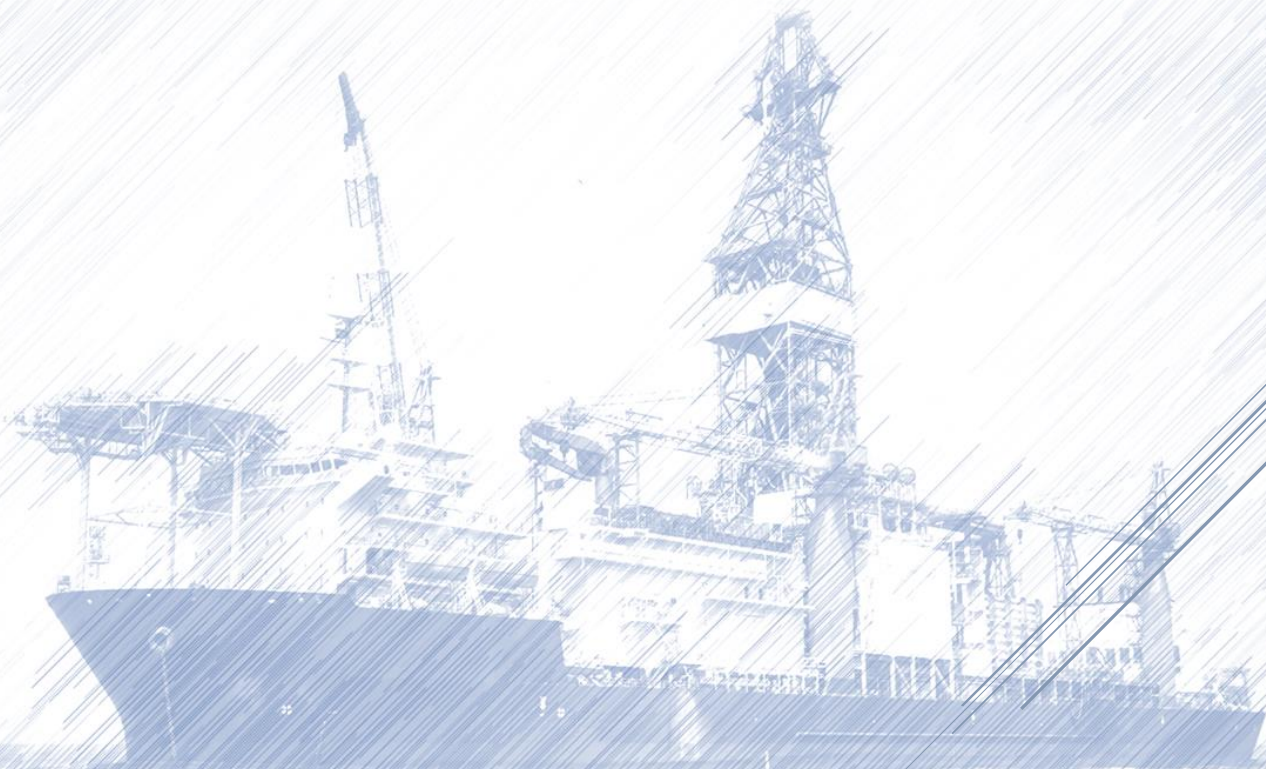


# The Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry

Prepared For



Prepared By



# Executive Summary

## Introduction

Despite the current difficulties facing the global economy as a whole and the oil and natural gas industry specifically, the Gulf of Mexico oil and natural gas industry will likely continue to be a major source of energy production, employment, gross domestic product, and government revenues for the United States. Several proposals have been advanced recently which would have a major impact on the industry's activity levels, and the economic activity supported by the Gulf of Mexico offshore oil and natural gas industry. The proposals vary widely, but for the purpose of this report three scenarios were developed, a scenario based on a continuation of current policies and regulations, a scenario examining the potential impacts of a ban on new offshore leases, and a scenario examining the potential impacts of a ban on new drilling permits approvals in the Gulf of Mexico.

Energy and Industrial Advisory Partners (EIAP) was commissioned by the National Ocean Industry Association (NOIA) to develop a report forecasting activity levels, spending, oil and natural gas production, supported employment, GDP, and Government Revenues in these scenarios. The scenarios developed in this report are based solely upon government and other publicly available data and EIAP's own expertise and analysis. The study also included profiles of NOIA members to demonstrate the diverse group of companies which make up the offshore Gulf of Mexico oil and natural gas industry as well as a list of over 2,400 suppliers to the industry representing all 50 states.

## Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry

The Gulf of Mexico oil and natural gas industry supports significant employment, gross domestic product and state and Federal Government revenues. To quantify the potential effects of policy changes, this study forecasted a Base Case activity level for Gulf of Mexico Outer Continental Shelf [OCS] oil and natural gas activity to provide a comparison with potential activity and economic impacts if certain policy changes were enacted. The study forecasted key activity indicators including the number of wells drilled, projects executed, oil and natural gas production, and spending based on projected activity levels. These activity and spending forecasts drive the projected employment, GDP, and government revenue forecasts presented in this report.

- In 2019, combined Gulf of Mexico OCS oil and natural gas production was over 2.3 million barrels of oil equivalent per day. Oil and natural gas production from the Gulf of Mexico OCS is projected to average around **2.5 million barrels of oil equivalent per day** over the 2020 to 2040 forecast period.
- In 2019, the Gulf of Mexico offshore oil and natural gas industry supported an estimated 345 thousand jobs in the United States. On average across the forecast period, the Gulf of Mexico offshore oil and natural gas industry is projected to support around **370 thousand jobs per year**.

- In 2019, the Gulf of Mexico oil and natural gas industry contributed an estimated \$28.7 billion of to the U.S. economy. The industry is projected to contribute an average of **\$31.3 billion of GDP per year** across the forecast period.
- In 2019, government revenues due to the Gulf of Mexico oil and natural gas industry reached nearly \$5.4 billion. Government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico (excluding personal and corporate income taxes and property taxes), are projected to average over **\$7 billion per year** across the forecast period.
- From fiscal year 2019, the Gulf of Mexico oil producing states received around \$353 million of revenues due to revenue sharing while the Land and Water Conservation Fund (LWCF) received over \$1 billion of distributions. State revenue sharing under the Gulf of Mexico Energy Security Act (GOMESA) is projected to average around **\$374 million per year** across the forecast period. Contributions to the Land and Water Conservation Fund (LWCF) from GOMESA and non-GOMESA offshore are projected to average around **\$1.3 billion per year**.

## Impact of a Potential Leasing Ban

Although no firm policy proposals have been advanced, one of a number of potential restrictive policy changes that has been discussed related to Gulf of Mexico oil and natural gas activities has been an end to new leasing in the Federal Outer Continental Shelf. For the purpose of this report, a “No Leasing Scenario” was developed to provide a comparison of activity levels (project executions, spending, oil and natural gas production), economic impacts, and government revenues to the Base Case Scenario. This scenario assumes that no new lease sales would be held from 2022, but that existing leases would be unaffected, and that no other major policy or regulatory changes impacting the Gulf of Mexico offshore oil and natural gas industry would be enacted.

- Average combined oil and natural gas production across the forecast period is projected to decline from around 2.5 million barrels of oil equivalent per day to 2 million barrels of oil equivalent per day (an over 20 percent decline). In 2040, combined oil and natural gas production is projected to be around 910 thousand barrels of oil equivalent per day compared to 1.96 million barrels in the Base Case.
- Average employment supported is projected to decline to 268 thousand jobs each year from around 370 thousand jobs each year nationally (a 28 percent decline).
- Average yearly contributions to GDP are projected at \$22.1 billion, around a 30 percent reduction compared to annual contributions of \$31.3 billion in the Base Case.
- Government revenues are projected at an average of around \$5.2 billion per year, a 26 percent reduction from the \$7 billion per year projected in the Base Case.
- State revenue sharing under the Gulf of Mexico Energy Security Act (GOMESA) is projected to remain relatively steady compared to the Base Case. Additionally, contributions to the Land and Water Conservation Fund (LWCF) are projected to average around \$1 billion per year, compared to \$1.3 billion per year in the base case over the forecast period.

## Impact of No New Drilling Permits Being Issued

Another potential restrictive policy change that has been advanced for the Gulf of Mexico offshore oil and natural gas industry is that regulatory authorities no longer issue new drilling permits for Gulf of Mexico wells. This scenario assumes that no new drilling permits would be issued from 2022, but that existing permits would be unaffected, and that no other major policy or regulatory changes impacting the Gulf of Mexico offshore oil and natural gas industry would be enacted.

- Average combined oil and natural gas production across the forecast period is projected to decline from around 2.5 million barrels of oil equivalent per day to 1.1 million barrels of oil equivalent per day (an over 55 percent decline). In 2040, combined oil and natural gas production is projected to be around 323 thousand barrels of oil equivalent per day compared to 1.96 million barrels in the Base Case.
- Average annual employment supported is projected to decline to 179 thousand jobs from around 370 thousand jobs nationally (a 52 percent decline).
- Average annual contributions to GDP are projected at \$14.2 billion, around a 55 percent reduction compared to contributions of \$31.3 billion in the Base Case.
- Government revenues are projected at an average of around \$2.7 billion per year, a 61 percent reduction from the \$7 billion per year projected in the Base Case.
- State revenue sharing under the Gulf of Mexico Energy Security Act (GOMES) is projected to fall to an average of around \$273 million per year, compared to around \$374 million in the Base Case (a 27 percent reduction). LWCF funding, including GOMESA and non-GOMESA offshore funding is project to fall to just under \$585 million a year compared to \$1.3 in the Base Case.

## Study Limitations

Given the large degree of volatility and uncertainty in oil and gas markets as well as the global economy, the assumptions and forecasts contained in this report are based on reasonable readings of conditions when this report was developed. Uncertainty around commodity pricing and global economic conditions may have significant effects, especially in the early years of the forecast contained in this report. EIAP makes no representations as to the impacts of the potential policy proposal addressed in this report and assumes that any proposals actually adopted or enacted would differ greatly in language and execution compared to the scenarios developed for this report. These policies could impose significantly greater engineering, operational, cost and other burdens on the oil and natural gas industry and regulators. The report's projections of the effects that these potential scenarios would impose on engineering, operations, and costs are an independent, good faith view arising from reasonable assumptions based on these potential scenarios and the authors' expertise and experience. Energy and Industrial Advisory partners provided this independent study while expressly disclaiming any warranty, liability, or responsibility for completeness, accuracy, use, or fitness to any person or party for any reason.

# Table of Contents

<b>Executive Summary</b>	<b>1</b>
Introduction	2
Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry	2
Impact of a Potential Leasing Ban	3
Impact of No New Drilling Permits Being Issued	4
Study Limitations	4
<b>Table of Contents</b>	<b>5</b>
<b>List of Tables</b>	<b>7</b>
<b>List of Figures</b>	<b>9</b>
<b>Introduction</b>	<b>11</b>
Purpose of the Report	11
Report Structure	11
Excluded from Study	11
About EIAP	12
<b>Methodology</b>	<b>13</b>
<b>Data Development</b>	<b>13</b>
Limitations	13
Scenario Development	13
<b>Gulf of Mexico Economic Impacts</b>	<b>17</b>
Projects	17
Production	18
Spending	19
Employment	20
GDP	22
Government Revenues	23
<b>No Leasing Case Impacts</b>	<b>27</b>
Projects	27

Production	28
Spending	28
Employment	29
GDP	31
Government Revenues	32
<b>No Permits Case Impacts</b>	<b>34</b>
Projects	34
Production	35
Spending	35
Employment	36
GDP	38
Government Revenues	39
<b>Conclusions</b>	<b>42</b>
Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry	42
Impact of a Potential Leasing Ban	43
Impact of No New Drilling Permits Being Issued	43
<b>NOIA Member Profiles</b>	<b>45</b>
<b>Appendices</b>	<b>65</b>
Methodology	65
Overall Methodology	65
Scenario Development	65
Project and Activity Methodology	66
Spending Methodology	66
Economic Methodology	67
Government Revenue Methodology	67
Representative Offshore Oil and Gas Industry Suppliers	69
Data Tables by Case	87
Gulf of Mexico Economic Impacts	87
No Leasing Case Impacts	97
No Permits Case Impacts	106



# List of Tables

Table 1: Potential Impacts No Leasing Case .....	15
Table 2: Potential Impacts No Permits Case.....	16
Table 3: Projected Base Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	87
Table 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions .....	88
Table 5: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment (Number of Jobs) .....	91
Table 6: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Direct vs. Indirect and Induced Supported Employment (Number of Jobs) .....	92
Table 7: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP \$ Millions .....	93
Table 8: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by Type \$ Millions .....	94
Table 9: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by State \$ Millions .....	95
Table 10: Projected Base Case LWCF Distributions \$ Millions .....	96
Table 11: Projected Base Case vs. No Leasing Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	97
Table 12: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions	98
Table 13: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs).....	101
Table 14: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Direct and Indirect and Induced Supported Employment Reductions (Number of Jobs) .....	102
Table 15: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions \$ Millions .....	103
Table 16: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type \$ Millions.....	104
Table 17: Projected No Leasing Case LWCF Distributions \$ Millions .....	105

Table 18: Projected Base Case vs. No Permits Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	106
Table 19: No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions .....	107
Table 20: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs).....	110
Table 21: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs).....	111
Table 22: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions \$ Millions .....	112
Table 23: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type \$ Millions.....	113
Table 24: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues Reductions by State \$ Millions .....	114
Table 25: Projected No Permits Case LWCF Distributions \$ Millions .....	115



# List of Figures

Figure 1: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year.....	17
Figure 2: Projected Base Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	19
Figure 3: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending .....	20
Figure 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment ..	21
Figure 5: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Direct vs. Indirect and Induced Supported Employment .....	22
Figure 6: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP .....	23
Figure 7: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by Type.....	24
Figure 8: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by State .....	25
Figure 9: Projected Base Case LWCF Distributions .....	26
Figure 10: Projected Base Case vs. No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year .....	27
Figure 11: Projected Base Case vs. No Leasing Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	28
Figure 12: Projected Base Case vs. No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending .....	29
Figure 13: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions .....	30
Figure 14: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Direct and Indirect and Induced Supported Employment Reductions .....	31
Figure 15: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions.....	32
Figure 16: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type .....	33
Figure 17: Projected Base Case vs. No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year .....	34

Figure 18: Projected Base Case vs. No Permits Case Gulf of Mexico Oil and Natural Gas Production (BOE/D) .....	35
Figure 19: Projected Base Case vs. No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending .....	36
Figure 20: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions.....	37
Figure 21: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions.....	38
Figure 22: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions.....	39
Figure 23: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type .....	40
Figure 24: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues Reductions by State .....	41

# Introduction

## Purpose of the Report

Despite the current difficulties it is facing, the Gulf of Mexico oil and natural gas industry will likely continue to be a major source of energy production, employment, gross domestic product, and government revenues for the United States. A number of proposals have been advanced recently which would likely have a major impact on the industry's activity levels, and the subsequent energy production, employment, gross domestic product, and government revenues supported by the offshore oil and natural gas industry in the United States. These proposals vary widely, but for the purpose of this report three scenarios were developed, a continuation of current policies and regulations, a ban on new offshore leases in the Gulf of Mexico OCS, and a ban on new drilling permits approvals in the Gulf of Mexico OCS.

Energy and Industrial Advisory Partners (EIAP) was commissioned by the National Ocean Industry Association (NOIA) to develop a report forecasting activity levels, spending, oil and natural gas production, supported employment, contributions to GDP, and Government Revenues in these scenarios. The scenarios developed in this report are based solely upon government and other publicly available data and EIAP's own expertise and analysis.

## Report Structure

In this report, EIAP first outlines the study's methodology including data development, the limitations of this study and how the three scenarios in this report were developed. The next section discusses activity levels and economic impacts of the Gulf of Mexico Offshore oil and natural gas industry. The third section outlines the potential impacts of the second scenario developed for the report, the No Leasing Case. The fourth section outlines the potential impact of the third scenario developed for the report, the No Permits Case. The final section concludes. Prior to the appendices, the study also included profiles of NOIA members to demonstrate the diverse group of companies which make up the offshore Gulf of Mexico oil and natural gas industry.

## Excluded from Study

This paper has been limited in scope to the assessment of the potential impacts of the three scenarios developed for the report, additional changes to regulations or policies outside of the changes assessed in this report (for example policies that impact already leased blocks or producing projects) could have a greater effect than the impacts laid out in this report. The study also excludes potential domestic supply chain reductions due to reduced activity levels which could lead to further reductions in the domestic economic impacts of the Gulf of Mexico oil and natural gas industry. This study has also excluded the impacts of activity in the Alaskan and Pacific OCS, as well as in Eastern Gulf of Mexico areas not currently

open to exploration and production and the Atlantic OCS. The impacts projected in this report would likely be greater if these areas were included. This study also does not attempt to calculate the effects of the proposed language on the downstream oil and natural gas industry, or subsequent impacts on other industries (for example due to reduced domestic oil and natural gas production), other than the impacts directly due to reduced activity in the offshore oil and natural gas sector. Additionally, the projected government revenue impacts do not account for personal income taxes, corporate income taxes or local property taxes. Due to the exclusion of these impacts, it is likely that the economic impacts presented in this study represent conservative projections of the potential impacts of the scenarios developed. Additionally, the impacts presented could be imprecise by as much as 10% or more due to the actual adoption and implementations of the studied scenarios and other factors.

## About EIAP

Energy & Industrial Advisory Partners (EIAP) was founded to provide companies, investors and industry associations across the energy and industrial markets with economic and strategic consulting, as well as M&A and restructuring advisory services from seasoned consultants with significant industry experience. EIAP is a specialist consulting firm that utilizes its deep industry experience and rigorous analytical methodologies to help stakeholders gain the insights they require to make more informed, data driven decisions.

Our team and our subject matter experts have worked in the industries we cover, and we have maintained that focus throughout our consulting careers. This specialism enables us to provide proprietary insights into the perspectives of key customers, suppliers and competitors. Our collective experience amounts to hundreds of engagements alongside some of the world's most sophisticated energy and industrial companies, investors, and industry associations.

Every project is bespoke and focused on identifying and understand the issues facing a business or industry and developing practical solutions. We understand that insight not only comes from the C-Suite but also the shop floor, and we're just as comfortable in the field as we are in the board room.

# Methodology

## Data Development

As part of the development of this report, a detailed review of the potential implications of certain regulatory and policy changes was conducted. This study is in no way exhaustive, especially considering uncertainty around how the proposed policy changes would be developed and implemented. This report focuses on the potential operational effects of the proposed policies based on a reasonable reading of these proposals and considers the potential operational changes oil and natural gas companies could undertake to minimize the effects of these changes on their operations. As such, this analysis is inherently forward looking and subject to significant changes based on the potential development and implementation of the proposed policy changes by Congress, the executive branch and regulators such as the Department of The Interior, The Bureau of Ocean Energy Management and The Bureau of Safety and Environmental Enforcement.

## Limitations

Given the large degree of volatility and uncertainty in oil and gas markets as well as the global economy, the assumptions and forecasts contained in this report are based on reasonable readings of conditions when this report was developed. Uncertainty around commodity pricing and global economic conditions may have a significant impact on the projections developed for this study, especially in the early years of the forecast contained in this report. This report has utilized revised forecasts for 2020 and 2021 oil and natural gas prices and attempted to forecast the impacts of current global economic conditions and commodity prices. EIAP makes no representations as to the impacts of the potential policy proposal addressed in this report and assumes that any proposals actually adopted or enacted would differ greatly in language and execution compared to the scenarios developed for this report. These policies could impose significantly greater engineering, operational, cost and other burdens on the oil and natural gas industry and regulators. The report's projections of the effects that these potential scenarios would impose on engineering, operations, and costs are an independent, good faith view arising from reasonable assumptions based on these potential scenarios and the authors' expertise and experience. Energy and Industrial Advisory partners provided this independent study while expressly disclaiming any warranty, liability, or responsibility for completeness, accuracy, use, or fitness to any person or party for any reason.

