



MGE SOLAR POLLINATORS





MGE - Heartland

- ▶ Dan Clausen, MGE Renewables Project Manager
- ▶ Jason Behrends – Heartland Ecological
- ▶ Jeanne Burns- Frank – MGE Environmental and Sustainability Program Manager



MGE Solar facilities and seed mixes

- ▶ **Morey Field Airport – Middleton**

- ▶ 5 MW
- ▶ 23 Acres
- ▶ July 2020

- ▶ **Dane County Airport – Town of Burke**

- ▶ 9 MW
- ▶ 65 Acres
- ▶ Dec 2020

- ▶ **O'Brien Solar – Fitchburg**

- ▶ 20 MW
- ▶ 145 Acres
- ▶ June 2021

- ▶ **Hermisdorf Solar – Madison (Town of Blooming Grove)**

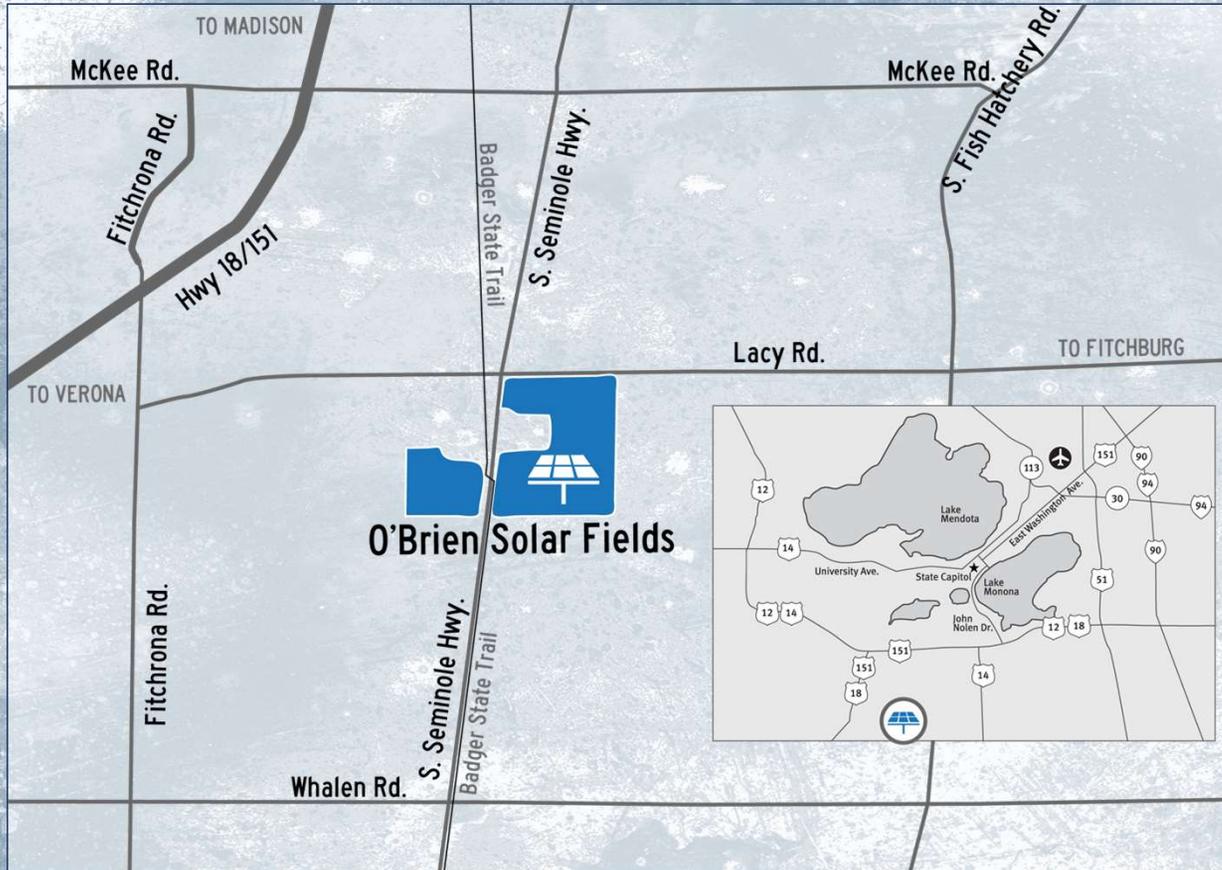
- ▶ 8 Mw
- ▶ 47 Acres
- ▶ Under Construction



