

# Battery Energy Storage Systems – Background and Case Studies

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# Contents

- Glossary of Terms .....3
- Project Background.....4
- Battery Energy Storage Systems (BESS).....4
  - Overview .....4
  - BESS Development Process and Life Cycle.....5
- Michigan’s Clean Energy Legislation .....5
  - Overview .....6
  - PA 235 Storage Mandate .....7
- Selection of Comparison Sites.....7
- Considerations for Oakland County - Items of Interest.....8
  - BESS and Oakland County’s Peaker Plants .....9
- Additional Resources .....9
- Tibbits Energy Storage .....11
- Slocum Battery Energy Storage Project .....14
- Williams Power Facility.....17

# Glossary of Terms

**BESS:** Battery Energy Storage System/s – large lithium-ion batteries.

**CES:** Clean Energy Standard – a percentage of electricity sales that needs to be served by clean energy generation.

**Docket:** the MPSC’s organizational tool for regulatory proceedings – a single docket will contain many filings from multiple parties about a specific issue.

**Grid-Scale** – designates that an energy project is of a scale that needs to interconnect to the transmission grid.

**MISO:** Midcontinent Independent System Operator – the entity that runs the whole electricity market in Michigan and plans for large-scale transmission projects.

**MW:** Megawatt – a unit of power equal to one million watts, measuring the instantaneous rate at which energy is produced or used.

**MPSC:** Michigan Public Service Commission – the state office that regulates utilities.

**MWh:** Megawatt-hour – a unit of energy equal to one megawatt of power sustained for one hour, measuring the total amount of energy produced or consumed over time.

**NFPA:** National Fire Protection Association – an international nonprofit organization that develops and publishes fire, electrical, and building safety standards and codes.

**PA ###:** Public Act – designation of a piece of legislation in Michigan.

**Peakers / Peaking Plant** – a power plant that can turn on quickly to serve sudden increases in electricity demand but is designed not to be run too frequently.

**PILOT/PILT:** Payment in Lieu of Taxes – a tax regime wherein a local government chooses to waive normal property taxes in exchange for a fixed yearly sum.

**PPA:** Power Purchase Agreement – a type of contract for electricity.

**RES:** Renewable Energy Standard – a percentage of electricity sales that needs to be served by renewable energy generation.

# Project Background

In 2024, Oakland County (OC) was awarded a Voucher Opportunity 3 (VO3) funded by the Department of Energy (DOE). The VO3 program provides Authorities Having Jurisdiction (AHJ) with support to navigate siting, zoning, and permitting processes related to new energy technologies. 5 Lakes Energy, a Michigan-based consulting firm, worked with Oakland County to develop a scope of work relevant to the county's constituent municipalities. Given the interest by renewable energy developers to build large-scale battery energy storage systems (BESS) in Oakland County, the relative newness of this technology, and the relatively low experience of local governments handling the permitting of such projects, it was determined that case studies of BESS projects being developed in similar communities around the state or in neighboring states would be informative.

## Battery Energy Storage Systems (BESS)

### Overview

Grid-scale BESS are large rechargeable lithium-ion batteries, similar to the ones used in a phone or laptop. When connected to the grid in front of the meter, these batteries operate on price signals from the wholesale electricity market, which, in most of Michigan, is operated by the Midcontinent Independent System Operator (MISO). In the simplest terms, BESS charge when electricity is cheap and discharge when electricity is expensive. To operate economically, BESS need a large enough price differential between charge and discharge electricity costs to overcome the portion of energy that is lost in the charging process. Battery technologies each have different round-trip efficiencies, which is a measure of how much energy is lost during a charge and recharge cycle. For most grid-scale lithium-ion BESS, the round-trip efficiency is about 85%, meaning that there are losses of about 15% in each charge cycle.

While the current approach to electricity storage using BESS is relatively new, the idea that there is value in being able to store electricity is old. Michigan has had a large electricity storage system since the early 1970s – the Luddington pump storage facility in western Michigan. This system pumps water into an uphill reservoir when electricity is cheap and lets it down through a generating turbine when it's expensive.

Physically, BESS look like sets of evenly spaced shipping containers set on concrete pads. Unlike wind and solar projects, BESS projects have fairly small footprints. Like wind and solar projects, BESS developers prioritize proximity to grid infrastructure when choosing their project locations – for BESS, proximity to a substation is even more important than it is for these other renewables for a variety of techno-economic reasons.

The benefits of BESS increase as Michigan's grid becomes more saturated with renewable energy, as they can be used to store electricity from renewable sources that produce intermittently and discharge it at times of higher need. The deployment of BESS will also help accelerate the retirement of natural gas or other types of peakers (power plants that dispatch quickly to serve

sudden increases in demand), as BESS can dispatch quickly. The Slocum project discussed below exemplifies this approach to peaking plant replacement.

## BESS Development Process and Life Cycle

In Michigan, the development of a BESS project will usually take three to five years, or more, to go from a concept to being fully operational. This timeline is predominantly shaped by the MISO interconnection process and permitting.

