

ITEM #: 31

DEPT: ADMIN

Staff Report

**REQUEST FROM LIGHTEDGE TO CONSIDER DATA CENTER DEVELOPMENT ON
AIRPORT PROPERTY**

June 23, 2026

BACKGROUND:

On May 12, the City Council referred to staff a letter from Lightedge, requesting to negotiate with City staff for the development of a new co-location data center on City-owned property at the James Hermann Banning Ames Municipal Airport. A staff report in response to that letter was provided to the City Council. The background of that report is duplicated below in this document along with additional information related to the topic.

On June 16, the City Council directed that the following actions would take place with regard to the proposed development:

- 1. At the June 23 City Council meeting, the Council would receive a staff presentation regarding the Lightedge proposal. At this meeting, there would be no public input. Staff would explain the proposal and its impacts and Lightedge may have a representative answer questions. No decisions will be made at that meeting.**
2. A special meeting will be held on the evening of June 30 as a Council listening session about data centers. There would be no action, but the community would be invited to attend to speak about data centers generally or the Lightedge project specifically.
3. A memo has been requested from the City Attorney for the July 14 meeting describing the legal means that the City has to limit the construction of data centers.

TEXT OF JUNE 16 STAFF REPORT:

On May 12, 2026, the City Council referred to staff a letter from Lightedge, requesting to “negotiate” with City staff for the development of a new colocation data center at the James Herman Banning Ames Municipal Airport. This type of data center is smaller regional scale facility compared to “hyperscaler” multi-building campuses serving national and international companies. The company is based in Des Moines. It provides data center services for clients across a variety of industries, in facilities throughout the central portion of the country.

Lightedge is interested in constructing a facility of approximately 100,000 square feet within Ames. Lightedge envisions initially constructing the entire building shell and approximately 10% of its ultimate buildout of servers. A second phase would expand the buildout inside the

building to approximately 25% of the building's ultimate server capacity. The third and final phase would be based upon demand and see the remaining capacity inside the building occupied by servers.

Lightedge is interested in developing the data center on an area of City controlled property containing approximately 10.86 acres on Aviation Way, directly west of the property occupied by the Sigler Companies. This area is currently farmed, but is shown within the 2020 Airport Master Plan as land that could be used for non-aeronautical uses. This area would be compatible with the type of industrial use associated with operating a data center facility.

Federal Aviation Administration (FAA) Impacts:

Although it is possible to either sell or lease Airport property for a non-aviation use, it is preferred to enter into a long-term lease. A sale of Airport property initiates a lengthy process of federal approval. In contrast, a long-term lease requires a less substantial approval process. **In addition, leasing airport land for non-aeronautical uses allows the land to earn revenue for the Airport, as well as serve the interests of civil aviation by making the Airport as self-sustaining as possible.**

According to the Airport Master Plan, prior to pursuing a ground lease with a commercial operator for non-aeronautical purposes, the City must formally request the FAA release the land in question from its federal obligations. A land use change must also be approved by the FAA. The proceeds derived from the land use change must be used exclusively for the benefit of the airport. They may not be used for a non-airport purpose, and they cannot be diverted to the airport sponsor's general fund or for general economic development unrelated to the airport.

LEASE CONSIDERATIONS:

The City previously leased the land currently occupied by Sigler Companies. That lease was entered into in 1997 and continued to 2022, when the City sold the land to Mulmac, LLC. That lease contained provisions to ensure compliance with FAA regulations, and a rent rate schedule on a per-acre basis that provided supplemental operating income to the Airport. City staff believes that lease would serve as a useful model for a lease with Lightedge, if it was to be pursued.

ELECTRIC UTILITY ISSUES:

The proposed data center would be in the Ames Municipal Electric System's service territory. While the data center would create new revenue for the utility, there are upfront costs and service challenges that would need to be addressed to support the use. **With unique upgrades to serve this one use, there would be costs to Lightedge for the infrastructure in order to not burden electric ratepayers.**

Staff has been informed that it is anticipated that the first phase of the project would result in up to 3 MW of electrical demand. The second phase would follow shortly thereafter and utilize 6 MW. The ultimate buildout of the project would demand 25 MW. The full buildout is estimated to occur in approximately 10 years.

The proposed electrical utilization impacts several facets of the Electric Utility: 1) Electrical

Capacity, 2) Distribution/transmission network and infrastructure, and 3) Electric rates and charges.

ELECTRICAL CAPACITY:

As reported to the City Council at the April 21, 2026 workshop, the utility is a participant in the Midcontinent Independent System Operator (MISO) Regional Transmission Organization. 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. Independent of this data center project, current projections anticipate demand to grow 1% per year.

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. By developing the Ames Municipal Energy Center (AMEC), another 54 MW of capacity is planned to be installed. However, this is expected to be a replacement for the increasingly unreliable Unit 7 (33 MW), for a net gain of 21 MW to provide for some growth capacity within the service territory.