Pollinator use- Why

- Chose to use Pollinators to provide community benefit
 - Native plants help infiltration, good for soil long term
 - Long term maintenance is reduced
 - Control height, control weeds
- NOTE : Dane County Airport - very limited pollinator use due to air traffic and attracting wildlife.

Madison Gas and Electric 
O'Brien Solar Fields





O Brien Solar -Native Seed Mixes

- ▶ Two different seed mixes were used; Inside Array Mix and Outside Array Mix
- ▶ Inside Array Mix constructed to have an average max height of 2.5' or less at maturity
- ▶ Outside Array Mix has more variation in height at maturity
- ▶ Seed installed via native seed drills in array aisles and outside of arrays
- ▶ Seed installed underneath array panels with broadcast seeders



Species Selection

- ▶ Native status within local ecosystems
- ▶ Vegetation height at maturity
 - ▶ Low profile desired to prevent panel shading
- ▶ Bloom periods and color
 - ▶ Bloom periods to provide flowering species for pollinators throughout entirety of growing season
 - ▶ Varying colors for aesthetic purposes and variable host/pollinator species.
- ▶ Growth habit and propagation capabilities
 - ▶ Rhizomes and readily re-seed
- ▶ Preferred soil and moisture types

Management

- ▶ Heartland was contracted to perform site management of the planting areas in 2021
- ▶ Management consisted of management mowings and spot herbicide treatments
- ▶ Two mowing events were completed throughout 2021
 - ▶ One event in mid-July, another in mid-September
- ▶ One herbicide treatment in mid-August
- ▶ 2022- 1 to 2 mowings, 1 herbicide
- ▶ 2023 – 1 mowing, herbicide
- ▶ 2024 + monitor and decide



Management cont.

- Mowing of native plantings helps reduce seed set of undesirable annual and biennial weed species
 - Mowing also promotes root growth and hardiness of desirable native species
- Herbicide treatments are used to target undesirable perennial weed species
- Herbicides are selected based on selectivity of an herbicide and the species present.
 - Broadleaf target species are treated with a broadleaf specific herbicide; grasses with a grass specific herbicide



Project Costs

- ▶ Seed Install approximately \$1,000 per acre
 - ▶ Costs affected by the following;
 - ▶ seed availability/cost
 - ▶ Installation method
 - ▶ Any necessary site preparation
- ▶ Maintenance approximately \$500 per acre
 - ▶ Costs affected by the following;
 - ▶ densities of undesirable species
 - ▶ Array construction and spacing



MGE's Monarch and Pollinator Initiatives

- ▶ MGE is actively trying to add milkweed and pollinator plants to our projects where feasible
- ▶ MGE is a member of the Wisconsin Monarch Collaborative
 - ▶ Voluntary program/consortium aimed at preserving and increasing Monarch habitat within Wisconsin
 - ▶ Collaborative is tracking volunteer actions, providing education, and developing guidelines for the State of Wisconsin



Other Initiatives MGE is Considering

- ▶ US Fish and Wildlife Service's Monarch Candidate Conservation Agreement with Assurances (CCAA)
 - ▶ Plant pollinator-friendly plants on a certain percentage of properties and actively manage sites
 - ▶ Exemption from federal species regulations if Monarch is listed
 - ▶ Costs include ongoing fees and the need to do federal nexus review
- ▶ Registering our solar sites with the Wisconsin Solar-Pollinator Program through the UW
 - ▶ Plant pollinator-friendly plantings, review and score your sites, submit information for certification
 - ▶ Low fees for joining - \$500 initial set up plus \$100 ongoing costs



Questions?

