



Morgan Valley Energy Center

Linn County Board of Supervisors

Project Overview

Key facts about the proposed Morgan Valley Energy Center.

Capacity

720 MW natural gas-fired generation

Electric Interconnection

Morgan Valley Substation ties into two ITC transmission lines

Transmission Owner

ITC Midwest

Natural Gas Pipeline

Built, owned and operated by an interstate pipeline supplier

Water

Seasonal water use minimizes demand and wastewater volume

Land Use

55 acres for the facility, 149.55 acres total; rest will be restored to agricultural use.

PROJECT SCHEDULE

PHASE 1

Permitting 2026 – 2027

Regulatory review and approvals

PHASE 2

Construction 2027 – 2030

Site prep, construction, interconnection

PHASE 3

Operational 2030

Commercial operation begins

Regulatory Review Process

The project is subject to a multi-layer, independent review by three separate bodies.

Linn County Board of Supervisors

Local Zoning Application

The project will be designed to meet Linn County EU-2 zoning requirements.

Linn County Public Health & Iowa DNR

Air Permit Application

Stringent emissions and public health requirements must be met before construction.

Iowa Utilities Commission

Generating Certificate (GCU)

Alliant Energy must prove the project is in the public interest, will comply with the certificate and the applicable law and the project is consistent with reasonable land-use and environmental policies.

WHAT THIS MEANS

A multi-month approval process will occur between 2026 and 2027. Construction cannot begin until Alliant Energy meets all regulatory requirements from the required regulating bodies.

Transparency and Public Responses

We share project information publicly and respond to questions throughout the review.

All questions from Linn County's June public meeting answered and posted online

Numerous filings and FAQs published on our public website

Public engagement

Open houses, an IUC public meeting, and briefings with elected officials.

Public information

Project website plus the rezoning, air permit, and IUC filings.

Ongoing responses

Replies to public, media, and IUC data requests, including the September 11 TRC response.

Evaluating the Need for New Resources

Before proposing any project, we ask three fundamental questions to make sure it is the right thing to do for customers and communities.

“Is the energy supply reliable?”

Reliability

We forecast how much energy our customers will need in the years ahead. If demand is growing faster than our current supply can handle, we need to plan now so the lights stay on tomorrow.

“Does this provide value for our customers?”

Cost-Effective

We compare different ways to meet that need — renewables, natural gas, energy storage, and more — and choose the options that keep costs reasonable for customers over the long term.

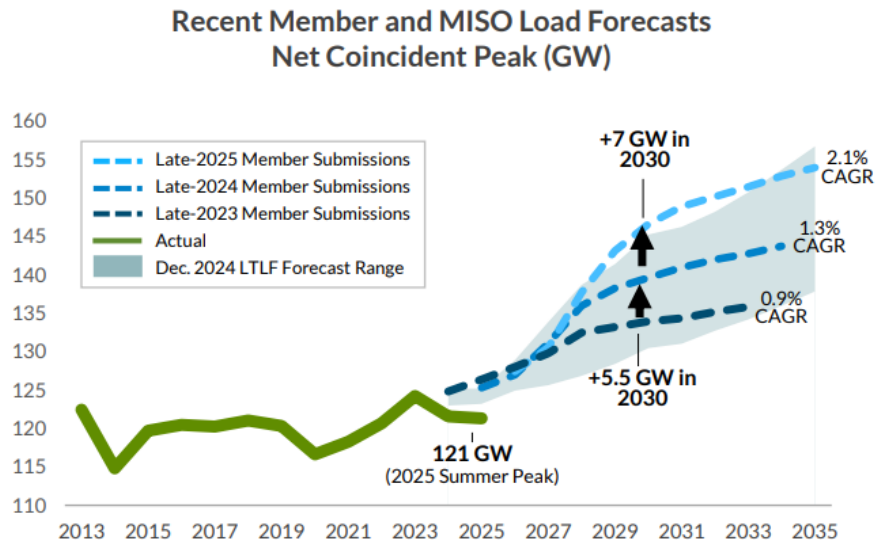
“Will it benefit communities we serve?”

Community Benefit

We consider how a project affects the people and places around it — jobs, tax revenue, environmental impact, and quality of life. A project must be in the public interest to move forward.

