to what is included in the utility's Excess Facilities Charge when connecting very large customers.

Staff will develop a plan for the extension of Unit 7's capacity life over the next 18 months as waste-to-energy draws to a close. A list of recommended capital investments to facilitate this approach will be incorporated into future CIP and operating budgets.

STAFF COMMENTS:

Although the cost estimates for the construction of the New Thermal Generation Project are higher than originally anticipated, in consultation with the City's financial advisor, PFM, it appears that the project remains financially viable with modest rate increases. The approach to construct new RICE generating capacity remains the best long-term path to provide reliable and cost-effective energy to customers.

No action is required at this time from the City Council. However, in the next few months, the City Council will be asked to take several steps to facilitate the project moving forward. These include modifying the Energy Cost Adjustment and electric rates, awarding contracts for the first major pieces of equipment (transformer and RICE units), and approving costs associated with the MISO Generator Interconnection Application (GIA).

As described in Tables 1 and 2 of this report, the Council will further need to consider how to balance the renewable portfolio and the cost to the customer through rate increases. Specific actions will be brought to the City Council in the future to make these decisions (e.g., Airport Solar lease agreement and PPA, replacement wind PPA agreement).

ATTACHMENT(S):

June 17, 2025 - Future Electric Generation.pdf

October 21, 2025 - Contract with Sargent & Lundy for Engineering RICE generating facility.pdf



To: Mayor & City Council
From: Donald Kom, Director of Electric Services
Date: June 17, 2025
Subject: Future Electric Generation

The City's Electric Utility is in the midst of dynamic changes. The primary fuels used in the City's Power Plant ten years ago (coal and refuse derived fuel) are different from those used today (natural gas and RDF), and those anticipated to be used in 2027 (natural gas alone). Increasing demand for electric vehicles and other devices has changed how metering infrastructure and rates are used to manage growth in load. Extreme weather events (e.g., the 2020 derecho) and infrastructure investments by neighboring utilities have presented the need and opportunity for additional electric transmission capabilities. Finally, the City's Climate Action Plan has called for significant changes in how energy is produced to serve Ames customers' needs.

In light of these dynamics and considering the infrastructure currently in place to meet the Utility's needs, staff presented a "first-look" of its long-range plan (copy of the Power Point attached) to Council on December 17, 2024. This was followed up with an aggressive 5-year Capital Improvements Plan for the Electric Utility presented and approved by Council earlier this year. Since that time, studies have been completed in the areas of Unit Health Assessment, Generation Alternatives, and Generation Optimization.

In May 2024, Electric retained HDR Engineering, Inc. to review and document the condition of major systems and equipment associated with Units 7 and 8 and provide an overall health assessment. Separately, HDR was again hired to perform a technical evaluation of six generation assets types and provide capital and O&M costs, performance characteristics, and amount of CO2 per MWh.

In September 2024, BrightNight, LLC was retained to perform generation performance/operation modeling. BrightNight utilized its energy modeling and optimization tool to discover resource mixes that would best fit Ames. The tool performed historical and forward-looking analyses, incorporating long-term historical weather and market energy pricing data as well as future forecasts.

In order to bring the City Council up to date, staff has prepared a presentation that will be reviewed at the June 17 Council workshop. The presentation aims to summarize the study outcomes mentioned above. Staff will again outline the philosophies that have been employed to prepare the current CIP for the next five years, and areas of focus farther out.

Currently, the presentation is informational only. Staff has an RFP on-the-street to hire an engineering firm to serve as the Utility's consultant to design a generation plant to meet short- and long-term capacity obligations while also considering operational costs and characteristics. This will tie back to the concept laid out at the December 17, 2024 presentation which considered Affordability, Reliability, and Sustainability.

ATTACHMENT(S):

[Dec. 17 2024 presentation.pptx](#)

[June 17 - Presentation v2.pptx](#)

City of Ames Electric Utility

Considerations for the long-term:

Affordability

Reliability

Sustainability



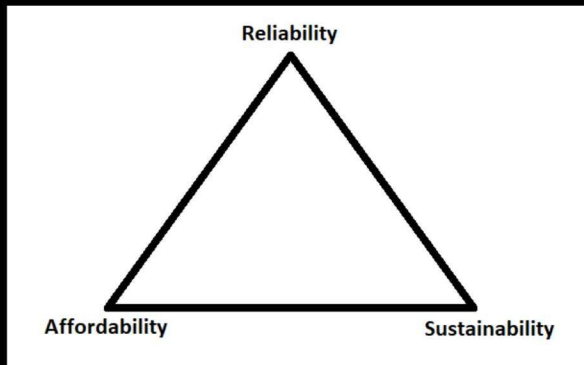
Utility History

- First started generating in 1896, producing 0.15 mega-watts (MW)
- Currently serve 28,000 customers with a peak demand of 138MW and approximately 630,000 MWh annual consumption
- Current Thermal Generation
 - 1967- Unit 7: 33MW, Natural Gas
 - 1972- Gas Turbine #1: 18MW, Fuel Oil
 - 1982- Unit 8: 65MW, Natural Gas
 - 2005- Gas Turbine #2: 29MW, Fuel Oil
- Current Green Energy Generation
 - 2009- 36MW of Wind, Purchase Power 2029
 - 2018- 2MW of solar, Purchase Power 2038



Maintain a Strong and Robust Utility

Three Main Drivers:

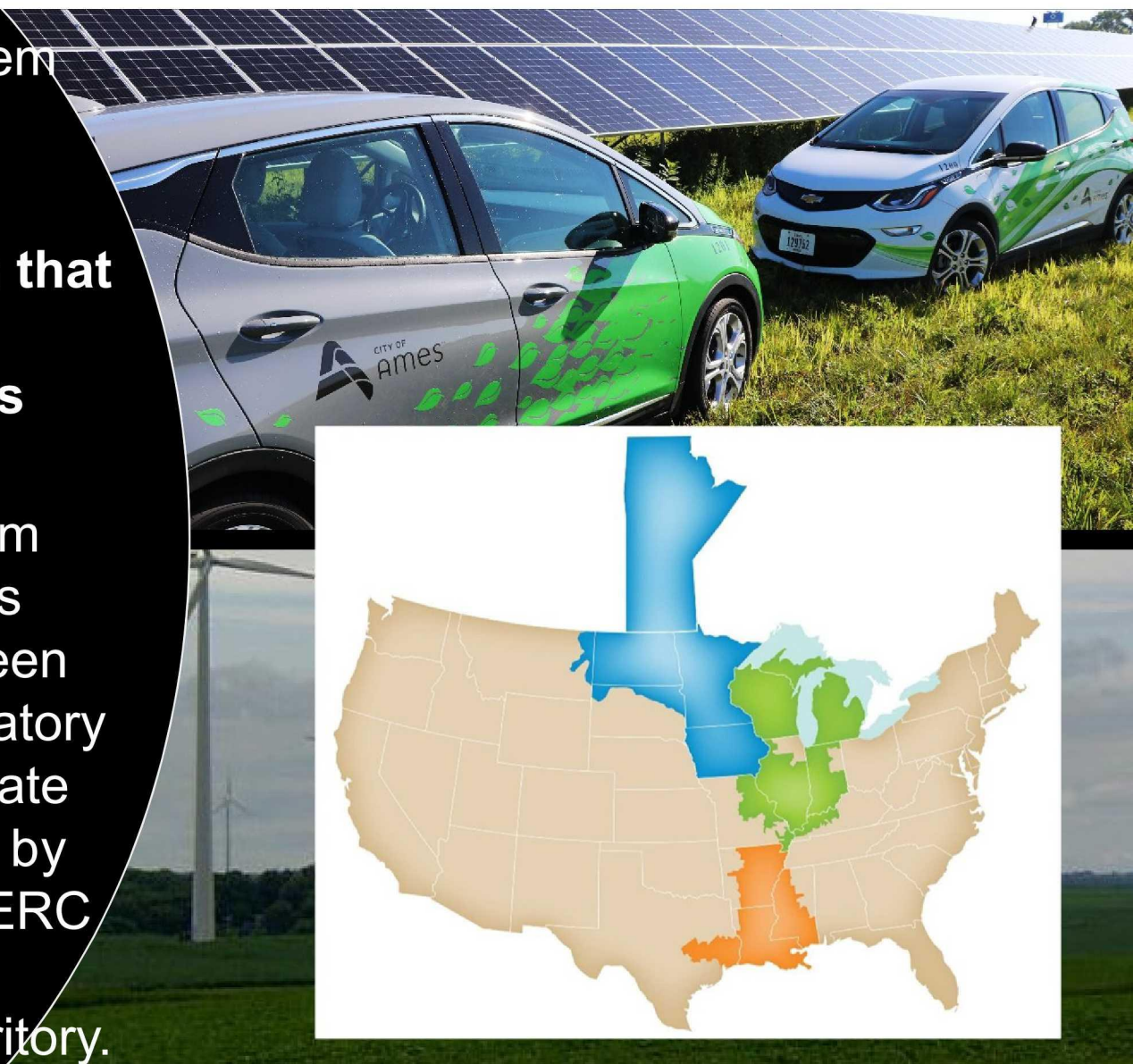


Five Main Areas Affecting these three drivers:
MISO Requirements
Operating Post-Waste-to-Energy
Climate Action Plan/Environmental Regulations
Load Growth
Asset Health/Life



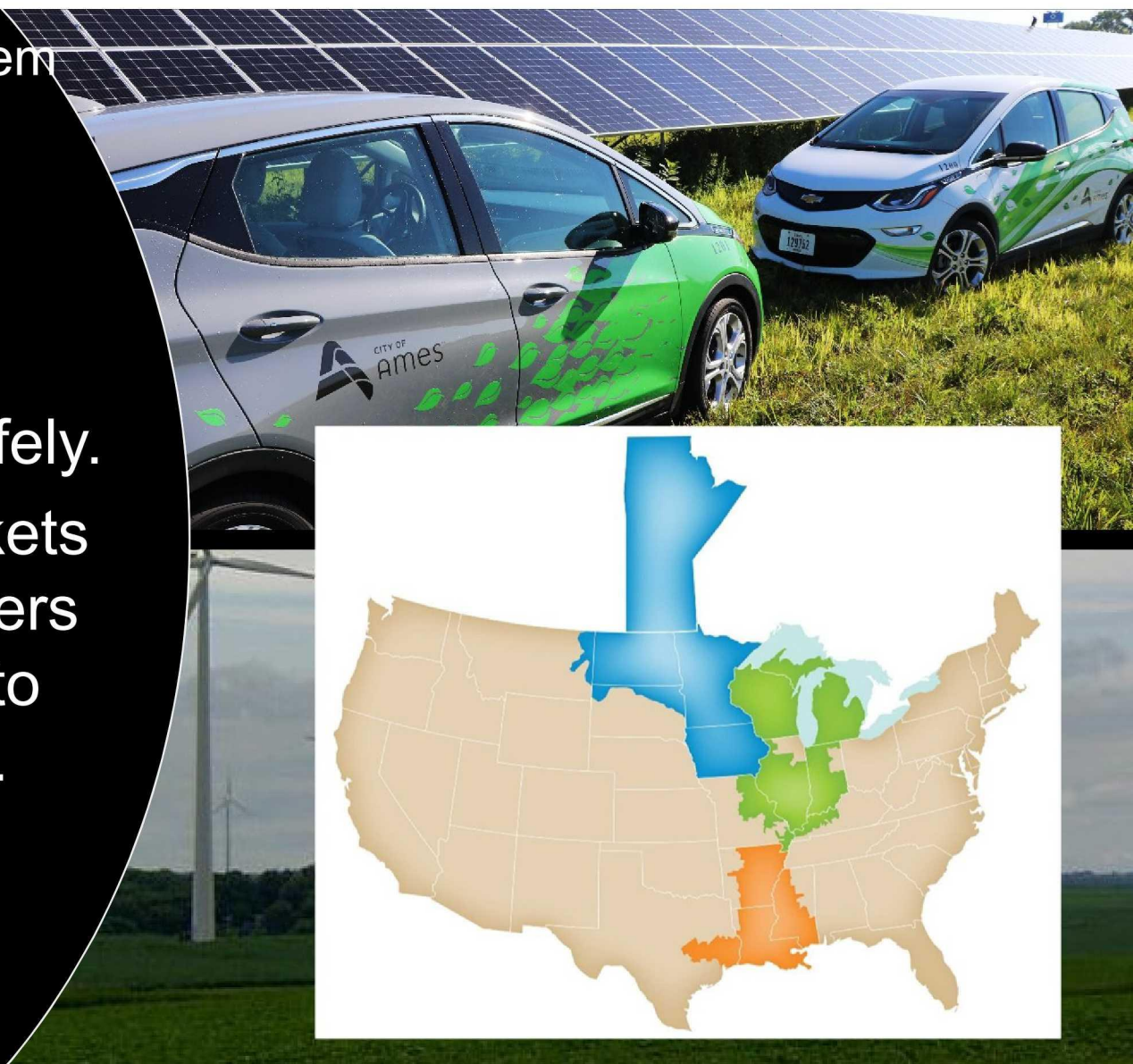
Midcontinent Independent System Operator

- Independent, not-for-profit, member-based **organization that manages the flow of high-voltage electricity across its region.**
- Called an *Independent System Operator* (ISO) because it has independent authority, overseen by the Federal Energy Regulatory Commission (FERC), to operate the transmission lines owned by the utilities. Designated by FERC as the “regional transmission organization (RTO) for its territory.



Midcontinent Independent System Operator

- Provides rules so the wholesale electricity transmission system operates reliably and safely.
- Provides electricity markets in which buyers and sellers bid to purchase or offer to sell wholesale electricity.



MISO Capacity

- **Generation Capacity** - The amount of electricity a generator can produce when it's running at full output
- **Demand Capacity** – The amount of electricity the City Electric system has demanded during peak hours, averaged over the last 5 years. Determined for each season of the year
- **MISO requirement:**

$$\begin{array}{ccc} \text{Generation} & \geq & \text{Demand} \\ \text{Capacity} & 109\% & \text{Capacity} \end{array}$$

- **Obtaining Generation Capacity:**
 1. Own generation capable of producing the required amount of energy
 2. Purchase capacity from other utilities who have excess
 - Capacity is sold in units of **Megawatt-day**
 - Until recently, prices were around \$10-\$15 / MW-d
 - 2022 capacity prices were around \$200/MW-d for summer season. Prices dropped back to \$30 for our region but are predicted to be around \$150 this next year as more utilities retire generation
 - 150MW @ \$15 = \$202,500/season 150MW @ \$150 = \$2,025,000/season
 - Ownership of reliable generation is proving very valuable

MISO

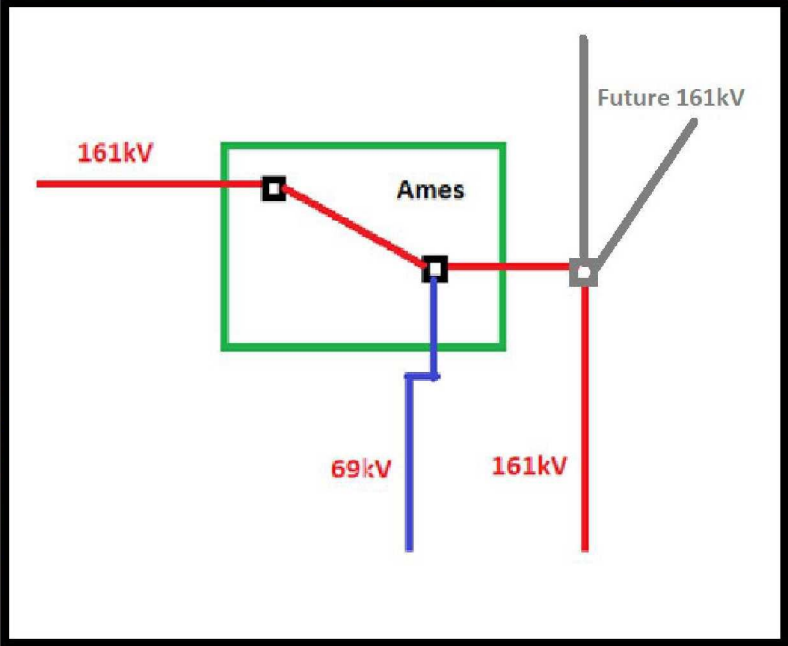
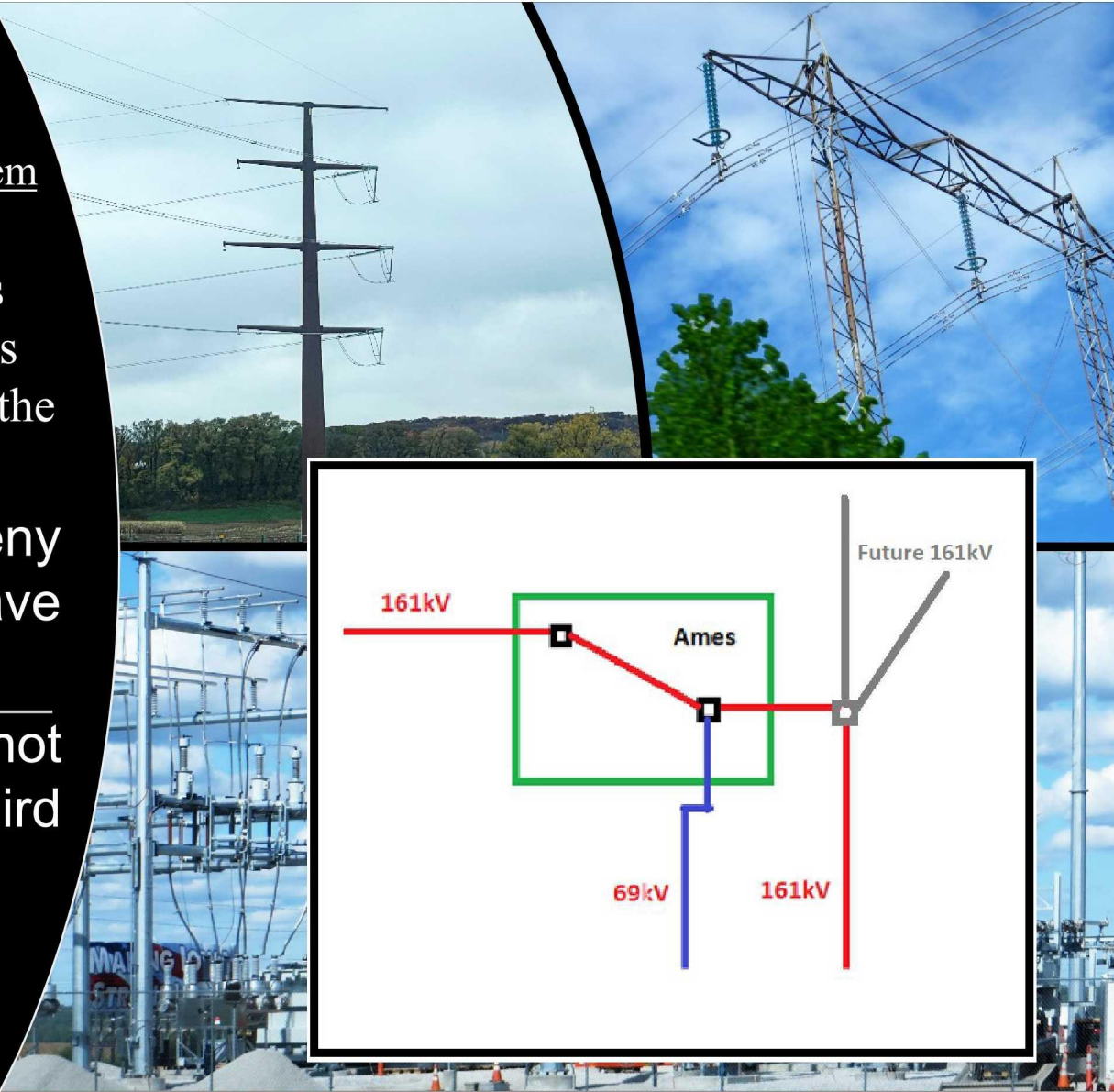
Requirements for a generator to receive Capacity credit

- **A Generation Unit must meet many requirements depending on how it is characterized by MISO. Generally speaking:**
 - **Fast start.** The quicker it can be turned on and off, the better.
 - Within 30 minutes is ideal
 - Less than 2 hours is desired
 - **Firm fuel source.** Unit can produce at anytime for as long as needed.
 - **Demonstrated output.** Unit has demonstrated ability for 1 to 4 hours (depending on generation type)
 - **Reliable Service.** Historical performance for the last 3 years is monitored.
 - Anytime a generator trips offline or fails to start, the capacity credit drops.
 - The amount of time a generator is out of service due to an unplanned outage, the capacity credit drops.
- **City of Ames Current Capacity:**
 - Unit 7- $39\text{MW} \times 86\% = 33\text{MW}$, starts in 6 hrs
 - Unit 8- $65\text{MW} \times 73\% = 50\text{MW}$, starts in 10 hrs
 - GT1- $16\text{MW} \times 90\% = 14\text{MW}$, less than 2hr start
 - GT2- $25\text{MW} \times 96\% = 24\text{MW}$, less than 2hr start
 - Wind PPA – $30\text{MW} \times 16.5\% = 5\text{MW}$
 - Solar PPA – $2\text{MW} \times 50\% = 1\text{MW}$

Transmission

Transmission Connecting Ames Electric System to Grid

- Future substation and additional lines being installed by ITC in 2025. Ames Electric can/should own a portion of the substation
 - If both Boone and Ankeny lines go down, we have generation on to cover.
- When generation is not always on, we need a third large transmission line



Transmission

- Desire to always have what is called N-2 contingency
 - N= options to serve entire city load
 - Boone Junction 161 kV line
 - Ankeny 161kV line
 - Internal Generation (when on)
 - Future 161kV line
 - Note – 69 kV line limited to 70 MVA

- If both Boone and Ankeny lines go down, we have generation on to cover.
- When generation is not always on, need a third large transmission



Environmental Regulations

- Electric Generating Greenhouse Gas Rule
 - Published May 9, 2024
 - Aimed to largely decrease greenhouse gases from existing coal-fired plants
 - Ensure new combustion turbines are built to obtain GHG emission reductions on par with those obtained through carbon capture and sequestration
 - There is currently litigation challenging several items in the rule

Gas-Fired Steam Units Presumptive Limits

- Base Load (CF>45%): 1400 lb CO2/MWh-gross
- Intermediate Load (CF 8-44%): 1,600 ‘
- Low Load (CF<8%): 130 lb CO2/MMBtu

• **Unit 7 = 1,350 lb CO2/MWh**

• **Unit 8 =1,300 lb CO2/MWh**

Gas-Fired Combustion Turbine Presumptive Limits

- Base Load (CF>40%): XXXXX lb CO2/MWh-gross
- Intermediate Load (CF 20-40%): XXXXXX ‘
- Low Load (CF<20%): XXXXX lb CO2/MMBtu

• **GT-1 = 2700 lb CO2/MWh**

• **GT-2 = 1790 lb CO2/MWh**

*Capacity Factor (CF)- Ratio of energy produced for a period of time vs what could have been produced at continuous full power during that same period

Green

- \$50 Million
- % green
- 1.5% rate increase per year

Load Growth

- Electric Vehicles
- Electrification of Homes & Businesses (Existing and New)
- Weather changes
- New Customers

Utility current forecast:

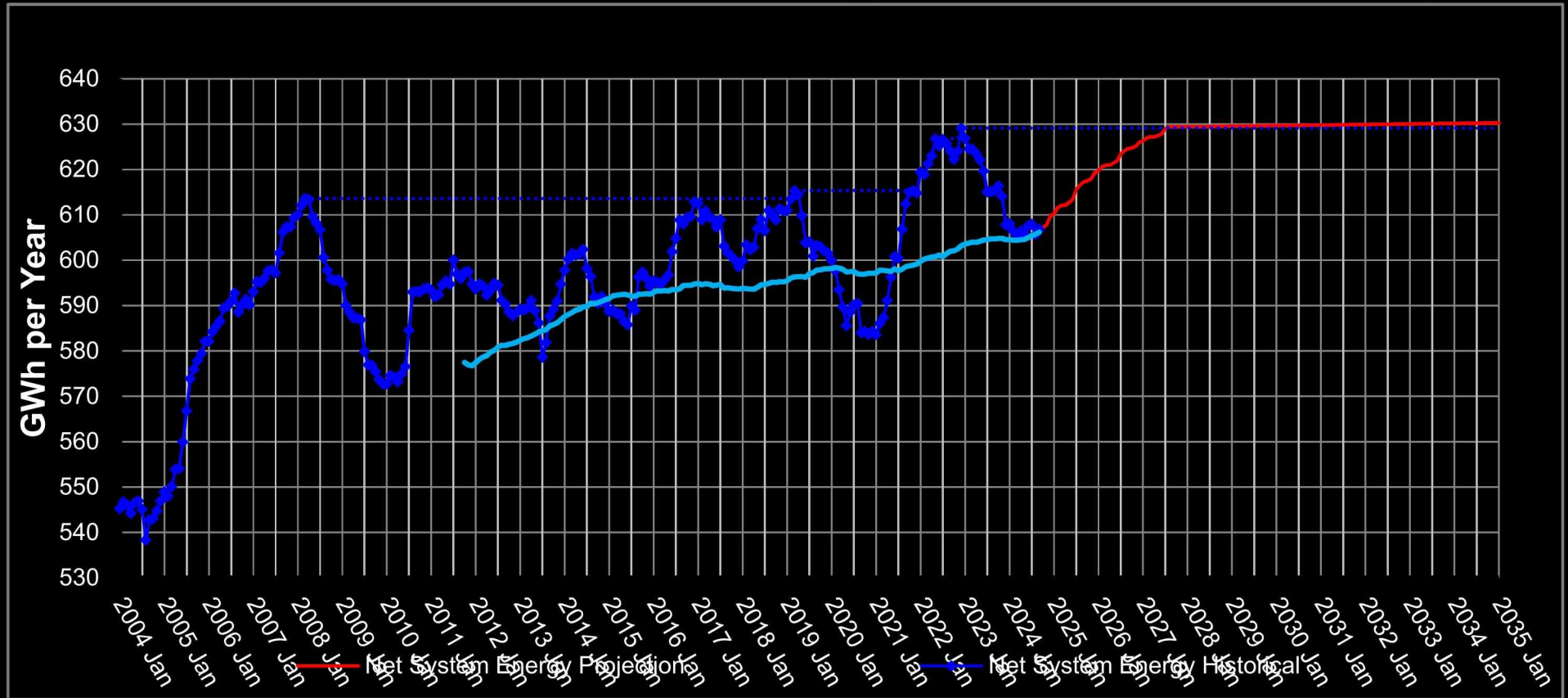
Peak Demand = 138MW (Aug of 2023)

