

The implications and opportunities of the Renewable Energy Modernization Rule

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Executive summary

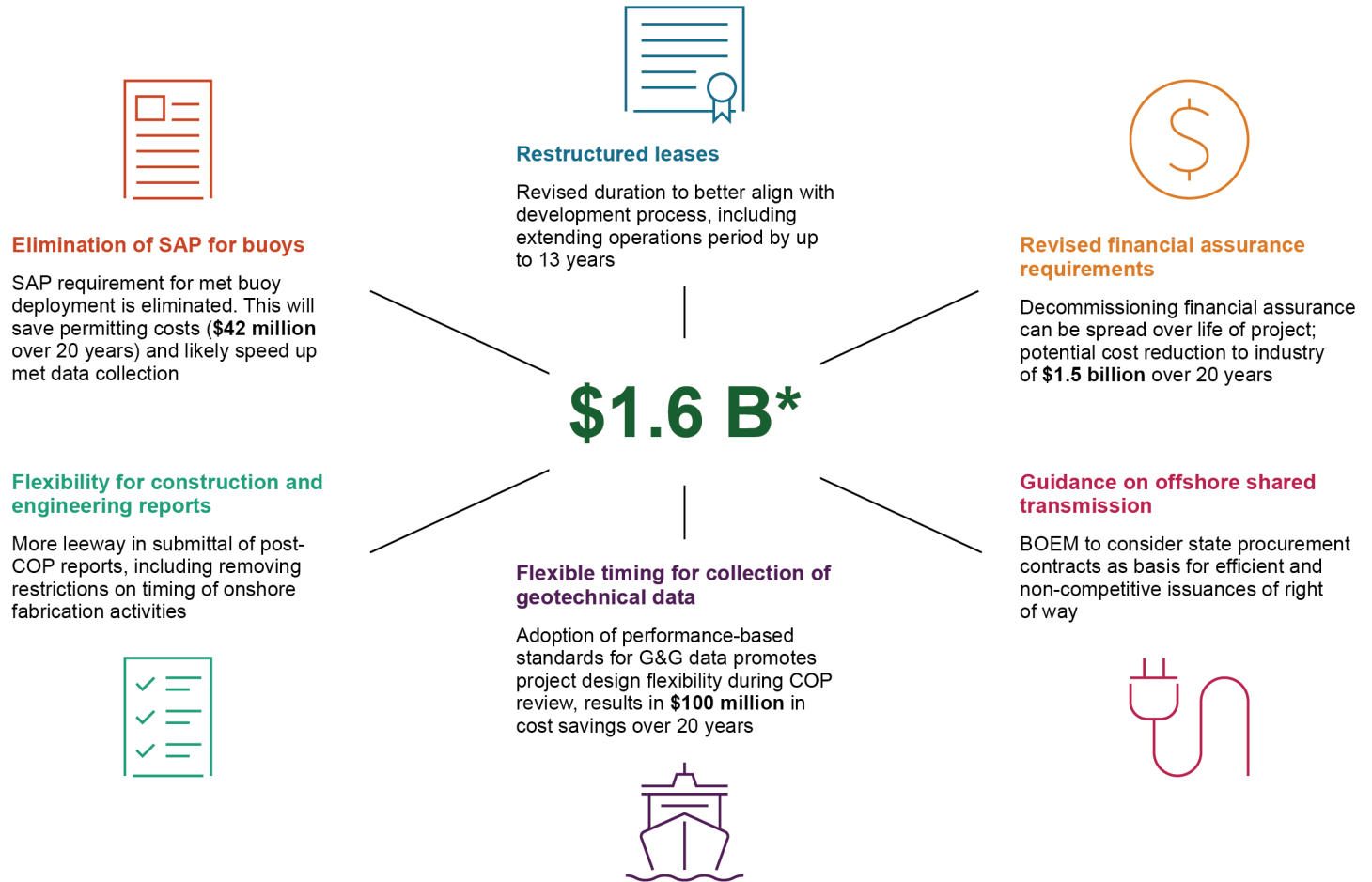
The new Renewable Energy Modernization Rule (or “Mod Rule”) is the first major change to US offshore wind regulations since they were first promulgated in April 2009. There was essentially no US offshore wind industry in 2009, and the original regulations were largely modeled after longstanding offshore oil and gas regulations. According to the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE), the Mod Rule “streamlines processes, clarifies regulatory provisions, enhances compliance provisions, and corrects technical errors and inconsistencies,” all in order to “reduce administrative burdens and reduce cost and uncertainty while creating greater regulatory flexibility in a rapidly evolving industry.”¹ But the subtext is that this rule is about conforming the 2009 regulations to how the offshore wind industry actually works, now that the federal government has 15 years of industry experience under its belt.

We have evaluated the regulatory and economic impacts of the Mod Rule, analyzing the most important provisions of the rule and contrasting the cost saving estimates of the rule provided by BOEM and BSEE with our own economic and activity forecasts for US offshore wind. We also review and discuss the likely qualitative and difficult-to-quantify benefits of the rule in terms of facilitating project approval, reducing uncertainty, increasing regulatory flexibility and promoting innovation. We conclude that the federal government has somewhat underestimated the benefits of the Mod Rule as a generator of significant cost savings and other advantages for US offshore wind developers and stakeholders. We also identify opportunities for additional regulatory and economic benefits that the Mod Rule left on the table.

1. Renewable Energy Modernization Rule, 89 FR 42602, 42603 (May 15, 2024).

Figure 1

Renewable energy modernization rule key elements



As of May 22, 2024.