## Scenario Development

The study's data development was undertaken by developing a model that accounts for all major parts of the offshore oil and natural gas exploration and production lifecycle. The major sections of the model are: an Activity Model that assesses near term project activity, Gulf of Mexico reserves and production;

and the likely project development and drilling activity necessary to meet production targets; a spending model derived from the activities required to develop and operate offshore oil and natural gas projects and reasonable assumptions around the spending levels typically associated with these activities; a government revenue model which uses forecast production levels and other relevant forecasts (leasing, block rentals, etc.), forecast commodity pricing, historical data on actual government revenues and distributions and governmental policies to forecast potential government revenues; and an Economic Model which utilizes the projected spending and government revenue levels, as well as assumptions about the nature of spending and its geographic distribution to forecast associated supported economic activity including employment and gross domestic product.

The Base Case model was developed based on forecast production and pricing levels based on the Energy Information Administration's (EIA) Annual Energy Outlook 2020<sup>1</sup> for long term prices and the EIA's Short-Term Energy Outlook<sup>2</sup> for near term (2020 and 2021) prices. Although these forecasts were utilized to develop the Base Case model, due to differences in modeling techniques, especially the project-based model developed in this report, the report's forecast production levels vary from those provided in the EIA's forecasts.

Following the creation of the Base Case forecast the potential effects of the two additional scenarios (no new leases being sold or the "No Leasing Case", and no new drilling permits being approved or the "No Permits Case") were considered with regards to how these changes would impact exploration drilling, new project development of both underway and future projects, and existing producing projects. For the No Leasing Case, the following potential impacts were noted. (Table 1)

---

<sup>1</sup> Annual Energy Outlook 2020, Energy Information Administration

<sup>2</sup> Short Term Energy Outlook, April 7, 2020, Energy Information Administration

**Table 1: Potential Impacts No Leasing Case**

Cause of Impact	Potential Effect
New Lease Sales Stopped beginning in 2022	No new lease sales
No new lease sales	Immediate Reduction in Bid Revenue
Leases expires and are not refreshed	Continuous Reduction in Lease Revenue
Steady reduction in leases available for exploration	Steady reduction in exploration drilling and reserves discovered
As leases expire an increasing portion of the Gulf is not open to activity	Steady reduction in new projects
Project economics are impacted by an inability to lease nearby blocks to tie in new production	Steady reduction in new projects
Reduced tie ins to existing facilities	Reduced production at existing facilities decreases facility life spans
Increased shut ins of existing facilities	Reduced operational spending, increased decommissioning spending
Operators will be less likely to allow leases to expire	Higher retention rate for existing leases

Source: Energy and Industrial Advisory Partners



For the No Permits Case the following potential impacts were considered. (Table 2)

**Table 2: Potential Impacts No Permits Case<sup>3</sup>**

Cause of Impact	Potential Effect
Immediate halt to new lease sales	Immediate Reduction in Bid Revenue
Undeveloped leases are allowed to expire	Continuous Reduction in Lease Revenue
No new unpermitted exploration wells	Drastic reduction in reserves discovered
New projects without drilling permits are halted	Rapid reduction in new projects after existing permits are used
New projects where economics are tied to unpermitted wells or tiebacks are halted	Rapid reduction in new projects due to project economics
Production at existing facilities declines rapidly	Inability to drill or tie in new wells leads to production decline
Declining production at existing facilities	Facilities shut in early than designed for
Increased shut ins of existing facilities	Reduced operational spending, increased decommissioning spending

*Source: Energy and Industrial Advisory Partners*

In addition to the potential impacts above, additional impacts due these potential policy changes are possible due to potential increased costs and changes or reductions in the supply chain as activity in the Gulf of Mexico declines.

The potential impacts listed above were examined to develop assumptions on how near-term projects, longer term projects, existing projects, drilling and decommissioning would be impacted. It was assumed that operators would modify their behavior to minimize the impacts of the potential changes by, for example, being more likely to retain leases and by being more likely to drill already permitted wells. The potential impacts were then applied to the Base Case Scenario to develop the two additional scenarios. These changes in activity levels and subsequent spending levels were then applied to the remaining parts of the model to develop modified production, government revenue, and economic forecasts.

<sup>3</sup> The study assumes no future leasing under this scenario. Even if leasing were authorized, there would be very low interest if no further permits for drilling were to be issued.

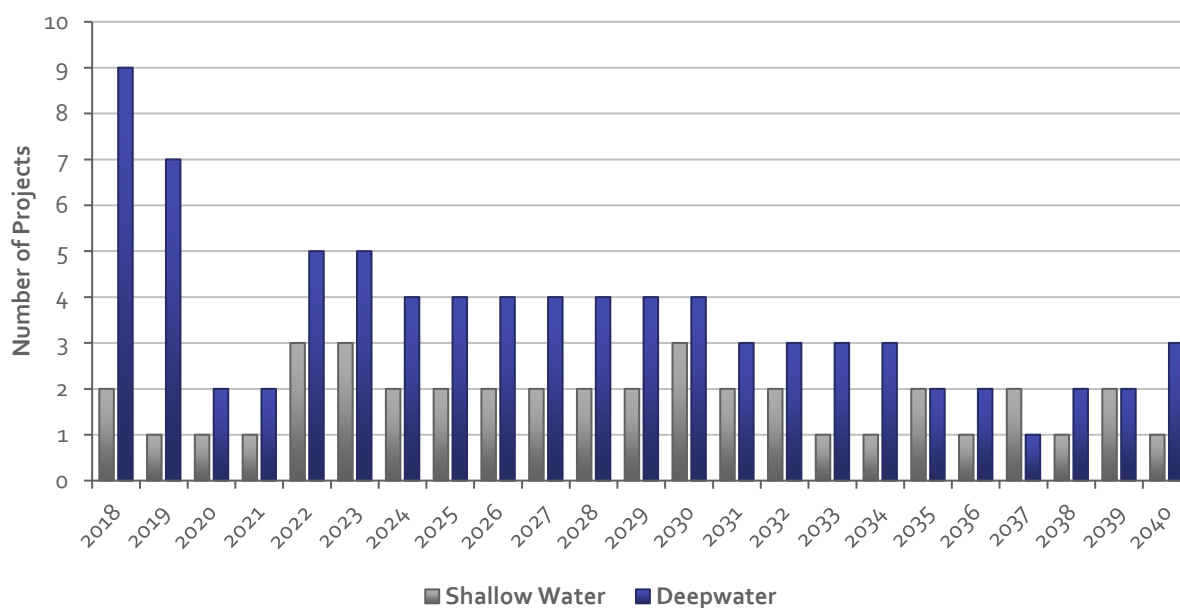
# Gulf of Mexico Economic Impacts

The Gulf of Mexico oil and natural gas industry supports significant employment, gross domestic product and state and Federal Government revenues. To quantify the potential effects of policy changes, this study forecasted a Base Case activity level for Gulf of Mexico OCS oil and natural gas activity to provide a comparison with activity levels and subsequent impacts if potential policy changes were enacted. The study forecasted key activity indicators including the number of wells drilled, projects executed, oil and natural gas production, and spending based on projected activity levels. These activity and spending forecasts drive the projected employment, GDP, and government revenue forecasts presented in this report.

## Projects

Development of new offshore oil and natural gas projects drives both capital and operational spending as well as oil and natural gas production. Offshore oil and natural gas projects are complex, and require significant planning, engineering, and procurement activities as well as long lead times. New project executions are a key indicator for activity and thus spending levels (and subsequent economic activity) in the Gulf of Mexico. Although Gulf of Mexico project executions have declined in recent years due to lower energy prices and competition from onshore unconventional resources, and near-term activity levels will likely be impacted by current conditions, project executions are expected to recover (albeit not necessarily to levels seen early in the 2010s). (Figure 1)

**Figure 1: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year**



Source: Energy and Industrial Advisory Partners

Over the long term, in line with the EIA's forecast for steadily declining production towards the end of the forecast period, project executions are expected to decline with some year to year fluctuations over the last decade of the forecast. Additionally, larger, deepwater projects are expected to account for a higher share of project executions. These projects are associated with higher spending and production levels on a per project basis compared to both smaller and shallow water projects.

## Production

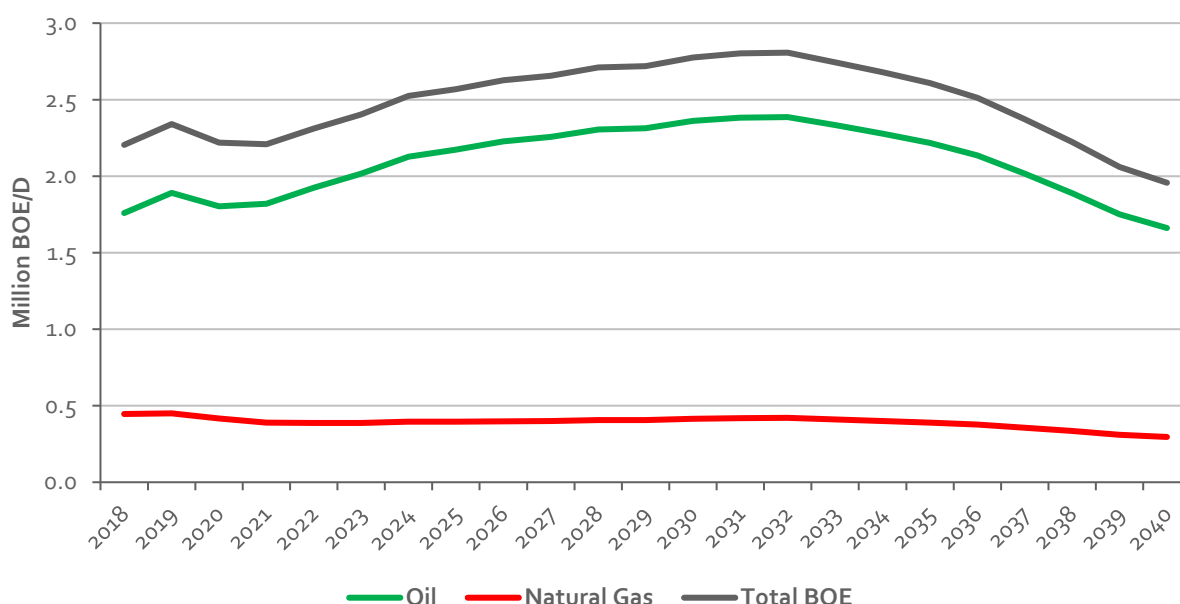
The decline rate of existing production, along with production from new projects are the primary drivers for Gulf of Mexico oil and natural gas production. Production is influenced by a number of factors including reservoir productivity, oil and natural gas ratios, well counts, and operational choices by exploration and production companies. To prepare the production forecast, the Energy Information Administration's production forecast from the "Annual Energy Outlook 2020"<sup>4</sup> was utilized as the primary indicator of forecast production levels, with revisions to near term levels due to current market conditions. The Base Case production forecast was developed to be relatively in line with this forecast, although the production forecast in this report differs from this forecast due to the project-based methodology used to develop forecasts for the report. To develop the production forecast for this report, project development (in addition to the existing production base) was modeled utilizing key indicators such as the water depth of the project, the number of producing wells, per well production levels, assumptions on peak production years, and decline rates.

This study forecasts that combined Gulf of Mexico oil and natural gas production in 2020 will be around 2.2 million barrels of oil equivalent per day, with oil and other liquids accounting for around 81 percent of production and natural gas accounting for 19 percent of production. The study forecasts that total production will, after declining in 2020 through 2020, steadily increase through 2032, before beginning to decline. At the end of the forecast period in 2040, the Gulf of Mexico OCS is projected to produce just under 2 million barrels of oil equivalent per day, with around 84 percent of production projected to be oil and other liquids and the remainder natural gas. (Figure 2)

---

<sup>4</sup> Annual Energy Outlook 2020, Energy Information Administration

**Figure 2: Projected Base Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**



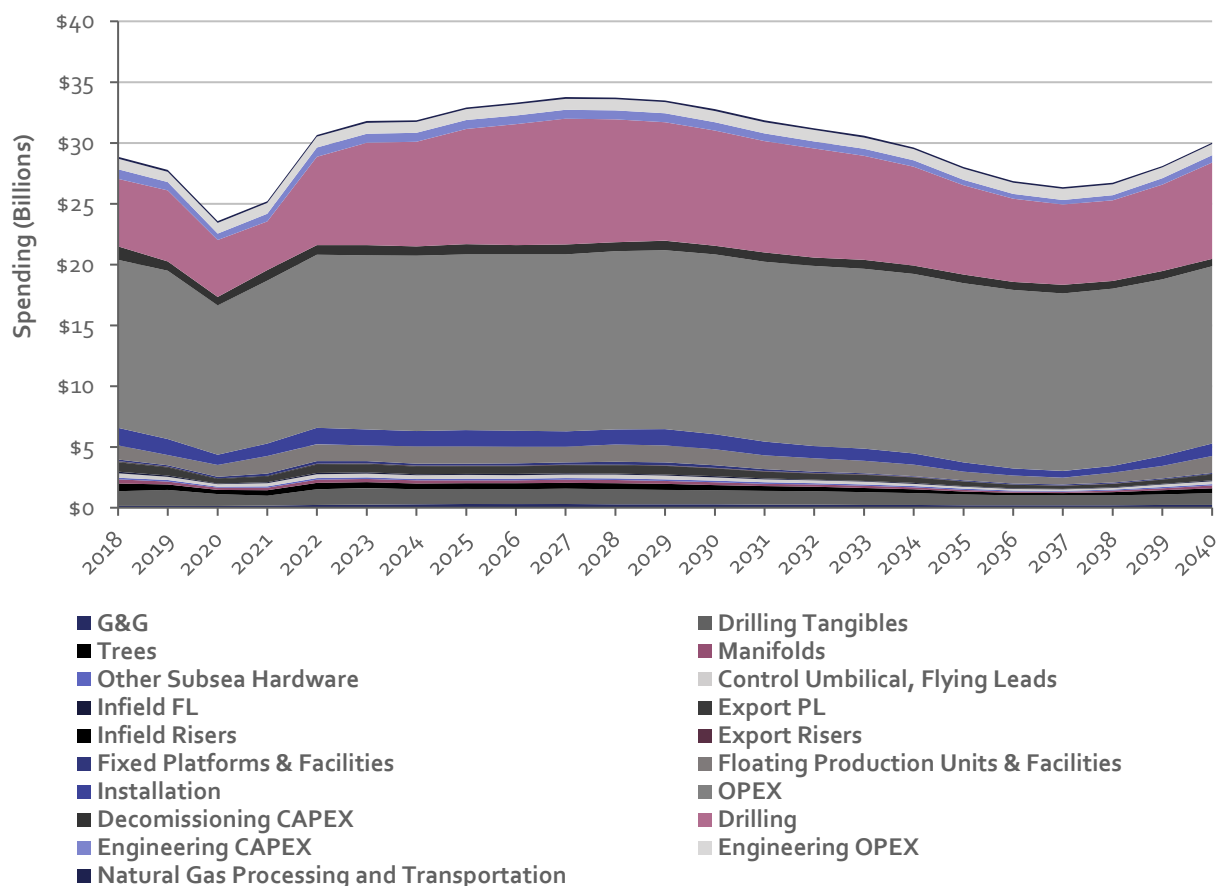
Source: Energy and Industrial Advisory Partners

## Spending

Offshore oil and natural gas exploration, development and operations require large amounts of spending across a large variety of activities ranging from geological and geophysical surveys, drilling, surface and subsea production equipment, engineering, operational expenditures, and decommissioning. For this study, spending was modelled in 19 categories, encompassing the full range of activities required to explore for, develop, operate, and decommission offshore oil and natural gas projects.

In the Base Case scenario developed for this report, offshore oil and natural gas spending is projected at just over \$23.4 billion in 2020 (compared to \$27.5 in 2019), with spending projected to grow steadily to a peak of over \$33 billion from 2026 to 2029. Spending is then projected to steadily decline with year to year fluctuations through 2038, before rising slightly towards the end of the forecast period. On average, from 2020 to 2040 annual spending is projected at nearly \$30 billion. (Figure 3)

**Figure 3: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending**

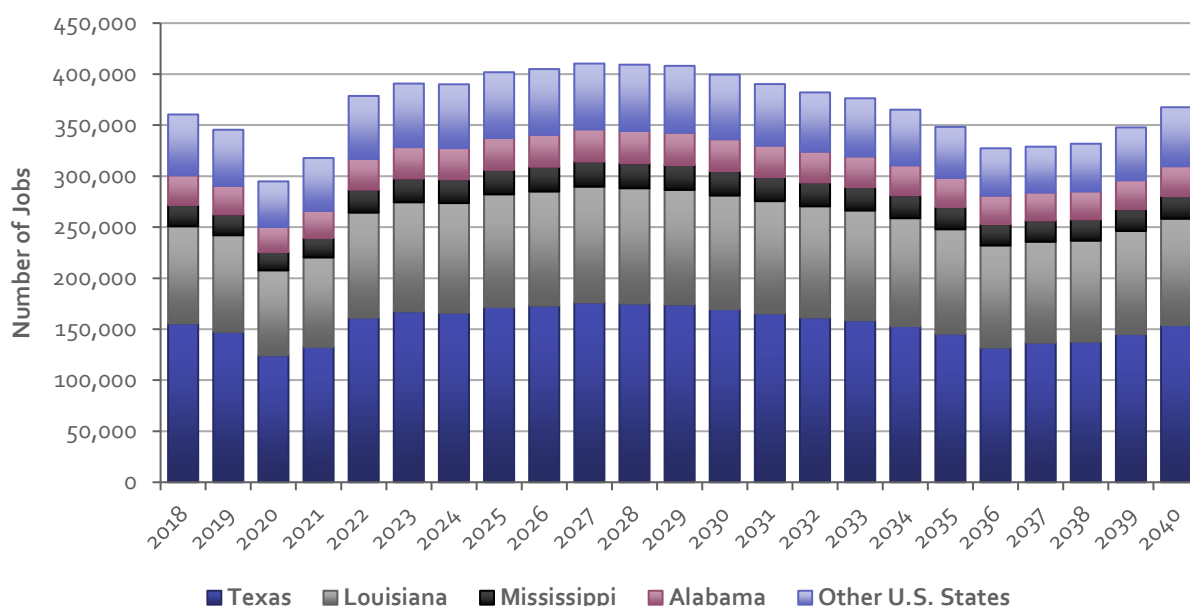


Source: Energy and Industrial Advisory Partners

## Employment

The Gulf of Mexico offshore oil and natural gas industry has supported significant levels of employment in the U.S. for decades. While the employment impact of the industry is focused on the Gulf Coast states, almost all, if not all states see employment supported due to the industry. The Gulf of Mexico offshore oil and gas industry supports a large number of highly paid jobs directly, especially highly paid blue collar jobs, and additionally supports significant employment through the industry's supply chain (indirect jobs), and due to increased spending by workers (induced jobs). In 2019, it is estimated that the industry supported around 345 thousand jobs. Due to current economic conditions and low commodity prices, this study projects that in 2020, the Gulf of Mexico offshore oil and natural gas industry will support around 295 thousand jobs. (Figure 4)

**Figure 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment**

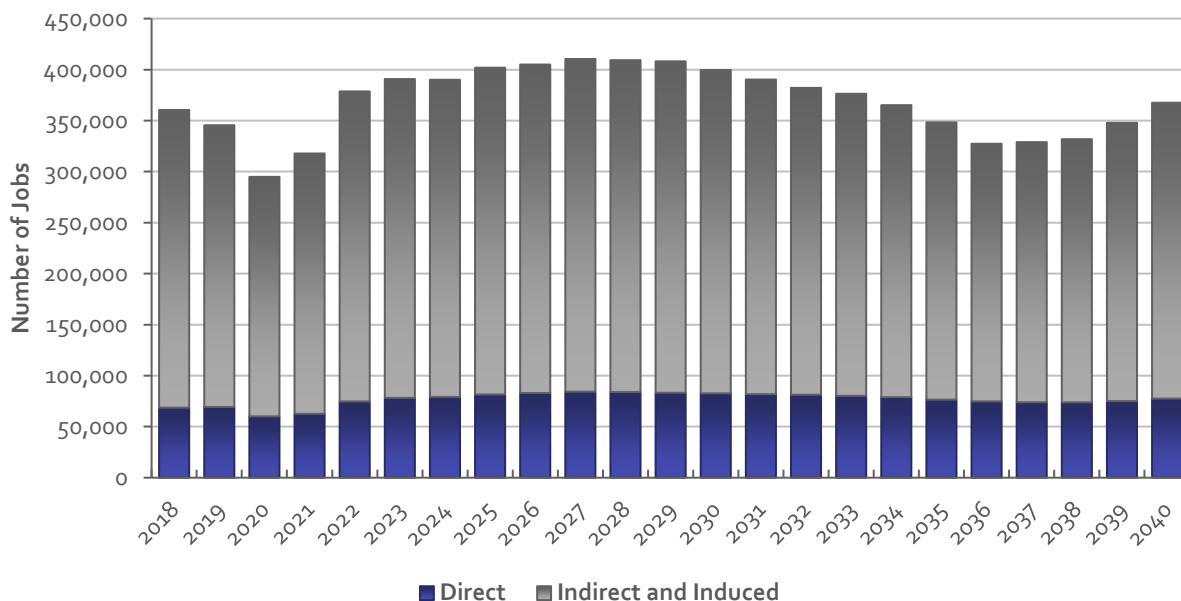


Source: Energy and Industrial Advisory Partners

Employment supported by the Gulf of Mexico offshore oil and natural gas industry is expected to steadily rise through the end of the decade, with an average of around 405 thousand jobs supported from 2025 to 2030. In line with the EIA's forecast for reduced production, employment is projected to slowly fall (with year to year fluctuations) for the last decade of the forecast period. On average from 2031 to 2040 around 357 thousand jobs are projected to be supported by the Gulf of Mexico offshore oil and natural gas industry. The largest employment impact is projected in the Gulf Coast states, with an average of 156 thousand jobs supported in Texas across the 2020-2040 forecast period, around 105 thousand jobs in Louisiana, over 30 thousand jobs in Alabama, over 22 thousand jobs in Mississippi, and around 57 thousand jobs in the rest of the U.S.