Annual Usage = 629,000MWh (2023)

By 2035: Peak Demand = 160MW
Annual Usage = 700,000MWh



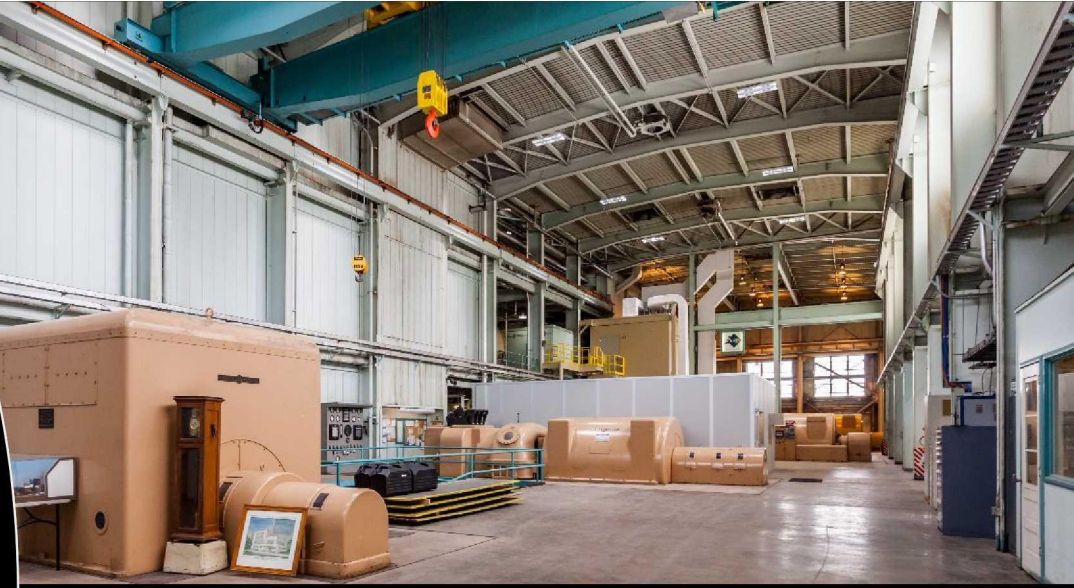
AMES Net System Energy – 12 month rolling



Asset Health

Generation

- Steam Units U7 & U8
 - Overall age – design life is 30yrs
 - Life assessment – Dec 2024
 - RDF as been particularly hard on boilers
- Combustion Turbines
 - GT-1
 - Generator and expander are original
 - Engine being replaced
 - Controls being replaced
 - GT-2
 - Controls being replaced
 - Approaching 20 yrs old



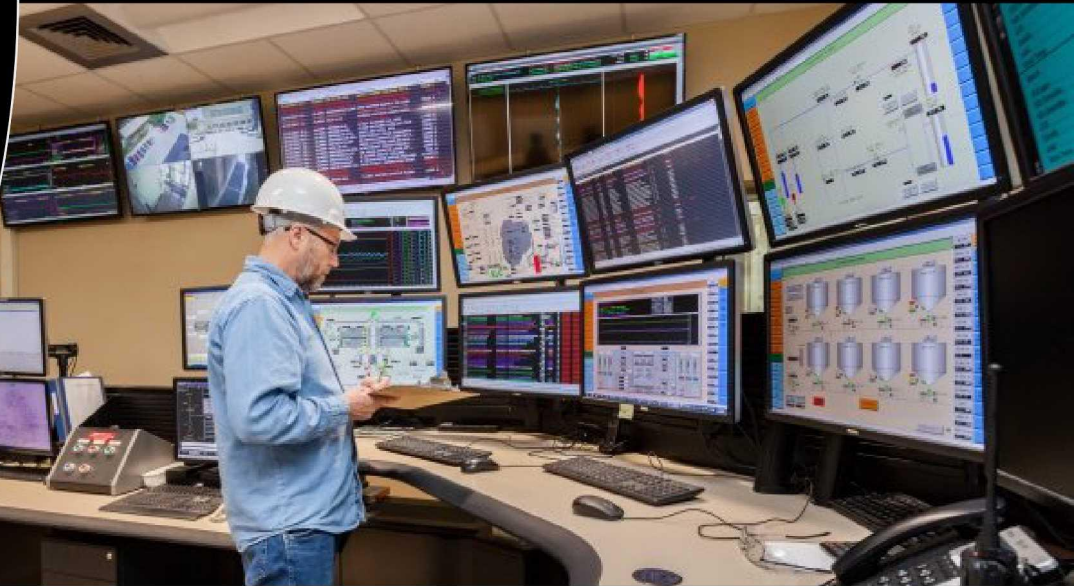
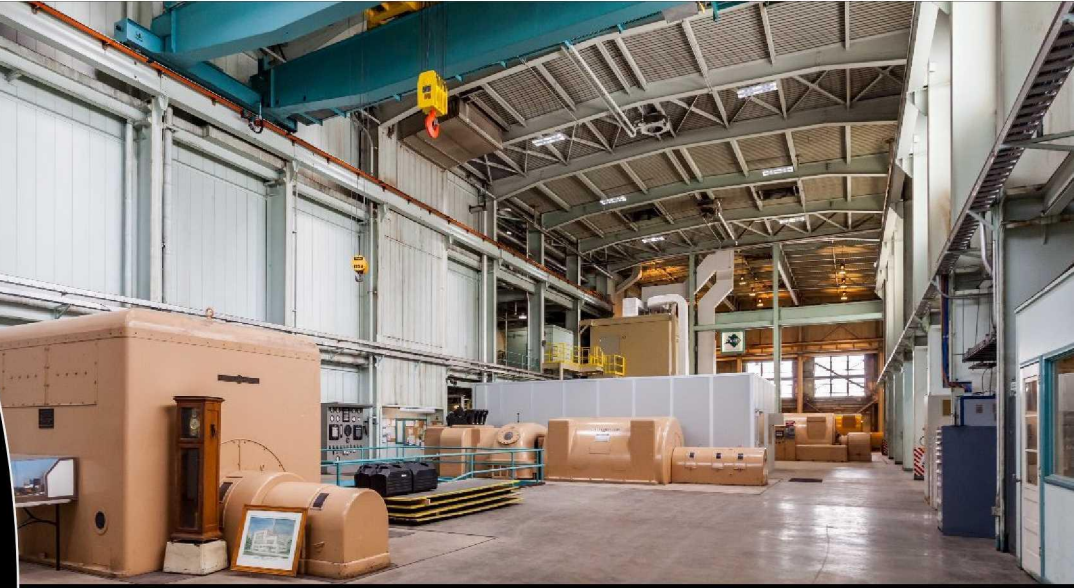
Transmission

- 161 kV lines
 - Boone line needing face lift within the next 5yrs
 - NE Ankeny line in good repair
- 69 kV system
 - System is 30 yrs old and needs to be largely replaced

Asset Health

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- Steam Units U7 & U8
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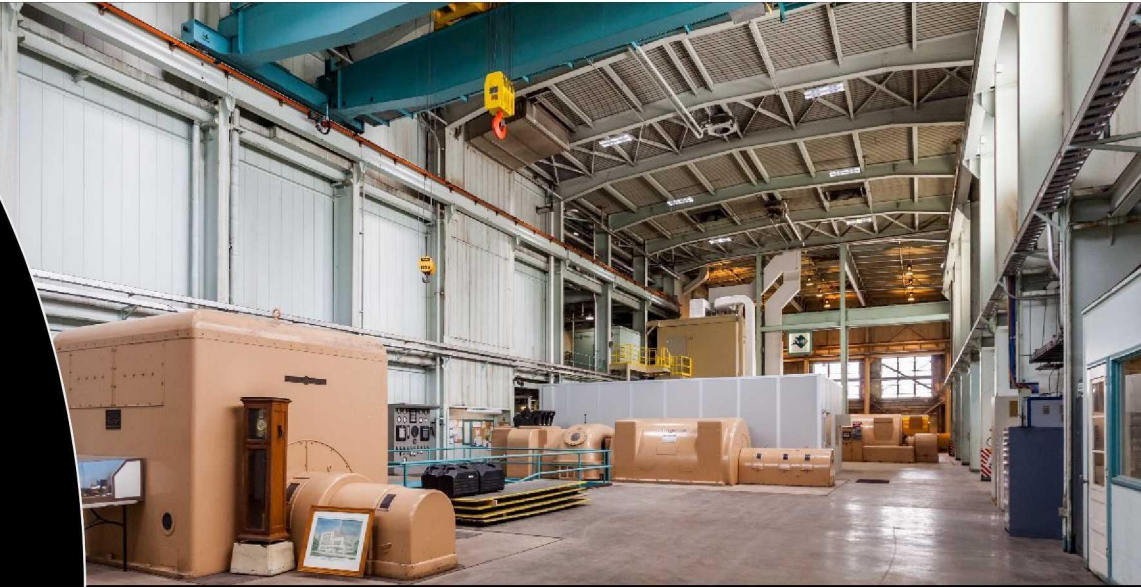
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Transmission

- 161 kV lines
 - Boone line needing face lift within the next 5yrs
 - NE Ankeny line in good repair
- 69 kV system
 - System is 30 yrs old and needs to be largely replaced

Utility Plan Development Guidelines

Current: Peak Demand = 138MW Annual Usage = 629,000MWh

Assumptions

by 2035: Peak Demand = 160MW Annual Usage = 700,000MWh



- 1) Maintain ability to serve City's peak load amount with generating units that can be turned on at anytime**
 - Creates ceiling for energy pricing. Protects utility from volatility in market
 - Provides Opportunity to sell energy to Market when grid demands it
 - Creates ceiling for capacity pricing.

- 2) Under normal conditions, have N-2 redundancy to serve the City's electric load without local generation, even if any two of the transmission lines capable of feeding the City are lost**
 - Reduces risk of large-scale outage due to transmission limitations

- 3) Keep customer costs competitive with surrounding Electric Utility companies**
 - Do not raise rates more than 15% cumulatively over the next 10 years

- 4) Limit overproducing (selling) when generating only from green sources**
 - Can not rely on overproducing to meet City's green goals. Market price conditions when are often negative when the wind speed is high

- 5) Serve as much of the City's electric load with green energy without compromising other guidelines**

Electric Cost per kWh, by Customer Class 2022 Data filed with IUC

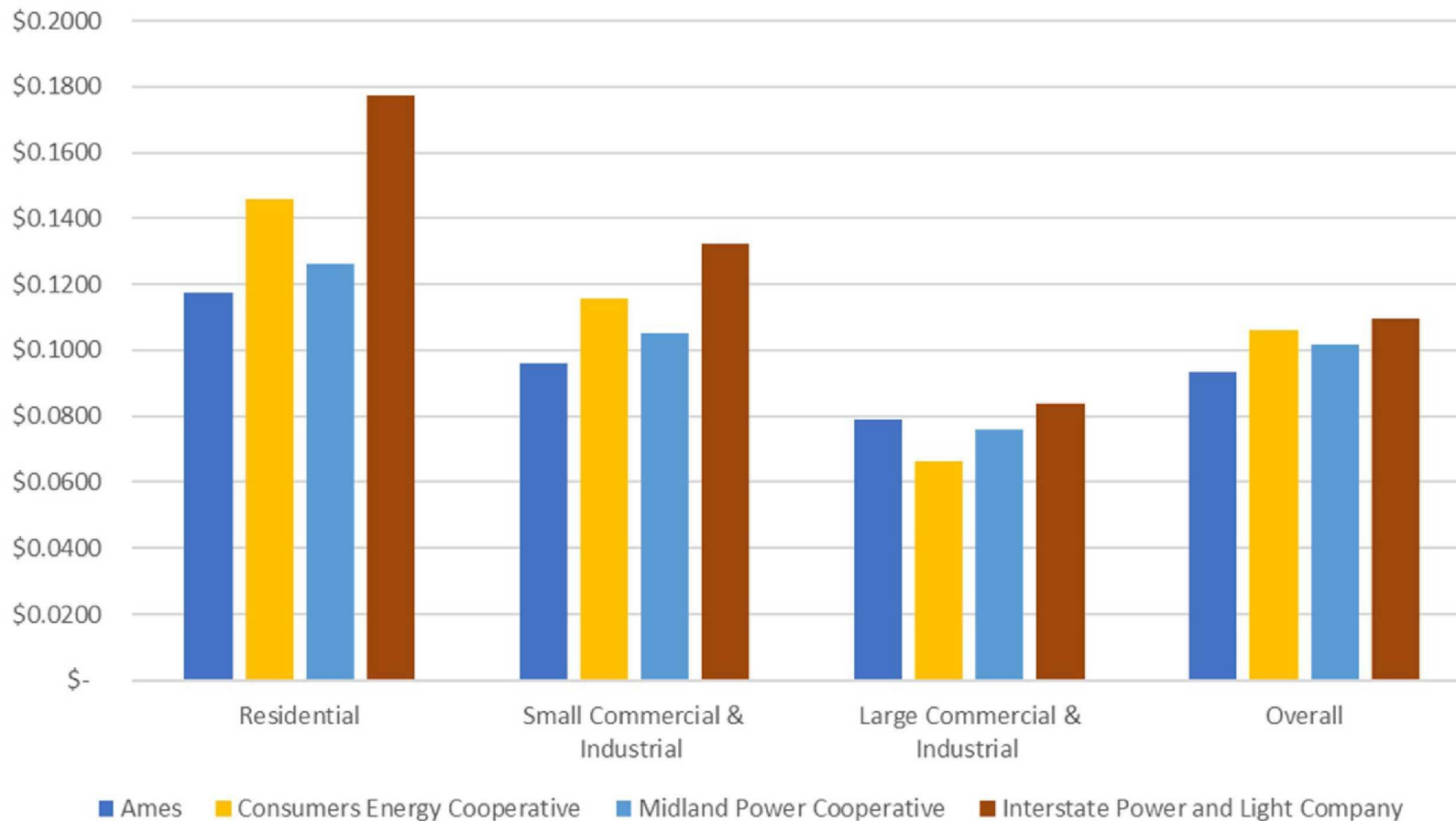


Chart shows the entire cost of electricity, including the energy costs, monthly service costs, and all additional costs like the Energy Adjustment Charge for the four electric utilities serving Ames. The cost per kWh figure is calculated by the entire consumer payments, divided by the total amount of energy (kWh) sold. This data is filed once per year with the Iowa Utilities Commission.

Note - these figures do not reflect the impact of recent rate increases by Alliant Energy or Midland Power.

Electric Cost per kWh, by Customer Class 2022 Data filed with IUC

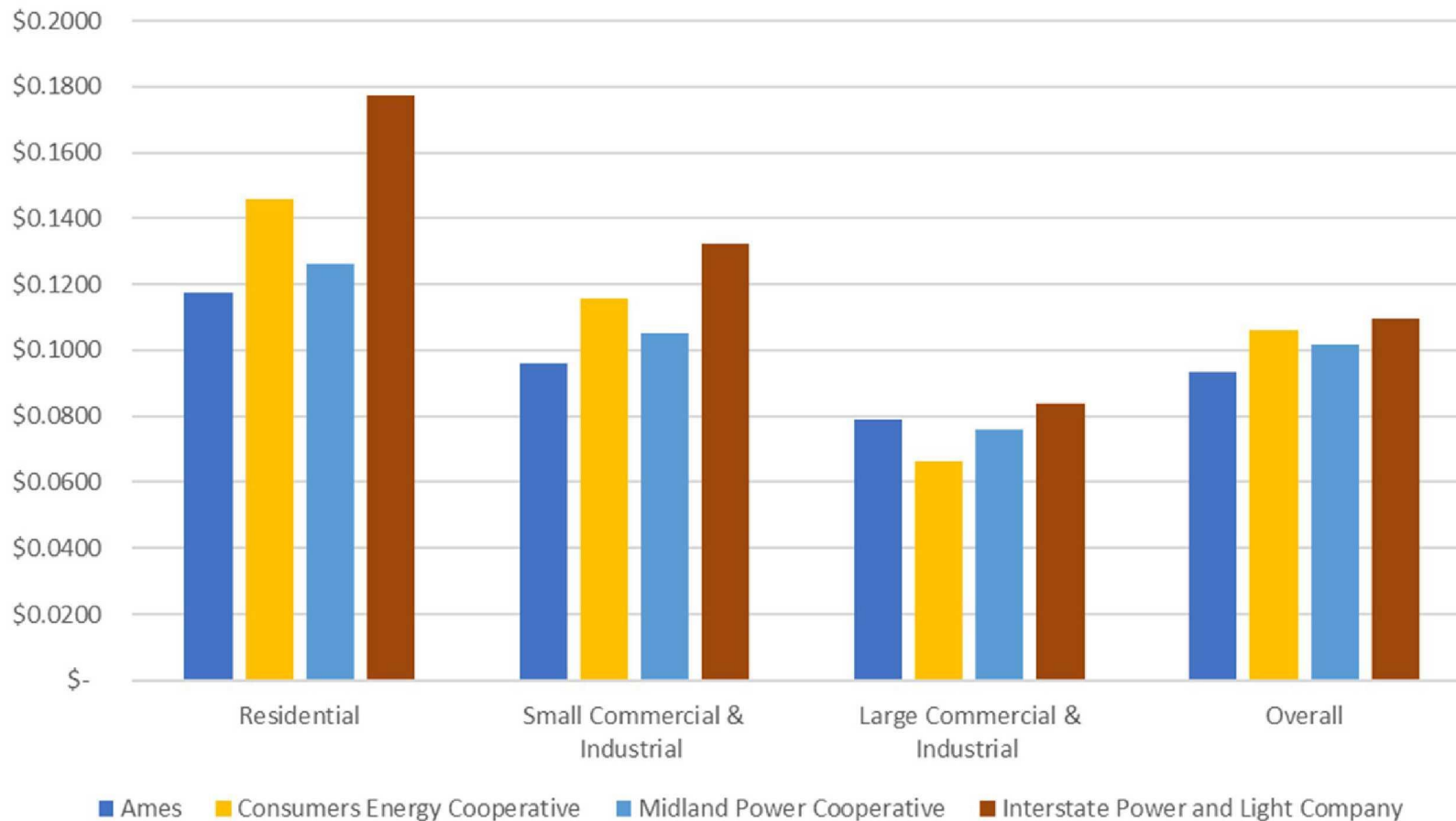


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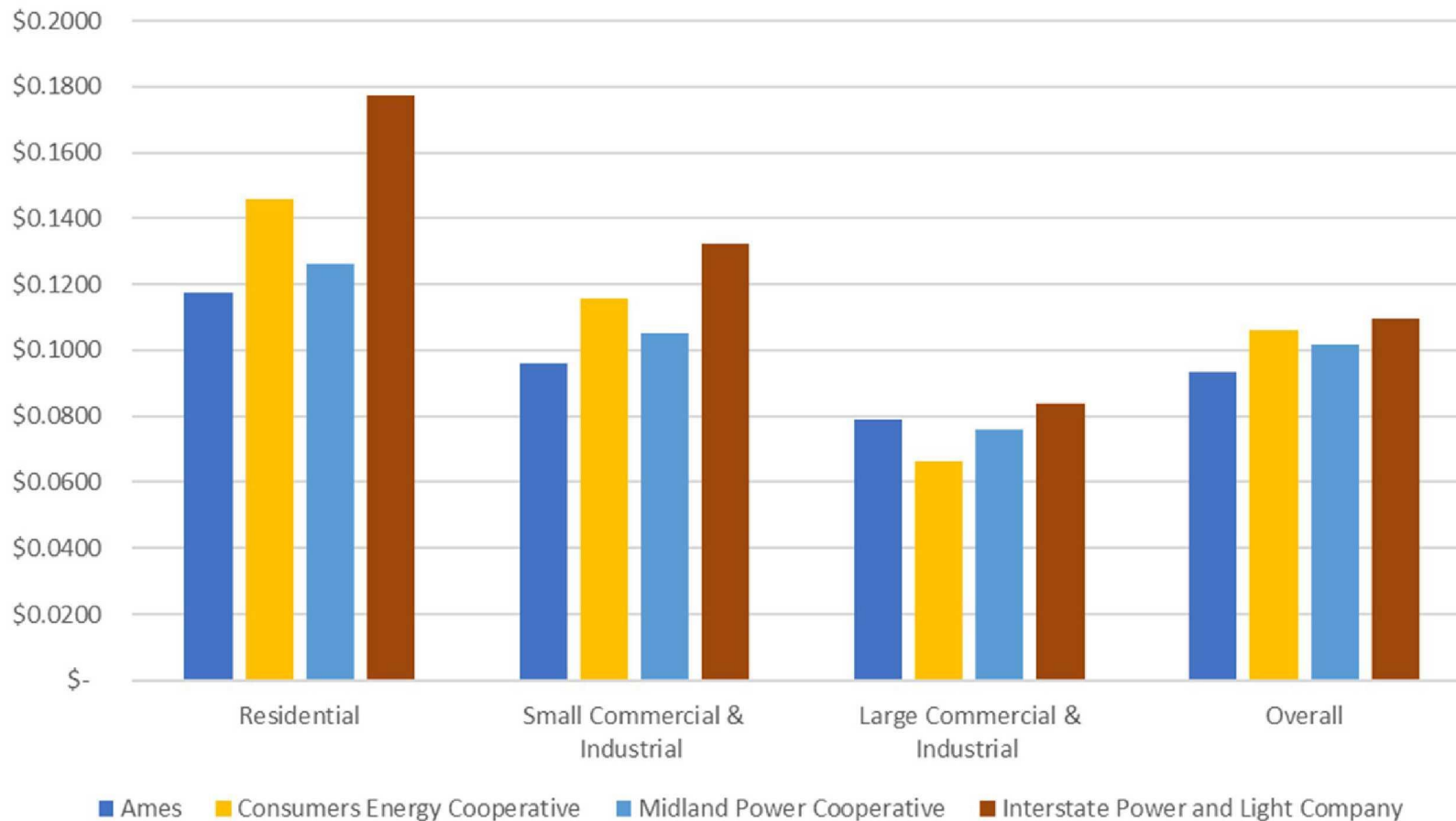


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Note - these figures do not reflect the impact of recent rate increases by Alliant Energy or Midland Power.

Here's what you're going to see in the Electric CIP

- Need to Replace Older generation, load growth
- New Projects in CIP
 - New Thermal (from savings to drop RDF)
 - New Green Energy (from 1.5%/yearly increase, can be increased/decreased as Council directs **have examples**)
- How to paying for?

City of Ames Electric

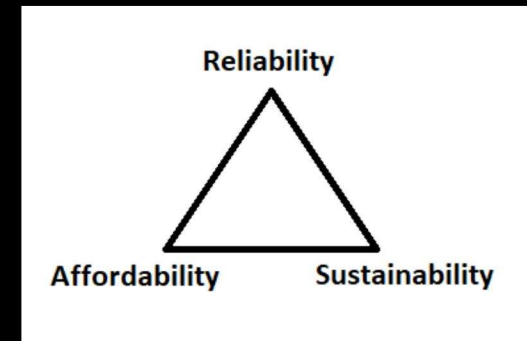
*Considerations for new
Electric Generation*



What We're Going to Cover

- Utility Priorities and Guidelines
- Current Utility status and the projected needs over
- Health Assessment of current generation
the next 10 years
- New Generation Technology assessment
- How new generation technology fits City of
- Utility plans for next 10 years
Ames

Utility Priorities



Affordability:

- Rates - Avoid large increases, compare to surrounding Utilities

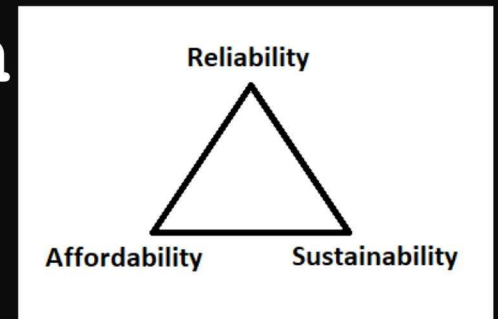
Sustainability:

- Green Resources - Intermittent Resources such as Wind and Solar generation.
 - Heavily Dependent on Mother Nature

Reliability:

- Transmission - Electric lines connecting Ames to the outside electric grid.
 - Ability to remove different transmission lines and still serve all Ames load without local generation
- Capacity - Ability to generate enough energy to meet customer's peak load
 - The System Operator (MISO) requires Utilities to have capability of covering 110% of peak load

Utility Plan Development Guidelines



- 1) **Maintain ability to serve City's peak load amount with generating units that can be turned on at anytime (Thermal Generation)**
 - Creates ceiling for energy pricing protecting utility from volatility in market
 - Provides Opportunity to sell energy to Market
 - Creates ceiling for capacity pricing.
- 2) **Under normal conditions, have three transmission options to serve the City's electric peak load without local generation on**
 - Reduces risk of large-scale outage due to transmission limitations
- 3) **Keep customer costs competitive with surrounding Electric Utility companies**
- 4) **Limit overproducing (selling) when generating only from green sources**
 - Market price conditions are often negative when the wind speed is high
- 5) **Serve as much of the City's electric load with green energy without compromising other guidelines**

Utility

Current Status

- 28,000 customers
- Peak demand of 138MW
- 630,000 MWh annual consumption
- Thermal Generation
 - 1967- Unit 7: 33MW, Natural Gas
 - 1972- Gas Turbine #1: 18MW, Fuel Oil
 - 1982- Unit 8: 65MW, Natural Gas
 - 2005- Gas Turbine #2: 29MW, Fuel Oil

Projected By 2035

- 30,000 customers
- Peak demand of 160MW
- 700,000 MWh annual consumption
- No longer burning RDF (2027)



Unit 7 and Unit 8 Health Assessment

- Retained HDR, Inc to review and document the condition of major systems and equipment associated with Units 7 and 8 and provide an overall health assessment
- HDR provided a thorough 48-page report that is summarized in three categories:

LEAST Concern – The equipment can reasonably be expected to continue operation through the future and beyond (5-10+ years) after RDF is no longer combusted given that appropriate maintenance and inspections continue.

