



Waldemar S. Nelson and Company, Incorporated  
*Engineers*

# Offshore Wind

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## WALDEMAR S. NELSON *and* COMPANY, INC.

**WALDEMAR S. NELSON AND COMPANY, INC.** is a full-service engineering, project management, and architectural firm with offices in New Orleans, Louisiana, and Houston, Texas. NELSON has served industry and the public sector on a broad range of projects worldwide since 1945.

Over the years, NELSON has developed a strong background in offshore and onshore oil and gas operations, onshore utility power, remote independent power, and port operations in the United States and overseas. From our Louisiana and Texas offices, we have supported small and large-scale projects throughout the United States and internationally.

NELSON's technical and project management expertise is highly applicable to the U.S. offshore wind projects now being planned and licensed by BOEM. As demonstrated in Europe over the past decade and recently in the northeastern U. S. seaboard, experience gained and lessons learned in the offshore oil and gas industry are directly relevant to offshore wind projects.

### **Our project experience includes the following:**

- Offshore supporting structures and foundations
- Offshore and Onshore power generation facilities
- Complex power management systems
- Factory Acceptance, proof of concept, and field testing and commissioning
- Solid state power conversion equipment expertise
- Crew living quarters
- Infrastructure facilities such as shorebases, docks, and buildings
- Power (transmission, distribution, substations, underwater cables and horizontal directionally drilled installed HV transmission lines and duct banks)
- Power (generation to 200 MW, HVAC transmission to 230 KV, substations from 115KV to 230KV, submarine and HDD cables to 230 KV)
- Project management, scoping, and planning
- Procurement

In addition to NELSON's experience in this realm, our position as engineers of record for our local public electricity utility and decades of experience in remote power installations for industry as well as our Codes and Standards development provide a unique depth of expertise as an industry leader.

NELSON's record of support and innovation in offshore projects and power transmission demonstrates our ability to support companies engaged in projects to harness the renewable wind resources offshore U.S. and worldwide.

*To learn more about NELSON's experience in roles that can support new and existing offshore wind projects, please scan the QR code to download and view a presentation on our offshore wind capabilities.*



## Our Expertise

### Departments

- Electrical Engineering
- Instrumentation & Controls Engineering
- Chemical & Process Engineering
- Mechanical Engineering
- Civil & Structural Engineering
- Architecture
- Project Management
- Construction Management

### Areas of Expertise

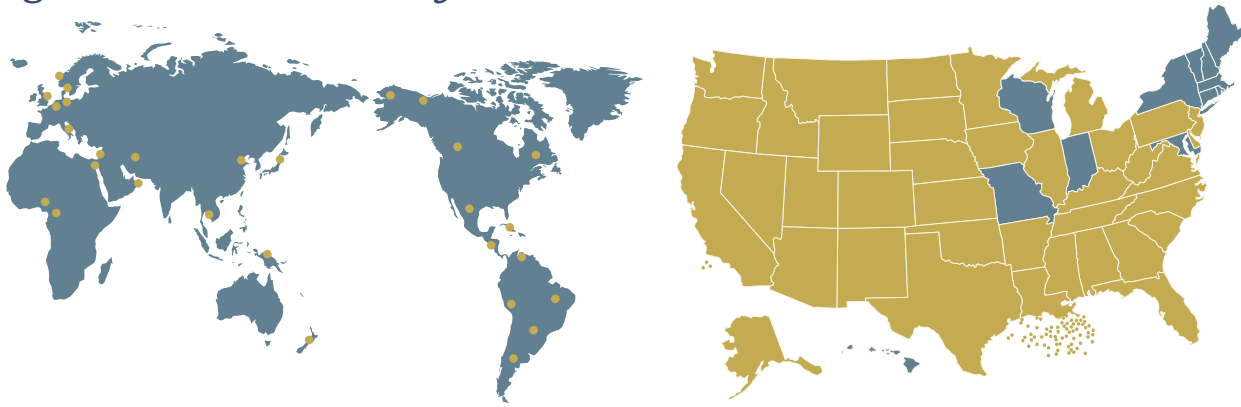
- Design of more than 60 remote power projects since 1950, from 1mW to 200mW
- In-field gathering cables
- Long-distance transmission cables
- HDD beach crossings
- Tower foundations
- Substation support platforms
- Substations
- Living quarters
- Onshore transmission
- Onshore distribution
- Back-up generation
- Battery storage
- Relaying
- Short circuit analysis
- Load flow studies
- Surveying
- Right of way acquisition

## Featured Projects



**CLOCKWISE FROM TOP LEFT:** 115 KV Horizontal Directionally Drilled submarine crossing of Gulf Intracoastal Waterway, Orange Beach, AL (2012); 35 KV, two-mile submarine cable from the first FPSO in U.S. waters to a fixed platform, offshore California (1980); HDD bundle for 230 KV river crossing, Mississippi River (2004); Onshore wind turbine conversion to U.S. codes from U.K. (1984); 35 KV "dynamic design" replacement cable in 1,200' water depth and at 29 miles long, offshore California (2015).

