ITEM #: 38

DATE: 08-12-25

DEPT: ELEC

COUNCIL ACTION FORM

SUBJECT: PRESENTATION ON ALTERNATIVE SITES FOR NEW GENERATION AND SELECTION OF SITE

BACKGROUND:

On July 22, 2025, staff presented the City Council with the results of a Request for Proposals (RFP) for engineering services to develop new thermal electric generating units for the City's Electric Utility. At that time, staff's expectation was that the site for the installation of these new units would be the former Power Plant coal yard, on the south side of the railroad tracks adjacent the existing Power Plant. However, during the discussion, the City Council asked staff to perform a high-level review of potential alternative sites for the new electric generation other than the coal yard site and report back at the August 12 City Council meeting.

As staff discussed on July 22, the site will require certain infrastructure to be feasible, including natural gas pipeline, electric transmission lines, a substation, and related electric distribution infrastructure, including appropriate redundant capabilities. The City Council asked staff to identify potential sites that would also be away from urban residential areas and the Main Street area. Therefore, to evaluate potential alternative sites, staff used the following criteria to prepare this presentation:

- 1. Proximity to large, high-pressure natural gas main
 - a. >= 10 inch line
 - b. >=120 psi
 - c. 11,000 dtherms when all running
- 2. Proximity to 161 kV transmission lines and/or multiple (3 or more) 69 kV lines
- 3. Proximity to electric distribution infrastructure
- 4. Distance from urban residential areas
- 5. Visibility from Main Street

The attached presentation will review different sites in and around Ames. It will also include an initial budgetary estimate of potential infrastructure costs for each site based on information from Ames Electric Engineering, Public Works and Alliant Energy.

Staff was unable to identify an alternative site that easily meets all of the evaluation criteria. Each site would require significant investments to bring the required infrastructure to the area, including disruption to the adjacent areas along the utility paths.

Staff's estimates are that pursuing any alternative site will increase the cost of the

generation project by a minimum of 25%. Additionally, any alternative site will cause delays in land acquisition, infrastructure design and construction, power plant engineering, design and construction.

Council also requested additional information regarding noise and vibration from the proposed new generating units. Information will be added to the presentation on Monday and covered Tuesday night, as this information was not completed in time to publish the Council agenda.

If the Council elects not to proceed with the project proposed at the former coal yard, a preferred alternative site would need to be identified. Then, staff would negotiate with Sargent & Lundy to amend the design contract (approval of which is a separate item on this Council agenda) to evaluate the proposed site in detail and determine more specifically what infrastructure is needed. Following that process, the original scope of Sargent & Lundy's work (design of the facility itself) could begin. Staff estimates this approach would delay the project by a minimum of six months. It is important to note that in addition to the increased cost of the engineering work to design transmission and substation infrastructure, there will be additional implications if the project is delayed:

- If the project is not completed by June 2028 and Ames misses the MISO summer season capacity requirements, this could result in a \$2.3 million charge for capacity.
- Materials costs for such things as transformers, breakers and the generating units, and labor continue to rise (separate from the costs of the additional equipment necessary).
 This by itself could cause increases of 3-5% to the cost of the project.
- As more and more utilities look to add capacity, material delays can continue to grow. A six-month delay in the engineering and design could add a year to the procurement schedule for materials.

ALTERNATIVES:

- 1. Approve the Ames Power Plant Coal Yard site as the preferred location for new generation.
- 2. Identify an alternative site for the construction of the new power plant generation and:
 - a. Authorize staff to negotiate a scope of services with Sargent & Lundy to begin a detailed site selection process based on the new site. Staff would return to City Council with a contract change and costs related to this work.
 - b. Direct staff to develop a Request for Proposal for engineering services to design new substation and transmission infrastructure.

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.

Finalizing the site will allow the engineer to design specifically for that site. This will eliminate delays that have the potential to result in compounding cost increases, make bidding more straightforward, and limit the amount of potential change orders from the engineering firm.

Although the Coal Yard site is in proximity to the Downtown area, it is important to note that even if the new generating units are sited in an alternative location, the existing Power Plant will remain at the end of Main Street for at least 15 more years, plus the length of time necessary to deconstruct and demolish the significant amount of infrastructure located within it.

The new generating units are expected to require an enclosure building, chimneys, and other accessory equipment that is far lesser in height than the equipment in place at the Power Plant, and this equipment is planned to be located on the furthest portion of the site away from Main Street (roughly 1/4 mile from the east end of Main Street and further south, compared to the existing Power Plant which is only 350 feet due east from Main Street). Additionally, staff can work with the design team to develop a facility exterior that is more visually appealing than a typical industrial building, for a far lower cost than the expense of relocating the facility entirely. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No.1 as stated above.

ATTACHMENT(S):

Gen Siting Aug 12.pptx