MODERATE Concern – The equipment can reasonably be expected to continue operation after RDF is no longer combusted (10 years or less) given that appropriate maintenance and inspections continue.

CRITICAL Concern – The expected operational life of the equipment cannot be predicted and has elevated risk of failure.

Unit 7 Health Assessment

- Unit 7 built in 1967 = 58 yrs old
- Left column are specific systems
- X's not highlighted are indicating systems that are only in their respective category because of age
- Critical concern:
 - Boiler tubes
 - Turbine/Generator and Exciter
 - Condenser
 - Circulating water

Unit 7			
Equipment	LEAST Concern	MODERATE Concern	CRITICAL Concern
Boiler and Steam Drums			X
Main Steam Piping	X		
Induced Draft Fan		X	
Forced Draft Fan		X	
Air Preheater	X		
Stack		X	
Steam Turbine, Generator and Exciter			X
Boiler Feedwater Pumps and Piping		X	
Low Pressure Feedwater Heaters		X	
Deaerator and Storage Tank		X	
High Pressure Feedwater Heaters	X		
Condensate Pumps		X	
Condensate Storage Tank		X	
Condenser			X
Steam Jet Air Ejector		X	
Cooling Tower	X		
Circulating Water Pumps		X	
Circulating Water Piping			X
Electrostatic Precipitators	X		
GSU Transformer			X
Turbine Controls	X		
Excitation Controls	X		

Unit 7 and Unit 8 Health

Unit 7			
Equipment	LEAST Concern	MODERATE Concern	CRITICAL Concern
Boiler and Steam Drums			X
Main Steam Piping	X		
Induced Draft Fan		X	
Forced Draft Fan		X	
Air Preheater	X		
Stack		X	
Steam Turbine, Generator and Exciter			X
Boiler Feedwater Pumps and Piping		X	
Low Pressure Feedwater Heaters		X	
Deaerator and Storage Tank		X	
High Pressure Feedwater Heaters	X		
Condensate Pumps		X	
Condensate Storage Tank		X	
Condenser			X
Steam Jet Air Ejector		X	
Cooling Tower	X		
Circulating Water Pumps		X	
Circulating Water Piping			X
Electrostatic Precipitators	X		
GSU Transformer			X
Turbine Controls	X		
Excitation Controls	X		

Unit 8			
Equipment	LEAST Concern	MODERATE Concern	CRITICAL Concern
Boiler and Steam Drums			X
Main Steam Piping	X		
Induced Draft Fan		X	
Forced Draft Fan		X	
Air Preheater	X		
Stack		X	
Steam Turbine, Generator and Exciter		X	
Boiler Feedwater Pumps and Piping	X		
Low Pressure Feedwater Heaters		X	
Deaerator and Storage Tank	X		
High Pressure Feedwater Heaters	X		
Condensate Pumps		X	
Condensate Storage Tank	X		
Condenser		X	
Steam Jet Air Ejector		X	
Cooling Tower	X		
Circulating Water Pumps		X	
Circulating Water Piping		X	
Electrostatic Precipitators		X	
GSU Transformer			X
Turbine Controls	X		
Excitation Controls	X		
DCS	X		

Unit 7 and Unit 8 Health Assessment

Unit 7 Summary:

1. Unit 7 will be 60 years old in 2027
2. Repairing/replacing the equipment labeled in **CRITICAL Concern** would be 2/3rds the cost to entirely replace Unit 7 with a new unit.
3. After completing RDF program in 2027, the boiler will need significant repair to continue operation

Unit 8 Summary:

1. Unit 8 is old (43 yrs) but most of the equipment is in good repair
2. Need to continue maintenance plans to extend life another 10+ years
3. The less RDF burned in the boiler, the longer the tubes can continue as is
4. The smaller number of hours operated, the longer the unit can be preserved for capacity

Future Planning:

1. Burn RDF in Unit 7 as much as possible to preserve Unit 8
2. Retire Unit 7 sometime after the completion of RDF program
3. Build new thermal generation to replace Unit 7
4. Operate Unit 8 less often to preserve for capacity
5. Include Unit 8 retirement some time after 10 years

Generation Technology Study

- May 2024, Retained HDR Engineering, Inc to perform a Technology Assessment
 - Results would provide Capital and O&M costs, performance characteristics, and amount of CO2 per MWh
 - A Class 5 estimate was used to obtain a rough order of magnitude (-50% to +100%)
 - Assessment included three different types of green resources:
 - Solar
 - Wind
 - Battery
 - Three different types of Thermal generation:
 - Reciprocating Internal Combustion Engine (RICE)
 - Simple Cycle Combustion Turbine (CT)
 - Combined Cycle (CC)
 - Size of Thermal generation considered:
 - Unit 7 = 33MW Growth = 20MW Unit 8 = 65MW → 120MW

Generation Technology- Green Resources



Solar

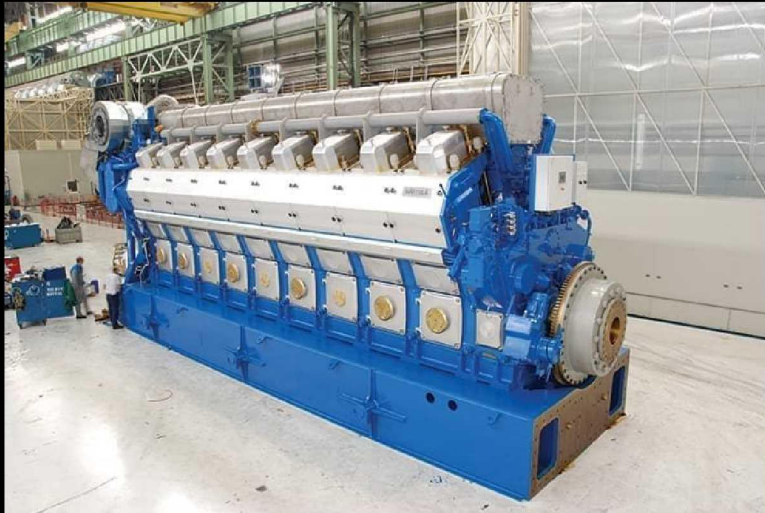


Battery
Storage

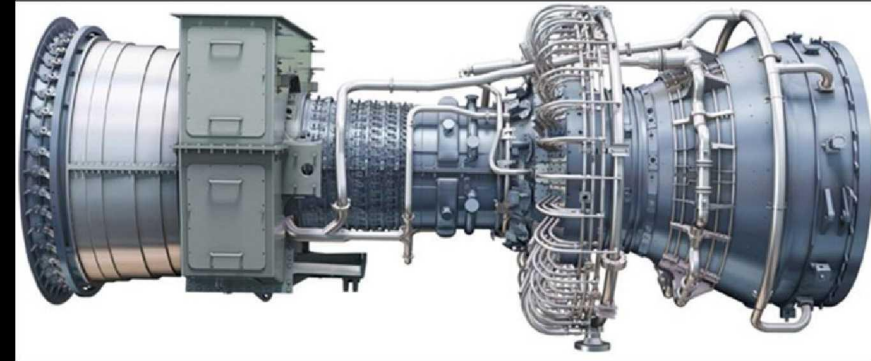


Wind

Generation Technology- Thermal Generation



Reciprocating
Engines (RICE)



Simple Cycle
Combustion Turbine
(CT)

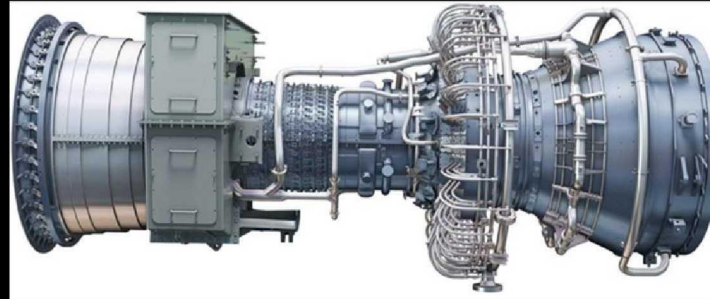


Combined
Cycle (CC)

Thermal Generation Options



RICE



CT



CC

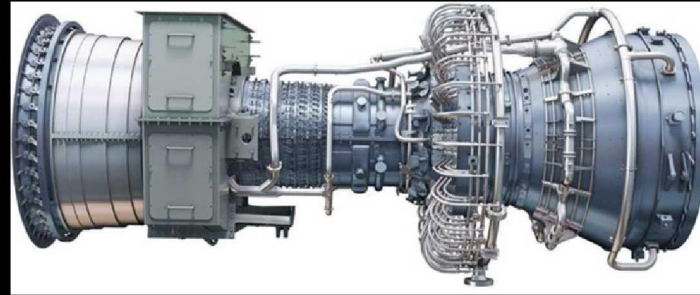
Why These Thermal Generation Options?

- Ability to cycle (turn on and off) multiple times per day
- Provide Heat Rates (ratio of fuel to power) that are competitive in market
- Relatively lower cost to install
- Proven technology available today
- Can operate in Midwest environment
- Relatively clean for the environment

Thermal Generation Study Results



RICE



CT



CC

- 2 min to full load
- Start/Stops - Unlimited
- Heat Rate* - 7,500 Btu/kWh
- Efficiency - 49%
- Constant capacity all year
- Cost/kW - Medium

- 10 min to full load
- Start/Stops - Limited
- Heat Rate - 8,500 Btu/kWh
- Efficiency - 41%
- Capacity affected seasonally
- Cost/kW - Medium

- 3 hours to full load
- Start/Stops - Limited
- Heat Rate - 7,000 Btu/kWh
- Efficiency - 57%
- Capacity affected seasonally
- Cost/kW - Low

Moving to Modeling

- Modeling was then needed to determine how each technology would fit City of Ames
- September 2024 - BrightNight, LLC was retained to perform modeling.
 - BrightNight utilized its energy modeling and optimization tool to discover resource mixes that would best fit Ames.
 - The tool performs historical and forward-looking analyses, incorporating long-term historical weather and market data as well as future forecasts.
- Modeled over 800 scenarios, reduced to the 10 least cost options for each technology

Modeling

Average Load data for 2022

- Average day for each month
- Average load per hour

What City of Ames

experiences:

- Customers higher demands:
 - Summer midday
- Customers lower demands:
 - Spring & Fall throughout the

Average Load [MW]

		Month											
		1	2	3	4	5	6	7	8	9	10	11	12
Hour	0	67.2	66.5	57.6	56.6	59.3	68.8	73.4	72.7	62.7	54.9	58.2	65.3
	1	66.3	65.3	56.2	54.6	57.2	64.7	69.7	69.2	59.1	53	56.5	64.4
	2	65.6	64.5	55.5	54.2	54.8	62.5	67	65.9	57.2	51.9	55.9	63.3
	3	66.1	64.3	55.5	53.5	54.2	61.3	65.4	64.3	56	51.4	55.7	63.1
	4	66.8	65.6	56.3	54.2	54.1	60.7	64.8	63.8	56	51.4	56.3	64.5
	5	69.4	68	59.3	57.3	55.9	62	65.5	65.2	57.6	53.7	59.2	66.9
	6	73.1	72.3	62.9	60.8	58.6	64.4	67.7	67.3	61.3	57.9	63.4	70.4
	7	75.7	74.8	65.5	63.1	62	69.6	72.1	71.6	64	61	65.8	73.3
	8	76.8	75.7	67.1	65.3	66	74.4	77.1	76	67.5	62.5	67.5	74.5
	9	77.3	76.4	68.5	67	69	78.6	82.3	81.9	71.1	64.4	68.2	75.1
	10	77.4	76.7	68.6	68	71.8	83.4	87.7	86.8	75.6	65.9	69.6	75.7
	11	77.2	76.8	68.9	68.8	74	86.9	92.4	91.4	78.8	67	69.9	75.6
	12	76.7	76.2	69.1	69.3	75.9	90	96.3	95.6	82.3	68.5	70.2	75.6
	13	75.9	75.6	69.1	68.6	77.1	92.6	99.4	98.6	84.4	68.9	69.3	74.7
	14	75.3	74.8	68.2	68.3	77.9	94.3	101	101	85.8	68.7	68.9	74.2
	15	75	74.2	67.3	67.2	78.4	96.3	103	103	86.5	68.7	68.7	74
	16	76.4	75.3	67.8	67.1	79.5	97.4	103	104	87.6	69.2	69.9	76.2
	17	80.5	77.1	68	67.3	79.5	98	105	104	87.2	69.4	72.7	79.6
	18	80.8	79.6	69	66.9	78.8	96.3	103	101	84.6	69.7	72.4	78.5
	19	79.5	78.1	69.1	67.2	76.2	92.9	99	97.5	82.5	69.6	71.2	77.2
	20	77.4	77.1	68.3	67.5	74.7	88.7	93.4	93.5	80.2	67.6	69.3	75.3
	21	75.1	74.3	66.2	65.4	72.4	85.5	90.2	89.5	75.9	64.7	67.1	73.1
	22	71.7	71.4	62.7	62.2	67.8	79.7	84.5	83.6	70.9	61.4	63.9	70
	23	69.3	68.2	60.3	58.7	63.5	74.2	78.4	77.6	66.3	57.5	61.2	67.2

Modeling – Solar and Wind Energy

Average Load [MW]

Month		1	2	3	4	5	6	7	8	9	10	11	12
Hour	0	67.2	66.5	57.6	56.6	59.3	68.8	73.4	72.7	62.7	54.9	58.2	65.3
	1	66.3	65.3	56.2	54.6	57.2	64.7	69.7	69.2	59.1	53	56.5	64.4
	2	65.6	64.5	55.5	54.2	54.8	62.5	67	65.9	57.2	51.9	55.9	63.3
	3	66.1	64.3	55.5	53.5	54.2	61.3	65.4	64.3	56	51.4	55.7	63.1
	4	66.8	65.6	56.3	54.2	54.1	60.7	64.8	63.8	56	51.4	56.3	64.5
	5	69.4	68	59.3	57.3	55.9	62	65.5	65.2	57.6	53.7	59.2	66.9
	6	73.1	72.3	62.9	60.8	58.6	64.4	67.7	67.3	61.3	57.9	63.4	70.4
	7	75.7	74.8	65.5	63.1	62	69.6	72.1	71.6	64	61	65.8	73.3
	8	76.8	75.7	67.1	65.3	66	74.4	77.1	76	67.5	62.5	67.5	74.5
	9	77.3	76.4	68.5	67	69	78.6	82.3	81.9	71.1	64.4	68.2	75.1
	10	77.4	76.7	68.6	68	71.8	83.4	87.7	86.8	75.6	65.9	69.6	75.7
	11	77.2	76.8	68.9	68.8	74	86.9	92.4	91.4	78.8	67	69.9	75.6
	12	76.7	76.2	69.1	69.3	75.9	90	96.3	95.6	82.3	68.5	70.2	75.6
	13	75.9	75.6	69.1	68.6	77.1	92.6	99.4	98.6	84.4	68.9	69.3	74.7
	14	75.3	74.8	68.2	68.3	77.9	94.3	101	101	85.8	68.7	68.9	74.2
	15	75	74.2	67.3	67.2	78.4	96.3	103	103	86.5	68.7	68.7	74
	16	76.4	75.3	67.8	67.1	79.5	97.4	103	104	87.6	69.2	69.9	76.2
	17	80.5	77.1	68	67.3	79.5	98	105	104	87.2	69.4	72.7	79.6
	18	80.8	79.6	69	66.9	78.8	96.3	103	101	84.6	69.7	72.4	78.5
	19	79.5	78.1	69.1	67.2	76.2	92.9	99	97.5	82.5	69.6	71.2	77.2
	20	77.4	77.1	68.3	67.5	74.7	88.7	93.4	93.5	80.2	67.6	69.3	75.3
	21	75.1	74.3	66.2	65.4	72.4	85.5	90.2	89.5	75.9	64.7	67.1	73.1
	22	71.7	71.4	62.7	62.2	67.8	79.7	84.5	83.6	70.9	61.4	63.9	70
	23	69.3	68.2	60.3	58.7	63.5	74.2	78.4	77.6	66.3	57.5	61.2	67.2

City Average Load

Wind Generation [Normalized | MW]

Month		1	2	3	4	5	6	7	8	9	10	11	12
hour	0	0.57	0.56	0.65	0.62	0.58	0.60	0.50	0.51	0.64	0.62	0.62	0.49
	1	0.56	0.54	0.65	0.60	0.56	0.64	0.50	0.50	0.64	0.61	0.63	0.47
	2	0.55	0.53	0.62	0.54	0.55	0.64	0.49	0.49	0.60	0.61	0.60	0.47
	3	0.54	0.51	0.61	0.51	0.53	0.63	0.49	0.47	0.58	0.59	0.58	0.46
	4	0.52	0.53	0.59	0.47	0.54	0.57	0.45	0.47	0.54	0.59	0.58	0.47
	5	0.51	0.54	0.56	0.45	0.52	0.60	0.44	0.44	0.55	0.57	0.56	0.48
	6	0.53	0.54	0.57	0.44	0.45	0.56	0.37	0.41	0.57	0.57	0.56	0.47
	7	0.54	0.56	0.57	0.42	0.39	0.47	0.27	0.30	0.52	0.55	0.57	0.47
	8	0.55	0.55	0.54	0.40	0.32	0.38	0.21	0.22	0.42	0.49	0.54	0.46
	9	0.52	0.49	0.51	0.41	0.30	0.34	0.20	0.20	0.36	0.44	0.49	0.44
	10	0.47	0.47	0.48	0.40	0.30	0.34	0.20	0.22	0.36	0.44	0.47	0.39
	11	0.46	0.44	0.46	0.42	0.31	0.35	0.21	0.22	0.38	0.47	0.46	0.35
	12	0.47	0.43	0.45	0.45	0.34	0.37	0.24	0.21	0.38	0.49	0.48	0.35
	13	0.47	0.44	0.46	0.44	0.35	0.39	0.25	0.23	0.40	0.49	0.48	0.36
	14	0.49	0.42	0.46	0.46	0.36	0.41	0.28	0.23	0.40	0.49	0.50	0.37
	15	0.51	0.42	0.46	0.47	0.38	0.42	0.28	0.25	0.41	0.47	0.52	0.38
	16	0.53	0.45	0.47	0.48	0.38	0.42	0.29	0.26	0.41	0.47	0.55	0.40
	17	0.59	0.48	0.48	0.50	0.39	0.48	0.28	0.26	0.39	0.49	0.58	0.46
	18	0.63	0.52	0.52	0.55	0.38	0.49	0.29	0.31	0.51	0.55	0.61	0.50
	19	0.65	0.54	0.57	0.61	0.45	0.55	0.37	0.39	0.59	0.56	0.63	0.53
	20	0.65	0.57	0.61	0.63	0.52	0.63	0.46	0.46	0.67	0.59	0.65	0.53
	21	0.61	0.57	0.63	0.65	0.57	0.66	0.51	0.51	0.67	0.61	0.63	0.55
	22	0.59	0.58	0.65	0.66	0.58	0.68	0.52	0.54	0.68	0.62	0.63	0.52
	23	0.58	0.55	0.64	0.64	0.60	0.62	0.50	0.52	0.68	0.60	0.62	0.52

City Wind Farm

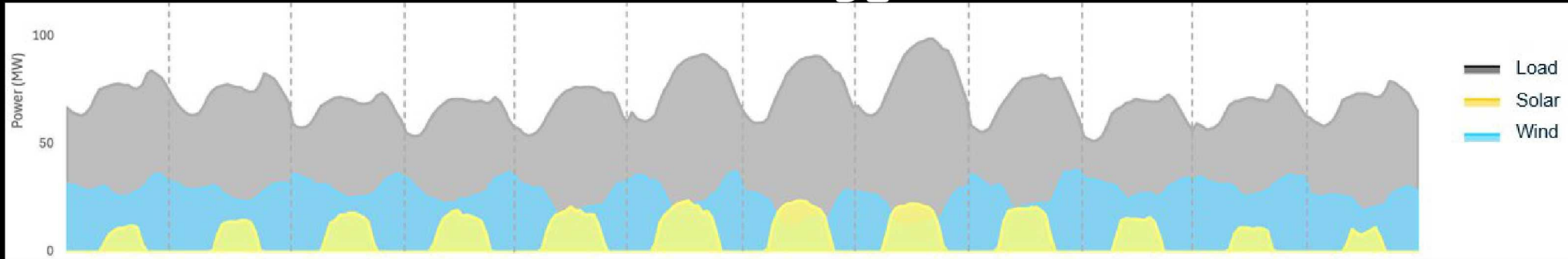
PV Generation [Normalized | MW]

Month		1	2	3	4	5	6	7	8	9	10	11	12
Hour	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.04	0.11	0.05	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.01	0.12	0.30	0.40	0.37	0.20	0.08	0.00	0.00	0.00
	7	0.00	0.02	0.22	0.33	0.45	0.52	0.55	0.50	0.42	0.22	0.04	0.00
	8	0.13	0.24	0.40	0.46	0.52	0.58	0.63	0.60	0.57	0.44	0.26	0.12
	9	0.25	0.38	0.44	0.52	0.55	0.64	0.68	0.63	0.59	0.47	0.33	0.32
	10	0.30	0.42	0.52	0.57	0.57	0.68	0.68	0.63	0.60	0.46	0.34	0.26
	11	0.33	0.42	0.52	0.58	0.63	0.70	0.71	0.67	0.60	0.46	0.33	0.24
	12	0.33	0.41	0.54	0.50	0.58	0.71	0.71	0.67	0.60	0.45	0.31	0.27
	13	0.36	0.44	0.54	0.52	0.58	0.65	0.70	0.66	0.61	0.44	0.33	0.31
	14	0.36	0.44	0.52	0.49	0.52	0.65	0.65	0.63	0.62	0.48	0.32	0.34
	15	0.34	0.42	0.49	0.47	0.53	0.55	0.62	0.61	0.58	0.41	0.30	0.20
	16	0.10	0.28	0.42	0.43	0.52	0.57	0.58	0.56	0.51	0.24	0.03	0.00
	17	0.00	0.01	0.15	0.26	0.36	0.49	0.49	0.40	0.20	0.01	0.00	0.00
	18	0.00	0.00	0.00	0.02	0.12	0.26	0.22	0.10	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

City Solar Farm

- Wind Resource provides more energy annually but not when it is needed
- Solar Resource provides energy when needed but much less energy

Modeling – Solar and Wind Energy



Average City of Ames Load Profile

Average Performance of 63MW Wind Resource

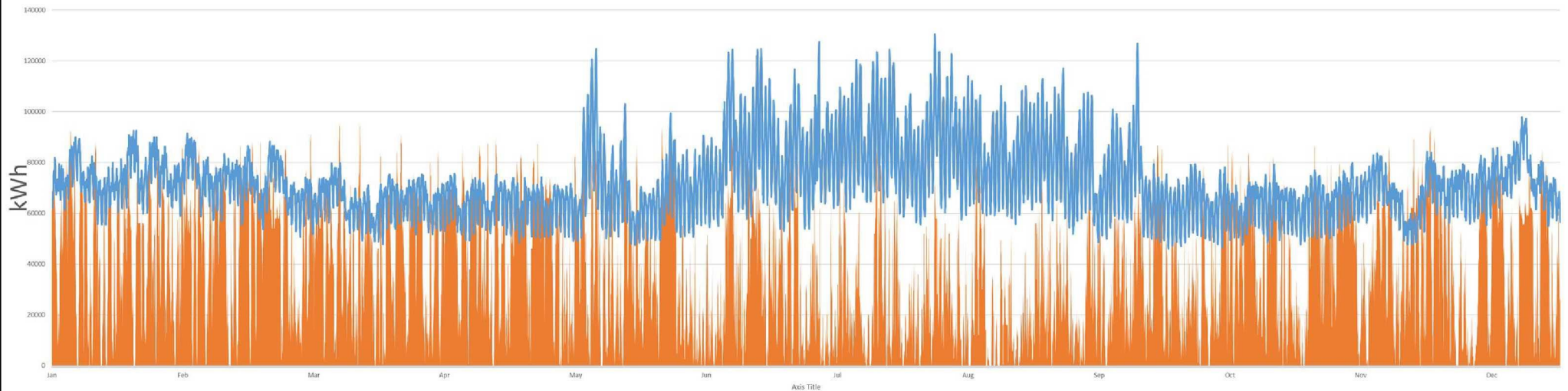
Average Performance of 26MW Solar Resource

- 63MW of Wind and 26MW of Solar accomplishes 50% of power provided by green resources
- There is still a large need for more generation
 - The “Average” graph does not show the whole story
 - Need to look at actual performance to determine the best generation to fill in the other 50% plus meet the Utility

18

Modeling – Solar and Wind

Yearly Energy Production vs. Load Profile 2022



City of Ames Load Profile

63MW of Wind and 26MW of Solar Performance

- Looking at actual performance, one can see adding more wind and solar will cause over production in some months and in other months there will still be a large need for more generation
 - Adding batteries – Customer costs go very high
- 63MW of Wind and 26MW of Solar show to be the best fit for achieving 50% green

Modeling – Thermal Generation

Considerations and Assumptions:

- 150MW plant was modeled for each Thermal Generation option (determined by minimum CC size)
 - Combined Cycle (CC) – 1 unit
 - Reciprocating Internal Combustion Engine (RICE) – 8 units
 - Simple Cycle Combustion Turbine (CT) – 3 Units
- Assumed 20-year life – Each will have capability of operating longer but 20 yrs was used to line up with debt service
- Each scenario uses what is called the Levelized Cost of Energy (LCOE)
 - This is the average cost per MWh over the lifetime of the asset
 - All costs (Operating and Maintenance, Debt service, Fuel, etc)
 - The City's combined dispatchable generation last year averaged a LCOE of \$90/MWh
 - Value of Capacity is not reflected in this number – LCOE assumes all value is in energy produced
- Each scenario also shows expected amount of operating per year, called **Capacity Factor**
 - Capacity Factor (CF) = total unit capability x 8760hrs (1 year) / ²⁰

Modeling – Thermal

Thermal Type	LCOE Yr 1 [\$/MWh]	Thermal CF Yr 1 [%]	CAPEX [\$ 10 ⁶]
CC	61.8	49%	205
CC >50% Green Wind	70.6	49%	356
CC >50% Green Wind&Solar	71.4	46%	358
CC >100% Green	77.2	49%	470
RICE	70.7	22%	200
RICE >50% Green Wind	79.5	22%	352
RICE >50% Green Wind&Solar	80.2	21%	354
CT	73.8	11%	207
CT >50% Green Wind	82.6	11%	359
CT >50% Green Wind&Solar	83.1	11%	361

- The Options with green resources include IRA funding. Removing IRA funding increases the \$/MWh up roughly \$15
- The scenario with the lowest LCOE is Combined Cycle.
 - Modeling scope included using similar dispatching criteria for each technology, only responding to Day Ahead pricing.

