Risk Management, Financial Assurance and Loss Prevention
Initial Regulatory Impact Analysis

RIN: 1010-AE14

PROPOSED RULE

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

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Contents

Executive Summary **4**

Need for Regulatory Action 5

Baseline 5

Potential Compliance Costs of the Proposed Rule 5

Potential Public Impacts 6

I. Introduction **8**

A. Background 8

B. Need for Regulatory Action and How this Proposed Rule will Meet that Need 11

C. Baseline 13

D. Provisions of the Proposed Rule 16

II. Assumptions and Analytical Methodology **24**

A. Affected Population 24

B. Decommissioning Activity Levels 25

C. Credit Ratings 26

D. Bond Premiums 27

E. OCS Decommissioning Liability Estimates 28

F. Cost to Government to Perform Work 30

G. Existing Bonds 31

H. Reserve Assumptions 32

I. Forecast Horizon 32

J. Third-Party Guarantees 33

K. Analytical Methodology 33

III. Compliance Costs and Savings of the Proposed Rule **35**

A. Estimated Compliance Costs and Cost Savings of the Proposed Rule 36

B. Adjustment for Reserves 47

C. Summary of Compliance Costs and Cost Savings under the Proposed Rule 49

IV. Public Impact of the Proposed Rule **52**

A. Regulatory Certainty 53

B. Distributional Effects - Transfers 54

1. Transfer of Decommissioning Cost 54

2. Bond Premium Payments 54
V. Analysis of Net Benefits 55
VI. Analysis of Regulatory Alternatives 56
A. No Action Alternative 56
B. More Stringent Regulatory Alternative (Full Implementation of NTL No. 2016-N01) (Assumes AA- Tier 1 Cut-Off for Analysis) 56
1. Full Implementation of NTL No. 2016-N01 Regulatory Alternative Assumptions... 58
2. Compliance Cost Estimate for Full Implementation of NTL No. 2016-N01 Regulatory Alternative 59
3. Net Benefits of Full Implementation of NTL No. 2016-N01 Regulatory Alternative 59
C. Less Stringent Regulatory Alternative (Lower Tier 1 Cutoff to BB- with predecessor waiver) 60
1. Potential Counterproductive Impacts of the Less Stringent Regulatory Alternative – Moral Hazard 63
VII. Initial Regulatory Flexibility Analysis 64
A. Description of the Reasons Why Action by the Agency Is Being Considered 64
B. Succinct Statement of the Objectives of, and Legal Basis for, the Proposed Rule 64
C. Description of and, Where Feasible, an Estimate of the Number of Small Entities to which the Proposed Rule Would Apply 66
D. Description of the Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule 70
E. Identification of All Relevant Federal Rules That May Duplicate, Overlap, or Conflict with the Proposed Rule 71
F. Description of Significant Alternatives to the Proposed Rule 71
VIII. Statement of Energy Effects (E.O. 13211) 73
IX. Statement of Unfunded Mandates 75

Executive Summary

This Initial Regulatory Impact Analysis (IRIA) provides supporting documentation and analysis for the Bureau of Ocean Energy Management's (BOEM) Notice of Proposed Rulemaking, entitled, "Risk Management, Financial Assurance, and Loss Prevention" (RIN 1010-AE14). The proposed rule revises 30 CFR Part 556, Subpart I-Bonding or Other Financial Assurance, pertaining to bonding and other security requirements for leases as well as the corresponding sections of 30 CFR Part 550, Subparts A-General and J-Pipelines and Pipeline Rights-of-Way, pertaining to bonding and other financial assurance requirements for right-of-use and easement (RUE) grants and pipeline right-of-way (ROW) grants.

This proposed rule would create a comprehensive risk management and financial assurance regulatory framework to meet the overall goal of ensuring that U.S. taxpayers do not have to pay for remedial actions related to lessees' and grant holders' noncompliance with obligations arising under the Outer Continental Shelf Lands Act (OCSLA), especially the obligation to decommission Outer Continental Shelf (OCS) facilities. The proposed changes rely on BOEM's joint and several liability framework, while better aligning the risk evaluation criteria with banking and finance industry practices, providing greater flexibility for the use of decommissioning accounts and third-party guarantees, and continuing to protect taxpayers from exposure to financial liabilities associated with OCS exploration and development. The revised regulatory framework would provide BOEM with front-end risk management tools, improve business certainty, and leverage the strength of financially strong OCS lessees and grant holders.

Changes to Federal regulations undergo several types of economic analysis. Executive Orders (E.O.s) 13563 and 12866 direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select a regulatory approach that maximizes net benefits (accounting for the potential economic, environmental, public health, and safety effects). Section 3(f) of E.O. 12866 defines a "significant regulatory action" as any regulatory action that is likely to result in a rule that: (1) has an annual effect on the economy of $100 million or more or adversely affects, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities (also referred to as "economically significant"); (2) creates serious inconsistency or otherwise interferes with an action taken or planned by another

agency; (3) materially alters the budgetary impacts of entitlement grants, user fees, or loan programs, or the rights and obligations of recipients thereof; or (4) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the EO. This proposed rule constitutes an economically significant regulatory action under Section 3(f)(1) of E.O. 12866, because the rule is expected to impose an effect on the economy of $100 million or more in any given year.

Need for Regulatory Action

BOEM is proposing this rulemaking to update its criteria for determining whether oil, gas and sulfur lessees, RUE grant holders, and ROW grant holders may be required to provide supplemental financial assurance to ensure compliance with their OCSLA obligations.

Baseline

BOEM's current financial assurance framework is the baseline analyzed in this IRIA. This baseline includes the partial implementation of Notice to Lessees (NTL) No. 2016-N01 and the February 17, 2017, withdrawal of Sole Liability Orders[1] issued for lower-risk companies. Though the NTL was rescinded, it remains partially applicable, and its partial implementation is the baseline that most closely represents current practices.[2] This baseline matches BOEM's implementation of its existing regulations, including current implementation costs to industry and the evaluation of transactions requiring bonding that have occurred during the NTL's partial implementation.

Potential Compliance Costs of the Proposed Rule

Table 1 presents the estimated annualized net compliance costs for the proposed rule discounted at 3% and 7%. The net costs of the proposed rule are the total estimated costs for BOEM's new expected financial assurance portfolio less the estimated premiums for bonds BOEM holds in its current financial assurance portfolio. Over the twenty-year period beginning

[1] Sole liability properties are leases, rights-of-way, or rights of use and easements for which the holder is the only liable party, i.e., there are no co-lessees, operating rights owners and/or other grant holders, and no prior interest holders liable to meet a lease and/or grant obligation.
[2] In August 2021, BOEM made some adjustments to expand its financial assurance efforts. For details, see https://www.boem.gov/newsroom/notes-stakeholders/boem-expands-financial-assurance-efforts.

in 2022[3], BOEM anticipates industry will incur net compliance costs of approximately $3.4 billion discounted at 7% ($318.9 million annualized).

Table 1: Net Estimated Compliance Costs of the Proposed Rule (2022-2041, 2021$ millions)

2022-2041	Discounted at 3%	Discounted at 7%
Net Compliance Cost	$4,867	$3,379
Annualized Compliance Cost	$327.1	$318.9

Potential Public Impacts

BOEM designed the proposed rule to minimize the amount of financial assurance required from financially strong companies, while at the same time protecting the taxpayer from assuming responsibility for defaulted decommissioning liabilities. Under the proposed action, BOEM would reevaluate the financial health of companies responsible for decommissioning liabilities annually and more often if the company's credit rating changes or if BOEM receives other information regarding deterioration of the company's financial standing.

[3] Decommissioning levels, facility ownership, and credit ratings can change independent of BOEM regulations at any time. This analysis was originally conducted on a comprehensive, but ultimately static, estimate of these values in late 2021. BOEM believes the 2021 data is suitable and the analysis remains a reasonable estimate of this proposed rule's potential impact. The adequacy of the data and time horizon will be assessed again for the final rule.

Table 2: OMB Circular A-4 Accounting Statement

Category	Primary Estimate		Minimum Estimate	Maximum Estimate	Source Citation
Net Regulatory Benefits ($ millions)					
Annualized monetized benefits (discount rate in parentheses)	N/A	N/A	N/A	N/A	IRIA
Unquantified benefits	This proposed rule is designed to decrease the risk to the taxpayer of assuming financial responsibility for defaulted decommissioning liabilities while providing the industry flexibility to avoid financial assurance if they can demonstrate they pose minimal risk.				IRIA
Costs ($ millions)					
20-year annualized monetized costs (discount rate in parentheses)					IRIA – **Table 1** (20 year)
Annualized quantified, but unmonetized, costs	$0		$0	$0	IRIA
Qualitative costs (unquantified)	See Section IX. Statement of Energy Effects				IRIA
Transfers ($ millions)					
Annualized monetized transfers: “on budget”	$0		$318.9	$327.1	IRIA
Annualized monetized transfers: “off budget”	$0		$0	$0	IRIA
From whom to whom?	**Quantified:** From regulated entities to surety companies that underwrite OCS financial assurance products. **Unquantified:** From regulated entities to the taxpayer to the extent that taxpayer-funded decommissioning is avoided.				IRIA
Effects on State, local, and/or tribal governments	No material adverse effects.				IRIA E.O. 12866
Effects on small businesses					IRFA (Section VIII)
Effects on wages	None				None
Effects on growth					E.O. 13211 (Section X)

I. Introduction

BOEM's goal for its financial assurance program is to protect the public from exposure to the financial burden of unperformed obligations of private parties associated with OCS exploration and development. BOEM and its predecessor agencies have administered the financial assurance program under the regulations issued in 1997. Since that time, BOEM has issued Notices to Lessees (NTLs) as guidance documents to clarify the criteria and information requirements for additional security (also referred to as "supplemental financial assurance") so that it can ensure that lessees and grant holders meet their OCS obligations, particularly for decommissioning. In the past several years, BOEM has engaged in public outreach and found stakeholder support for policy changes that would protect the taxpayer and reduce the economic burden for lessees and grant holders, particularly during times of low oil prices.

The proposed regulatory changes would reduce the five current criteria for requiring supplemental financial assurance to just two: firstly, financial strength based on credit ratings and audited financial statements, and secondly, the value of proven reserves. Further, the proposed rule would revise the qualification criteria necessary to provide a third-party guarantee, as well as allowing guarantors to limit such guarantees to specific obligations (such as those of a specific lessee) rather than all obligations under a lease or grant. It would also expand the application of its RUE financial assurance regulations to RUEs serving federal leases and simplify the requirements with respect to decommissioning accounts. This IRIA is intended to critically assess the positive and negative effects of the proposed action and regulatory alternatives.

A. Background

Lessees and grant holders are required to decommission their OCS facilities. Decommissioning OCS oil and gas facilities requires a large financial expenditure, which does not yield a net return for asset owners. One of the most challenging issues faced by the Department of the Interior (DOI) and offshore operators is covering the high-dollar liabilities associated with decommissioning OCS facilities. Estimated current decommissioning liabilities

for existing OCS facilities are approximately $42.8 billion[4]. Under BOEM regulations and those of the Bureau of Safety and Environmental Enforcement (BSEE), the liability of lessees and pipeline ROW grant holders is "joint and several" with other holders of such leases (including sublessees) or grants. Each current lessee or grant holder, and its assignees, are liable for all decommissioning obligations that accrued prior to, and during, their ownership until each obligation is met. See, generally 30 CFR part 250, Subpart Q.

The policy and practice of BOEM's predecessors, the Minerals Management Service (MMS) and the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), and now of BOEM, has been to evaluate the ability of lessees and grant holders to carry out present and future obligations when determining whether to require additional financial assurance. The existing regulations at 30 CFR 556.901(d) provide five criteria the agency uses to determine a lessee's ability to carry out present and future obligations. However, these regulations do not specifically describe how those criteria are applied. MMS issued Notice to Lessees (NTL) No. 1998-18N, effective December 28, 1998, to provide details on how MMS would apply these regulations. This NTL was replaced by NTL No. 2003-N06, effective June 17, 2003, and then NTL No. 2008-N07, effective August 28, 2008.

In 2009, MMS issued a proposed rule to re-write the entirety of Part 256 (re-designated later as Part 556), which included the bonding regulations. However, BOEM deferred revision of the bonding regulations for a separate rulemaking because of the complexity and potential impacts associated with revising these regulations. This separate bonding rulemaking commenced August 19, 2014, with an advance notice of proposed rulemaking (79 FR 49027) to solicit ideas from the public for improving the bonding regulations, assessing and mitigating risk, and determining types and levels of financial assurance.

Following further bureau analysis, and a series of stakeholder meetings in 2015 and 2016 to solicit industry input, BOEM issued NTL No. 2016-N01, *Requiring Additional Security*, effective September 12, 2016, which sought to clarify the procedures and application of the criteria BOEM would use to determine if, and when, additional security may be required for

[4] BSEE tracks probabilistic decommissioning cost estimates which BOEM queries for the purpose of determining supplemental financial assurance. This is BOEM's estimate of the total portfolio of OCS decommissioning liability, using BSEE P70 facility estimates.

OCS leases, RUE grants, and pipeline ROW grants. The NTL also refined BOEM's application of the criteria to determine a lessee's or grant holder's financial ability to carry out its obligations. In December 2016, BOEM began implementing the NTL and issued orders to lessees and grant holders to provide additional security for "sole liability properties," i.e., leases, RUE grants, and pipeline ROW grants, for which the current lessee or grant holder was the only party liable for meeting the lease or grant obligations.

On January 6, 2017, BOEM issued a Note to Stakeholders that extended by six months the implementation timeline of NTL No. 2016-N01 for leases, RUE grants, and pipeline ROW grants for which there were co-lessees and/or predecessors in interest, except in circumstances in which BOEM determined there was a substantial risk of nonperformance of the interest holder's decommissioning liabilities. The extension of the implementation timeline allowed BOEM additional opportunity for conversation with interested stakeholders to evaluate whether certain leases and grants were considered sole liability properties. On February 17, 2017, BOEM issued a second Note to Stakeholders, announcing that it would withdraw the December 2016 orders issued on sole liability properties held by low-risk companies to allow time for the then new Administration to review BOEM's financial assurance program. BOEM then began issuing orders for unbonded sole-liability properties held by high-risk companies, requiring such companies to provide financial assurance.

On June 22, 2017, BOEM issued a third Note to Stakeholders announcing that it was in the final stages of its review of NTL No. 2016-N01. The third Note to Stakeholders reported that BOEM had determined that "more time was necessary to work with industry and other interested parties," and therefore, it would be appropriate to extend the implementation timeline beyond June 30, 2017, "except in circumstances where there would be a substantial risk of nonperformance of the interest holder's decommissioning liabilities."

BOEM continued to review the provisions of NTL No. 2016-N01, examine options for revising or rescinding the NTL, and make determinations as to the extent to which regulatory revisions were necessary. BOEM has now prepared the proposed rulemaking addressed in this IRIA to develop a comprehensive framework to assist in identifying, prioritizing, and managing the risks associated with industry activities on the OCS.

B. Need for Regulatory Action and How this Proposed Rule will Meet that Need

OCSLA authorizes the Secretary of the Interior (Secretary) to promulgate regulations to administer leasing on the OCS. 43 U.S.C. § 1334. To administer OCS leasing, BOEM adopted regulations that require a prescribed level of bonds (base) or other forms of financial assurance from OCS lessees and grant holders and allow BOEM's Regional Directors to require additional security when determined necessary to ensure compliance with obligations under a lease, RUE grant, or pipeline ROW grant. This financial assurance is to protect the public from bearing the costs associated with nonperformance by lessees, RUE grant holders, and pipeline ROW grant holders. A strong BOEM financial assurance program would identify and evaluate the financial weaknesses of OCS lessees and grant holders that could impact their ability to meet OCS obligations. The existing BOEM regulatory framework and frequently shifting implementation has resulted in significant regulatory uncertainty for OCS lessees, grant holders and operators.

Pursuant to BOEM's standard historical practice under NTL No. 2008-N07, a lessee or grant holder that passed established financial thresholds would be 'waived," i.e., not ordered to provide additional security to cover its decommissioning liabilities. Additionally, co-lessees (regardless of their own financial strength), were not required to provide additional security for the decommissioning liability for that lease if one co-lessee was waived. The proposed rule maintains those two major components, but modifies the financial threshold. The decommissioning liability on a lease on which there were two exempt lessees was not attributed to either lessee in calculating whether a lessee's cumulative potential decommissioning liability was less than 50% of the lessee's net worth, which was the standard for a lessee to qualify for a supplemental bonding waiver, as explained in NTL No. 2008-N07. The policy assumed that the chances were very remote that both lessees would simultaneously become financially distressed and not able to meet their decommissioning obligations.

However, since 2009, there have been 32 corporate bankruptcies of offshore oil and gas lessees and some of these bankruptcies have involved un-bonded decommissioning liabilities as a result of application of the waiver criteria in NTL No. 2008-N07. As such, these bankruptcies demonstrate that BOEM's regulations as implemented pursuant to the guidance provided in NTL No. 2008-N07 are inadequate to protect the public from potential responsibility for OCS decommissioning, especially during periods of low hydrocarbon prices. As an example, ATP Oil

& Gas was a mid-sized company with a financial assurance waiver when it filed for bankruptcy in 2012. Similarly, Bennu Oil & Gas was waived at the time of its bankruptcy filing in 2016, and Energy XXI and Stone Energy had waivers that they did not lose until less than 12 months prior to filing bankruptcy. While most affected OCS properties were ultimately sold or the lessees reorganized under Chapter 11 of the U.S. Bankruptcy Code, these bankruptcies, particularly those of ATP and Bennu, demonstrated the weaknesses in BOEM's financial assurance program. These weaknesses were apparent because, in some cases, the unbonded decommissioning liabilities exceeded the value of the leases to potential purchasers or investors. Further, in some other cases the leases were expired or almost expired at the time of the bankruptcy filing, making them similarly unmarketable.

BOEM cannot forecast the outcome of bankruptcy proceedings, which may lead to liquidation of an insolvent company. If BOEM has insufficient financial assurance at the time of bankruptcy and no other liable parties of sufficient strength on which to rely, there may be no recourse for obtaining decommissioning performance, resulting in DOI needing to perform the decommissioning responsibility with the cost being borne by the American taxpayer. Failure to timely complete decommissioning could result in environmental damage (e.g., oil leaks), along with other risks, such as obstructions to navigation.

