

# Monarch Research with Electric Power Companies

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UIC ROW as Habitat Working Group  
Sept 9, 2019



# Power-in-Pollinators Initiative 2019





# Documentary Film - Release late 2019/early 2020

[www.crowdrise.com/power-for-pollinators](http://www.crowdrise.com/power-for-pollinators)

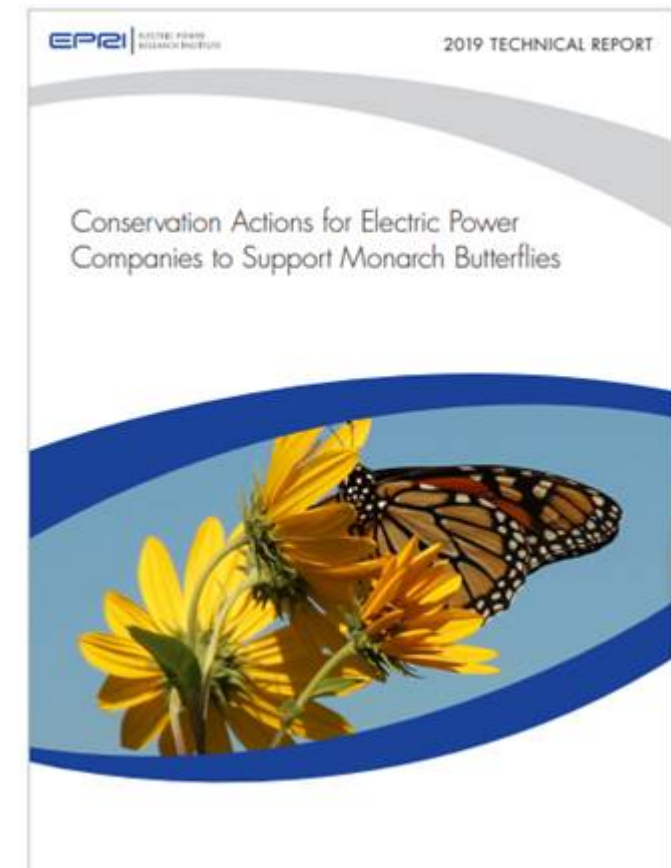


# Monarch Conservation Actions for Power Companies

Synthesizes the scientific literature and existing best management practices for monarch butterflies with input from monarch experts and EPRI members.

Monarch listing decision: Dec 2020

- [Report # 3002015435](#)
- 223 pages



# Driving Research Questions

- What is the role of power companies in monarch impacts and conservation?
- What are the most meaningful specific monarch conservation actions that a power company can take?
- What are the barriers and possible solutions for the implementation of monarch conservation actions by power companies?

# Action, Asset, Opportunity, Challenges

## Conservation Action

- Herbicides
- Mowing
- Prescribed Fire
- Invasive Species
- Brush Management
- Grazing
- Restoration/Revegetation
- Education/Outreach
- Monitoring

## Land Asset Type

- Transmission Lines
- Distribution Lines
- Power Plant Sites
- Substations
- Solar/Wind Sites
- Surplus Property