Modeling – Thermal

Thermal Type	LCOE Yr 1 [\$/MWh]	Thermal CF Yr 1 [%]	CAPEX [\$ 10^6]
CC	61.8	49%	205
CC >50% Green Wind	70.6	49%	356
CC >50% Green Wind&Solar	71.4	46%	358
CC >100% Green	77.2	49%	470
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RICE >50% Green Wind	79.5	22%	352
RICE >50% Green Wind&Solar	80.2	21%	354
CT	73.8	11%	207
CT >50% Green Wind	82.6	11%	359
CT >50% Green Wind&Solar	83.1	11%	361

- The capital amounts are very high
 - Modeled each plant at 150MW – Only need 120MW
 - RICE and CT can be built to 120MW, reducing CAPEX by \$40 million for each of these options
- RICE and CT can be built in stages, allowing the use of current assets for longer
- RICE and CT can respond to Real Time market, working well with green

Potential Site

Existing Coal Yard

- Land Area
 - Located close to existing Unit 7 and Unit 8
 - 8 acres at current site
 - Additional 2 acres if able to use RRP current site
- Substation Access
 - Ames Plant Substation located just to the Northeast
 - Open connection to Ames Plant sub once RDF program ends
- Large Gas line on North side of property

Conclusion

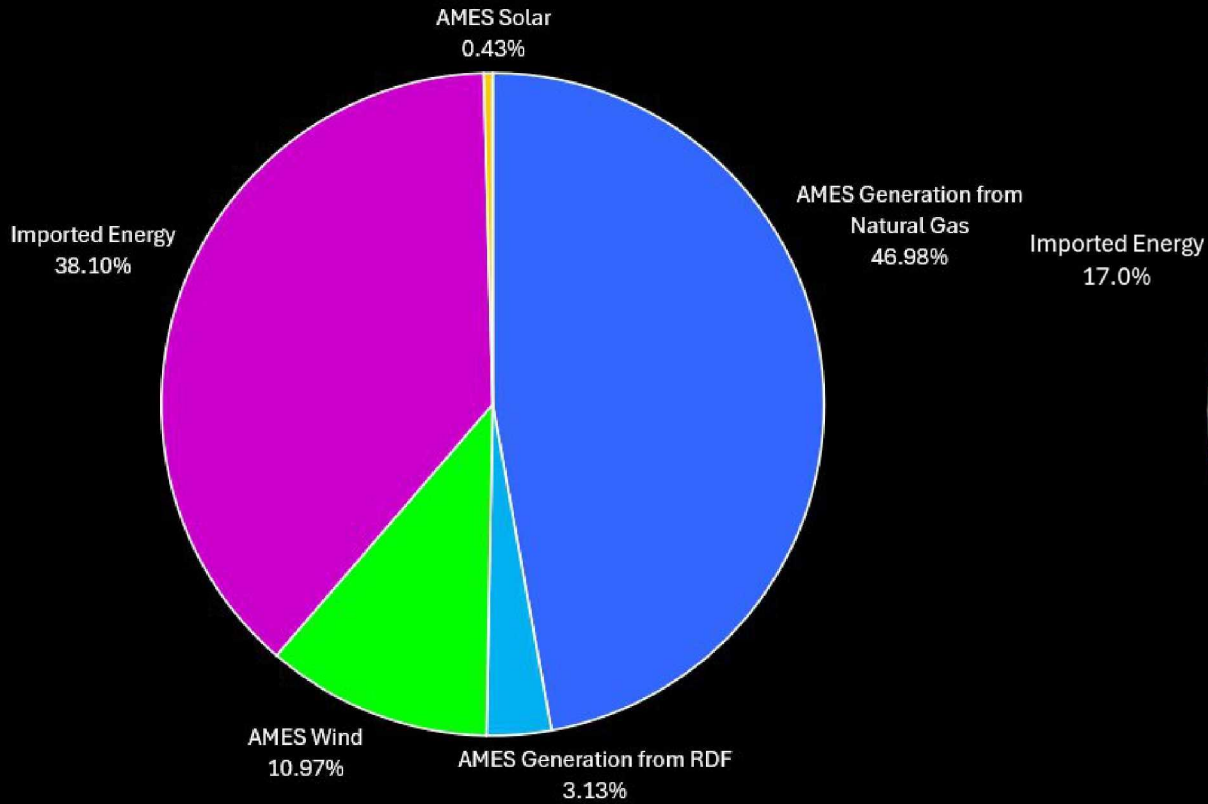
- Existing Steam Units:
 - Unit 7 = Will need major maintenance after RDF program ends. Retire in less than 10 years
 - Unit 8 = Aging and needs to be considered for retirement in less than 15 years
- Thermal Generation Options:
 - Combined Cycle = Lead times 5+ yrs, Large dollar investment, Less flexible, Needs to run
 - Combustion Turbine = Lead times 5+ yrs, Staged buildout, Less flexible, Poor heat rate
 - Reciprocating Engines = Short lead times, Staged Buildout, Very Flexible, good heat rate
- Utility Plan Going Forward
 - RICE is the best fit for City of Ames Electric
 - First build 60 MW (3 units) to replace Unit 7 capacity and 20MW for anticipated load growth. Located at the old coal yard site
 - Build additional 60MW (3 units) to replace Unit 8 within next 15 years - can review plan at that time
 - Build or contract 63MW of Wind and 26MW of Solar to gain > 50% Renewable Energy

Cost/Rate Impacts

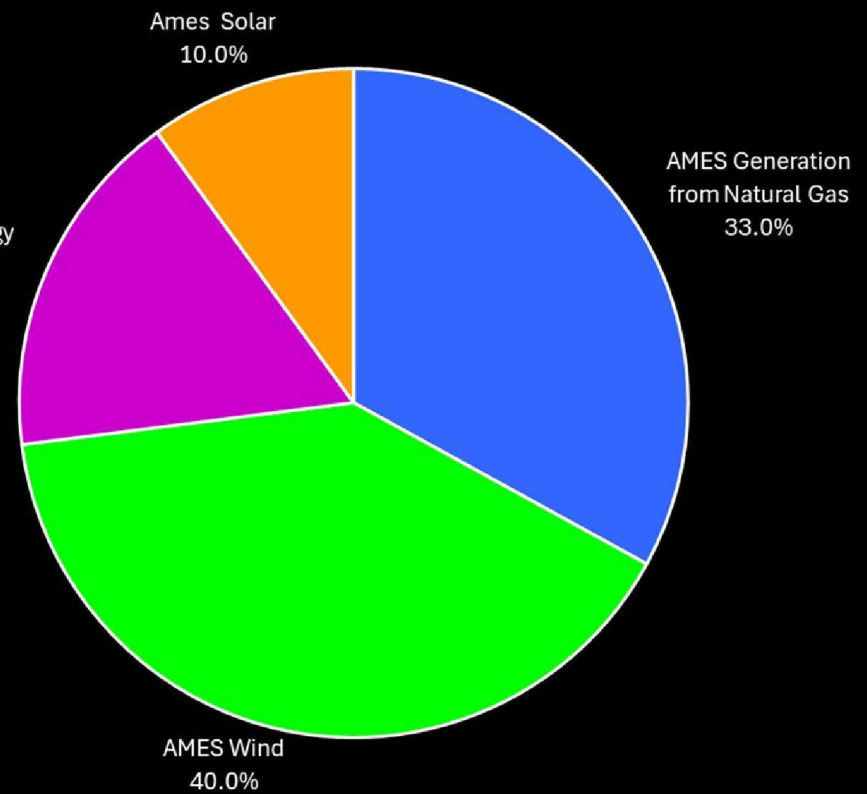
- Current Electric CIP, passed by Council March 2025 includes:
 - Funding for 3 RICE engines
 - Replaces Unit #7 by 2030
 - Meets expected load growth
 - Has fast response time to meet energy market fluctuations, black start
 - Funding for substation ownership and new Transmission Source
 - Improves reliability
 - Up to \$50M investment in Renewable Generation
- Funding
 - Savings from discontinuation of Waste-to-Energy
 - Anticipated 1.5% rate increases over the next 5 year (Cost of Service Study)
 - Current Wind contract replaced in 2029, gaining double energy for same price
 - Long-term Unit #7 CIP projects eliminated: O & M reduced

26

AMES Energy Mix, 2024



AMES Energy Mix, 2035



Energy Mix
Today vs. End of 10yr plan

Timeline

Jul 2025

- Procure Engineering Services
- Start Permitting Process

Nov 2026

- Issue Contracts for Construction

Apr 2029

- Commercial Operation of new generation

2035+

- Install 60MW of New Generation
- Retire Unit 8

Feb 2026

- Order 3 Engines
- Order Transformers & Switchgear

Aug 2027

- Start Construction

2030+

- Retire Unit 7



Question

S



ITEM #: 4
DATE: 10-21-25
DEPT: ELEC

COUNCIL ACTION FORM

**SUBJECT: ENGINEERING SERVICES FOR RECIPROCATING INTERNAL
COMBUSTION ENGINE (RICE) ELECTRIC GENERATION FACILITY**

BACKGROUND:

The City's Electric Utility is in the midst of dynamic changes. The primary fuels used in the City's Power Plant ten years ago (coal and refuse derived fuel) are different from those used today (natural gas and refuse derived fuel), and those anticipated to be used in 2027 (natural gas alone).

Increasing demand for electric vehicles and other devices has changed how metering infrastructure and rates are used to manage growth in load. Extreme weather events (e.g., the 2020 derecho) and infrastructure investments by neighboring utilities have presented the need and opportunity for additional electric transmission capabilities. Finally, the City's Climate Action Plan has called for significant changes in how energy is produced to serve Ames customers' needs.

In light of these dynamics and considering the infrastructure currently in place to meet the Utility's needs, staff presented a "first-look" of its long-range plan to Council on December 17, 2024. At this meeting, staff presented the results of studies that were performed by Electric staff and engineering consultants, in the areas of Unit Health Assessment, Generation Alternatives, and Generation Optimization. These studies helped determine the expected remaining life of Unit 7 and Unit 8 as well as determine the best technology to replace Unit 7, provide additional capacity for today's load growth, and eventually replace Unit 8.

On May 1, 2025, staff issued a Request for Proposals (RFP) to hire an engineering firm to serve as the Utility's consultant to design a generation plant to meet the short and long-term capacity obligations while also considering operational costs and characteristics. A discussion of the evaluation process and the proposals received was presented at the July 22, 2025 City Council meeting.

After evaluating the proposals, staff determined that the proposal from Sargent & Lundy LLC, Chicago, Illinois is most acceptable. The experience and qualifications of the personnel, along with the significant number of similar projects completed by the firm, best fit the needs of the City. Sargent & Lundy has considerable experience with RICE engines, which sets it apart from other engineering firms for this project. The firm emphasized a thorough approach to the project, including internal checks and balances to ensure that the individual project components align with the overall project objectives. The description of this approach was particularly impressive to the evaluation team.

Because of the more thorough approach to the design work, Sargent & Lundy assumed a greater number of staff hours would be involved in completing the scope. Based on the submitted rates and hours, the estimated cost for the Sargent & Lundy contract is

\$6,885,000. It is important to note that the actual amount of the contract awarded to Sargent & Lundy will be billed on a time and materials basis with a cost-not-to-exceed \$6,885,000. It is important to note that invoices will only be paid according to the rates provided, for actual time spent.

The majority of this contract will be expended in FY 2025/26 as design and engineering is performed. There is currently a balance of \$3,050,000 available in the current fiscal year for this project, consisting of \$2,000,000 from the adopted FY 2025/26 budget and \$1,050,000 in project savings in FY 2024/25, which will be carried over into FY 2025/26. In addition, the adopted 2025-2030 CIP reflects \$7,000,000 in FY 2026/27. This amount is earmarked for building/infrastructure, and staff will draft the 2026-2031 CIP to reflect the portion of this funding that is used for engineering.

It is intended to cover these costs from the available balance in the Electric Fund (currently >\$50,000,000), and reimburse the Fund when bonds are issued for the entire generation project in FY 2026/27.

At the July 22, 2025 meeting, City Council directed staff to pursue negotiations with Sargent & Lundy LLC, Chicago, Illinois to develop an Engineering Services contract. Electric Services staff and the staff from Sargent & Lundy have come to an agreement in principle. The agreement must be approved by Sargent & Lundy's board, which meets on the morning of the City Council meeting (October 21). The version that will be presented to Sargent & Lundy's board is attached. However, if City staff receives notification that the board has rejected or amended the agreement, then staff may request that Council delay approval until the outstanding issues can be resolved.

ALTERNATIVES:

1. Award a contract to Sargent & Lundy LLC, Chicago, Illinois, for Engineering Services for Reciprocating Internal Combustion Engine (RICE) Electric Generation Facility, in the amount not-to-exceed \$6,885,000.
2. Direct staff to make modifications to the proposed contract.
3. Do not award a contract at this time.

CITY MANAGER'S RECOMMENDED ACTION:

The last time Electric Services expanded its baseload generation capacity was in the 1980s. Customer demands have grown, and generation infrastructure has aged since then. Staff has extensively studied the needs, the life assessment of the existing generation, the power production technologies available, and the financial requirements to afford the additions. It is time to add new generation resources to meet utility requirements.

Obtaining Engineering services from a consultant with extensive RICE plant experience and capability is crucial for the Electric Services Department to ensure success in building a generation plant that meets the short- and long-term capacity obligations currently facing the utility. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No.1 as stated above.

ATTACHMENT(S):

E500-2020 10.17.25 COA & S&L Clean Final.docx

E500-2020-Exhibits 10.17.25 COA & S&L Clean Final.docx

AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared by



AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

TABLE OF CONTENTS

	Page
Article 1— Services Of Engineer	1
1.01 Scope	1
Article 2— Owner’s Responsibilities	1
2.01 Project Information	1
2.02 Owner’s Instructions Regarding Bidding and Front-End Construction Contract Documents Error! Bookmark not defined.	
2.03 Owner-Furnished Services.....	Error! Bookmark not defined.
2.04 Owner’s General Responsibilities	2
2.05 Payment.....	3
Article 3— Schedule For Rendering Services	4
3.01 Commencement	4
3.02 Time for Completion.....	4
Article 4— Invoices And Payments	4
4.01 Invoices	4
4.02 Payments	4
Article 5— Opinions Of Cost	Error! Bookmark not defined.
5.01 Opinions of Probable Construction Cost	Error! Bookmark not defined.
5.02 Opinions of Total Project Costs	Error! Bookmark not defined.
Article 6— General Considerations.....	5
6.01 Standards of Performance.....	5
6.02 Ownership and Use of Documents.....	7
6.03 Electronic Transmittals	9
6.04 Insurance	9
6.05 Suspension and Termination	10
6.06 Successors, Assigns, and Beneficiaries	12
6.07 Dispute Resolution	12
6.08 Controlling Law; Venue	12
6.09 Environmental Condition of Site	13
6.10 Indemnification and Mutual Waiver	14
6.11 Records Retention	15
6.12 Miscellaneous Provisions.....	15
Article 7— Definitions	16
7.01 Defined Terms	16
Article 8— Exhibits And Special Provisions	20
8.01 Exhibits to Agreement	20
8.02 Total Agreement.....	20
8.03 Designated Representatives	20
8.04 Engineer's Certifications	20
8.05 Conflict of Interest.....	21

AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

This is an Agreement between **City of Ames, Iowa** (Owner) and Sargent & Lundy, L.C.C. (Engineer). Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as **Engineering Services for a Reciprocating Internal Combustion Engine (RICE) Power Generation Facility** (Project). Other terms used in this Agreement are defined in Article 7. Engineer's services under this Agreement are generally identified as **Schematic Design, Design Development, Specifications, Construction Drawings, and Bidding phases**. Owner and Engineer further agree as follows:

ARTICLE 1—SERVICES OF ENGINEER

1.01 Scope

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.
- B. All phases of service will include Management of Engineering Services as shown in Exhibit A.

ARTICLE 2—OWNER'S RESPONSIBILITIES

2.01 Project Information

- A. To the extent Owner has not already provided the following, or has new, additional, or revised information from that previously provided, Owner shall provide Engineer, and the Engineer shall assist the Owner in determining the information and data needed by Engineer in the performance of Basic and Additional Services, including Owner's:
 - 1. design objectives and constraints;
 - 2. space, capacity, and performance requirements;
 - 3. flexibility and expandability needs;
 - 4. design and construction standards;
 - 5. budgetary limitations; and
 - 6. any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.
- B. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, Owner shall obtain, furnish, or otherwise make available (if necessary through retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services; or, with consent of Engineer, Owner may authorize the Engineer to obtain or provide all or part of such additional information as Additional Services. Such additional information or data may include the following:
 - 1. Property descriptions.
 - 2. Zoning, deed, and other land use restrictions.
 - 3. Surveys, topographic mapping, and utility documentation.
 - 4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.

5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; appropriate professional interpretation of such information or data.
 6. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.
 7. Data or consultations as required for the Project but not otherwise identified in this Agreement.
- C. Owner shall review all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
 - D. Owner shall advise Engineer if any invention, design, process, product, or device that Owner has requested, required, or recommended for inclusion in the Drawings or Specifications will be subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights.
 - E. NOT USED
 - F. Owner shall inform Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.

2.02 Owner's General Responsibilities

- A. Owner shall inform Engineer of the policies, procedures, and requirements of Owner that are applicable to Engineer's performance of services under this Agreement.
- B. Owner shall inform Engineer in writing of any safety or security programs required by Owner that are applicable to the personnel of Engineer, its Subconsultants, and Engineer's Subcontractors, as they visit the Site or otherwise perform services under this Agreement. Such safety programs shall be the minimum requirements that Engineer must follow while onsite. Job safety is the sole responsibility of the individual construction contractors and/or other parties working at the Site and Engineer's representation on site will in no way diminish or eliminate that responsibility. Should Engineer see actual or potential safety hazards during Engineer's regular observation of the work, Engineer shall advise construction contractor's safety administrator. Engineer's failure to note such hazards shall not act to transfer responsibility from the construction contractors or any other party or parties which may be responsible for safety at the Site. It is understood that the Site's safety program and first aid provisions will be developed and administered by others. Engineer shall be responsible for their own personnel.
- C. Prior to construction commencing, Owner shall arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform Services under this Agreement.
- D. Owner shall provide necessary direction and make decisions, including prompt review (within reasonable and mutually agreeable time limits and, when applicable, the regular

schedule of governing and regulatory approval boards and committees when approval from such is required) of Engineer's submittals, and carry out its other responsibilities in a timely manner so as not to unreasonably delay Engineer's performance of its Services. Should the Engineer encounter or anticipate delays that are within the Owner's reasonable control to prevent or correct, the Engineer shall promptly notify the Owner in writing in order that such delays may be prevented or corrected.

- E. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing Services under this Agreement.
- F. Owner shall, in its capacity as a client, not a Design Professional or one that has technical expertise, as this is the Engineer's responsibility give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
 - 1. any development that affects the scope or time of performance of Engineer's services;
 - 2. the presence at the Site of any Constituent of Concern; or
 - 3. any relevant nonconformance in Engineer's services or Owner's performance of its responsibilities under this Agreement.
- G. If Owner designates a construction manager, site representative, or any individual or entity to represent Owner at the Site, Owner shall notify Engineer in writing of their duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.
- H. Owner shall:
 - 1. Primarily communicate with Engineer's Subcontractors and Subconsultants through the Engineer.
 - a. Promptly inform Engineer of the substance of any communications between Owner and Engineer's Subcontractors or Subconsultants.
 - b. Refrain from directing the services of Engineer's Subcontractors or Subconsultants.
 - 2. The Owner may authorize Engineer in writing to provide Additional Services as set forth in Article 2 of Exhibit A of the Agreement, as required. Additional Services shall not be provided prior to receipt of written approval from Owner. Should Additional Services be provided prior to receipt of approval, the Engineer is proceeding at its own risk and Owner is not obligated to compensate the Engineer for the Additional Services, even if the work is partially or fully performed.
 - a. **NA**

2.03 Payment

- A. Owner shall pay Engineer as set forth in Article 4 and Exhibit J.

- B. Engineer's compensation is outlined in Exhibit J, and is based on a 16 month engineering services period.
 - 1. Compensation items and totals based in whole or in part on Hourly Rates, and/or Direct Labor, shall not exceed \$6,885,000.
 - 2. Labor rate amounts incorporate Engineer's labor, overhead, profit, and Engineer's Subcontractor and Subconsultants' charges.

ARTICLE 3—SCHEDULE FOR RENDERING SERVICES

3.01 Commencement

- A. Engineer is authorized to begin rendering services as of the Effective Date.

3.02 Time for Completion

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit B, as may be updated by mutual written agreement.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services and the amount of Engineer's compensation, will be adjusted equitably.
- C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, will be adjusted equitably. Any changes to compensation must be approved in writing and in advance, based on the Engineer's detailed written description of the required additional services due to scope changes. Changes to the contract amount may require the approval of the City Council.
- D. If Engineer fails, for reasons within control of Engineer, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, to terminate this contract.

ARTICLE 4—INVOICES AND PAYMENTS

4.01 Invoices

- A. Preparation and Submittal of Invoices: Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit J. Invoices will include a breakdown of services provided. Engineer shall submit its invoices to the Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

4.02 Payments

- A. Application to Interest and Principal: Payment will be credited first to any interest owed to Engineer and then to principal.
- B. Disputed Invoices: If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so; may withhold only that portion so disputed; and must pay the undisputed portion, subject to the

terms of Paragraph 4.01. After a disputed item has been resolved, Engineer shall include the agreed-upon amount on a new invoice.

- C. Failure to Pay: If Owner fails to make any undisputed payment due Engineer within 30 days after receipt of Engineer's invoice, then:
 - 1. Engineer may, after giving 30 days' written notice to Owner, suspend or terminate the services under this Agreement, either part or in whole, until Owner has paid in full amounts due. Owner waives any and all claims against Engineer for any such suspension or termination. and agrees to indemnify, defend and hold Engineer harmless from and against any claims arising from such suspension or termination.-
 - 2. A finance charge shall be assessed on the unpaid balance for each day of a month that any undisputed amount remains unpaid beyond sixty (60) calendar days, using the prime rate for the last day of the prior month as reported in the Wall Street Journal, plus 5%. For example, if the published rate is 7%, the daily interest rate used for the following month will be $(7\%+5\%)/360 = 0.0333\%$.
- D. Sales or Use Taxes: If after the Effective Date any governmental entity takes an action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement will be in addition to the compensation to which Engineer is entitled under the terms of Exhibit J.

ARTICLE 5—NOT USED

A. NOT USED

ARTICLE 6—GENERAL CONSIDERATIONS

6.01 Standards of Performance

- A. Standard of Care: The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- B. Technical Accuracy: Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- C. Engineer's Subcontractors and Subconsultants: Engineer may retain such Engineer's Subcontractors and Subconsultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. Reliance on Others: Subject to the standard of care set forth in Paragraph 6.01.A, Engineer may use or rely upon design elements and information ordinarily or customarily furnished by

others, including, but not limited to delegated design professionals retained by Constructor, specialty contractors, manufacturers, suppliers, and the publishers of technical standards. For the avoidance of doubt, Engineer's review and/or translation and conversion of design information and interface prepared by others shall in no way serve to transfer to Engineer responsibility or liability for the correctness and/or accuracy of the work performed by others.

- E. Compliance with Laws and Regulations, and Policies and Procedures
1. Engineer and Owner shall comply with applicable Laws and Regulations.
 2. Engineer shall comply with the policies, procedures, and instructions of Owner to the extent that they are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.
 3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date (see Exhibit A: "Known Design Standards"). The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
 - a. changes to Laws and Regulations after the Effective Date but before Engineer's completion of the Services,
 - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures, and
 - c. changes after the Effective Date to Owner-provided written policies or procedures.
- F. Engineer shall endeavor to prepare cost estimates, project time schedules, reports, or any other deliverable as accurately as possible based on current information and experience. It is expressly acknowledged that information and data provided by others, which may constitute the basis for these deliverables, has not been independently verified by Engineer. In addition, Owner acknowledges that the cost estimates, project schedules, reports or any other deliverable generated by Engineer are time sensitive and changes in the underlying data, applicable codes, standards, and acceptable engineering practices, as well as the passage of time, may affect the accuracy of the deliverables provided to Owner.
- G. Copies of Drawings and Specifications: Engineer shall prepare and furnish Drawings and Specifications under this Agreement, and shall deliver to Owner at least one complete electronic copy of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations.
- H. Engineer shall not be required to sign any document, no matter by whom requested, that would result in Engineer having to certify, guarantee, or warrant conditions whose existence Engineer cannot ascertain within the authorized scope of Engineer's services. Owner agrees not to make resolution of any dispute with Engineer or payment of any amount due to Engineer in any way contingent upon Engineer signing any such document.
- I. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor or Contractor's work, nor will Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor or Contractor, or the safety precautions and programs incident thereto,

for security or safety at the Site, nor for any failure of a Constructor or Contractor to comply with Laws and Regulations applicable to that Constructor or Contractor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor or Contractor, nor shall Engineer's presence on site in any way be interpreted as having the authority to provide instruction to the construction contractor or others at the Site, nor shall it be responsible or have the authority to stop work by any Contractor or Constructor or others at the Site for any reason. If work is noticed by Engineer to not be in compliance with drawings and specifications, then Engineer shall notify Owner.

- J. Engineer neither guarantees the performance of any Constructor or Contractor nor assumes responsibility for any Constructor or Contractor's failure to furnish and perform the Work.
- K. Engineer shall not be responsible for any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer.
- L. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- M. Engineer's services do not include providing legal advice or representation.
- N.
- O. While at the Site, Engineer, its Subconsultants, and Engineer's Subcontractors, and their employees and representatives will comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.
- P. Engineer's sole obligation and Owner's exclusive remedy for any failure to perform its Services in accordance with the Standard of Care, whether in tort or in contract, shall be to reperform those Services, so long as such failure is reported in writing to Engineer within thirty (30) days following the discovery thereof, but in no event later than two (2) year from the completion of the Services . After said two (2) year, Engineer shall have no remaining obligation to reperform any Services or otherwise compensate Owner.