Conventionally, the development process for any renewable energy project, including BESS, will begin with research and location scouting, followed by securing land through option agreements signed with landowners, or less commonly with the purchase of property. In the optioning process, a developer will offer a landowner a short-term option at a small fixed rate per acre per year, likely less than \$100, which gives the developer the right to convert that option to a long-term lease at a much higher rate. As leases are often subject to confidentiality agreements, and storage is new to Michigan, there isn't good data on property lease rates for BESS, but a ballpark range, based on other states, and solar lease rates in Michigan, is about \$1,000 – \$3,000 per acre per year. BESS lease rates tend to be higher than solar lease rates as storage projects are smaller but more capital-intensive per acre, and location is even more important.<sup>1</sup>

After most or all land is secured, a developer will initiate an interconnection request with MISO. The MISO interconnection process is currently severely backlogged and can take several years to complete. Although some progress is being made to clear MISO's backlog and achieve its stated goal of 1-year interconnection times by 2028, this goal may be difficult to achieve and does not help projects currently waiting in the queue.<sup>2</sup> Simultaneously, developers pursue environmental due diligence, technical system design, and local, and/or state, and even sometimes federal permitting.

Once permits and a MISO interconnection agreement are in hand, detailed design, procurement, and construction can begin and, depending on the project's size, will take one to two years. Most BESS in Michigan use lithium iron phosphate (LFP) chemistry, are fire-tested to UL9540A<sup>3</sup> standards, and are designed for 20–25 years of service. Many local permits – whether via MPSC or local governments – require a decommissioning plan and a security bond or irrevocable letter of credit upfront. At end of life, developers are expected to restore the site in accordance with specific requirements in their permit, which will generally, but not always, include the complete removal of all infrastructure and equipment associated with the project and the reestablishment of the original underlying ground conditions.

## Michigan's Clean Energy Legislation

There are a range of factors driving renewable energy deployment in Michigan, including federal policy with the Inflation Reduction Act, improving economics – the rapidly decreasing costs of

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<sup>1</sup> <https://artinenergy.com/battery-storage-land-lease>. Accessed 6/6/2025.

<sup>2</sup> <https://www.spglobal.com/commodity-insights/en/news-research/latest-news/electric-power/022525-miso-on-path-to-reduce-queue-process-to-one-year-with-reforms-technology-executive>. Accessed 6/6/2025.

<sup>3</sup> <https://www.ul.com/services/ul-9540a-test-method>. Accessed 6/6/2025.

renewables compared to other energy sources, and Michigan’s energy policy landscape. The following section outlines the history of Michigan legislation supporting the increased deployment of renewable energy and battery storage.

## Overview

In 2008, Michigan passed PA 295<sup>4</sup>—the “Clean, Renewable, and Efficient Energy Act.” Among other things, this law created Michigan’s first renewable energy standard (RES) of 10% by 2015. The RES mandates that utilities serve their customers with at least 10% renewable energy. In 2008, Michigan already produced 3.4% of its energy from renewable sources, including hydropower, biomass, and a very small amount of wind. At the time, 60% of Michigan’s generation came from coal, 27% from nuclear, with the remainder coming from natural gas and other smaller sources.

In 2016, Michigan amended PA 295 with the Clean and Renewable Energy and Energy Waste Reduction Act, enacted as PA 342<sup>5</sup> which increased the Michigan RES standard to 15% renewable energy by 2025, and created a non-binding goal that 35% of all retail sales be served by a combination of energy efficiency and renewable energy by 2025.

Most recently, in 2023, Michigan passed another package of laws designed to support clean and renewable energy deployment. Of these laws, the most impactful were PA 235<sup>6</sup> and PA 233<sup>7</sup>. PA 235 further amended the clean and renewable energy mandate in PA 295 by:

- Increasing Michigan’s RES standard to require utilities to serve 50% of retail sales with renewable energy by 2030 and 60% renewable energy from 2035 onward;
- Creating a new clean energy standard (CES) of 80% by 2035 and 100% by 2040;
- Creating a new mandate for the development of a minimum of 2,500 MW/10,000 MWh of new battery storage capacity for Michigan utilities by 2030.

The CES includes almost all renewable energy technologies, including wind and solar, but also allows for compliance with nuclear energy and natural gas energy, provided the natural gas generators are outfitted with 90% effective carbon capture and storage technology.

PA 233 works in tandem with PA 235 to facilitate the rapid deployment of renewable energy. It creates a state-level siting approval pathway for large renewable energy projects that developers can use if good-faith efforts to work with local governments on project permitting prove impossible. The legislature delegated the administration of this new state process to the MPSC. Although passed in 2023, the first round of state siting approval dockets is expected to reach the MPSC in sometime in 2025. Consequently, its overall effectiveness at increasing the rate of renewable energy deployment remains unknown.