BOEM = Bureau of Ocean Energy Management; SAP = site assessment plan; met = meteorological; COP = construction and operations plan; G&G = geotechnical and geophysical.

* S&P Global Commodity Insights estimates the total savings from the rule to be \$1.6 billion over 20 years, which is just over 20% higher than BOEM's estimation of \$1.3 billion.

Source: S&P Global Commodity Insights.

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Introduction

It is well known that the US has a permitting problem and that complex energy infrastructure projects like offshore wind bear the brunt of the delays, cost overruns and commercial uncertainty that a protracted and inefficient permitting process causes. These problems are often embedded in laws that require legislation to reform — a tall task in this age of congressional gridlock. But often, the solutions lie within an agency's existing authority. So, when the key federal agencies with authority over offshore wind, BOEM and BSEE, embarked on a rulemaking to comprehensively amend their offshore wind leasing and permitting regulations, the question was would the Mod Rule take full advantage of the opportunity to improve the industry's regulatory timelines and certainty, and, by extension, its project economics? Based on our analysis, the answer is twofold. First and foremost, the Mod Rule does a great deal of good, both in terms of efficiency and time and money saved — and likely does more good than the government gives itself credit for. But at the same time, the rule leaves a lot of potential benefits on the table — which we hope will be picked up in future rulemakings and/or legislation.

We would be remiss if we did not note that although permitting reform has bipartisan support, the upcoming presidential election presents significant permitting risks for offshore wind. Almost all projects are sited on the Outer Continental Shelf, where the federal government has exclusive jurisdiction; this gives the executive branch significant control over the pace of offshore wind lease issuance and project approvals. Election-related risks are outside the direct scope of this paper, but they can be expected to have a major amplifying or dampening effect on the real-world consequences of the Mod Rule.

Background: The offshore wind permitting layer cake

The offshore wind permitting process in the US is a layer cake of federal, state and local laws, rules and policies, and the Mod Rule affects only a slice of the federal layer. Offshore wind farms generate their energy almost entirely in waters beyond 3 nautical miles from shore that are subject to exclusive federal jurisdiction (i.e., federal waters).¹ BOEM is the landlord that leases the seabed and the lead agency in permitting projects on those leases, while BSEE enforces the requirements that developers are subject to and regulates the safety of offshore wind activities in federal waters. BOEM's analysis of project proposals under the National Environmental Policy Act (NEPA)² requires consultation with an array of federal, state, local and tribal agencies — including a parallel process focused on effects on cultural resources under the National Historic Preservation Act (NHPA).³ In addition, developers must get approval not only from BOEM, but also from an array of other federal agencies whose jurisdiction extends to aspects of the project. This includes (but is not limited to)

- The National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service, which must consult with BOEM under Section 7 of the Endangered Species Act⁴ regarding potential impacts to endangered marine mammals and birds — in addition to an independent permit that NMFS must issue under the Marine Mammal Protection Act⁵
- The US Army Corps of Engineers (USACE), which issues permits for all obstructions to navigation⁶ and dredging and filling activities in US waters,⁷ as well as activities that could affect water quality⁸
- The US Environmental Protection Agency, which has the authority to issue air permits in federal waters under the Clean Air Act⁹

The Federal Permitting Improvement Steering Council (FPISC) is tasked with coordinating these various permits by working with the various federal agencies to create a project schedule and using an online permitting dashboard. However, FPISC lacks some of the enforcement mechanisms that could deter project delays or definitively resolve underlying interagency disputes.

1. 43 US Code § 1301.

2. 42 US Code § 4321, *et seq.*

3. 54 US Code § 306108.

4. 16 US Code § 1536.

5. 16 US Code § 1361, *et seq.*

6. 33 US Code § 403.

7. 33 US Code § 1344.

8. 33 US Code § 1341.

9. 42 US Code § 7627; 40 CFR part 55.

But construction of wind turbines, subsea transmission cables and electrical substations in federal waters is only part of the picture. The cables that transmit the energy to shore pass through state-owned waters and onto land, where onshore interconnection infrastructure must be built, and such infrastructure requires a battery of state and local permits. This nearshore and onshore infrastructure is also subject to federal review; the facilities are considered part of the overall project and thus are also analyzed under NEPA and the NHPA — and may have independent effects on endangered species and wetlands that could require additional federal review.

BOEM's process: The linchpin

Notwithstanding the constellation of federal, state and local permits that an offshore wind developer must obtain, BOEM's approval is without question the most important one. But the BOEM approval process starts well before a permit application is even filed. First, BOEM must identify areas to lease to developers. This is effectively a winnowing process. BOEM typically begins with an entire region of the ocean and seeks feedback at numerous stages from other federal agencies; state, local and tribal governments; and the general public. At each phase, BOEM makes “cuts” and eliminates areas to avoid potential conflicts, including nearshore visual impacts, sensitive habitats, shipping lanes, archaeological resources and heavy commercial fishing effort. BOEM also balances deconfliction with consideration of the commercial viability of the area, including distance to onshore points of interconnection and electricity markets, wind speed, water depth, distance to shore and known seabed conditions. The lease areas that BOEM ultimately auctions should represent the portions of the ocean most suitable for offshore wind development.

The lease sale is an ascending-bid online auction, although BOEM may also allow certain discounts from the bid price if the bidder agrees beforehand to spend money on things that benefit the region — e.g., contribution to a fisheries compensation fund or investment in supply chain and workforce development. BOEM's final sale notices set forth the auction procedures and may impose auction-specific restrictions on bidders — for instance, only allowing each bidder to win one of multiple leases up for sale.