BOEM attempted to remedy the weaknesses in its financial assurance program as administered under NTL No. 2008-N07 with NTL No. 2016-N01. However, NTL No. 2016-N01 established criteria that created programmatic issues and unintended consequences in the management of risk. This was communicated by BOEM via the aforementioned Note to Stakeholders on January 6, 2017.

Once the unintended programmatic issues came to light, BOEM reviewed NTL No. 2016-N01 to examine options for revising or rescinding the NTL and reviewed its financial assurance regulatory program to determine the extent to which regulatory revisions were necessary. As a result of this review, BOEM again recognized the need to update its regulations to better manage the risks associated with industry activities on the OCS. Accordingly, BOEM is proposing adjustments to the financial risk management framework to better assist in identifying and prioritizing supplemental financial assurance needs. This notice of proposed rulemaking (NPRM) is proposing changes to 30 CFR Part 556, Subpart I-Bonding or Other Financial

Assurance pertaining to the additional security requirements for leases, as well as the corresponding sections of 30 CFR Part 550, Subparts A and J, pertaining to RUE grants and pipeline ROW grants.

The proposed changes would:1) modify the evaluation process for requiring additional security, 2) simplify and strengthen the evaluation criteria, and 3) remove restrictive provisions for third-party guarantees and decommissioning accounts. These proposed changes reflect an interest in relying on the risk mitigation provided by BOEM's joint and several liability regime, including regulations holding assignors liable for accrued obligations, while better aligning the evaluation criteria with banking and finance industry practice, providing greater flexibility for industry, and continuing to protect taxpayers from exposure to the consequences of noncompliance with DOI regulations and OCS lease terms, particularly the nonperformance of decommissioning obligations.

C. Baseline

The regulatory analysis presented below estimates impacts of the proposed rule by comparing the costs and benefits of the new provisions in the rule to the baseline scenario. The baseline scenario represents BOEM's best assessment of how the OCS financial assurance program would be administered absent this regulatory action. The baseline includes compliance with existing regulations as clarified by BOEM guidance documents such as previously issued NTLs, as well as current BOEM and industry practices that are consistent with existing BOEM regulations. BOEM considered three primary options for the proposed rule's regulatory baseline:

1. NTL No. 2016-N01, *Requiring Additional Security*
2. Current (Partial) Implementation of NTL No. 2016-N01
3. NTL No. 2008-N07, *Supplemental Bond Procedures*

BOEM has determined that the partial implementation of NTL No. 2016-01 (option 2 above) is the most appropriate regulatory baseline for this analysis. This is BOEM's most recent financial assurance framework and reflects the decision to require high-risk companies to bond only their sole liability properties. This baseline most closely reflects the actual costs of current practice on a forward-looking basis and only takes into account circumstances where bonding was required during the last five years. NTL No. 2016-N01 policies currently being implemented

include BOEM's categorizing a lessee's liabilities based on risk, with the highest risk being properties where one lessee or grant holder is the sole party responsible for decommissioning (a sole liability property). On a sole liability property, there is no jointly and severally liable party (e.g., a predecessor lessee or co-lessee) on whom BSEE may rely for the performance of decommissioning.

BOEM has classified companies into two tiers based on the likelihood of nonperformance of obligations based on their credit rating, with higher risk companies classified as Tier 2. BOEM has focused on the higher risk (Tier 2, *i.e.*, companies without credit ratings or companies with an issuer credit rating B+ or lower[5]) and has issued supplemental financial assurance demands for Tier 2 sole liability properties. BOEM permits those lessees or grant holders with acceptable issuer credit ratings (Tier 1) to forgo providing additional financial assurance for their sole liability properties. BOEM has retained bonds submitted under previous guidance for which decommissioning liability still exists, but which would not require financial assurance under the sole liability Tier-2 property criteria. **Table 3** shows the partial implementation of NTL No. 2016-N01.

Table 3: Baseline Framework (Partial Implementation of NTL No. 2016-N01)[6]

<table>
<tr><th></th><th></th><th>Sole Liability Properties</th><th>Joint Liability Properties (Co-lessee, Co-grant holder or Predecessor)</th></tr>
<tr><td rowspan="2">Lessee or Grant Holders (including co-lessees/holders and predecessor lessees/holders</td><td>Tier 1 (BB- or above)</td><td>Supplemental Financial Assurance Not Demanded</td><td>Supplemental Financial Assurance Not Demanded</td></tr>
<tr><td>Tier 2 (B+ or below)</td><td>Supplemental Financial Assurance Required</td><td>Supplemental Financial Assurance Not Demanded</td></tr>
</table>

[5] Using the S&P rating scale, which is also used by Fitch; **Table 4** includes the corresponding ratings used by Moody's.

[6] Lessees/holders with a credit rating of at least BB- (S&P), or Ba3 (Moody's) are considered "Tier 1." Companies that do not meet these criteria, or choose not to provide financials to BOEM, are considered "Tier 2." See discussion of "Tier 1" and "Tier 2" at pp. 18-21.

During the partial implementation of NTL 2016-N01, BOEM continued to hold bonds previously provided to BOEM to cover OCS liabilities. The total face amount of these bonds is approximately $3.3 billion, as shown in **Table 19**. Most of these bonds would not be required under the baseline to cover obligations associated with accrued Tier 2 sole liability (**Table 16**) obligations because they are either held by Tier 1 companies or by Tier 2 companies on joint liability properties. These bonds are being retained pending resolution of permanent policy. If the proposed rule is adopted, and lessees and grant holders who provided these bonds are not required to provide additional financial assurance under the new criteria, BOEM would release most of these bonds to the lessees or grant holders. Because BOEM currently lacks regulatory clarity on its authority to cancel bonds in such circumstances, the current BOEM portfolio of bonds held during the partial implementation of NTL 2016-N01 is part of the baseline.

BOEM has opted not to use the full implementation of NTL No. 2016-N01 (option 1 above) as the regulatory baseline because BOEM never fully implemented most of the NTL's provisions. BOEM withdrew most of the initial demand letters and did not implement those provisions of NTL No. 2016-N01 that it found it could not efficiently implement. Furthermore, NTL No. 2016-N01 was rescinded several years ago and does not govern how the financial assurance program operates under current regulations. BOEM does evaluate the full implementation of NTL No. 2016-N01 as a more stringent regulatory alternative in the section below entitled, "More Stringent Regulatory Alternative (Full Implementation of NTL No. 2016-N01)."

Additionally, BOEM has opted not to use NTL No. 2008-N07, *Supplemental Bond Procedures* (option 3 above), as the baseline. While this framework was the most recent and fully implemented NTL, it was superseded by NTL No. 2016-N01, including the partial implementation thereof. Therefore, 2008-N07 has not been in effect for several years and there is no way for BOEM to estimate what bond demands would have been issued based upon it. If BOEM used NTL No. 2008-N07 (as written and designed) for the baseline, it would need to estimate the amount of additional bonds submitted to BOEM in response to demands that could have been made. BOEM does not have access to information, such as financial statements or reserve estimates, from all companies required for this analysis.

D. Provisions of the Proposed Rule

BOEM's current financial assurance framework has two main components: 1) base bonds, generally required in amounts prescribed by regulation, and 2) additional (supplemental) bonds or other security, above the prescribed amounts, which may be required by order of the Regional Director upon determination that an increased amount is necessary to ensure compliance with OCSLA obligations. The amount of supplemental bonds or other security required by the Regional Director is directly related to the lessee's or grant holder's level of liability and its perceived risk of default.

To maintain a balanced supplemental financial assurance framework, BOEM proposes to: 1) modify the evaluation process for requiring supplemental financial assurance by streamlining the evaluation criteria; and 2) remove restrictive provisions for third-party guarantees and decommissioning accounts that lessees and grant holders may use to ensure that their OCSLA obligations will be met.

The proposed rule would allow the Regional Director to require supplemental financial assurance when a lessee or grant holder poses a substantial risk of becoming financially unable to carry out its obligations under the lease or grant or when the property is at or near the end of its productive life, and thus, may not have sufficient value relative to the attendant decommissioning cost to be marketable to potential purchasers. In the first instance, the risk that the taxpayer might have to take on the costs of performing obligations of a lessee or grant holder is mitigated when there is a co-lessee or co-grant holder that has sufficient financial capacity to carry out the obligations. In the second, the risk that the taxpayer might have to take on the costs of performing obligations of a lessee or grant holder is mitigated when there is sufficient value on the lease which could make it an attractive property for re-sale.

Under BOEM and BSEE regulations, lessees and grant holders are jointly and severally liable, meaning each is independently responsible for the relevant decommissioning obligation regardless of cost or its proportionate ownership, and BOEM and BSEE may pursue a demand for full performance against any current or previous lessee or grant holder. As such, each lessee or grant holder with an ownership interest is liable for all decommissioning obligations that accrue during its ownership and those that accrued prior to its ownership. In addition, a lessee or grant holder that assigns its ownership interest to another party will continue to be liable after

assigning that interest and until that obligation is met. However, any decommissioning obligations that accrue after the lessee or grant holder transfers its ownership rights accrue only to the new lessee or grant holder (and subsequent lessees or holders).

BOEM proposes to look at the following evaluation criteria to determine the ability of a lessee or a grant holder to carry out present and future obligations. **Figure 1** shows the proposed rule company and liability evaluation process.

OCS Lessees: must meet at least one of the following criteria: (1) The lessee must have an issuer credit rating from a nationally recognized statistical ratings organization (NRSRO) greater than or equal to either BBB- (S&P) or Baa3 (Moody's), or an equivalent proxy credit rating determined by BOEM (a company with one of these ratings is referred to for the purposes of this analysis as a Tier 1 company); or (2) If the lessee does not meet the criteria in paragraph (1) above: (i) a co-lessee that is jointly and severally liable with the lessee must have an issuer credit rating, or a proxy credit rating, that meets the criteria in paragraph (1), or (ii) there must be proved oil and gas reserves on the lease, the net present value of which exceeds three times the cost of the decommissioning associated with the production of those reserves. If one of the above criteria is met, the lessee may not be required to provide supplemental financial assurance for the lease.

The proxy credit ratings that BOEM will calculate on behalf of lessees will be structured in the same format as the standard issuer ratings (i.e., AAA to D). The audited financial information from the most recent fiscal year used to determine the proxy credit rating must include a twelve-month period within the twenty-four months prior to the receipt of the Regional Director's determination that the lessee must provide supplemental financial assurance. When determining a proxy credit rating, the Regional Director will retain discretion to account for all liabilities that may encumber a lessee's ability to carry out future obligations, including any for which it is jointly and severally liable with other parties. To obtain a proxy credit rating, the lessee may be obligated to provide the Regional Director with information regarding all its joint-ownership interests and other liabilities associated with its OCS leases and ROWs, which might not be accounted for in the audited financial information provided to BOEM.

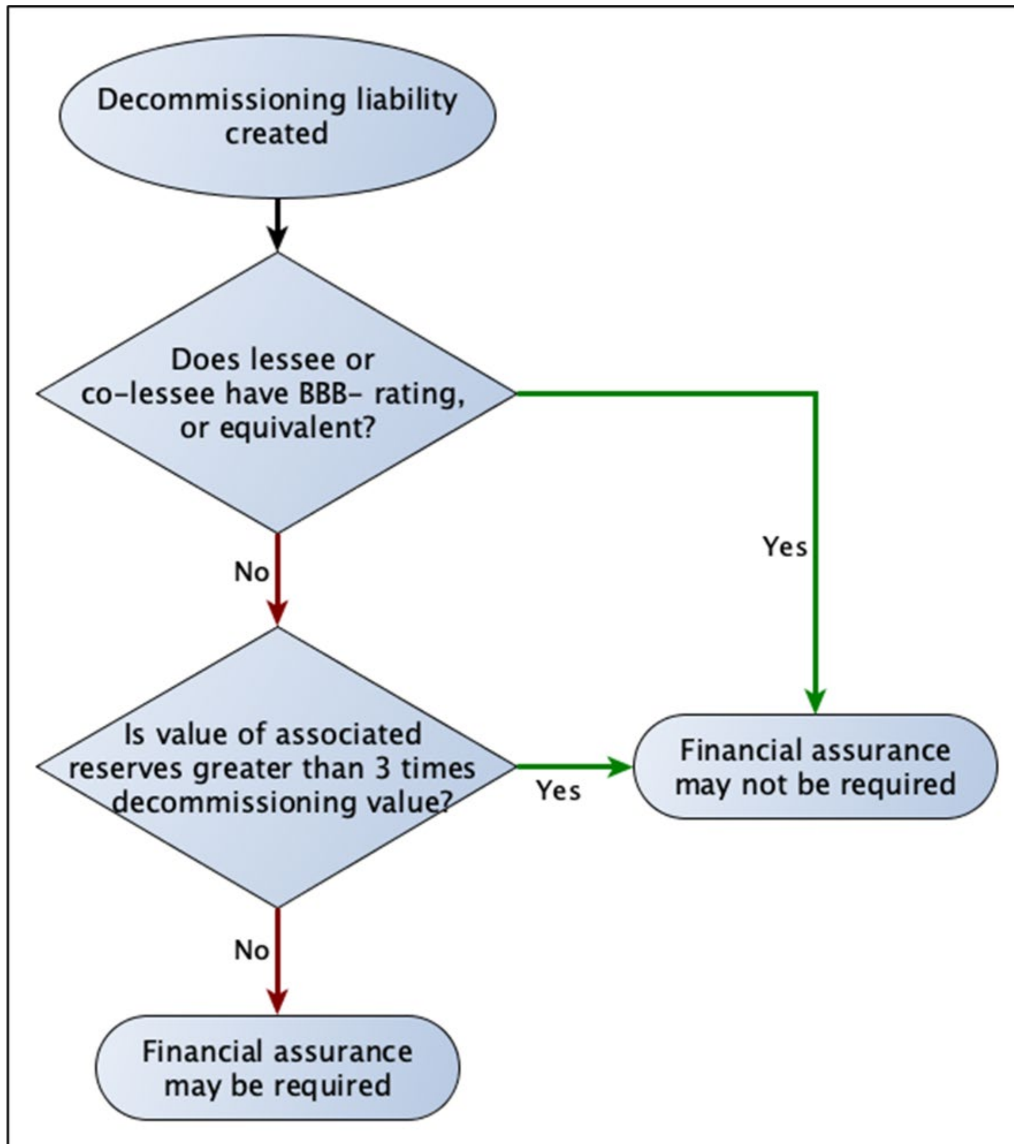

Figure 1: Proposed Rule Company and Liability Evaluation Process

RUE/ROW Grant Holders: must have an issuer credit rating from a NRSRO greater than or equal to either BBB- (S&P) or Baa3 (Moody's), or an equivalent proxy credit rating determined by BOEM (a company with one of these ratings is referred to for the purposes of this analysis as a Tier 1 company). BOEM will also consider the financial strength of co-grant holders with accrued liability for the facilities on such ROWs and RUEs, using the same issuer credit rating or proxy credit rating criteria set forth above (which is the same as that set forth for lessees). If a grant holder or co-grant holder meets the credit rating criteria set forth above, the grant holder may not be required to provide supplemental financial assurance for the grant. The

value of proved oil and gas reserves is not considered for grants because neither a RUE grant nor a pipeline ROW grant entitles the holder to any interest in oil and gas reserves.

BOEM is also proposing to institute a federal RUE base financial assurance requirement matching the existing base financial assurance requirement for state RUEs. Therefore, BOEM is proposing to revise the financial assurance regulations at Part 550 to clarify that any RUE grant holder, whether the RUE serves a state lease or an OCS lease, must provide base financial assurance of $500,000. In addition, BOEM is proposing to permit a party who has already provided BOEM with area wide lease financial assurance of more than $500,000 to use such financial assurance to also satisfy the proposed RUE base financial assurance requirement.

Third-party Guarantors: The eligibility to serve as a third-party guarantor would be determined using the same issuer or proxy credit rating criteria for a Tier 1 company discussed earlier in the first paragraph under "OCS Lessees." The guarantor must have an issuer credit rating from a nationally recognized statistical ratings organization (NRSRO) greater than or equal to either BBB- (S&P) or Baa3 (Moody's), or an equivalent proxy credit rating determined by BOEM.

Credit Ratings: The issuer credit ratings assigned by credit rating agencies provide investors a consistent and objective evaluation of a company's capability to meet its debt obligations. The issuer credit rating considers the company's current financial condition and the industry's performance and risk conditions.

BOEM is proposing to differentiate between lessees and grant holders that do not need to provide supplemental financial assurance (referred to in this analysis as Tier 1) and those that do need to provide supplemental financial assurance (referred to in this analysis as Tier 2) based on credit ratings. BOEM defines the demarcation between Tier 1 and Tier 2 as between BBB- and BB+ (S&P) and between Baa3 and Ba1 (Moody's). This demarcation is consistent with the "investment grade" determination, with companies with a rating of or above a BBB- or Baa3 considered investment grade and those with ratings below not considered investment grade. Thus, companies with an issuer credit rating greater than or equal to either BBB- (S&P), or Baa3 (Moody's), or an equivalent proxy credit rating determined by BOEM, would be considered "Tier 1" when applying the provisions of the proposed rule to determine their supplemental financial assurance requirement. Companies with an issuer credit rating of less than or equal to

BB+ (S&P), or Ba1 (Moody's), or an equivalent proxy credit rating determined by BOEM, or that choose not to provide audited financial statements to BOEM for a proxy credit rating determination, would be considered "Tier 2." **Table 4** below provides descriptions of the issuer credit ratings used by S&P and Moody's, which would form the basis for BOEM's proposed financial assurance evaluation, described in **Figure 1**. **Table 5** (S&P detail), provides the historic default rates for companies with the applicable issuer credit ratings.

Table 4: Credit Rating Descriptions (S&P and Moody's)

Long-Term Issuer Credit Ratings (S&P Ratings Services)*	Global Long-Term Rating Scale (Moody's)**
Tier 1	
An obligor rated '**AAA**' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P Global Ratings.	Obligations rated '**Aaa**' are judged to be of the highest quality, subject to the lowest level of credit risk.
An obligor rated '**AA**' has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.	Obligations rated '**Aa**' are judged to be of high quality and are subject to very low credit risk.
An obligor rated '**A**' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.	Obligations rated '**A**' are judged to be upper-medium grade and are subject to low credit risk.
An obligor rated '**BBB**' has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments.	Obligations rated '**Baa**' are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics.
Tier 2	
An obligor rated '**BB**' is less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions that could lead to the obligor's inadequate capacity to meet its financial commitments.	Obligations rated '**Ba**' are judged to be speculative and are subject to substantial credit risk.
An obligor rated '**B**' is more vulnerable than the obligors rated '**BB**', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.	Obligations rated '**B**' are considered speculative and are subject to high credit risk.
An obligor rated '**CCC**' is currently vulnerable and is dependent upon favorable business, financial, and economic conditions to meet its financial commitments.	Obligations rated '**Caa**' are judged to be speculative, of poor standing and are subject to very high credit risk.
An obligor rated '**CC**' is currently highly vulnerable. The '**CC**' rating is used when a default has not yet occurred, but S&P Global Ratings expects default to be a virtual certainty, regardless of the anticipated time to default.	Obligations rated '**Ca**' are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.
An obligor rated '**SD**' (selective default) or '**D**' is in default on one or more of its financial obligations including rated and unrated obligations but excluding hybrid instruments classified as regulatory capital or in nonpayment according to terms.	Obligations rated '**C**' are the lowest rated and are typically in default, with little prospect for recovery of principal or interest.