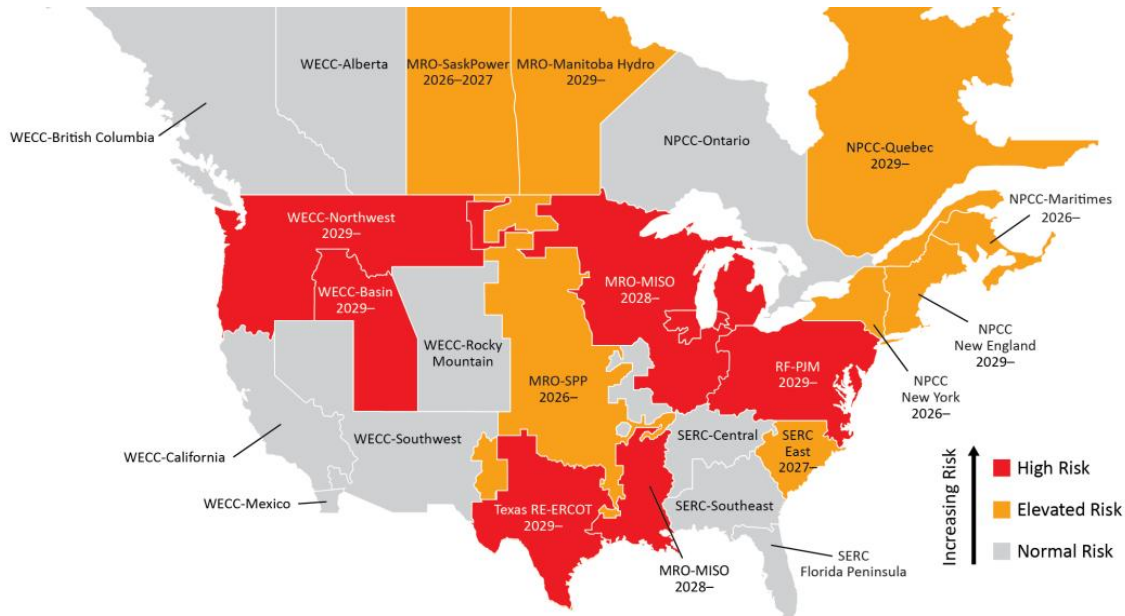
Energy Demand is Increasing

- Electric utilities in the Midcontinent Independent System Operator (MISO) footprint must secure energy capacity sufficient to meet forecasted load with a reserve margin.
- Load is growing in Alliant Energy's service territory and across MISO. Reliability obligations are evolving.
- In a future regulatory proceeding, the Iowa Utilities Commission will determine the prudence of investments made on behalf of customers.



CAGR: Compound Annual Growth Rate

Resource Adequacy in the Midwest and US



Alliant Energy is in the Midwest Reliability Organization (MRO) and the resources are dispatched by the Midcontinent Independent System Operator (MISO)

Meeting reliability needs relies on implementation of 50 GW of expedited resource additions

2025 LTRA						2025 LTRA with MISO ERAS Additions				
Risk Level (High, Elevated, or Normal)						Risk Level (High, Elevated, or Normal)				
2026	2027	2028	2029	2030		2026	2027	2028	2029	2030
	Elevated	Elevated	High	High			Elevated	Elevated	Normal	Normal

Source: NERC 2025
Long-Term Reliability
Assessment

Topics for Further Review

Five areas where more information has been requested from Alliant Energy.

- Water** ● Revised supply proposal, water use and treatment, tank location and delivery plans.
- Boland Farm setbacks** ● Requested setback reductions, landowner waiver and hazard assessment.
- Sound** ● Sound modeling, proposed limits and verification of operating sound levels.
- Spill prevention** ● Oil containment, spill prevention and stormwater controls under SPCC and SWPPP.
- Air quality** ● Ambient monitoring, terrain effects, air modeling and the permitting process.

Designed to Minimize Water Use

Projected water use for the Morgan Valley Energy Center, in context.

4.2 – 9.4 million gallons

Projected total water use per year

About 1-2 conveyor car wash facilities

Equivalent annual use

Two primary uses of water

Potable water for sinks, restrooms and drinking, plus process water for combustion turbine inlet air evaporative cooling.