The winning bidders execute their leases and set about surveying their lease area for, among other things, wind speeds, geology of the seabed, presence of wildlife and fish stocks and onshore visual effects. Until very recently, lessees were required to submit a separate site assessment plan (SAP) if they wished to deploy any type of wind speed measurement device — including both meteorological buoys and bottom-founded meteorological towers — on their leases. They then process this data and prepare their BOEM permit application — known as a construction and operations plan (COP). BOEM will then review the application for completeness and sufficiency; engage the various federal, state and local agencies that will also be reviewing the COP; and commence its formal environmental review by issuing a notice of intent (NOI) to conduct a NEPA analysis.¹⁰ After recent statutory amendments under the Fiscal Responsibility Act of 2023, the NEPA process is now required by statute to take no more than two years, allowing for extensions in consultation with the applicant.¹¹ However, there are currently no guardrails on how long it takes to start the NEPA analysis after COP submittal or to issue formal project approval after the analysis is complete.

Oftentimes, the greatest uncertainty and most likely source of delay derives from friction within the federal family. Every federal agency operates under its own independent authorities, with standards and prerogatives that vary from each other and from BOEM's regulations. Although BOEM is the “lead agency,” it is not a “one-

10. 30 CFR 585.628.

11. 42 US Code 4336a(g).

stop shop” and must constantly collaborate with (and sometimes cajole) these other agencies to ensure their timelines align with its COP review and their proposed mitigation measures are economically and technically feasible.

At the end of BOEM’s review (and other agencies’ various consultations and ancillary permitting reviews), all permitting agencies will issue a “record of decision” that memorializes their anticipated decisions.¹² The formal approvals follow soon thereafter. But even then, developers do not yet have the green light to build their wind farms. Next, BSEE must conduct a safety and engineering review of the final project specifications and installation plan, culminating in a certification of the project plans by an independent third-party certified verification agent (CVA).¹³ In parallel, the terms and conditions of COP approval are likely to require developers to submit an array of granular construction plans that BOEM and other agencies (including NMFS) must sign off on before offshore construction can finally commence.¹⁴

A costly and flawed process — and a time to reassess

Such a complex and multifaceted process is both costly and time-consuming. The offshore wind permitting process can range from several years to more than a decade, depending on project size, complexity and site-specific conditions. The costs associated with offshore wind projects are also substantial — S&P Global Commodity Insights estimates the permitting process can account for 5%-10% of the total project costs, which can range from \$4.5 billion to \$6 billion for a typical 1-GW project (i.e., between \$225 million and \$600 million).¹⁵ And because this is the US, the threat of lawsuits hangs heavy over the process, creating additional uncertainty on the back end and causing government agencies to engage in over-analysis. The government and developers have prevailed in the first few lawsuits, but more are on the way.¹⁶ And the cost of losing in court and having to redo some or all of the permitting process can be economically catastrophic.

If the US is to meet its offshore wind generation (and, by extension, decarbonization) goals and develop a supply chain that can bring down costs and meet the industry’s full potential, this permitting status quo is not good enough. The US industry has collectively worked its way through the offshore wind permitting process several times now. Regulators have begun to build expertise and “muscle memory” on offshore wind project parameters, methodologies, impacts and mitigations. It is time to collectively audit the system and figure out ways to create efficiencies and reduce costs — all while issuing permits that meet environmental standards and can stand up to judicial scrutiny. The Mod Rule is, in a very real way, the first test.

12. 40 CFR 1505.2.

13. 30 CFR part 285, subpart G.

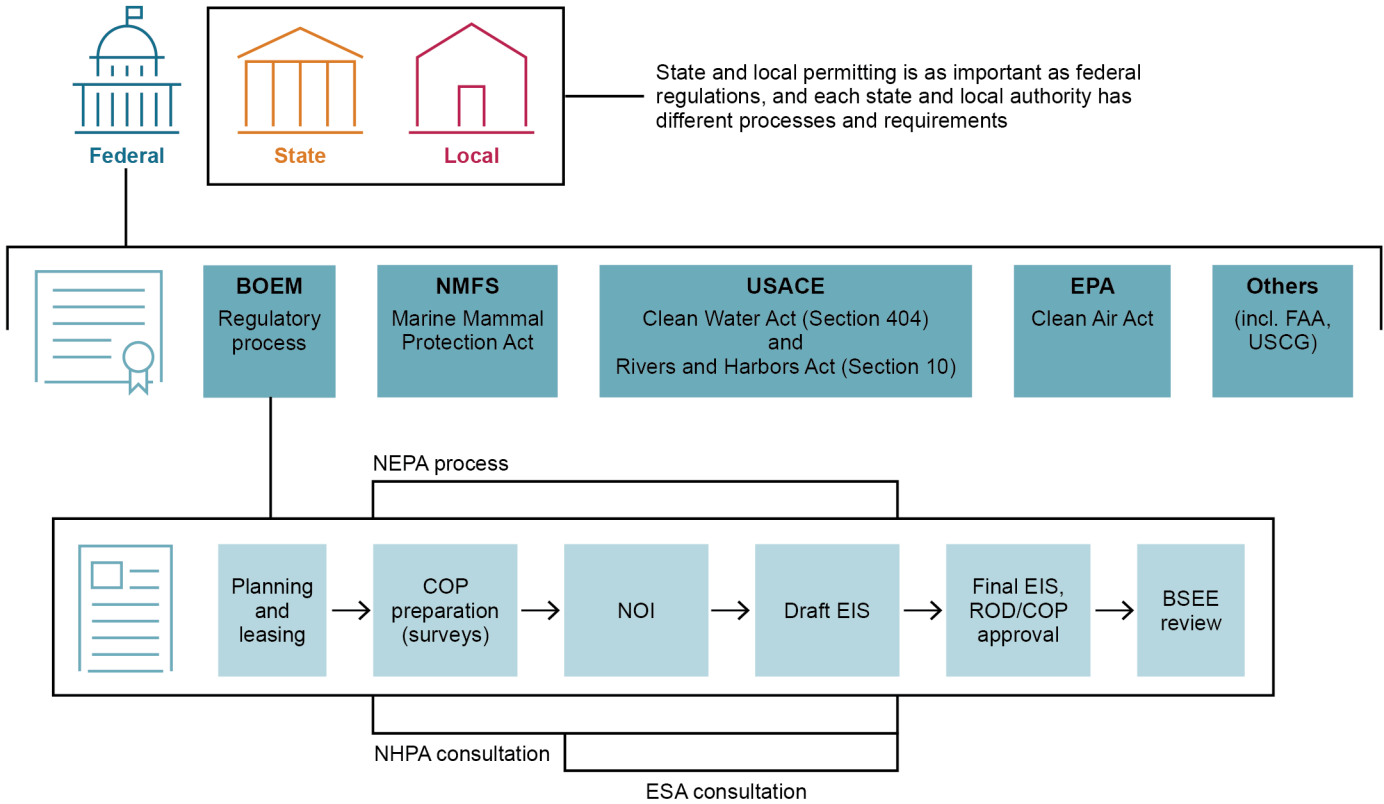
14. See, e.g., “Conditions of Construction and Operations Plan Approval: Lease Number OCS-A 0486,” published Nov. 17, 2023 and available at https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Cond%20of%20COP%20Appr_REV%20OCS-A%200486_0.pdf.

