



**AEP Transmission
Right-of-Way
Vegetation
Demonstration
Project**

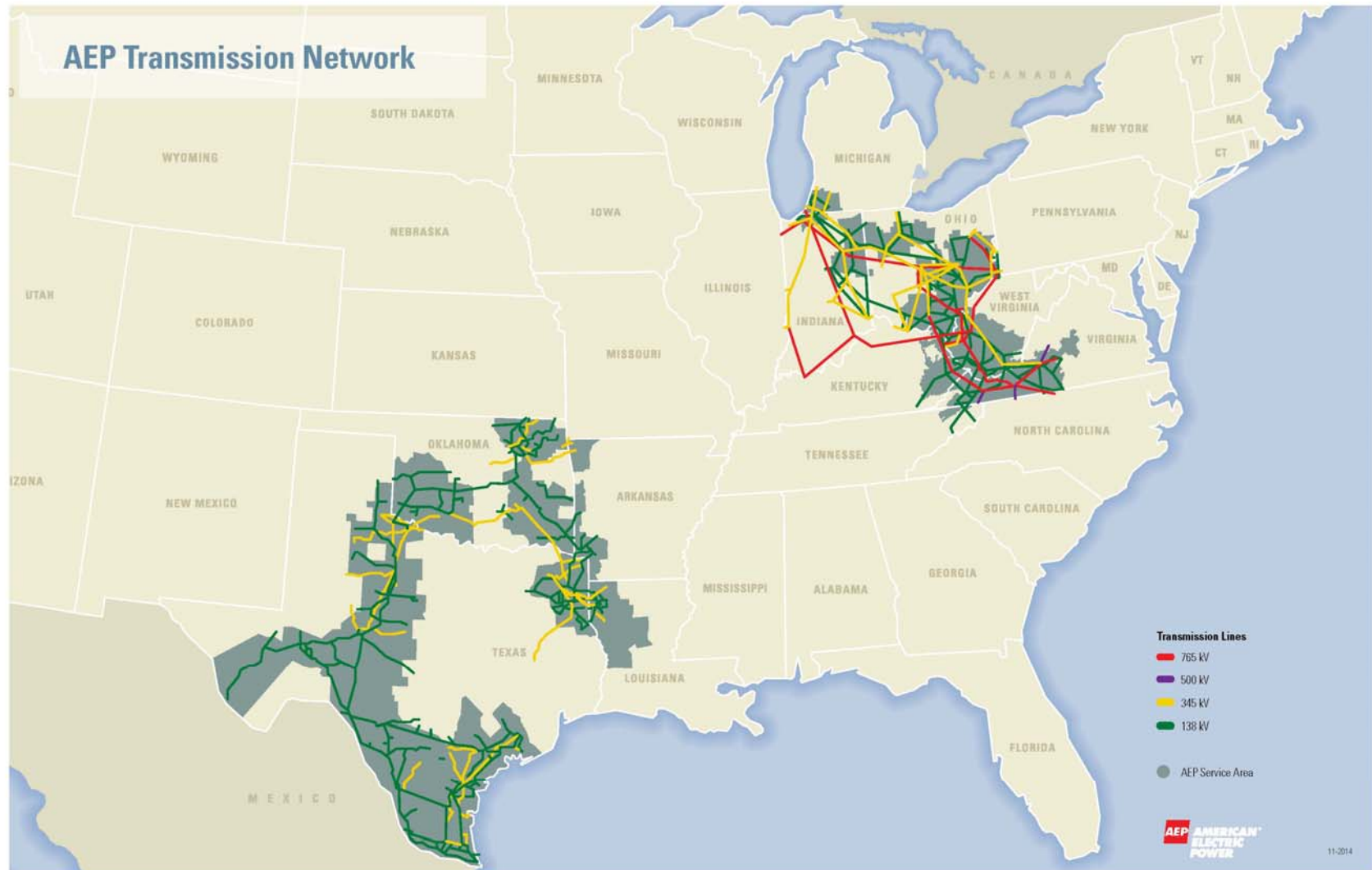
New Albany Transmission Center

New Albany, Ohio



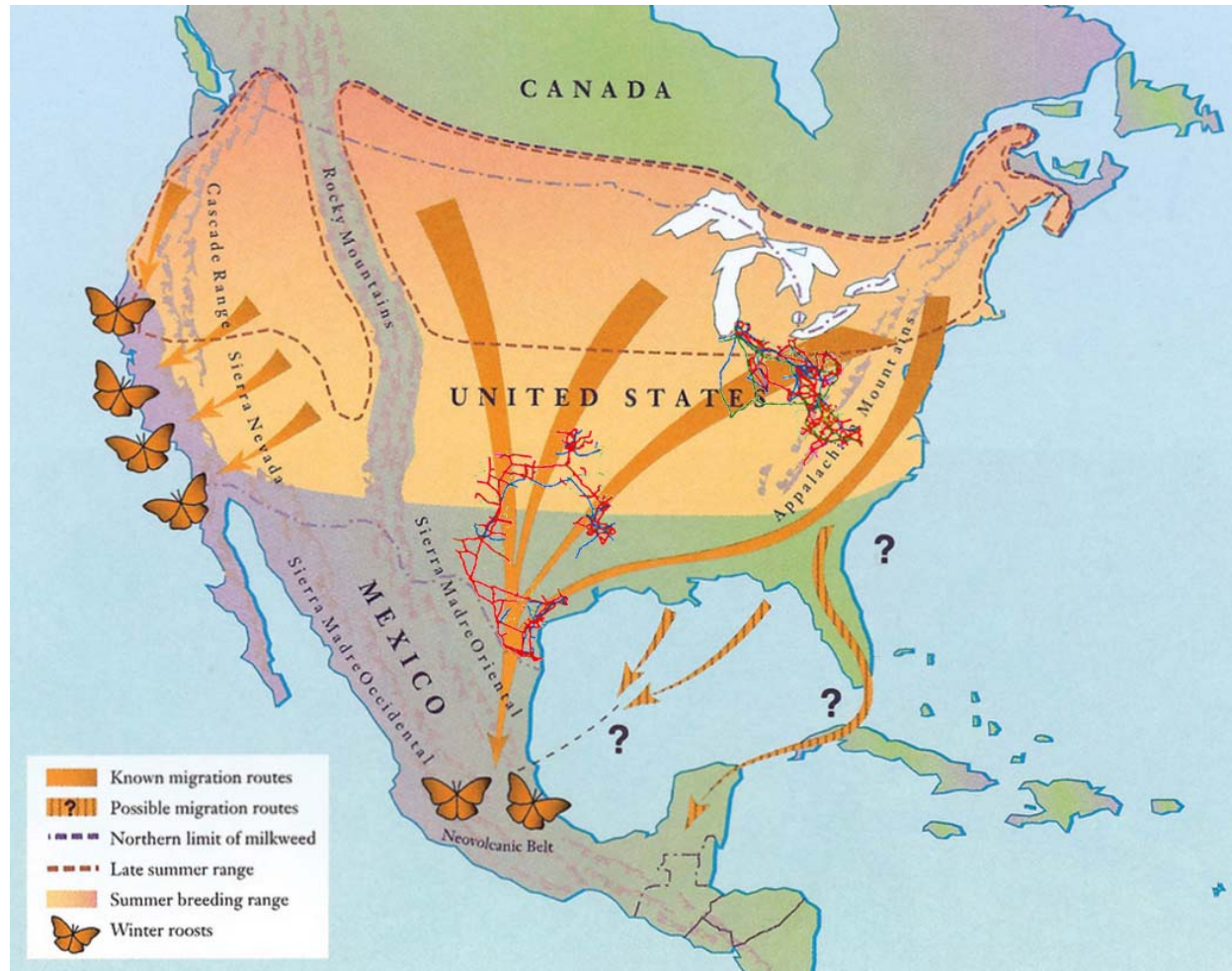


AEP Transmission





AEP Transmission and the Monarch Migration





Projected Growth of Transmission

- Capital investments increasing 25-30% from 2015 to 2016
- Building new lines and rehabilitating aging lines
- What this means in terms of habitat creation = potential!

“We are citizens of each community we serve and take an active part in its affairs. Like any other citizen, we want our neighbors to think well of us. Besides, it makes good business sense. We prosper only as the community prospers; so we help it thrive in every way we can.

Such is our job as we see it. We are trying to do it well and do it better all the time.”

-AEP President George Tidd, 1934



Current ROW practices, southern Fort Wayne, IN, 2014





What are we trying to achieve?

- Investigate ROW habitat potential – we can do better without compromising reliability
- ROW demo- chance to showcase options for enhanced ROW options
- R&D Opportunity
- Public Outreach