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<sup>4</sup> PA 295 - <https://www.legislature.mi.gov/documents/2007-2008/publicact/pdf/2008-PA-0295.pdf>

<sup>5</sup> PA 342 - <https://www.legislature.mi.gov/documents/2015-2016/publicact/pdf/2016-PA-0342.pdf>

<sup>6</sup> PA 235 - <https://www.legislature.mi.gov/documents/2023-2024/publicact/pdf/2023-PA-0235.pdf>

<sup>7</sup> PA 233 - <https://www.legislature.mi.gov/documents/2023-2024/publicact/pdf/2023-PA-0233.pdf>

## PA 235 Storage Mandate

PA 235 requires the deployment of 2,500 MW of battery energy storage systems (BESS) with a minimum of 4 hours of storage duration, meaning that, if fully charged, these BESS systems could discharge 2,500 MW for four hours to serve the needs of the grid. The allocation of these 2,500 MW of BESS between utilities is based on the utility’s average contribution to the state’s peak load.<sup>8</sup>

While Michigan has already seen some utility commitments to the deployment of BESS, there is not a clear projection of how much will be built over the coming decades. However, it is likely that more than 2,500 MW of BESS will be deployed by 2040. The MISO interconnection queue in Michigan currently contains over 13,000 MW<sup>9</sup> of BESS. While historically only a fraction of what enters the queue is built,<sup>10</sup> this high volume of BESS in the queue shows the degree of utility and developer interest in BESS deployment.

## Selection of Comparison Sites

At the beginning of this project, 5 Lakes Energy identified and conducted light research into dozens of storage projects across Michigan and the Midwest. The goal was to identify completed or in-process BESS projects in locations similar to Oakland County – largely urban and suburban with some agricultural lands. While the ideal comparison sites would be in Michigan, and while there are many BESS projects in early stages of development in the state, there were not many that had progressed far enough to yield interesting case studies. Consequently, one of the three sites that was selected for the case studies is in Indiana. Another goal was to identify sites with diverse takeaways. Projects eventually selected include new projects on greenfield sites, those replacing existing energy infrastructure, and those implementing novel land use policies, thereby providing Oakland County with a broader set of applicable findings.

The table below provides a brief overview of the selected sites and why they were chosen.

| Project Name                         | Size          | Location                              | Reason for Selection  |
|--------------------------------------|---------------|---------------------------------------|---|
| <i>Tibbits Battery Storage</i>       | 100MW /400MWh | Coldwater Township, Branch County, MI | <ul style="list-style-type: none"><li>• one of the earliest of its scale in the state</li><li>• used an unexpected zoning mechanism</li><li>• provides an interesting example for communities that proactively want to support renewable energy projects as an economic development opportunity</li></ul> |
| <i>Slocum Battery Energy Storage</i> | 14 MW /56MWh  | City of Trenton, Wayne County, MI     | <ul style="list-style-type: none"><li>• project’s proximity to Oakland County and DTE ownership (primary utility provider in Oakland)</li><li>• potential findings for existing peaker plants in Oakland County</li></ul>   |

<sup>8</sup> PA 235 – Sec. 101. (1)

<sup>9</sup> MISO Interactive Queue: [https://www.misoenergy.org/planning/resource-utilization/GI\\_Queue/gi-interactive-queue/](https://www.misoenergy.org/planning/resource-utilization/GI_Queue/gi-interactive-queue/). Accessed April 16, 2025.

<sup>10</sup> LBNL 2024 Queued-Up Report: [https://emp.lbl.gov/sites/default/files/2024-04/Queued%20Up%202024%20Edition\\_1.pdf](https://emp.lbl.gov/sites/default/files/2024-04/Queued%20Up%202024%20Edition_1.pdf). Accessed April 16, 2025.

|                                |                |                                       |  |
|--------------------------------|----------------|---------------------------------------|--|
| <i>Williams Power Facility</i> | 150 MW /600MWh | City of Madison, Jefferson County, IN | <ul style="list-style-type: none"> <li>• suburban nature comparable to Oakland County context</li> <li>• site resides within the city’s buffer limits, requiring approvals from the city and county</li> </ul> |
|--------------------------------|----------------|---------------------------------------|--|

## Considerations for Oakland County - Items of Interest

Each jurisdiction approached project permitting differently and addressed distinct issues. Please refer to individual case studies below for details. However, there are three items of note for BESS:

- 1. “By-Right Approval” is not standard practice:** While both Michigan case studies, Tibbits Battery Storage and Slocum Battery Energy Storage, approved their projects as permitted by-right, it is not standard practice. In the case of Tibbits, it's a novel strategy to classify BESS as an essential service and to permit them by-right on agricultural lands. Communities interested in proactively looking to host renewable energy projects can investigate this strategy; however, one should not expect it to be common. On the other hand, the City of Trenton's permitting of energy generation units on industrial lands is more commonplace; however, many projects in the MISO queue or under construction are not sited on industrial land and don't typically fall in this category. Slocum highlights a special case where BESS can replace fossil-fuel-powered peaker plants.
- 2. Fire safety is a common concern:** With a couple of battery fire events in Western states in the news, fire safety at BESS sites is typically top of mind for local officials and fire departments. Jurisdictions with successful project implementation indicated that early engagement with the project developer, fire code experts, local fire officials, and equipment manufacturers was key to preparing a comprehensive fire safety plan. At a minimum, all jurisdictions completed emergency management plans in accordance with the applicable NFPA 855 standards and created annual training and engagement plans over the useful design life of the project.
- 3. Potential for early mover bias:** To ensure the case studies provide meaningful insights across the project development cycle, 5 Lakes Energy chose projects that were in later stages of development. However, given the limited number of BESS sites being actively developed in Michigan, doing so might have led to a bias towards early movers and adopters who might be more open to hosting BESS. There may be some communities that have additional concerns related to aesthetics, noise, water pollution, soil contamination, and site restoration (i.e. decommissioning plan), among others. These concerns can be addressed by developers with transparent communication and incorporating community input into the site plan. For example, Tibbits incorporated a decommissioning plan and an associated bond, and for the Williams project, the community requested visual screening to preserve the rural landscape, which led to the development of a landscape plan. The [Planning and Zoning for Battery Energy Storage Systems](#), a guide for Michigan local government officials and planners, outlines many of these options and provides an overview of BESS deployment.

## BESS and Oakland County’s Peaker Plants

As mentioned above and discussed in the Slocum case study below, peaker plants are a natural low-hanging fruit for replacement with BESS, since peakers tend to be costly to operate and have higher emissions per MWh than larger power plants. However, some peaker plants have physical sites and grid interconnections that are better suited to BESS than others.

One constraint for peaker-to-BESS conversions is space. Peaker plants are often located on small plots of land, and BESS will usually take up more space than peakers to achieve the same MW of output rating. The amount of available space should be accounted for especially as the BESS loses total capacity and additional battery packs may need to be added. This can make one-to-one swap-outs difficult and utility providers generally want to maximize the use of their available grid interconnections.

Assessing the feasibility of replacing existing peaker plants in Oakland County with BESS is beyond the scope of this report, and 5 Lakes Energy cannot comment on whether replacing Oakland County’s peakers is feasible. Additional research is needed in order to conduct a complete an inventory of peaker plants in Oakland County, however the following sites have been identified:

1. Hancock Peaking Station (DTE owned), 121.6 MW capacity, gas-fired, has 4 units; Commerce Township
2. Placid Peaking Facility (DTE owned), 13.5 MW capacity, oil-fired, has 5 units; Springfield Township
3. Corewell Health William Beaumont University Hospital, oil-fired; Royal Oak (peaker status needs to be verified)
4. Par Sterile Products, oil-fired; Rochester (peaker status needs to be verified)

## Additional Resources

- **[Planning and Zoning for Battery Energy Storage Systems](#)**: This guide emphasizes the strategic planning and zoning considerations for implementing Battery Energy Storage Systems. It outlines examples of permitting processes, fire safety measures, and other important details. It also discusses the implications of PA 233 for BESS permitting.
- **[Grid-Scale Battery Storage FAQ](#)**: A short, useful technical explainer of grid-scale BESS compiled by the National Renewable Energy Laboratory.
- **[PA 233 \(2023\) – Overview Slide Deck](#)**: This slide deck outlines some of the most important aspects of PA 233 and how local governments can think through “workable” ordinances for renewable energy projects.

# Case Studies

# Tibbits Energy Storage

**Project Size:** 100 MW / 400 MWh

**Location:** Coldwater Township, Branch County, MI

**Location Type:** Agricultural

**Stage of Development:** Construction

**Commercial Operational Date:** 2025



**Summary:** The Tibbits Battery Storage (Tibbits) is a 100 MW / 400 MWh battery energy storage project located in Coldwater Township in Branch County, Michigan, and is being constructed on agricultural land just outside the city of Coldwater. Tibbits is a project of Jupiter Power, a Texas-based battery storage company. The project will sell its power through a power purchase agreement to Consumers Energy and is expected to be operational by the end of 2025.

**Development and Permitting Process:** The earliest reference to the Tibbits in the *Coldwater Daily Reporter* – a local publication – is November 2022. However, the Coldwater project entered the MISO interconnection queue in 2020, meaning that early stages of development, such as location scouting and land acquisition, began several years earlier. In the early stages of permitting, it appeared that the project might fall under a PA 425 (1984) development agreement (425 agreement) between the City of Coldwater and Coldwater Township. 425 agreements have tax implications; under one, the project would have been taxed under the city’s higher millage of ~17 mils compared with the township’s .91 mils. The township would have received 20% of the town’s tax revenue, which would have been more than what it receives for pulling in the full property taxes under township taxation. The 425 agreement would have been required had the project needed to use city services, in this case, water. To avoid the 425 agreement, Jupiter Power dug on-site wells for water, keeping full siting and taxing authority for the project in the township. While water is not typically used in fire suppression for Battery fires, it can be used to prevent the spread of fire to any