15. The 5%-10% figure refers to long-term permitting costs. Permitting costs for early projects could be as high as 20% of capital expenditure.

16. See, e.g., *Nantucket Residents Against Turbines v. U.S. Bureau of Ocean Energy Management*, No. 23-1501, 1st Cir. (April 24, 2024).

Figure 2

Multistep process for permitting US offshore wind projects



As of May 21, 2024.

BOEM = Bureau of Ocean Energy Management; COP = construction and operations plan; EIS = environmental impact study; EPA = Environmental Protection Agency; ESA = Endangered Species Act; FAA = Federal Aviation Administration; NEPA = National Environmental Policy Act; NHPA = National Historic Preservation Act; NMFS = National Marine Fisheries Service; NOI = notice of intent; ROD = record of decision; USACE = US Army Corps of Engineers; USCG = US Coast Guard.

Source: S&P Global Commodity Insights.

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Assumptions of Mod Rule analysis

In analyzing the economic benefits of the Mod Rule, Commodity Insights focuses on what we view as the most impactful elements of the rule. Much of the rule involves relatively minor changes to the regulations, and we do not endeavor to analyze those impacts. We also recognize that some provisions of the rule may impose costs, but we find them to be *de minimis* and have not included them in our analysis.

Even within the major Mod Rule provisions, however, are amendments that lend themselves to quantitative analysis (and indeed, many of these have already been analyzed by BOEM and BSEE in their Regulatory Impacts Analysis or RIA), and others where the economic benefits are best described qualitatively because they are too dependent on project-specific variables. Despite the challenges in quantification, these savings are nonetheless expected to contribute to the overall financial benefits of the Mod Rule for developers.

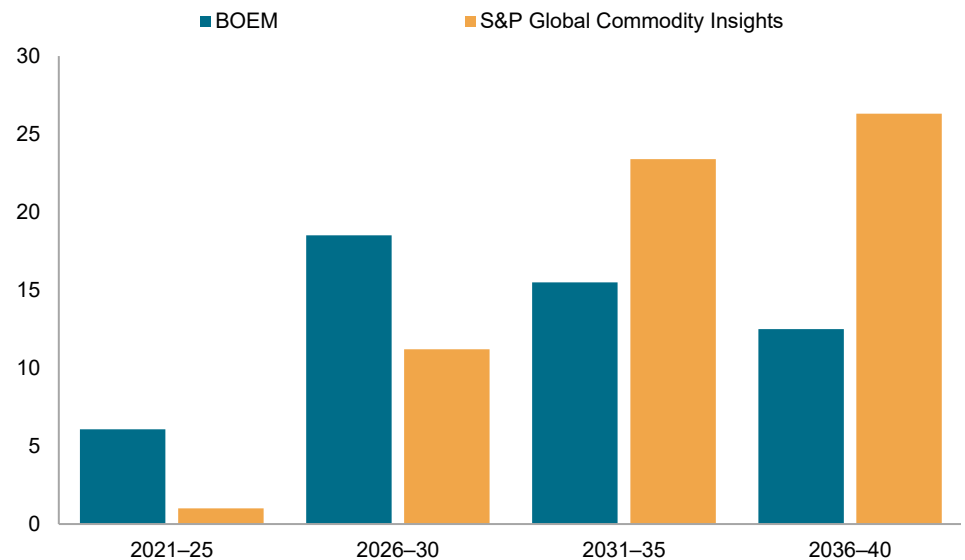
To estimate the quantifiable savings from the Mod Rule, Commodity Insights uses the same discounted cash flow method as BOEM but relies on our own internal outlook to inform key input assumptions — notably our view of offshore wind capacity additions and our forecast of project capital costs.