Seasonal, not constant

Little to no process water in cooler weather. Use rises in warm periods when evaporative cooling supports output as demand peaks.

In perspective

About one-quarter to one-third of a typical irrigated 18-hole golf course in the Midwest.

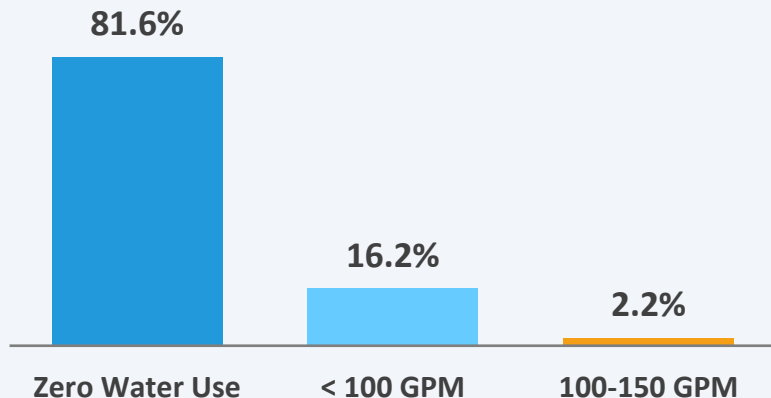
Water Use in Context

97.8%

of annual hours below 100 gpm of process water

Even in a year with high total water use

Over 80% of hours use no process water



Morgan Valley Energy Center's water use will fall below that of Linn County's top 25 permitted well users

9.4 MGY

MVEC upper estimate
Would rank #33

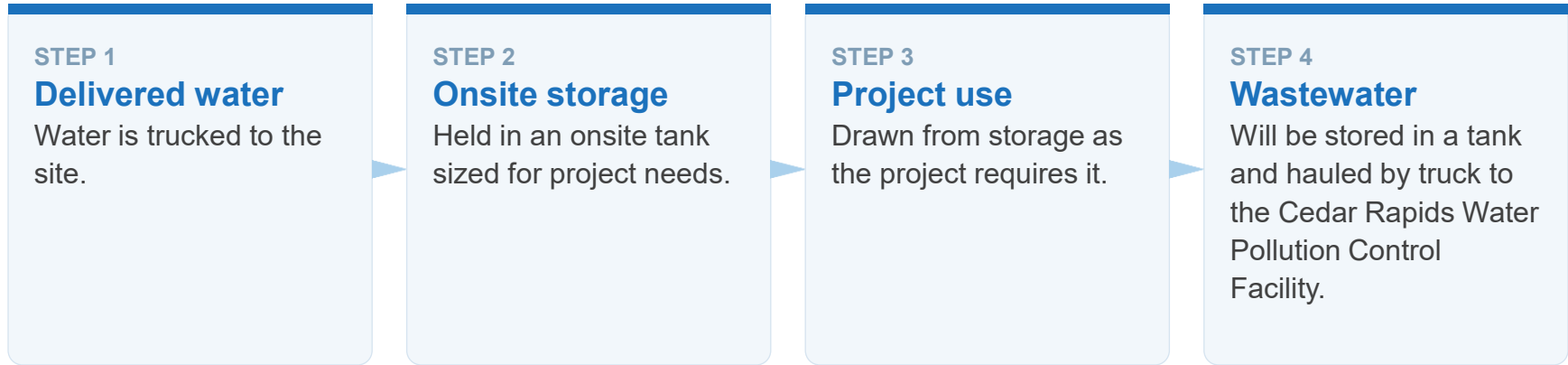
25.1 MGY

Local Country Club
Ranks #25

2023 Linn County use by listed business. Excludes Heating/Cooling.
Includes public supply.

Revised Water / Wastewater Proposal

We heard the community. Our proposal now relies on delivered water and onsite tank storage.



The current proposal does not require action from the City of Cedar Rapids for water supply or onsite wells.

This water supply approach has no contingencies and requires no additional approvals.

