



Civil & Environmental
Consultants, Inc.

CEC's Services to the Solar Power Industry

2022

Introduction to CEC

- Founded in 1989, providing comprehensive, market-oriented consulting services that advance client strategic business objectives
- Employee-owned by more than 500 shareholders
- Core Business Principles
 - Senior Leadership
 - Integrated Services
 - Personal Business Relationships



Introduction to CEC

- 2021 Gross Revenue: \$196M
- 9.8% compounded annualized growth rate over last 5 years
- Consistently ranked on Engineering News-Record's Top 500 Design Firms and Top 200 Environmental Firms lists



Introduction to CEC

1,100+ Employees in 30 Offices

- | | |
|----------------------|-----------------------------------|
| 1. Athens, PA | 16. Kansas City, KS |
| 2. Austin, TX | 17. Knoxville, TN |
| 3. Boston, MA | 18. Martinsburg, WV |
| 4. Bridgeport, WV | 19. McAllen, TX |
| 5. Buffalo, NY | 20. Monroeville, PA |
| 6. Charlotte, NC | 21. Nashville, TN |
| 7. Chicago, IL | 22. Oklahoma City, OK |
| 8. Cincinnati, OH | 23. Philadelphia, PA |
| 9. Cleveland, OH | 24. Phoenix, AZ |
| 10. Columbus, OH | 25. Pittsburgh, PA (Headquarters) |
| 11. Fall River, MA | 26. Sacramento, CA |
| 12. Fishers, IN | 27. San Diego, CA |
| 13. Greenville, SC | 28. Sevierville, TN |
| 14. Houston, TX | 29. St. Louis, MO |
| 15. Indianapolis, IN | 30. Toledo, OH |



Introduction to CEC

Staff Disciplines

- Agronomists/Soil Scientists
- Archaeologists
- Biologists
- Chemical Engineers
- Chemists
- Civil Engineers
- Construction Managers and Inspectors
- Ecologists
- Electrical Engineers
- Emissions Scientists and Technicians
- Environmental Scientists and Engineers
- Environmental Technicians
- Geologists
- Geotechnical Engineers
- GIS Analysts and Programmers
- Hydrogeologists
- Hydrologists
- Land Surveyors
- Landscape Architects
- Mechanical Engineers
- Meteorologists
- Planners
- Structural Engineers
- Threatened & Endangered Species Experts
- Treatment Plant Operators
- Wetland Scientists

Introduction to CEC

Markets We Serve

- Manufacturing
- Mining
- Oil & Gas
- Power
- Public Sector
- Real Estate
- Solid Waste

Practice Areas

- Air Quality
- Civil Engineering
- Ecological Sciences
- Environmental Engineering & Sciences
- Manufacturing Infrastructure Services
- Survey/Geospatial
- Waste Management
- Water Resources



Introduction to CEC

CEC Commitment to Safety: Accident and Incident Free

- *The Accident and Incident Free* program objective is to eliminate injuries, property loss, and environmental damage by aligning work processes, systems, and behaviors so our employees have the necessary guidance and knowledge to complete every task safely, every time.



Project Life-Cycle Services



Project Life-Cycle Services

Critical Issues Analyses

- Site Feasibility Analyses (topo, roads, utilities...)
- Conceptual Design and Visualization
- Stream and Wetland Delineations
- Threatened and Endangered Species Services
- Cultural Resources Services
- Phase I Environmental Site Assessments
- Disturbed Site Reviews (brownfield, landfill, mine)



Project Life-Cycle Services

Critical Issues Analyses

- Preliminary Environmental Impact Assessment and Permit Identification
- Existing vegetation assessment/invasive species survey
- Survey (boundary, utility, easement, ALTA, topo, aerial photography, drones)
- Rooftop Condition Inspections
- Evaluation of State and Local Land Ordinances and Zoning



Project Life-Cycle Services

Design and Permitting

- Land Use Permitting and Variances
- System and Facility Conceptual Design
- Landscape Architecture, Site Renderings, and 3D Visualization
- Canopy and Rooftop Structural Design
- Electrical Diagrams