Commodity Insights forecasts a slower rise in offshore wind capacity compared with BOEM but higher long-term growth. Our more bearish near-term view, which is based on specific projects' announced online dates, likely reflects the recent challenges encountered by the industry, which had not yet fully emerged when BOEM drafted its initial savings estimate. Our more bullish long-term outlook is grounded in our view that states will continue to support and grow the industry as they seek to decarbonize their power supply and achieve their offshore wind deployment targets.¹⁷ Out of the 12 US states with offshore wind targets, eight states (Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Rhode Island and Virginia) have legally binding mandates, totaling 45 GW, that require the development and integration of specific levels of

offshore wind capacity into their energy mix by certain deadlines. The remaining four states (California, Louisiana, North Carolina and Oregon) have goals for offshore wind development, although these goals are not yet legally binding mandates. Commodity Insights also projects higher per-turbine decommissioning costs than BOEM. The cost gap results from challenges that the industry faces with installation capital expenditures exceeding expectations because of the scarce availability of US-made specialized vessels and the more expensive feeder-barge option that the US employs due to Jones Act limitations on foreign flagged vessels. While costs fall over time in our outlook, we estimate average decommissioning costs at about \$5 million per turbine, compared with BOEM's \$2.5 million per turbine.¹⁸

Figure 3

Estimated US offshore wind capacity additions (GW)



Data compiled May 20, 2024.

Source: S&P Global Commodity Insights.

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The Mod Rule: An evaluation of key elements

The final Mod Rule is a sprawling revamp of virtually every subpart of the rule, but we believe the following elements will have the most impact on offshore wind developers and the industry as a whole. Three provisions in particular enable us to estimate cost savings: 1) eliminating SAPs for met buoy deployment, 2) decommissioning accounting changes and 3) geotechnical regulatory revisions.

BOEM claims that the MOD rule will reduce the offshore wind industry's costs by more than \$1.3 billion in the next 20 years, but Commodity Insights estimates savings that are more than 20% higher than BOEM's. The new accounting rules for funding wind farm decommissioning represent more than 90% of the total cost savings. The Mod Rule

17. Cumulative state offshore wind targets are now at 86 GW.

18. Decommissioning costs cover the removal of subsea cables, offshore substations, turbines and foundations.

also makes other changes that are hard to measure, such as streamlining the leasing process, improving environmental reviews and enhancing coordination with state and local governments.

Table 1

20-year net present value using 3% discount rate, negative figures represent cost savings (\$ million)

	BOEM	S&P Global Commodity Insights
Met buoy streamlining	-16	-42
Geotechnical regulatory revisions	-121	-100
Decommissioning accounting changes	-1,248	-1,545
Total net present value	-1,386	-1,687

Data compiled May 2024.
Source: S&P Global Commodity Insights.
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Table 2

Annualized cost savings using a 3% discount rate, negative figures represent cost savings (\$ million)

	BOEM	S&P Global Commodity Insights
Met buoy streamlining	-1	-3
Geotechnical regulatory revisions	-8	-7
Decommissioning accounting changes	-84	-103
Total net present value	-93	-113

Data compiled May 2024.
Source: S&P Global Commodity Insights.
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Leasing process: The Mod Rule makes numerous strategic revisions to BOEM’s offshore wind leasing process. Here are the most significant changes:

- **Leasing schedule:** The rule introduces a brand new requirement that BOEM publish and update a five-year leasing schedule every two years. The schedule provides a general description of proposed lease sales, their projected calendar year and reasons for any changes.¹⁹ This requirement codifies BOEM’s recent practice of publishing leasing schedules that began back in 2021 with BOEM’s 2021–25 leasing road map²⁰ and continued with a refreshed prospective schedule that it released at the same time it issued the Mod Rule.²¹ Adopting a five-year offshore wind leasing plan offers several financial benefits to developers and original equipment manufacturers (OEMs). It will allow OEMs to better assess the geographic focus of policymakers and make informed investment decisions, while developers can better formulate their strategic project pipeline plans and get an earlier start on securing financing and attracting investors.

19. 30 CFR 585.150.

20. <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/OSW-Proposed-Leasing-Schedule.pdf>.

21. <https://www.boem.gov/sites/default/files/images/Renewable%20Energy%20Lease%20Sale%20Timeline.jpg>.

- **Area identification:** BOEM has clarified that at this pivotal point in its multistage lease deconfliction process, it will balance conflicts with commercial feasibility considerations that could include “an adjacent State’s offshore wind energy offtake or incentive programs.”²² This largely conforms to existing BOEM leasing practice, but it sends a clear signal to state governments regarding the link between their energy mandates and the amount of acreage that BOEM may seek to auction. This provision could indirectly benefit the industry by resulting in larger lease sales, encouraging further expansion of state mandates and extending the project pipeline needed to foster a sustainable domestic supply chain.²³ There is also a potential policy shift, as BOEM will now evaluate wind energy mitigation measures at the Area Identification stage of its process.²⁴ To date, BOEM has generally reserved its pre-lease sale mitigation measures for surveys and other preconstruction activities, deferring consideration of wind energy mitigation measures until it has received a project-specific COP. Depending on how this provision is implemented, premature limitations on the use of leases could dampen auction prices and/or increase project development costs.
- **Bidding credits:** The Mod Rule clarifies that BOEM may use bidding credits — i.e., discounts off the auction price — as a policy mechanism to incentivize developer activities that can either move the overall industry forward or mitigate potential impacts.²⁵ BOEM has deployed bidding credits in each lease sale during the Joe Biden administration, so this provision is essentially a codification of existing practices. BOEM opted against capping the amount of bidding credits in the final rule and indicated that it intended to continue its default policy of offering no more than a 25% discount off the winning bid.²⁶ Bidding credits have the potential to reduce auction prices and allow the winning bidders to put the value of their credits to beneficial use. For instance, the past few BOEM auctions have included bidding credits that can be used for supply chain investments and workforce training that can save money for both the lessees holding the credits and subsequent offshore wind projects in the region.