* Ratings from 'AA' to 'CCC' may be modified by S&P with the addition of a plus (+) or minus (-) sign to show relative standing within the rating categories. S&P source: https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352
** Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. Moody's source: https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_79004
‡ Obligors rated 'BB', 'B', 'CCC', and 'CC' are regarded as having significant speculative characteristics. 'BB' indicates the least degree of speculation and 'CC' the highest. While such obligors will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions.

BOEM reviewed historical default rates across the entire credit rating spectrum to inform and determine an appropriate level of acceptable public risk. The average S&P one-year default rate for BBB- rated companies from 1981 to 2020 was 0.24% (**Table 5**).[7] This average is significantly better than the average default rate for BB and lower rated companies (ranging from 0.32% to 28.3%). The one-year default rate (**Table 5**, first column) is the most relevant for this regulatory analysis, since BOEM is proposing to reevaluate the financial health of lessees and grantees at least annually. Under current policy, BOEM reviews the financial status of lessees and grantees at a minimum on an annual basis, the review typically corresponding with the release of audited annual financial statements. In addition, BOEM continually monitors the financial status of lessees and grantees throughout the year and can demand supplemental financial assurance through the Regional Director's regulatory authority as a result of any changes in a lessee or grantee's financial status. The historical default rates in these tables are not industry-specific. But credit ratings issued by credit rating agencies act as a consistent, forward-looking assessment of creditworthiness and as a pricing benchmark for relative value across industry sectors. Therefore, BOEM considers these default rates to be reasonable proxies for companies with corresponding issuer credit ratings responsible for OCS decommissioning obligations.

[7] The one-year cumulative default rate counts all defaults that happened within one year of the rating; these defaults could happen much sooner than one year from receiving such a rating.

Table 5: Global Corporate Average Cumulative Default Rates By Rating Modifier (1981-2020) (%)[8]

	Time Horizon (years)														
Rating	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
AAA	0	0.03	0.13	0.24	0.34	0.45	0.51	0.59	0.64	0.7	0.72	0.75	0.78	0.84	0.9
AA+	0	0.05	0.05	0.1	0.15	0.2	0.25	0.31	0.36	0.42	0.48	0.53	0.59	0.66	0.72
AA	0.02	0.03	0.08	0.21	0.35	0.47	0.59	0.7	0.78	0.87	0.95	1	1.1	1.16	1.22
AA-	0.03	0.08	0.16	0.23	0.31	0.41	0.47	0.52	0.57	0.62	0.68	0.73	0.75	0.8	0.84
A+	0.05	0.09	0.19	0.31	0.41	0.5	0.6	0.71	0.83	0.96	1.08	1.21	1.36	1.54	1.68
A	0.05	0.14	0.21	0.32	0.44	0.61	0.78	0.94	1.11	1.32	1.48	1.6	1.72	1.79	1.95
A-	0.06	0.16	0.25	0.36	0.51	0.66	0.87	1.03	1.15	1.27	1.37	1.5	1.62	1.74	1.84
BBB+	0.09	0.26	0.47	0.67	0.9	1.15	1.35	1.56	1.82	2.07	2.3	2.46	2.64	2.87	3.12
BBB	0.15	0.37	0.59	0.93	1.27	1.62	1.94	2.24	2.56	2.88	3.22	3.49	3.72	3.82	4.03
BBB-	0.24	0.69	1.27	1.93	2.63	3.24	3.78	4.28	4.69	5.04	5.43	5.75	6.05	6.51	6.86
BB+	0.32	0.97	1.76	2.55	3.35	4.14	4.82	5.32	5.92	6.52	6.93	7.42	7.92	8.27	8.82
BB	0.48	1.52	2.96	4.34	5.76	6.88	7.92	8.81	9.67	10.43	11.25	11.86	12.34	12.68	13.08
BB-	0.96	2.92	5.01	7.15	9.03	10.83	12.34	13.78	14.92	15.92	16.68	17.46	18.21	18.94	19.62
B+	1.98	5.42	8.82	11.73	14.02	15.8	17.43	18.86	20.17	21.37	22.41	23.14	23.92	24.65	25.35
B	3.13	7.35	11.11	14.19	16.69	18.97	20.62	21.87	23.07	24.26	25.02	25.78	26.37	26.89	27.44
B-	6.52	13.69	19.28	23.16	25.97	28.07	29.63	30.86	31.72	32.45	33.61	34.32	34.89	35.46	35.88
CCC/C	28.3	38.33	43.42	46.36	48.58	49.61	50.75	51.49	52.16	52.76	53.21	53.68	54.23	54.69	54.76
Investment grade	0.09	0.24	0.41	0.63	0.86	1.09	1.3	1.5	1.69	1.88	2.05	2.2	2.35	2.49	2.65
Speculative grade	3.71	7.19	10.18	12.63	14.64	16.3	17.68	18.83	19.86	20.81	21.61	22.29	22.93	23.49	24.04
All rated	1.53	3	4.27	5.35	6.25	7.01	7.64	8.18	8.67	9.12	9.5	9.83	10.13	10.41	10.69

Sources: S&P Global Ratings Research and S&P Global Market Intelligence's CreditPro®.

BOEM also reviewed 276 North American oil and gas companies that declared bankruptcy between January 2015 and June 2021. This period saw two significant downturns in global oil prices, resulting in significant financial distress to the industry. Therefore, BOEM considers this time period a very relevant sample to determine default risk. **Figure 2** displays the credit distribution one year prior to bankruptcy filing for the 276 analyzed companies.

[8] S&P historical default rates are not industry specific. S&P Global Ratings, 2020 Annual Global Corporate Default Study and Rating Transitions, April 7, 2021 (Table 26).

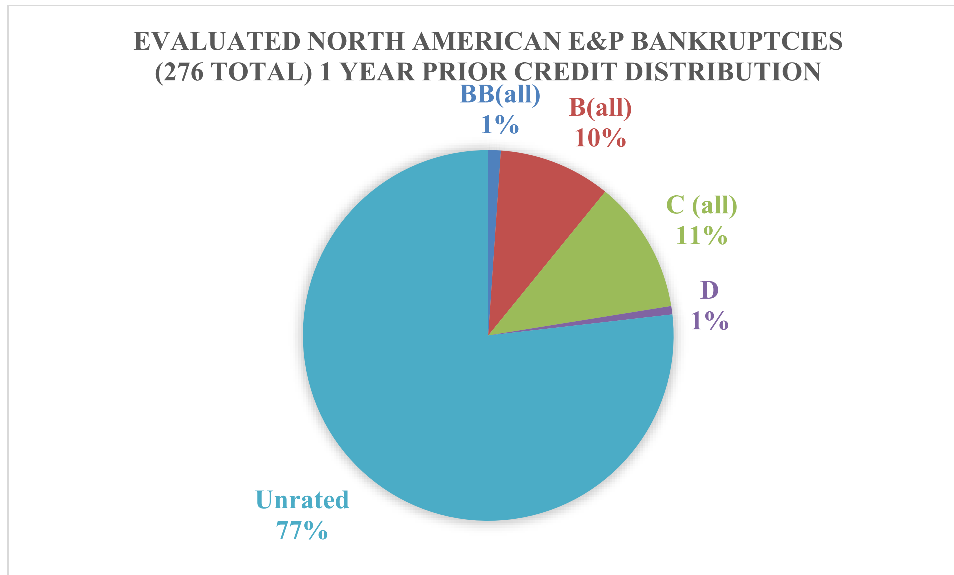

Figure 2: North American Exploration and Production Company Bankruptcies (2015 – 2021)

Figure 2 shows that most companies that entered bankruptcy between 2015-2021 did not have issuer credit ratings available. Under the proposed rule, BOEM would treat unrated companies as high-risk "Tier 2" companies. Assuming the company does not provide BOEM audited financials to determine a proxy rating or is unable to demonstrate sufficient proved oil and gas reserves, BOEM would demand financial assurance from them.

Out of the 276 companies analyzed, none of the companies were rated at or above BBB- at the time of bankruptcy nor within 10 years prior to bankruptcy. There were two cases of companies that maintained a BB- rating one year prior to bankruptcy and one company that maintained a BB rating one year prior to bankruptcy. Even three years prior to bankruptcy, there were only three instances of companies rated at BB- and two with a BB rating. Therefore, under the proposed rule, BOEM would have adequate time to secure needed financial assurance if a company were to drop below the proposed investment grade threshold.

II. Assumptions and Analytical Methodology

A. Affected Population

The proposed rule would affect current and future lessees, sublessees, RUE grant holders, and pipeline ROW grant holders. BOEM's analysis shows that this includes roughly 536 companies with record title ownership or operating rights in leases, and with RUE grants and

pipeline ROW grants. These lessees and grant holders are responsible for complying with BOEM regulations and therefore would bear the compliance costs and realize the cost savings associated with the provisions in this proposed rulemaking. The IRIA assumes the distribution of OCS liability across associated company ratings would remain constant over the twenty-year forecast horizon, but makes no assumptions about the number of affected companies in the sector. While we recognize that the industry will continue to evolve through the forecast period, this assumption allows the analysis to focus on the impacts of the proposed rulemaking rather than speculative assumptions on what may happen in the industry. To the extent the financial profiles of affected companies improve over the forecast period, the proposed rule would have compliance costs less than estimated in this analysis. To the extent the financial profiles of affected companies deteriorate over the forecast period, the proposed rule would have more compliance costs than estimated.

B. Decommissioning Activity Levels

Activity level forecasts are developed for planning areas that have existing or previous OCS activity, including the three Gulf of Mexico planning areas and existing liabilities in the Alaska and Pacific Regions. Decommissioning liabilities are forecast over the 20-year time period using two methods: (1) an annual decay rate for the Gulf of Mexico and (2) the forecasted decommissioning schedule in the Pacific. For the Gulf of Mexico Region, the total liability is reduced by an annual decay rate. The decay rate is based on a BOEM-contracted decommissioning trend study (Kaiser & Siddhartha, 2018)[9], see *Federal rulemaking portal: http://www.regulations.gov* (Docket ID: BOEM-2018-0033), completed in May 2018. Shallow water liabilities, *i.e.*, those in less than 200 meters of water depth, are expected to decay an *average* of 2.23% per year, decreasing by about 55% over the 20-year forecast, as the number of facilities decommissioned is projected to be greater than the number installed. This reflects the vintage of shallow water operations, including aging facilities and decreasing economic reserves. Deepwater liability levels are expected to remain constant over the 20-year period, as facilities are decommissioned at roughly the same rate they are installed. These two rates are incorporated

[9] https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Energy-Economics/External-Studies/BOEM-2019-023.pdf

into a composite decay rate for the Gulf of Mexico. **Table 6** shows the decay rate over the first five years of the analysis, and every five years thereafter.

Table 6 Gulf of Mexico Liability Decay Rate from 2021 Levels

		2022	2023	2024	2025	2026	2031	2036	2041
Shallow	26%	97.8%	95.5%	93.3%	91.1%	88.9%	77.7%	66.6%	55.4%
Deep	74%	100%	100%	100%	100%	100%	100%	100%	100%
Composite		**99.4%**	**98.8%**	**98.3%**	**97.7%**	**97.1%**	**94.2%**	**91.3%**	**88.4%**

Liabilities in the Pacific region are based on 23 facilities and their operations offshore California. Of these facilities, 18 are operational and on five, well plugging and abandonment operations have commenced. Due to the small number of these facilities compared to the number of facilities in the Gulf of Mexico, BOEM estimated a decommissioning year for each facility, based on a decommissioning schedule provided by the operator or a BOEM forecast. The Pacific Region’s liabilities are reduced over the 20 years of analysis based on BOEM’s estimated decommissioning years. There is one facility in the Alaska region, but it is not expected to be decommissioned within the 20-year time horizon of this analysis.

C. Credit Ratings

Under the proposed rule, BOEM would use issuer credit ratings from the major credit rating agencies, such as S&P or Moody’s, or BOEM would determine a proxy credit rating based on sufficient audited financial information provided by the lessee or grant holder or co-lessee, or co-holder. In some cases, an issuer credit rating may not be available, and company financials may not have been provided to BOEM. In these cases, the company and any associated liability would be considered unrated and categorized as Tier 2.

Tiers: For this analysis, BOEM uses the credit rating of lessees holding OCS decommissioning liabilities to assign companies to a “Tier.” Companies assigned an issuer credit rating greater than or equal to either BBB- (S&P), or Baa3 (Moody’s) or an equivalent proxy rating determined by BOEM using audited financial information are considered “Tier 1” for the purposes of this analysis. This rating is an investment grade credit rating. Companies that

do not meet this criterion or choose not to provide financials to BOEM for a proxy credit rating determination, are treated as "Tier 2" for this analysis.

The tier assignment is the primary method for determining the estimated financial assurance, if any, that BOEM may require. Under the proposed rule, when a lessee is evaluated for financial assurance, the presence of a current Tier 1 lessee or grant holder is sufficient to avoid a requirement to provide additional financial assurance for a given facility. If there is no current Tier 1 lessee or grant holder liable for decommissioning, additional financial assurance may be required unless the operator can demonstrate that the net present value of the proved oil and gas reserves on the lease exceeds three times the decommissioning cost associated with production of those reserves.

Table 8 provides the total combined decommissioning liability for Tier 1 and Tier 2 across OCS regions. **Table 9** and **Table 10** show liability by tiers and corresponding credit ratings used for this regulatory analysis.

D. Bond Premiums

For this analysis, BOEM uses credit ratings to inform the estimate for a bond premium a third-party surety company charges an OCS lessee or grant-holder for a required decommissioning bond. The bond premium cost factor used for this analysis is the sum of a bond's annual premium and the cost of collateral.[10] For investment grade companies, this cost can range from as low as $5.00 to more than $21.75 per $1,000 of bond face value. Sub-investment grade and speculative companies can be charged as high as $83.13 per $1,000. These premiums are fees associated with obtaining the required financial assurance from a surety and are not returned to the company upon successful decommissioning. BOEM is not estimating bond premiums for companies in bankruptcy proceedings as these companies are likely unaffected by this rulemaking.

[10] Companies generally use a Letter of Credit as the preferred financial vehicle to satisfy collateral requirements. rather than post the entire collateral as a cash deposit. The cost to maintain the credit is generally a percentage of the collateral value.

Table 7: Annual Surety Bond Cost per Thousand$ of Bond Value[11]

Surety Bond Premium Rate (Percent)	Annual Premium per Thousand Dollars of Bond Value (Dollars)	Collateral Requirement (Percent of Bond Value)	Collateral Requirement (Dollars per Thousand Dollars of Bond Value)	Annual Charge for Undrawn LC Balance (Percent)	Annual Charge for Undrawn LC Balance (Dollars per Thousand Dollars of Bond Value)	Total Annual Cost , Premium + Collateral (Dollars per Thousand Dollars of Bond Value)
Strongest Investment Grade						
0.50%	5.00	0.00%	-	n/a	n/a	5.00
0.75%	7.50	0.00%	-	n/a	n/a	7.50
1.00%	10.00	0.00%	-	n/a	n/a	10.00
Investment Grade						
1.00%	10.00	10.00%	100.00	1.75%	1.75	11.75
1.25%	12.50	10.00%	100.00	1.75%	1.75	14.25
1.50%	15.00	10.00%	100.00	1.75%	1.75	16.75
1.75%	17.50	10.00%	100.00	1.75%	1.75	19.25
2.00%	20.00	10.00%	100.00	1.75%	1.75	21.75
Speculative						
2.00%	20.00	25.00%	250.00	1.75%	4.38	24.38
2.25%	22.50	25.00%	250.00	1.75%	4.38	26.88
2.50%	25.00	25.00%	250.00	1.75%	4.38	29.38
2.75%	27.50	35.00%	350.00	1.75%	6.13	33.63
3.00%	30.00	35.00%	350.00	1.75%	6.13	36.13
Highly Speculative						
5.00%	50.00	50.00%	500.00	1.75%	8.75	58.75
7.00%	70.00	75.00%	750.00	1.75%	13.13	83.13

Table 7 presents the underlying bond cost estimates used to inform the premiums associated with the credit ratings used in this analysis.[12] These bond estimates were developed by Scully Capital and described in *Cost of Decommissioning Surety Bonds for Offshore Oil and Gas Projects.* For purposes of this analysis, *Strongest Investment Grade* is AAA to A-; *Investment Grade* is BBB+ to BBB-; *Speculative* is BB+ to B-, and *Highly Speculative* is CCC+ and below. If a company is not rated by a credit agency or by BOEM, this analysis estimates a bond cost using an average of the speculative and highly speculative bond costs weighted based on the distribution of BOEM's Tier 2 liability portfolio.

E. OCS Decommissioning Liability Estimates

The liability data used in this analysis originates from the portfolio of structures, wells, and pipelines in the OCS installed under BOEM/BSEE authority. When BOEM determines that additional financial assurance is needed from a lessee to guarantee compliance with lease

[11] "Charge for Undrawn LC Balance" is the cost to maintain a line of credit, often a financial vehicle used to satisfy collateral requirements.
[12] Scully Capital. 2018. *Cost of Decommissioning Surety Bonds for Offshore Oil and Gas Projects*. United States Department of the Interior, Bureau of Ocean Energy Management. Contract No. M16PC00006. See rulemaking docket BOEM-2018-0033.

obligations, the bureau relies on BSEE-provided estimates to determine the necessary amount. Prior to August 2016, BSEE's decommissioning cost estimates for Gulf of Mexico facilities were based primarily on BSEE-commissioned studies, publicly available information, internally derived estimates, and discussions with industry participants. BSEE identified potential improvements to its process and, in August 2016, implemented changes to improve the algorithms[13] employed to estimate decommissioning costs. These estimates were generally of a deterministic nature, i.e., all uncertainty is accounted for with a single value, and were still in use through 2020.