Project Life-Cycle Services

Design and Permitting

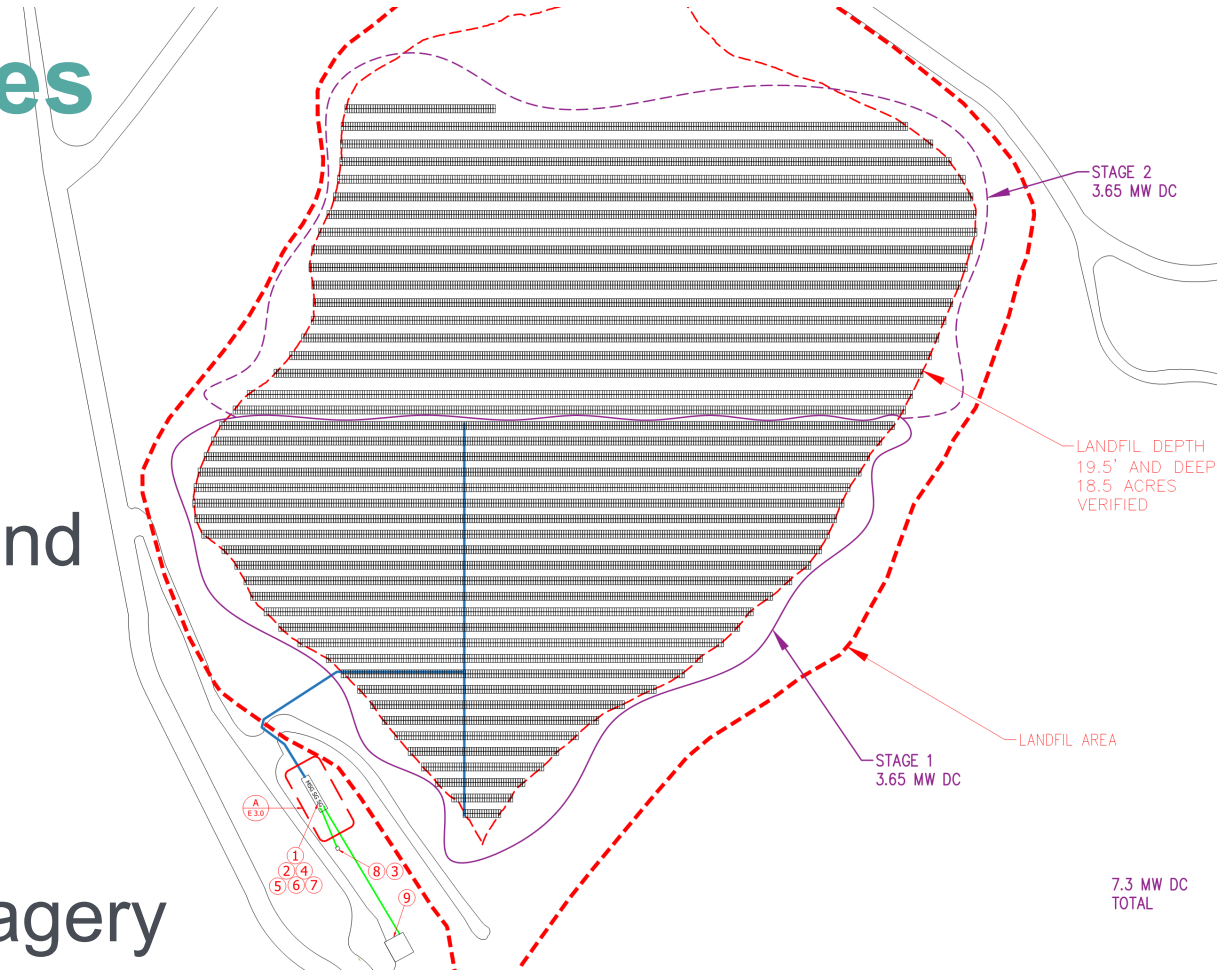
- Geotechnical Investigations and Foundation Design
- Erosion and Sediment Control Design and Permitting
- Stormwater Management Design and Permitting
- Solar Array Decommissioning Plans
- Public/Community Outreach



Project Life-Cycle Services

Construction-Phase Services

- Construction Management Support
- Construction Details and Bid Specs
- Project Management
- Construction Inspection, Oversight and Monitoring
- Construction Materials Testing and Oversight
- Preparation of As-Built Docs and Imagery