Engineer makes no other warranties or guarantees express or implied. This Article governs, modifies and supersedes any other terms which address warranties or guarantees or the quality of the Services unless such terms specifically reference and supplement this Article.

6.02 Ownership and Use of Documents

- A. All Documents are instruments of service, and Engineer owns the Documents, including all associated copyrights and the right of reuse at the discretion of the Engineer, subject to the following provisions:
 - 1. Upon receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents and subject to the express exclusions that follow, Engineer and any Subconsultants will grant to Owner the ownership of the Documents, including all associated copyrights and the right of reuse.
 - 2. When requested by Owner, Engineer will perform any clerical or administrative acts reasonably necessary to confirm or record the transfer of Engineer's interests in the Documents to the Owner, and Owner will reimburse the Engineer for its costs to comply with the transfer request.

3. Engineer shall have and retain the ownership, title, and property rights, including copyright, patent, intellectual property, and common law rights, in any design elements (including but not limited to standard details, drawings, plans, specifications, methodologies, know-how, and engineering computations) used in the Documents, but developed by Engineer or its Subconsultants previous to or independent of this Agreement (“Previously/Independently Created Works”). Engineer shall provide appropriate verification of such previous or independent development upon Owner’s request.
 4. Upon receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, Engineer will issue to Owner a royalty-free, nonexclusive and irrevocable license to use such Previously/Independently Created Works on the Project or on any extension of the Project.
 5. Owner acknowledges that the Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer.
 6. Any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner’s sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants.
 7. Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Subconsultants from all claims, damages, losses, and expenses, including attorneys’ fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer.
 8. Such limited license to Owner shall not create any rights in third parties.
 9. Nothing herein limits the Engineer’s right of use or reuse of Previously/Independently Created Works or any of Engineer’s non-Document work product.
- B. If Engineer at Owner’s request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project in the future or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.
- C. Engineer shall inform Owner in writing if Engineer is aware of any invention, design, process, product, or device specified in the Drawings, Specifications, or other Documents that is subject to payment (whether by Owner or Contractor) of any license fee or royalty to others, as required by patent rights or copyrights. If Engineer’s good-faith inclusion in the Drawings, Specifications, or other Documents of new, innovative, or non-standard technologies, for the benefit of Owner and the Project, results in third-party claims of infringement or violation of intellectual property rights and such inclusion does not meet the criteria outlined in the previous sentence, then Owner and Engineer shall share equally the costs of defending against, settling, or paying such claims.

- D. Engineer will obtain Owner's consent, which will not be unreasonably withheld, prior to releasing any publicity, including news and press releases, promotional publications, award and prize competition submittals, and other advertising regarding the subject matter of this Agreement. Nothing herein will limit the Engineer's right to include information in statements of qualifications and proposals to others accurately describing its participation and participation of employees in the Project.

6.03 Electronic Transmittals

- A. To the fullest extent practical, Owner and Engineer agree to transmit, and accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with Exhibit F, Electronic Documents Protocol (EDP).
 - 1. Compliance with the EDP by Engineer shall be considered a Basic Service and no direct or separate compensation will be paid to Engineer for such compliance, unless provisions for separate compensation are expressly set forth in the EDP.
- B. If this Agreement does not include Exhibit F or otherwise does not establish or include protocols for transmittal of Electronic Documents by Electronic Means, then Owner and Engineer may operate without specific protocols or may jointly develop such protocols at a later date.
- C. Except as stated otherwise in Exhibit F (if included in this Agreement), when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents, or from those established in applicable protocols.
- D. This Agreement (including the EDP) is not intended to create obligations for Owner or Engineer with respect to transmittals to or from third parties, except as expressly stated in the EDP.

6.04 Insurance

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G.
- B. Additional Insureds: The Engineer's commercial general liability, automobile liability, and umbrella or excess liability policies, must:
 - 1. include as additional insureds Owner, and any individuals or entities identified as additional insureds in Exhibit G;
 - 2. include coverage for the respective officers, directors, members, partners, and employees of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for claims covered thereby (including as applicable those arising from both ongoing and completed operations); and
 - 4. not seek contribution from insurance maintained by the additional insured.
- C. Owner shall procure and maintain insurance as set forth in Exhibit G.

- D. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer, its Subconsultants, and Engineer's Subcontractors to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project. Owner shall give Engineer access to any certificates of insurance and copies of endorsements and policies obtained by Owner from Contractor.
- E. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates must be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- F. All construction contracts entered into by Owner with respect to the Project must require builder's risk or similar property insurance, which Owner will procure and purchase or cause to be procured and purchased.
- G. All policies of property insurance relating to the Project, including but not limited to any builder's risk or similar policy, shall allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any insured thereunder or against Engineer, its Subconsultants, or Engineer's Subcontractors. To the extent permitted by law, Owner and Engineer waive all rights against each other, Engineer's Subcontractors and Subconsultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any such builder's risk or similar policy and any other property insurance relating to the Project. Owner shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.
- H. All policies of insurance must contain a provision or endorsement that the coverage afforded will not be canceled, and that renewal will not be refused, until 15 days' prior written notice has been given to the primary insured (except in the event of non payment of a premium). Upon receipt of such notice, the primary insured must promptly forward a copy of the notice to the Owner and replace the coverage being cancelled or reduced to conform to the requirements of this Agreement.

I.

6.05 Suspension and Termination

A. Suspension

1. By Owner: Owner may suspend Engineer's services for up to 90 days upon 15 days' written notice to Engineer.
2. By Engineer: Engineer may, after giving 15 days' written notice to Owner, suspend services under this Agreement:
 - a. if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraphs 4.02.B and 4.02.C;
 - b. in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.09.D; or

- c. if persistent circumstances beyond the control of Engineer have prevented it from performing its obligations under this Agreement.
- B. Termination for Cause
 - 1. Either party may terminate the Agreement for cause upon 30 days' written notice in the event of substantial failure by the other party to perform in accordance with the terms of the Agreement, through no fault of the terminating party.
 - a. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1 if the party receiving such notice begins, within 15 days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30-day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein will extend up to, but in no case more than, 60 days after the date of receipt of the notice.
 - 2. In addition to its termination rights in Paragraph 6.05.B.1, Engineer may terminate this Agreement for cause upon 15 days' written notice:
 - a. if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional;
 - b. if Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control; or
 - c. as the result of the presence at or adjacent to the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.09.E.
- C. Termination for Convenience: Owner may terminate this Agreement for convenience, effective upon Engineer's receipt of notice from Owner.
- D. Payments Upon Termination: In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement, plus any reimbursable expenses incurred through the effective date of termination. Upon making such payment, Owner will have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.02.A.
 - 1. If Owner has terminated the Agreement for cause and disputes Engineer's entitlement to compensation for services and reimbursement of expenses, then Engineer's entitlement to payment and Owner's rights to the use of the Documents will be resolved in accordance with the dispute resolution provisions of this Agreement or as otherwise agreed in writing.
 - 2. If Owner has terminated the Agreement for convenience, or if Engineer has terminated the Agreement for cause, then Engineer will be entitled, in addition to the payments identified above, to invoice Owner and receive payment of the services performed up to the effective date of termination plus any reasonable expenses directly attributable to termination. The Owner is not obligated to compensate the Engineer for services following the effective date of termination, even if the work is partially or fully performed, but may consider doing so in its sole discretion.

3.

6.06 Successors, Assigns, and Beneficiaries

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.06.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, claims arising out of this Agreement or money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any assignment, subletting, or transfer is mandated by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.
- C. Unless expressly provided otherwise in this Agreement:
 - 1. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
 - 2. Nothing in this Agreement will be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, Contractor, other third-party individual or entity, or to any surety for or employee of any of them.
 - 3. Owner agrees that the substance of the provisions of this Paragraph 6.06.C will appear in the Construction Contract Documents.

6.07 Dispute Resolution

- A. Owner and Engineer shall resolve all disputes in the following manner:
 - 1. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice, prior to invoking mediation.
 - 2. Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof (“Disputes”) to mediation. Owner and Engineer agree to participate in the mediation process in good faith. The process will be conducted on a confidential basis and must be completed within 120 days. Owner and Engineer shall equally share in all costs of the mediation.
 - 3. If the parties fail to resolve a Dispute through negotiations under Paragraph 6.07.A.1 or mediation under Paragraph 6.07.A.2, then the parties may exercise their rights at law in a court of competent jurisdiction (in Story County, Iowa).

6.08 Controlling Law; Venue

- A. This Agreement is to be governed by the Laws and Regulations of the state of Iowa with venue in the appropriate state and/or federal courts for Story County, Iowa..

6.09 Environmental Condition of Site

- A. Owner represents to Engineer that, as of the Effective Date, to the best of Owner's knowledge, no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- B. Undisclosed Constituents of Concern: For purposes of this Paragraph 6.09, the presence at or adjacent to the Site of Constituents of Concern that were not disclosed to Engineer pursuant to Paragraph 6.09.A, in such quantities or circumstances that such Constituents of Concern may present a danger to persons or property exposed to them, will be referred to as "undisclosed" Constituents of Concern.
 - 1. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of this Agreement or the Construction Contract, are not undisclosed Constituents of Concern.
 - 2. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under this Agreement are not undisclosed Constituents of Concern.
 - 3. Constituents of Concern that are to be located, identified, studied, removed, or remediated as part of the services under another professional services contract for Owner, or as part of the work under a construction or remediation contract, are not undisclosed Constituents of Concern if Engineer has been informed of the general scope of such contract.
- C. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate authorities having jurisdiction if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, or if encountered, uncovered, or revealed Constituents of Concern are present in substantially greater quantities or substantially different locations than disclosed or anticipated, or if investigative or remedial action, or other professional services, are necessary or required by applicable Laws and Regulations with respect to such Constituents of Concern, then Engineer may, at its option and without liability for direct, consequential, or any other damages, suspend performance of services on the portion of the Project adversely affected thereby until such portion of the Project is no longer so affected; and Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.
- E. If the presence at the Site of undisclosed Constituents of Concern, or of Constituents of Concern in substantially greater quantities or in substantially different locations than disclosed or anticipated, adversely affects the performance of Engineer's services under this Agreement, then:
 - 1. if the adverse effects do not preclude Engineer from completing its Project services in general accordance with this Agreement on unaffected or marginally affected portions

of the Project, the Agreement may be amended to reflect changes necessitated by the presence of such Constituents of Concern; or

2. if the adverse effects are of such materiality to the overall performance of Engineer that it cannot complete its services without significant changes to the scope of services, time of completion, and compensation, then Engineer may terminate this Agreement for cause on 7 days' written notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and will not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.10 Indemnification, Mutual Waiver, and Limitation of Liability

- A. Indemnification by Engineer: To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions, relating to the Project, provided that any such third-party claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, members, partners, agents, employees, Subconsultants, or Engineer's Subcontractors.
- B. Environmental Indemnification: To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer, its Subconsultants, Engineer's Subcontractors, and their officers, directors, members, partners, agents, employees, and subconsultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorney's fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that:
1. any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and
 2. nothing in this paragraph obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- C. No Defense Obligation: The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- D. Mutual Waiver: To the fullest extent permitted by Laws and Regulations, Owner and Engineer mutually waive against each other, and the other's officers, directors, members, partners, agents, employees, subconsultants, and insurers, any and all claims for or entitlement to any special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes. Such excluded damages include but are not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and cost of capital.

- E. Limitation of Liability: Notwithstanding any other provisions of this Agreement to the contrary, Engineer's aggregate limitation of liability for any claims arising or allegedly arising hereunder, whether in tort or contract shall, be limited to \$2,000,000 per event. Engineer's aggregate limitation of liability under this Agreement shall not exceed \$5,000,000.
- F. Owner agrees that in no event shall any claims be submitted to the Engineer later than the amount of time equal to Iowa's statute of limitations after Engineer's completion of its Services associated with an authorization under which the claim would have occurred.

6.11 Records Retention

- A. Engineer shall maintain on file in legible form, for a period of six years following completion or termination of its services, or such other period as required by Laws and Regulations, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.12 Miscellaneous Provisions

- A. Notices: Any notice required under this Agreement will be in writing, and delivered: in person (by commercial courier or otherwise); by registered or certified mail to the addresses specified below in the signature portion of this agreement. All such notices are effective upon the date of receipt.

- B. Survival: Subject to applicable Laws and Regulations, all express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. Severability: Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Engineer.
- D. No Waiver: A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Agreement.
- E. Accrual of Claims: To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement will be deemed to have accrued, and all statutory periods of limitation will commence, no later than the date of Substantial Completion; or, if Engineer's services do not include Construction Phase services, or the Project is not completed, then no later than the date of Owner's last payment to Engineer.
- F. Assignment: This Agreement may not be assigned or transferred by the Engineer without the prior written consent of the Owner.
- G. Independent Contractor Status: The Engineer agrees that the relationship between Engineer and the Owner is that of an independent contractor for employment tax purposes. The Engineer shall be solely responsible for all taxes relating to payments under this agreement including those of employees.

ARTICLE 7—DEFINITIONS

7.01 Defined Terms

- A. Wherever used in this Agreement (including the exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:
1. **Additional Services**—The services to be performed for or furnished to Owner by Engineer in accordance with Article 2 of Exhibit A of this Agreement.
 2. **Agreement**—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
 3. **Basic Services**—The services to be performed for or furnished to Owner by Engineer in accordance with Article 1 of Exhibit A of this Agreement.
 4. **Bidding/Proposal Documents**—Documents related to the selection of the Contractor, including advertisements or invitations to bid; requests for proposals; instructions to bidders or proposers, including any attachments such as lists of available Site-related documents; bid forms; bids; proposal forms; proposals; bidding requirements; and qualifications documents, Front-End Construction Contract Documents, Drawings and Specifications.
 5. **Change Order**—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
 6. **Construction Contract**—The entire and integrated written contract between Owner and Contractor concerning the Work.
 7. **Construction Contract Documents**—Those items designated as “Contract Documents” in the Construction Contract, and which together comprise the Construction Contract.
 8. **Construction Cost**—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner’s costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.

9. Construction Manager—An individual or entity retained by the Owner to provide construction management services for the benefit of the Owner as outlined within the Agreement between the Owner and Construction Manager.
10. Constructor—Any person or entity (not including the Engineer, its employees, agents, representatives, or Subconsultants, or Engineer’s Subcontractors), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner’s work forces, utility companies, other contractors, construction managers, design-builders, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
11. Contractor(s)—The entities or individuals with which Owner enters into a Construction Contract.
12. Documents—All documents expressly identified as deliverables in this Agreement, whether in printed or Electronic Document form, required by this Agreement to be provided or furnished by Engineer to Owner. Such specifically required deliverables may include, by way of example, Drawings, Specifications, data, reports, building information models, and civil integrated management models.
13. Drawings—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
14. Effective Date—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
15. Electronic Document—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
16. Electronic Means—Electronic mail (e-mail), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Agreement. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.
17. Engineer—The individual or entity named as such in this Agreement.
18. Engineer’s Subcontractor—An individual, firm, vendor, or other entity having a contract with Engineer to furnish general services, equipment, or materials with respect to the Project as an independent contractor.
19. Field Order—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.
20. Front-End Construction Contract Documents—Those Construction Contract Documents whose primary purpose is to establish legal and contractual terms and conditions,

typically including the Owner-Contractor agreement, bonds, general conditions, and supplementary conditions. The term excludes the Drawings and Specifications, and any Construction Contract Documents delivered or issued after the effective date of the Construction Contract. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

21. Owner—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
22. Project—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
23. Record Drawings—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
24. Resident Project Representative—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of the RPR.
25. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
26. Services – all work to be performed by Engineer, including the Basic Services and the Additional Services.
27. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
28. Site—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
29. Specifications—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
30. Subconsultant—An individual, design firm, consultant, or other entity having a contract with Engineer to furnish professional services with respect to the Project as an independent contractor.

31. Subcontractor—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
32. Submittal—A written or graphic document, prepared by or for Contractor, which the Construction Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Construction Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Construction Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
33. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
34. Supplier—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
35. Total Project Costs—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties and private utilities (including relocation if not part of Construction Cost), Owner’s costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.
36. Underground Facilities—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
37. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes

and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.

B. Terminology

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

ARTICLE 8—EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits to Agreement

The following exhibits are incorporated by reference and included as part of this Agreement:

- A. Exhibit A, Engineer’s Services.
- B. Exhibit B, Deliverables Schedule.
- C. Exhibit C, Amendment to Owner-Engineer Agreement (form)
- D. Exhibit D, Duties, Responsibilities and Limitations of Authority of Resident Project Representative – Not Used.
- E. Exhibit E, EJCDC® C-626, Notice of Acceptability of Work (form).
- F. Exhibit F, Electronic Documents Protocol (EDP).
- G. Exhibit G, Insurance.
- H. Exhibit H, Dispute Resolution. – Not Used
- I. Exhibit I, Limitations of Liability. – Not Used
- J. Exhibit J, Payments to Engineer for Services and Reimbursable Expenses.

8.02 Total Agreement

- A. This Agreement (which includes the exhibits listed above) constitutes the entire contractual agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit C to this Agreement.

8.03 Designated Representatives

- A. With the execution of this Agreement, Engineer and Owner shall each designate a specific individual to act as representative under this Agreement. Such an individual must have authority to transmit instructions, receive information, and render decisions with respect to this Agreement on behalf of the party that the individual represents.

8.04 Engineer's Certifications

- A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the selection process or in the Agreement execution;
2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.

8.05 Conflict of Interest

- A. Nothing in this Agreement will be construed to create or impose any duty on the part of Engineer that would be in conflict with Engineer's paramount obligations to the public health, safety, and welfare under the professional practice requirements governing Engineer, its Subconsultants, and all licensed professionals employed by Engineer or its Subconsultants.
- B. If during the term of this Agreement a potential or actual conflict of interest arises or is identified:
 1. Engineer and Owner together will make reasonable, good faith efforts to avoid or eliminate the conflict of interest; to mitigate any adverse consequences of the conflict of interest; and, if necessary and feasible, to modify this Agreement to address the conflict of interest and its consequences, such that progress under the Agreement may continue.
 2. Such efforts will be governed by applicable Laws and Regulations and by any pertinent Owner's policies, procedures, and requirements (including any conflict of interest resolution methodologies) provided to Engineer under Paragraph 2.04.A of this Agreement.

8.06 Order of Enforcement

- A. When conflict occurs between Agreement and Exhibits, the Agreement takes precedence.

This Agreement's Effective Date is **October 21, 2025**.

Owner:

City of Ames, Iowa
(name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: John A. Haila
(typed or printed)

Title: Mayor
(typed or printed)

Attach evidence of authority to sign.

Attest: _____
(individual's signature)

Title: Renee Hall, City Clerk
(typed or printed)

Address for giving notices:

Attn: Electric Services Director

515 Clark Avenue

Ames, IA 50010

Designated Representative:

Name: Donald Kom
(typed or printed)

Title: Director of Electric Services
(typed or printed)

Address:

City of Ames – Electric Services

502 Carroll Avenue

Ames, IA 50010

Phone: 515-239-5170

Email: donald.kom@cityofames.org

Engineer:

Sargent & Lundy, LLC
(name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: Kevin Lauzze
(typed or printed)

Title: Senior Vice President
(typed or printed)

Attach evidence of authority to sign.

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

Attn: Kevin Lauzze, Sargent & Lundy

55 East Monroe St.

Chicago, IL 60603

Designated Representative:

Name: Adam Redd
(typed or printed)

Title: Project Director
(typed or printed)

Address:

Sargent & Lundy

55 East Monroe St.

Chicago, IL 60603

Phone: 312-269-2641

Email: Adam.J.Redd@sargentlundy.com

EXHIBITS TO AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

Prepared By



Exhibit A—Engineer's Services.

Exhibits to EJCDC[®] E-500, Agreement between Owner and Engineer for Professional Services.
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Page 1 of 24

EXHIBITS TO AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

EXHIBIT A TABLE OF CONTENTS

EXHIBIT A—ENGINEER’S SERVICES

Exhibit A Table of Contents

Article 1— BASIC SERVICES	4
1.01 Management of Engineering Services	4
1.02 RICE OEM PROCUREMENT	6
1.03 SPECIFICATIONS FOR ENGINES	6
1.04 PROCUREMENT OF ENGINES	7
1.05 RICE OEM POST-AWARD SUPPORT	8
1.06 PROCUREMENT OF TRANSFORMERS	8
1.07 SPECIFICATIONS FOR TRANSFORMERS	9
1.08 BIDDING TRANSFORMERS.....	9
1.09 UNDERGROUND INFRASTRUCTURE	10
1.10 SPECIFICATIONS FOR UNDERGROUND INFRASTRUCTURE	10
1.11 BIDDING UNDERGROUND INFRASTRUCTURE.....	11
1.12 ABOVEGROUND INFRASTRUCTURE	12
1.13 SPECIFICATIONS FOR ABOVEGROUND INFRASTRUCTURE.....	13
1.14 ENVIRONMENTAL PERMITTING	13
Article 2— Additional Services Not Requiring Owner’s Written Authorization	20
2.02 Additional Services Requiring Owner’s Written Authorization	Error! Bookmark not defined.

Article 1 of the Agreement, Services of Engineer, is supplemented to include the following provisions:

Baseline Information: Owner has furnished the following Project information to Engineer as of the Effective Date. Engineer's scope of services has been developed based on this information. As the Project moves forward, some of the information may change or be refined, and additional information will become known, resulting in the possible need to change, refine, or supplement the scope of services.

Project Title:	Reciprocating Internal Combustion Engine (RICE) Power Generation Facility
Type and Size of Facility:	50-75 MW RICE Electric Generation Facility
Description of Improvements:	Dual Fuel (Natural Gas and Fuel Oil) reciprocating engines for a total of 50-75 megawatts (MW) along with all supporting ancillary buildings and equipment.
Expected Construction Start:	September 24, 2026 (or as determined during the Introduction Phase)
Prior Studies, Reports, Plans:	Geotechnical Report- performed by Terracon in 2025, Technology Assessment Report performed by HDR in 2024
Facility Location(s):	200 E 5 th Street, Ames, Iowa
Current Project Budget:	\$84 Million This includes the purchase and installation of the RICE Generation Units and supporting equipment, the construction of buildings (enclosing engines and ancillary equipment, control room, breakroom, restroom facilities, offices, maintenance activities and storage), the purchase and installation of transformers, sitework, design/engineering, permitting, construction inspection, and project contingency. The budget excludes land acquisition, construction of a substation and substation connection.
Funding Sources:	Revenue-abated General Obligation Bonds
Known Design Standards:	2015 International Building Code (IBC) (with local amendments) 2015 International Fire Code (IFC) (with local amendments) 2021 Uniform Plumbing Code (UPC) 2021 International Mechanical Code (IMC) 2012 International Energy Conservation Code (IECC) 2020 National Electrical Code (NEC) Iowa Code on Manufactured and Modular Structures Accessibility: ICC A117.1-2009 Current National Fire Protection Association (NFPA) Standards as referenced by the International Fire Code Iowa Code Chapter 455B Iowa Administrative Code 199, Chapter 24 Iowa Statewide Urban Design and Specifications (SUDAS), including local amendments thereto Ames Municipal Code, Chapter 9 (Flood Plain Zoning Regulations) Ames Municipal Code, Chapter 29 (Zoning Ordinance)
Known Project Limitations:	8–10-acre site located near downtown. The site is zoned government/airport (GA), however the noise levels caused by the Project generation facility under full operation, including start up, and

Exhibit A—Engineer's Services.

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monitored at the nearest residential neighboring property shall not to exceed 55 dBA and 70 dBC. For the avoidance of doubt, in no case shall Engineer be responsible for ensuring this noise level requirement is met.

Project Assumptions:

Utilities (electricity, water, gas, sanitary sewer, storm sewer) are available at the property line of the nearest road. Required utilities are of adequate size. It is assumed utility profiles are adequate for gravity lines (storm drainage and sanitary sewer). No site utilities will be designed outside the subject property. Engineer will initiate request to Iowa One Call and specific utilities servicing the site and review utility information provided. Hydrant flow tests necessary for fire suppression/permitting will be provided by others. If test data is not available, hydrant flow testing may need to be completed and will require additional effort and modification to the scope/fee. A three-phase, 480V electric service will be provided, with a 120/208V panelboard for lights, receptacles, and small loads. The service size will be adequate for the facility.

Engineer shall provide Basic and Additional Services as set forth below.

ARTICLE 1—BASIC SERVICES

1.01 Management of Engineering Services

- A. Sargent & Lundy (S&L, who is the “Engineer” referred to in the Agreement and they are one and the same) shall provide the services set out in the City of Ames, Iowa, Scope of Work, Professional Services for engineering services for Request for Proposal (RFP) #2025-164 Engineering Services for Reciprocating Internal Combustion Engine (RICE) Power Generation Facility for City of Ames attached hereto as Exhibit C. During the introduction phase, S&L will work with the City of Ames (City, also referred to as “Owner” in the Agreement) to develop the conceptual design of the project. As requested in the Request for Proposal, S&L will perform the following tasks to determine the conceptual site layout for the entire project and provide guidance for determining the best overall project structure, procurement plan, and construction process.
- B. **Kick-off Meeting:** After award, S&L will conduct a virtual kick-off meeting with the City. The goal of the kick-off meeting is to introduce the project team members, review the project scope of work and schedule, establish document control procedures, and establish meeting and design review frequency.
- C. **Site Visit:** Shortly after the kickoff meeting, S&L will perform a in person walkdown at the proposed site and neighboring Steam Electric Plant. The goal of the walkdown is to collect design information. This includes gathering information about tie-in points, existing systems, etc. S&L will submit a data request prior to the meeting and will begin to collect additional information while at the site.

Exhibit A—Engineer’s Services.