In December 2015, BSEE finalized its Decommissioning Costs Report Rule, which requires lessees and operating rights owners to submit summaries of their actual decommissioning expenditures.[14] Using the cost summaries, in 2020, BSEE's Decommissioning Support Section (DSS) analyzed the accumulated data, modified its methodology, and updated its decommissioning cost estimates. To inform its current cost estimates, BSEE evaluated the decommissioning expenditure data associated with approximately 1,176 wells, 258 structures, and 338 pipeline segments that were decommissioned in the Gulf of Mexico from April 2016 through June 2020. BSEE introduced distribution analyses of the cost estimates to produce probabilistic cumulative frequency estimates for different asset-classes of OCS facilities. Instead of a deterministic estimate specifying that the cost to decommission an OCS facility will be a specific dollar amount, BSEE's current methodology provides multiple decommissioning expenditure levels associated with the cumulative likelihood of not being exceeded. They do not represent a percentage of the cost to decommission any given facility, rather they represent the statistical likelihood that the specified value will be equal to or greater than the amount ultimately required (i.e., there is a X percent chance that the cost will be equal to or less than Y). BSEE, using actual cost data, now presents BOEM with a range of facility decommissioning estimates at the P50, P70 and P90 levels – values with a 50%, 70% and 90% chance of providing sufficient coverage for decommissioning obligations.

BOEM has selected BSEE's P70 estimate to use when determining supplemental financial assurance requirements. In an ideal scenario, BOEM would be able to efficiently set

[13] A set of equations that use variables such as type of wells, structures, site clearance and verification, and depth.
[14] https://www.bsee.gov/sites/bsee.gov/files/fact-sheet/decommissioning-costs-fact-sheet-2016.pdf

financial assurance levels at the exact level to reflect the actual decommissioning cost of a facility. As that cost is unknown until decommissioning is completed, and BSEE is receiving real-world information concerning decommissioning costs from operators, BOEM relies on BSEE's provided statistical levels. BOEM's proposal to use P70 is intended to balance the risk of being underfunded at lower financial assurance levels against the risk of setting a financial assurance level at higher p-values and burdening any lessee that can efficiently decommission at a lower cost. BOEM also recognizes, that it is only in very limited circumstances that these bonds would be used to pay for decommissioning (i.e., when a company goes bankrupt and is unable to pay for their decommissioning liability and the remaining reserves are insufficient to cover the decommissioning costs).

At the portfolio level, financial assurance levels at P70 would reduce offshore decommissioning risk to taxpayers relative both to previous BSEE deterministic decommissioning estimates and to a methodology based on P50, while attempting to minimize offshore burden on available capital for continued OCS investment imposed by using P90. While financial assurance estimates are developed at the facility level, financial assurance demands, and the resulting bonds are issued at a lease level. Functionally this has an additional risk mitigation impact in the event of a default event. To the extent that the P70 figure exceeds the actual decommissioning costs of any of the associated lease facilities (which would be expected 70% of the time), this financial assurance excess would be available to cover, in whole or in part, those instances where the decommissioning cost of an associated lease facility exceeds the P70 value (30% probability).

For this analysis, BOEM calculates the rule's impacts using the P70 estimate. Given the uncertainty associated with estimating decommissioning costs, BOEM requests public comments on the appropriate balance to seek when selecting a p-value, any potential unrecognized risks associated with its selection, and the associated impacts of the selection that BOEM does not have the data to evaluate, particularly with regard to the need to balance the impact to private companies and small entities with the need to limit taxpayer risk.

F. Cost to Government to Perform Work

BSEE's new estimates do not reflect any cost adjustment for potential increases as a result of the government, rather than a private party, contracting for decommissioning work.

BSEE states in the June 2020 *Decommissioning Cost Estimating Update* that "BOEM should also take into account the fact that, in general, industry is in a better position to perform such decommissioning and if the Government were required to contract out such work, costs would ultimately be higher than what has been expended by industry."[15] BSEE's data does not differentiate between companies with in-house decommissioning capabilities versus companies that must externally contract for the work. Presumably the latter would reflect cost estimates closer to what the government could expect to receive.

BSEE's new estimates are presented on a "one-off" asset-by-asset basis. They assume that the decommissioning of each well, structure, or pipeline segment is performed as a separate event with no explicit economies of scale available, regardless of how many are located on the lease. Though the costs are presented this way, it is possible that the decommissioning costs reported to BSEE may have benefited from economies of scale available to the operator, which is appropriate given that BOEM expects there would be economies of scale in actually conducting the decommissioning work.

G. Existing Bonds

BOEM has accumulated an existing portfolio of bonds to date (see **Table 19**). The proposed rule increases financial assurance requirements over the baseline, but for some companies and facilities owned by Tier 1 lessees, the face value of BOEM's existing bond portfolio still exceeds the value of financial assurance that would be required under the proposed rule. For these properties, BOEM would likely cancel their existing bonds under the proposed action. While BOEM would evaluate each company's liability on a case-by-case basis, this analysis reconciles the total value of bonds currently posted with the total financial assurance required under the proposed action. The difference in bond premiums between the current bond portfolio and the required financial assurance portfolio under the proposed action is used to calculate the net bond premium costs.

[15] As the government does not regularly perform decommissioning work as a first-party, industry is generally expected to have the relevant facility familiarity, subject-matter expertise, and existing decommissioning service-company relationships to more effectively plan, mobilize, and implement the work in a timely fashion.

H. Reserve Assumptions

When the credit rating analysis indicates that supplemental financial assurance is required, the proposed rule would provide that the additional financial assurance would not be required if the net present value of the lease reserves exceeds three times the cost of the decommissioning associated with the production of those reserves. The lessee would have the burden of submitting the technical information that BOEM would require to assess the reserves.

BOEM used the following assumption for its reserves analysis:

- Qualifying reserves are 1P reserves (Proved Developed Producing, Proved Developed Non-Producing, and Proved Undeveloped) as measured by the Securities and Exchange Commission (SEC) Present Value Pricing Methodology.

The Tier 2 bonding estimates in **Table 7**, **Table 10**, and **Table 11** are not adjusted to remove select deepwater properties that are estimated to have at least "3X" reserves. The results of the analysis with this reserve adjustment are shown in **Table 22**.

I. Forecast Horizon

Adhering to the guidance in OMB Circular A-4, "Regulatory Analysis," this IRIA presents an estimated annual stream of benefits and costs expected to result from the proposed rule. The first year in this stream is the year in which the rule will begin to have effects (the effective date in the published final rule), which was assumed to be 2022 at the time this analysis was conducted; this will be re-evaluated and updated for the final rule analysis. BOEM does not anticipate that the change in effective date would have meaningful impact on the analysis results. BOEM considered a number of factors when determining how far into the future to forecast the impacts. The financial health of lessees and grant holders is a primary basis for the compliance cost and cost savings estimated in this proposed rule. While specific lessee and grant holder financial health is uncertain over the long-term and heavily dependent on market conditions, BOEM assumes the aggregate financial profile of affected lessees and grant holders will remain consistent. Additionally, offshore oil and gas facilities typically have a long lifecycle, often decades, and current regulations do not require decommissioning until the end of the facilities' useful life. Consequently, the economic effects from this proposed rule may affect existing offshore facility liabilities for many years and may not be fully captured if BOEM's time horizon

for analysis is too short. Due to this long time horizon of impacts, the availability of facility decommissioning estimates from BSEE, and given the certainty of decommissioning even if not imminent, BOEM has elected to forecast 20 years, through 2041, concluding that it is a suitable time horizon to reasonably capture all the significant benefits and costs likely to result from the proposed rule without introducing speculative and less reliable estimates likely if extended beyond 20 years. Activity beyond 20 years is more uncertain and would not significantly affect the discounted quantitative results.

J. Third-Party Guarantees

The proposed rule assumes that some lessees and grant holders will opt to use a third-party guarantee or need a guarantee because they either do not have a credit rating or do not have their own audited financial statements. For the purposes of this RIA, BOEM assumes that existing guarantors will qualify as a guarantor under the proposed rule. The proposed rule eliminates the requirement that a guarantor provide an unlimited guarantee covering all obligations on the lease or grant and simplifies the financial analysis (credit rating criteria only) to be a qualified guarantor. Given these provisions and that BOEM has received third-party guarantees from corporate parents in the past under more stringent regulatory provisions, BOEM assumes parent companies at least will continue to provide guarantees for their subsidiaries and will continue to qualify to do so.

For those Tier 2 lessees and grant holders with decommissioning liability, BOEM would require additional financial assurance for liability that is:

a) Not held by a liable Tier 1 co-lessee; or

b) Not covered by a liable, qualified guarantor.

Under the existing regulations and the proposed rule, after the termination of the period of liability, guarantors remain liable for obligations that accrued during the period of liability.

K. Analytical Methodology

To calculate the costs of the proposed regulation, BOEM first estimated the liability portfolio by calculating the aggregate decommissioning costs for all facilities. Decommissioning liabilities are then split between those with a Tier 1 (BBB- and above) or Tier 2 (BB+ and below)

owner or co-lessee or grant holder. A Tier 1 facility is a facility whose decommissioning is the responsibility of a company with a rating sufficient to meet the Tier 1 definition used in this analysis and as such, requires no additional financial assurance under the proposed action.

A Tier 2 facility is a facility whose decommissioning is the responsibility of a company that does not meet the Tier 1 definition in this analysis (a Tier 2 company). Decommissioning costs of a facility on a lease or grant with a Tier 2 company as the current lessee/grant holder is a Tier 2 liability/Tier 2 facility and require supplemental financial assurance, though some of that required additional security is included in the baseline for this analysis.

For the analysis, Tier 2 properties are further divided into sole liability properties and joint liability properties categories. A Tier 2, sole liability facility is one owned by a single Tier 2 company, i.e., there are no co- or predecessor lessees or grant holders in the ownership history. In this category, lessees and grant holders have already posted additional security under the current regulations and that bonding is incorporated into the baseline. A Tier 2 joint liability property has more than one liable company, but no Tier 1 company as a current lessee or grant holder. This proposed rule may require additional security for a decommissioning liability currently held only by Tier 2 companies, regardless of how many Tier 2 or Tier 1 companies are in the property's chain of title. While the proposed rule maintains flexibility to address Tier 2 companies' liabilities on a case-by-case basis to best protect the interests of the American taxpayers, this analysis assumes that BOEM will require additional financial assurance for a decommissioning liability on a lease held only by Tier 2 companies when that lease does not have sufficient reserves (see **Reserve Assumptions**). The bonding cost for covering this liability is considered an incremental regulatory burden required by the proposed rule. Together, the financial assurance required to secure joint and sole Tier 2 liabilities make up the total amount of security that would be required under the proposed regulation.

BOEM further divides the liability within the Tier 1[16], Sole Tier 2, and Joint Tier 2 categories by credit ratings to then estimate the anticipated financial assurance cost to cover that liability. BOEM uses the credit rating assigned to the current lessee or grant holder, since this is the entity that would be required to post the financial assurance. In the case of multiple owners,

[16] Tier 1 companies are not required to provide financial assurance under the proposed scheme.

the liability is shared among the owners. While only one financial assurance instrument is provided for a liability, the analytical approach used for this analysis assumes owners share the financial assurance cost among all the partners equally.[17] BOEM uses the assigned credit rating to determine the applicable bond pricing rate which is then used to calculate the amount it would cost (i.e., in bond premiums) to cover the liability within each credit rating category.

III. Compliance Costs and Savings of the Proposed Rule

This section presents the expected proposed rule compliance costs and cost savings compared to the baseline. The proposed action would result in a change from the baseline. Most of the regulatory changes are expected to be no cost or cost neutral provisions. However, amendments to provisions in Sections 556.901(d), 550.166(b), and 550.1011(d) would increase or decrease the compliance burdens and costs to the regulated industry compared to the baseline. To summarize the costs of these specific provisions, BOEM considered the estimated annualized average costs as well as 10- and 20-year discounted totals (in 2021 dollars) to estimate the present value of the costs. In accordance with OMB guidance on conducting regulatory analysis (OMB Circular A-4, "*Regulatory Analysis*," 2003), BOEM used discount rates of 3 and 7 percent to calculate the discounted net present value of the savings of the proposed rule.

BOEM estimates that the information collection burdens for the proposed rule (on a net basis) are very close to the same as those for the existing regulatory framework. The proposed rule preamble provides additional information on information collection burdens. The proposed amendments would add limited new reporting, recordkeeping, or other administrative compliance requirements. For example, BOEM expects companies to have reserves information available as a matter of those companies' general ongoing operations; however, there would likely be a nominal administrative expense involved in submitting these reserve reports to BOEM in an appropriate format. Companies seeking to avoid the requirement to post supplemental financial assurance already provide BOEM audited financials as part of that process and so, the additional reserve reports would not be an incremental expense. The

[17] BOEM tried to distribute the bonding cost among the owners in proportion to the percentage of record title ownership rather than equally. The manner in which liability is assigned (by well, facility, pipeline segment) and the manner that bonding is managed (by lease and also includes operating rights owners) makes this calculation very complicated. Because the bond premiums within Tier 2 do not vary by orders of magnitude, BOEM believes the estimates are reasonably close to the result expected if allocated by percentage of ownership.

company could also choose to avoid this expense by furnishing financial assurance instead. Other companies would realize reduced paperwork burdens due to the simplified evaluation of the need for financial assurance for lessees and grant holders.[18] Most other proposed changes are either textual clarifications or remove or reduce existing compliance burdens.

A. Estimated Compliance Costs and Cost Savings of the Proposed Rule

BOEM's estimate for the incremental compliance costs and cost savings rests upon the multiple assumptions discussed in the last section. This section presents BOEM's methodology and calculations for the incremental compliance cost and cost savings for the proposed action. A summary of this proposed rule's costs can be found in **Table 1** and **Table 24**.

The following tables present BOEM's calculation methodology to estimate the bonding required and bonding that is expected to be canceled if the proposed action is implemented. To begin, **Table 8** shows BSEE's current estimate of decommissioning liability, which is $42.8 billion. Then, BOEM presents in **Table 9** and **Table 10** a summary of the entire population of Tier 1 and Tier 2 decommissioning liabilities and the company credit rating of the current lessees and grant holders from BOEM's database as of November 2021. Current lessees and grant holders are required to decommission OCS properties with the associated decommissioning liabilities shown in these tables.

The decommissioning liability shown in **Table 9** (Tier 1) is for companies in either Tier 1 or with a Tier 1 co-lessee. These liabilities do not require additional security under this proposed action.

As described in the previous section, the Tier 2 liabilities shown in **Table 10** do require additional security under this proposed action. However, some of these liabilities currently have additional security under the baseline dependent on whether the liability was a sole liability or joint liability and in certain instances the credit ratings of the liable parties. **Table 11** shows the decommissioning liabilities for Tier 2 sole liability properties and **Table 12** shows the liabilities for Tier 2 joint liability properties. **Table 11** and **Table 12** sum to equal the total Tier 2 liabilities shown in **Table 10**. The regulatory baseline is the current practice, (partial implementation of

[18] These arise from, among other changes, the reduction in the number of criteria evaluated, elimination of the need for audited financial information for those with qualifying credit ratings, and elimination of the need to provide proved reserve information if additional security is not required because of a credit rating or proxy credit rating.

NTL No. 2016-N01) as described in the section titled **Baseline.** Under the baseline, BOEM required additional bonding from, or issued bond demands to, companies for decommissioning liabilities that are the sole responsibility of a single Tier 2 company with an issuer or proxy credit rating equal to or below B+.[19] This means that the bonding premium costs associated with sole liability properties with an issuer or proxy credit rating equal to or below B+ are included in the baseline.

Table 13 shows these decommissioning liabilities for Tier 2 sole liabilities that are included in the baseline (those with an issuer or proxy credit rating equal to or below B+). The table also shows the estimated bonding premium cost based on the Scully rates (described in **Table 7**) per $1,000 of liability**.** The estimated bonding premium cost for Tier 2 sole liabilities ($19.5 million in 2021), is the bonding cost assumed to be part of the regulatory baseline. **Table 14** shows the sole liabilities for companies with a BB-, BB, or BB+ rating and the estimated bonding premium cost. These costs are costs under the proposed rule.

Table 15 shows the incremental joint Tier 2 liability that would require bonding under the proposed rule along with the bond premium costs for these liabilities. Because BOEM has redefined Tier 2 to include the double B category of ratings, **Table 16** shows the joint Tier 2 liabilities (from **Table 15**) and the BB+, BB, and BB- sole liabilities (from **Table 14**). This table includes only the incremental bonding required under the proposed action. This table excludes the liabilities that are currently the joint and several liability of a Tier 1 co-lessee or co-grant holder as they would not require bonding under the proposed action. The proposed rule would require additional bonds or other financial assurance above the baseline to be posted for all liabilities with no liable current owners other than current Tier 2 companies. BOEM has estimated an incremental cost ($785 million in 2021) for these bonds in **Table 16**. The $785 million is the estimated annual compliance cost of the proposed action.

Table 17 shows the liability profile under the baseline, compared with **Table 18**, the liability under the proposed rule. In both cases, total decommissioning liabilities are $42.8

[19] BOEM is currently holding bonds covering Tier 2 sole liabilities shown in **Table 10**. While BOEM only issued bond demands for Tier 2 sole liabilities, it has continued to hold bonds previously provided to BOEM for Tier 1 liabilities and Tier 2 joint liabilities.

billion. The tables summarize the distribution of all $42.8 billion and show the incremental bonding costs resulting from the proposed rule.

Under current partial implementation (baseline), no bond demands are issued for OCS properties that have a Tier 1 company in the chain of title. However, BOEM currently holds bonds for companies that fall into this category. **Table 19** shows the inventory of bonds currently held by BOEM as of November 2021. BOEM is holding $3.3 billion in bonds with estimated 2021 annual premiums of approximately $125 million. Most of these bonds were provided to BOEM prior to the issuance of NTL No. 2016-N01. BOEM has continued to hold these bonds during the partial implementation of this NTL. Under the proposed action, any OCS liability backed by a Tier 1 company, either as a lessee, co-lessee, grant holder, co-grant holder or guarantor, would not require additional financial security. Therefore, if the proposed action is implemented, BOEM would release all additional security covering any property with a current Tier 1 lessee, grant holder, or guarantor. The net face value of bonds that BOEM estimates would be required from lessees and/or grant holders pursuant to the proposed rule is shown in **Table 20**.

