

A large red offshore construction vessel is positioned over a partially completed wind farm in the ocean. Several white wind turbine towers are visible, with cranes and other construction equipment on the vessel. The sky is clear and blue.

— WHY, WHEN & HOW: ENVIRONMENTAL COMPLIANCE IN US OFFSHORE WIND FARM CONSTRUCTION

In the U.S., environmental compliance will be an important consideration in the construction stage of an offshore wind project. Why is this, and how can you stay in front of your responsibilities? Read on for some tips – and to learn how RPS approaches this challenge.

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Why should developers be thinking about environmental construction compliance?

The U.S. is on the verge of a massive offshore wind construction boom – and the construction phase of an offshore wind farm is when adverse environmental impacts are most likely to occur.

Project development teams spend five years on studies, analysis and negotiation with regulators and stakeholders to obtain your permits and approved mitigation plans. After you receive your Record of Decision (ROD) and Notice to Proceed with construction, all of those carefully tailored requirements are handed over to the construction team. It is important to ensure that hand over is successful because there is so much at stake.

This is particularly challenging because no full-scale offshore wind projects have been built in the U.S. so there is limited local industry experience to draw from. Additionally, many of the construction firms who will be involved with the first full-scale U.S. projects may have gained their experience abroad and may be used to different rules. Finally, regulators are also still figuring out how to monitor compliance as the first large offshore wind construction projects commence.

What is at stake?

First of all, the industry values the people, environment, and communities in our project areas. No one wants there to be a significant impact to safety, the environment, cultural resources, or other protected resources during offshore wind construction.

For developers, noncompliance also presents project risks. It can lead to cessation (stop work) orders, which can in turn lead to additional construction costs, delay, and the potential to miss 'in-service' deadlines. Failure to comply with requirements in Power Purchase Agreements (PPAs) can lead to "claw backs" in power price. More directly, many of the laws that govern offshore wind leasing and construction have associated civil and criminal penalties for noncompliance. These penalties affect the offshore wind lessee/permit holder, who is responsible for the implementation of (or failure to implement) mitigation requirements by contractors, consultants, operators, or designees. For example, violations of a BOEM lease could result in civil penalties of up to \$48,862 per day per violation and criminal penalties of up to \$100,000 per day per violation, imprisonment for up to 10 years, or both. And finally, reputational harm can result from significant adverse impacts during construction.

How to keep an offshore wind construction project in compliance

At RPS, we've based our environmental compliance approach for [U.S. offshore wind](#) on tried and true norms established by the Federal Energy Regulatory Commission. These norms have been successfully used for decades to ensure environmental compliance on pipelines, LNG facilities and other energy infrastructure. These have also been adapted for onshore wind, solar, and other projects. (And while this approach is tailored to the US offshore wind market, we also have access to our European teams' expertise in supporting numerous offshore wind projects through their equivalent construction phases throughout the UK.)

We take a thorough and systematic approach, in which we identify construction related requirements, assign responsibility for compliance to discrete players, and identify and employ tools to assist with compliance during construction. We also offer training, variance procedures, audits, documentation and reporting.

Putting together your Environmental Construction Compliance Plan

You'll need a plan that identifies and records each of the relevant requirements and responsibilities related to your development project. You will also need to record, report on and be able to audit your compliance measures.

The RPS team get started with this by scouring the [Construction and Operations Plan \(COP\)](#), Environmental Impact Statement (EIS), RODs, Lease Approval, Permits, Plans, Memoranda of Understanding (MOUs), PPA, and other documents for requirements that apply during

construction. We then discuss and agree a shared vision with the project developer and construction team regarding how the project will implement each requirement, who will be responsible, and what tools will be needed.

Once you have your Construction Compliance Plan and start construction, it's vital to get environmental compliance under control – not just because of the amount of documentation involved, but because you may also need to be able to track down and refer to specific details. The tools your team use for this could vary from the development of procedures and standard forms to the use of compliance management software. RPS' web-based tool **ComplianceMap** can be used to initiate and track compliance obligations and store required documents for offshore wind construction projects.

We also strongly recommend including Draft Environmental Specifications in construction procurement documents. This ensures that bidders understand how lease and permit conditions might affect construction. This will lead to more accurate bids, the ability to compare bids fairly, fewer change orders, and greater protection of offshore wind lessees.

Factoring in training sessions

Construction management and crews must fully understand the environmental compliance plan to construct the project within permitted guidelines. We recommend three types of environmental construction compliance trainings to our offshore wind clients. These are:

- **Kick-off training** - Provided at the beginning of the mobilization period for construction managers and initial crews
- **Daily training** - For new crews when they come to the job, typically done with safety orientation
- **Refresher training** - Given before starting construction in an environmentally sensitive area or after a non-compliance

Training helps keep managers and crews up-to-date and prepared to observe compliance responsibilities, supporting your construction project in staying on track and avoiding some of the project risks and penalties mentioned above.

The role of environmental inspector during an offshore wind construction project

The lead environmental inspector is an important part in the construction stage, ensuring that all activities are in accordance with applicable requirements. This person documents compliance status in the field and can temporarily halt construction activities to avoid non-compliance. Ahead of work in sensitive areas, they provide notice and guidance to construction teams, and suggest methods to bring construction activities into compliance when needed.

Day-to-day implementation of the environmental construction compliance program is the lead environmental inspector's responsibility. They'll coordinate with the lessee's construction manager, construction contractors, and the environmental inspection team, and be the primary liaison between construction personnel and agency field representatives. In addition to assigning daily/weekly inspection activities, they have the primary responsibility for submitting variance requests, addressing non-compliances, and documentation and reporting. They manage construction close out punch lists and documentation for bond releases.

RPS has provided site environmental (and site safety) inspectors for the offshore oil and gas industry for years and we also provide this service for offshore wind. Our people are part of the "just transition", taking professionals from the fossil fuel industry and providing them with great jobs in renewables, helping to build the U.S. offshore wind workforce at this crucial stage of development.

[Read more about growing the U.S. offshore wind workforce in this article](#)

Environmental resource monitoring – another key part of the compliance solution

In addition to supporting environmental construction compliance as described above, RPS also supports environmental resource monitoring. We are particularly well known for our [Protected Species Observation \(PSO\) and Passive Acoustic Monitoring \(PAM\)](#) work, boasting one of the largest, most experienced PSO teams in the U.S. We provide resource monitoring and/or manage partners for other required compliance subjects, including but not limited to:

- Avian and bat (acoustic, mortality)
- Benthic
- Cultural resources
- Finfish and squid
- Unexploded ordinance (UXO)
- Ventless trap
- Water quality

If you are considering the various aspects of monitoring you might need for environmental compliance, you might like our [article \(and free checklist\) here](#).

If you would like to discuss environmental construction compliance for your project – or have any other questions – please contact [Anntonette Zembrzuska, Director – North America Offshore Renewables](#).