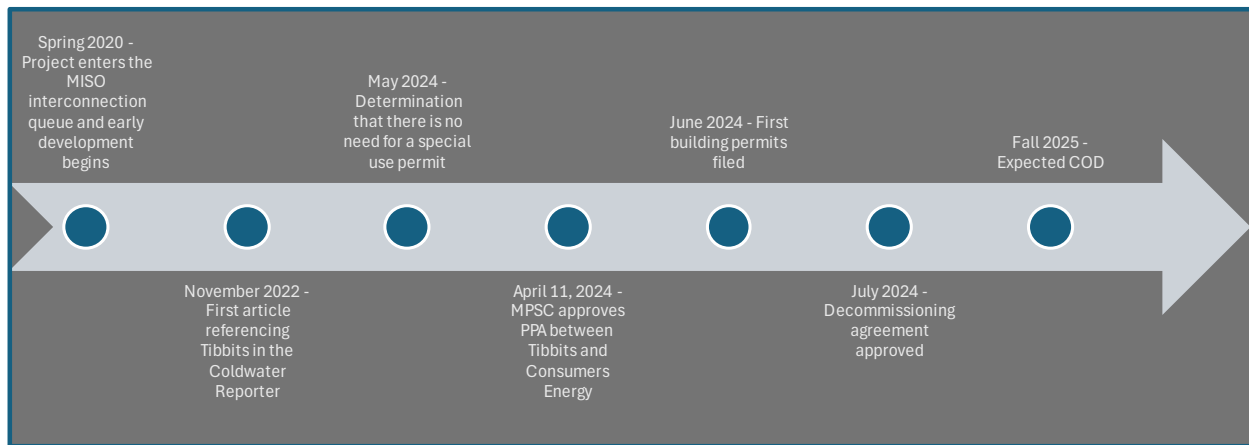
neighboring properties or structures. In addition to normal ad valorem taxes, Jupiter Power also agreed to pay \$600 per MW per year (\$60,000) to the township.

According to Don Rogers, the Coldwater Township supervisor, the project was initially being looked at by the township zoning department, but on his recommendation, instead of requiring a normal permitting process for the project, it was determined that the project was an essential service and was permitted by right on agriculturally zoned land. This substantially expedited the permitting process, and the first building permits for the project were filed in June of 2024.

**Local Concerns:** Jupiter Power’s avoidance of a 425 agreement was contested in some public meetings, but did not produce organized opposition. According to two interviews with public authorities, there were some concerns about fire safety and other issues, but opposition was relatively mild, and Jupiter Power agreed to meet with the Coldwater fire officials to share information and provide training. Decommissioning the site at the end of the useful design life was important to local officials. As a result, the township board requested that Jupiter Power prepare a decommissioning plan in accordance with the townships desired characteristics which was approved by the township board. This plan required Jupiter Power to acquire a bond to cover the costs of decommissioning the site.

**Items of Interest:** Coldwater was able to receive a Renewable Ready Communities Award of \$5,000/MW (\$500,000 total) for siting the project through local processes. The project had an advocate in Don Rogers, who sees renewable energy projects as good economic development opportunities, and helped smooth the way for this project. According to a recent radio interview with Rogers, DTE Electric and ESA (a solar and storage developer) are also looking at building storage projects in Coldwater due to good transmission access.

### Project Timeline



### Reference Documents:

- [Building Permits](#)
- [Zoning Map](#)
- [Zoning Ordinance](#)
- [MPSC PPA Approval](#)

- [MISO Interconnection Study Approving Tibbits \(Project# J1635\)](#)