Table 8: Total OCS Decommissioning Liability - Tier 1 and Tier 2 Combined (2021)

GOM Lease Liability	GOM ROW Liability	GOM RUE Liability	Pacific Liability	Alaska Liability	Total Liability
$38,204,304,736	$2,213,573,752	$733,086,692	$1,661,157,800	$49,400,000	$42,861,522,980

Table 9: All OCS "Tier 1" OCS Decommissioning Liabilities by Company Credit Rating (2021)

Rating of current Owners	Gulf of Mexico			Pacific Liability	Alaska Liability	Total Decommissioning Liability
	Lease Liability	ROW Liability	RUE Liability			
AAA	$0	$0	$0	$0	$0	$0
AA+	$0	$0	$0	$0	$0	$0
AA	$201,489,631	$3,130,056	$3,255,769	$0	$0	$207,875,456
AA-	$10,705,056,589	$91,065,617	$83,313,207	$650,749,400	$0	$11,530,184,813
A+	$4,273,064,700	$189,238,299	$79,216,643	$0	$0	$4,541,519,642
A	$2,200,277,888	$15,511,416	$0	$0	$7,900,000	$2,223,689,304
A-	$635,206,575	$130,065,376	$130,269,185	$0	$0	$895,541,136
BBB+	$1,804,219,882	$76,638,000	$30,422,265	$0	$0	$1,911,280,147
BBB	$746,271,907	$326,152,342	$0	$0	$0	$1,072,424,249
BBB-	$92,215,316	$142,712,629	$0	$0	$0	$234,927,945
TOTAL	$20,657,802,488	$974,513,735	$326,477,069	$650,749,400	$7,900,000	**$22,617,442,692**

Note: This table represents the total decommissioning liability for all facilities within Tier 1. No bonding is required under the proposed rule.

Table 10: All OCS "Tier 2" Decommissioning Liabilities by Company Credit Rating (2021)

Rating of current owners	Gulf of Mexico			Pacific Liability	Alaska Liability	Total Decommissioning Liability
	Lease Liability	ROW Liability	RUE Liability			
BB+	$1,702,278,743	$100,388,729	$9,458,841	$312,489,600	$0	$2,124,615,913
BB	$1,715,920,571	$89,721,154	$4,081,805	$0	$0	$1,809,723,530
BB-	$3,382,116,547	$247,001,685	$172,887,262	$0	$41,500,000	$3,843,505,494
B+	$10,181,217	$90,072,560	$0	$98,362,000	$0	$198,615,777
B	$891,550,812	$32,541,621	$3,513,489	$0	$0	$927,605,922
B-	$2,381,684,376	$93,518,613	$7,962,738	$0	$0	$2,483,165,727
CCC+	$1,082,727,454	$76,362,474	$9,771,626	$0	$0	$1,168,861,554
CCC	$0	$0	$0	$0	$0	$0
CCC-	$2,313,915,868	$52,618,423	$31,473,526	$0	$0	$2,398,007,817
Not Rated	$4,066,126,660	$456,834,758	$167,460,336	$599,556,800	$0	$5,289,978,554
TOTAL	**$17,546,502,248**	**$1,239,060,017**	**$406,609,623**	**$1,010,408,400**	**$41,500,000**	**$20,244,080,288**

Note: This table represents the total decommissioning liability for all facilities within Tier 2.

Table 11: "Tier 2" Sole Decommissioning Liabilities by Company Credit Rating (2021)

Rating of current owners	Gulf of Mexico			Pacific Liability	Alaska Liability	Total Decommissioning Liability
	Lease Liability	ROW Liability	RUE Liability			
BB+	$27,482,658	$0	$0	$129,546,800	$0	$157,029,458
BB	$0	$514,762	$0	$0	$0	$514,762
BB-	$103,385,252	$21,849,420	$0	$0	$0	$125,234,672
B+	$0	$0	$0	$98,362,000	$0	$98,362,000
B	$7,145,127	$0	$0	$0	$0	$7,145,127
B-	$82,351,483	$0	$0	$0	$0	$82,351,483
CCC+	$1,135,399	$0	$0	$0	$0	$1,135,399
CCC	$0	$0	$0	$0	$0	$0
CCC-	$57,434,315	$0	$0	$0	$0	$57,434,315
Not Rated	$12,687,790	$500,086	$0	$202,513,200	$0	$215,701,076
SUBTOTAL	**$291,622,024**	**$22,864,268**	**$0**	**$430,422,000**	**$0**	**$744,908,292**

Note: This table represents the total liability required to be covered under the proposed rule for solely held facilities within Tier 2.

Table 12: "Tier 2" Joint Decommissioning Liabilities by Company Credit Rating (2021)

Rating of current owners	Gulf of Mexico			Pacific Liability	Alaska Liability	Total Decommissioning Liability
	Lease Liability	ROW Liability	RUE Liability			
BB+	$1,674,796,085	$100,388,729	$9,458,841	$182,942,800	$0	$1,967,586,455
BB	$1,715,920,571	$89,206,392	$4,081,805	$0	$0	$1,809,208,768
BB-	$3,278,731,295	$225,152,265	$172,887,262	$0	$41,500,000	$3,718,270,822
B+	$10,181,217	$90,072,560	$0	$0	$0	$100,253,777
B	$884,405,685	$32,541,621	$3,513,489	$0	$0	$920,460,795
B-	$2,299,332,893	$93,518,613	$7,962,738	$0	$0	$2,400,814,244
CCC+	$1,081,592,055	$76,362,474	$9,771,626	$0	$0	$1,167,726,155
CCC	$0	$0	$0	$0	$0	$0
CCC-	$2,256,481,553	$52,618,423	$31,473,526	$0	$0	$2,340,573,502
D	$0	$0	$0	$0	$0	$0
Not Rated	$4,053,438,870	$456,334,672	$167,460,336	$397,043,600	$0	$5,074,277,478
SUBTOTAL	**$17,254,880,224**	**$1,216,195,749**	**$406,609,623**	**$579,986,400**	**$41,500,000**	**$19,499,171,996**

Note: This table represents the total liability required to be covered under the proposed rule for jointly held facilities within Tier 2.

Table 13: Estimated Bonding Cost for Tier 2 Sole Liabilities included in the Baseline

Rating of current owners	Gulf of Mexico OCS			Pacific Liability	Alaska Liability	Total Decommissioning Liability	Bond Rate[20]	Estimated 2021 Premiums
	Lease Liability	ROW Liability	RUE Liability					
B+	$0	$0	$0	$98,362,000	$0	$98,362,000	$ 31.43	$3,091,518
B	$7,145,127	$0	$0	$0	$0	$7,145,127	$ 33.78	$241,362
B-	$82,351,483	$0	$0	$0	$0	$82,351,483	$ 36.13	$2,975,359
CCC+	$1,135,399	$0	$0	$0	$0	$1,135,399	$ 58.75	$66,705
CCC	$0	$0	$0	$0	$0	$0	$ 66.88	$0
CCC-	$57,434,315	$0	$0	$0	$0	$57,434,315	$ 75.00	$4,307,765
Not Rated	$12,687,790	$500,086	$0	$202,513,200	$0	$215,701,076	$ 40.93	$8,828,645
TOTAL	**$160,754,114**	**$500,086**	**$0**	**$300,875,200**	**$0**	**$462,129,400**		**$19,511,354**

Note: This table represents the costs under the RIA's baseline

[20] Dollars per thousand dollars of bond coverage.

Table 14: Estimated Bonding Cost for Tier 2 Sole Liabilities Incremental Cost of the Proposed Rule (2021)

Rating of current owners	Gulf of Mexico OCS			Pacific Liability	Alaska Liability	Total Decommissioning Liability	Bond Rate ($)	Estimated 2021 Premiums
	Lease Liability	ROW Liability	RUE Liability					
BB+	$27,482,658	$0	$0	$129,546,800	$0	$157,029,458	24.38	$3,828,378
BB	$0	$514,762	$0	$0	$0	$514,762	26.73	$13,760
BB-	$103,385,252	$21,849,420	$0	$0	$0	$125,234,672	29.08	$3,641,824
SUBTOTAL:	**$130,867,910**	**$22,364,182**	**$0**	**$129,546,800**	**$0**	**$282,778,892**		**$7,483,962**

Note: This table represents the rule's new costs for solely held facilities for which the owners currently do not bond under the baseline.

Table 15: Estimated Bonding Cost for Tier 2 Joint Liabilities: Incremental Cost of the Proposed Rule (2021)

Rating of current owners	Gulf of Mexico OCS			Pacific Liability	Alaska Liability	Total Decommissioning Liability	Bond Rate ($)	Estimated 2021 Premiums
	Lease Liability	ROW Liability	RUE Liability					
BB+	$1,674,796,085	$100,388,729	$9,458,841	$182,942,800	$0	$1,967,586,455	24.38	$47,969,758
BB	$1,715,920,571	$89,206,392	$4,081,805	$0	$0	$1,809,208,768	26.73	$48,360,150
BB-	$3,278,731,295	$225,152,265	$172,887,262	$0	$41,500,000	$3,718,270,822	29.08	$108,127,316
B+	$10,181,217	$90,072,560	$0	$0	$0	$100,253,777	31.43	$3,150,976
B	$884,405,685	$32,541,621	$3,513,489	$0	$0	$920,460,795	33.78	$31,093,166
B-	$2,299,332,893	$93,518,613	$7,962,738	$0	$0	$2,400,814,244	36.13	$86,741,419
CCC+	$1,081,592,055	$76,362,474	$9,771,626	$0	$0	$1,167,726,155	58.75	$68,603,912
CCC	$0	$0	$0	$0	$0	$0	66.88	$0
CCC-	$2,256,481,553	$52,618,423	$31,473,526	$0	$0	$2,340,573,502	75.00	$175,550,815
Not Rated	$4,053,438,870	$456,334,672	$167,460,336	$397,043,600	$0	$5,074,277,478	40.93	$207,690,177
SUB-TOTAL	**$17,254,880,224**	**$1,216,195,749**	**$406,609,623**	**$579,986,400**	**$41,500,000**	**$19,499,171,996**		**$777,287,687**

Note: This table represents the rule's new costs for the jointly held facilities for which owners do not bond under the baseline.

Table 16: Incremental Sole and Joint Tier 2 Liabilities: Incremental Cost of the Proposed Rule (2021)

Rating of current owners	Gulf of Mexico OCS			Pacific Liability	Alaska Liability	Total Decommissioning Liability	Bond Rate	Estimated 2021 Premiums
	Lease Liability	ROW Liability	RUE Liability					
BB+	$1,702,278,743	$100,388,729	$9,458,841	$312,489,600	$0	$2,124,615,913	$ 24.38	$51,798,136
BB	$1,715,920,571	$89,721,154	$4,081,805	$0	$0	$1,809,723,530	$ 26.73	$48,373,910
BB-	$3,382,116,547	$247,001,685	$172,887,262	$0	$41,500,000	$3,843,505,494	$ 29.08	$111,769,140
B+	$10,181,217	$90,072,560	$0	$0	$0	$100,253,777	$ 31.43	$3,150,976
B	$884,405,685	$32,541,621	$3,513,489	$0	$0	$920,460,795	$ 33.78	$31,093,166
B-	$2,299,332,893	$93,518,613	$7,962,738	$0	$0	$2,400,814,244	$ 36.13	$86,741,419
CCC+	$1,081,592,055	$76,362,474	$9,771,626	$0	$0	$1,167,726,155	$ 58.75	$68,603,912
CCC	$0	$0	$0	$0	$0	$0	$ 66.88	$0
CCC-	$2,256,481,553	$52,618,423	$31,473,526	$0	$0	$2,340,573,502	$ 75.00	$175,550,815
Not Rated	$4,053,438,870	$456,334,672	$167,460,336	$397,043,600	$0	$5,074,277,478	$ 40.93	$207,690,177
SUBTOTAL:	**$17,385,748,134**	**$1,238,559,931**	**$406,609,623**	**$709,533,200**	**$41,500,000**	**$19,781,950,888**		**$784,771,650**

Incremental costs under proposed rule for sole (companies rated BB) and joint liability.

Table 17: Baseline Liabilities (Partial Implementation of NTL No. 2016-N01)[21]

		Sole Liability Properties	Joint Liability Properties (Co-lessee, Co-grant holder or Predecessor)
Lessee or Grant Holders (including co-lessees/holders and predecessor lessees/holders)	**Tier 1 (BB- or above)**	$30.4 billion liability	
	Tier 2 (B+ or below)	$462 million liability (supplemental bonding required)	$12.0 billion liability

[21] Lessees/holders with a credit rating of at least BB- (S&P), or Ba3 (Moody's) are considered "Tier 1" in the baseline. Companies that do not meet these criteria, or choose not to provide financials to BOEM, are considered "Tier 2." See discussion of "Tier 1" and "Tier 2" at pp. 18-21.

Table 18: Decommissioning Liability under Proposed Action (2021)

<table>
<tr><th></th><th></th><th>Sole Liability Properties</th><th>Joint Liability Properties
(Co-lessee)</th></tr>
<tr><td rowspan="2">Company or Co-lessee Tier</td><td>Tier 1
(BBB- or above)</td><td colspan="2">$22.6 billion liability
No supplemental bonding required
(Table 9)</td></tr>
<tr><td>Tier 2
(BB+ or below)</td><td>Total Liability: $745 million (Table 11)

Sole Liability Included In the Baseline: $462 million
Baseline Costs (2021 annual premium): $19.5 million (Table 13)

Incremental Liability Needing Supplemental Bonding Under Proposed Rule:
$283 million
Incremental Cost (2021 annual premium): $7.5 million (Table 14)</td><td>Joint Liability Needing Supplemental Bonding Under Proposed Rule: $19.5 billion
Incremental Cost (2021 annual premium):
$777 million
(Table 15)</td></tr>
</table>

Table 19: Bonds Currently Held by BOEM (2021)

	Gulf of Mexico OCS			Pacific Bonds	Alaska Bonds	Total Bond Value	Bond Rate	Estimated 2021 Premiums
	Lease Bonds	ROW Bonds	RUE Bonds					
AAA	$0	$0	$0	$0	$0	$0	$ -	$0
AA+	$0	$0	$0	$0	$0	$0	$ 5.83	$0
AA	$78,330,000	$5,382,500	$2,600,390	$0	$0	$86,312,890	$ 6.67	$575,419
AA-	$21,531,921	$18,646,368	$0	$0	$0	$40,178,289	$ 7.50	$301,337
A+	$0	$24,709,778	$0	$0	$0	$24,709,778	$ 8.33	$205,915
A	$0	$0	$0	$0	$4,300,000	$4,300,000	$ 9.17	$39,417
A-	$0	$0	$0	$0	$0	$0	$ 10.00	$0
BBB+	$2,121,261	$1,271,700	$13,377,675	$0	$0	$16,770,636	$ 11.75	$197,055
BBB	$5,446,402	$180,853,021	$0	$0	$0	$186,299,423	$ 16.75	$3,120,515
BBB-	$20,109,787	$59,086,439	$0	$0	$0	$79,196,226	$ 21.75	$1,722,518
BB+	$260,000	$5,501,021	$4,058,200	$6,200,000	$0	$16,019,221	$ 24.38	$390,549
BB	$13,249,500	$7,845,000	$0	$0	$0	$21,094,500	$ 26.73	$563,856
BB-	$36,035,625	$22,990,820	$0	$0	$3,300,000	$62,326,445	$ 29.08	$1,812,453
B+	$1,000,000	$32,734,341	$0	$96,612,923	$0	$130,347,264	$ 31.43	$4,096,815
B	$275,319,788	$19,891,623	$0	$0	$0	$295,211,411	$ 33.78	$9,972,241
B-	$642,031,142	$30,289,895	$12,839,906	$0	$0	$685,160,943	$ 36.13	$24,754,865
CCC+	$245,886,375	$14,110,234	$23,000,000	$0	$0	$282,996,609	$ 58.75	$16,626,051
CCC	$0	$0	$0	$0	$0	$0	$ 66.88	$0
CCC-	$129,002,849	$24,077,145	$3,735,000	$0	$0	$156,814,994	$ 75.00	$11,761,647
Not Rated	$867,800,666	$157,958,369	$18,870,000	$146,634,877	$0	$1,191,263,912	$ 40.93	$48,758,432
TOTAL	**$2,338,125,316**	**$605,348,254**	**$78,481,171**	**$249,447,800**	**$7,600,000**	**$3,279,002,541**		**$124,899,085**

Table 20: Estimate of Bond Reconciliation under the Proposed Rule (2021)

	Gulf of Mexico OCS					Total Bond Value	Bond Rate	Estimated 2021 Premiums
	Lease Bonds	ROW Bonds	RUE Bonds	Pacific Bonds	Alaska Bonds			
AAA	$0	$0	$0	$0	$0	$0	$ -	$0
AA+	$0	$0	$0	$0	$0	$0	$5.83	$0
AA	($78,330,000)	($5,382,500)	($2,600,390)	$0	$0	($86,312,890)	$6.67	($575,419)
AA-	($21,531,921)	($18,646,368)	$0	$0	$0	($40,178,289)	$7.50	($301,337)
A+	$0	($24,709,778)	$0	$0	$0	($24,709,778)	$8.33	($205,915)
A	$0	$0	$0	$0	($4,300,000)	($4,300,000)	$9.17	($39,417)
A-	$0	$0	$0	$0	$0	$0	$10.00	$0
BBB+	($2,121,261)	($1,271,700)	($13,377,675)	$0	$0	($16,770,636)	$11.75	($197,055)
BBB	($5,446,402)	($180,853,021)	$0	$0	$0	($186,299,423)	$16.75	($3,120,515)
BBB-	($20,109,787)	($59,086,439)	$0	$0	$0	($79,196,226)	$21.75	($1,722,518)
BB+	$1,702,018,743	$94,887,708	$5,400,641	$306,289,600	$0	$2,108,596,692	$24.38	$51,407,587
BB	$1,702,671,071	$81,876,154	$4,081,805	$0	$0	$1,788,629,030	$26.73	$47,810,054
BB-	$3,346,080,922	$224,010,865	$172,887,262	$0	$38,200,000	$3,781,179,049	$29.08	$109,956,687
B+	$9,181,217	$57,338,219	$0	$1,749,077	$0	$68,268,513	$31.43	$2,145,679
B	$616,231,024	$12,649,998	$3,513,489	$0	$0	$632,394,511	$33.78	$21,362,287
B-	$1,739,653,234	$63,228,718	($4,877,168)	$0	$0	$1,798,004,784	$36.13	$64,961,913
CCC+	$836,841,079	$62,252,240	($13,228,374)	$0	$0	$885,864,945	$58.75	$52,044,566
CCC	$0	$0	$0	$0	$0	$0	$66.88	$0
CCC-	$2,184,913,019	$28,541,278	$27,738,526	$0	$0	$2,241,192,823	$75.00	$168,096,932
Not Rated	$3,198,325,994	$298,876,389	$148,590,336	$452,921,923	$0	$4,098,714,642	$40.93	$167,760,390.30
TOTAL	**$15,208,376,932**	**$633,711,763**	**$328,128,452**	**$760,960,600**	**$33,900,000**	**$16,965,077,747**		**$ 679,383,918.90**

Note: This table presents the difference in bonding portfolio and required bonds. It reconciles the current bonding portfolio and the required bonding under proposed rule. A negative value is the net amount of bonding that would be canceled and represents a cost savings. A positive number indicates net additional amount of bonding that would be required under the proposed rule. The values in this table do not reflect potential adjustments for 3X reserves.