New Albany, OH Transmission Center





ROW Demo Site, June 2015

- Most recently in soybeans
- Old field species
- Some invasives





ROW Demo Site, June 2015

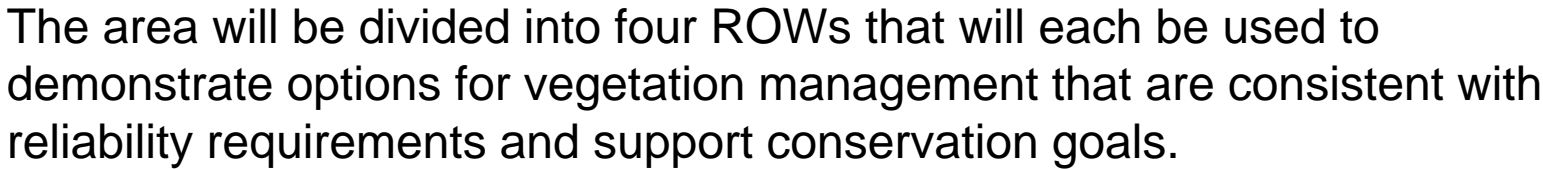




Our Partners

- **USFWS**
- **ODNR Division of Wildlife**
- **Audubon Society**
- **National Wild Turkey Federation**
- **Ohio Pollinator Habitat Initiative**
- **Ohio State University – MENR**







Plot 1: Pollinators, Monarch Butterfly

Local Partners -- U.S. Fish and Wildlife Service, Ohio Department of Natural Resources, Ohio Pollinator Habitat Initiative

Plant species examples:

- ☐ Little Bluestem
- ☐ Indian grass
- ☐ Canada Wild Rye
- ☐ Black-eyed Susan
- ☐ Purple Coneflower
- ☐ Oxeye Sunflower
- ☐ Common Milkweed





Plot 2: Songbirds

Local Partners –Ohio Dept. of Natural Resources; Audubon Society

Plant species examples:

- ☐ Sawtooth Sunflower
- ☐ Ox Eye Sunflower
- ☐ Grey-Headed Coneflower
- ☐ Raspberry
- ☐ Dogwood
- ☐ Serviceberry
- ☐ Viburnum





Plot 3: Game Birds, Small Mammals

Local Partners – *National Wild Turkey Federation*

Plant species examples:

- ☐ Brown Top Millet
- ☐ Dove Proso Millet
- ☐ Sorghum
- ☐ Crimson Clover
- ☐ Buckwheat
- ☐ Peredovic Sunflower





Plot 4: Traditional E&S Control Plot

One plot of traditional grass plantings would show what is most often done within ROWs. It would provide an important contrast.

Primary Plant Species:

- ❑ Annual cover crop
- ❑ Tall Fescue
- ❑ Perennial Rye
- ❑ Kentucky Bluegrass
- ❑ White Dutch Clover

■ Seed mix cost –
\$141.47 per acre





Installation Schedule and Maintenance Plans

- Mow existing vegetation in early 2016
- Treat 2016 growth with herbicides
- Plant demo plots in fall 2016 by drill seeding
- Mow at 10-12" to discourage weed growth
- No fertilizer, no irrigation





Cost Estimates

Task	Ernst			
Obtain seed mixes	\$2,634	---	---	---
Task	EMI	Williams Creek	Kwest	Cardno
Earthen mound and tree planting	\$13,525	---	---	---
Gravel pathway	\$19,666	---	---	---
Laydown/parking area mitigation	---	---	---	---
Site preparation, seeding, and maintenance mowing	\$81,028	\$34,626	\$50,796	\$42,805
Watering	(included)	---	---	---
Task	Eagle			
Install signage	\$9,832	---	---	---
Totals	\$126,685	\$80,283	\$96,453	\$88,462



- Perform OPHI monitoring protocol for next several years
- What species are persisting? What species are declining or no longer present?
- How can we modify our seed mixes based on these observations
- Seed mixes: What is the point of diminishing return?
- Biodiversity: What species are utilizing the site for forage, habitat
- Are we meeting stormwater obligations? No bare spots, washouts, >70% dense vegetative coverage



Benefits of Demonstration ROW

Growth of AEP Transmission creates an opportunity to simultaneously demonstrate our commitment to conservation and environmental stewardship while providing reliable, cost-effective electricity to customers.

An education tool for visitors and employees about the ways in which AEP responsibly maintains its ROWs and the potential to improve

- Signage to explain habitat types, conservation partners, ROW maintenance
- Strengthens relationships with conservation partners, community





Outreach opportunities

- High school environmental science classes
- Multi-use recreational path
- Scouts
- Earth day





Our Constraints in Real-World Applications

- ROW ownership
- Overhead asset prohibits prescribed burns
- Little maintenance by AEP
- E&S Regulations
- The skeptics – “why do this?”
- How do we track the sites long-term?
- How do we make the business case?





Example: Dawes Arboretum



The Dawes Arboretum

7770 Jacksontown Rd. SE
Newark, Ohio 43056

■ AEP & Dawes Arboretum “Power Line Prairie” Demonstration Site





Other applications

- Transmission substations
- CCR landfills and impoundment closures





Going Forward

- AEP wants to do this
- AEP manages a vast amount of land
- Opportunity exists
- We need committed landowners and outside expertise to make it happen

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