The Gulf of Mexico Offshore Oil and Natural Gas industry supports employment both through direct employment by the industry, but also indirectly. Indirect employment occurs through the purchases of goods and services by the industry, while induced employment is due to the impact of greater income in the economy. Direct employment by oil and natural gas companies and their suppliers in 2019 was estimated at 70 thousand jobs. In 2020, direct employment is projected to fall to around 60 thousand jobs. Across the 2020 to 2040 forecast period, direct employment is projected to average around 78 thousand jobs each year. Indirect and induced employment due to the Gulf of Mexico offshore oil and natural gas industry was estimated at around 276 thousand jobs in 2019. In 2020, supported indirect and induced employment is project to fall around 235 thousand jobs. Across the 2020 to 2040 forecast period supported indirect and induced employment is projected to average just under 292 thousand jobs each year.

**Figure 5: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Direct vs. Indirect and Induced Supported Employment**



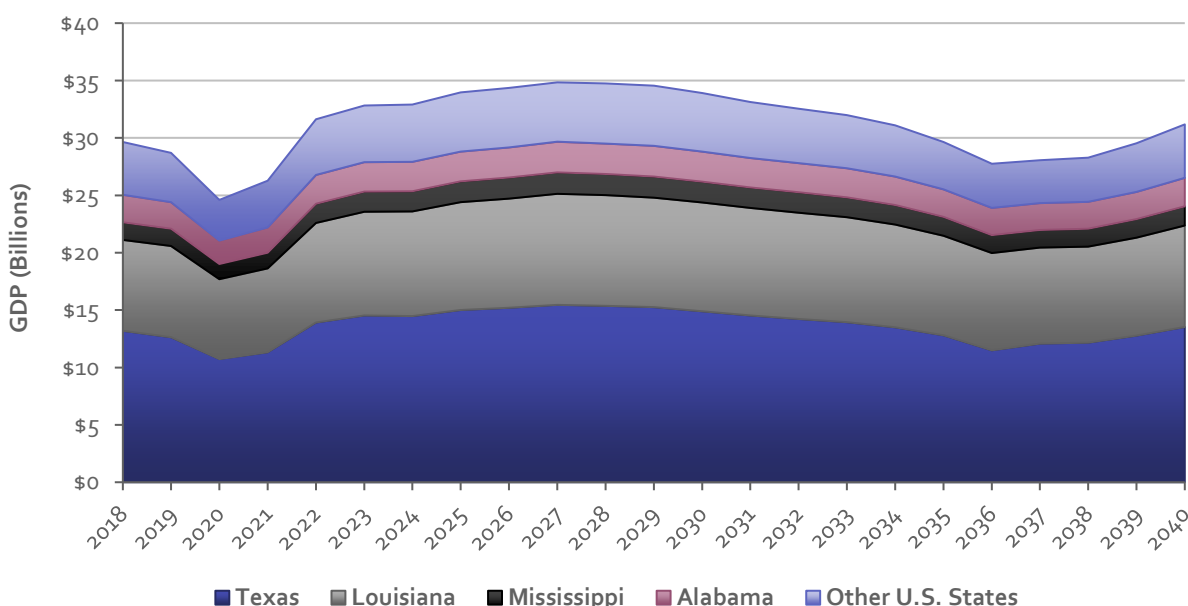
Source: Energy and Industrial Advisory Partners

## GDP

The Gulf of Mexico offshore oil and natural gas industry contributes significantly to the gross domestic product (GDP) of the Gulf Coast states as well as the nation as a whole. In 2019, the industry is estimated to have contributed nearly \$28.7 billion to U.S. GDP. In 2020 the industry is projected to contribute nearly \$24.6 billion per year of GDP nationally. Over the ten-year period from 2021 to 2030, contributions to GDP are projected at just under \$33 billion per year on average. From 2031 to 2040, projected contributions to GDP average at just under \$30.3 billion. (Figure 6)



**Figure 6: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP**



Source: Energy and Industrial Advisory Partners

## Government Revenues

Government revenues due to Gulf of Mexico offshore oil and natural gas activity are primarily derived from three main revenue streams; royalties paid on produced oil and natural gas, bonus bids paid to acquire blocks in lease sales, and rents for blocks leased by operators. There are a number of policies which impact royalties and lease payments received by the Federal Government, including royalty relief for certain blocks depending on production levels, and differing rent and royalty regimes for fields in different water depths, and blocks leased at different times. Additionally, the value of oil and natural gas produced in the Gulf of Mexico may differ from major indicators such as West Texas Intermediate (WTI) crude due to transportation costs, long term sales contracts, and differentials due to product quality. To calculate government revenues due to offshore oil and natural gas activities data from the Office of Natural Resource Revenue<sup>5</sup> (ONRR) as well as oil and natural gas price projections from the Energy Information Administration's Annual Energy Outlook 2020<sup>6</sup> and Short-Term Energy Outlook<sup>7</sup> were utilized. In some cases (especially regarding disbursements to states) calendar year data was unavailable. In these cases, fiscal year data was utilized as a stand in for calendar year data.

In 2019, government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico were just under \$5.4 billion. This study forecasts that on average across the forecast period, government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico (excluding personal

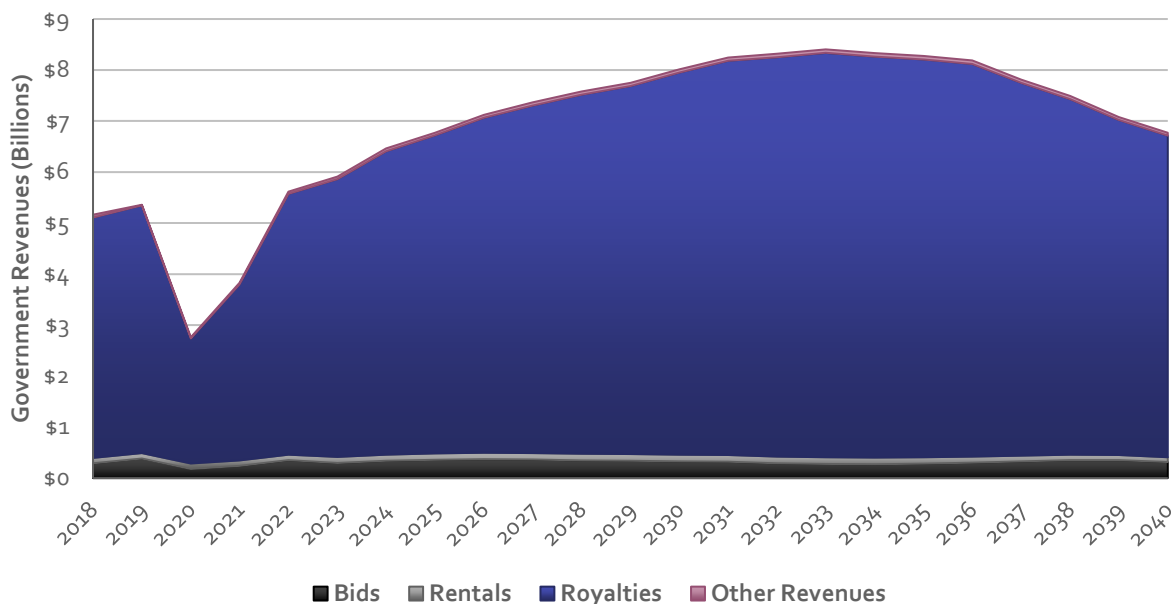
<sup>5</sup> Natural Resources Revenue Data, Office of Natural Resource Revenue, U.S. Department of the Interior

<sup>6</sup> Annual Energy Outlook 2020, Energy Information Administration

<sup>7</sup> Short Term Energy Outlook, April 7, 2020, Energy Information Administration

and corporate income taxes and property taxes), will average over \$7 billion per year. In general, the largest source of government revenues from Gulf of Mexico offshore oil and natural gas activities is derived from royalties paid on produced oil and natural gas. Across the forecast period, average royalty revenues are projected at around \$6.6 billion per year. Bid revenues are projected to average over \$315 million per year across the forecast period, rental revenues are projected to average around \$120 million per year, and other revenues are projected to average around \$57 million per year. (Figure 7)

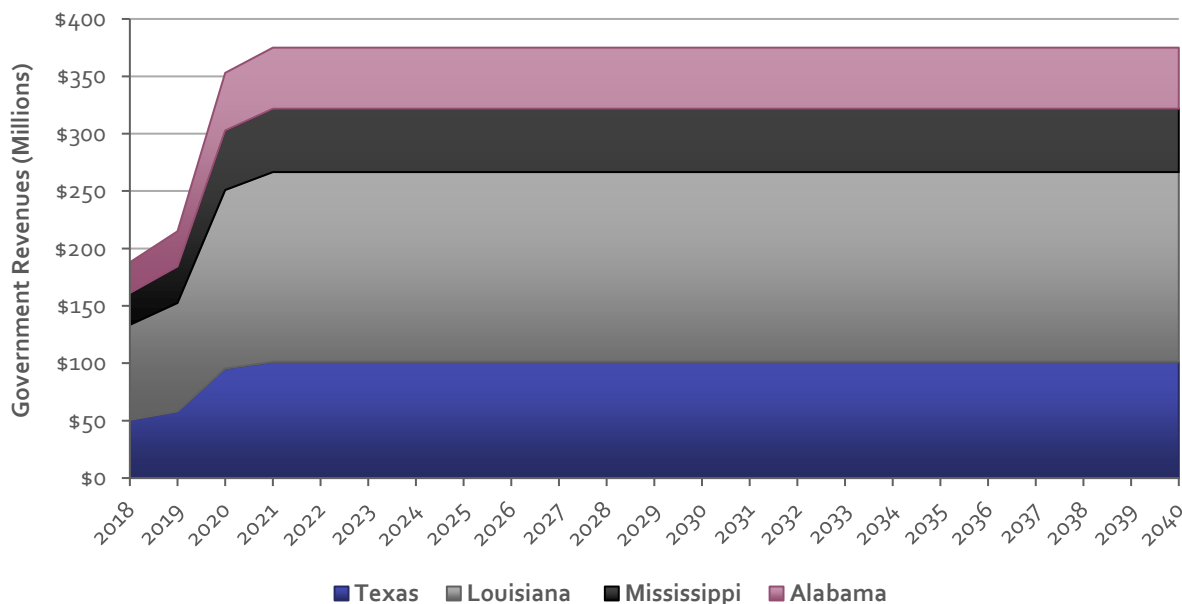
**Figure 7: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by Type**



Source: Energy and Industrial Advisory Partners

In 2006 Congress passed the Gulf of Mexico Energy Security Act (GOMESA) which created revenue sharing provisions for the four Gulf oil and gas producing States (Alabama, Louisiana, Mississippi and Texas), and their coastal political subdivisions. Revenue sharing was enacted in two phases beginning in 2007 and 2017 respectively, with revenue sharing caps of \$375 million for fiscal years 2017–2019, \$487.5 million for fiscal years 2020 and 2021, and \$375 million for fiscal years 2022–2055 enacted. To develop the revenue sharing forecasts in this report, total projected federal revenues, actual distribution data from the ONRR, analysis of the growth of revenue sharing and the revenue sharing caps were considered. In 2020, the Gulf of Mexico oil and natural gas producing states received around \$352 million due to revenue sharing. This study projects that in 2021 the Gulf Coast states will receive around \$375 million of revenue from GOMESA, the \$375 million revenue sharing cap would be maintained through 2040. (Figure 8)

**Figure 8: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by State**



Source: Energy and Industrial Advisory Partners

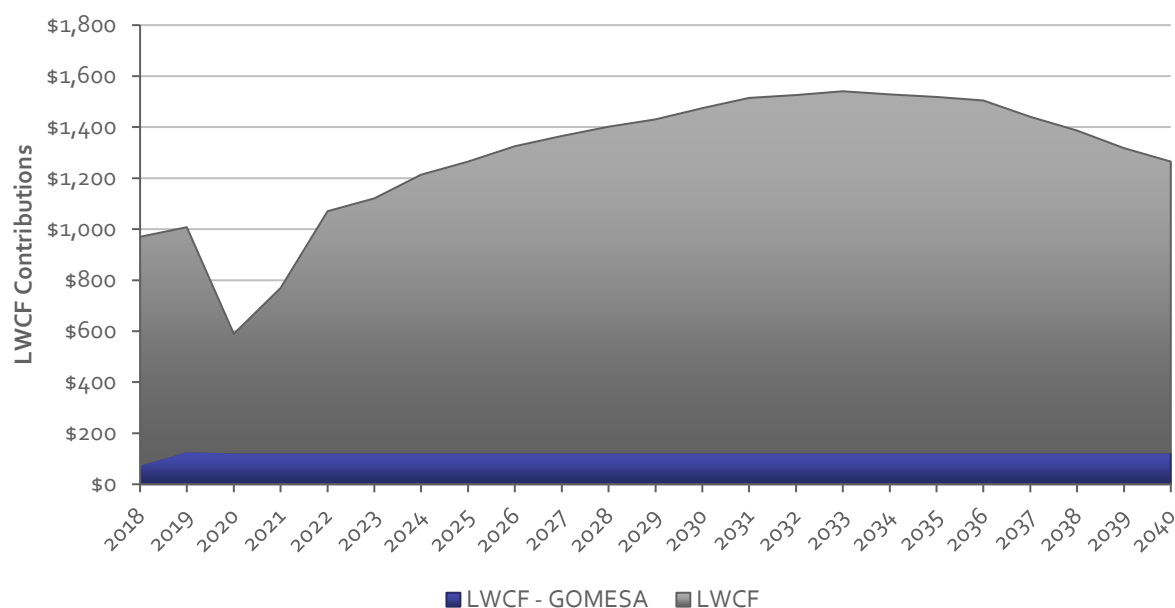
Based on historical distributions, this study projects that Louisiana will see the largest annual distributions due to GOMESA, with distributions averaging around \$165 million over the forecast period. Texas is projected to receive the second highest average distributions, at nearly \$101 million per year. Mississippi and Alabama are projected to receive distributions of an average of around \$55 and \$53 million respectively annually.

In addition to provisions for revenue sharing with Gulf of Mexico producing States, GOMESA also included a provision for distributions to the Land and Water Conservation Fund (LWCF). The LWCF, “supports the protection of federal public lands and waters – including national parks, forests, wildlife refuges, and recreation areas – and voluntary conservation on private land. LWCF investments secure public access, improve recreational opportunities, and preserve ecosystem benefits for local communities.”<sup>8</sup> In addition to funding due to GOMESA, the LWCF also receives significant additional funding due to offshore oil and natural gas activities.

GOMESA distributions to the LWCF are capped at \$125 million per year as part of a total cap with state distributions of \$500 million, although in FY 2019 nearly \$130 million was distributed to the LWCF. This study projects that distributions to the LWCF due to GOMESA revenue sharing will remain at or around the \$125 million level for the remainder of the study period, though distributions in 2020 and 2021 may be lower, non-GOMESA LWCF contributions are projected to average just under \$1.2 billion per year. (Figure 9)

<sup>8</sup> Land and Water Conservation Fund, U.S. Department of the Interior

**Figure 9: Projected Base Case LWCF Distributions**



Source: Energy and Industrial Advisory Partners

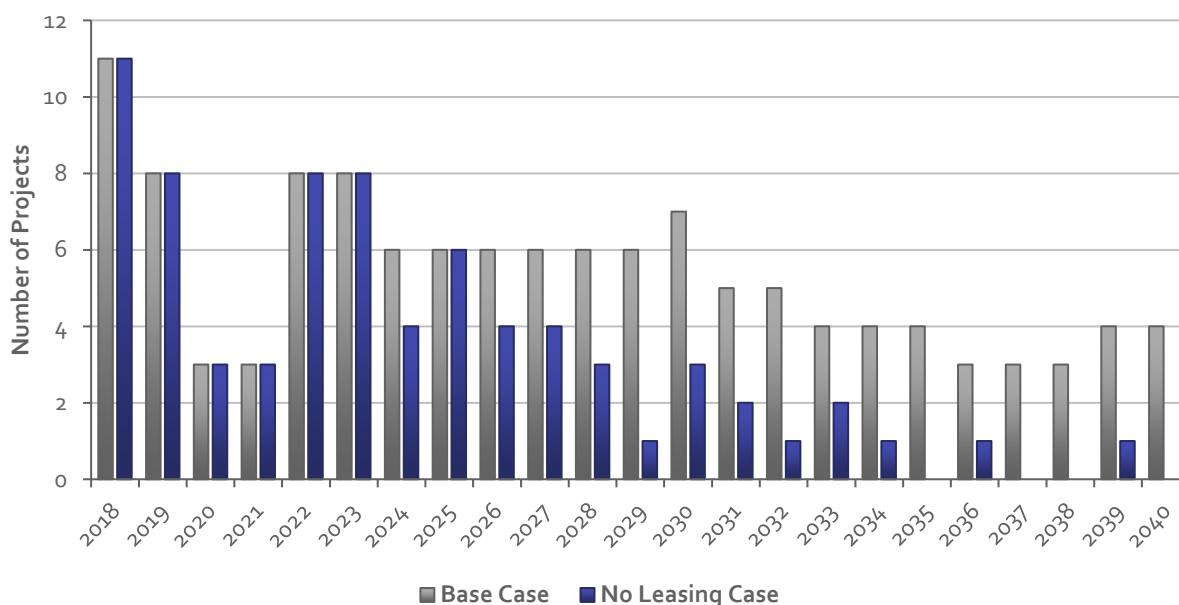
## No Leasing Case Impacts

Although no firm policy proposals have been advanced, one of a number of potential restrictive policy changes that has been advanced related to the Gulf of Mexico offshore oil and natural gas industry has been an end to new leasing in the Federal Offshore Continental Shelf. For the purposes of this report, the “No Leasing Scenario” was developed to provide a comparison of activity levels (project executions, spending, oil and natural gas production), economic impacts, and government revenues to the Base Case. This scenario assumes that no new lease sales would be held from 2022, but that existing leases would be unaffected, and that no other major policy or regulatory changes impacting the Gulf of Mexico offshore oil and natural gas industry would be enacted.