Water Hauling: Volumes and Seasonality

Process-water hauling: 2–8 truckloads per day during April–October

Water / timing	Supply delivered to MVEC	Disposal hauled from MVEC
Process water Evaporative coolers April–October	2–8 truckloads / day From Prairie Creek Generating Station	1–3 truckloads / day Blowdown to CR Water Pollution Control Facility
Turbine-wash water CT compressor washing Annual volume	1–2 truckloads / year Demineralized water from Prairie Creek Generating Station	1–2 truckloads / year To CR Water Pollution Control Facility

Hauling has been used successfully at another Alliant Energy CT site for 20 years

Boland Farm Setback Request

The landowner waiver and engineering safety response address different questions.

Requested Setbacks

Dwelling setback: 1,000 to 650 feet

Yard setback: 200 to 100 feet

At Owner's Request

Owner wants to remain in farmhouse and continue business operations on the 10 acres separated by the Residential Parcel Split.

Engineering Review

RFI asked about a safety assessment related to the setback. This is a different issue and will be addressed at the appropriate engineering phase of the project. An Emergency Management Plan is required to be completed prior to commercial operation.

Sound analysis and enhancements

MVEC is designed with low-sound upgrades to reduce far-field sound levels.

Indoor design

MVEC's indoor building envelope absorbs equipment sound.

Enclosures

Additional enclosures surround the exhaust ductwork and stack.

Stack silencer

Each stack includes an advanced internal silencer to further reduce sound levels.

Startup & Shutdown Sound

Some equipment operates only during startup and shutdown. Sound associated with startup may last 5 minutes and shutdown may last 30 seconds. These activities are not expected to cause any significant or sustained increase in noise levels relative to normal plant operation.

Sound levels for nearest neighbors

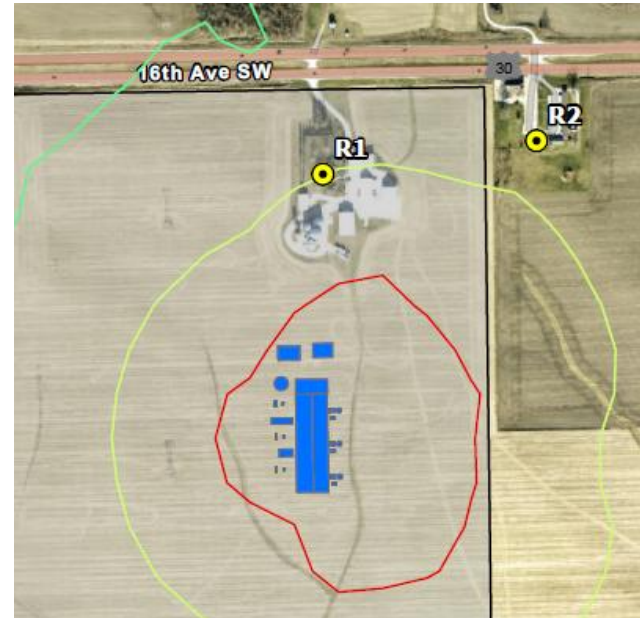
Modeled sound levels for dBA and dBC comply with Linn County EU-2 zoning ordinance.

Boland Farm (R1)

Waiver from Boland increasing limit from 75 to 85 dBC
Provided design flexibility during initial design
Not for future combined cycle

Ced Rel Motel (R2)

Ced Rel sound level modeled at 74 dBC
No waiver is needed
Project complies with EU-2 zoning ordinance



Sound Level Monitoring

EU-2 zoning requires sound evaluation before construction, after construction and throughout operation.

Pre-construction

Completed sound study included in the rezoning application.

Post-construction

Sound evaluation will verify compliance after construction. To be completed within 90 days of commercial operation.

Ongoing operations

A sound evaluation every five years will verify continued compliance.

Spill Prevention

Oil containment and broader stormwater controls require coordinated design.

SPCC Framework

Federal rules (40 CFR Part 112) govern oil-spill prevention. SPCC plans, secondary containment, and PE certifications are required in most cases.

Alliant Energy Experience

743

SPCC plans currently managed across our service territory



Air Permit Review and Compliance

1 Analysis

Alliant Energy models emissions, including startup and shutdown and completes BACT analyses.

2 Application

July 21 filing includes emissions estimates, modeling and Best Available Control Technology (BACT) analysis.

3 Agency review WE ARE HERE

LCPH and IDNR review the application, request more information if needed, make preliminary determinations, and draft a permit for public comment.