B. Adjustment for Reserves

BOEM proposes not to require supplemental financial assurance for a lease if the net present value of proved oil and gas reserves on the lease exceeds three times the cost of the decommissioning associated with the production of those reserves ("3X reserves"). To estimate the impact of, or possible reduction in bonding from, this proposal, BOEM first identified the leases that have only Tier 2 lessees or co-lessees (Tier 2 leases). To estimate the Tier 2 liabilities that might not require additional security, BOEM estimated the proved reserves and compared the estimated proxy reserve value to decommissioning liabilities.[22] BOEM is using a proxy estimate for this regulatory analysis, since updated SEC *Present Value Pricing Methodology* reserve estimates are not currently available for these OCS leases.

Proxy Calculation Methodology: For each lease, the annual reported oil and gas production was multiplied by a set of price and cost assumptions (see **Table 21**) to obtain the estimated net annual income for the lease. BOEM then calculated a ratio of the net income to the decommissioning cost estimate (see **Equation 1**). A ratio of 3 or greater indicates that three years of net income from production would equal or exceed the decommissioning cost. If a lease had a ratio of 3:1 or greater, then BOEM considered it highly likely that the lease would meet the proposed 3X reserve threshold and additional security would not be required.

Table 21: Cost and Price Assumptions for Valuing Proved Reserves

Product	Sales Price[23]	Production Cost[24]
Oil	$61.85 / barrel	$13.00 / barrel
Gas	$3.34 / mcf	$0.67 / mcf

[22] BOEM focused the reserve analysis on GOM deepwater leases that represented a significant share of the $2.5 billion in Tier 2 liabilities. While there may be other lease liabilities that could be excluded from providing additional security under the 3X reserves provision, the identified GOM deepwater leases were those with sufficient production and other information available for BOEM to estimate proved reserves.

[23] Prices are based on SEC methodology using NYMEX 1st of the month spot pricing between October 2020 and September 2021.

[24] Production costs were estimated based on a review of publicly available statements from offshore operators, where specific production costs were reported in financial statements.

Equation 1

$$Net\ Income\ to\ Decommissioning\ Ratio = \frac{Annual\ Net\ Income}{Decommissioning}$$

Based on these proxy price, cost, and production assumptions, BOEM estimates that at least 272 of 454 producing Tier 2 leases would have a net present value of proved reserves greater than three times the cost of decommissioning associated with the production of those reserves. These 272 leases have a combined decommissioning liability of $7.8 billion and BOEM estimates that under the proposal, the owners of these leases would not be required to provide additional security under the proposed rule. This reserves adjustment is available to all companies, and this estimate may include leases with Tier 2 companies holding sole liability that are currently required to bond under the baseline.

In an effort to further validate the net income to decommissioning ratio to be used as a proxy for sufficient reserves, BOEM evaluated publicly available statements from Tier 2 lessees where specific reservoirs were individually reported in financial statements. The results affirmed economically significant reserves were associated with the 272 leases and would meet the proposed 3X reserves to decommissioning ratio. **Table 22** displays the estimated 2021 liabilities that lessees would not be required to cover by additional security due to the 3X reserves provision.

Table 22: Tier 2 Liabilities Backed by 3X Reserves (2021)

		OCS Liability	Bond Rate ($)	Estimated 2021 Premiums
Estimated Tier 2 liability by rating with associated reserves greater than 3:1	BB+	$695,975,721	$ 24.38	$16,967,888
	BB	$756,681,000	$ 26.73	$20,226,083
	BB-	$2,038,351,641	$ 29.08	$59,275,266
	B+	$2,307,293	$ 31.43	$72,518
	B	$638,952,590	$ 33.78	$21,583,818
	B-	$1,459,311,681	$ 36.13	$52,724,931
	CCC+	$260,245,674	$ 58.75	$15,289,433
	CCC	$0	$ 66.88	$0
	CCC-	$1,012,046,809	$ 75.00	$75,906,884
	Not Rated	$918,524,134	$ 40.93	$37,595,193
	TOTAL	**$7,782,396,543**		**$299,642,015**

C. Summary of Compliance Costs and Cost Savings under the Proposed Rule

As shown in **Table 20**, BOEM calculates that, before adjusting for the 3X reserves provision, up to (net) $17 billion in bonds could be issued. BOEM estimates it would cancel approximately $437 million in bonds from Tier 1 companies not required to bond under the proposed criteria. BOEM would also issue $9.6 billion in supplemental financial assurance demands for uncovered Tier 2 liabilities held by current owners with an issuer or proxy credit rating of BB+ or lower. The supplemental financial assurance demands would be issued to those companies with weaker credit ratings and are estimated to cost companies more per face value unit than the bonds being cancelled that were provided by stronger companies. **Table 23** summarizes the overall costs and savings of the rule. BOEM estimates the 2021 baseline supplemental financial assurance cost for Tier 2 sole liability properties to be $19.5 million and estimates $785 million in incremental required supplemental financial assurance for Tier 2 joint liability properties. However, as noted earlier, BOEM has accumulated an existing portfolio of financial assurance over many years. This portfolio consists of bonds, some of which may not be required under the proposed rule. In the absence of a facility-by-facility audit that matches the existing portfolio to the estimates, this methodology compares the overall amounts of bonding expected under the proposed rule (adjusting for the amount of financial assurance avoided due to the 3x reserves provision) against the amount of financial assurance BOEM currently holds to determine the bottom-line effect of this proposed rule. The result is a net increase in financial assurance and associated premiums of $379 million after the reconciliation of newly required financial assurance and the release of bonds that would no longer be required by BOEM.

Table 23: Effects of Proposed Rule on Lessee and Grant Holder Bonding Premiums (2021)

	P70 (Proposed)	**P90 (Illustration)**[25]
Required bond premiums for Tier 2 Sole Liability Properties (**Table 13**) [***This bonding cost is part of the regulatory baseline.***]	$19,511,354	$21,910,833
Estimated additional 2021 bond premiums for Tier 2 joint liability Properties (**Table 15**) and Tier 1 sole liability Properties with BB+, BB, or BB- ratings (**Table 14**) (**Table 16** provides the sum of these premiums). [***This is an additional compliance cost of the proposed rule.***] BOEM is currently holding many of the bonds that will cover this liability.	$784,771,650	$942,897,078
Estimated required bond premiums under the proposed Tier 2 criteria **(Table 13 + Table 16).**	**$804,283,003**	**$964,807,910**
Reduced bond requirement based on 3X reserves of Tier 2 bonding (**Table 22**)	-$299,642,015	-$346,404,972
Estimated total required bond premiums under the proposed rule	**$504,640,988**	**$618,402,939**
Reduce by estimated bond premiums for all bonds currently held by BOEM (**Table 19**)	-$124,899,085	-$124,899,085
Estimated Compliance Costs of Proposed Rule	**$379,741,904**	**$493,503,854**

The calculations and estimates in **Table 23** are based on the decommissioning liability estimates, bonds held by BOEM, greater than 3X reserve estimates and company credit profiles as of November 2021. BOEM calculated enforcement of this rule from calendar year 2022 and is estimating net compliance costs for 20 years, or until 2041. As mentioned in the Assumptions and Analytical Methodology Sections, BOEM estimates OCS decommissioning liabilities would decline over the next couple of decades as idle wells, structures and pipelines are decommissioned in the shallow water. BOEM also conducted its analysis using BSEE's P90 level, and the results are also included in **Table 23.** BOEM's total expected financial assurance portfolio at P90 levels would hold an additional $3.2 billion over P70 levels. Requiring financial assurance at this level would cost approximately $494 million, an increase $114 million in

[25] BOEM conducted its analysis using BSEE's P90 estimates as well. The results are included in this table for comparison purposes.

annual financial assurance premiums over the P70 levels. **Table 24** presents the estimated 20-year annualized and net present value (NPV) rulemaking compliance costs at 3 and 7 percent discounting. Because this rule would, in the aggregate, impose greater supplemental financial assurance requirements on lessees than the amounts currently required, this rule also contains a provision that would allow phased-in compliance over a period of three years.

Table 24: Proposed Rule Compliance Cost Estimates (2021$, millions)

Year	Discounted at 3%	Discounted at 7%
2022	$ 42.5	$ 40.9
2023	$ 197.7	$ 183.2
2024	$ 342.1	$ 305.2
2025	$ 330.2	$ 283.5
2026	$ 318.7	$ 263.4
2027	$ 307.5	$ 244.7
2028	$ 296.8	$ 227.3
2029	$ 286.4	$ 211.2
2030	$ 276.4	$ 196.2
2031	$ 266.7	$ 182.2
2032	$ 257.3	$ 169.2
2033	$ 248.3	$ 157.2
2034	$ 239.6	$ 146.0
2035	$ 231.1	$ 135.6
2036	$ 223.0	$ 125.9
2037	$ 215.1	$ 116.9
2038	$ 207.5	$ 108.6
2039	$ 200.2	$ 100.8
2040	$ 193.1	$ 93.6
2041	$ 186.3	$ 86.9
Total Compliance Cost	**$4,867**	**$3,379**
Annualized Compliance Cost	**$327.1**	**$318.9**

IV. Public Impact of the Proposed Rule

This proposed rule is designed to require supplemental financial assurance when needed to ensure that taxpayers remain protected from the costs of decommissioning not performed by the responsible party. Under the proposed rule, the risk that the government would be responsible for the costs associated with decommissioning is negligible because BOEM requires supplemental financial assurance for all but the strongest lessees and co-lessees with a negligible risk of default. Moreover, any viable predecessors remain jointly and severally liable for accrued decommissioning obligations. The presence of a Tier 1 company among those predecessors further reduces the risk of decommissioning liabilities falling to taxpayers.

Table 25 provides examples of quantitative risk using **Equation 2**. Quantitative risk is the same as expected consequence in **Equation 2**. The result is illustrated in **Table 25** using 1-year default probabilities for a $1MM decommissioning liability. Risk is further reduced as additional companies are included in the chain of title, either as co-lessees or predecessors, and even more if any of the additional companies are Tier 1.

Equation 2

Expected Consequence = Decommissioning Liability x Probability of Default

Table 25: Default Risk Examples

One Tier 2 Lessee	One Tier 2 Lessee with Tier 1 Co-lessee	Two Tier 1 Co-lessees
Tier 2 sole liability = $1MM x 0.371 (S&P Speculative Grade) = $371,000 quantitative risk	$1MM x 0.371 (S&P Avg Speculative Grade) x 0.0009 (Avg Investment Grade) = $333.90 quantitative risk	$1MM x 0.0024 (Default Probability BBB-) x 0.0003 (Default Probability AA-) = $0.72 quantitative risk

Table 5, S&P's global cumulative default rates, illustrates the annual estimated historical risk for all rated companies. The issuer credit ratings assigned by credit rating agencies provide investors a consistent and objective evaluation of a company's capability to meet its debt obligations. The credit rating considers the company's current financial condition and the

industry's performance and risk conditions. The historical default rates in these tables are not petroleum industry specific. As mentioned earlier, however, BOEM believes these default rates are reasonable proxies for companies with corresponding credit ratings holding OCS decommissioning obligations. This is because credit ratings issued by credit rating agencies act as a consistent assessment of creditworthiness and as a pricing benchmark for relative value across industry sectors.

Under the proposed action, BOEM would reevaluate the financial health of companies responsible for decommissioning liabilities annually and would do so more often in response to company credit rating changes, market reports, trade press, quarterly financial reports, or other information that is received throughout the year if it indicates such a reevaluation is necessary. In the event BOEM identifies any companies approaching financial distress, BOEM can demand supplemental financial assurance as a result of mid-year changes in financial status through the Regional Director's existing authority. Because BOEM would reevaluate company financial health, reserves, and other applicable information at least annually, and has the ability to demand financial assurance at any time it is determined to be necessary, the year-1 default risk is the value that should be used to assess individual company risk.

While it should be theoretically possible to estimate the quantitative risk to the taxpayer for each OCS property using credit ratings or proxy credit ratings as shown in **Table 25**, BOEM's liability data is not currently organized in a format where this risk can easily be matched to each OCS property.[26] The public can best understand the negligible risk through the example in **Table 25**. The OCS liability profiles in **Table 16** (additional bonding required under proposed action) combined with the one-year default rates in **Table 5** illustrate that the level of risk to the taxpayer is lower under the proposed rule than the baseline.

A. Regulatory Certainty

Upstream and midstream OCS oil and gas companies need a regulatory environment on which they can rely. The perceived uncertainty of BOEM's financial assurance regulatory environment for the last several years may be impacting OCS investment decisions. As discussed

[26] Each property (in most cases leases) may have multiple predecessor owners, multiple lessees and different vintages of incurred liability. The myriad of resulting combinations makes a calculated risk value not possible with BOEM's current data set.

in the **Background** section, BOEM's changes and ongoing discussions of potential financial assurance changes have created regulatory uncertainty for companies. A clear understanding of BOEM's financial assurance standards and processes may incentivize OCS investment and provide public benefits through increased leasing revenues or other indirect economic activity.

B. Distributional Effects - Transfers

1. Transfer of Decommissioning Cost

If current lessees or grant holders default on decommissioning obligations, the responsibility to perform the decommissioning is transferred to predecessor companies, surety companies, or possibly the taxpayers. No social welfare costs or benefits from this transfer are calculated for this regulatory impact analysis.[27] The funds used for decommissioning are not being used for a less productive purpose; only the party paying for the facility decommissioning changes. These potential transfers are not considered in the proposed rule's net benefit calculation; however, the design of this proposed action is to make such transfers less likely.

2. Bond Premium Payments

Insurance payments, or— in the case of this analysis—bond premium payments, are considered transfer payments. The bond premium is consideration for the transfer of nonperformance risk. Transfer payments are payments from one group to another that do not affect the total resources available to society. Under the increased bond demands in the proposed action, lessees and grant holders (in aggregate) are estimated to pay more in bond premiums to surety companies that underwrite OCS bonds. In turn, those surety companies would likely underwrite additional OCS bonds or use their increased insurance float for other investment purposes.

There are several dozen companies underwriting OCS surety bonds, but just four companies underwrite more than 60 percent of current bonds for OCS liabilities. The annualized and NPV for the increase in payments to surety companies can be found in **Table 24**.

[27] There is no change in the aggregate economic activity and resources in the economy, e.g., the transfer does not directly absorb resources or create output.

V. Analysis of Net Benefits

OCSLA regulatory and lease requirements establish a decommissioning obligation requiring lessees to remove OCS wells and facilities when their useful life has concluded. The requirements for decommissioning offshore platforms are designed to minimize the environmental and safety risks inherent in leaving unused structures in the ocean, including the risk of oil spills, and to reduce the potential for conflicts with other users of the OCS (i.e., commercial fishing/aquaculture, military activities, transportation industry, other oil and gas/renewable energy operations, etc.). If the current lessee fails to perform decommissioning of its OCS facilities, the burden to decommission OCS facilities may fall to other obligated parties such as co-lessees or predecessor lessees, and failing that, the government and U.S. taxpayer. The proposed approach adheres to the general principle that each current owner should bear the costs for its own obligations. This proposed rule would require that every lessee, ROW grant holder, and RUE grant holder assume full responsibility for providing assurance for performance of its own obligations unless there is a financially strong co-lessee (i.e., one that meets the rating threshold).

Bonding of OCS liabilities by a surety company, for example, greatly reduces the risk that those liabilities will revert to a predecessor lessee/grant holder because DOI could, but is not required to, turn to the surety for performance before turning to a predecessor. Further, because this proposed rule will require more supplemental financial assurance than is now required, it decreases the likelihood that these liabilities could become the responsibility of the government. These reductions in risk are dependent on the initial risk of the lease and risk specific to each OCS lessee and as such, BOEM is not able to quantify them at the portfolio level consistent with the remainder of this analysis. BSEE is expected to continue to exercise its regulatory authority to issue decommissioning orders to predecessor lessees, seek an appropriation, or intervene as necessary to address an environmental or safety risk, regardless of the outcome of this proposed rule. However, without this proposed rule (*i.e.*, without the financial assurance fully in place), it could take longer to arrange for decommissioning, which could result in additional environmental damage or increased obstacles to navigation. A reduction in decommissioning activity lead-time could reduce environmental damage, but BOEM cannot quantify this benefit in this rulemaking. This proposed rule would provide lessees and grant holders with clarity and regulatory certainty regarding the way in which BOEM will conduct its financial assurance

program. The financial assurance it requires would provide accountability to the taxpayer that a current lessee's or grant holder's obligations to decommission do not go unfulfilled, or that an associated cost of business is not transferred to another party at the culmination of the life of the facility when the productive value it had is gone and only liabilities remain.

VI. Analysis of Regulatory Alternatives

BOEM's overall objective is to ensure that taxpayers do not have to bear the cost of paying for decommissioning or performance of other regulatory obligations not performed by lessees and grant holders on the OCS. At the same time, BOEM balances this objective against the cost efficiency and burdens imposed by requiring increased amounts of surety bonds and other security. BOEM analyzed three alternatives to determine the optimum financial assurance approach: 1) a "no action" alternative; 2) a more stringent alternative to the proposed rule; and 3) a less stringent alternative to the proposed rule.

A. No Action Alternative

The "no action" alternative is what the world would be like if the proposed action is not adopted and the regulatory baseline is codified in the regulations. This alternative assumes BOEM would continue with the partial implementation of NTL No. 2016-N01 under which only high-risk, Tier 2, sole liability properties[28] are required to be covered by bonds or other financial assurance. See **Table 13** for the allocation of financial assurance covering Tier 2 sole liability properties.