Representative Clients



Representative Clients

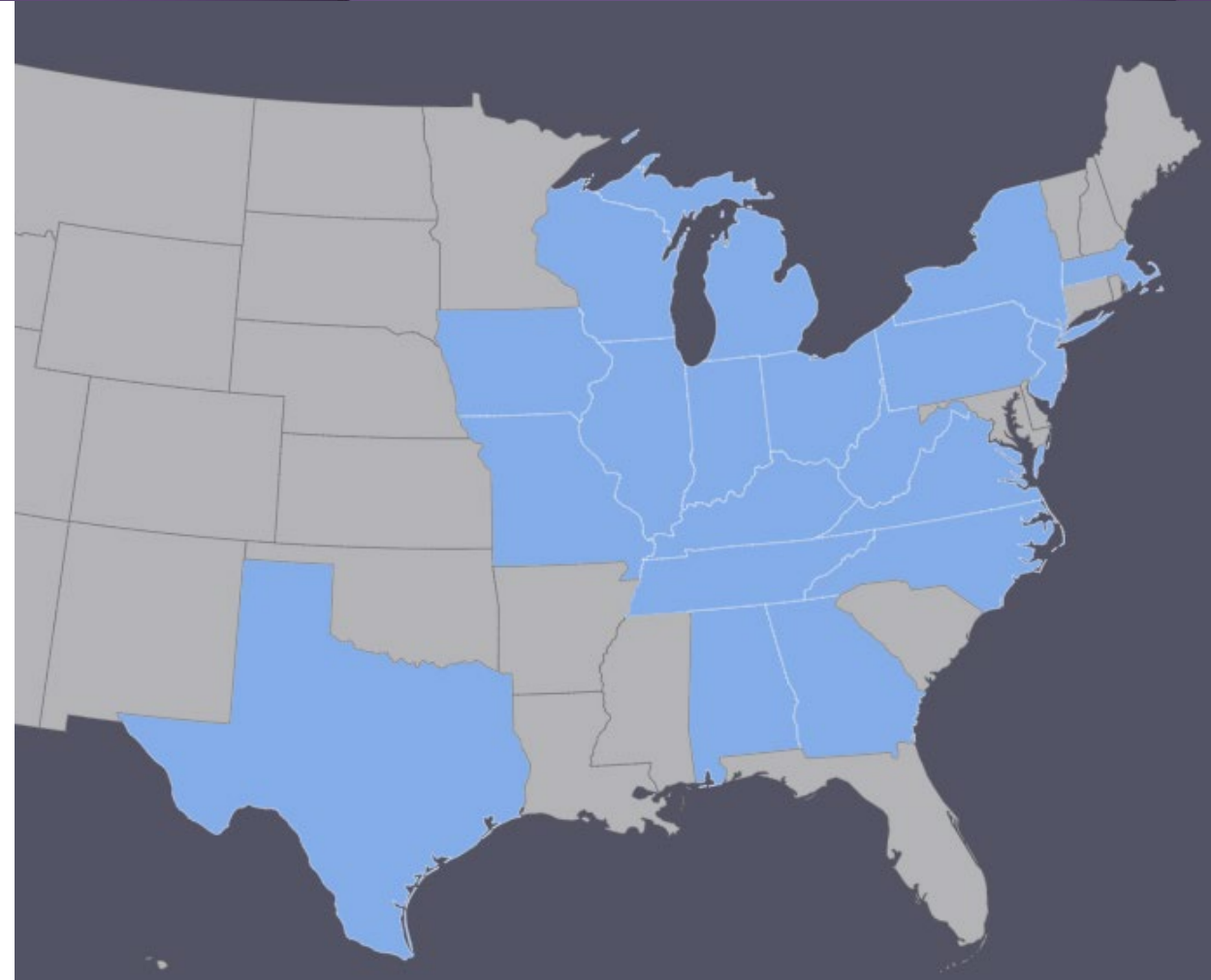
- Ameren
- Ames Construction
- Barton Malow Co. (DTE Solar)
- Borrego Solar Systems
- BQ Energy, LLC
- Capital Power
- Constellation NewEnergy, Inc.
- Circle Power
- City of Brooklyn, OH
- Copper County Power, LLC
- EcoPlexus
- Empower Energies
- Exelon*
- Farm Wind Energy
- First Solar, Inc.
- Fisher & Arnold
- Geronimo Wind Energy
- Grouse Mountain Environmental
- Hannah Solar Government Services
- HBK Engineering
- hep Petra
- Hillcrest Solar*
- Holtwood Solar, LLC
- Indiana Municipal Power Agency
- International Electric Power
- Jackson Environmental
- juwi
- Kiewit Power
- Kossman Development Company.
- Montauk Energy Capital
- Nexamp, Inc.
- NJR Clean Energy Ventures
- Novatus*
- Orsted North America, Inc.
- Oya SolarPenn Wind, LLC
- Partner Eng & Sci., Inc.
- PG Solar, LLC
- PSG Energy Group
- Scalo Solar
- Scotia Wind, LLC
- Sunbury Solar, LLC
- SunConnect
- Terracon Consultants
- Vesper Energy
- Vis-Solis, LLC
- Wabash Valley Power Association
- Western EcoSystems Technology
- Williams Field Services

**Subconsultant as part of project team*



Solar Project Numbers

- Solar projects completed: ~ **100**
- Dollar value of projects: > **\$3M**
- Capacity of projects: ~ **5 GW**
- Most frequent project services:
 - Ecological (**58%**);
 - Survey (**35%**);
 - Cultural (**28%**);
 - Geotechnical (**28%**);
 - Due Diligence (**26%**);
 - Civil Engineering (**25%**)



Questions?

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www.cecinc.com/who-we-serve/power

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