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Page 4 of 24

- D. **Meeting Participation:** S&L will participate in virtual **weekly** meetings with the City during the project. The goal of the meetings will be to discuss S&L progress, gather additional input from the City, and review the in progress engineering. S&L will develop an agenda prior to each meeting and publish minutes and an updated Action Item list at the conclusion of each meeting within three (3) business days of the meeting.
- E. **Monthly Reports:** S&L will prepare and submit monthly engineering services progress reports to the City. The report will be submitted by S&L no later than the 10th day of each month. The report will include summary of services performed in the previous month, expected progress in the next month, percent completion of current tasks, and a description of major issues or concerns. The report will be able to be used by City staff to report project status to City Management and City Council.
- F. **General Arrangement Drawings.** S&L will utilize information gathered during the site walkdown, its experience from past RICE projects, and historical information from RICE OEMs to develop general arrangement drawings for the entire facility (Part 1 and 2) as defined in RFP #2025-164, attached as Exhibit C. During the introduction phase, S&L will conduct general arrangement specific meetings to be held virtually with the City to gather information about the City's preferences for items such as desired maintenance areas, warehouse areas, administration areas, etc. S&L will assist the City in evaluating the possible use of building information modeling; civil integrated management; geotechnical baselining of subsurface conditions at the Site; innovative design, contracting, and procurement strategies; project delivery method; and other strategies, technologies, or techniques for assisting in the design, construction, and operation of the City's facilities. S&L will assist the City in identifying opportunities for enhancing the sustainability of the Project, and pursuant to Owner's instructions, plan for the inclusion of sustainable features in the design. In all phases of Engineer's services, S&L shall provide draft drawings in PDF and final Drawings in PDF and AutoCAD, unless otherwise mutually agreed upon by both parties. The source documents for the draft and final Specifications in all phases of Engineer's services will be in Microsoft Word, unless otherwise mutually agreed upon by both parties.
- G. **Project Division of Responsibility.** S&L understands that the City is prohibited from performing the project utilizing a design-build or EPC concept. S&L will work with the City to develop a full project division of responsibility to develop the best overall project approach.
- H. **Procurement Plan.** In addition to the Project Division of Responsibility, S&L will develop a procurement plan for the project to develop the best overall project approach. The procurement plan will assign a RFP number to each proposed procurement package and then clearly define the equipment, material, or service that will be provided in the package.
- I. **Project Schedule.** After the best overall project approach is approved by the City, S&L will develop a Level 3 schedule for Part 1 of the project. S&L will utilize its experience from recently executed RICE projects and current lead time information from RICE OEMs and other equipment vendors to develop the schedule. The project schedule will be updated by S&L on a regular basis, no less than the end of each project phase as identified in Exhibit A, and as required to reflect any programmatic decisions by the City. The schedule shall include, but not be limited to, an anticipated sequence of tasks, estimates of task duration; interrelationships among tasks; milestone meetings and submittals; anticipated schedule of

construction, including major project activities, their durations, and logical relationships; and other pertinent Project events.

- J. **Cost Estimate Development.** After the best overall project approach is determined, S&L will develop an preliminary estimate of Construction Cost for Part 1 of the project as defined in RFP #2025-164. S&L’s previously executed projects along with their extensive library of cost commodities and labor will be used to efficiently build a preliminary estimate based upon the quantities provided by the engineering team. Known site specific factors such as labor productivity, plant arrangement related factors, ambient conditions, as well as any client preferences (e.g. extent of Owner’s costs, Owner’s level of involvement during construction) that are made available to the S&L project team during the course of the project will also be included. The format, structure, and content of the estimate will be S&L’s standard and will identify the total capital direct costs and specific indirect costs. The preliminary estimate of Construction Cost will be structured into multiple accounts for a clear understanding of the costs for each of the major areas utilizing the Timberline program. The capital cost estimate will identify equipment and material quantities, equipment and material unit prices, unit and total man-hours for installation/erection/construction, crew codes, labor rates, and productivity adjustments to calculate total installed costs. S&L will use the prevailing skilled craft labor wage rates as published in the RS Means Labor Rates for the Construction Industry. The craft rates will then be incorporated into work crews appropriate for the tasks by adding allowances for small tools, construction equipment, insurance, payment bonds and site overheads to arrive at crew rates to perform a specific activity listed in the cost estimate. Depending on the market conditions, the preliminary estimate of Construction Cost may also include premium pay, per diem, or other costs required to attract labor. S&L will develop a cost estimate report summarizing the preliminary estimate of Construction Cost. The technical and commercial basis for the estimate will be provided including information about indirect costs, escalation, contingency, etc. The assumptions utilized in the development of the estimate will also be provided. The cost estimate will be updated by S&L on a regular basis, no less than the end of each project phase as identified in Exhibit A, and as required to reflect any programmatic decisions by the City. S&L shall not begin a phase of work, beyond the Introduction Phase, until receiving written consent from the Owner. This shall be true if the City approved best overall approach includes less or more phases than what is shown in Exhibit A.

1.02 RICE OEM PROCUREMENT

- A. S&L will work with the City during the Introduction Phase and during the early stages of Phase 1 to finalize the size of the RICE the City desires to purchase. S&L will also assist in determining operation, maintenance, and site requirements for the new RICE units. During Phase 1, S&L will assist the City in developing the Invitation to Bid (ITB) for the full RICE OEM scope.

1.03 SPECIFICATIONS FOR ENGINES

- A. **Development of Potential Vendors List.** S&L will develop a list of qualified RICE OEM capable of successfully executing this project.
- B. **Development of Technical Specification.** S&L will develop the technical specification for the procurement of the RICE and the entire scope that the RICE manufacturer shall be responsible for including but not limited to the following scope:

1. Reciprocating Engine & Generator Set w/all core ancillary systems (starting air, cooling water, unit fuel supply control/modulation, lube oil, etc.)
 2. SCR, reagent storage, injection systems/equipment, etc.
 3. Radiators & fans/motors
 4. Exhaust ductwork & silencers (if required)
 5. Stack & silencers (if required)
 6. Intake air system
 7. Structural support steel for radiators, SCR, exhaust ductwork, and intake air
 8. Delivery to jobsite (***include onsite assembly and delivering to foundation***)
- C. Technical support during construction & Start Up/commissioning The specification developed by S&L will include all technical requirements, performance requirements, and general requirements (summary of work, schedule requirements, quality control requirements, etc.). The City will be responsible for all commercial requirements and for overall management of the procurement process.
- D. ***Development of RICE OEM Comparison Matrices:*** As part of the RFP development, S&L will create the following comparison tools to be included in the bid:
1. Bid Data Pages – The proposal data (BD) pages will be created to collect important data about the OEM’s proposal. The form will contain questions about schedule, performance, emissions, equipment characteristics, equipment sizing, etc. The BD pages will be provided to the prospective bidders in native Excel format for completion. After all bids are received, S&L will assemble all the OEM’s BD pages together so that a side-by-side comparison can be performed.
 2. Bid Pricing Pages – The proposal pricing (BP) pages will be created to collect the OEM’s pricing information in a uniform format. Like the BD pages, they will be provided to the prospective OEM in native Excel format for completion. After all proposals are received, S&L will assemble all the OEM’s BP pages together so that a side-by-side comparison of price can be performed.

1.04 PROCUREMENT OF ENGINES

- A. ***Conduct the Pre-Bid Meeting.*** S&L will conduct a pre-bid meeting with the prospective OEMs by teleconference. The S&L PM and lead engineers will attend the meeting. After a brief safety minute, S&L will present the important aspects of the project such as: scope of work, plant general arrangement, schedule, performance requirements, emissions requirements, technical requirements, and commercial requirements. The OEMs will be given an opportunity to ask questions following the presentation. S&L will take notes during the pre-bid meeting which will be issued to the prospective bidders within three (3) business days following the meeting.
- B. ***Provide Bid Period Support:*** During the bid period, S&L will respond to technical inquiries from the OEMs. All inquiries will be documented in tabular format and will be periodically issued to all OEMs on predetermined dates through a City issued addendum.

- C. **Perform Technical Review of the Bids:** S&L will perform a cursory review of the bids received to short list two OEMs for detailed evaluation. S&L will then perform a detailed technical review of the two OEMs on the short list. The technical review will focus on assuring that all OEM exceptions and clarifications are clearly understood and that all S&L or City questions about the bids are resolved. S&L has assumed that the commercial review will be performed by the City. All communication with the OEMs will be done through a Request for Clarification (RFC) form so that all communication is documented, and all issues are resolved. The City will be the only entity to directly communicate with potential OEMs. The RFC will become part of the final contract. S&L will assemble the side-by-side comparisons of the bid data (BD) pages and bid pricing (BP) pages. These are important documents for evaluating and comparing the OEM's overall proposal and pricing.
- D. **Conduct Short-list OEM Interviews, if necessary.** After completion of the technical review of the bids, S&L, along with the City will conduct live in person interviews with the OEM's project team. The OEMs project team will be expected to present the key components of their bid. After the presentation, S&L and the City will interview the OEMs to assure that all aspects of their bid are understood.
- E. If the City engages in negotiations with a Firm, S&L shall assist the City with respect to technical and engineering issues that arise during the negotiations.
- F. **Prepare Letter of Recommendation for the RICE OEM Contract.** Following the OEM interviews, S&L will finalize a letter of recommendation for award of the OEM contract. Form of Contract will be determined by the City.
- G. **City Council Action Form and Meeting.** S&L will assist the City in developing the City Council action form. If the City determines it is necessary, S&L shall have a staff member present in person at the council meeting to present to the City Council.

1.05 RICE OEM POST-AWARD SUPPORT

- A. S&L will support the City after award of the RICE OEM contract as follows:
 - 1. **Vendor Drawing Review and Cataloging.** S&L will review the drawings and documents that are submitted by the RICE OEM. Upon receipt of each submittal from the RICE OEM, S&L will log it into the project database, notify interfacing entities/disciplines as required to provide input, perform a technical/commercial review, compile S&L and City comments, and return the submittal to the RICE OEM using approved submittal process as defined during project kickoff meeting between the City and S&L. The RICE OEM is required to incorporate comments provided and resubmit the documents for approval. As part of the review process, S&L will have direct communications with the RICE OEM as necessary, which ensures clarity in the comment incorporation and assists the overall project execution schedule by minimizing drawing turnaround time. S&L will include the City in all communications. S&L will also monitor the RICE OEM's submittal schedule to ensure that drawings and documents are being submitted on schedule. S&L will perform expediting as necessary.
 - 2. **Vendor Interface Meetings.** S&L will lead bi-weekly meetings between the City, RICE OEM, and S&L. S&L will develop an agenda which will be issued prior to the meeting. S&L will maintain an action item list and publish meeting notes within three (3) business days after each meeting.

1.06 PROCUREMENT OF TRANSFORMERS

- A. The scope of work stops at the high side of the generator step up (GSU) transformer. Therefore, the interconnection design into the existing transmission system and the specification for the high voltage switchgear equipment, are not included in the scope of services.
- B. S&L will utilize information from the Introduction Phase and experience from past projects to size the generator step up (GSU) transformers required for the project.

1.07 SPECIFICATIONS FOR TRANSFORMERS

- A. During Phase 2, S&L will assist the City in developing the Invitation to Bid (ITB) for the GSU transformers by performing the following activities.
 - 1. **Development of Bidders List.** S&L will develop a list of potential vendors capable of successfully supplying the GSUs.
 - 2. **Development of Comparison Matrices:** As part of the ITB development, S&L will create the following comparison tools to be included in the bid:
 - a. Bid Data Pages – The bid data (BD) pages will be created to collect important data about the bidder’s bid. The form will contain questions about schedule, performance, characteristics, etc. The PD pages will be provided to the prospective bidders in native Excel format for completion. After all bids are received, S&L will assemble all the bidder’s PD pages together so that a side-by-side comparison can be performed.
 - b. Bid Pricing Pages – The bid pricing (PP) pages will be created to collect the bidder’s pricing information in a uniform format. Like the PD pages, they will be provided to the prospective bidders in native Excel format for completion. After all bids are received, S&L will assemble all the bidder’s PP pages together so that a side-by-side comparison of price can be performed.
 - 3. **Development of Technical Specifications and Documents:** The specifications developed by S&L will include all technical requirements, performance requirements, and general requirements (summary of work, schedule requirements, quality control requirements, etc.). S&L has assumed that the City will be responsible for all commercial requirements and for overall management of the procurement process. However, S&L can provide these services if requested

1.08 BIDDING TRANSFORMERS

- A. After the bid is issued, S&L will perform the following:
 - 1. **Provide Bid Period Support:** During the bid period, S&L will respond to technical and commercial inquiries from the bidders. All inquiries will be documented in tabular format and will be periodically issued to all bidders on predetermined dates through an addendum.
 - 2. **Perform Technical Review of the Bids:** S&L will then perform a detailed technical review of the bids received. The technical review will focus on assuring that all requirements from the technical specification are met and that all S&L or the City’s questions about the bids are resolved. All communication with the bidders will be done through a

Request for Clarification (RFC) form so that all communication is documented, and all issues are resolved. The City will be the only entity to directly communicate with potential OEMs. The RFC will become part of the final contract. S&L will assemble the side-by-side comparisons of the bid data (BD) pages and bid pricing (BP) pages. These are important documents for evaluating and comparing the bidder's overall response and pricing.

3. **Prepare Letter of Recommendation for the Contract.** S&L will finalize a letter of recommendation for award of the contract. The Form of Contract will be determined by the City.
4. **Post Award Services.** S&L will support the City after award of the GSU transformer contract by reviewing drawings and documents that are submitted by the successful Vendor.

1.09 UNDERGROUND INFRASTRUCTURE

- A. S&L will work with the City during the Introduction Phase to determine the best overall approach for the project. This will involve separate contractors for the underground infrastructure and aboveground infrastructure.
- B. S&L will build upon the conceptual design performed in the Introduction Phase to perform the engineering and design required to develop a bid package for a contractor to perform the underground infrastructure scope of work. S&L will utilize information from previous projects to develop the following as a minimum:
 1. *Civil Engineering and Design:* Initial grading drawings, potable water piping, stormwater piping drawing, oily water piping drawings, sanitary piping drawings.
 2. *Electrical Engineering and Design:* Grounding drawings, underground raceway drawings
 3. *Mechanical Engineering and Design:* Underground P&IDs, underground piping isometrics, underground piping lists (pipeline, valve, specialty)
 4. *Structural Engineering and Design:* Deep foundation drawings (if applicable), foundation drawings
- C. The bid package will be developed to a level allowing the City to receive firm pricing from contractors. Information is required from the RICE OEM and the Aboveground Infrastructure Contractor to complete detailed engineering and design and issue drawings for construction. S&L will perform detailed engineering and design as this information is received per the schedule that will be developed during the Introduction Phase.

1.10 SPECIFICATIONS FOR UNDERGROUND INFRASTRUCTURE

- A. S&L will assist the City in developing the Invitation to Bid (ITB) for the underground infrastructure scope by performing the following activities.
 1. **Development of Bidders List.** S&L will develop a list of potential Contractors capable of successfully executing this project.
 2. **Bid Attachment Development:** S&L will create the attachments required for the bid:
 - a. Recommended approved suppliers list for goods and/or services,
 - b. Bid level engineering and design deliverables discussed above

Exhibit A—Engineer's Services.

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- c. Existing drawings for existing utilities being utilized for the new plant
 - d. Overall project schedule
 - e. Geotechnical investigation reports
 - f. Topographical surveys
3. **Development of Comparison Matrices:** As part of the bid development, S&L will create the following comparison tools to be included in the bid:
- a. Bid Data Pages – The bid data (BD) pages will be created to collect important data about the bidder’s response. The form will contain questions about schedule, subcontracted work, subcontractor’s credentials, relevant project experience, etc. The BD pages will be provided to the prospective bidders in native Excel format for completion. After all bids are received, S&L will assemble all the bidder’s BD pages together so that a side-by-side comparison can be performed.
 - b. Bid Pricing Pages – The bid pricing (BP) pages will be created to collect the bidder’s pricing information in a uniform format. Like the BD pages, they will be provided to the prospective bidders in native Excel format for completion. After all bids are received, S&L will assemble all the bidder’s BP pages together so that a side-by-side comparison of price can be performed.
4. **Development of Technical Specifications and Documents:** The specification developed by S&L will include all technical requirements, performance requirements, and general requirements (summary of work, schedule requirements, quality control requirements, etc.). S&L has assumed that the City will be responsible for all commercial requirements and for overall management of the procurement process.

1.11 BIDDING UNDERGROUND INFRASTRUCTURE

- A. After the bid is issued, S&L will perform the following:
- 1. **Conduct the Pre-Bid Meeting.** S&L will conduct a pre-bid meeting with the prospective bidders. The S&L PM and lead engineers will attend the meeting in person. Additional S&L engineers will participate through a teleconference. After a brief safety minute, S&L will present the important aspects of the project such as: scope of work, plant general arrangement, schedule, technical requirements, and commercial requirements. The bidders will be given an opportunity to ask questions following the presentation followed by a tour of the project area. S&L will take notes during the pre-bid meeting which will be issued to the prospective bidders following the meeting.
 - 2. **Provide Bid Period Support:** During the bid period, S&L will respond to technical and commercial inquiries from the bidders. All inquiries will be documented in tabular format and will be periodically issued to all bidders on predetermined dates through an Addendum.
 - 3. **Perform Technical Review of the Bids:** S&L will perform a cursory review of the bids received to short list to three bidders for detailed evaluation. S&L will then perform a detailed technical review of the short-listed bids. The technical review will include but not limited to bid specification compliance, cost review, and evaluation of alternatives

- a. S&L will assemble the side-by-side comparisons of the proposal data (BD) pages and proposal pricing (BP) pages. These are important documents for evaluating and comparing the bidder's overall proposal and pricing.
4. **Prepare Letter of Recommendation for the Contract.** S&L will prepare a letter of recommendation for award of the contract. The Form of Contract will be determined by the City.
5. **Post Contract Award Services.** S&L will support the City after award of the underground infrastructure contract as follows:
 - a. **Drawing Review and Cataloging.** S&L will review the drawings and documents that are submitted by the contractor. Upon receipt of each submittal from the contractor, S&L will log it into the project database, notify interfacing entities/disciplines as required to provide input, perform a technical/commercial review, compile S&L and City comments, and return the submittal to contractor with a Status of 1, 2, 3, or 4. As part of the review process, S&L will have direct communications with the contractor as necessary, which ensures clarity in the comment incorporation and assists the overall project execution schedule by minimizing drawing turnaround time. The City will be included in all communication. S&L will also monitor the contractor's submittal schedule to assure that drawings and documents are being submitted on schedule. S&L will perform expediting as necessary.
 - b. **Vendor Interface Meetings.** S&L will lead weekly meetings between the City, contractor, and S&L. S&L will develop an agenda which will be issued prior to the meeting. S&L will maintain an action item list and publish meeting notes.

1.12 ABOVEGROUND INFRASTRUCTURE

- A. S&L will build upon the conceptual design performed in the Introduction Phase and engineering and design performed for the underground infrastructure to perform the engineering and design required to develop a detailed and thorough bid package for a contractor to perform the aboveground infrastructure scope of work. S&L will utilize information from previous projects, as well as new information and design concepts to develop at a minimum, the following:
 1. *Architecture:* Building interior and exterior general arrangement drawings
 2. *Civil Engineering and Design:* Final grading drawings, storm water controls, landscaping,
 3. *Electrical Engineering and Design:* Relay & metering diagrams, 3-line diagrams, phasing diagrams, cable tray drawings, lighting & fixture schedules, electrical installation drawings, cable tabulation, master schematic & wiring diagrams, electrical load list,
 4. *I&C Engineering and Design:* Instrument datasheets, instrument lists, instrument installation detail and location drawings, I/O list, control narratives, network architecture drawing
 5. *Mechanical Engineering and Design:* Equipment location drawings, hazardous area classification drawings, aboveground P&IDs, aboveground piping isometrics, system descriptions, aboveground piping lists (pipeline, valve, specialties)

6. *Structural Engineering and Design*: Structural drawings for all above ground infrastructure(as required)

- B. The bid package will be developed to a level allowing the City to receive firm pricing from the contractors. Information is required from the RICE OEM and the Aboveground Infrastructure Contractor to complete detailed engineering and design and issue shop drawings for construction. S&L will perform detailed engineering and design as this information is received per the schedule that will be developed during the Introduction Phase.

1.13 SPECIFICATIONS FOR ABOVEGROUND INFRASTRUCTURE

- A. S&L's approach to the above ground infrastructure bid development will be the same as described above for the underground infrastructure.
- B. S&L's approach to the bidding the aboveground infrastructure scope of work will be the same as described above for the underground infrastructure.
- C. S&L's approach to supporting the aboveground infrastructure scope of work after award will be the same as described above for the underground infrastructure.

1.14 ENVIRONMENTAL PERMITTING

- A. The following tasks will be completed in order to support the City with the State of Iowa permitting and registration requirements.

1. PERMIT MATRIX

- a. Sargent & Lundy will develop a permitting matrix that will remain a working document throughout the Project and will serve as a roadmap for securing all permits and approvals in a timely manner. S&L shall work closely with the City to identify and assist in securing all permits and approvals required to allow the Project to be constructed and begin operation. The matrix will include federal, state, and local permits that may be required by the addition of the RICE facility. The matrix will identify the following:

- 1) Permit Type
- 2) Regulatory Agency
- 3) Applicability
- 4) Permit Need By Date
- 5) Estimated Timelines for Agency Review
- 6) Technical Input Requirements
- 7) Responsible Parties

- b. S&L has included the following major permits that will be required for the project:

- 1) Construction Air Permit
- 2) SPCC Plan
- 3) NPDES Stormwater and Soil Erosion Sediment Control Plan & Municipal Separate Storm Sewer System (MS4) Permit Requirements

- 4) Iowa Utility Commission Certificate of Public Convenience, Use and Necessity (CPCUN)
- 5) Building Permit

2. PERMIT APPLICATION SERVICES

- a. Sargent and Lundy will prepare all portions of the construction air permit application as detailed below. S&L has assumed a major source Prevention of Significant Deterioration (PSD) permit.
- b. S&L will confer with the City regarding revisions, if any, to the application(s), and make appropriate revisions to the application(s) for the City's resubmittal to the authority having jurisdiction. S&L will provide technical criteria, written descriptions, and design data for the City's use in filing applications for permits from or approvals of the authorities having jurisdiction listed above, including applications for review or approval of the final design. S&L will identify and indicate in the Construction Contract Documents the permits and approvals for which Contractors will be responsible, including work permits, building permits, and other permits and approvals that will be Contractor's responsibility; and, in addition, indicate those permits initially obtained by the City for which Contractor will be a co-permittee, together with associated requirements.
- c. Unless expressly indicated otherwise, S&L's scope includes attending one meeting or conference call with each permit and approval-issuing agency to discuss the Project and receive the agency's comments on the application. The City will be included in all communication with all issuing agencies. S&L does not guarantee issuance of any required permit or approval.
- d. **Emission Calculations** - S&L will prepare emissions calculations, relying on OEM performance data for the proposed RICE units and ancillary heating equipment. As part of the emissions analysis, S&L will help identify any air permitting issues or constraints as well as potential operating/capacity factor limits, if any. The goal of this subtask is to quantify potential annual emissions from the generating station to determine: (1) whether potential emissions from the facility exceed the applicable major source thresholds; (2) if so, which regulated air pollutants will be emitted at, or above, their respective significance level; and (3) prepare a preliminary regulatory applicability evaluation. S&L shall develop the preliminary emission calculations and regulatory applicability evaluation in order to define the permitting scope and provide meaningful input to the Agency Pre-Application Meeting. Emissions calculations will be prepared for normal operation and startup.
- e. **Regulatory Review** - As part of the air permit application process, S&L will review and evaluate the applicability of the state and federal air quality control regulation, identify other applicable air emission standards, and provide the technical information needed to support a conclusion that the proposed emission sources will be in compliance with all applicable standards. Applicable air emission standards may include New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), Maximum Available Control Technology (MACT) Standards, and any state permitting rules and limitations.

Exhibit A—Engineer's Services.

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Page 14 of 24

- f. **Air Quality Impact Modeling** - S&L will perform ambient air quality impact modeling to assess the potential off-site impact of emissions from the proposed new source(s). The modeling will define the impacts of the Project to the National Ambient Air Quality Standards (NAAQS) to determine if there could be an issue with meeting air quality in the proposed project area. S&L shall utilize state-of-the-art computer modeling capabilities, including models approved by the U.S. EPA (such as AERMOD) and proprietary models developed in-house, to perform all aspects of air quality modeling. Air quality impact modeling for the project includes the following:
 - 1) Impact modeling protocol
 - 2) Comparison of modeled impacts for the project with the SILs
 - 3) Cumulative modeling that compares the modeled impacts for the project and off-site emissions sources with NAAQS and PSD Increments
 - 4) Additional impacts analysis
 - g. **Air Permit Application Preparation**
 - 1) Information developed from the previous Tasks will be assembled into a permit application for submittal to the State Agency. S&L shall prepare the PSD major source permit application, which will include all applicable application forms required by the Iowa Department of Natural Resources (IADNR) for a major source permit application. In addition, a BACT analysis will be prepared, as required by the IADNR. S&L will provide a draft copy of the application to the City for review and comment. After incorporating any comments, S&L will submit the final permit application to the City for signature and submittal to the Agency.
 - 2) After the submittal of the major source permit application, S&L will assist the City during the Agency's completeness review process, as well as the public notice and participation process. S&L will provide responses to Agency comments submitted during the public review/comment period. Upon issuance of a draft permit, S&L will review and prepare comments on the draft permit and advise the City as to the technical feasibility and risks associated with the proposed permit conditions.
3. **SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN**
- a. S&L will prepare a Spill Prevention Control and Countermeasure (SPCC) Plan and/or oil containment requirements for oil-filled equipment. If oil storage exceeds applicable thresholds, S&L will develop a Spill Prevention Control and Countermeasure (SPCC) plan for the project in accordance with City of Ames requirements and EPA requirements for the duration of project construction.
4. **NPDES STORMWATER AND SOIL EROSION SEDIMENT CONTROL PLAN**
- a. S&L will develop a Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) in conjunction with state, county, and local requirements; industry standards; and best management practices (BMPs) that are included in associated permitting documents and other applicable regulations. Existing work site

conditions and environmental features will be retained and protected with minimal disturbance to the maximum extent practical. This effort includes maintaining existing drainage features, contours, slopes, soil conditions, and vegetation patterns as far as development and local conditions permit and otherwise minimizing disturbances and damages to the work site and adjoining lands. Vegetation will be left in place wherever possible within construction areas. Proposed access roads and additional workspaces will be coordinated with the City.