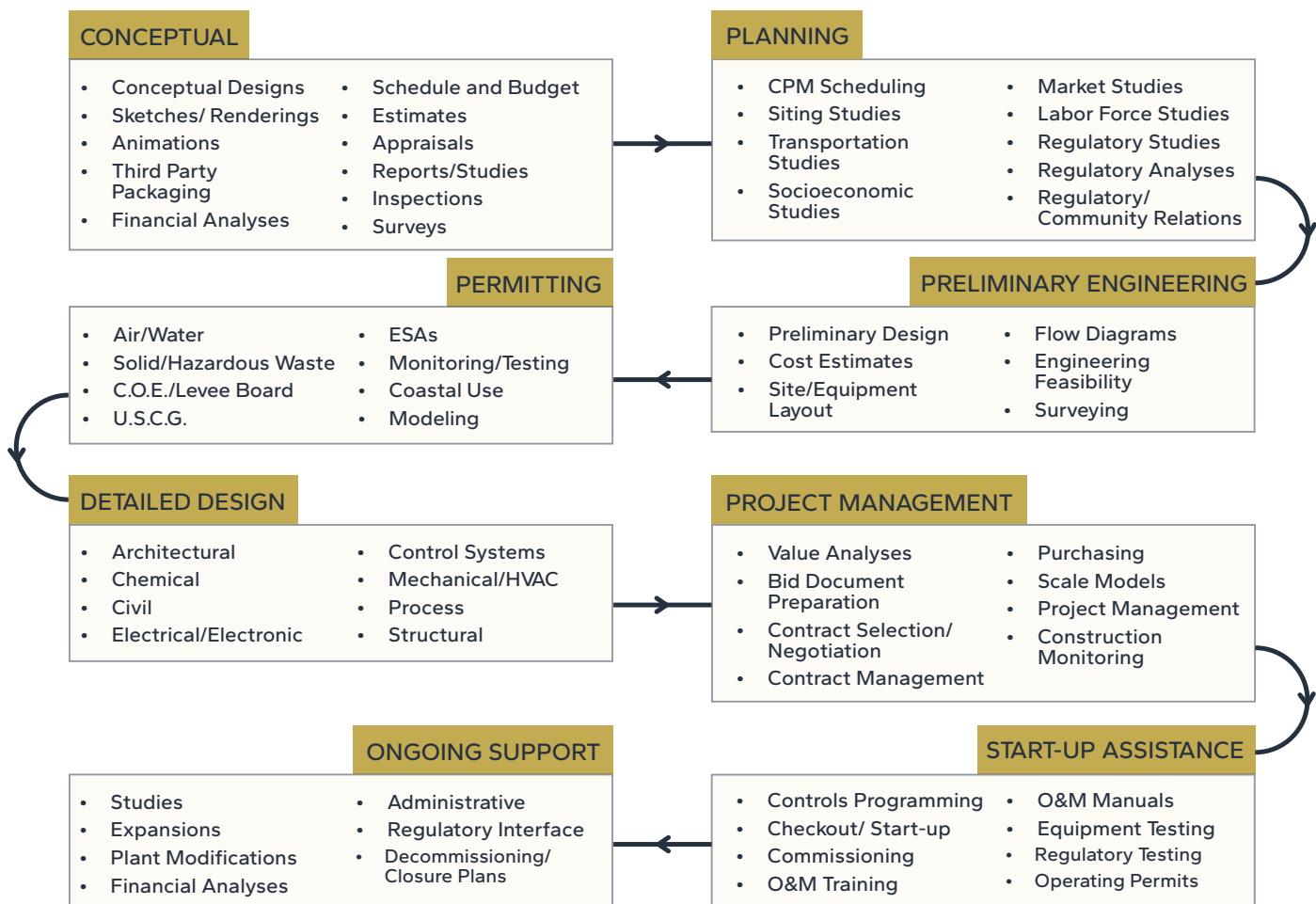
## Serving our Clients Nationally and Worldwide since 1945



**NELSON has provided professional services in more than 40 states and 60 countries.**

*All services are provided by locally registered engineers.*

## Our Process



## 2025 ENR Rankings

- #357 of Top 500 Design Firms
- #134 of Top 225 International Design Firms
- #49 of Top 50 in Oil and Gas
- #16 of Top 25 in Refineries and Petrochemical Plants
- #5 of Top 5 in Offshore and Underwater Facilities
- #5 of Top 10 in Mining



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