## Projects

Development of new offshore oil and natural gas projects drives both capital and operational spending as well as oil and natural gas production. Under the No Leasing Case, project development activity is projected to be reduced as soon 2024, as projects which would require tiebacks from adjacent unleased blocks to be economic are the first to be impacted. Over the 2020-2040 forecast period, new project startups are projected to decline by over 47 percent, from 104 to 55. The largest impact to new project startups is projected in the last decade of the forecast period, when projects are projected to decline by around 80 percent from 39 to 8. (Figure 10)

**Figure 10: Projected Base Case vs. No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year**



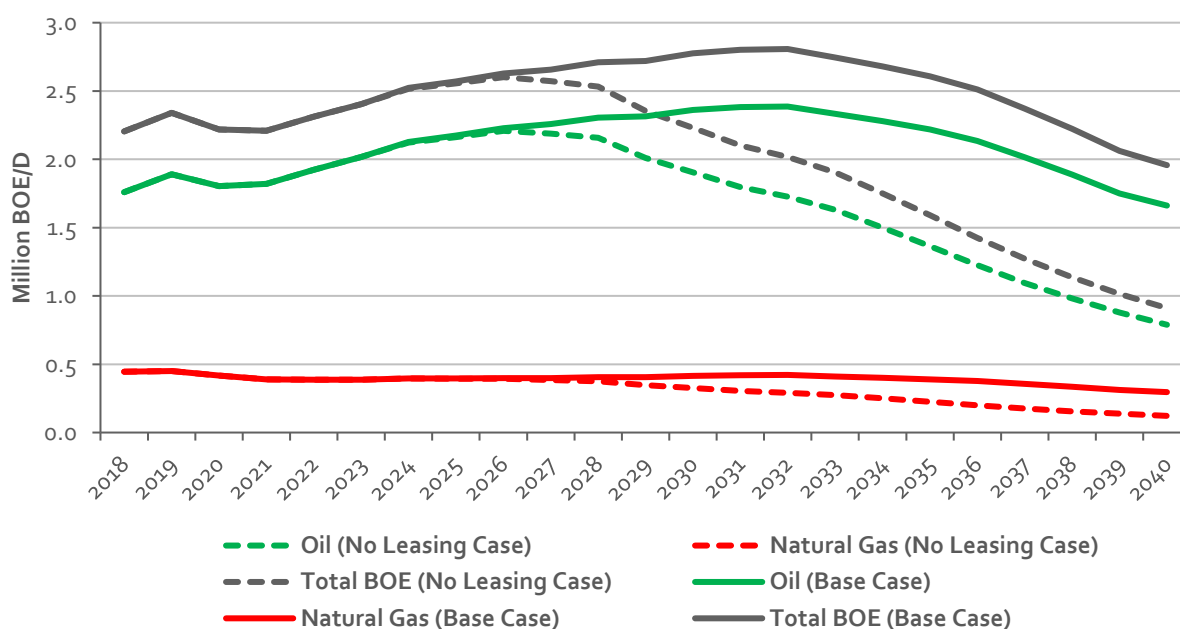
Source: Energy and Industrial Advisory Partners

## Production

To develop the production forecasts for this report, project development (in addition to the existing production base) was modeled utilizing key indicators such as the water depth of the project, the number of producing wells, per well production, assumptions on peak production years, and decline rates. In the No Leasing Case, the impact of reduced project development on production was modelled.

This study forecasts that in the No Leasing Case, average combined oil and natural gas production across the 2020 to 2040 forecast period will decline from around 2.5 million barrels of oil equivalent per day to just under 2 million barrels of oil equivalent per day (an around 20 percent decline). Over the last decade of the forecast period, production is projected to decline from around 2.5 million barrels of oil equivalent per day to 1.5 million barrels of oil equivalent per day (a just under 40 percent decline). In 2040, combined oil and natural gas production is projected to be around 910 thousand barrels of oil equivalent per day compared to 1.96 million barrels in the Base Case. (Figure 11)

**Figure 11: Projected Base Case vs. No Leasing Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**

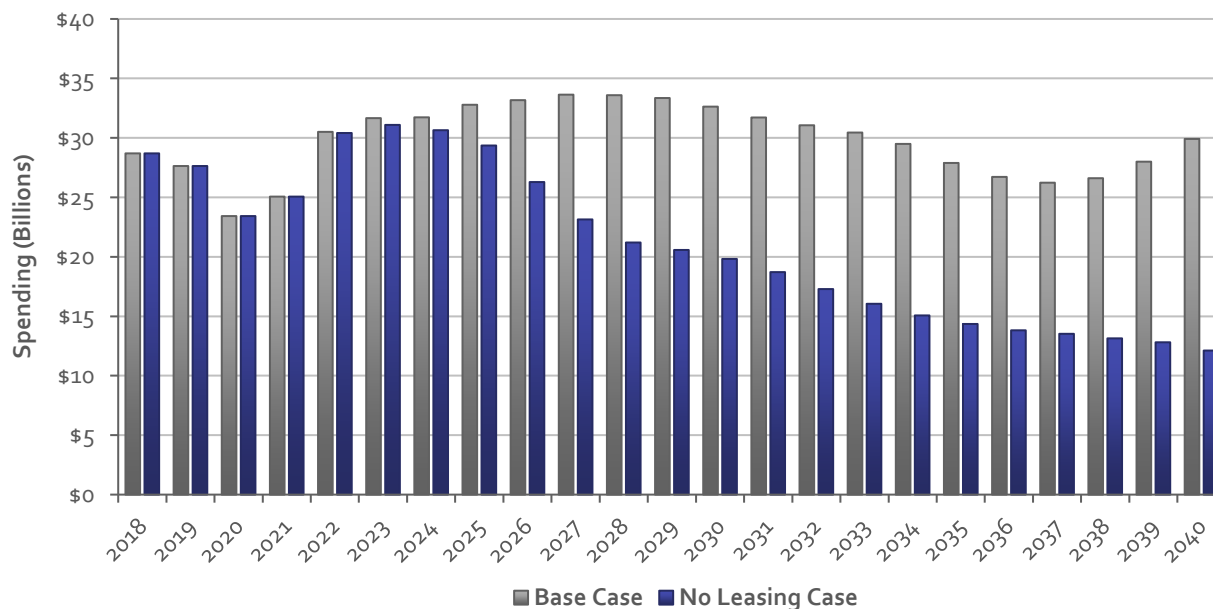


Source: Energy and Industrial Advisory Partners

## Spending

In the Base Case scenario developed for this report offshore oil and natural gas spending is on average from 2020 to 2040 projected at nearly \$30 billion per year. In the No Leasing Case spending is projected at around \$20.4 billion on average per year, a 32 percent decline. Over the last decade of the forecast period spending is projected to fall from an average of around \$28.8 billion to \$14.7 billion per year, a 49 percent decline. (Figure 12)

**Figure 12: Projected Base Case vs. No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending**



Source: Energy and Industrial Advisory Partners

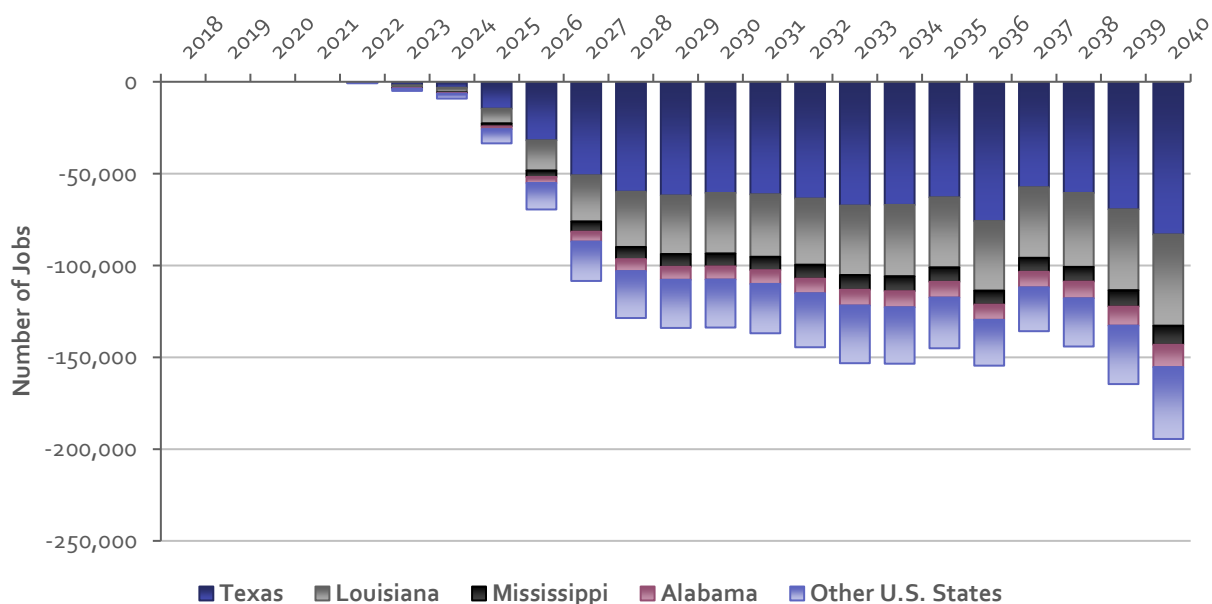
## Employment

This study projects that in the Base Case an annual average of around 370 thousand jobs nationally will be supported by the Gulf of Mexico Offshore oil and natural gas industry across the forecast period. In the No Leasing Case average employment is projected to decline to 268 thousand jobs supported annually (a 28 percent decline). Over the last decade of the forecast period, average employment supported by the offshore oil and natural gas industry is projected to decline to just under 204 thousand jobs supported on average annually in the No Leasing Case, from 357 thousand jobs in the Base Case.

In the No Leasing Case, Texas' average annual supported employment across the forecast period is projected to decline from 154 thousand jobs to 111 thousand jobs (a 29 percent decline), from around 104 thousand jobs to 79 thousand jobs in Louisiana (a 25 percent decline), from over 29 thousand jobs in Alabama to 24 thousand jobs (a 19 percent decline), from over 22 thousand jobs in Mississippi to 17 thousand jobs (a 24 percent decline), and from nearly 57 thousand jobs in the rest of the U.S to 37 thousand jobs (a 35 percent decline). Employment declines are projected to accelerate towards the end of the forecast period, with reduced employment approaching 195 thousand jobs nationally in 2040. (Figure 13)



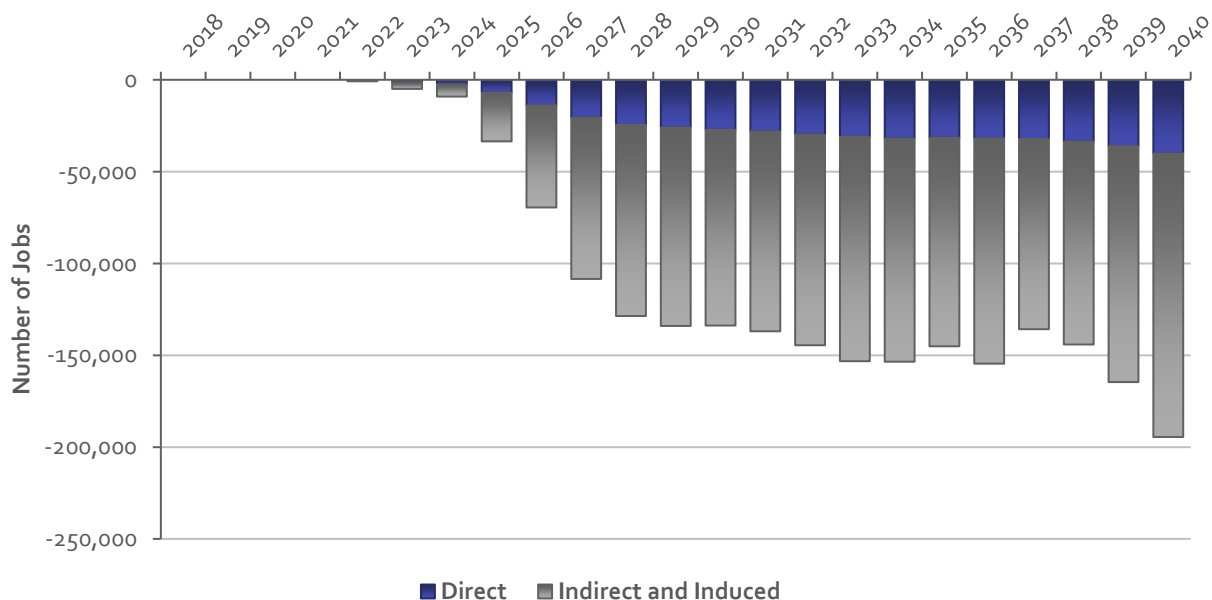
**Figure 13: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions**



Source: Energy and Industrial Advisory Partners

The Gulf of Mexico Offshore Oil and Natural Gas industry supports employment both through direct employment by the industry, but also indirectly. Across the 2020 to 2040 forecast period, direct employment is projected to average around 78 thousand jobs each year in the Base Case. In the No Leasing Case, average direct employment across the forecast period is projected at around 56 thousand jobs, a nearly 28 percent decrease. Across the 2020 to 2040 forecast period, supported indirect and induced employment in the No Leasing Case is projected at around 212 thousand jobs on average, compared to around 293 thousand jobs in the Base Case (also around a 28 percent decrease).

**Figure 14: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Direct and Indirect and Induced Supported Employment Reductions**

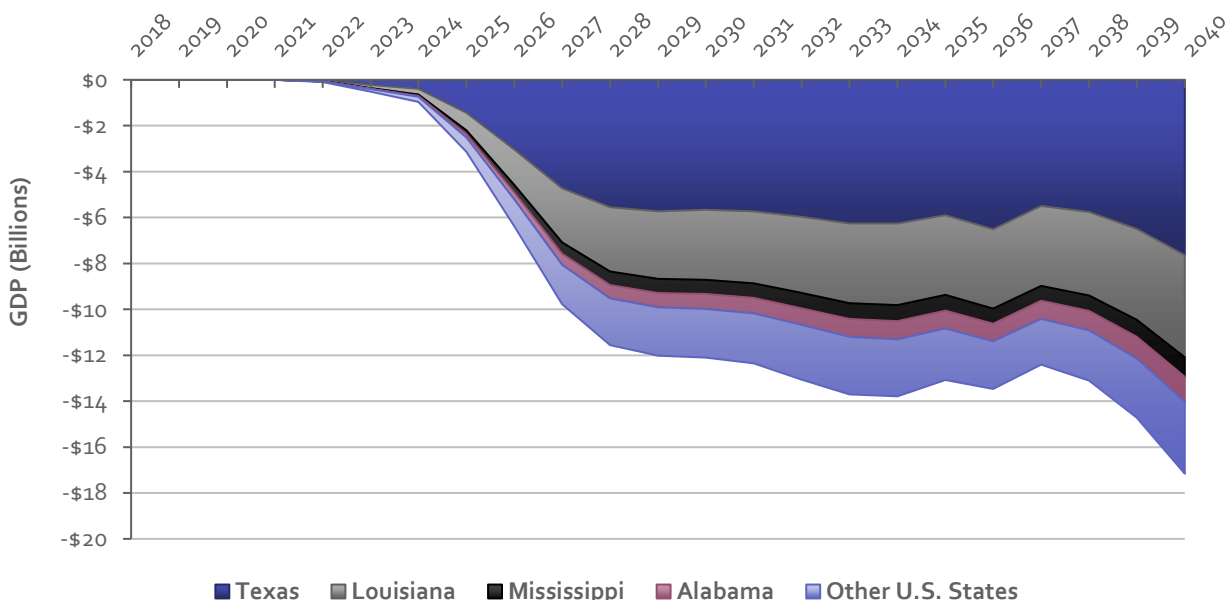


Source: Energy and Industrial Advisory Partners

## GDP

The Gulf of Mexico offshore oil and natural gas industry contributes significant levels of gross domestic product (GDP) to the Gulf Coast states' economies as well as the national economy. On average, the Gulf of Mexico Offshore Oil and Natural Gas Industry is projected to contribute \$31.3 billion to national GDP annually over the forecast period. In the No Leasing Case, annual contributions to GDP are projected at an average of around \$22.1 billion, around a 30 percent reduction. In the last decade of the forecast period, contributions to GDP in the No Leasing Case are projected at around an annual average of \$16.6 billion, compared to \$30.3 billion in the Base Case, around a 45 percent reduction. (Figure 15)

**Figure 15: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions**



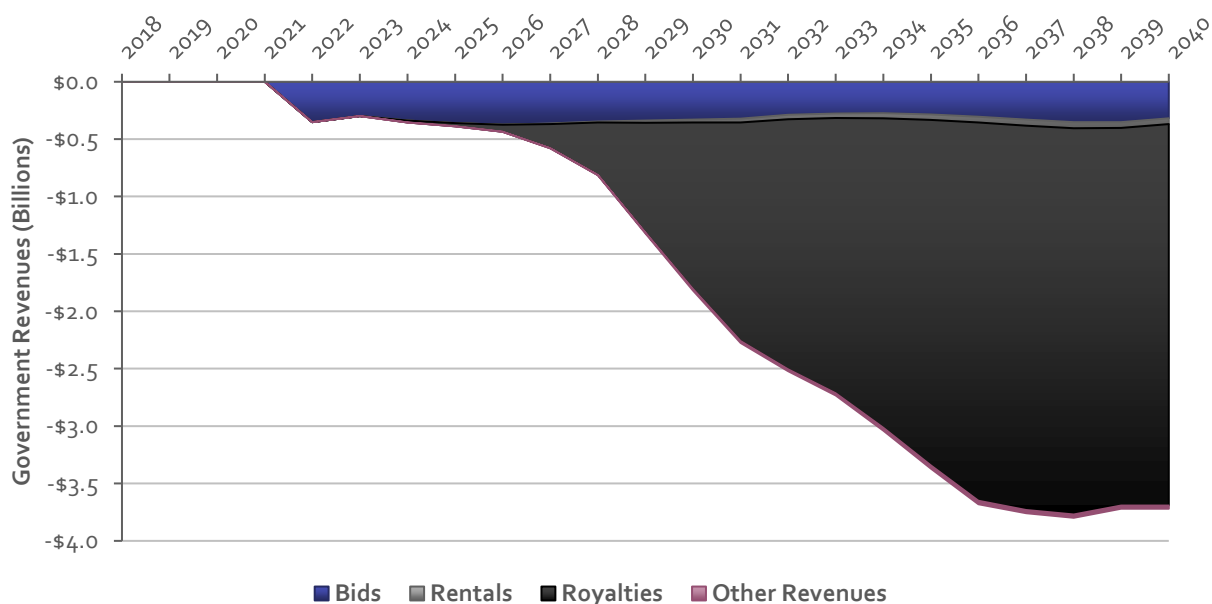
Source: Energy and Industrial Advisory Partners

## Government Revenues

This study forecasts that in the Base Case across the forecast period, government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico (excluding personal and corporate income taxes and property taxes), will average over \$7 billion per year. In the No Leasing Case revenues are projected at an average of around \$5.2 billion per year (a 26 percent reduction). Over the last decade of the forecast period, government revenues are projected at around \$4.6 billion per year, compared to \$7.9 billion in the Base Case, a 41 percent reduction.

Across the forecast period, average royalty revenues are projected to decline from over \$6.6 billion to \$5 billion per year (a 23 percent reduction). Bid revenues are projected to decline from an average of \$315 million per year to \$20 million per year (a 94 percent reduction), rental revenues are projected to decline from around \$120 million per year to \$95 million (a 21 percent reduction), and other revenues are projected to decline to around \$44 million per year compared to \$57 million in the Base Case. (Figure 16)

**Figure 16: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type**



Source: Energy and Industrial Advisory Partners

In the No Leasing Case, distributions to states due to GOMESA are projected to be relatively inline with distributions in the Base Case. Distributions to the LWCF due to GOMESA are also projected to be relatively in line with those in the Base Case. Non- GOMESA distributions to the LWCF due to offshore activities are project at just over \$900 million compared to around \$1.2 billion in the Base Case.