4 Public review

The public can review the draft permit and provide comment before the final decision. LCPH and IDNR must respond to comments and may change the permit.

5 Compliance

After issuance of a final permit. Alliant Energy must meet permit limits and monitoring, testing, recordkeeping and reporting requirements.

Air Quality Screening and Standards

PZC question: How do potential PM_{2.5} and NO_x SMC exceedances affect the compliance demonstration?

SIL

Significant Impact Level

SCREENING LEVEL

What area should be included in the model to verify compliance with health-based standards?

SMC

Significant Monitoring Concentration

SCREENING LEVEL

Which emissions require additional review of available ambient air quality data?

NAAQS

National Ambient Air Quality Standards

HEALTH-BASED STANDARD

Does total ambient air quality, including background, meet the applicable standard?

SILs are 95–99% lower than the NAAQS. SMCs are 89% to 96% lower than the NAAQS.

Low screening thresholds result in a thorough and conservative evaluation against the NAAQS.

Exceeding a SIL or SMC does not mean that a health-based standard has been exceeded.

Why Use Existing Air Monitors?

PZC question: What air-quality evidence shows the project, as proposed, can meet applicable requirements?

PM10 and PM2.5

Cedar Rapids Public Health
AQS 19-113-0040
DNR: Urban data overestimate
the rural background.

Nitrogen Dioxide

Lake Sugema State Park
AQS 19-177-0006
DNR: Background values use
2022–2024 certified data.

Carbon Monoxide

Davenport monitor
DNR: Urban data overestimate
local CO background.
Cedar Rapids does not monitor CO.

IDNR's preliminary review favors using existing data to fulfill preconstruction monitoring requirements. The decision will be specified in public-comment documents.

Linn County reviews the application and prepares draft permits. Iowa DNR makes the final permitting decision, including preconstruction monitoring requirements.

Stack Design and Air Quality Compliance

PZC question: Which stack parameters and downwash-related changes could alter the Major Site Plan?

Submitted design

The submitted air permit application identifies stack parameters, facility configuration and the emission controls incorporated into the Project.

Building downwash

The application identifies the structures evaluated for building downwash.

Compliance demonstration

The application demonstrates compliance with all applicable National Ambient Air Quality Standards (NAAQS) and PSD Class II Increment requirements.

Material Changes

Based on the final design evaluated in the application, no additional potential Material Changes have been identified. The current design satisfies applicable air quality requirements.

Reference: PSD Application Section 6.3.6 (Building Wake Effect/Downwash).

2050 Goals and Resource Transition

Morgan Valley Energy Center plays a crucial role in Alliant Energy's long-term transition

Net-zero carbon emissions by 2050

An aspirational and voluntary goal with an adaptable path for net-zero greenhouse gas emissions from our utility operations that is shaped by evolving technology, demand, reliability and cost-effective decisions for customers.

Progress to date

- Generation emissions have declined with renewable investments and changes to the coal fleet.
- Alliant Energy is a top owner and operator of regulated wind in the United States, and we continue to add more solar and battery storage to our portfolio.

MVEC's role in the transition

As renewable energy and battery storage technologies continue to evolve, the facility will provide dependable power when demand is high or renewable output is low.

Solar

~400 MW in service; considering additional projects

Wind

~1,800 MW in service; currently adding up to 1,000 MW

BESS

~160 MW in service with an additional
~755 MW planned or in construction

Current Standards and Long-Term Planning

**MVEC is designed to meet Linn County's current EU-2 requirements.
County staff recommended approval based on those standards.**

2013 **Comprehensive Plan**

Adopted 13 years ago, the plan provides the County's long-term vision for land use and community development.

2026 **Updated EU-2 ordinance**

The more recent ordinance provides specific standards for gas-fired generation and balances economic-development considerations.

Our Commitment to the Community

Alliant Energy has signed the President's Ratepayer Protection Pledge and has a strong track record of meeting, and often exceeding, the requirements that protect customers, the environment and public health.

OUR COMMITMENT TO YOU

MORGAN VALLEY ENERGY CENTER

Morgan Valley Energy Center moves forward only under independent regulatory review — with your rates, your community and environmental stewardship protected at every step.

