



Industrial & Advanced Technology

Solar/PV

Services

Front-End Planning

CH2M HILL's front-end engineering and design (FEED) program provides critical analysis and pre-planning to help clients determine operations expansion, worldwide product manufacture and execution, cost of goods, and cost of installed wattage per product. These services support corporate funding definition, and provide certainty for clients in moving forward with business plans.

Seamless Execution

Meticulous planning and pragmatic, constructible design allows a seamless transition to efficient field execution, with a focus on safe facilities, economical operation, environmental protection, and future expansion.

Construction Management

CH2M HILL's Construction Management (CM)—proven on more than 1,500 projects during the past five years—effectively manages construction services and resources to complete projects on schedule and budget. Our CM approach provides a single point of contact, representing the owner's interests first and foremost.

Master Design for Large-Scale Manufacturing Complexes

Clients seeking to scale-up production facilities face unique challenges. A large-scale manufacturing complex must be evaluated for viability and value, positioned for minimum risk, designed for optimum performance, and constructed in the right location. CH2M HILL helps meet these challenges with comprehensive planning and design services that include:

- Feasibility, Competitive, Financial and Risk Analysis
- Conceptual Programming
- Technology Process Consulting
- Utility Needs Analysis
- Transportation Logistics Planning
- Site/Location Evaluation and Selection
- Environmental Analysis
- Permitting and Licensing
- Campus, Site and Facility Master Planning

Contact:

www.ch2mhill.com/solarpv



Manufacturing Integration

With a thorough understanding of how materials handling and tool layout support efficient operations and life cycle cost reduction, we lead the drive for cost efficiency in large-scale manufacturing complexes. The resulting facilities are “fit for purpose,” with reduced cost-per-watt, robust and compliant process systems, and flexibility for future improvements.

Our Manufacturing Integration group provides focused expertise and services that help improve the performance, output, and profit of solar PV manufacturing operations, through:

- Lower operating costs and lower cost-per-watt from the beginning
- Optimized automation for greatest return on investment and best cycle time
- Shorter learning curve at factory start-up
- Faster “time to money” (ROI)
- More consistent, less expensive, faster replication of factories

Proactive Leadership in Energy and Sustainability

CH2M HILL enterprises span the entire energy value chain, from crude oil and natural gas to extraction of oil sands, wind and other renewable sources. We leverage innovations and technology from this global energy experience to benefit our solar PV clients, with expertise in regulatory compliance, risk mitigation, and optimization of facilities, infrastructure, and operations.

Sustainable Design for Solar PV Factories

CH2M HILL builds sustainability into a project from the beginning, considering full life-cycle value. With an in-depth understanding of PV business and technology, we consider an array of sustainable approaches to optimize cost and benefits over the lifetime of a factory, including:

- Site Selection and Right-Sizing
- Integrated Conceptual Design
- Material Handling and Optimization
- Daylighting and Natural Ventilation
- Local Sourcing & Use of Recycled Materials
- Waste Neutralization and Reclaim Systems
- Slurry Reclaim and Waste Neutralization
- Water Reclaim/Low-Water Building and Site Design
- Onsite Supply Chain Integration
- Glass and Scrap Recycle
- Hazardous Materials Management
- Waste Heat Recovery
- Environmental Permitting
- Scale-Up Planning
- Energy Efficient Structures
- Smart Building and Equipment Controls Systems
- Onsite Energy Generation
- Permeable Cover and Native Landscaping