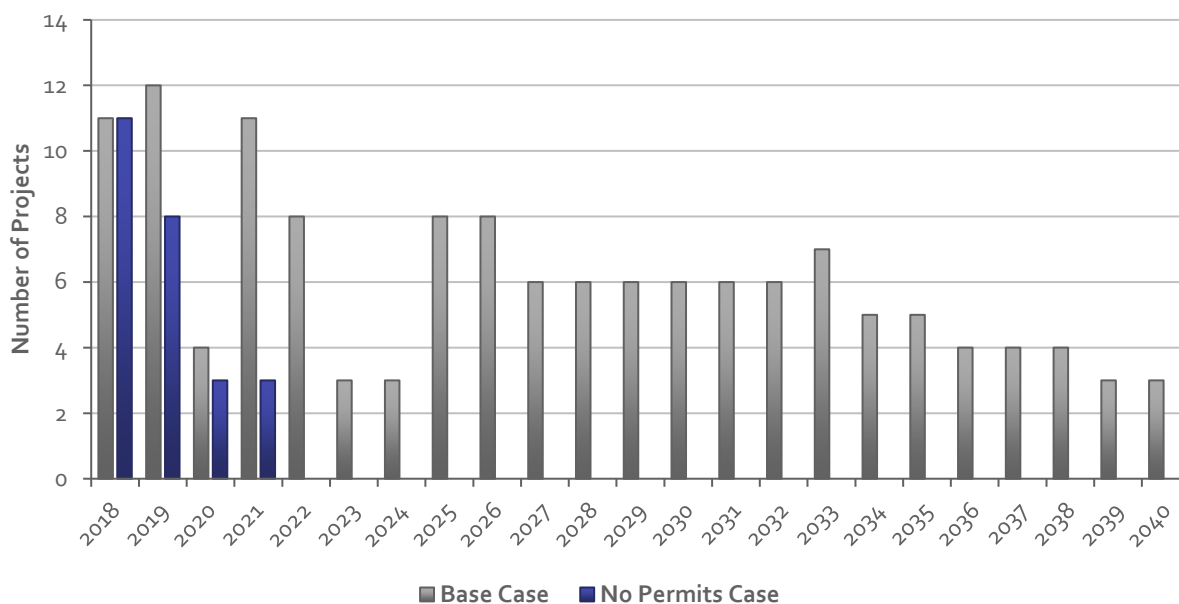
## No Permits Case Impacts

Although no firm policy proposals have been advanced, one of a number of potential restrictive policy changes that has been advanced for the Gulf of Mexico OCS is that regulatory authorities no longer issue new drilling permits for Gulf of Mexico wells. For the purposes of this report, the “No Permits Case” was developed to provide a comparison of activity levels (project executions, spending, oil and natural gas production), economic impacts, and government revenues to the Base Case. This scenario assumes that no new drilling permits would be issued from 2022, but that existing permits would be unaffected, and that no other major policy or regulatory changes impacting the Gulf of Mexico offshore oil and natural gas industry would be enacted.

## Projects

Under the No Permits Case, project development activity is projected to be reduced as soon 2022, as projects which are already under development which would require unpermitted wells to be economic are the first to be impacted. Over the 2020-2040 forecast period, new project startups are projected to decline by nearly 95 percent, from 104 to 6. (Figure 18)

**Figure 17: Projected Base Case vs. No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Project Startups by Year**



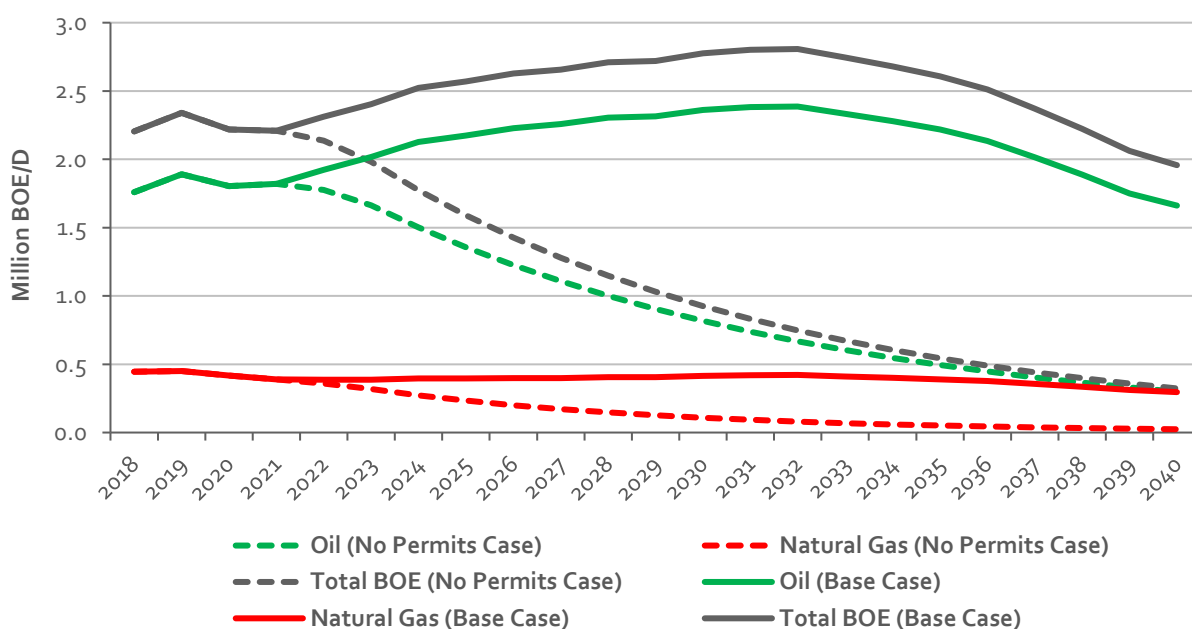
Source: Energy and Industrial Advisory Partners

## Production

To develop the production forecasts for this report, project development (in addition to the existing production base) was modeled utilizing key indicators such as the water depth of the project, the number of producing wells, per well production, assumptions on peak production years, and decline rates. In the No Permits Case, the impact of reduced project development and drilling on production was modelled.

This study forecasts that in the No Permits Case, average combined oil and natural gas production across the 2020 to 2040 forecast period will decline from around 2.5 million barrels of oil equivalent per day to 1.1 million barrels of oil equivalent per day (an over 55 percent decline). Over the last decade of the forecast period, production is projected to decline from nearly 2.5 million barrels of oil equivalent per day to around 540 thousand barrels of oil equivalent per day (an around 78 percent decline). In 2040, combined oil and natural gas production is projected to be around 323 thousand barrels of oil equivalent per day compared to 1.96 million barrels in the Base Case. (Figure 19)

**Figure 18: Projected Base Case vs. No Permits Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**

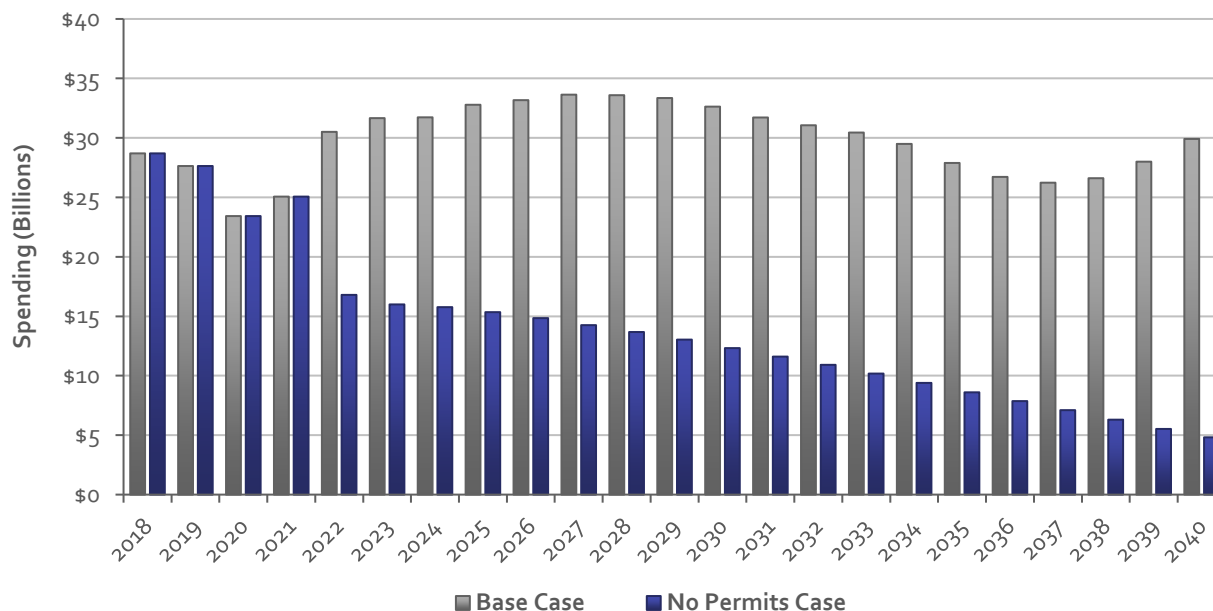


Source: Energy and Industrial Advisory Partners

## Spending

In the Base Case scenario developed for this report, offshore oil and natural gas spending is projected to average nearly \$30 billion per year from 2020 to 2040. In the No Permits Case spending is projected at an annual average of \$12.5 billion, an approximately 58 percent decline. Over the last decade of the forecast period, spending is projected to fall from an average of around \$28.8 billion to \$8.2 billion per year, a 72 percent decline. (Figure 20)

**Figure 19: Projected Base Case vs. No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending**



Source: Energy and Industrial Advisory Partners

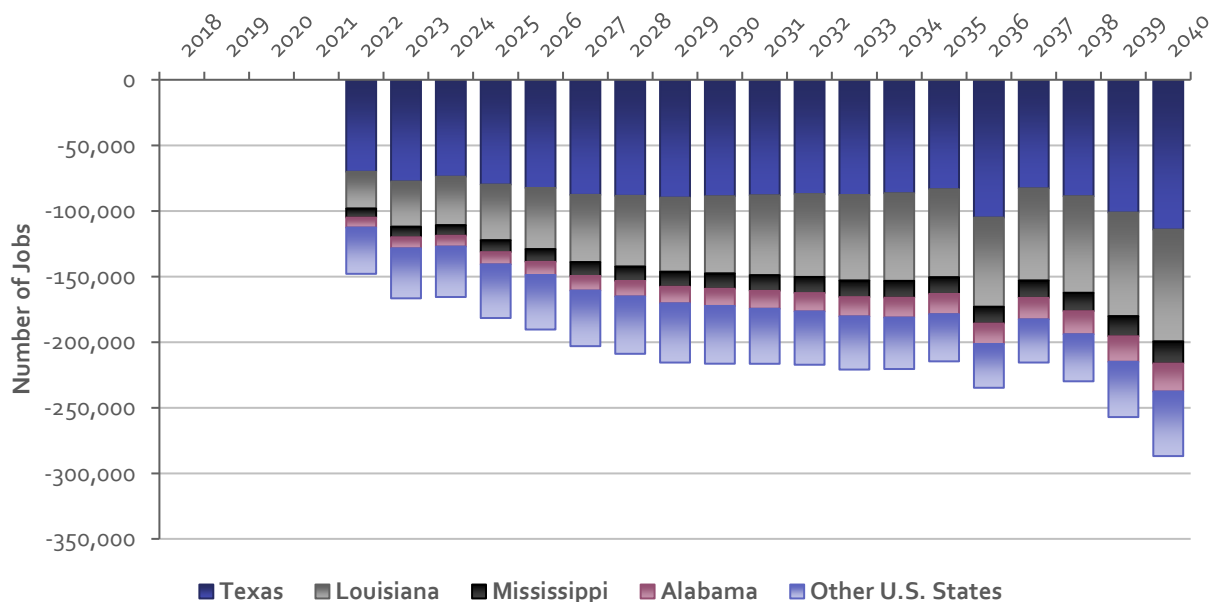
## Employment

This study projects that in the Base Case an average of around 370 thousand jobs nationally will be supported by the Gulf of Mexico Offshore oil and natural gas industry across the forecast period. In the No Permits Case employment is projected to decline to around 179 thousand jobs on average (a 52 percent decline). Over the last decade of the forecast period, average employment supported by the offshore oil and natural gas industry is projected to decline to just over 125 thousand jobs in the No Permits Case, from 357 thousand jobs in the Base Case.

In the No Permits Case, in Texas, average supported employment across the forecast period is projected to decline from 156 thousand jobs to 77 thousand jobs (a 51 percent decline), from around 105 thousand jobs to 52 thousand jobs in Louisiana (a 50 percent decline), from over 30 thousand jobs in Alabama to 17 thousand jobs (a 41 percent decline), from over 22 thousand jobs in Mississippi to 12 thousand jobs (a 47 percent decline), and from over 57 thousand jobs in the rest of the U.S to 21 thousand jobs (a 64 percent decline). Employment declines are projected to accelerate towards the end of the forecast period, with reduced employment approaching 287 thousand jobs nationally in 2040. (Figure 21)



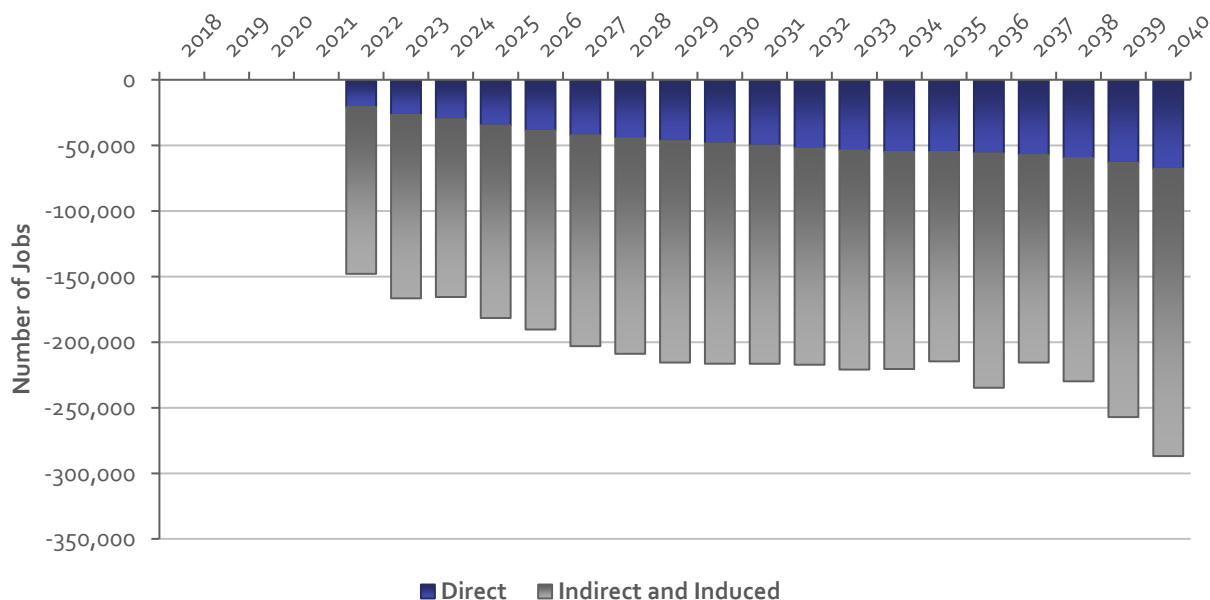
**Figure 20: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions**



Source: Energy and Industrial Advisory Partners

Across the 2020 to 2040 forecast period, direct employment is projected to average around 78 thousand jobs each year in the Base Case. In the No Permits Case, average direct employment across the forecast period is projected at around 35 thousand jobs, an over 55 percent decrease. Across the 2020 to 2040 forecast period, supported indirect and induced employment in the No Permits Case is projected at around 145 thousand jobs on average, compared to around 293 thousand jobs in the Base Case (around a 51 percent decrease).

**Figure 21: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions**

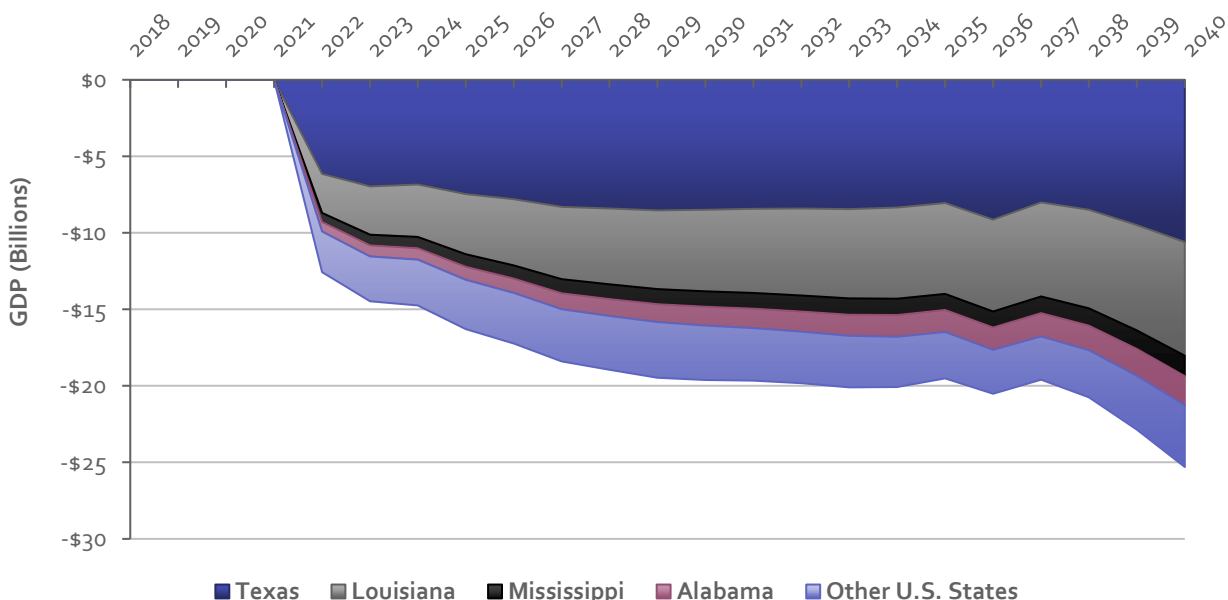


Source: Energy and Industrial Advisory Partners

## GDP

The Gulf of Mexico offshore oil and natural gas industry contributes significant levels of gross domestic product (GDP) to the Gulf Coast states' economies as well as the national economy. On average, the Gulf of Mexico Offshore Oil and Natural Gas Industry is projected to contribute \$31.3 billion annually to national GDP over the forecast period. In the No Permits Case, average contributions to GDP are projected at \$14.2 billion per year, around a 55 percent reduction. In the last decade of the forecast period, contributions to GDP in the No Permits Case are projected at around \$9.5 billion per year, compared to an average of \$30.3 billion in the Base Case (around a 69 percent reduction). (Figure 23)

**Figure 22: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions**



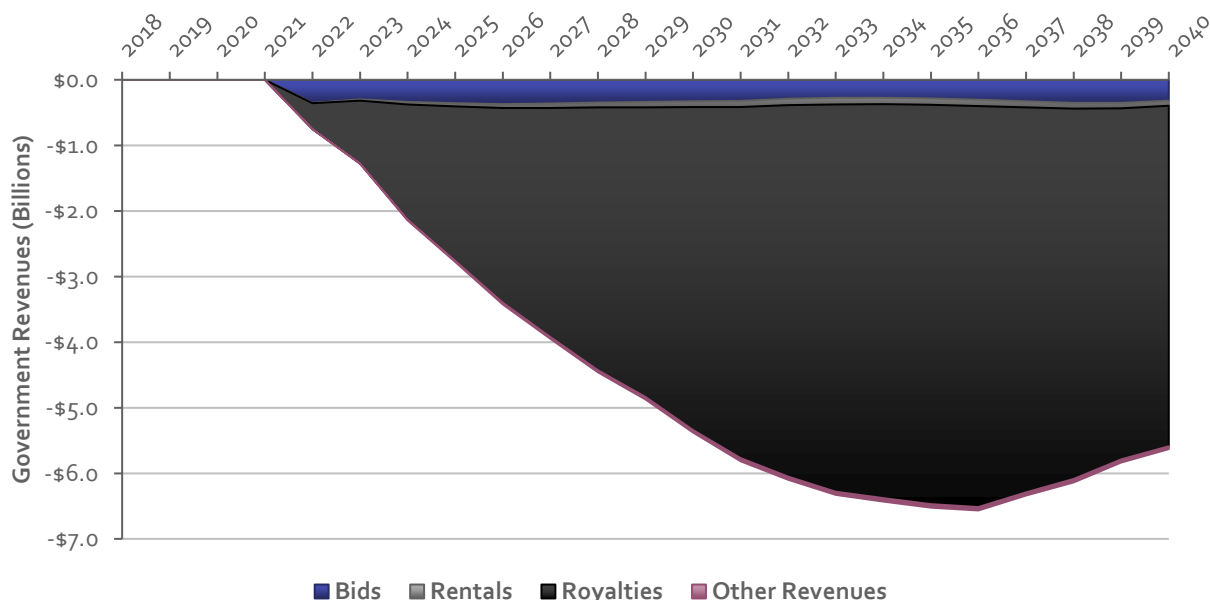
Source: Energy and Industrial Advisory Partners

## Government Revenues

This study forecasts that in the Base Case, across the forecast period, government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico (excluding personal and corporate income taxes and property taxes), will average over \$7 billion per year. In the No Permits Case revenues are projected at an average of around \$2.7 billion per year (a 61 percent reduction). Over the last decade of the forecast period, government revenues are projected at around \$1.7 billion per year, compared to \$7.9 billion in the Base Case, a 78 percent reduction.