# Slocum Battery Energy Storage Project

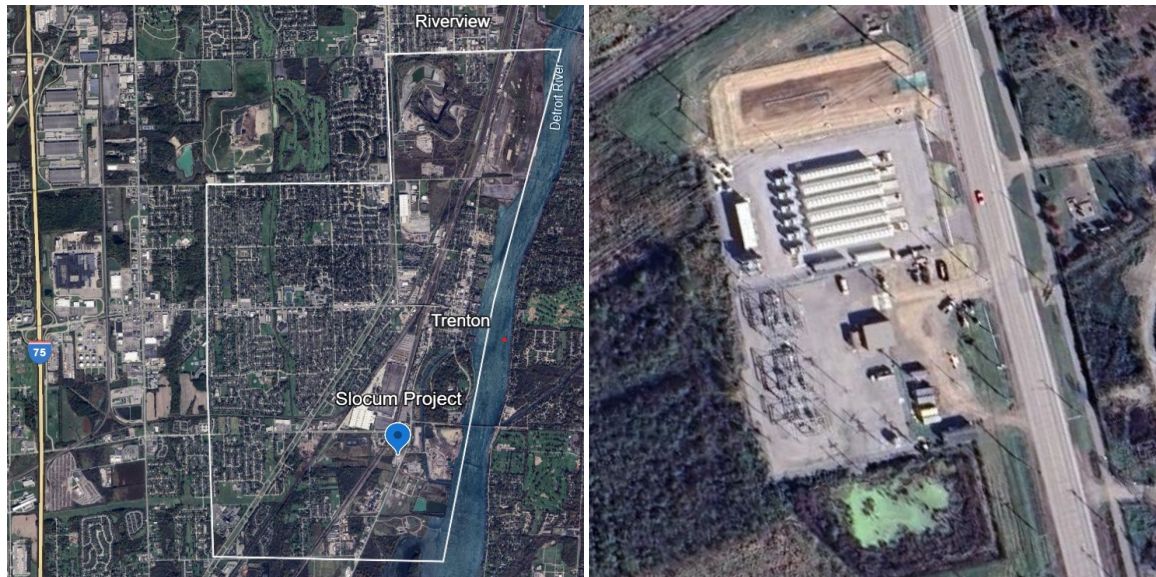
**Project Size:** 14 MW/56 MWh

**Location:** City of Trenton, Wayne County, MI

**Location Type:** Industrial

**Stage of Development:** Operational

**Commercial Operational Date:** Q1 2025



**Summary:** Slocum is DTE's first utility-scale battery storage project in Michigan. It recently became operational, replacing a peaker plant with five 2.75-megawatt diesel-fired engines. It is sited on an industrial-zoned parcel where energy generation units are permitted by right and did not require a lengthy siting and permitting process.

**Site Selection:** DTE conducted a feasibility study on several existing peaker sites in its territory to determine their suitability for a BESS pilot project. Some of the factors evaluated were the age and usage of existing infrastructure, the ability to utilize existing interconnection rights fully, minimal local grid impact of installing a resource with a 4-hour duration and eliminating diesel emissions near populated areas.

Land constraints at individual sites were also considered during siting studies. Battery storage efficiency deteriorates over time due to various factors, leading to decreased capacity and overall performance. To maintain system capacity and fully utilize the interconnect (all 14MW in this case) over 20 years (expected project lifetime), the project will have to add battery packs over time. In case of Slocum, the expectation is that the site will eventually have 114 battery packs by the end of its lifetime, a 35% increase from its initial 84 packs, requiring that the site have enough land available for future expansion. One interviewee noted that the project site increased from about an acre to 1.5 acres. With constant improvements in battery technology, DTE expects this constraint will become less binding.

A feasibility study for a particular site is generally a utility-led process. However, communities interested in transitioning their fossil-powered peaker plants can proactively engage with their local utility liaison to identify what constraints could be binding for specific sites and identify opportunities for their remediation. Battery storage project development should grow in alignment with PA 235, which mandates a statewide energy storage target of 2,500 MW by 2030; DTE has committed to developing 780 MW of energy storage capacity by 2030 and over 1,800 MW by 2042<sup>11</sup>.

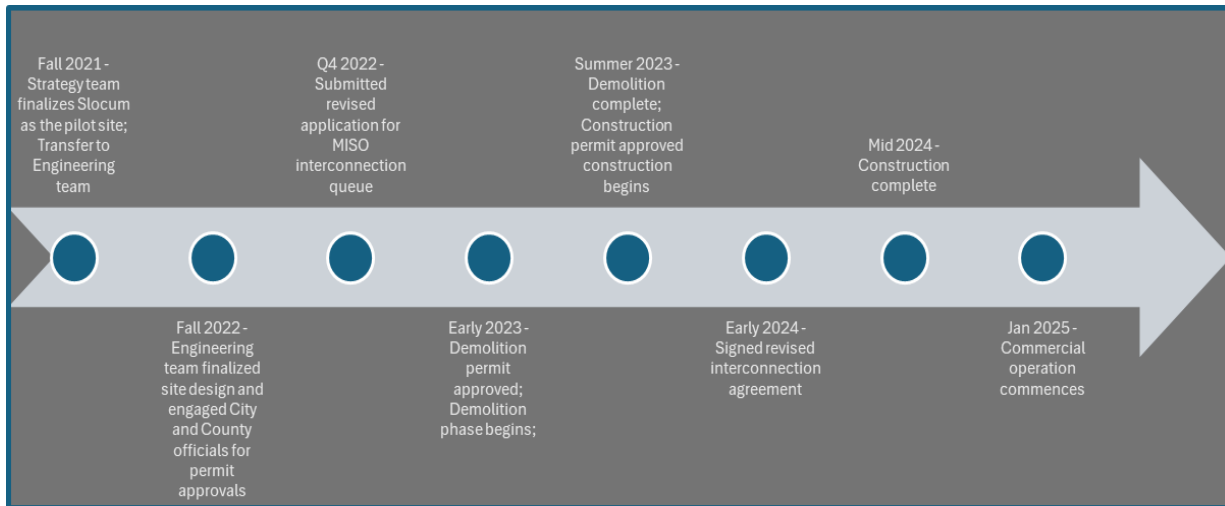
**Permitting Process:** Slocum Battery Storage sits on an I-2, aka Heavy Industrial District parcel, where heating and electric generating power plants are allowed by right. The project did not require site approval from the Planning Commission or the Zoning Board, but did require a demolition permit to remove existing peaker units (only from City) and a construction permit to build new structures for battery packs (both from City and County). With the increase in site footprint, the site's stormwater management requirements also changed, and DTE amended the site plan accordingly. One interviewee noted that while the City of Trenton issued this approval, site changes were primarily driven by Wayne County's stormwater ordinance.

