



Morgan Valley Energy Center

Designed to minimize water use

Water is an important resource in Linn County, and residents deserve clear information about how much water the proposed Morgan Valley Energy Center would use. Current engineering projections show water use would depend on weather and how often the facility operates, with the highest use expected during warm-weather periods.

Total annual water use is projected to range from approximately 4.2 to 9.4 million gallons per year. It would not occur evenly throughout the year; use would rise only when conditions call for combustion turbine inlet air evaporative cooling.

Putting the numbers into perspective

To understand what those projections mean, it helps to compare them with familiar water uses and look at how the facility would operate across the year.

- A typical irrigated Midwest 18-hole golf course uses approximately 25.8 million gallons of water per year, meaning Morgan Valley Energy Center is projected to use about one-quarter to one-third as much water.
- A high-volume conveyor-style car wash typically uses approximately 4 million gallons annually, placing the facility's projected water use in a range similar to roughly one to two car wash facilities.
- The Morgan Valley Energy Center will use as much water as 115 average households on an annual basis. According to U.S. Census data, there are 95,600 households in Linn County as of 2024.

Why water use changes throughout the year

The facility would use water for two main purposes:

- Everyday needs such as sinks, restrooms and drinking water (potable water).
- Evaporative cooling, which helps improve power output during warmer weather conditions (process water).

In cooler weather, little to no process water is expected. Use would increase mainly during warmer periods, when evaporative cooling can help support power output as customer demand rises.



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Estimated Process Water Use by Season*

Season	GPM	Gallons
Winter	0	0
Spring	7.5	987,880
Summer	29.5	3,911,966
Fall	8.6	1,125,049

*Based on 2023 weather data and a maximum capacity factor of 40%, which is the maximum water demand across all modeled operations.

What do the facts tell us?

- No process water use is expected during winter conditions.
- Most process water use would occur during the summer months.
- Water use during spring and fall is substantially lower than summer operation.
- Annual water-use estimates already account for these seasonal differences and should not be confused with occasional peak summer conditions.

Designed to use less water

The Morgan Valley Energy Center would not use cooling towers, which are commonly associated with higher water consumption at some power plants. Instead, it would use a closed-loop cooling system that recirculates a glycol-water solution, similar in concept to a vehicle radiator. This approach reduces the amount of water needed for plant operations.

We understand that water use is important to the community. That is why the project has been designed to limit water needs while still supporting reliable electric service. Current projections show water use would be seasonal, with the highest use during warmer weather and much lower use during cooler periods.

Sources: United States Environmental Protection Agency 2024 Benchmark Report, United States Golf Association Water Use Report, and Tommy Car Wash 2020 Study on Water Usage, International Carwash Association – Car Wash Water Use Study (2018). Household water consumption from Water Research Foundation, 2023.



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