Lease structure: BOEM will now restructure renewable energy leases to reflect actual development. The previous one-year preliminary term and five-year site assessment term will merge to become a five-year preliminary period before COP submission.²⁷ The 25-year operations term has been replaced with a 35-year operations period that does not start until a project has completed construction.²⁸ This change provides two key benefits. First, it avoids triggering the operations period during construction, which can take up to three years for larger wind farms and previously left lessees with only 22-23 years of guaranteed operations. Second, a 35-year operations period better aligns with the design life of the latest models of wind turbines. Perhaps recognizing that wind turbines will only get more durable over time, BOEM now allows lessees to propose longer operations periods in their COPs, and lease periods can be extended for “good cause.” Longer operations periods are likely to positively impact project financing because they create more certainty regarding the duration of a project’s revenue stream.

Offshore transmission planning: The Mod Rule states that BOEM will consider transmission developers with contracts from states, regional transmission organizations (RTOs) or independent system operators (ISOs) when determining

22. 30 CFR 585.212(a); 89 FR 42602, 42687.

23. We have already seen one state, Maryland, enter into a memorandum of understanding with BOEM on June 7, 2024, that is seemingly designed to ensure that its 8.5-GW offshore wind goal is kept top of mind during BOEM’s upcoming leasing process in the Central Atlantic. See <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Signed%20Maryland-BOEM%20MOU.pdf>.

24. 30 CFR 585.212(c)(3).

25. 30 CFR 585.216.

26. 89 FR 42602, 42627-8.

27. 30 CFR 585.235(a)(1).

28. 30 CFR 585.235(a)(4).

whether there is competitive interest in a right of way (ROW) grant.²⁹ This new provision allows states to plan for transmission independently with the confidence that winners of transmission contracts will likely be able to efficiently obtain a ROW from BOEM without being subject to the uncertainty of a ROW auction. It also reverses the traditional order of operations for offshore wind generation, where BOEM holds lease auctions and then states award development contracts to developers that have already won leases.

In providing additional certainty regarding site control, the Mod Rule helps state, RTOs/ISOs and federal processes work together better to develop shared transmission infrastructure and corridors.

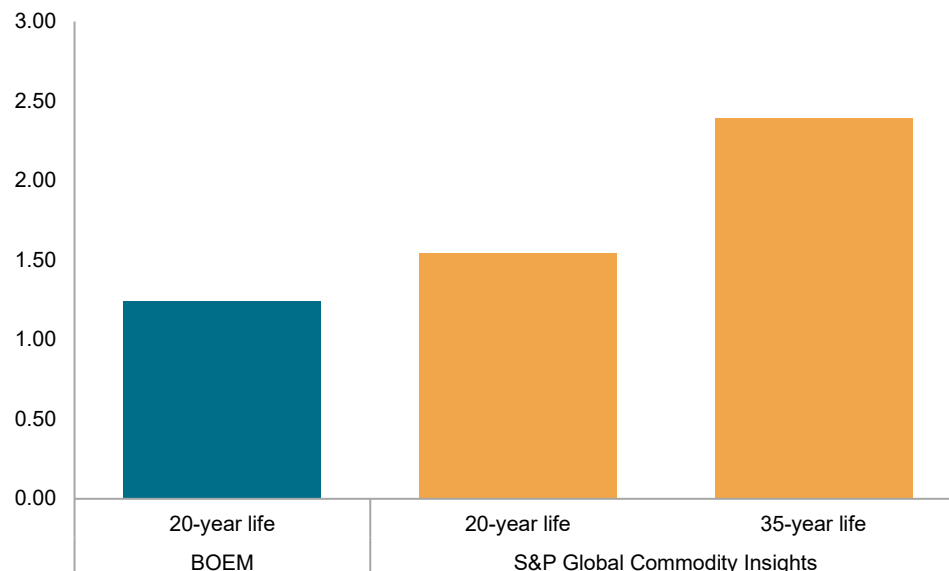
In turn, a shared transmission grid that connects offshore wind farms can benefit the industry and the power sector in many ways. It can lower the costs and environmental impacts of transmission cables and interconnectors by up to \$900 million a year, as the National Renewable Energy Laboratory 2024 Atlantic Offshore Wind Transmission Study shows. A shared transmission grid can also improve power supply efficiency and reliability.

Financial assurance: The Mod Rule allows for incremental funding of decommissioning financial assurance, spreading out the expense over the project's operations period.³⁰ BOEM considers this approach a reasonable balance of risk and benefit, similar to practices in Europe.³¹ The criteria for substituting a decommissioning bond with a lessee's financial strength have been modified to emphasize credit rating and revenue stream.³² The process for obtaining a third-party or parent company guaranty has also been streamlined.³³

BOEM estimates the savings from incremental funding of decommissioning bonds as the time value of money associated with posting bonds at the end of a project's contract. More specifically, BOEM assumes the decommissioning bond would be funded at the same level but that developers would incur those costs over the final five years of a lease (i.e., years 16-20). The present value of those future costs, discounted at 3%, are materially lower than those same costs incurred in year one, resulting in savings. We believe BOEM's savings are an underestimate owing to conservative assumptions about the number of turbines installed over the next 20 years, decommissioning costs and contract length.