Across the forecast period, average royalty revenues are projected to decline from over \$6.6 billion to \$2.6 billion per year (a 56 percent reduction). Bid revenues are projected to decline from an average of \$315 million per year to \$20 million per year (a 94 percent reduction), rental revenues are projected to decline from an average of around \$120 million per year to \$53 million (a 56 percent reduction), and other revenues are projected to decline to an average of around \$23 million per year compared to around \$57 million in the Base Case. (Figure 24)

**Figure 23: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type**

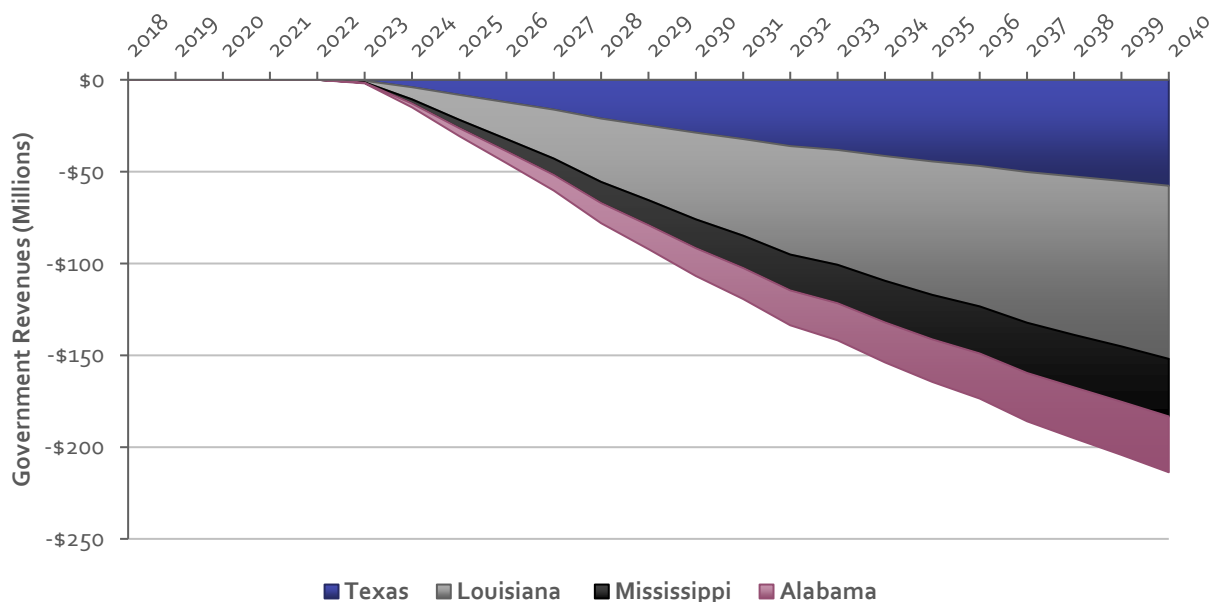


Source: Energy and Industrial Advisory Partners

In the Base Case this study projects on average the Gulf Coast States would receive around \$374 million per year of revenue distributions due to GOMESA. In the Base Case, Louisiana will see the largest annual distributions due to GOMESA, with distributions averaging around \$165 million over the forecast period. Texas is projected to receive the second highest average distributions, at around \$101 million per year. Mississippi and Alabama are projected to receive distributions of an average of around \$55 and \$53 million respectively annually.

In the No Permits Case, distributions to Gulf Coast States are projected to fall to an average of \$273 million per year (around a 27 percent reduction). Distributions to Louisiana are projected to average around \$121 million per year. Texas is projected to receive distributions averaging around \$74 million per year. Mississippi and Alabama are projected to receive distributions of on average around \$40 and \$39 million respectively annually. (Figure 25)

**Figure 24: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues Reductions by State**



Source: Energy and Industrial Advisory Partners

In the No Permits Case, distributions to states due to GOMESA are projected to be relatively inline with distributions in the Base Case. Distributions to the LWCF due to GOMESA are also projected to be relatively in line with those in the Base Case. Non- GOMESA distributions to the LWCF due to offshore activities are project at just under \$585 million compared to around \$1.2 billion in the Base Case.

## Conclusions

Despite the challenges currently facing the industry due to global economic conditions and low commodity prices, under current policies the Gulf of Mexico oil and natural gas industry should continue to be a major source of energy production, employment, gross domestic product, and government revenues for the United States. Several proposals have been advanced recently which would have a major impact on the industry's activity levels, and the subsequent energy production, employment, gross domestic product, and government revenues that the industry provides to the United States. The proposals vary widely, but for the purpose of this report three scenarios were developed, a continuation of current policies and regulations, a ban on new offshore leases, and a ban on new drilling permits approvals in the Gulf of Mexico OCS.

## Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry

The Gulf of Mexico oil and natural gas industry supports significant employment, gross domestic product and state and Federal Government revenues.

- In 2019, combined Gulf of Mexico OCS oil and natural gas production was over 2.3 million barrels of oil equivalent per day. Oil and natural gas production from the Gulf of Mexico OCS is projected to average around 2.5 million barrels of oil equivalent per day across the 2020-2040 forecast period.
- In 2019, the Gulf of Mexico offshore oil and natural gas industry supported an estimated 346 thousand jobs in the United States. On average, across the 2020-2040 forecast period, the Gulf of Mexico offshore oil and natural gas industry is projected to support around 370 thousand jobs.
- In 2019, the Gulf of Mexico oil and natural gas industry contributed an estimated \$28.7 billion of to the U.S. economy. The industry is projected to contribute an average of \$31.3 billion of GDP per year across the forecast period.
- In 2019, government revenues due to the Gulf of Mexico oil and natural gas industry reached nearly \$5.4 billion. Government revenues derived from offshore oil and natural gas activities in the Gulf of Mexico (excluding personal and corporate income taxes and property taxes), are projected to average over \$7.2 billion per year over the forecast period.
- From FY 2019, the Gulf of Mexico oil producing states received around \$352 million of revenues due to revenue sharing while the Land and Water Conservation Fund (LWCF) received nearly \$130 million of distributions due to GOMESA. State revenue sharing under the Gulf of Mexico Energy Security Act (GOMESA) is projected to average around \$374 million per year. Additionally, contributions to the Land and Water Conservation Fund (LWCF) due to GOMESA are projected to average \$125 million per year. Total LWCF distributions due to offshore activity are projected at around \$1.3 billion across the forecast period.

## Impact of a Potential Leasing Ban

Although no firm policy proposals have been advanced, one potential restrictive policy changes that has been advanced for the Gulf of Mexico oil and natural gas industry is an end to new leasing in the Federal Outer Continental Shelf. For the purpose of this report, the “No Leasing Scenario” was developed to provide a comparison of activity levels (project executions, spending, oil and natural gas production), economic impacts, and government revenues.

- Average combined oil and natural gas production across the forecast period is projected to decline from around 2.5 million barrels of oil equivalent per day to under 2 million barrels of oil equivalent per day (an over 20 percent decline) across the 2020 to 2040 forecast period.
- Average employment supported is projected to decline to 268 thousand from around 370 thousand jobs nationally (a 28 percent decline).
- Average contributions to GDP are projected at \$22.1 billion per year, around a 30 percent reduction compared to average contributions of \$31.3 billion in the Base Case.
- Government revenues are projected at an average of around \$5.3 billion per year, a 26 percent reduction from the \$7.2 billion per year projected in the Base Case.
- Contributions to the LWCF including GOMESA and non-GOMESA offshore contributions are projected to fall from over \$1.3 billion on average in the Base Case to just over \$1 billion.

## Impact of No New Drilling Permits Being Issued

Another potential restrictive policy change that has been proposed for the Gulf of Mexico OCS has been that regulatory authorities no longer issue new drilling permits for Gulf of Mexico wells. This scenario assumes that no new drilling permits would be issued from 2022, but that existing permits would be unaffected, and that no other major policy or regulatory changes impacting the Gulf of Mexico offshore oil and natural gas industry would be enacted.

- Average combined oil and natural gas production across the forecast period is projected to decline from around 2.5 million barrels of oil equivalent per day to 1.1 million barrels of oil equivalent per day (an over 55 percent decline) across the 2020 to 2040 forecast period.
- Average employment supported by the Gulf of Mexico oil and natural gas industry is projected to decline to 179 thousand jobs from around 370 thousand jobs nationally in the Base Case (a 53 percent decline).
- Average contributions to GDP are projected at \$14.2 billion per year, around a 55 percent reduction compared to contributions of \$31.3 billion in the Base Case.
- Annual government revenues are projected at an average of around \$2.9 billion, a 66 percent reduction from the \$7.2 billion per year projected in the Base Case.

- State revenue sharing under the Gulf of Mexico Energy Security Act (GOMESA) is projected to fall to an average of around \$273 million per year, compared to around \$374 million in the Base Case (a 27 percent reduction).
- Contributions to the LWCF including GOMESA and non-GOMESA offshore contributions are projected to fall from over \$1.3 billion on average in the Base Case to just over \$585 million.



This Page Intentionally  
Left Blank

## NOIA Member Profiles

In addition to the quantitative report, EIAP conducted interviews with NOIA member companies to gain a better understanding of the Gulf of Mexico offshore oil and natural gas industry, its supply chain, and the employment impacts of the industry. Ten companies, ranging from independent operators, to public companies, to small private companies which are representative of the diverse companies involved in the Gulf of Mexico Offshore oil and natural gas industry, were interviewed. In the profiles the NOIA members discuss their companies, how they were founded and began to work in the offshore oil and natural gas industry, their company's and the industry's employment impacts, the impact of their supply chains, and the future of the industry. These ten companies, and NOIA's membership as whole account for only a small percentage of the Gulf of Mexico Offshore oil and natural gas industry supply chain. As an appendix to this report a list of over 2,400 companies which supply goods and services to the industry is included. Even this list likely greatly underestimates the number of industry suppliers.



We spoke to Paul Danos, Owner – Executive at Danos.



### About Danos

Danos, based in Houma Louisiana, offers land-based and offshore customers an extensive range of oil and gas production related services, including: automation, coatings, construction, fabrication, instrumentation and electrical, mechanical maintenance, production workforce, project management, regulatory compliance, scaffolding, shorebase and logistics, specialized consultants and valve wellhead. Danos has 11 offices across Louisiana, Pennsylvania, Texas.

### When was Danos founded?

We were founded in 1947, by my grandfather and his brother in law. They started with one little supply boat and 72 years later, we're completely US-focused, with 3,000 employees.

### Where are most of Danos' employees located?

A lot (of our employees) come from the Gulf Coast; Texas, Louisiana, Mississippi, Alabama, even some from Florida, and then there's a handful that will come from Washington state, Tennessee and other states that catch a plane and fly into their hitch. When you think about our 3,000 employees and the flexibility that comes with the way we work offshore on a 14 and 14 rotation, these are really good jobs for people who may not have a college education, but have a good technical background or are willing to work hard. These are really good paying jobs. We have a lot of people making \$60 thousand, \$70 thousand, \$80 thousand, to over \$100 thousand a year with an associate's degree or a high school diploma who are providing for their families, enjoying a high quality of life and living in places where, if you make \$80,000 a year, that's a very good living.



### What about the impact of Danos on the communities where it is located?

We have a pretty significant impact on our community, when I am out on a weekend, at church, or at restaurants, I'm constantly seeing people that work for us, and that work for companies that we do business with. Raw material suppliers like metals and fittings, companies that provide services like safety training, companies that provide our protective equipment and uniforms. Because we're pulling people from all along the Gulf Coast and throughout the US, the pay that our guys take home and spend impacts all of their communities as well.

### How important is the Gulf of Mexico offshore industry to the economy?



For our local community where we live, in Houma, Louisiana on the Gulf Coast, our community is very much dominated and dependent upon the oil and gas sector. So many of the people here work for companies that are involved in the sector. We're very heavily reliant upon it. More broadly, our industry keeps the lights on, provides the energy, literally and figuratively for everything, for all goods and services and it's just what drives our economy. We're keeping

their lights on by electricity generation and petrochemical inputs that are going into products that people who might not think about it are dependent upon. Almost every product that they're touching has some sort of input from our industry. It's a huge driver for our economy.

### What about the future of the industry?

In a long, long time frame we will still be very much dependent on oil and gas as a big part of our energy supply. It's going to be critically important as a percentage of the total energy supply. We're going to diversify. We're going to get better at generating energy from renewable sources, that's going to be good for the environment. You have companies like Shell, Equinor and BP who are making investments in those areas and a company like ours has relationships, understands how they do business, and has competencies that transfer well to those areas. Companies that are full of engineers and that know how is very transferable from oil and gas over to offshore wind for example.

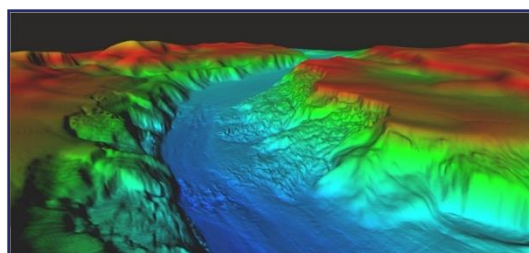




We spoke to Tony Gray, Executive Vice President at Fugro in the US.

### About Fugro

Fugro is a global company headquartered in Leidschendam, the Netherlands. We are the world's leading Geo-data specialist, collecting and analyzing comprehensive information about the Earth and the structures built upon it.



*Geo-Referenced Bathymetric Map of The Seabed at a Future Drill Center Location*

Fugro was founded in 1962 as an onshore geotechnical engineering firm and grew to our current size during an active acquisition period to obtain cutting-edge technology. Our talented workforce now operates in 60 countries across the world. We acquired McClelland, in 1987, which moved us into the offshore industry, primarily oil and gas.

In the US, we have consolidated multiple different companies into one business entity to provide our clients with a seamless "One Fugro" offering. Fugro in the US comprises seven service lines that aid oil companies in streamlining their operations throughout the entire life of field.

We acquire data from the ocean bottom and its sub-bottom that allow our clients to understand the characteristics of the area they are exploring and make informed decisions on their projects. Once a project moves further into the development phase, Fugro provides asset management services such as accurate positioning of vessels and infrastructure, monitoring and remote systems technologies, environmental management, and more. Our goal is always to plan and execute our activities with the highest focus and attention on safety

### How important is offshore oil and gas to Fugro?

Up until about 2 years ago, most of our revenue derived from oil and gas. A recent uptake in offshore wind has been great for our Gulf of Mexico marine site characterization fleet, with many vessels now working on the East coast. Today, globally, around half of our revenue is derived from oil and gas. In the Americas, oil and gas still account for most of our Regional offshore business.



*Onboard Laboratory Testing*

### How many employees does Fugro have in the U.S.?

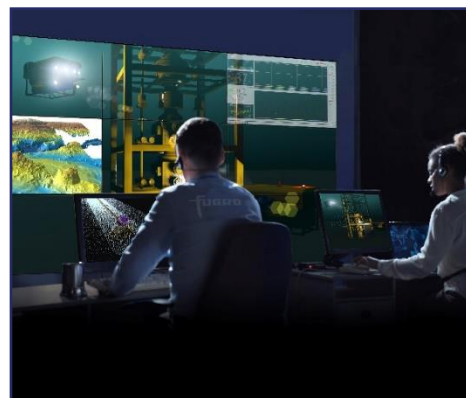
We have approximately 1200 employees in the US, including land and marine. Strictly on the marine side, employees work on a wide variety of projects and industries, including oil and gas, offshore wind,



hydrography, coastal resilience, government-academic-industry partnerships and funded research. We hire geochemists, geophysicists, geologists, geoconsultants and people with civil and environmental engineering backgrounds. Our offshore surveyors typically come from a land surveying background from various universities and then of course we also employ marine crew, who operate the vessels.

### How important is the industry to the economy?

The offshore industry or, as we refer to it, the blue economy is extremely important to the wider national economy. It has both a direct impact with regards to the jobs it provides and an indirect impact based on the jobs it creates in other industries, whether energy, or products derived from petroleum for instance.



*Fugro Employees Managing ROV Flight in a Remote Mission Control Center*

### What about other areas of the OCS?

Plenty of exploration and development could happen in the OCS around the US with the right regulatory environment. Offshore wind, oil and gas exploration, environmental studies, fisheries, transportation, telecommunications: all of these industries form part of the OCS nationwide and the territories.



*Fugro Explorer Sailing Through Manhattan en Route to a Wind Farm Project*

### Do the same assets which support offshore oil and natural gas also support offshore wind development?

Of course. As an example, the Fugro Explorer is a deepwater geotechnical vessel capable of working in water depths up to 3,000 meters. A few weeks ago, we finished a geotechnical campaign in the Gulf of Mexico on the Explorer. We sailed into Galveston, conducted a crew change and a few days of routine maintenance, and then headed up to the East Coast to carry out a geotechnical

campaign for a wind farm. For the most part, our assets are interchangeable, regardless of whether we are supporting the oil and gas or wind farm industry, and, as a global service provider, we move those assets around the world as required.

Especially here in the US, the experience of the oil and gas industry has enabled offshore wind and other blue economy industries to be developed in a safe and strategic manner. Through oil and gas, we serviced industry needs along the East Coast from within the US. This meant we were immediately able to translate oil and gas innovations to service offshore wind farms, and vice versa it should be noted. It is vitally important for renewables companies to be able to pull from an industry that has years of experience in technologies and safe working strategies. I don't think that the wind and renewables industries could afford to educate an entire workforce or supply chain to service them. But fortunately, oil and gas did that already and wind development now receives the benefit.



We spoke with Richard R. Clark, Senior Vice President and Head of Gulf of Mexico Business Unit at Kosmos Energy.



### About Kosmos

Kosmos is a deepwater independent oil and gas E&P company focused along the Atlantic Margins. Our key assets include production offshore Ghana, Equatorial Guinea and U.S. Gulf of Mexico, as well as a world-class gas development offshore Mauritania and Senegal. We also maintain a sustainable exploration program balanced between infrastructure-led exploration (Equatorial Guinea and U.S. Gulf of Mexico), emerging basins (Mauritania, Senegal and Suriname) and frontier basins (Namibia, Sao Tome and Principe, and South Africa).