The adopted electric rates include assumptions of the cost for providing electric capacity. In the event that the Electric utility is unable to cover its historical peak demand with its generating resources, the utility purchases the difference from a quarterly MISO auction process. If the capacity to serve this customer from the auction is costlier than the costs embedded in the adopted electric rates, it would be necessary for the customer to pay for the difference. **This arrangement would need to be further studied by the utility's rate consultant and then negotiated with the customer.**

DISTRIBUTION/TRANSMISSION NETWORK AND INFRASTRUCTURE:

An electrical demand the size of what is proposed for the complete buildout is not able to be served along Riverside Drive with the infrastructure currently in place. The distribution equipment currently in place is estimated to be able to serve a demand of 3 MW.

For the ultimate buildout of the data center project, an extension of 69 kV transmission is needed, along with a substation to step down the voltage. Three challenges exist with providing these facilities in the proposed location:

1. There are no nearby high voltage transmission lines on the west side of the Airport. The nearest lines are located on the east side of the Airport, along S. Duff Avenue.
2. Extending transmission lines is typically performed using overhead poles, which cannot cross the airport or interfere with the takeoff and landing approaches. Although it is technically possible to put transmission lines underground, this is challenging and costly. There is currently no buried high voltage transmission infrastructure in Electric Services' system.
3. A single transmission line to the customer does not provide a backup path in the event

the line is damaged or must be taken out of service for maintenance. Therefore, a double-circuit path is necessary.

Despite these challenges, staff's preliminary opinion is that there are three potential paths to provide transmission infrastructure to this site. The first would be to extend overhead from the Duff Avenue 69 kV line to the eastern edge of the Airport, outside of the restrictions for the approach and takeoff areas. The extended 69 kV lines would then be buried under the Airport, emerging on the west side of the property where a new substation would be constructed to serve the data center. The new 69 kV lines would be double-circuited (six total conductors). The buried conductors would be very large and likely encased in concrete. It may be possible to time the construction of this line with the anticipated reconstruction of the main Airport runway, which would reduce the disturbance needed to install the lines and associated structures.

The second option is similar to the first, but instead of extending 69 kV transmission lines under the Airport, a substation would be built east of the Airport, and several 13.8 kV distribution lines would be buried under the runways to connect to the new data center. This approach relies on being able to site a substation on the east side of the Airport, either on Airport property or on land adjacent. Although it involves potentially a greater number of conductors to be buried under the Airport, burying 13.8 kV lines is much more common and far less costly than burying 69 kV lines.

Alternatively, in a third approach, a new overhead line could potentially be extended south of the Airport and up S. Riverside Road. Overhead line is significantly less costly per-mile compared to underground transmission line. This approach suffers from several challenges, however. It would require a greater length of line compared to cutting directly under the Airport. Additionally, it would need to be engineered to meet the clearances of the approach path for the main Airport runway. Finally, a significant hurdle is the fact that this line would need to extend outside the City's corporate limits. This path triggers a lengthy approval process subject to the Iowa Utilities Commission's review.

Separately from the 165.5 MW of electricity that can be produced by the Electric utility locally (including purchased power agreements), the utility has the ability to import energy from three separate transmission lines. Even with one line down, the capability exists to serve at least two times the historical peak demand of the utility.

ELECTRIC RATES AND CHARGES:

Once direction is provided as to the location of the customer and the approach to serving it, staff would rely on the Utility's Excess Facilities Charge to ensure that the data center alone pays for the improvements necessary to serve the site (e.g., transmission and distribution lines, transformers, substation, etc.). These costs would need to be negotiated in an Excess Facilities Charge agreement.

OTHER UTILITIES/INFRASTRUCTURE:

The proposed development involves the use of a closed-loop cooling system, meaning that substantial quantities of water are not required on a constant basis in order to cool the equipment located within. Lightedge has told City staff that it anticipates using a few thousand gallons of water to initially fill the cooling loop, but that subsequent

usage will be only for typical domestic water needs. The cooling system uses a refrigerant rather than relying on evaporation to perform the cooling.

The developer indicates that the property does not generate a substantial volume of vehicle traffic. Fewer than 10 employees would be regularly working on site, with a total of approximately 20 staff and visitors at any given time.

The site is zoned already as Planned Industrial (PI). Although the Zoning Ordinance does not currently explicitly define a data center use, PI is currently a zone where such a use could be located. Later this summer, City Council will consider a text amendment defining a data center use and the appropriate zoning districts for such a use. Due to the location and size of this facility, staff does not anticipate any compatibility issues.

ALTERNATIVE PROPERTIES:

Staff is aware that Lightedge is contemplating alternative properties within Ames for its project. As noted by the Planning Director in a recent memo about 300 Airport Road (former Danfoss operation) related to a requested change to allow industrial uses, it has been discussed as a site for a data center as well. Currently the use is not permitted at this location by zoning.

From an electric utilities standpoint, this property is more readily servable than the Airport property west of Sigler, since the electric transmission infrastructure would be: 1) able to extend entirely overhead, and 2) need to be extended less than ¼ mile (as opposed to at least one mile for the property west of Sigler. The former Danfoss property also has available property for the siting of the necessary electrical substation.

However, this property may not be preferred by the developer due to the modifications and/or expansion needed for it to serve its needs. From the City's standpoint, this site is relatively uncomplicated to serve with utilities, but its use would result in no additional revenue to the Airport such as would exist with the property west of Sigler.