Figure 4

Savings from incremental funding of surety bonds (2021 \$ billions)



Data compiled May 7, 2024.
 Source: S&P Global Commodity Insights.
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29. 30 CFR 585.307(c).
 30. 30 CFR 585.516, 529.
 31. 89 FR 42602, 42635-7.
 32. 30 CFR 585.527.
 33. 30 CFR 585.528.

Commodity Insights estimates higher decommissioning costs per turbine than BOEM. The cost difference reflects recent industry struggles with higher-than-expected project capital expenditures due to increased global demand for offshore wind construction resources and rising costs on everything from raw materials (steel and copper) to installation vessels, subsea cables and turbines. While costs fall over time in our outlook, we estimate average decommissioning costs at about \$5 million per turbine, compared with BOEM's \$2.5 million per turbine.

When recalculating the savings using the Commodity Insights outlook, the savings are 24% higher than BOEM's estimate. Assuming contracts evolve to match a typical project's design life of 35 years, the savings increase to more than \$2 billion, approximately 90% higher than BOEM's estimate.

Elimination of the site assessment plan for meteorological buoys: BOEM has eliminated the requirement to submit an SAP for the deployment of meteorological (or "met") buoys on a lease.³⁴ This change was made because the industry now primarily uses floating buoys instead of fixed bottom met towers, with BOEM noting the low environmental impact of buoys and their routine permitting by the USACE.³⁵ While BOEM expects to approve an average of one SAP per year for the next 20 years, we believe that the number of avoided SAP reviews could be up to three times higher. This higher estimate considers the projects in the US project pipeline that hold leases but have not yet deployed met buoys, as well as the expected continuation of offshore wind lease sale activity. Using the same SAP submittal cost as BOEM, the cost savings from an average of three avoided SAP approvals per year over the next 20 years is just more than \$42 million. Deploying a met buoy 6-12 months sooner for offshore wind projects can also result in unquantifiable savings. Early data collection provides a comprehensive understanding of the offshore wind resource, enabling better project planning and optimization. It also helps identify potential risks earlier, leading to timely mitigation strategies. Additionally, earlier met buoy deployment improves resource assessment, thus optimizing turbine selection and energy production estimates. While these benefits may be challenging to quantify precisely, they contribute to overall cost savings and enhanced decision-making.

Flexibility for COP data submittal: The Mod Rule aligns the COP review process with BOEM's policy of allowing lessees to submit proposals with a range of design parameters, known as a project design envelope (PDE). BOEM had previously used regulatory departures to provide flexibility regarding the timing of data submittal on a case-by-case basis, but embedding the PDE in the regulations ensures long-term certainty for lessees. This affects data submittal in several key ways:

- **Geophysical and geotechnical data.** The final Mod Rule replaces the old rule that required lessees to submit a geotechnical exploration for each wind turbine location with their COP application. Now, lessees only need to submit geophysical and geotechnical data that shows the seabed's baseline geological conditions, geologic model, geologic hazards and site feasibility for their proposed facility. The more detailed geotechnical data can be submitted later with the Facility Design Report (FDR) that BSEE reviews after COP approval. This approach will help developers refine their project design earlier in the permitting process without redoing expensive geotechnical surveys.
- **Cable routes.** BOEM and lessees can now adjust the size of project easements and ROWs for offshore transmission cables. The old rules required easements and ROWs to be 200 feet wide, but BOEM and industry players learned that they need more flexibility to avoid subsea problems during construction. BOEM can now

34. 30 CFR 585.600.

35. 89 FR 42602, 42606-42612.

grant easements and ROWs with enough off-lease transmission cable space “to accommodate potential changes at the design and installation phases” of projects.³⁶

- **COP revisions.** The Mod Rule grants BOEM more flexibility to determine which design changes require a COP revision. The old regulations did not align neatly with the PDE by having the potential for minor design changes to trigger a new COP submittal. The post-Mod Rule regulations anticipate design changes within the PDE and may only require COP revisions that are material and proportionate to the magnitude of the modification.

Using a higher geotechnical survey cost per turbine than BOEM, we estimate that the geophysical and geotechnical provision will result in developers saving \$100 million over the next 20 years. This is 17% less than BOEM’s estimate of \$121 million. A possible explanation for the difference is that we are more cautious than BOEM on how long it takes for developers to benefit from this rule, as we assume that there is an average seven-year gap between conducting a survey and commissioning a project.

Engineering reports: BSEE, which only last year received its authority over the post-COP approval engineering reports, has finalized rules that provide lessees — and itself — with more flexibility in submitting and reviewing those reports. First, the final Mod Rule clarifies that you can submit FDRs and fabrication and installation reports (FIRs) at different times for different portions of the wind farm (e.g., wind turbines, substations, export cables). Second, lessees now have much greater leeway to nominate their independent third-party CVAs for BSEE approval, as the CVA is encouraged to provide oversight much earlier in the project design process. Third, BSEE has amended a particularly problematic provision in the original regulations that had the potential to prevent lessees from engaging in anything that constituted “fabrication” until after the FDR and FIR had passed muster. The final Mod Rule clarifies that lessees can engage in onshore manufacture and fabrication at any time prior to FDR/FIR submittal — a reasonable allowance given developers’ commercial need to commence procurement at an early stage and BSEE’s lack of jurisdiction over onshore activities.