- b. **Municipal Separate Storm Sewer System (MS4) Permit Requirements** - The U.S. EPA's National Pollutant Discharge Elimination System ("NPDES") permit program administered by the IDNR requires that cities meeting certain demographic and environmental impact criteria obtain from the IDNR an NPDES permit for the discharge of stormwater from a Municipal Separate Storm Sewer System (MS4) (MS4 Permit). The City is subject to the program and is required to obtain, and has obtained, an MS4 Permit. As a condition of the City's MS4 Permit, the City is obliged to undertake primary responsibility for administration and enforcement of the Program by adopting a Construction Site Erosion and Sediment Control (COSESCO) ordinance. The Project is located within this regulated MS4 jurisdiction; therefore, a City of Ames COSESCO Permit will be required from the Departments of Public Works and Building Inspections. S&L will prepare the application, including all applicable application forms and attachments required by the City of Ames for a COSESCO application. Information developed from the previous Tasks will be assembled into the application as required.

5. IOWA UTILITY COMMISSION

- a. The Project exceeds 25 MW of generating capacity; therefore, it meets the definition of a "facility" and a certificate of public convenience, use, and necessity (CPCUN) will be required from the Iowa Utility Commission (Iowa Administrative Code [IAC] Chapter 24, Part 1 [199 – Utilities] and IAC Chapter 476A). According to Iowa regulations, a facility means "any electric power generating plant or combination of plants at a single site, owned by any person, with a maximum generator nameplate capacity of 25 MW of electricity or more and those associated transmission lines connecting the generating plant to either a power transmission system or an interconnected primary transmission system or both. This term includes any generation addition that increases the total maximum generator nameplate capacity at one site to 25 MW or more but does not include those transmission lines beyond the generation station's substation".
- b. **CPCUN Application** - Per IAC 199—24 (476A), each person or group of persons proposing to construct a facility after January 1, 1977, or a significant alteration to a facility shall file an application for certificate of public convenience, use, and necessity with the board, unless otherwise provided by these rules. An application shall substantially comply with the informational requirements detailed within the regulation. Information developed from the previous Tasks will be assembled into a CPCUN application for submittal to the State Agency. S&L shall prepare the CPCUN application which shall include all applicable application forms and attachments required by the IUC for a CPCUN application. S&L will provide a draft copy of the application to the City for review and comment. After incorporating any

comments, S&L will submit the final CPCUN application to the City for signature and submittal to the Agency. After the submittal of the CPCUN application, S&L shall assist the City during the Agency's completeness review and proceedings. S&L will attend the prehearing conference and public hearing; assist with the preparation of required materials; and provide responses to Agency comments submitted during the public review/comment period. Upon issuance of the Agency's decision, S&L will review and prepare comments on the certificate and advise the City as to the technical feasibility and risks associated with the proposed conditions.

6. BUILDING PERMIT

- a. A Building Permit Application with construction plans shall be submitted to the City of Ames for the Project. S&L will prepare the building permit application, including all relevant application forms and attachments required by the City of Ames. Information developed from the previous Tasks will be assembled into the application as required.

7. MISO INTERCONNECT APPLICATION

- a. S&L will provide the City with the services required by Midwest Independent System Operator (MISO) to receive permission to interconnect this generation to the regional electric transmission grid. S&L will assist The City in determining a Point of Interconnection. S&L will support submitting the MISO generator interconnection application. S&L will perform the following tasks to support the application:
 - 1) Work with the City to obtain PSS/E models for the planned RICE generator.
 - 2) Preparation of a one-line diagram showing the Generating Facility and associated electrical equipment with appropriate rating and impedance information
 - 3) Preparation of application technical data in the form of Attachment A to Appendix 1 of Generator Interconnection Procedure (GIP)
 - 4) Preparation of PSSE modeling data, including the MVAR calculations for gross and net MW Values
 - 5) Verification of FERC Order 827 power factor requirements
 - 6) Attending meetings with MISO/TO as requested

8. PERMITTING CLARIFICATIONS

- a. Fees associated with submittal of permit applications are to be paid by the City.
- b. Environmental field surveys (i.e. wetlands, species and/or cultural surveys) are not included.
- c. Meteorological and terrain input data for AERMOD shall be readily available for the project site.

- d. During the development of the permit matrix, S&L may identify additional permits, not specifically listed in this proposal, that may be necessary, especially at the local level. These permits have not been included in the scope of services.
- e. Because of the undefined nature of the post-submittal agency support, S&L has included an allotment on a time and material basis of 100 hours. This assumes the Agency will have a moderate number of comments and questions regarding the permit application and that responses to all questions/comments can be developed based on information developed for the permit application.

1.15 SERVICES ALSO INCLUDED

A. RICE OEM Scope of Supply. The RICE OEM scope of supply shall include:

- 1. Reciprocating Engine & Generator Set w/all core ancillary systems (starting air, cooling water, unit fuel supply control/modulation, lube oil, etc.),
- 2. SCR, reagent storage, injection systems/equipment, etc.,
- 3. Radiators & fans/motors,
- 4. Exhaust ductwork & silencers,
- 5. Stack & silencers,
- 6. Intake air system,
- 7. Structural support steel for radiators, SCR, exhaust ductwork, and intake air,
- 8. Lube oil storage/urea storage tanks and transfer pumps
- 9. Compressor system (starting/instrument air compressors, dryers, and receivers)
- 10. MV and LV switchgear, station service transformer, and DC electrical systems,
- 11. Emergency diesel generator
- 12. Electrical studies including electrical system model, load flow analysis, short circuit analysis, motor starting analysis, relay and breaker settings,
- 13. Delivery to jobsite,
- 14. Technical support during construction & SU/commissioning.

B. *Schedule*. S&L will work with the City after award to develop an overall project schedule. S&L currently assumes a 16-month engineering schedule.

C. *P&IDs*. S&L shall develop P&IDs for the following balance of plant and RICE interconnecting systems:

- 1. Fire Protection
- 2. HVAC
- 3. Lube Oil
- 4. Urea Reagent
- 5. Compressed Air (Starting Air and Instrument Air)
- 6. Cooling Water

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7. Fuel Gas

- D. *Balance of Plant Piping and Conduit Design.* S&L will perform the detailed engineering and design of the balance of plant large bore piping (lines that are 2.5" and larger). Isometric or composite drawings will be created showing the pipeline routing, tag number, elevations, lengths, BOM, and other information required to perform the installation work. Piping and conduit that is <2.5" is defined as small bore and will be field routed during construction by the Contractor based on the P&IDs and/or cable tabulations. To support the construction phase of the project, S&L will define corridors and pathways ("home runs") during design for small bore piping and conduit. This information will be captured in the 3D model. The home run paths will provide guidance during construction for major pipe and conduit corridors and will help to prevent encroachment on equipment maintenance areas, aisle ways, and access corridors.
- E. *Fire Protection/Detection Systems.* The fire water source will be from the existing fire water loop. A new fire water loop will be created around the perimeter of the RICE facility and include hydrants spaced in accordance with NFPA. S&L assumes adequate pressure and flow is available from the existing fire water system. If the existing fire water system (i.e. tanks, pumps, etc.) is inadequate, S&L will identify the extent of modifications to meet fire water demand for the new facility.
- F. *Cooling Water.* S&L assumes the municipal water supply will meet the RICE OEM's water quality standards; S&L will confirm this and if needed, S&L will define the water filtration and/or treatment needed to allow for safe operation of the engine systems (typically this will be limited to cartridge water filters).
- G. *Telecommunication & Security.* S&L will work with the City during the Introduction Phase to determine the telecommunication & security scope for the project and the best approach for design. S&L will provide base design of the telecommunications and security systems with the understanding that the City may choose to either hire another company to perform such design or perform the design by City staff. This scope includes:
1. SCADA/RTU interfaces
 2. IT and phone systems and networks
 3. Revenue metering
 4. Facility security system including key card system and CCTV's
- H. *Buildings:* S&L will develop the specification and building general arrangement drawings. S&L will also work with the City and the City hired noise consultant to assure sound attenuation, meet maximum allowable exterior sound levels, and external façade features, are included in the design specification.
- I. *Substation:* Protective relay and circuit breaker settings for all existing and new electrical equipment in the substation and outside of the power block will be developed by others.
- J. *Controls:* S&L shall develop the specifications for controls so that the control system supplied by the RICE OEM will include the ability to view, monitor, and control the balance of plant systems.
- K. Fuel oil / chemical storage and unloading areas will be located outdoors.

- L. *Subcontractors*: S&L assumes the City will direct hire contractors based upon S&L technical specifications including geotechnical investigation, topographical surveys, noise consultant, above ground fire protection, telecommunications and security, HVAC, heat trace, cathodic protection, etc.
- M. *Commercial*: S&L assumes that the City will provide the commercial and legal support for requests for proposal developed for the project. The pricing and labor estimates for the detailed engineering scope provided are indicative and include a small contingency. As this project becomes more prescriptively defined with regards to commercial terms, schedule, and division of responsibility (DOR), S&L will align with the City of Ames regarding the specific margins to carry.

ARTICLE 2—ADDITIONAL SERVICES REQUIRING OWNER’S PRIOR WRITTEN AUTHORIZATION BEFORE PROCEEDING WITH WORK

- A. Engineer shall advise Owner in writing, prior to commencing any additional work, that Engineer is proposing to commence to performing or furnishing the Additional Services of the types listed below. For such Additional Services, Engineer must obtain specific advance written authorization from Owner. Engineer shall not perform or furnish such Additional Services until receipt of written notice to proceed from Owner. These services are not included as part of Basic Services, are subject to Owner’s consideration and approval and may be paid for by Owner as indicated in Exhibit J.
 - 1. Substantive design and other technical services in connection with Work Change Directives, Change Proposals, and Change Orders to reflect changes requested by Owner.
 - 2. Services essential to the orderly progress of the Bidding/Proposal and Construction Phases and not wholly quantifiable prior to those Phases or otherwise dependent on the actions of prospective individual bidders or contractors and including:
 - a. making extensive revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than “or equal” items;
 - b. services after the award of the Construction Contract in evaluating and determining the acceptability of a proposed "or equal" or substitution found to be inappropriate for the Project;
 - c. evaluation and determination of an excessive number of proposed "or equals" or substitutions, whether proposed before or after award of the Construction Contract; and
 - d. providing to the Contractor or Owner additional or new information not previously prepared or developed by the Engineer for their use in applying for or obtaining required permits and licenses, in responding to agency comments on such applications, or in the administration of any such permits or licenses.
 - 3. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
 - 4. Additional or extended services arising from (a) the presence at the Site of any Constituent of Concern or items of historical or cultural significance, (b) emergencies or

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acts of God endangering the Work, (c) damage to the Work by fire or other causes during construction, (d) a significant amount of defective, neglected, or delayed Work, (e) acceleration of the progress schedule involving services beyond normal working hours, or (f) default by Contractor.

5. Implement coordination of Engineer's services with other parts of the Project that are not planned or designed by Engineer or its Subconsultants, unless Owner furnished to Engineer substantive information about such other parts of the Project prior to the parties' entry into this Agreement, in the Baseline Information section of this Exhibit A, or otherwise in Exhibit A; if such substantive information has been so provided, coordination of Engineer's services will be part of Basic Services.
6. Implement the specific parts of an Underground Facilities Procedure that are assigned to Engineer, or above-ground utilities tasks that are assigned to Engineer as the Project progresses (but not including the design-related services already assigned to Engineer as a Basic Service).
7. Services (other than Basic Services during the Post-Construction Phase) in connection with any partial utilization of the Work by Owner prior to Substantial Completion.
8. Evaluating unreasonable or frivolous requests for interpretation or information (RFIs), Change Proposals, or other demands from Contractor or others in connection with the Work, or an excessive number of RFIs, Change Proposals, or demands.
9. Reviewing a Shop Drawing or other Contractor submittal more than three times, as a result of repeated inadequate submissions by Contractor.
10. While at the Site, compliance by Engineer and its staff with those terms of Owner's or Contractor's safety program provided to Engineer subsequent to the Effective Date that exceed those normally required of engineering personnel by federal, State, or local safety authorities for similar construction sites.
11. To the extent the Project is subject to Laws and Regulations governing public or government records disclosure or non-disclosure, Engineer will comply with provisions applicable to Engineer, and Owner will compensate Engineer as Additional Services for Engineer's costs to comply with any disclosure or non-disclosure obligations beyond those identified in the Basic Services.
12. Services directly attributable to changes in Engineer's Electronic Documents obligations after the effective date of the Agreement.
13. Obtain or provide specified additional Project-related information and data to enable Engineer to complete its Basic and Additional Services.
14. Preparation of special and customized reporting, invoicing, and related support documentation in addition to that identified to be provided under Basic Services.
15. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance

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in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

16. Services to make measured drawings of existing conditions or facilities, to conduct tests or investigations of existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.
17. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer, or the Project's design requirements, including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Construction Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date or are due to any other causes beyond Engineer's control.
18. Services resulting from Owner's request to evaluate additional Study and Report Phase alternative solutions beyond those agreed to in Exhibit A Paragraph 1.02 A.1, but only if the Owner's request is made after completion of the Study and Report Phase.
19. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.
20. Providing renderings or models for Owner's use, including development, management, and other services in support of building information modeling or civil integrated management.
21. Undertaking investigations and studies including, but not limited to:
 - a. All-hazards risk assessments and other studies to evaluate the feasibility of enhancing the resiliency of the design;
 - b. detailed consideration of operations, maintenance, and overhead expenses;
 - c. the preparation of feasibility studies (such as those that include projections of output capacity, utility project rates, project market demand, or project revenues) and cash flow analyses, provided that such services are based on the engineering and technical aspects of the Project, and do not include rendering advice regarding municipal financial products or the issuance of municipal securities;
 - d. preparation of appraisals;
 - e. with respect to proprietary systems or processes requiring licensing, providing services necessary to assist Owner in obtaining such licensing.
 - f. detailed quantity surveys of materials, equipment, and labor; and
 - g. audits or inventories required in connection with construction performed or furnished by Owner.
22. Furnishing services of Subconsultants or Engineer's Subcontractors for other than Basic Services.
23. Providing data or services of the types described in Article 2, when Owner retains Engineer to provide such data or services instead of Owner furnishing the same.

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24. Providing the following services:
 - a. Services attributable to multiple prime construction contracts.
 - b. Services to arrange for performance of construction services for Owner by contractors other than the principal prime Contractor, and administering Owner's contract for such services
25. Services during out-of-town travel required of Engineer, other than for visits to the Site or Owner's office as required in Basic Services (Article 1 of Exhibit A).
26. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, , project peer review, and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other documents as a result of such review processes beyond the reports and studies required to be provided as part of Basic Services.
27. Preparing additional bidding-related documents (or other construction procurement documents); preparing pre-qualification procedures and documents, and participating in pre-qualifying prospective Bidders.
28. Assistance in connection with bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services.
29. Preparing conformed Construction Contract Documents that incorporate and integrate any amendments negotiated by Owner and Contractor.
30. Services to assist Owner in developing or modifying protocols for transmittal of Electronic Documents by Electronic Means after the effective date of this Agreement, either by revising or adapting Exhibit F to the Project or implementing other Electronic Documents protocols among Project participants.
31. Any services by Engineer in connection with Owner or Engineer providing a Document to a Requesting Party under Exhibit F Paragraph 1.01.D (see Exhibit F, Electronic Documents Protocol), or any other distribution of a Document to a third party. Such services may include but are not limited to preparing the data contained in the requested Document in a manner deemed appropriate by Engineer; creating or otherwise preparing and distributing the Document in a format necessary to respond to Owner's direction or decision to provide the Document to a requesting party, including Contractor, in a format other than that required for deliverables from Engineer to Owner; and services in connection with obtaining required releases from the third parties to which the Documents will be distributed. Compensation for these Additional Services is not contingent upon Owner's reimbursement from the requesting party.
32. Providing Construction Phase services beyond the original date for completion and readiness for final payment of Contractor, but only if such services increase the total quantity of services to be performed in the Construction Phase, rather than merely shifting performance of such services to a later date.
33. Preparing Record Drawings, and furnishing such Record Drawings to Owner.

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34. Supplementing Record Drawings with information regarding the completed Project, Site, and immediately adjacent areas obtained from field observations, Owner, utility companies, and other reliable sources.
35. Conducting surveys, investigations, and field measurements to verify the accuracy of Record Drawing content obtained from Contractor, Owner, utility companies, and other sources; revise and supplement Record Drawings as needed.
36. Preparation of operation, maintenance, and staffing manuals.
37. Assistance to Owner in training Owner's staff to operate and maintain Project equipment and systems.
38. Assistance to Owner in developing systems and procedures for (a) control of the operation and maintenance of Project equipment and systems, and (b) related recordkeeping.
39. Preparing to serve or serving as a consultant or witness for, or producing documents for or on behalf of, Owner in any litigation, arbitration, mediation, lien or bond claim, or other legal or administrative proceeding involving the Project (but not including disputes between Owner and Engineer).
40. Overtime work requiring higher than regular rates.
41. Providing more extensive services required to enable Engineer to issue notices or certifications requested by Owner.
42. Extensive services required during any correction period, or with respect to monitoring Contractor's compliance with warranties and guarantees called for in the Construction Contract (except as agreed to under Basic Services).
43. Other additional services performed or furnished by Engineer not otherwise provided for in this Agreement.

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EXHIBIT B—DELIVERABLES SCHEDULE

Paragraphs 2.04.E, 3.02.A referenced in the Agreement, and Exhibit A of the Agreement are supplemented by the following paragraph and table.

Engineer shall endeavor to furnish Documents to Owner as required to meet an intended construction start date of September 24, 2026 or sooner and facility opening date of May 24, 2028 or sooner. Engineer will evaluate and provide to Owner a tentative schedule of major review dates, including the development of specifications and procurement of the RICE units, and transformers, contract award of Aboveground infrastructure and Belowground Infrastructure, and pertinent dates for permitting, installation of equipment and construction of buildings, time for required legal posting, City Council meetings, development approval meetings, review time for Owner’s staff, and any other pertinent dates. Engineer and Owner will work collectively to communicate necessary review time frames to meet the goals of: 1) project construction commencement on September 24, 2026 or sooner, and 2) facility opening on May 24, 2028 or sooner.

EXHIBIT C—AMENDMENT TO OWNER-ENGINEER AGREEMENT

AMENDMENT TO OWNER-ENGINEER AGREEMENT

Amendment No. **[Enter Amendment Number]**

Owner: **[Name of Owner]**

Engineer: **[Name of Engineer]**

Project: **[Name of Project]**

Effective Date of Owner-Engineer Agreement: **[Effective Date of Agreement]**

Nature of Amendment: (Check those that apply)

- Additional Services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications of payment to Engineer
- Modifications to time(s) for rendering services
- Modifications to other terms and conditions of the Agreement

Description of Modifications:

[Here describe the modifications, in as much specificity and detail as needed. Use an attachment if necessary. Include cost breakdown and documentation, if applicable.]

Agreement Summary:

Original agreement amount: \$

Net change for prior amendments: \$

This amendment amount: \$

Adjusted Agreement amount: \$

Change in time for services (days or date, as applicable):

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. The Effective Date of the Amendment is **[Enter Effective Date of Amendment]**.

Owner

Engineer

(typed or printed name of organization)

(typed or printed name of organization)

By:

(individual's signature)

By:

(individual's signature)

(Attach evidence of authority to sign.)

(Attach evidence of authority to sign.)

Date:

(date signed)

Date:

(date signed)

Name:

(typed or printed)

Name:

(typed or printed)

Title:

(typed or printed)

Title:

(typed or printed)

NOTICE OF ACCEPTABILITY OF WORK (EJCDC® C-626 2018)

Owner: _____ Owner's Project No.: _____
Engineer: _____ Engineer's Project No.: _____
Contractor: _____ Contractor's Project No.: _____
Project: _____
Contract Name: _____
Notice Date: _____ Effective Date of the Construction Contract: _____

The Engineer hereby gives notice to the Owner that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated **[date of professional services agreement]** ("Owner Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (signature): _____
Name (printed): _____
Title: _____

EXHIBIT F—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

ARTICLE 1—ELECTRONIC DOCUMENTS PROTOCOL (EDP)

Paragraph 6.03 of the Agreement is supplemented by the following Exhibit F Paragraph 1.01 and Exhibit F—Attachment 1: Software Requirements for Electronic Document Exchange:

1.01 Electronic Documents Protocol

A. Electronic Transmittals: The parties shall conform to the following provisions together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. Basic Requirements

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents by Electronic Means using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Agreement.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Agreement.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between the Owner and Engineer and any third party for any portion of the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with Owner, Engineer, or any Contractor or other entity directly contracted with the Owner to furnish Program-related services. Nothing herein will modify the requirements of the Agreement regarding communications between and among the individual third parties and their respective subcontractors and consultants, except to the extent that any respective subcontractor or consultant exchanges Electronic Documents with the Owner or Engineer.
- e. When transmitting Electronic Documents, the transmitting Party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving Party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
- f. Nothing herein negates any obligation (1) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or (2) to comply with any notice requirements limiting or otherwise modifying the acceptance of Electronic Documents for such notice.

Exhibit F—Electronic Documents Protocol (EDP).

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Page 1 of 5

2. System Infrastructure for Electronic Document Exchange

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP and any explicit system requirements specified by attachment to this EDP, it will be the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an e-mail attachment for exchange of Electronic Documents under this EDP is **30 MB**. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it will not be liable to the other party for any breach of system security.
- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties will cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Engineer, not reasonably anticipated under the original EDP, Engineer shall be entitled to compensation as Additional Services for its costs associated with the revisions to the EDP, delayed adoption of Exhibit L or implementation of other Electronic Documents protocols.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of any Project contract/agreement under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the Parties may rely for document archiving during the specified term of operation of such project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of project documents, as each party deems necessary

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for its own purposes, after the term of contract, or termination of the project document archive, if one is established.

- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

B. Software Requirements for Electronic Document Exchange; Limitations

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
 - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
- 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
- 3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in the following Attachment 1 to this EDP, including software version, if listed.

C. Format and Distribution of Deliverables

- 1. By definition, "Documents" as used in this Agreement are documents expressly identified as deliverables from Engineer to Owner. Exhibit A of the Agreement identifies various Documents that Engineer is required to deliver to Owner as part of Engineer's services; Exhibit B is a schedule of such Documents. Engineer will transmit such Documents to Owner in the formats identified in Attachment 1 to this Protocol. If no specific format is identified for a deliverable Document, the format will be Portable Document Format (PDF).
- 2. If a Document will be distributed to third parties, such as prospective bidders and contractors, reviewing agencies, or lenders, the transmittal format for distribution will be as identified in Attachment 1 to this Protocol; provided, however, that if a format for distribution of a specific Document is expressly stated in Exhibit A, then the Exhibit A format will take precedence. If no specific format is identified for distribution of a deliverable Document to third parties, the format will be Portable Document Format (PDF).

- a. If a format for Document distribution other than Portable Document Format (PDF) is specified, Owner shall first obtain a written, signed release from each third party to which the deliverable Document is distributed, establishing agreement to the following conditions:
- 1) The content included in the Electronic Documents prepared by or for Engineer and covered by the request was prepared as an internal working document for Engineer's purposes solely, and is being provided to the third party on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, the third party is advised and acknowledges that the content may not be suitable for the third party's application, or may require substantial modification and independent verification by the third party. The content may include limited resolution of models; not-to-scale schematic representations and symbols; use of notes to convey design concepts in lieu of accurate graphics; approximations; graphical simplifications; undocumented intermediate revisions; and other devices that may affect subsequent reuse.
 - 2) Electronic Documents containing text, graphics, metadata, or other types of data that are provided to the Requesting Party are only for the convenience of the third party. Any conclusion or information obtained or derived from such data will be at the third party's sole risk and the third party waives any and all claims against Engineer or Owner arising from the use of the Electronic Documents covered by the request, or of any data contained in such Electronic Documents.
 - 3) The third party shall indemnify and hold harmless Owner, Engineer, and Engineer's Subcontractors and Subconsultants, from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from the third party's use, adaptation, or distribution of any Electronic Documents provided under the request.
 - 4) The third party agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the request and is limited to the third party's subcontractors and consultants. The third party warrants that subsequent use by the third party's subcontractors and subconsultants will comply with all terms of the Construction Contract Documents and any specific instructions or conditions established by Owner.
- b. If Engineer is required to assist or participate in obtaining such releases from third parties, such services will be categorized as Additional Services.

D. Requests by Project-Related Parties for Electronic Documents in Other Formats

1. Owner may release (or direct Engineer to release) an Electronic Document version of a Document prepared by or for Engineer, including but not limited to a deliverable Document as set forth in Exhibit F Paragraph 1.01.C, in a format other than those identified in Exhibit F Paragraph 1.01.B or 1.01.C of the Electronic Documents Protocol, or elsewhere in the Agreement, only if (a) a Contractor or other Project-related party

Exhibit F—Electronic Documents Protocol (EDP).

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(Requesting Party) makes a good faith request for such release, (b) Owner determines in its sole discretion that such release is prudent and will be beneficial to the Project, and (c) Owner obtains Requesting Party's written consent to the four conditions set forth in Exhibit F Paragraph 1.01.C.2.a.1-4 above.

2. Any services by Engineer in connection with Owner or Engineer providing a Document to a Requesting Party under this Exhibit F Paragraph 1.01.D are Additional Services. Such services may include but are not limited to preparing the data in a manner deemed appropriate by Engineer. Owner may require reimbursement from the Requesting Party for the cost of such Additional Services, but compensation by Owner to Engineer for the Additional Services is not contingent upon Owner obtaining reimbursement from the Requesting Party.