Ratepayer Protection

We signed the president's Ratepayer Protection Pledge: large energy users pay 100% of the cost to serve them.

Right-Sized Generation

A simple-cycle facility is the right-sized option for current demand projections, with flexibility to convert later if needed.

Local Investment

Base rates stay stable through the decade, plus new jobs and tax revenue for Linn County.

Independent Review

Nothing is built until regulators approve necessary permit applications.

Protecting Air Quality

Modeled emissions meet EPA health standards, with controls set through the BACT process.

Responsible Siting

The site moved in response to local siting requirements and airport feedback; unused acres return to farmland.

SUPPORTING INFORMATION

APPENDIX



Appendix: Economic Tax Update

The updated analysis qualifies the earlier long-term local-tax illustration.

Scenario Analysis

Future generation and levy rates affect actual replacement-tax receipts.

Local Allocation

The statutory local amount allocates taxable value among taxing jurisdictions. It is not a fixed payment.

Budget Effect

Replacement taxes may reduce other levy needs rather than add dollar-for-dollar budget revenue.

Appendix: Source Record

Principal materials supporting this discussion draft.

- County review** ● PR26-0006 staff report, PZC information request, and EU-2 rezoning application.
- IUC filings** ● GCU application and Farlinger, El-Zein, Myhre, and Maxted direct testimony.
- Air quality** ● July 21, 2026 PSD Air Construction Permit Application, especially sections 4–6.
- Public responses** ● June 24 question set and September 11 Technical Review Committee response.
- Other sources** ● Economic tax update, 40 CFR Part 112 references.

Water Use at the Morgan Valley Energy Center

Simple-Cycle Facility with Closed-Loop Cooling and Turbine Inlet Air Evaporative Cooling

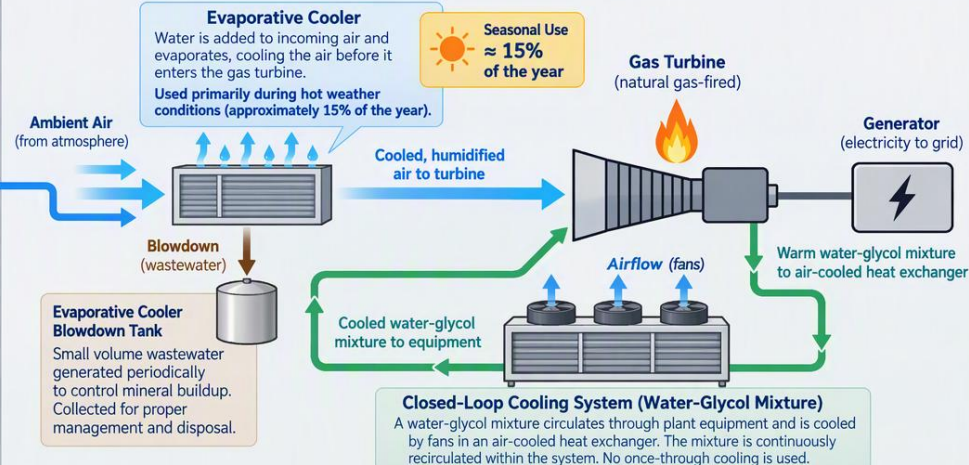
Water Delivery and Storage

Water is delivered to the site by truck and stored in an on-site tank.



Morgan Valley Energy Center

(Simple-Cycle, Natural Gas-Fired)



Key Points

1

Water Delivery and Storage

Water is delivered to the site by truck and stored in an on-site tank.



2

Seasonal Turbine Inlet Air Cooling

Water is used in the evaporative cooler during hot weather conditions (approximately 15% of the year) to reduce inlet air temperature and improve turbine performance.



3

Closed-Loop Cooling

A water-glycol mixture is continuously recirculated through plant equipment and cooled using fans in an air-cooled heat exchanger. No once-through cooling is used.



4

Limited Water Consumption

Water consumption occurs primarily through seasonal evaporation in the turbine inlet air cooling system, with small amounts of periodic blowdown and minor system losses.



No once-through cooling water withdrawals.

Water is delivered to the site, used primarily for turbine inlet air cooling, and recirculated within closed-loop systems.