



CLEAResult SEM/Decarbonization Impact and Footprint

2024 Impact

Carbon

155,000 MWh

3,000,000 therms

60,000 MT CO2e

582% YoY increase

SEM

254,000 MWh

10,000,000 therms

700,000 MT CO2e

250% YoY increase

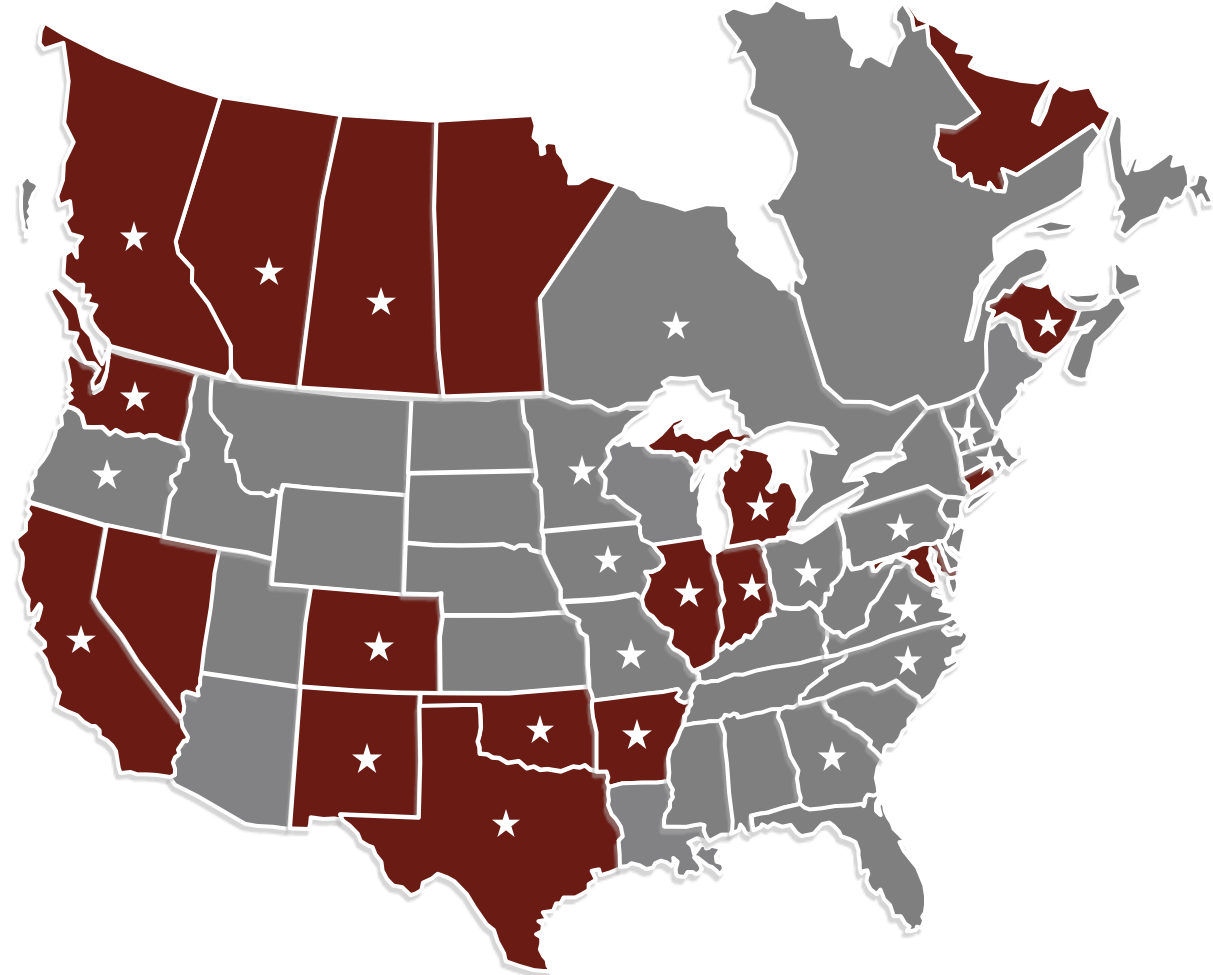
Total Combined

409,000 MWh

13,000,000 therms

760,000 MT CO2e

264% YoY increase



 Staff Location

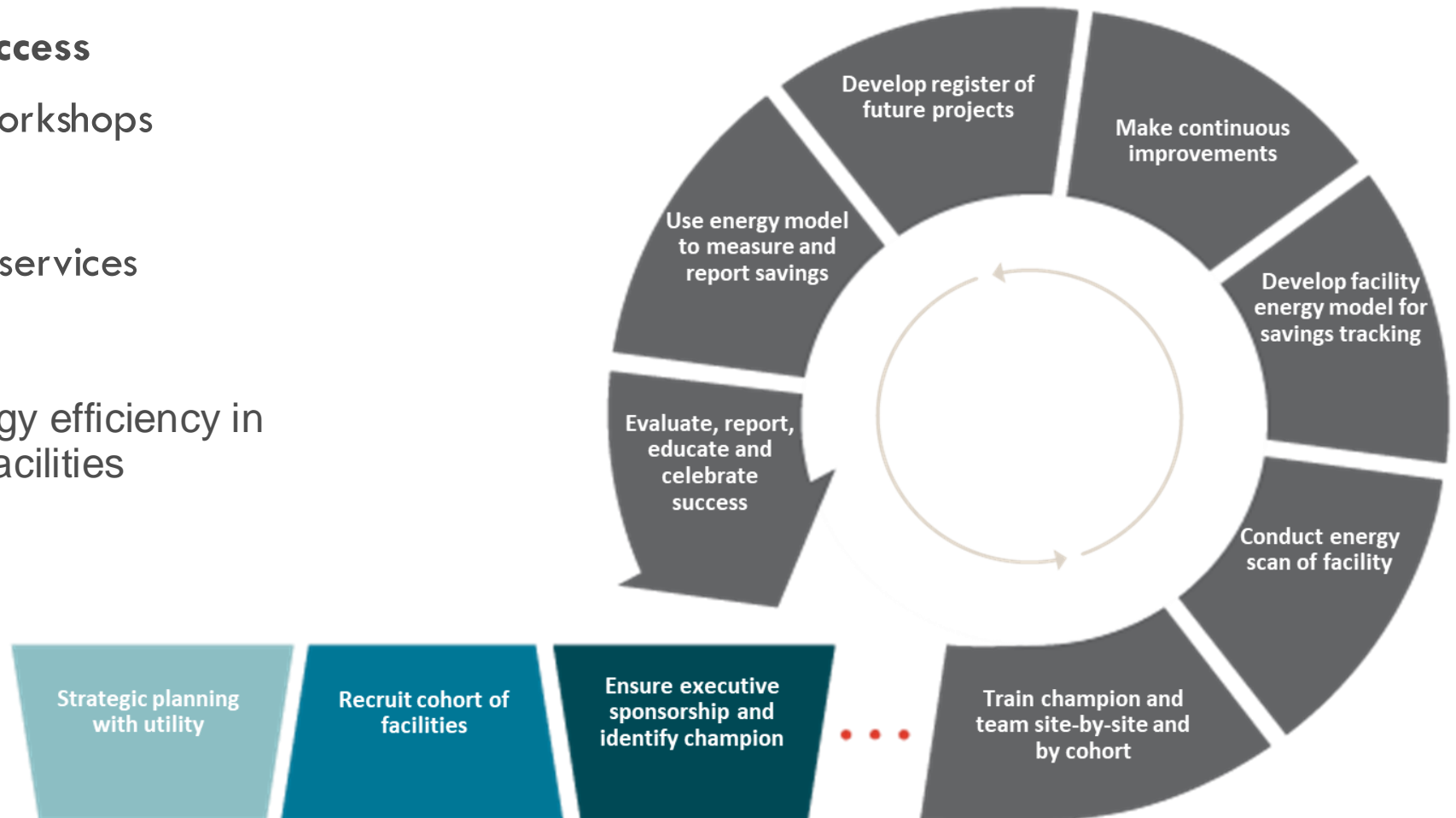
 Program Location

CR How does an SEM program work?

A continuous cycle of success

- ✓ Collaborative group workshops
- ✓ One-on-one coaching
- ✓ Technical/engineering services

Creates a culture of energy efficiency in commercial & industrial facilities



CR 2024 Industrial Highlights

Industrial Steel Manufacturing

- ✓ First year participant
- ✓ Baseline Usage: 27 GWh
- ✓ Savings: 1,550,893 kWh
- ✓ Savings Percent: 5.8%
- ✓ Primary Projects:
 - Emergency stop campaign: Full shutdown of machines not scheduled for production on the next shift
 - Air stop campaign: Shut off CA valves on equipment at the end of production runs
- ✓ DOE ITAC project grant approved for 2025

Industrial Bearing Manufacturing

- ✓ Alumni participant (7 years)
- ✓ Baseline Usage: 48 GWh
- ✓ Savings: 2,450,397 kWh
- ✓ Savings Percent: 5.1%
- ✓ Primary Projects:
 - Expanded Shutdown procedures during weekend non-production
 - Shut down air compressors and various production equipment from Saturday at 5am through Monday at 5am.

Industrial Automotive Supplier

- ✓ Alumni participant (3 years)
- ✓ Baseline Usage: 104 GWh
- ✓ Savings: 1,018,941 kWh
- ✓ Savings Percent: 1.0%
- ✓ Primary Projects:
 - Access to controls and scheduling for lighting & HVAC Control
 - Fixed faulty water sensor on pumping station



Industrial/Manufacturing Decarbonization Challenges



Cost-Benefit: High revenue per hour makes halting production to install decarbonization and cost-saving measures hard to justify



Technological: For processes that require high temperatures, electrical replacements are often not economical



Human/Behavioral: Lean staffing limits time and resources for process upgrades and leadership buy-in



Funding Barriers: Grants preferred over rebates/tax credits, but funding remains limited

CR Program Models and Solutions

- ✓ **Pairing technical assistance with grant funding**
 - Allows manufacturers to modernize their processes and find decarbonization solutions
- ✓ **Some successful models:**
 - CEO (Colorado): Free Level 2 audits + grants up to \$3M for industrial projects
 - DOE ITAC: Quick application, \$300K per project, \$41M awarded to date
 - PA DEP: New program pairing audits with grant funding to drive impact