**Local Concerns:** Fire safety was a key concern noted for this project. The City of Trenton's Fire Department worked closely with DTE to review facility design, develop a high-level understanding of the technology and the system, and assess the exposure it creates for firefighters and the community. Firefighters across all shifts visited the site and received training on the system, fire incidents at other sites, what worked and did not, manufacturers' recommendations, industry best practices, NFPA standards, and other relevant information. Battery technology is rapidly evolving, and at times, recommendations from different sources can be at odds with one another, making it essential to understand the implications of one versus the other. For example, manufacturers don't recommend using water for fires related to Lithium-Ion batteries. However, the City insisted on installing pre-plumbed pipes as a last resort, and all firefighters are trained to work with DTE, hazmat experts, and others to assess whether water suppression is an appropriate tool for a particular incident. The department has also developed an annual engagement plan with DTE for ongoing training. Both DTE and the Fire Chief emphasized the importance of training and education on fire suppression, emergency plan review, and code enforcement as critical pieces of the project development process.

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<sup>11</sup> Michigan Public Service Commission approves DTE's landmark clean energy plan: <https://ir.dteenergy.com/news/press-release-details/2023/Michigan-Public-Service-Commission-approves-DTEs-landmark-clean-energy-plan/default.aspx>

## Project Timeline:



## Reference Documents:

- [City of Trenton Zoning Map](#)
- [City of Trenton Ordinance](#)
- [One-pager on NFPA 855](#) (most recent standard for installation of energy storage systems)

# Williams Power Facility

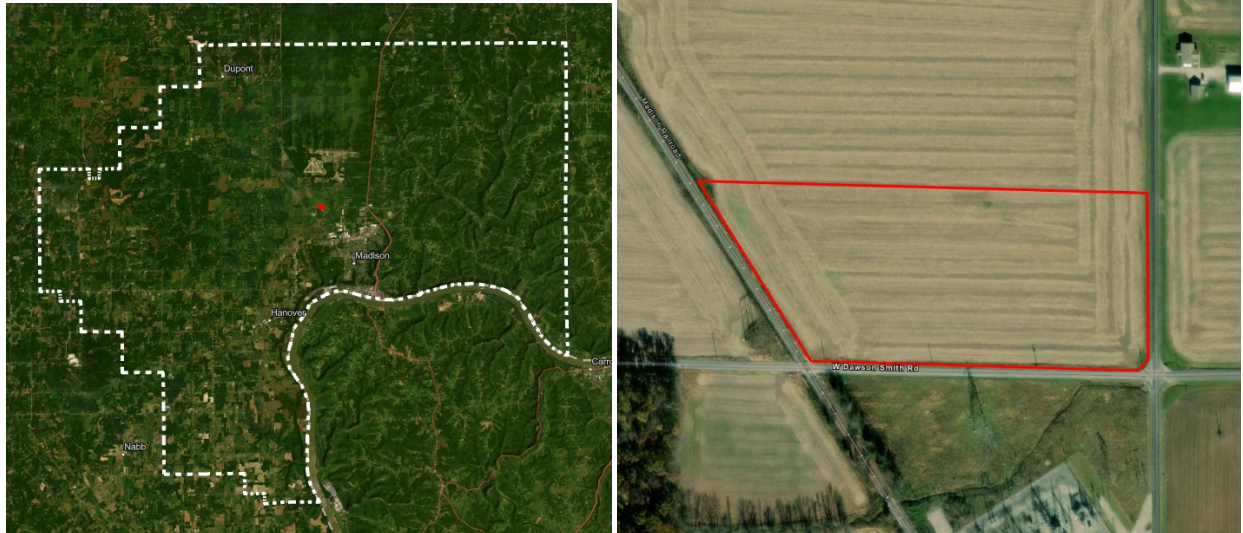
**Project Size:** 150 MW/600MWh

**Location:** City of Madison, Jefferson County, IN

**Location Type:** Agricultural

**Stage of Development:** Active Permitting

**Commercial Operational Date:** *December 2026*



**Summary:** The project is sited on ten acres of agriculturally zoned land within the city of Madison’s buffer limits in Jefferson County, Indiana. Madison is a suburban city with a population of 12,277. The project site is situated close to the Madison substation and has only one dwelling within 500 feet of the facility. The parcel has been disturbed for decades and has been studied for wetlands and wildlife resources, and presents no issues. The project has received zoning approval from the city’s board of zoning appeals, signed a decommissioning agreement, and an economic development agreement with the County. The project has also received its generator interconnection agreement from MISO and is expected to start construction in December 2025.