Another location being considered by the developer is property within the Dayton small-lot industrial park (Bailey Avenue). The site is zoned General Industrial (GI), which would allow for data centers. Additionally, the City's development agreement for the subdivision did not limit development to specifically smaller sites and users and a data center would be permissible.

Of the sites discussed in this report, this property is the most challenging to serve electrically. The clearest path to provide electric transmission service involves obtaining easements on private property through woodlands to the west. At least two private property owners would need to consent to the easements necessary to extend this transmission line. However, those properties are outside the City's corporate limits, and therefore a lengthy approval process involving the Iowa Utilities Commission would be triggered. In addition, this site will not generate much-needed revenue for the Airport.

STAFF COMMENTS:

Lightedge is actively trying to facilitate a project to meet regional customers' needs within central Iowa. Lightedge desires to have control of a site in the next few months to proceed with a project. The overall implementation of the project and needed infrastructure has long lead

times and it is highly desirable to Lightedge to know if the City's property is in fact available so they can proceed.

It is staff's opinion that, of the potential options, developing the 10-acre airport property would be the least challenging for the utilities and the most effective option for the City Council to direct the manner in which the facility affects others. The lease agreement would provide an enforceable tool to establish limits regarding square footage, water consumption, noise, and other expectations. This option also has substantial benefits to the Airport operations budget and would create additional tax base for the City.

Staff's initial estimate for the cost to construct the electric infrastructure needed to develop at the Airport is approximately \$4 million in Phase 2, and approximately \$12 million in Phase 3. The electric infrastructure needed primarily includes underground wire, which is more reliable and less costly to maintain compared to overhead lines. This minimizes expenses to the Electric Utility in the long term. In addition, the electric infrastructure would be located on City property or right-of-way, eliminating the need for acquisition of easements. Additionally, this location allows for electric infrastructure to be improved west of the Airport, which would be beneficial for other developments that may occur in that area in the future.

For the location at Bailey Avenue, staff's initial estimate is that serving Lightedge's Phase 2 electric needs would require approximately \$8 million. This phase is also reliant on obtaining an agreement with another utility to rebuild a portion of that utility's line, then installing Ames Electric Services cables on that line. Phase 3 at this site requires approximately \$20 million of electric infrastructure, in addition to the acquisition of property rights and regulatory approvals for the extension of this infrastructure. Much of the Phase 2 electric infrastructure becomes redundant with the Phase 3 improvements. The electric lines for this site would be primarily overhead, which results in the potential for increased maintenance costs to the Electric utility compared to underground lines.

Additionally, as a private site, the City would not have a lease agreement at Bailey Avenue. This results in a lessened ability for the City to place contractual obligations or limitations on the project, such as constraints on water consumption, noise, light, etc. For either site, the manner in which Lightedge would be charged for the electrical infrastructure, the electric capacity, and the electric consumption would be determined through an excess facilities agreement. It is important to note that prior to each phase, Lightedge would need to meet with Electric staff to review electrical needs, timing, and costs to provide the requested level of service. Electric Services will need several years to engineer, design, procure materials and build infrastructure to accommodate phases 2 and 3.

Staff will provide graphics that illustrate the electric infrastructure approaches of the various sites at the June 23 meeting.

It should be noted that there has not been any request for a property tax abatement or TIF incentive for the project, nor would staff support such an incentive for the project. This means that the new valuation of the building would generate additional property tax revenue for all tax entities, including the City, Ames Community School district, and the County.

Staff believes that the development challenges at the Airport site can be resolved in a timely and cost-effective fashion to:

1. Meet Lightedge's needs,
2. Protect the Electric Utility's and customers' interests, and
3. Avoid impacts to the Water Utility's resources *(Note that as proposed the facility is primarily air cooled it does not rely upon substantial water usage for cooling)*.

The City Council has identified three specific steps it wishes to take before proceeding any further: 1) receiving a presentation regarding this report, 2) holding a listening session with residents on June 30 to better understand the comments and concerns regarding this prospect and data centers generally, and 3) receiving a memo report the City Attorney at the July 14 meeting describing the legal means that the City has to limit the construction of data centers.

Once these three actions take place, the City Council must then decide if it wishes to further entertain the Lightedge proposal to negotiate a lease of Airport property. This involves:

1. Authorizing staff to negotiate a lease of real estate and to facilitate any FAA or other governmental studies or approvals necessary for the development,
2. Authorizing staff to negotiate an excess facilities charge to recoup the costs of extending electrical infrastructure to the development, and
3. Directing staff to work with the City's electric rate consultant to develop an appropriate rate classification for the data center that would account for the electrical capacity required and avoid cost impacts to other electric utility customers.

Alternatively, if the City Council elects to not proceed with a lease negotiation for City property, then assuming Lightedge secures properly zoned private property upon which to construct its development, staff would still proceed with the tasks identified in items 2 and 3 above (the excess facilities agreement negotiation and the rate classification preparation).

ATTACHMENT(S):

[M. McDaniel - Request for Development.pdf](#)