For reasons outlined in the section entitled, **Provisions of the Proposed Rule,** BOEM has proposed not to continue the current regulatory practice. The proposed rule would require supplemental financial assurance to cover all Tier 2 liabilities without a current Tier 1 company as a lessee, co-lessee, grant holder, co-grant-holder.

B. More Stringent Regulatory Alternative (Full Implementation of NTL No. 2016-N01) (Assumes AA- Tier 1 Cut-Off for Analysis)

[28] This does not fully represent the current policy, in that some non-sole liability companies may now also be required to post financial assurance under certain circumstances; however, this analysis does cover the costs associated with the baseline.

As mentioned earlier, BOEM considered using the full implementation of NTL No. 2016-N01 as a regulatory baseline but decided against this option. This regulatory alternative estimates the effects for the full implementation of NTL No. 2016-N01.

Under NTL No. 2016-N01, any lessee with liabilities exceeding the value of its general bond was to be evaluated by BOEM for the ability to self-insure up to 10% of its tangible net worth based on its financial capacity. A lessee that was eligible for self-insurance could make explicit arrangements to cover the additional security requirements of its co-lessees, but the decommissioning liability would nevertheless be attributed to all co-owners; express agreements to guarantee the liabilities of the weaker co-lessees would be of record; and such reliance could not exceed the self-insurance capacity of the lessee covering its co-lessees. Eliminating the previously used waiver would have required formerly waived lessees and the associated co-lessees to provide significant additional financial assurance to cover their liabilities. Based on the guidance in NTL No. 2016-N01 and the financial ratios published on the BOEM website, very few companies that applied for self-insurance were able to self-insure for their entire decommissioning liability.

NTL No. 2016-N01 included guidance regarding how BOEM would evaluate the following five criteria for determining a company's ability to meet its OCS obligations or to qualify for self-insurance:

1. Financial Capacity - BOEM established minimum thresholds for each of nine ratios, as well as the number of such thresholds that BOEM required companies to exceed, to determine if Financial Capacity is substantially in excess of existing and anticipated lease and other obligations.
2. Projected Financial Strength - The estimated value of existing OCS lease production and proven reserves of future production.
3. Business Stability - Five years of continuous operation and production on the OCS or onshore.
4. Reliability - Credit rating from Moody's or Standard and Poor's, or trade references.
5. Record of Compliance - assessed civil penalties by BOEM and/or BSEE; found to be non-compliant with any lease, plan, or permit term or condition; cited by any other agency(ies) with jurisdiction on the OCS, for noncompliance with any regulation; and/or

cited for non-payment or under-payment of rentals, royalties, interest bills, civil penalties, or inspection fees, and such non-payment or under-payment has been referred to the U.S. Treasury for collection within the past five years.

Following issuance of NTL No. 2016-N01, BOEM received stakeholder feedback on common corporate structures of offshore lessees, specifically on parent and subsidiary relationships. The result of NTL No. 2016-N01, as written, was that not even the subsidiaries of highly rated companies could self-insure for the full amount of their OCS liabilities. The feedback received by BOEM primarily focused on two criteria: 1) most subsidiary lessees do not have an auditor's certificate with their financial statements, since the audit is performed at the parent level, and 2) most subsidiary lessees do not have a stand-alone credit rating; instead, the credit rating applies to the parent entity. The bottom-line result was that most subsidiary lessees and grant holders did not have the required documentation to be eligible for self-insurance.

For this assessment of NTL No. 2016-N01's full implementation regulatory alternative, BOEM assumes that 100 percent of the liability for companies rated AA- and above would be fully covered by self-insurance. All liabilities below AA- (A+ and below for S&P) are assumed to require bonding under this regulatory alternative. While there are certainly a few companies with ratings below AA- that could partially self-insure and companies AA- and above that could only partially self-insure, BOEM does not have a quantitative basis to estimate a percentage of liabilities absent an individual company evaluation.

1. Full Implementation of NTL No. 2016-N01 Regulatory Alternative Assumptions

- All $42.8 billion in OCS liabilities not covered by self-insurance would be covered by bonds or other financial assurance.
- Companies rated AA- (S&P) and above would self-insure for 100% of their liabilities. BOEM would cancel all bonds currently held for these companies' liabilities.
- All companies rated A+ and below (S&P) would be required to purchase bonds covering 100% of their liabilities. The 10-year and 20-year analyses assume the decay rates for the decommissioning liabilities coming due described in the Assumptions and Analytical Methodology sections.

2. **Compliance Cost Estimate for Full Implementation of NTL No. 2016-N01 Regulatory Alternative**

Much of the analysis for this stricter regulatory alternative is based on data presented in previous sections. **Table 26** displays the calculation for estimating the compliance cost of this regulatory alternative.

Table 26: Consolidated NTL 2016-N01 Net Bonding Premium Cost Calculation

Liability Category	OCS Liability Amount	Est. Bonding Premium Cost (2021)
Companies Rated AA- and Above (**Table 9**)	$11,738,060,269	Self-insurance: $0 Bonds Returned to Co: ($876,756)
Companies Rated A+ and Below (**Table 9** & **Table 10**)	$31,123,462,711	Bonding premiums: $916,998,561 Cost of Current Bonds: ($124,022,328) Incremental NTL Bond Cost: $792,976,233
Total	**$42,861,522,980**	**Compliance Cost of Reg. Alternative: $792,099,477**

3. **Net Benefits of Full Implementation of NTL No. 2016-N01 Regulatory Alternative**

While there is expected to be a small reduction in risk if all A+ and below liabilities are bonded, the joint and several liability with multiple co-lessees and predecessor lessees suggests the risk reduction from this alternative is very small. As such, BOEM has not quantified the benefit for this regulatory alternative.[29]. **Table 27** displays the estimated 20-year annualized net benefits discounted at both 3% and 7%.

Table 27: 20-Year Alternative Compliance Cost (2022-2041, 2021$, millions)

2022-2041	Discounted at 3%	Discounted at 7%
Total Compliance Cost	**$9,549**	**$6,850**
Annualized Compliance Cost	**$642**	**$647**

The heavy compliance cost burden on lessees and grant holders, as shown above in **Table 27**, cannot justify this regulatory alternative. BOEM expects that the risk reduction from this

[29] BOEM does not have the data to analyze this alternative and will work to improve its quantitative risk assessment for existing decommissioning liabilities for the final rule's analysis.

alternative would be small because there is a very low default rate for A+, A, and A- companies (0.05%, 0.05%, and 0.06% respectively) and the fact that any lease with a co-lessee or predecessor lessee would have responsible parties to cover decommissioning. Given the small reduction in risk beyond that provided by the proposed rule, it is difficult to justify the $792 million cost (2021$) of this regulatory alternative. For the reasons discussed in the rulemaking preamble and in this IRIA, BOEM has opted not to fully implement NTL No. 2016-N01.

C. Less Stringent Regulatory Alternative (Lower Tier 1 Cutoff to BB- with predecessor waiver)

BOEM considered a less stringent regulatory alternative: using a credit rating demarcation that would drop the Tier 2 credit requirement for avoiding financial assurance from BBB- to BB- while also allowing for predecessor strength to be considered. Currently BOEM is proposing that companies with credit ratings BBB- (S&P) and above be categorized as Tier 1 companies. These Tier 1 companies do not need to post financial assurance for decommissioning liabilities under the proposed action. BOEM assesses BBB- and above companies to be financially strong and likely to meet their decommissioning obligations.

This less stringent regulatory alternative assumes the BB credit ratings are considered Tier 1. This rating is consistent with the baseline for sole liability properties but, under this alternative, jointly held liabilities or those with Tier 1 predecessor lessees in the record of title would also satisfy the criteria to avoid supplemental financial assurance.

Table 28: Alternative Tier 1 Credit Rating Demarcation

Proposed Rule			Less Stringent Regulatory Alternative	
Tier 1	AAA		Tier 1	AAA
	AA+			AA+
	AA			AA
	AA-			AA-
	A+			A+
	A			A
	A-			A-
	BBB+			BBB+
	BBB			BBB
	BBB-			BBB-
Tier 2	BB+	→		BB+
	BB			BB
	BB-			BB-
	B+		Tier 2	B+
	B			B
	B-			B-
	CCC+			CCC+
	CCC			CCC
	CCC-			CCC-
	Not Rated			Not Rated

This regulatory alternative would slightly increase the likelihood that decommissioning costs would be borne by the taxpayer. The threshold for Tier 1 under the proposed rule is BBB- and above (investment grade), but this regulatory alternative uses a threshold of BB-. As shown in **Table 5**, the average 1-year default rate for investment grade is just 0.09 percent. Because this regulatory alternative uses a threshold of BB-, the default rate would increase as BB+, BB, and BB- have default rates of 0.32, 0.48, and 0.96 percent respectively.

The following tables compare the one-year default risk to these liabilities, estimating the 1-year default risked value. **Table 29** shows the speculative grade liabilities that would be uncovered by supplemental financial assurance with this regulatory alternative. An additional $2.5 billion of Tier 2 joint liabilities (see **Table 30**) would be required to provide financial assurance with associated compliance costs of $112 million in 2022. However, this would result

in a total Tier 2 portfolio of $2.97 billion, less than the current amount of supplemental financial assurance that BOEM currently holds, resulting in a net bonding decrease.

Table 29: Unrealized Compliance Costs and Risks Under Less Stringent Alternative

Rating	OCS Liability	Bond Rate	Estimated Bond Premiums	1-Year Default Risk Rate	1-Year Default Risked Value
Total Tier 2 Sole and Joint (No supplemental financial assurance required under less stringent regulatory alternative)					
BB+	$2,124,615,913	$24.38	$51,798,136	0.32%	$6,798,771
BB	$1,809,723,530	$26.73	$48,373,910	0.48%	$8,686,673
BB-	$3,843,505,494	$29.08	$111,769,140	0.96%	$36,897,653
Tier 2 with BB- or above Predecessor (No supplemental financial assurance required under less stringent regulatory alternative)					
B+	$6,454,013	$31.43	$202,850	1.98%	$127,789
B	$661,844,213	$33.78	$22,357,098	3.13%	$20,715,724
B-	$1,817,403,328	$36.13	$65,662,782	6.52%	$118,494,697
CCC+	$913,926,882	$58.75	$53,693,204	28.30%	$258,641,308
CCC	$0	$66.88	$0	28.30%	$0
CCC-	$2,034,307,237	$75.00	$152,579,824	28.30%	$575,708,948
Not Rated	$4,063,275,850	$40.93	$166,309,881	3.71%	$150,747,534
TOTAL	**$17,275,056,460**		**$672,746,824**		**$1,176,819,097**

Table 30: Estimated Industry Compliance Costs, Less Stringent Regulatory Alternative

Rating	OCS Liability	Bond Rate	Estimated Bond Premiums	1-Year Default Risk Rate	1-Year Default Risked Value
Jointly held Tier 2 liability with no Tier 1 predecessor					
B+	$93,799,764	$ 31.43	$2,948,127	1.98%	$1,857,235
B	$258,616,582	$ 33.78	$8,736,068	3.13%	$8,094,699
B-	$583,410,916	$ 36.13	$21,078,636	6.52%	$38,038,392
CCC+	$253,799,273	$ 58.75	$14,910,707	28.30%	$71,825,194
CCC	$0	$ 66.88	$0	28.30%	$0
CCC-	$306,266,265	$ 75.00	$22,970,991	28.30%	$86,673,353
Not Rated	$1,011,001,628	$ 40.93	$41,380,297	3.71%	$37,508,160
TOTAL	**$2,506,894,428**		**$112,024,826**		**$243,997,034**

The excessive risk to the taxpayer and predecessor lessees cannot justify this regulatory alternative. Double B rated companies are considered speculative with unacceptably high default rates and pose significant risk to the taxpayer. The industry compliance cost savings that result from the less stringent alternative ($672.7 million) do not justify the risk ($1.2 billion) that this regulatory alternative poses to the public and other industry participants.

1. Potential Counterproductive Impacts of the Less Stringent Regulatory Alternative – Moral Hazard

BOEM recognizes that the less stringent regulatory alternative could theoretically introduce a moral hazard into offshore oil and gas operations and decommissioning obligations. The concept of a moral hazard is that a party protected in some manner from risk will act differently than it would if that party did not have that protection. In the case of this regulatory alternative, BOEM would allow Tier 2 lessees and grant holders to forgo providing financial assurance if there are Tier 1 predecessor companies in the chain of title. This could theoretically incentivize Tier 2 companies to take greater investment risks. Tier 2 companies would be aware that they could avoid the costs of jointly held asset retirement obligations given the presence of a Tier 1 predecessor lessee. These companies would not have to quantify decommissioning liabilities as they would not be required to provide supplemental financial assurance and therefore may not incorporate the cost into making investment decisions. In comparison, similarly situated companies that are required to provide supplemental financial assurance must internalize future liabilities into their decision-making process. This is because companies procuring supplemental financial assurance must meet the capitalization standards imposed by the surety industry in order to qualify for financial assurance. These companies are therefore incentivized to operate more prudently and be better positioned to meet accrued decommissioning obligations as they become due.

A regulatory framework permitting financially weaker companies to forgo the posting of financial assurance may create a private cost advantage for certain entities. Entities operating in a manner designed to avoid funding decommissioning obligations would likely have lower costs of production. This could distort competition and incentivize financially weaker companies to incur investment risks they would otherwise not undertake if they had to fully internalize the cost of procuring supplemental financial assurance to cover decommissioning liability. The possibility

for moral hazard is reduced under the proposed action over this less stringent regulatory alternative as the proposed action does not allow lessees to rely on predecessor lessees to avoid providing supplemental financial assurance.

VII. Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA), 5 U.S.C. §§ 601-612, requires agencies to analyze the economic impact of regulations when there is likely to be a significant economic impact on a substantial number of small entities and to consider regulatory alternatives that will achieve the agency's goals while minimizing the burden on small entities. For the reasons explained in this section, BOEM has determined that the proposed rule is likely to have a significant economic impact on a substantial number of small entities. BOEM has included an Initial Regulatory Flexibility Analysis (IRFA) to assess the impact of this rule on small entities and to provide the public an opportunity to comment on the analysis.

A. Description of the Reasons Why Action by the Agency Is Being Considered

BOEM is proposing this rule to implement its financial assurance program more effectively. To do this, BOEM is proposing to update its criteria for determining whether oil, gas and sulfur lessees, RUE grant holders, and ROW grant holders may be required to provide supplemental financial assurance to ensure compliance with their OCS obligations. The proposed regulatory changes are intended to clarify and simplify BOEM's financial assurance requirements with the goal of providing regulatory changes that greater protect taxpayers. The proposed changes are designed to balance the risk of non-performance with the costs and disincentives to production that may be associated with the requirement to provide additional security. By publishing a proposed rule, BOEM hopes to provide an opportunity for all interested and potentially affected parties to provide substantive feedback.

B. Succinct Statement of the Objectives of, and Legal Basis for, the Proposed Rule

BOEM is amending and updating the 30 CFR Parts 550 and 556 regulations regarding financial assurance for OCS leases, RUE grants and pipeline ROW grants. Under OCSLA, the Secretary administers the provisions relating to the leasing of the OCS and regulation of mineral exploration and development operations on those leases. The Secretary is authorized to prescribe

"such rules and regulations as may be necessary to carry out [OCSLA's] provisions . . . and may at any time prescribe and amend such rules and regulations as he determines to be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the [OCS] . . ." and such rules and regulations "shall, as of their effective date, apply to all operations conducted under a lease issued or maintained under the provisions of [OCSLA]" (43 U.S.C. 1334(a)).

The Secretary delegated most of the responsibilities under OCSLA to BOEM and BSEE, each of which is charged with administering and regulating aspects of the nation's OCS oil and gas program. BOEM is responsible for managing development of the nation's offshore resources in an environmentally and economically responsible way. BOEM's financial assurance regulations under 30 CFR Parts 550 and 556 require lessees and grant holders to provide bonding for leases and grants. Section 556.901(d) authorizes the Regional Director to require additional security for leases above the prescribed amounts for lease and areawide bonds. Similarly, section 550.1011 authorizes the Regional Director to require an areawide base bond in a prescribed amount, and additional security above the prescribed amount, for pipeline ROW grants. The regulations for RUE grants (30 CFR 550.160 and 550.166), provide for the Regional Director to require bonds or other security for RUE grants.

BOEM's objective is to ensure that taxpayers do not have to bear the cost of paying for obligations not performed by lessees and grant holders on the OCS. At the same time, BOEM must balance this objective against the costs and disincentives to additional exploration, development, and production that may be imposed as increased amounts of financial assurance are required. To maintain a balanced framework, BOEM is proposing to do the following: 1) Modify the evaluation process for requiring additional financial assurance; 2) Simplify and strengthen the evaluation criteria; and 3) Remove restrictive provisions for third-party guarantees and decommissioning accounts. In the proposed rule, BOEM would require additional financial assurance only when: (1) A lessee or grant holder poses a risk of becoming unable to carry out its obligations under the lease or grant; (2) There is no co-lessee or co-grant holder liable for those obligations and that has sufficient financial capacity to carry out the obligations; and (3) The property is at or near the end of its productive life, and thus, may not have sufficient value in reserves to be sold to another company that would assume these obligations.

C. Description of and, Where Feasible, an Estimate of the Number of Small Entities to which the Proposed Rule Would Apply

A small entity, as defined by the RFA, consists of small businesses, small not-for-profit organizations, and small governmental jurisdictions. We have identified no small not-for-profit organizations or governmental jurisdictions that the rule would impact, so this analysis focuses on impacts to small businesses (hereafter referred to as "small entities").[30] A small entity is "one which is independently owned and operated, and which is not dominant in its field of operation." The definition of small business varies from industry to industry to reflect industry size differences.

The proposed rule would affect OCS lessees and RUE and pipeline ROW grant holders. This includes roughly 536 companies with ownership interests in OCS leases and grants.[31] Entities that would operate under this rule are classified primarily under North American Industry Classification System (NAICS) codes 211120 (Crude Petroleum Extraction), 211130 (Natural Gas Extraction) and 486110 Pipeline Transportation of Crude Oil and Natural Gas.[32] For NAICS classifications 211120 and 211130, the Small Business Administration defines a small business as one with fewer than 1,250 employees; for NAICS code 486110 it is a business with fewer than 1,500 employees. Based on this criterion, approximately 407 (76 percent) of the businesses operating on the OCS are considered small (see **Table 31**). As all are subject to this proposed rule, BOEM expects the proposed rule would affect a substantial number of small entities.