Safety and inspections: BSEE has included additional specificity regarding the contents of a lessee’s safety management system (SMS), along with new reporting requirements. BSEE has also added a new regulation that offers the potential for more lenient auditing requirements for any developer who gets its SMS certified by a recognized accreditation organization.

Departures: BOEM and BSEE have created more flexibility to deviate from their own regulations, clarifying that they may issue departures anytime its existing regulations are “impractical or unduly burdensome and the departure is necessary to achieve the intended objectives of the renewable energy program.”³⁷ The original departure regulation was rooted primarily in the need to “facilitate the appropriate activities on a lease or grant under this part,”³⁸ which may have inadvertently constrained BOEM and BSEE from being agile in its programmatic regulatory processes, including actions taken prior to lease issuance.

36. 30 CFR 585.301(a)(2); 585.628(g)(1).

37. 30 CFR 285.103(a)(1); 585.103(a)(1).

38. *Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf*, 74 FR 19638, 19811 (April 29, 2009).

Reflections on the Mod Rule

Does the Mod Rule deliver on cost savings? According to Commodity Insights, the Mod Rule does achieve the cost savings that BOEM and BSEE claim. We concur with BOEM that the clearest and most impactful driver for these cost savings is the revised financial assurance requirements. Both BOEM and Commodity Insights calculate that postponing decommissioning costs to the final five years of a project can lead to cost savings of more than \$1 billion over the next 20 years.

We found that BOEM and BSEE's cost savings estimates are typically lower than ours. This difference could be due to the regulators using a more conservative approach to current prices by possibly using pre-high-inflation-rate costs. Our estimates account for the recent higher prices in the global industry, and we anticipate further price increases over the next decade because of global supply chain limitations. It is important to note that the US market faces extra challenges, especially in the short to medium term. The reliance on foreign vessels and equipment providers while creating its own support network for offshore wind development may impact cost savings.

We also believe it is important to recognize the unquantifiable but highly foreseeable benefits of the Mod Rule. BOEM and BSEE also did not analyze them in their RIA, but nonetheless, these anticipated benefits are tangible and must be factored into any analysis.

What is next? The new regulations take effect on July 14, 2024, 60 days after their publication in the Federal Register, but there is more to be done. For starters, BOEM's regulations are now inconsistent with standard BOEM leases in several respects. Some of these differences are ministerial (e.g., updating citations and definitions), while others are more material, such as the above-referenced changes in lease structure/duration and financial assurance. BOEM acknowledged that leases may need to be amended, but the preamble is noncommittal as to when and how this will happen. Additionally, more regulatory amendments are forthcoming. BSEE has indicated that it will be proposing additional changes to its offshore wind safety regulations; although the Unified Regulatory Agenda indicated that a proposed rule would come out in May 2024, realistically we anticipate seeing it no sooner than late summer.

While the Mod Rule makes great strides in improving the efficiency and certainty of the BOEM leasing and permitting processes, the efforts to improve offshore wind permitting and improve project economics cannot stop here. On the regulatory side, BOEM and its fellow permitting agencies should tee up the following steps, which it can take without Congress' help:

- **Permitting timelines:** As noted above, NEPA requires BOEM to take no more than two years to go from NOI to Final Environmental Impact Statement (FEIS), absent extenuating circumstances. However, this still leaves a tremendous amount of uncertainty between COP submittal and NOI and between FEIS and final agency actions (i.e., BOEM and other agency approvals). BOEM should commit to a regulatory time frame between completing the NOI checklist for COP submittal and getting NOI; BOEM and its fellow permitting agencies should bind themselves to a time frame between FEIS and final project approval. Predictable permitting timelines will reduce contracting risk and allow for earlier supply chain investment, with attendant cost savings.
- **Post-COP plan submittals:** BOEM should work with other permitting agencies to scale back the number of terms and conditions of COP approval requiring the submittal of additional plans before construction can commence. Large numbers of post-COP

decision points with open-ended timelines can delay the start of construction and cost developers dearly in the form of extra vessel charter days and labor.

- **Leasing schedule:** Although the provision in the Mod Rule obligating BOEM to periodically issue a leasing schedule will send helpful signals to the industry, states and stakeholders, it does not nearly provide the certainty that the offshore oil and gas industry has that a leasing pipeline will continue. BOEM should consider issuing guidance regarding the factors it will consider in determining the pace and location of lease sales — factors that may include satisfaction of state mandates and domestic supply chain needs. These steps will incentivize supply chain investments needed to create economies of scale within the industry and further reduce project costs.
- **A new rulemaking:** While the ink is barely dry on the Mod Rule, certain issues were left unresolved — including some of the concerns raised here. Given how long it can take to amend regulations, it is never too early for BOEM and industry players to discuss additional changes that could provide further financial certainty to developers.

At the same time, legislation would create more certainty in the offshore wind permitting process — and thus augment the economic benefits to project developers and the supply chain. For instance, while the Outer Continental Shelf Lands Act (OCSLA) has provided a robust framework for oil and gas leasing and permitting for the better part of a century, offshore wind has only been covered since 2005 and only through one subsection. We recommend that the OCSLA be amended to provide parity between offshore wind and oil and gas, including provisions to ensure continued offshore wind leasing, efficient and predictable judicial review of project approvals and protections against arbitrary agency actions. There are also opportunities for broader permitting reforms that could particularly aid offshore wind projects. This could include expansion of NEPA time limits prior to NOI and between FEIS and final decisions, as well as empowering FPISC to resolve substantive interagency disputes that are causing permitting timeline delays.

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