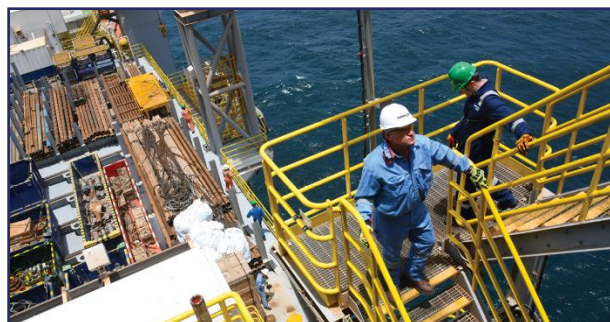
### When was Kosmos founded?

Kosmos was founded in 2003 to find oil in under explored parts of West Africa. In its brief history, the company has opened two new hydrocarbon basins. Jubilee, in Ghana was one of the largest oil discoveries worldwide in 2007 and one of the largest offshore West Africa discovered during that decade.

Over the last two years, our strategy has evolved to include production-enhancing infill drilling as well as infrastructure-led exploration. This strategic evolution was bolstered by the September 2018 acquisition of the Deep Gulf Energy companies operating in the U.S. Gulf of Mexico..

### How important is the Gulf of Mexico to Kosmos?

In 2019, 31% of Kosmos revenue came from the Gulf of Mexico. In the future, we would like to grow our production in the Gulf, a basin where we see significant resource potential and where there is an abundance of under-utilized infrastructure, making it a good place to do low cost, high return projects on accelerated timelines. Ideally, we would like to drill 3-4 exploration wells in the Gulf each year. With that level of activity, the region would comprise a substantial part of our worldwide program and continue to demonstrate its importance to the company.



### How many people does Kosmos employ?

Kosmos has 240 employees and consultants in Dallas and Houston. We are an operator so when we have a rig contracted approximately 300 people, mostly contractors, are providing work on the rig over the course of drilling operations. In normal times we would expect to have a rig under contract for at least 9 months a year.

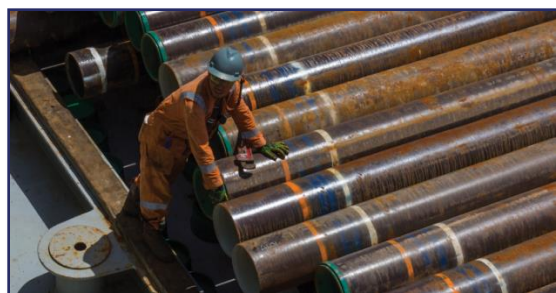


### How large is Kosmos' supply chain?

In the GoM, Kosmos and DGE invested over \$1 billion in drilling and projects over the past 5 years, we paid \$435 million to operate our wells. Most of the supply chain is in Louisiana and Texas. We used about 450 vendors last year including equipment manufacturers, service and engineering companies, seismic vendors, marine services, drilling contractors and the list goes on. A very large percentage of the oil field service and manufacturing industry is based in the Gulf Coast area. Much of the oil field equipment used overseas is made right here. It is a significant contributor to our economy.

### How could changes in the regulatory regime in the Gulf of Mexico impact activity?

If drilling in the Gulf of Mexico were prohibited it would be devastating to the Gulf Coast. The area would lose thousands of high paying jobs. It would also be bad for the environment. The GOM is a highly regulated area. We do not flare huge volumes of gas like many onshore areas. We have one of the lowest carbon footprints for oil and gas extraction in the world. If we don't allow production in the GOM we will be forced to import oil from areas with lax environmental regulations which would defeat the objectives



of those who seek to ban offshore activity. Historically, we've done about 50-50 farming into leases that are owned by other companies and then going to the lease sale for the other half. We have an inventory of around 20 prospects that we think are drillable. At four prospects a year that gives us five years of inventory. Over the next five years you would have trouble replacing your inventory if the lease sales were prohibited.

### Are there any other ways Kosmos supports the communities it works in?

Our U.S.-focused social investment has historically centered on improving the quality of STEM education and building cross cultural understanding, which is an extension of our desire to engage with the international communities where we live and work. While we continue to support those programs, we are now exploring ways to alleviate the socio-economic impacts of the coronavirus pandemic by targeting measures to tackle acute hunger and chronic food insecurity in our communities. From an environmental perspective, we are supporting an innovative blue carbon project in Louisiana that restores wetlands to improve coastal resilience and biodiversity, as well as positively impact climate change.



# NEW INDUSTRIES

We spoke with Bill New, President at New Industries.

## About New Industries



Guyana. We don't send field crews out. We don't send guys offshore, we're just strictly a fabricator. Essentially, all the work we do is right here in our yard. Then we load it out on a barge, boat, or occasionally a truck if it's small enough.

We are a fabrication company, we bend, cut, and weld metal, we build subsea equipment, pressure vessels and suction piles. We do most of our work in the Gulf of Mexico, though sometimes we export things typically for customers based out of Houston. For example, we recently exported to

## How was New Industries founded?

My background is in engineering. I made my first trip offshore to work a week-and-a half after I got out of high school. I went to engineering school then started working for Mobil when I was still in engineering school, during the summers. When I graduated in 1980, I went to work for Mobil full-time, here in Morgan City. I stayed with Mobil for about five years until 1985, then I quit Mobil to go into business for myself and have been at it ever since. I'm the sole stockholder. My dad was my original partner, but I bought him out a couple of years after we got started. I've made every mistake in the book over the years, the only mistake I've managed to not make is what I call the fatal mistake, which is the one to put you out of business. We've been damn close a couple of times, but we're still here.



## How much of your business is related to offshore oil and gas?

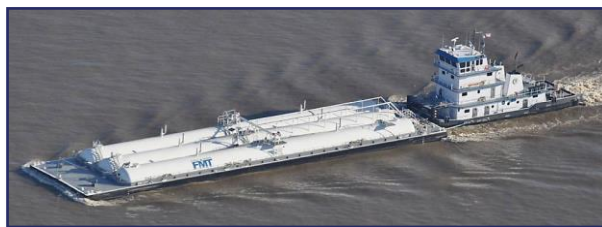


North Slope of Alaska. We do some midstream work, so that's not offshore, but certainly, oil and gas.

We've been involved in offshore pretty much since day one. Right now, about 70% of our revenue is directly related to offshore. We do some work in the marine industry, but ultimately, at the end of the day, that rolls back to oil and gas at some point. We recently did some work that went to the

### How many people does New Industries employ?

Right now, we're at 100 employees. We use some subcontractors, and that number varies day to day depending on what we have going on. On any given day, we probably have 25 to 35 subcontractor employees in the yard. They come in to do specific things like painting or testing work. Most of the employees tend to be tradespeople, welders, fitters, crane operators, riggers. We do have some CNC equipment for cutting plate and we have a few guys that do that. I've got some guys that have been with me for 30-plus years because I tend not to staff up and lay off. I don't like to do that. When I hire somebody, I tend to hold on to them for the long-term.



### Are most of your employees based locally?

Yes, they all live probably within maybe 40 miles. Places like, Houma, Franklin, Thibodaux, Morgan City, Berwick, Patterson, that's pretty much our workforce. Some companies that work offshore have guys come in from all over the country, then go offshore and work for some period of time and then come make a crew change and go home. Our guys, they come here to work every day so they have to live locally.

### How does your supply chain impact the economy?



Some of our supply chain is local, like the hardware store and vendors that we buy paint from. We rent equipment from local guys and I try to do business as much as I can with the local people. Our supply chain stretches from Houston to across the Gulf South. We buy a lot of steel plate directly from

steel mills in Texas, Alabama, and North Carolina and occasionally in the Midwest. I wouldn't call it New Industry's supply chain, but we're a big part of the community because our employees are shopping here at local stores, and they're going to eat in the local restaurants, going to the local healthcare facilities.

### What's the future of the Gulf of Mexico Offshore Oil and Gas Industry?

I think the Gulf of Mexico is going to continue to be a vital source of oil and gas for the United States. It's a hugely prolific basin that has tremendously well-established infrastructure with a very strong supply chain across the industry. Pretty much anything you need to work offshore if you're an oil company, you can find somewhere between New Orleans and Houston. Whether that's a shipyard, whether that's boats, whether that's a fabricator, whatever it is. You don't have that in other parts of the world, not nearly as well-developed anyway as what we have here in the Gulf of Mexico. Offshore is going to continue to play a huge part. However, if regulations change and they quit holding lease sales it would be extremely difficult in this part of South Louisiana for sure. Without oil and gas, there'd be a few shrimpers and that'd be about it.



We spoke to Lanis Belaire, Owner of Pharma-Safe Industrial Services.



### About Pharma-Safe

Pharma-Safe is a Louisiana based company that provides services and products including contract medical personnel, safety professionals, support personnel, medical supplies, and medical management. For example, we do health checks before workers leave shorebases. We've always done pre-employment physicals and health

screenings during the times of year when people are more susceptible to the flu, but obviously, these health checks have grown exponentially in importance recently.

### How was Pharma-Safe founded?

I started my career in the offshore energy industry as a health care provider in 1989. I developed lifelong relationships with fellow coworkers who now are in charge of many oilfield companies. The company was founded in 1998 and we have grown Pharma-Safe by providing quality service, making our employees our biggest champions, providing competitive pricing, developing strategic relationships, and working with our clients to become a division of their organization. We actively lobby on behalf of environmental stewardship, social responsibility, and corporate governance to maintain sustainability in our industry.

### How important is the Gulf of Mexico offshore oil and gas industry to your business?

Currently, 95% of our business is derived from the industry. As a company, we are highly dependent on activity in the Gulf of Mexico to sustain our business, our employees, and our vendors.

### How many people work at Pharma-Safe?

Pharma-Safe currently employs approximately 100 full time employees, many of which have been with us since we started our company. We hire three primary types of employees: remote healthcare clinicians, safety professionals, and combo health/safety professionals. Pharma-Safe only hires seasoned personnel with experiences catered to our client's needs. Employees who have exceptional offshore experience along with exceptional people skills are our primary targets, our employees become long term assets for our clients.

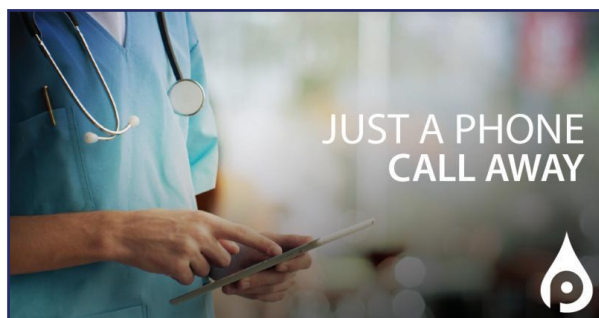


### Do most of your employees live in Louisiana?

When possible, we hire local personnel along the Gulf Coast area. However, we have many people from many different states. For call out work we try to hire local because we may get a call on Monday at 3:00 PM wanting us there Tuesday at 6:00 AM. Those employees may live in Texas, Alabama, Mississippi, or Florida. On permanent production locations, our people live all over the United States.

### How does your supply chain impact the communities where you work?

It is amazing to see how many families are impacted by our activity level. As part of our normal day to day operations, our labor force creates multiplier effects, spurring additional investment and employment in many service sectors such as housing, food service, and retail. We currently source from around 45 local vendors and 25 national vendors on a normal basis. We buy from all over the US, mostly directly from manufacturers. We feel a tremendous sense of obligation to keep the economy moving as we estimate that more than 2,000 people are directly affected by our activity levels. We are only one of several thousand small businesses that support our industry.

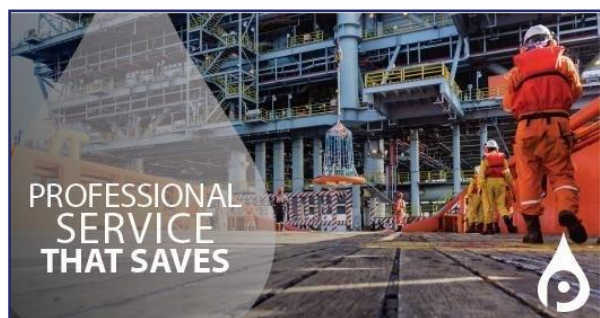


### What is your understanding of how the industry as a whole impacts the economy?

A huge part of our local economy is impacted by the oil and gas industry. Lafayette Louisiana is centrally located for most crew change locations in the GoM, we are a hub for service companies. A reduction in offshore activity affects not just corporate investment and family incomes, but the fiscal base of local communities, affecting education, infrastructure, and other public services through a reduction in tax revenue.

### As a healthcare company, are there unique challenges working for the Offshore Industry?

Our ability to provide patient care in remote locations is a career path which many health care professionals have taken to advance their ability to help others. Our employees learn remote patient care skills which stimulate innovative solutions and advanced learning in the healthcare industry. With the advent of enhanced communications and better software, Telemedicine has played a vital role in



increasing the quality of remote patient care. Also, pharmaceutical advancements are evolving in our highly dynamic field making our jobs much easier by developing more specific or targeted drug delivery techniques. As a result, we have noticed remarkable improvements in our remote care clinics and a significant reduction of unnecessary transports. The end result is a higher level of patient care to the health care industry in general, stimulated by

advancements and innovations created to support remote operations in the Oil & Gas Industry.





We spoke to Kirk Headley, President of American Pollution Control.



### About AMPOL

Our environmental crews perform asbestos abatement, tank and vessel cleaning, spill response, and recently the bulk of our crews are providing disinfection services. We've got crews offshore, in California, Houston, Arkansas, Louisiana, Alabama, we are providing crews disinfecting people's offices, living quarters, platforms, and drill ships.

We also manufacture all types of oil spill products, booms and skimmers, primarily. We sell these products to clients and agents all around the world and United States. Our products are designed for offshore, lakes, rivers, inland, some for land, but most of our equipment is designed for marine environments. We've opened up a

new transportation division. We transport liquids and solid waste all over the South.

AMPOL also holds one of four licenses in the South to decontaminate Naturally Occurring Radioactive Material. We separate the steel from the radiation, then we properly package, manifest, transport and dispose of the radioactive material.

### How was AMPOL founded?

American Pollution Control was formed under a company called American Oilfield Divers (AOD) in 1993, which at the time was the largest diving company in the Gulf of Mexico. The environmental service we provided was spill response, tank and vessel cleaning, pipeline pigging and cleaning, and asbestos abatement.

In 1995 the former president retired, a new president came in and wanted to focus on diving. We were going to spin you off. I went back to him said, "Look, I started this company. If you want spin it off, spin it off to me."

We made an offer, AOD accepted, and have been living American dream since.



### How important is the Gulf of Mexico Offshore oil and gas industry for AMPOL?

It bounces up and down for us from time to time. We do a lot of onshore oil and gas too. As of today offshore oil and gas, is probably around 5 percent of our total revenue, next month that could be 20 percent. There could be something offshore that we have to respond to or we may have to increase the amount of disinfection crews we have offshore. Before an Oil and Gas company can get a permit approved to drill and operate a well, they are required to have an approved response plan. In that response plan, there should be a classified (OSRO) oil spill response organization, which Ampol is and meets all the coast guard requirements. AMPOL is one of the providers in the US and Mexican Gulf of Mexico that meets the requirements, with Ampol contracted and listed, oil companies should get their drilling and operational plans approved to operate and produce.



### How many and what types of people does AMPOL employ?

We're close to 300 today. Most of our management are experienced in emergency management, ICS (Incident Command System). On the field level side, the same guys that work on drilling rigs or boats have the basic qualifications to work for us but need some more training which we give them. We really love to promote from within when we can. Most of our people have 10+ years here at AMPOL, some even 20 or 25.

### Where are AMPOL's employees based?

We have four offices in Louisiana. We have one Texas office, then one Mexican office. We have two agent offices, one in Colombia and one in Peru. Most of our employees come from Louisiana, Texas and Mississippi.

### How about AMPOL's Supply chain?

We are always working to get more local vendors and US vendors, which is increasingly important given the current situation. A lot of the things we use are consumables, which we buy here in the US.

### What is the impact of the industry on the economy?

I'm a hundred percent proponent and supporter of the oil and gas industry for what it can do for great paying jobs and the economic activity it supports.

One thing I do love about NOIA is that we're trying to get out the story about what the oil and gas and the energy business does as a whole for the public. I think energy companies as a whole and service companies specifically could improve the job getting our great message out to the public.





We spoke to Lee Jackson, CEO at Jackson Offshore Operators.

### About Jackson Offshore Operators



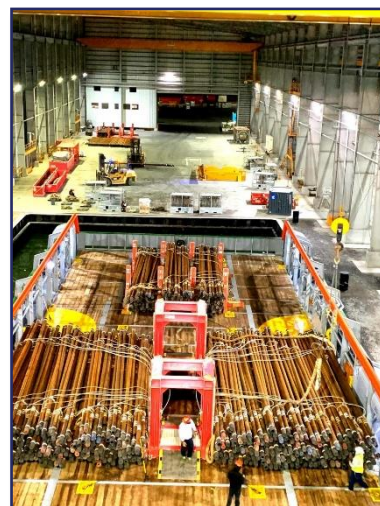
Jackson Offshore Operators is a minority owned marine transportation company servicing the Gulf of Mexico. Our main task is to shuttle goods and supplies to facilities and platforms offshore. We began this business around 2011. The core of our client base is the supermajors, operating in the deepwater market. 100 -percent of our fleet works out of Port Fourchon, servicing the Gulf of Mexico and all our vessels are Jones Act vessels.

### How many people work for Jackson Offshore?

As a brief snapshot, we employ around One Hundred -Forty Five (145) employees and that would be both offshore as well as onshore workers. Offshore workers would consist of Captains, Chief Engineers, Able Bodied Seaman. The onshore side would be support staff which consists of obviously myself, HR Manager, Port Captains, Vessel Managers and Accounting. When you put all that together it's about 145 employees. Having office's in New Orleans as well as Houston, but a large swath of our employees travel from all over the South. The balance of my employee base flies from up North, the East Coast, and the West coast. The typical tenure for my employees is about six to seven years for which I'm pretty proud of. When folks come to work for Jackson, they feel like they have a home. Our turnover rate is fairly low, since our inception it has been less than Ten-Percent (10%) which was another thing that I'm extremely proud of.

### How does operating Jones Act Vessels impact your hiring?

It isn't difficult at all and quite frankly I wouldn't have it any other way. Because of the Jones act, all of our vessels, all of our employees are US citizens and it's an important factor when we talk about job creation. In addition to hiring US workers our vessels were all built in the US for US trade.



### Can you speak to the quality of jobs that Jackson Offshore and the industry provides?

Even at entry-level, the average income can be anywhere between \$45 thousand to \$60 thousand annually, all the way up to a Captain and Chief Engineer, that can make in excess of \$170 thousand a year. These jobs are good-paying jobs. They absolutely are. That has always been the driver that attracts people to the maritime industry and to the oil and gas sector as it supports families and it's above minimum wage. It's the one thing that I would say you can't get down the street in other industries. Now, there's sacrifice there, because like my vessels and some oil and gas jobs require people to spend time away from their families. It's a shared sacrifice, but the oil and gas industry is a good industry that pays a good living wage that allows you to raise a family.

### How big is Jackson Offshore's supply chain?

Our current supply chain probably consists of around 40 to 50 vendors and for the most part, they're all Louisiana based companies. These vendors provide a broad range of services from, let's say, Engine Service Technicians to as far as on the other side of the spectrum, grocery deliveries.



When you speak about oil and gas and you talk about the value that it brings, I will tell you it's more than just the oil and gas companies. It is the mom and pop companies. It is the restaurants. It's the car dealerships. All these people benefit from a very robust oil and gas industry. I think that's where people get lost in the discussion. I will share with you a lot of my vendors are, in fact, mom and pops. When I say mom and pop, some of my vendor base is probably less than five employees. They're very good at what they do. It is important for them that oil and gas continues to be robust in a very meaningful way.



### What about the future of the industry?

My opinion is this industry will return to its rightful place in the world. It absolutely will. Oil and gas has always been in the forefront of the US economy and the world economy. It's unfortunate, because if you look back five years ago, we took a hit, and the industry was beginning to crawl itself back to a good place and then we entered the COVID-19 era. But I am a strong advocate for this industry, I've seen what it has done for people, what it has done for businesses and what it has done for the economy. It's bigger than

just the oil and gas companies. It's the hotels, restaurants, the service companies, the supply chain that actually supports companies that work in oil and gas. It is a long line of economic prosperity, and I just look forward to that day when we continue down that path, and I'm a firm believer that it will return, and it will return strong. But we have to be vigilant and I note that not well thought out legislation could impact or impede the progress of this industry and the economy.