[30] Native American or Native Alaskan corporations with ownership interests in OCS properties are considered to participate in a proprietary capacity rather than a governmental one for this analysis.
[31] The count of companies often includes multiple subsidiary companies under one parent. The categorization of small versus large company is made based on the size of the parent company per SBA Office of Advocacy guidance.
[32] Some holders of OCS properties may be categorized under other NAICS codes. For example, a venture capital fund with only an economic interest in an OCS property may be categorized under another NAICS code, but BOEM believes the three NAICS Codes used here capture the large majority of OCS entities.

Table 31: Count of Companies with OCS Record Title Ownership[33] (2021)

Tier	Large	Small	Total
Tier 1	109	44	153
Tier 2	20	363	383
Total	**129**	**407**	**536**

The majority of OCS properties owned or operated by a small entity are in shallow water in the Gulf of Mexico (GOM shelf) and on select Pacific properties. The GOM shelf is a mature oil and natural gas basin that has been producing oil and gas for more than 70 years. Historically, GOM shelf fields were initially developed by large oil and gas entities (majors) and then sold to smaller entities. A map of recent lease ownership (**Figure 3**) illustrates a distinction of the two water depths of ownership; majors (integrated companies) own the majority of the deepwater leases and non-majors own the majority of the shallow water leases. Most of the non-majors (non-integrated companies) are classified as small entities.

[33] BOEM does not collect the company employment information necessary to make a size determination per the SBA employment criteria. This table is based on ownership records and any publicly available employment information for each company. BOEM was unable to determine the SBA size of many companies. Because of this, this analysis assumes these companies to be small.

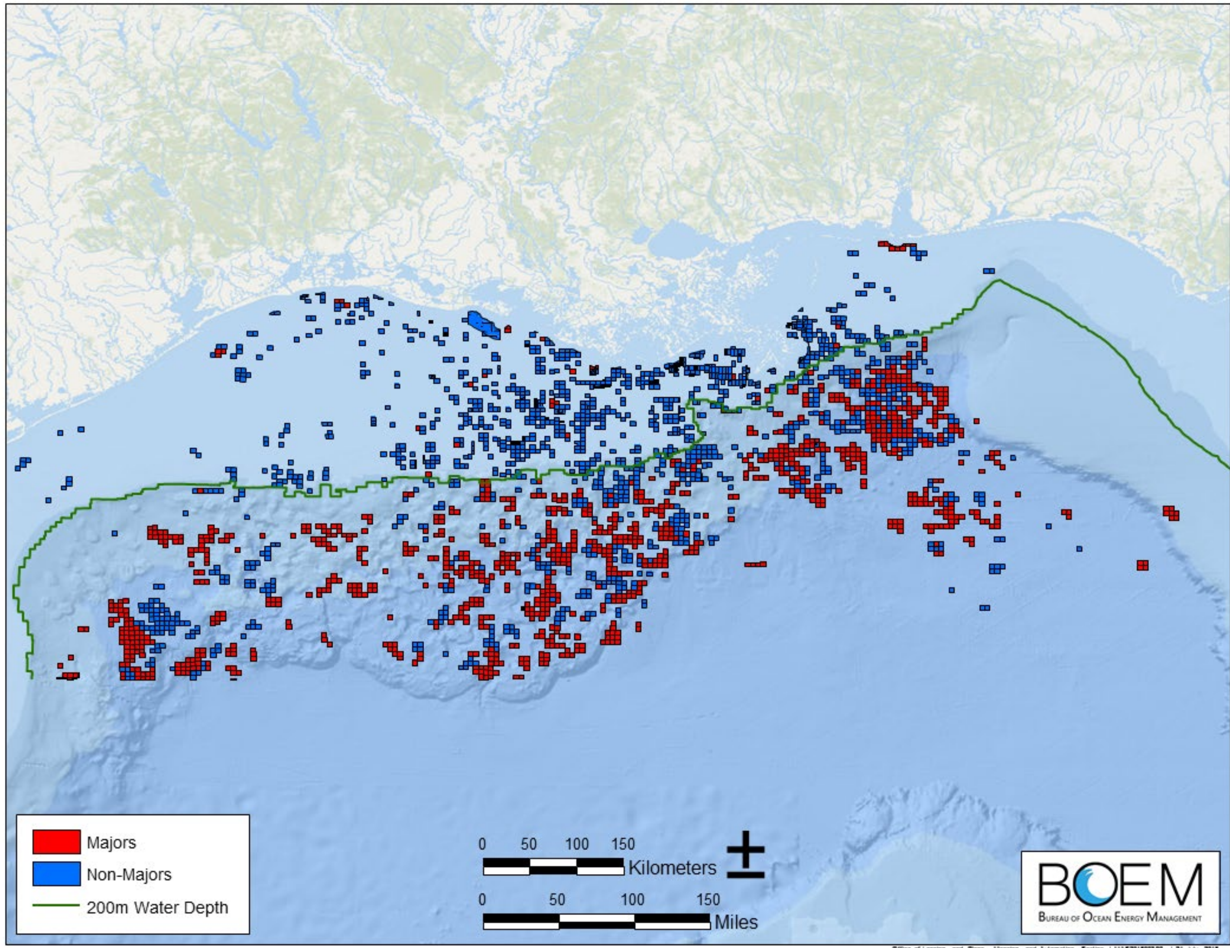

Figure 3: Active GOM Leases by Company Type

While the actual distribution of ownership of leases and grants may be slightly different than that illustrated in **Figure 3**, the general result is the same. Larger companies are primarily located in deep water and smaller companies typically operate in the GOM shelf. **Table 32** shows the OCS liability distribution among the different types and locations of properties.

Table 32: OCS Decommissioning Liability Distribution ($million)

OCS Liability Category	
GOM Lease Shallow (<200m)	$9,093
GOM Lease Deep (>200m)	$29,111
PAC/AK (all)	$1,711
GOM ROW	$2,214
GOM RUE	$733
TOTAL:	**$42,862**

The primary changes made by this proposed action are described in the section titled **Provisions of the Proposed Rule**. Under the proposed action, BOEM would explicitly consider the financial capacity of all co-owners when determining the need for current lessees and grant holders to provide additional financial assurance. If one of these entities meets the proposed issuer credit or BOEM proxy credit rating criteria, BOEM would determine that the current lessee or grant holder is not required to provide additional financial assurance. This will benefit financially strong lessees that meet the Tier 1 criteria and Tier 2 lessees that are partnered with financially strong lessees. Certain Tier 2 lessees that are solely responsible for their OCS liability are already bonded under the baseline and these lessees will not be impacted. Tier 2 lessees with Tier 2 co-lessees that have avoided financial assurance under the baseline would be expected to provide financial assurance under this proposed rule. BOEM's estimates indicate that (as shown in **Table 33**) small entities are responsible for $16.1 billion, or approximately 80 percent, of the current $20.2 billion in Tier 2 liability. Tier 2 small entities holding joint and several liabilities with other Tier 2 companies would incur increased compliance burdens under the proposed rule. This increased compliance burden would vary substantially by entity; the burden is a function of the small entity's decommissioning liability, reserves, and the premium pricing for its financial assurance. Based on the estimates in **Table 7**, these premiums could exceed $83 per $1000 of bond coverage for highly speculative small entities[34]. The agency does not have access to the proprietary data necessary to analyze individual compliance burdens for affected companies and, therefore, requests data and feedback from small entities as to what, if any, cost burdens may result from this rulemaking.

Table 33: OCS Record Title Proportional Decommissioning Liability (2021, $millions)

	Large	Small	Total
Tier 1	$22,169	$449	$22,617
Tier 2	$4,133	$16,111	$20,244
Total:	$26,302	$16,559	**$42,862**

[34] The largest burden would be on "highly speculative" companies; however, BOEM notes that small entities, even unrated, may be financially strong, or stronger than "speculative grade," and would, therefore, have a smaller burden. Small entities themselves are in the best position to determine their financial strength and any associated impact.

D. Description of the Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule

The proposed revisions would add very limited new reporting, recordkeeping, or other compliance requirements. BOEM estimates the net information collection burdens (see rulemaking preamble for additional discussion) for the proposed rule are very close to the same as those for the existing regulatory framework. Some companies that did not previously have audited financial statements or reserve reports might choose to incur additional expenses to prepare these documents to reduce their supplemental financial assurance costs. Overall however, BOEM expects very few companies to incur this expense solely to minimize demands for additional financial assurance since most companies with lease ownership interests meet the U.S. Securities and Exchange Commission's present value pricing methodology for reserves and already have externally audited financial statements, or have partnered with a Tier 1 co-lessee/holder. Other companies would realize reduced paperwork burdens due to the simplified evaluation of the need for financial assurance for lessees and grant holders. Most other proposed changes are either textual clarifications or remove or reduce existing restrictions on use of the various forms of financial assurance, so would have little to no effect on paperwork burdens.

Most small entities are Tier 2 companies, and Tier 2 companies will face increased compliance costs from this proposed action, unless they have a Tier 1 co-lessee. Therefore, small companies would be significantly impacted by this rulemaking. In Table 34, BOEM estimates the annualized compliance costs for Tier 2 small entities to be $252.6 million in bond premiums (7% discounting).

Table 34: Estimated Compliance Costs for Tier 2 Small Entities (2022-2041, $millions)

2022-2041	Discounted at 3%	Discounted at 7%
Total Compliance Cost	$3,820	$2,676
Annualized Compliance Cost	$256.8	$252.6

E. Identification of All Relevant Federal Rules That May Duplicate, Overlap, or Conflict with the Proposed Rule

The proposed rule does not conflict with any relevant Federal rules, nor duplicate or overlap with any Federal rules, and therefore does not unnecessarily add cumulative regulatory burdens on small entities without any gain in regulatory benefits.

F. Description of Significant Alternatives to the Proposed Rule

The regulatory alternatives for the proposed rule are discussed in section **VI. Analysis of Regulatory Alternatives**.[35] BOEM believes the proposed action would strongly protect the public from incurring decommissioning costs. The regulatory alternatives include both more stringent and less stringent regulatory options. Tier 2 companies are overwhelmingly small companies as shown in **Table 31**. The regulatory revisions in this proposed rule are designed to focus the increased compliance on costs for those companies operating on the OCS that pose the greatest risk of failing to fulfill their obligation to decommission, most of which are Tier 2 companies. Tier 2 lessees for whom associated reserves exceed three times the decommissioning obligations would avoid impacts from the rule.

Under BOEM's less stringent alternative, small entities currently responsible for a liability that has at least one Tier 1 predecessor lessee would benefit by avoiding the need to provide supplemental financial assurance. However, as discussed earlier, this risks an economic moral hazard, where one company may forgo preparing for its obligation to decommission knowing it could leave that cost to a predecessor lessee once the use of the facility has ended. A regulatory framework permitting financially weaker companies to forgo or delay the posting of financial assurance may create a private cost advantage for certain entities. This could distort competition and incentivize financially weaker companies to incur investment risks they would otherwise not undertake. BOEM has also elected to maintain the proposed rule's credit demarcation over that of the less stringent alternative to reduce the risk imposed on taxpayers from uncovered decommissioning liabilities.

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[35] The "No Action" alternative discussed in section VI is a regulatory alternative BOEM has considered and is presented as part of the Regulatory Impact Analysis. It does not meet the criteria for an alternative under the Regulatory Flexibility Act and should not be considered a part of the Regulatory Flexibility Analysis.

Under BOEM's more stringent alternative, more small businesses would be required to provide supplemental financial assurance. Under this alternative, all companies rated A+ and below (S&P) would be required to purchase bonds covering 100% of their liabilities. As discussed earlier, BOEM determined that this alternative would not meaningfully reduce risk and would result in significant new costs to industry. Because A+, A, and A- companies have very low default rates, and any co-lessee or predecessor lessee would have responsibilities of covering decommissioning, the small reduction in risk beyond what is provided in the proposed rule would not justify the $792 million cost (2021$) of this regulatory alternative.

BOEM has designed its financial assurance program to be as accommodating to small entities as can be done without introducing excessive burdens or moral hazards, while still fulfilling the goals of minimizing the risk of noncompliance with regulations. BOEM's proposed use of lessee issuer or proxy credit ratings and lease reserves for determining whether financial assurance would be required creates a performance standard rather than a prescriptive design standard for all companies operating on the OCS.

Table 35 shows the OCS liabilities that lessees and grantees would be required to bond and the estimated cost of bonding those liabilities for the three alternatives. These are not compliance cost estimates as they do not account for liabilities in the baseline or make adjustments based on reserves, but provide a comparison of the raw liabilities and cost differences of the alternatives.

Table 35: OCS Liabilities and Estimated Bond Premiums from Regulatory Alternatives

	OCS Liability Requiring Bonding	Estimated Bond Premiums
Proposed Rule	$20,244,080,288	$804,283,003
More Stringent Alternative	$31,123,462,711	$916,998,561
Less Stringent Alternative	$2,506,894,428	$112,024,826

Decommissioning obligations and the joint and several nature of those obligations are not being changed with this proposed rule. BOEM is not proposing to categorically exempt or provide differing compliance requirements for small entities. Categorically exempting small entities from the provisions of this proposed rule based on size would place the taxpayer at

greater risk for assuming the decommissioning obligations of small entities. BOEM has proposed a three-year, phased compliance approach for all lessees to provide flexibility to secure financial assurance or suitable partnerships with stronger parties. Categorically providing small entities with more favorable compliance timetables before requiring financial assurance unreasonably increases risk due to the possible financial deterioration of a given company during that time. BOEM's proposed financial assurance criteria are designed, in part, to provide BOEM ample time to intervene should a company's financial position begin to deteriorate. It is foreseeable that a company not meeting those criteria, but categorically granted additional time to provide financial assurance, could deteriorate more quickly than its compliance timetable and thus not be able to satisfactorily perform its obligations to the public.

VIII. Statement of Energy Effects (E.O. 13211)

Upstream U.S. oil and gas producers sell their production into a market where oil prices are determined through global commodity trading. Global supply and demand are the primary oil price drivers, with up- and downturns based on forecasted economic outlooks or investor sentiments. Thus, the local policies of any single country are unlikely to significantly affect oil prices.[36] However, the compliance costs, or lack thereof, for oil and gas producers operating in any single region, directly impact the competitiveness of that region against other localities for investment and development opportunities. Regions with high compliance costs and government take are less attractive for companies seeking higher rates of return. A country's particular policy would not necessarily impact global oil prices, but they could impact a company's decision of whether or not to invest in that country.

This proposed rule is estimated to result in approximately $319 million (7% discounting) in annualized compliance costs for the U.S. oil and gas upstream energy sector. Importantly, these compliance costs secure the public against the failure of industry participants to perform their decommissioning obligations. However, these costs make operating in the U.S. offshore oil and gas sector more expensive for companies that do not meet the proposed rule's issuer or

[36] Individual government actions tend to be *reactionary* to large price changes. [https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Energy-Economics/Fair-Market-Value/2018-GOM-International-Comparison.pdf#page=19] Gas prices are set on a more regional market, but given that oil is the main commodity of interest in the GOM, this section focuses on oil prices.

proxy credit rating threshold. Those companies that must provide supplemental financial assurance will have larger compliance costs than those that do not.

Historically, OCS oil and gas infrastructure has been developed and installed by larger entities with sufficient resources to take on capital intensive projects. In general, larger companies have higher internal rates of return thresholds than smaller companies. As such, they often transfer offshore facilities to smaller independent companies when the assets no longer meet those return thresholds. This secondary market, which flourishes today, may not be as financially strong, but nonetheless typically extends the useful life of the offshore asset, and thereby provides additional U.S.-based oil and gas production, employment, and royalty payments to the Treasury.[37]

The proposed rule's estimated compliance costs would likely be more burdensome on this secondary market than on the larger companies that have historically developed the OCS, as assets would likely be sold to companies for which bond acquisition is more costly. As a result, with the increased compliance costs, properties could become less valuable or more difficult to sell. With higher compliance costs, these resources could also become uneconomic more quickly, leading to an earlier-than-otherwise decommissioning and a potential loss of production and royalties.

Though the secondary market and, potentially, offshore production generally, could be hurt in this way, BOEM has observed that in recent years the secondary market has started privately accounting for the decommissioning liability risks. In recent transactions involving offshore assets, some larger sellers, recognizing the joint-and-several liability framework in BOEM's regulations, have opted to require the purchasers of their offshore assets to provide financial assurance protecting the seller from forthcoming decommissioning liabilities as a term of the sale.[38] In exchange for this protection from future risk, the seller may forgo a higher selling price. In these cases, a portion of the increased surety cost may already be priced into the secondary market and the ultimate impact of the regulation may be less.

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[37] The taxpayer is, in essence, trading these things for increased risk of decom failure

[38] For example, when Fieldwood Energy purchased Apache's offshore assets in 2013, Apache required Fieldwood to provide certain financial assurances as terms of the sale. [https://sec.report/Document/0001673379-21-000007/]

IX. Statement of Unfunded Mandates

This proposed rule will not impose an unfunded Federal mandate on State, local, or tribal governments and will not have a significant or unique effect on State, local, or tribal governments. BOEM has determined that this rule will impose costs on the private sector of more than $100 million in a single year. DOI has prepared a written statement satisfying the requirements of the Unfunded Mandates Reform Act (UMRA). Specifically, this IRIA, the IRFA analysis for this proposed rule, and the proposed notice of final rulemaking itself constitute such a written statement.

Among other things, the final rule, this IRIA, or the IRFA:

(1) Identifies the provisions of the Federal law (OCSLA) under which this rule is being implemented;

(2) Includes a quantitative and qualitative assessment of the anticipated costs and benefits to the private sector (i.e., bonding premiums) of the proposed rule (section 5 above);

(3) Describes the future compliance costs of the regulation; and

(4) Provides an assessment of the impact on the national economy (section IX in the statement of energy effects).

Because all anticipated expenditures by the private sector analyzed in this IRIA and in the IRFA analysis will be borne by a single segment of the private sector (the offshore oil and gas industry), this IRIA and the IRFA analysis satisfy the UMRA requirement to estimate any disproportionate budgetary effects of the rule on a particular segment of the private sector.

In addition, this IRIA describes BOEM's consideration of two major regulatory alternatives (see section 6). BOEM has decided to move forward with this rule, in lieu of the other alternatives, because those alternatives would not as efficiently or effectively address the concerns and recommendations that were raised in the Need for Regulation to prevent taxpayers becoming responsible for decommissioning liabilities.

BOEM has determined that the rule will not impose any unfunded mandates or any other requirements on State, local, or tribal governments; thus, the rule will not have disproportionate budgetary effects on these governments.