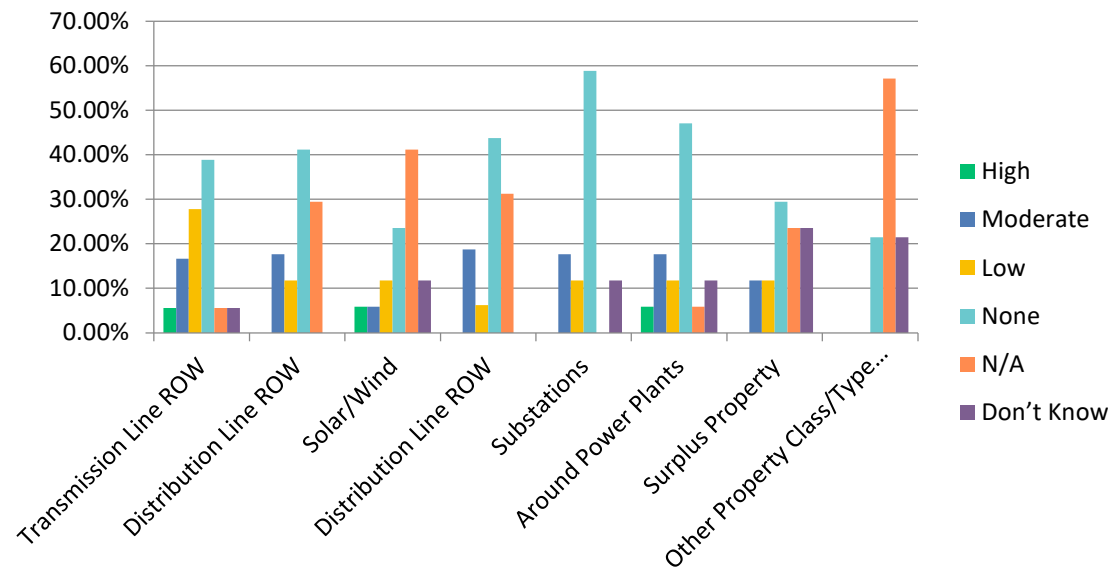
**Extent Action Implemented?**

**Barriers to Action?**

# Conservation Actions:

**Revegetation: Plant native, monarch-attractive nectar species which will provide floral resources throughout the breeding season, with a minimum of 3 species in bloom at any time between spring and fall.**

Extent Implemented



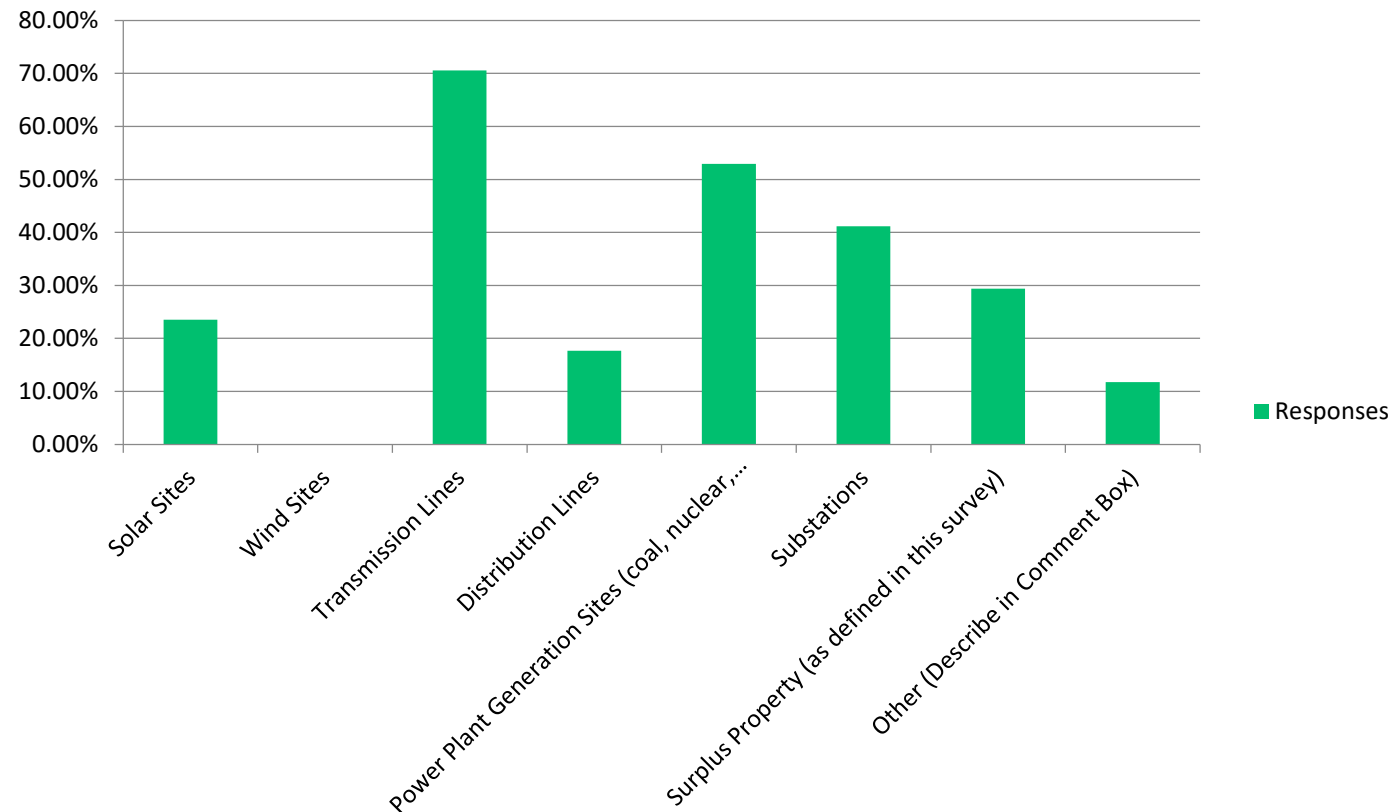
## BARRIERS:

- For revegetation along transmission line ROWs and at substations, there is a lack of locally adapted native forb seed in some areas.
- Higher cost of native species compared to erosion control seed mixes.
- No internal or federal policy requiring revegetation with native plants.
- Cost, Time, Implementation Guidance
- Need to guarantee 70% vegetative coverage as soon as possible; currently, only implemented as required by state or federal agencies or by the property owner
- Local restrictions and security issues generally prevent use at substations.
- Re-vegetation is typically not practiced on surplus properties.



# Overall Opportunity by Asset

Considering all the barriers and opportunities, in your opinion, which of your property types has the greatest meaningful potential to support monarch habitat with the lowest barriers?





# Big Upshot

**“The challenge for power companies is to find ways to meet their obligation to protect human safety, provide electricity at reasonable and predictable prices, and deliver their product consistently with minimal interruptions—while also supporting monarchs.”**

**(EPRI Report: Conservation Actions for Electric Power Companies to Support Monarchs. 3002015435)**

# Automated Identification of Monarch Habitat

## ■ Challenge

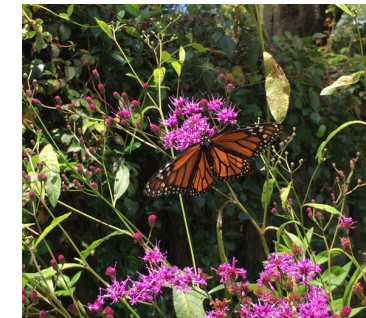
- Unknown location and amount of milkweed over large scale

## ■ EPRI Research

- Evaluating the feasibility of direct milkweed detection using various satellite remote sensing sources and resolutions.

## ■ Value

- **Environment:** Potential to be used to assess populations
- **Cost:** If listed, cost effective way to monitoring on ROW
- **Compliance:** If listed, cost effective way of detection



Inform approaches to milkweed mapping and habitat assessment

# SEEKING DATA: Milkweed Data to Calibrate Model

Assess the feasibility of direct milkweed detection and as an input for machine learning models to recognize milkweed.