EXHIBIT F—ATTACHMENT 1: SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices, and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas; meeting minutes; RFI's and Responses to RFI's; and Construction Contract administrative forms.	Email w/Attach	PDF	(2)
a.3	Contractor's Submittals (Shop Drawings, "Or Equal" requests, Substitute requests, documentation accompanying Sample submittals and other Submittals) to Owner and Engineer; and, Owner's and Engineer's Responses to Contractor's Submittals, Shop Drawings, Correspondence, and Applications for Payment	Email w/Attach	PDF	
a.4	Correspondence; Interim and Final Versions of reports, layouts, Specifications, Drawings, maps, calculations and spreadsheets, Construction Contract, Bidding/Proposal Documents, and Front-End Construction Contract Documents.	Email w/ Attach or LFE	PDF	(3)
a.5	Layouts, plans, maps, and Drawings to be submitted to Owner by Engineer for future use and modification	Email w/ Attach or LFE	DWG	
a.6	Correspondence, reports, and specifications to be submitted by Engineer to Owner for future word processing use and modification	Email w/ Attach or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner by Engineer for future data processing use and modification	Email w/ Attach or LFE	EXC	
a.8	Database files and data to be submitted to Owner for future data processing use and modification	Email w/ Attach or LFE	DB	
Notes				
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of the Agreement and Construction Contract.			
(2)	Transmittal of written notices is governed by requirements of the Agreement and Construction Contract.			
(3)	Transmittal of Bidding/Proposal Documents and Front-End Construction Contract Documents will be in manner selected by Owner in Exhibit A, Paragraph 1.05.A.1.a. Unless otherwise expressly stated, these documents and the Construction Contract will be transmitted in PDF format, including transmittals to bidders and Contractor.			
Key				
EMAIL	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies.			
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive.)			
PDF	Portable Document Format readable by Adobe® Acrobat Reader Version 25 or later.			
DWG	Autodesk® AutoCAD. dwg format Version 2020 .			
DOC	Microsoft® Word. docx format compatible with Office 365 .			
EXC	Microsoft® Excel .xlsx or .xml			
DB	Microsoft® Access .mdb			

EXHIBIT G—INSURANCE

ARTICLE 1—INSURANCE

Paragraph 6.04 of the Agreement, Insurance, is supplemented to include the following Exhibit G Paragraphs 1.01 and 1.02:

1.01 Insurance Policies and Limits

- A. In accordance with Paragraph 6.04.A of the Agreement, the insurance that Engineer must procure and maintain, and the policy limits of such insurance, are as follows:

Coverage	Insurance Limits of:
Workers' Compensation	
State of Iowa	Statutory
Employer's Liability	
Each accident	\$2,000,000
Each employee	\$2,000,000
Policy limit	\$2,000,000
Commercial General Liability	
General Aggregate	\$2,000,000
Personal and Advertising Injury	\$2,000,000
Bodily Injury and Property Damage—Each Occurrence	\$2,000,000
Automobile Liability	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$2,000,000
Excess or Umbrella Liability	
Each Occurrence	\$NA
General Aggregate	\$NA
Professional Liability	
Each Claim	\$2,000,000
Annual Aggregate	\$5,000,000
Unmanned Aerial Vehicle Liability Insurance	
Each Occurrence	\$1,000,000 if applicable
General Aggregate	\$1,000,000 if applicable
Other Insurance [Specify]	
Each Claim	\$
General Aggregate	\$

The General Liability, Auto Liability, and Employers Liability limits set forth in this Exhibit can be met through an Umbrella/Excess policy.

1.02 Additional Insureds

- A. The Owner must be included on Engineer's general liability policy as an additional insured, and as provided in Paragraph 6.04.B.
- B. For applicable Contractor's general liability policies of insurance, the additional insured endorsements will include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 12 19 and CG 20 37 12 19 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.



Exhibit I—Limitation of Liability.

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EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

COMPENSATION PACKET BC-1: BASIC SERVICES—TIME AND MATERIAL AGAINST NOT-TO-EXCEED AMOUNT

ARTICLE 1—COMPENSATION PACKET BC-1: BASIC SERVICES—TIME AND MATERIAL AGAINST NOT-TO-EXCEED AMOUNT

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 1.01:

1.01 Compensation for Basic Services (other than Resident Project Representative)—Time and Material against a not-to-exceed sum.

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A (except for Resident Project Representative services, if any) as follows:

1. A Time and Material against a not-to-exceed amount of \$6,885,000 based on the following estimated distribution of compensation:

Task Description	Hours	Labor	Expenses	Total Fee
Introduction Phase (Firm Pricing)	1,890	\$ 340,590	\$ 22,500	\$ 363,090
Phase 1 – Engines (Indicative to be determined during Introduction Phase)	1,190	\$ 214,450	\$ 9,000	\$ 223,450
Phase 2 – Transformers & Switchgear (Indicative to be determined during Introduction Phase)	690	\$ 124,340	\$ 0	\$ 124,340
Phase 3 – Underground Infrastructure (Indicative to be determined during Introduction Phase)	12,860	\$ 2,317,450	\$ 15,000	\$ 2,332,450
Phase 4 – Aboveground Infrastructure (Indicative to be determined during Introduction Phase)	18,700	\$ 3,369,860	\$ 22,500	\$ 3,392,360
Phase 5 – Permitting (Indicative to be determined during Introduction Phase)	2,460	\$ 443,310	\$ 6,000	\$ 449,310
Total Not-to-Exceed Amount	37,790	\$ 6,810,000	\$ 75,000	\$6,885,000

2. Subject to prior written notice to Owner, Engineer may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but compensation will not exceed the total not-to-exceed amount unless approved in writing by the Owner.

3. The total fee includes compensation for Engineer's services and services of Engineer's Subcontractors and Subconsultants, if any. Appropriate amounts have been

incorporated in the Lump Sum to account for labor costs, overhead, profit, and expenses (other than any expressly allowed Reimbursable Expenses).

4. In addition to the labor rates , Engineer is also entitled to reimbursement from Owner for Reimbursable Expenses provided in Appendix 1. .
 5. The portion of the total amount billed for Engineer's services will be based upon Engineer's staff hours actually completed during the billing period. If any Reimbursable Expenses are expressly allowed, Engineer may also bill for any such Reimbursable Expenses incurred during the billing period.
- B. Period of Service: The compensation amount stipulated in Compensation Packet BC-1 is conditioned on a period of service not exceeding 24 months. If such period of service is extended, the compensation amount for Engineer's services will be appropriately adjusted, by mutual written agreement.
- C. **COST**
1. Compensation for Basic Services—Appendix 2: Standard Hourly Rates Method of Payment:
 2. The Owner shall pay Engineer for Basic Services set forth in this Agreement as follows:
 - a. An amount equal to the cumulative hours charged to the Project by Engineer's personnel times Standard Hourly Rates for the applicable billing class, plus Reimbursable Expenses, if any.
 - b. The Standard Hourly Rates charged by Engineer constitute full and complete compensation for Engineer's services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses.
 - c. Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates are attached to this Exhibit A as 'Hourly Billing Rates by Classification'.
 - d. The amounts billed for Engineer's services under will be based on the cumulative hours charged to the Project during the billing period by Engineer's employees times Standard Hourly Rates for the applicable billing class, plus Reimbursable Expenses
 - e. The total compensation for such services is shall not exceed **\$6,885,000**. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but compensation will not exceed the total estimated compensation amount, unless adjusted by mutually executed amendment to this Agreement.
 - 1) Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
 - 2) When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner written

Exhibit J—Payments to Engineer for Services and Reimbursable Expenses.

Compensation Packet BC-1: Basic Services—Lump Sum.

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notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's Services for Owner's convenience. Upon notice, Owner and Engineer will promptly review the matter of Services remaining to be performed and compensation for such Services. Owner shall either exercise its right to suspend or terminate Engineer's Services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Owner decides not to suspend Engineer's Services during the negotiations and Engineer exceeds the estimated amount before Owner and Engineer has agreed to an increase in the compensation due Engineer or a reduction in the remaining Services, then Engineer will be paid for all Services rendered hereunder.

- f. To the extent necessary to verify S&L's periodic invoices and expenses and upon Owner's timely request, Engineer shall make copies of such records available to Owner. For the avoidance of doubt, the makeup of labor hours, unit rates or costs charged on a fixed unit or percentage basis, the basis of agreed upon multipliers or of pre-determined charges are not subject to audit.

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES
COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES

ARTICLE 2—COMPENSATION PACKET AS-1: ADDITIONAL SERVICES—STANDARD HOURLY RATES

Article 2 of the Agreement is supplemented to include the following Exhibit J Paragraph 2.01:

No Additional Services or Additional Reimbursable Expenses shall be incurred prior to reviewing written authorization from the Owner for calculated amounts for specific tasks or expenses.

2.01 Compensation for Additional Services—Standard Hourly Rates Method of Payment

A. Owner shall pay Engineer for Additional Services, if any, as follows:

1. For services of Engineer's personnel engaged directly on the Project pursuant to this Article, an amount equal to the cumulative hours charged by each class of Engineer's personnel providing such Additional Services times Standard Hourly Rates for each applicable billing class, plus Additional Services related reimbursable expenses, and Additional Services-related Engineer's Subcontractors' and Subconsultants' charges, if any.

B. Compensation for Reimbursable Expenses

1. For those Reimbursable Expenses that are directly related to the provision of Additional Services, and are not already accounted for in the compensation for Basic Services or RPR-related services, Owner shall reimburse Engineer, using the rates set forth in Appendix 1 to this Exhibit J when applicable.
2. Such Reimbursable Expenses include, to the extent Additional Services-related, the expenses identified in Appendix 1 and the following categories: transportation (including mileage), lodging, and subsistence incidental thereto; and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar items.
3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be the Additional Services-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such Additional Services, the latter multiplied by a factor of **1.0**.

C. Other Provisions Concerning Payment for Additional Services

1. Whenever Engineer is entitled to compensation for the charges of Engineer's Subcontractors and Subconsultants, such compensation will be the amounts billed by Engineer's Subcontractors and Subconsultants to Engineer times a factor of **1.08**.
2. Factors: The external Reimbursable Expenses and Engineer's Subcontractors' and Subconsultants' factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.
3. The Standard Hourly Rates and the Reimbursable Expenses Schedule will be adjusted annually (as of **January 1, 2026**) to reflect equitable changes in the compensation payable to Engineer for Additional Services-related services and expenses.

4. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at no cost .

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

APPENDIX 1: REIMBURSABLE EXPENSES SCHEDULE

Reimbursable Expenses are subject to review and adjustment per Exhibit J. Rates and charges for Reimbursable Expenses as of the date of the Agreement are included in the materials cost and expenses shown in the fee table in Exhibit J, Article 1. Expenses will be billed at cost:

Mileage (auto)	\$ 0.70 /mile
Air Transportation	at cost
Meals and Lodging	at cost

EXHIBIT J—PAYMENTS TO ENGINEER FOR SERVICES AND REIMBURSABLE EXPENSES

APPENDIX 2: STANDARD HOURLY RATES SCHEDULE

- A. Standard Hourly Rates
1. Standard Hourly Rates are set forth in this Appendix 2 to this Exhibit J and include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.
 2. The Standard Hourly Rates apply only as specified in Exhibit J.
 3. Travel charges will be billed at actual cost with no markup.
 4. Billing Classifications include one or more Engineer position categories that are typically grouped under a classification on the basis of similarities in position function, experience factors, and/or wage levels. Acceptance of this schedule includes the rates shown, the period of time for which they are effective, and the combination of individual position categories that comprise each classification.
 5. Billing rates are considered to be proprietary to Sargent & Lundy, L.L.C.
 6. Overtime is billed at actual rate.
 7. The below rates are subject to annual review and escalation, shall not exceed 5.0%, beginning in January of each year.
- B. Schedule: Hourly rates for services performed in 2025 are:

HOURLY BILLING RATES BY CLASSIFICATION

Billing Classification	2025 Billing Rate
Director	\$273.50
Senior Manager	\$245.50
Manager	\$226.50
Senior Project Associate	\$214.50
Project Associate	\$193.50
Senior Associate	\$171.50
Associate II	\$140.50
Associate I	\$126.50
Project Designer	\$169.50
Senior Designer	\$162.50
Designer	\$127.50
Drafter	\$96.50
Administrative III	\$124.50
Administrative II	\$90.50
Administrative I Notes:	\$80.50

Below is a list of S&L Staff that is assigned to the Project. Billing Classification for each Team Position is as of October 2, 2025. Billing Classifications for each Team Position may change during the course of the project when individuals are promoted.

Team Position	Name	Billing Classification
Executive Sponsor	Kevin Lauzze	Director
Project Director/Manager	Adam Redd	Director
Project Administrator	Monica Ybarra	Administrative 3
Project Planning/Scheduler	Chris Schug	Project Associate
Engineering Manager/Mechanical Lead	Marion Teslik	Senior Project Associate
Architectural Lead	Jordan Margolis	Project Associate
Civil Lead	Darrel Packard	Senior Manager
Design Lead (Conceptual)	Rich Miller	Manager
Design Lead (Detailed)	Kevin Fifer	Project Designer
Electrical Lead	Nicole Kozmin	Manager
Geotechnical Lead	Josh Bickett	Manager
I&C Lead	James Robeson	Manager
Structural Lead	Tom Dehlin	Manager
Permitting Lead	Dave Helm	Senior Manager

Exhibit J—Payments to Engineer for Services and Reimbursable Expenses.

Appendix 2: Standard Hourly Rates Schedule.

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Staff Report

SOLAR ENERGY PROJECT AT AMES MUNICIPAL AIRPORT

April 21, 2026

BACKGROUND:

The City's Electric Services Department is capable of providing electricity to over 28,000 customers through a combination of the utility's own boilers and combustion turbines, market purchases, as well as Purchased Power Agreements (PPAs) that provide fixed terms for the purchase of electricity from outside entities.

Currently, the utility is engaged in two PPAs:

1. A PPA with NextEra Energy Resources (d/b/a Garden Wind LLC) for wind energy. This contract provides 36 MW of capacity from a wind farm located in northeast Story County. Of this amount, 6 MW is passed through to Iowa State University and the City receives the benefit of the remaining 30 MW. The agreement provides for energy to be sold to the City through February 2030. This agreement, when considering its unique "take or pay" provisions, costs approximately 8 cents per kWh in FY 2025/26. This translates to approximately \$5.6 million annually.
2. A PPA with Forefront Power for a community solar farm located on City property north of the Airport. This agreement was entered into in July 2019, and the 25-year initial term expires in 2044. The solar farm is 2.2 MW in size. The energy produced is purchased by the Electric utility at 5.9 cents per kWh. Most of this energy is not a direct to the Utility because it is credited directly to customers who have elected to purchase power packs.

The constructed capacity of 32.2 MW from these two projects, when adjusted by MISO to calculate their contributions towards the utility's capacity obligations, results in credit of 6.8 MW of capacity.

With the knowledge that the PPA for wind energy expires in 2029, combined with the City's aspirations as outlined in the Climate Action Plan, the City sought proposals from renewable energy projects in 2024. Unfortunately, no proposals were received. Staff learned that this lack of interest was in part due to the fact that most utility-scale projects had a buyer involved prior to the development of the project rather than reserving some of the capacity for sale to other entities after construction has occurred.

To address this new understanding of the market dynamics, staff identified a developer with a track record of implementing utility-scale projects. In March 2025, the City Council approved a letter of intent with Ames Greenfield Development Co., a subsidiary of Callaway Energy Development, to identify a viable renewable energy project suitable for the utility to invest in. Initially, this effort was focused on securing a wind energy project. However, during 2025 it

became clear that there were few, if any, viable wind projects that the City could invest in. Most such projects were committed to other utilities. Therefore, the developer began evaluating the potential for a utility-scale solar project.

Following a review of potential sites, the developer identified properties owned by the City adjacent the James Hermann Banning Ames Municipal Airport as a preferred location for a project. A solar development firm, Recall Strategies, was identified as having interest in constructing a project. Ames Greenfield LLC is a Special Purpose Entity (SPE). The SPE will hold the assets of the solar project. The SPE is owned by Callaway Energy, LLC, which is the development arm of Recall Strategies.

PROJECT CONCEPT:

The concept for the solar project being proposed by Recall involves the installation of up to 24.9 MW of solar panels. Projects larger than this size would require an Iowa Utilities Commission approval process that would delay the project and cause the loss of essential federal tax credits that are being relied upon to make the project financially viable.

Up to 165 acres of Airport property would be utilized. The solar panels would be divided into as many as seven separate zones situated in areas of the Airport property that are currently part of the Airport farm operation. Most of these potential zones are in areas that are unsuitable for other types of development due to the potential for conflict with Airport operations. The solar panels would tilt to follow the path of the sun throughout the daylight hours, maximizing the potential for energy production.

One advantage of the arrangement and location of the project on the Airport property is the possibility for the Utility to take the energy at the distribution voltage, which avoids a lengthy study process by MISO. The energy would be delivered to the Electric Utility at a fixed price for a period of 20-25 years, depending on the terms negotiated under the PPA.

Recall has preliminarily estimated that the price per kWh would be near 7.65 cents per kWh over the 20-25 year life of the agreement. It is important to note that this figure would adjust and be finalized once further development steps are taken, such as performing engineering analyses and identifying the specific equipment to be installed. However, once the PPA containing the price is agreed to, the price would remain fixed.

Additionally, it is important to note that the estimate of the pricing is dependent on Recall being able to meet key deadlines to secure federal tax credits for solar production. Without these tax credits, the price under the PPA would increase by approximately 30%, making the project significantly less financially viable. Further discussion regarding the timing of these deadlines is provided below.

AGREEMENT OVERVIEW:

The project would require that the City lease portions of the Airport property to the developer for the evaluation, installation, and operation of the solar project. This agreement would simply provide the developer the right to complete the project if certain conditions are met, and it is this agreement which is critical to complete soon if the project is to move forward and qualify for the tax credits.

A separate Power Purchase Agreement would need to be negotiated later by the City and the developer to establish the terms for the purchase of the energy by the Electric Utility.

It is anticipated that the lease is structured as a **revocable** lease-option agreement, containing several separate phases.

1. The **Development Phase** would allow Recall to enter the property, perform geotechnical analysis, surveys, and other studies, and commence civil and electrical design work. This phase would include the completion of necessary FAA studies for the project.

It is this phase that is the most time-critical. In order to qualify for tax credits, Recall must demonstrate to the IRS by July 4, 2026 (the "Safe Harbor" Deadline), that it has secured the lease option and has begun physical work of a significant nature on the project (completing approximately 100 laborer-hours and \$100,000 of work). Once Safe Harbor for the tax credits has been secured, Recall would finalize its cost per kWh and the City would enter into negotiations for a PPA.

It is important to emphasize that the risk for these investments lies entirely with Recall. The City would be under no obligation to pay for Recall's due diligence or its preliminary construction costs necessary to meet the Safe Harbor provisions. Additionally, the City would be under no obligation to agree to the PPA. If the terms of the PPA are unacceptable, in the City's sole determination, the lease option agreement would terminate. Additionally, the agreement would be structured to prevent Recall from building the solar farm and selling the electricity to any entity other than the City of Ames.

One major issue yet to be resolved is that it is unknown the manner in which the solar project will interconnect into the Electrical utility's distribution network. This will need to be evaluated further by Electric Services staff during the Development phase. If it is not possible to connect each of the seven separate solar zones into separate distribution lines, then the Electric Utility may need to incur expenses to construct a larger feeder line between the solar project and the Vet Med substation. This is not City staff's preference, as it results in additional costs for Electric customers. More work will be necessary to determine the manner in which the interconnection(s) can take place.

2. The **Construction Phase** would commence once the Development Phase has concluded, and only after Ames and Recall are able to negotiate a successful PPA. It is anticipated that equipment procurement would take place in 2027 and construction would occur in 2028.
3. The **Operational Phase** would begin on the date the project enters commercial operation and begins delivering energy, which is expected to be in late 2028. This phase would extend for 20-25 years, depending on renewal periods.

Each phase of the agreement has the potential to impact the City's existing lease with a tenant farmer for agricultural production at the Airport. **Therefore, the agreement must contain provisions to pay for crop damages and loss of Airport revenues that may occur during the Development or Construction phases.**

Additionally, a rent amount will need to be determined to reimburse the Airport for the

use of the land during the Construction and Operational phases of the project. It is important to note that as the rent amount owed by the developer to the Airport increases, so too does the amount the Electric Utility will pay the developer for the purchased power.

FINANCIAL ANALYSIS:

The cost of the energy that is ultimately purchased through this project is added to the blend of other purchased power, transmission, and fuel used by the utility's own generating assets, ultimately reflected on customer bills through the Energy Cost Adjustment (ECA). The ECA is calculated monthly on a rolling 12-month basis and is either a credit or additional cost on a per-kWh basis for each customer's energy consumption. Because of the ECA mechanism, the costs of entering into a PPA for this project would not affect the adopted rates. However, these additional costs will be incorporated into the ECA and reflected on a customer's total electric bill.

Because the proposed project has no competitive proposals to analyze, a key question is whether the potential financial terms for the solar project are reasonable, competitive, and a good value for the Utility. In the absence of direct comparisons with competitive proposals, costs can be compared with: 1) other solar PPA projects in the market, 2) MISO market energy pricing (with caveats), and 3) pricing from the City's other PPAs and generating units.

Solar PPA Pricing within MISO - Data from the Lawrence Berkeley National Lab (<https://emp.lbl.gov/pv-ppa-prices>) shows that solar PPA pricing (excluding battery storage projects) in the MISO market from 2013 to 2024 ranges from 2.4 cents per kWh to 11.3 cents per kWh, with average pricing of 4.5 cents per kWh (in 2024 dollars). If only projects between 15 and 25 MW are considered, the average pricing rises to 5.7 cents per kWh. It is anticipated that average prices for solar projects are rising as the federal tax credit deadline approaches.

MISO Market Pricing - Ames can purchase energy from MISO through transmission lines. MISO's average on-peak energy price over the most recent 12 months has been 4.0 cents per kWh.

In comparison, the estimated cost of 7.65 cents per kWh for this new solar energy source would be 90% greater than the average on-peak MISO price. **However, unlike other comparisons, MISO prices have no long-term stability since these prices change hourly.** MISO prices are expected to rise at least 3% per year, according to analysis from the City's consultants. Therefore, these prices should not be used as a direct comparison to a fixed-price PPA.

Comparison with Other Ames Generation Resources - The utility's two natural-gas fired baseload generating units (Unit 7 and Unit 8) can produce energy at approximately 4.2 cents per kWh. A 20-year solar energy PPA with Forefront started in 2020. This solar farm is 2.2 MW in size and has a fixed price of 5.9 cents per kWh.

A PPA with NextEra Energy started in 2009. This wind farm is for 36 MW and has a variable price. In the most recent year, pricing was approximately 8 cents per kWh. This PPA is set to end in February 2030. A comparison between the expiring wind PPA and the preliminary estimates for the Airport solar farm is provided below:

PROJECT	FUEL	ANNUAL MWH PRODUCED	\$/MWH	ANNUAL COST	% of Ames Load
NextEra PPA	Wind	70,195	\$79.70	\$5,594,542	11.69%
Recall PPA	Solar	52,350	\$76.50	\$4,004,756	8.8%

STAFF COMMENTS:

There are a number of issues that must be resolved if the City Council wishes to pursue this project further.

LEASE AGREEMENT:

Foremost among the issues is the preparation of an agreeable revocable lease option agreement. To secure the 30% Investment Tax Credit from the Federal government, a project must achieve "safe harbor" status by July 4, 2026. If Recall fails to secure the lease and make the necessary financial investments prior to this date, then the credit goes away and the project would see a 30% increase in cost. **Coming to agreeable terms prior to the looming safe harbor deadline will prove to be a challenge.**

City staff and Recall have had preliminary discussions about provisions for a lease. Entering into revocable lease agreement will not obligate the City to move ahead with this solar project. This agreement will make it clear that if for any reason the City decides not to sign a Power Purchase Agreement, the land lease will be terminated with no financial obligation on the part of the City. **However, arriving at an agreeable lease in a timely fashion will be a substantial undertaking.**

Recall has indicated that May 12 is the latest feasible date to enter into the agreement in order to complete the due diligence and begin physical work of a significant nature as necessary to demonstrate that it has met the Safe Harbor deadline of July 4, 2026. Therefore, on April 28, the City Council would need to set May 12 as the date of hearing and approval of this agreement. **It is not likely that the lease will be negotiated to staff's satisfaction until shortly prior to the May 12 meeting where approval is requested. Therefore, the Council will have little opportunity to review the agreement's terms prior to being asked to approve it.**

AIRPORT OPERATION IMPACTS:

As part of the lease negotiations, one of staff's concerns is ensuring that the areas made available for solar installation allow the City to meet any existing or future FAA obligations imposed upon the Airport. In addition to meeting FAA's approval prior to construction, the City must maintain the ability to remove certain infrastructure if the FAA determines in the future that doing so is necessary for operations. **The potential for FAA obligations adds risk and uncertainty to the solar project, which staff expects will translate to increased solar PPA pricing.**

ELECTRIC DISTRIBUTION INTERCONNECTION:

Another significant hurdle is the ability of the Electric Utility to connect this size of a project into the utility's distribution system. A full buildout of 24.9 MW would require a substation to incorporate the energy into the system. A planning-level cost estimate for a substation project would be \$4 million, which would likely be a direct cost to the Electric utility rather than being incorporated into the PPA cost.

Without a substation, staff anticipates that the size of the solar project would be limited to approximately 12-14 MW. This, however, relies on constructing a large electric feeder to the nearest substation. Because of Airport operations, this large line would need to be buried, adding to costs. An initial estimate of the cost to pursue this approach is approximately \$2 million, again a direct utility cost. Short of pursuing these capital-intensive options, the utility would only be able to absorb perhaps 2-4 MW of solar development without the construction of major infrastructure.

The sizing of the project would ultimately need to be determined after the lease option has been signed, but before the PPA has been agreed to. Although the technical issues are likely capable of being resolved, it must again be emphasized that the costs necessary to resolve them, plus costs to compensate the project's investors for uncertainties that exist in the future (e.g., FAA requirements), will increase the price the Utility ultimately pays for the energy. How much the price increases can only be known through more study and negotiation prior to the approval of a PPA in the fall.

If the prospect of an increased price and/or a smaller project is unsatisfactory to the City Council, then the Council may wish not to pursue the project any further. City staff has emphasized to Recall that the Utility's top priority at the moment is the New Thermal Generation project to install replacement capacity for the Power Plant. That project is critical to meeting our obligations to MISO for sufficient capacity to meet our customer demand.

Although Recall has expressed a willingness to invest its staff's time in preparing documents and performing studies to relieve City staff's burden, this solar project will still require substantial City staff time to complete. If the Council wishes to proceed with the project negotiation, it should indicate so at the workshop. Staff will then proceed with setting the necessary hearing date for approval of the lease option agreement.

ATTACHMENT(S):