**Permitting Process:** Permitting for the Williams Power Facility began on May 13, 2022, when Open Road Renewables, LLC applied for a Conditional Use Permit (CUP) from the City of Madison to develop a battery energy storage system on Parcel ID 39-08-08-000-012.000-006. On June 17, 2022, Williams Power, LLC<sup>12</sup> submitted two variance requests: one for a one-year extension of the CUP, and another to ensure the CUP would remain valid under new ownership. The City’s Board of Zoning Appeals (BZA) reviewed these requests on July 11 but tabled them pending additional information. Full approval was granted on November 14, 2022, following further documentation from Open Road Renewables and its counsel, Ice Miller.

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<sup>12</sup> It is typical for renewable energy developers to create “special purpose vehicles” (SPV) for each renewable energy project they develop. An SPV is a separate LLC that limits a developer’s liability.

In October 2023, the project was presented to the Jefferson County Council. Aypa Power<sup>13</sup> proposed a 10-year payment in lieu of taxes (PILOT) agreement, offering \$375,000 annually—2.5% of its estimated \$150 million investment. Aypa also requested designation of the site as an Economic Revitalization Area to qualify for tax abatement. The Council approved this designation during a special meeting on November 27, and adopted Resolution 2023-021 on December 12, formalizing the PILOT agreement. This included an additional \$10,000 annual contribution to local STEM education, as well as commitments to cover any construction-related road damage and the County’s legal and consulting expenses.

**Local Concerns:**

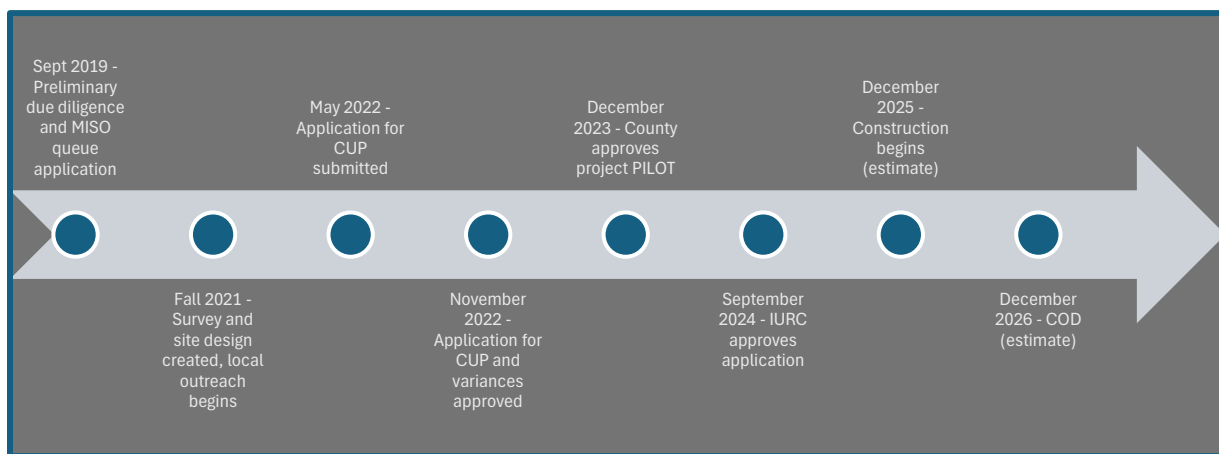
Screening – in response to public requests for visual screening to preserve the rural landscape, Open Road Renewables hired two consulting firms in 2022 to develop a landscape plan, including vegetation design and site management.

Fire safety – fire safety concerns prompted Aypa to write an emergency management plan aligned with NFPA 855 standards. Aypa also agreed to provide annual training for local fire departments, satisfying the County’s Emergency Management Agency mandate for fire preparedness.

Taxes – the PILOT agreement drew mixed public feedback. Some stakeholders argued it was unnecessary given the growth of BESS projects in 2023, driven by low costs and Inflation Reduction Act incentives. Others, including Aypa, viewed the PILOT as essential to making the Jefferson County site viable amid stiff competition.

Communication – Some County Council members expressed frustration over how late in the permitting process they were notified, which limited their ability to fully evaluate safety and other development issues.

**Project Timeline**



**Reference Documents:**

- [City of Madison Code of Ordinances](#)

<sup>13</sup> In the spring of 2023, Aypa Power purchased the Williams Power project.

- [City of Madison Application for Conditional Use Permit](#)
- [Variance Request that CUP would not expire within one year](#)
- [Variance Request that CUP remains active if change in ownership](#)
- [July 11<sup>th</sup>, 2022, BZA Meeting Minutes](#)
- [November 14<sup>th</sup>, 2022, BZA Meeting Minutes](#)
- [December 12<sup>th</sup>, 2023, Jefferson County Council Meeting Minutes](#)
- [September 2024 IURC Order](#)
- [Indiana HEA 1173](#)
- [Site Landscape Plan](#)
- [Open Road Renewables Presentation](#)