- Polygons with GPS coordinates
- Contiguous milkweed patches
- Ideally patches of 30ft x 30ft or larger
- Rough date of observation
- Milkweed species, if known

# SEEKING INPUT: Next Steps for EPRI Monarch Research

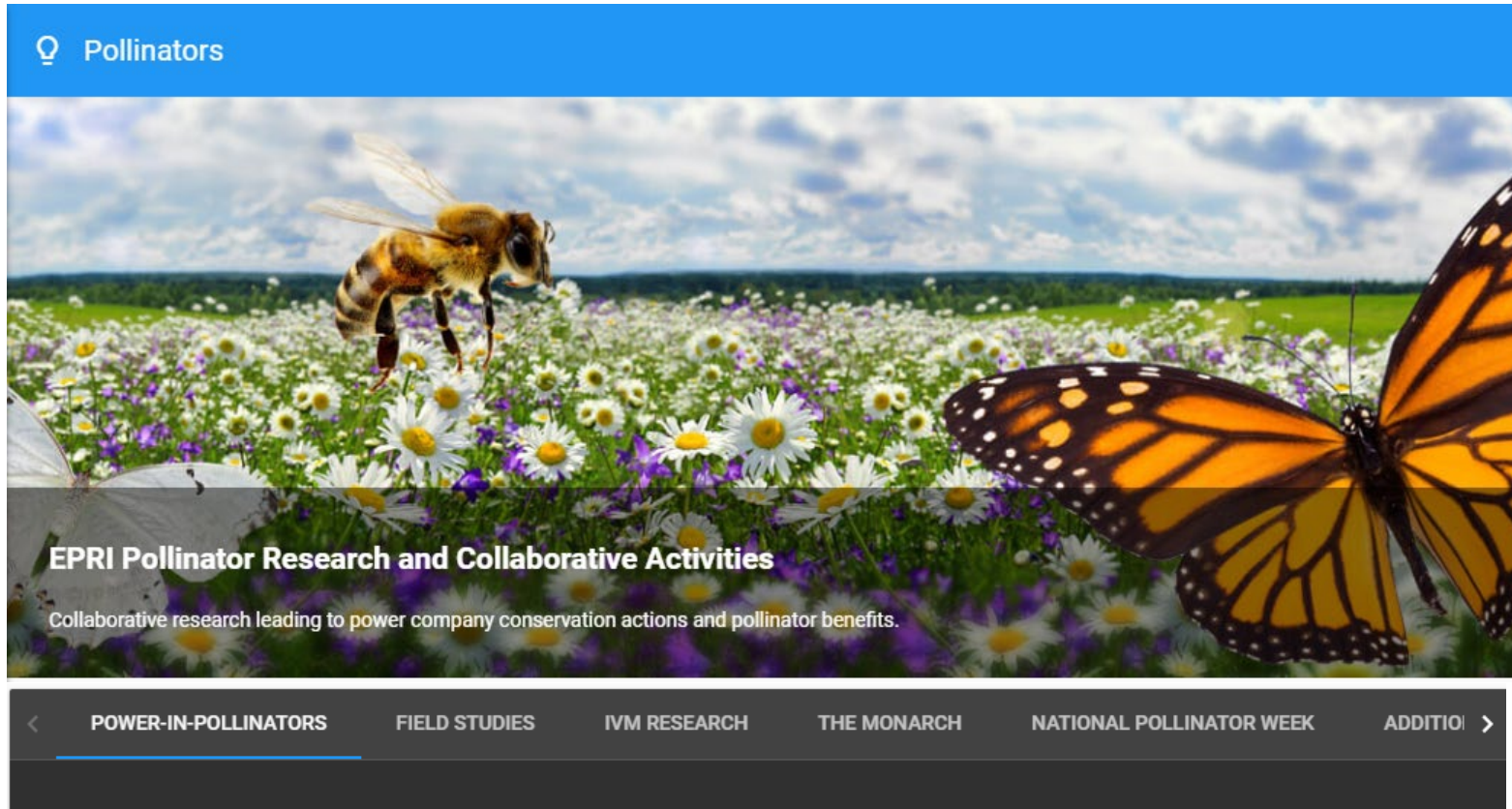
\*\*\*Monitoring of **existing** monarch habitat is a crucial gap.\*\*\*

1. Communication tools?
2. site- or company-specific species management plans?
3. Guidance regarding the implementation of the conservation actions described in the 2019 EPRI report.

WHAT TO DO NEXT?



<http://www.epri.com/pollinators>



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