We spoke to Chet Morrison, Founder and CEO of Chet Morrison Contractors (Morrison).



### About Morrison

Our business is infrastructure. We build, maintain and decommission platforms, pipelines, and stations. We are a land and marine contractor. We also perform work in coastal regions. Our deepwater business is the fabrication of subsea components and the IRM of Deepwater Risers. .

### When was Morrison founded?

We've been in business for almost 40 years, so we have been through many cycles and worked through many evolutions. When asked "how did we grow our business?" I'll just say, "One good person at a time." We've established tremendous relationships over the years with employees, clients, suppliers, and other industry folks.

### How many people does Morrison employ?

We are typically around 500 domestic personnel. Additionally, we may have as many as 300 to 500 people working in a peak period at some of our overseas locations, predominantly in Mexico and Trinidad where we have a JV company that builds & maintains offshore oil and gas structures. Our employees are engineers, planners, project managers, pipeliners, welders, divers, operators, marine vessel personnel, equipment specialist, and back office teams. We typically ramp up during seasonal peak activity. Morrison is technically driven with core HSEQ values.



### What about the impact of Morrison in South Louisiana?

I'm from Houma, Louisiana where I was raised and have lived most of my life. The Terrebonne, Lafourche, and St. Mary Parish area owes its population growth to the oil and gas industry. It's now a 200,000-person-community. A lot of folks that were attracted to this area grew and developed it in the heydays of the oil field, in the '60s and '70s. Over the years, we've become a large employer in the region. When I say region, I mean we've seen towns and communities become cities and meld together with extended rural connections. The Tri-Parish area now has become more of a central industrial location.

Our livelihoods depend on production and handling of energy that originates from the drill bit. Concerns with the current state of the industry and the economy as a whole are frightening. We need our government leaders to be attentive and support our industry. We need to promote domestic policies and get behind Americans that want to work. It is about the people and not the politics. I've never met "Big Oil". I've only know professional industry people that have allowed our company to make a difference in many lives.



### How does the industry's supply chain impact the economy?

Besides the materials and services suppliers that count on our business, our community relies on the payroll and spend that trickle down from our spend. I am proud to say that our local governments are industry supporters that understand and support our efforts. I wish the rest of the country and all of state leaders would take note on what is working well and invest positive assistance in promoting our strengths. When the oil and gas businesses are busy, the community sees increase as well. We are a giving industry and enjoy giving back to the community as well, supporting organizations that directly impact the people here.



### What about the future of the industry?

My cup's always half full. While I believe that the industry has a particularly difficult period for now, I believe that there are also opportunities. We're a very resilient industry that will be around for a long time. We are a mature industry that is focused on the health, safety and environmental aspects of our business, we're responsible citizens. Our clients are real people that enjoy being part of the South Louisiana heritage. We are blessed with a wetland paradise and respect

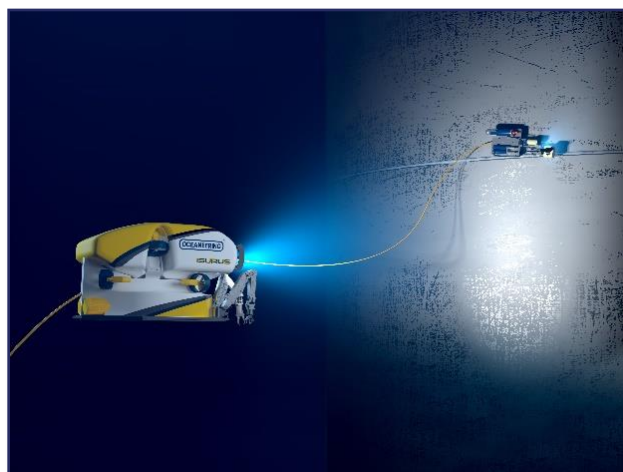
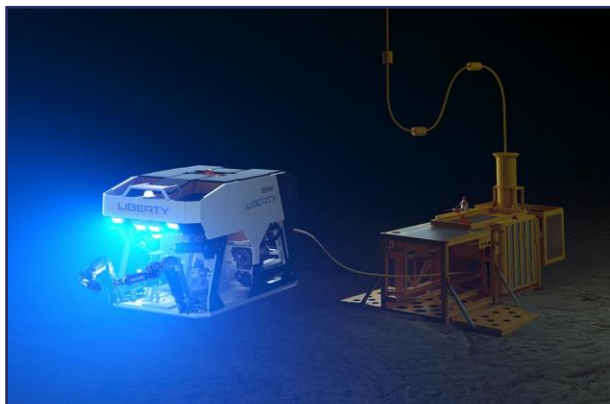
the responsibilities that come along with preserving that for our children. We need the ability to access resources and we need reductions in the barriers of over regulation. We need the government to partner with us. Right now, more than ever we are asking for industry assistance. We need to turn the drill bit. Our future and our jobs depend on that!

# OCEANEERING®

We spoke with Earl Childress, Senior Vice President at Oceaneering.

## About Oceaneering

Oceaneering International started in the 1960s as World Wide Divers, a diving company based in Louisiana, servicing the Gulf of Mexico. We combined with two other diving companies in 1969 to form Oceaneering, primarily as a provider of diving services for shallow and saturation diving. We have morphed over the years. Now, we are a public company with revenue of just over \$2 billion last year. Around two-thirds of that revenue is in the energy space. We have the world's largest fleet of work-class remotely operated vehicles (ROVs). We deploy and use those ROVs ourselves to support drilling operations, production platform operations, offshore renewables work, and decommissioning projects globally. We have a fleet of vessels that perform installation, workover, de-watering, and maintenance services around the globe. We build subsea umbilicals at three manufacturing facilities located in Florida, Scotland, and Brazil. We also perform pipeline repairs and offer a suite of valves and connectors for subsea pipelines. The other third of our revenue comes from our non-oil and gas operations. For instance, we provide engineering services to the US Navy sub rescue program to aid in the recovery of submariners in the event that there is an issue with one of their submarines. We also provide some specialty work for NASA. Oceaneering also has an entertainment division that designs, develops, and manufactures theme park rides and transport systems. If you've been to a major theme park, you've probably seen or rode a system that we designed and developed.



## How many people does Oceaneering employ?

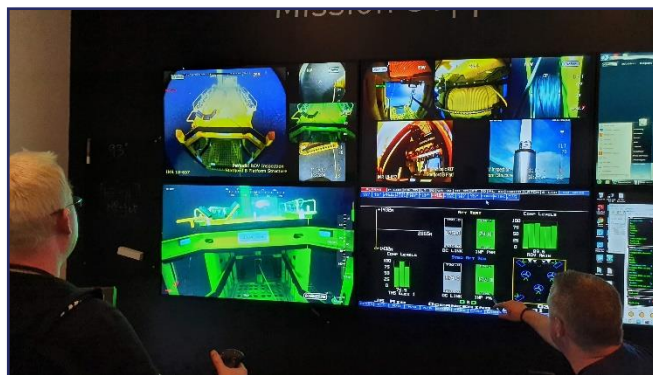
Our global headcount is 11,000, including 1,500 contingent workers. Those are crews that do two weeks on, two weeks off, so they fundamentally work for us, but they're handled as contractors. We have just under 3,700 employees in the US. We employ technicians, engineers of all education levels (master's and PhDs), manufacturing, and similar types of employees. We also have a large contingent of field technicians—divers, vessel operators, marine engineers, ROV operators, ROV technicians as



well as those who support that work. For example, those jobs include maintenance and repair, front- and back-office, sales engineers, administrators, and commercial managers. It's a fairly technical workforce.

### How large is Oceaneering's supply chain?

In 2019, we spent approximately \$600 million with roughly 400 suppliers on direct materials and services; About 40 percent of that total spend is in the US, the rest is international. In addition to vessel services, we purchase raw materials, high-end electrical distribution equipment, electronics, hydraulic control, and large fabrications. That's excluding indirect materials, such as office supplies, cleaning, IT, and recruiting; the soft side of it.



### How important is the offshore oil and gas industry to the US?

When you look at the actual hydrocarbon demand profile, so much is about day-to-day things that people don't consider where they truly originate—rubber, plastics, asphalt, etc. Natural gas, gasoline for cars, and jet fuel for planes aren't the only products derived from oil and gas production. That demand represents 20-25 percent of the total demand for hydrocarbons. This is the piece that the general public misses. It's not only about powering cars. For example, the low cost of natural gas makes US Steel more competitive against that of other countries. The domestic offshore oil and gas industry enables other US industries to be competitive around the globe.

### What's the future of the Gulf of Mexico Offshore Oil and Gas Industry?

In the near- to medium-term, we're in for a pretty tough run. In the longer term—in the 3-5-year range—



the industry needs to be leaner. If drilling stopped in the Gulf of Mexico, it would devastate not only the industry but the national economy as well. The economic impacts of the industry are substantial. However, Oceaneering stands ready to support the energy transition as well. We support offshore construction in general, so as you think about wind, waves, tides, and other renewable energies, we can leverage our expertise to support those industries as well.

# Appendices

## Methodology

### Overall Methodology

As part of the development of this report a detailed review of the potential implications of the potential regulatory and policy changes was conducted. This study is in no way exhaustive, especially considering the uncertainty around how the potential proposed policy changes would be developed and implemented. This report focuses on the potential operational effects of these policies based on a reasonable reading of these proposals and considers the potential operational changes oil and natural gas companies could undertake to minimize the effects of these changes on their operations. As such, this analysis is inherently forward looking and subject to significant changes based on the potential development and implementation of the proposed policy changes by Congress, the executive branch and regulators such as the Department of The Interior, The Bureau of Ocean Energy Management and The Bureau of Safety and Environmental Enforcement.

### Scenario Development

The study's data development was undertaken by developing a model that accounts for all major parts of the offshore oil and natural gas exploration and production lifecycle. The major sections of the model are; an Activity Model that assesses near and long term project activity, GoM reserves and production; and the likely project development and drilling activity necessary to meet production targets; a spending model derived from the activities required to find, develop and operate offshore oil and natural gas projects and reasonable assumptions around the spending levels typically associated with these activities; a government revenue model which uses forecast production levels and other relevant forecasts (leasing, block rentals, etc.), forecast commodity pricing, historical data on actual government revenues and distributions and governmental policies to forecast potential government revenues; and an Economic Model which utilizes the projected spending and government revenue levels, as well as assumptions about the nature of spending and its geographic distribution to forecast associated supported economic activity including employment and gross domestic product.

The Base Case model was developed based on forecast production and pricing levels based on the Energy Information Administration's (EIA) forecasts provided in their Annual Energy Outlook 2020<sup>9</sup> and Short-Term Energy Outlook<sup>10</sup>. Although these forecasts were utilized to develop the Base Case model, due to

---

<sup>9</sup> Annual Energy Outlook 2020, Energy Information Administration

<sup>10</sup> Short Term Energy Outlook, April 7, 2020, Energy Information Administration

differences in modeling techniques, especially the project-based model developed for this report, the report's forecast production levels vary from those provided in the EIA's forecasts.

## Project and Activity Methodology

In order to forecast activity levels, both near term projects as well as longer term projects that are not currently under development were considered. Near term project activity forecasts are based on actual projects where operators have stated development plans or in some cases reasonable forecasts for other potential projects where no development decisions have been advanced. For long term activity, project forecasts are based primarily on projected production levels, with project development activity to meet projected production levels forecast. Undeveloped reserves and historical trends in the mix of projects (both sizes and water depths) were used to forecast future project development activity. Historical trends in well counts, per well production levels, peak production years, and decline curves for both existing and future projects were utilized. Any major changes in technology or project development and production trends would likely have a material impact on forecasts.

For the No Leasing Case and the No Permits Case, the project and activity forecasts as presented in the Base Case was used as a baseline for activity levels. For each case a reasonable reading of what these proposed policy and regulatory changes impacts would be on activity levels was then developed. This study assumes that operators would adapt their behaviors to minimize the impacts of these proposed scenarios by, for example, retaining leases at a higher rate or developing permitted wells through existing facilities.

## Spending Methodology

The spending analysis developed for this report attempts to account for the totality of capital and operational spending associated with offshore oil and natural gas project development throughout a project's lifecycle. This includes spending prior to project development such as geological and geophysical surveys, exploration drilling, and engineering; spending during a project's development such as hardware procurement, drilling, and installation; spending during a project's producing life such as operational expenditures and gas processing; and spending at the end of a project's life such as well plugging and abandonment and decommissioning.

Spending for each project is divided into 19 categories, with each category accounting for one general activity type required to find, develop, operate, or abandon an offshore oil and natural gas project. Costs for each category were developed based on general project sizes (and the associated activity levels and equipment requirements of these projects), well counts, water depths, and other factors. Additionally, the distribution of spending over time for each spending category for different project sizes and water depths was developed.

After the overall spending forecast for Gulf of Mexico oil and natural gas activity was developed, spending was allocated to individual states as well as international suppliers. Spending with international suppliers

is not analyzed further and accounts for no economic impact in the report. Domestic spending is allocated based on a category by category analysis of supply chains and Bureau of Economic Analysis data to provide state specific spending allocations. Distributions are constant throughout the three scenarios presented in this report, although it is possible and perhaps likely that reduced activity levels may lead to changes in supply chains and thus spending distributions.

## Economic Methodology

To develop the employment and gross domestic product analysis presented in this report, the Bureau of Economic Analysis' RIMS II input-output multipliers were used. These multipliers provide state level employment and gross domestic product estimates based on industry specific spending levels. For the purpose of this report, economic activity was also divided into direct (directly related to industries involved in the oil and natural gas supply chain) and indirect and induced (industries not directly involved in the oil and natural gas supply chain as well as economic activity due to increased wages) employment and gross domestic product.

The following RIMS industry categories were used in the development of the report to account for spending by the oil and natural gas industry (all RIMS categories were used in the output of data):

- Mining and oil and gas field machinery manufacturing
- Steel product manufacturing from purchased steel
- Fabricated metal product manufacturing
- Construction
- Drilling oil and gas wells
- Architectural, engineering, and related services
- Support activities for oil and gas operations
- Natural gas distribution

## Government Revenue Methodology

Government revenues due to Gulf of Mexico offshore oil and natural gas activity are primarily derived from three main revenue streams, royalties paid on produced oil and natural gas, bonus bids paid to acquire blocks in lease sales, and rents for blocks leased by operators. There are a number of policies which impact royalty and lease payments received by the Federal Government, including royalty relief for certain blocks depending on production levels, and differing rent and royalty regimes for fields in different water depths and blocks leased at different times. Additionally, the value of oil and natural gas produced in the Gulf of Mexico may differ from major indicators such as West Texas Intermediate (WTI) crude due to transportation costs, long term sales contracts, and differentials due to product quality. To calculate government revenues due to offshore oil and natural gas activities data from the Office of

Natural Resource Revenue<sup>11</sup> (ONRR) as well as oil and natural gas price projections from the Energy Information Administration's Annual Energy Outlook 2020<sup>12</sup> and Short-Term Energy Outlook<sup>13</sup> were utilized. In some cases (especially regarding disbursements to states) calendar year data was unavailable. In these cases, fiscal year data was utilized as a stand in for calendar year data. Lease sale bid revenues and rental revenues were calculated through the simulation of yearly lease sales based on the current 5-year plan. The number of leases acquired and retained was modeled on the oil price forecasts used to develop the report and historical bid number and levels correlated with activity levels.

In 2006 Congress passed the Gulf of Mexico Energy Security Act (GOMESA) which created revenue sharing provisions for the four Gulf oil and gas producing States (Alabama, Louisiana, Mississippi and Texas), and their coastal political subdivisions. Revenue sharing was enacted in two phases beginning in 2007 and 2017 respectively, with revenue sharing caps of \$375 million for fiscal years 2017–2019, \$487.5 million for fiscal years 2020 and 2021, and \$375 million for fiscal years 2022–2055 enacted. To develop the revenue sharing forecasts in this report, total projected federal revenues, actual revenue distribution data from the ONRR, analysis of the growth of revenue sharing based on eligible leases, and the revenue sharing caps were considered.

In addition to provisions for revenue sharing with Gulf of Mexico producing States, GOMESA also included a provision for distributions to the Land and Water Conservation Fund (LWCF). The LWCF, "supports the protection of federal public lands and waters – including national parks, forests, wildlife refuges, and recreation areas – and voluntary conservation on private land. LWCF investments secure public access, improve recreational opportunities, and preserve ecosystem benefits for local communities."<sup>14</sup> LWCF distributions forecasts are based on total projected federal revenues, actual distribution data from the ONRR, analysis of the growth of revenue sharing based on eligible leases and revenue sharing caps.

---

<sup>11</sup> U.S. Department of the Interior, Natural Resources Revenue Data, <https://revenuedata.doi.gov/>

<sup>12</sup> Annual Energy Outlook 2020, Energy Information Administration

<sup>13</sup> Short Term Energy Outlook, April 7, 2020, Energy Information Administration

<sup>14</sup> Land and Water Conservation Fund, U.S. Department of the Interior



## Representative Offshore Oil and Gas Industry Suppliers<sup>15</sup>

### Alabama

- Aaron Oil Company
- ABC Applicators, Inc.
- Aker Solutions
- Alabama Laser
- Atlas Copco
- BAE Systems
- Barry Graham Oil Service LLC
- Bay Area Screw & Supply Co., Inc.
- Consolidated Pipe & Supply Company
- Delta Rigging & Tools
- DK Tech Corporation
- Gulf Coast Air & Hydraulics, Inc.
- Hill Marine Refrigeration, Inc.
- Ideal Technical Services
- Industrial Training Consultants
- Intergraph Corporation
- Lott Ship Agency, Inc.
- Martin Energy Services
- Master Boat Builders, Inc.
- Midstream Fuel Service, LLC
- Motion Industries
- NOV
- Nudraulix, Inc.
- Offshore Inland Marine & Oilfield
- Precision IBC
- Regions Bank
- S&K Machineworks and Fabrication, Inc.
- ShipConstructor USA
- Technical Specialties, Inc.
- TriNova
- Winkelmann Flowform Technology

### Alaska

- Alaska Instrument Company, LLC
- MRO Sales, Inc.
- RJE International Inc.

### Arizona

- Ballast Technologies, Inc.
- CERTEX USA
- DH Instruments Pressure Products
- EMMEGI Heat Exchangers Inc.
- Hybrid Design Associates - Surface Mount Company
- Phoenix Digital Corporation
- PREVCO Subsea Housings
- Technologic Systems
- Tomar Electronics
- Valley Forge & Bolt
- Westcoast B.O.P. Products US, Inc.

### Arkansas

- Applied Technology Group, Inc.
- Baldor Electric Company
- Crow-Burlingame Company
- Engines, Inc.
- Stephens
- Triangle Engineering
- United Spectrographics, LLC

### California

- Additel Corporation
- Advantech
- Aerospace & Marine International
- Alliant Energy & Marine
- Amron International Inc.
- Analysts, Inc.
- Anritsu Company
- Applied Physics Systems
- Armor Guys
- Autodesk, Inc.
- Bal Seal Engineering, Inc.
- Barksdale Control Products
- Behrens and Associates Inc.
- BEI Sensors
- Berry Plastics
- BG System Inc.
- Bird Barrier

- Blacoh Fluid Control, Inc.
- BMT Group
- Capstone Turbine Corporation
- Cavins Oil Well Tools
- Celesco Transducer Products
- ChemEOR
- Clayton Industries
- Compass Water Solutions
- ConGlobal Industries Inc.
- Control Panel
- Corpro Companies Inc.
- Dakota Ultrasonics
- Dino-Lite Scopes
- Discflo Pumps
- DryVac Environmental Services
- ESP Safety Inc.
- Euramco
- Every Industry
- Fieldbit
- Fortinet
- Glenair
- Global Precision Instruments
- Hawk Industries, Inc.
- Hydraulics International
- Hyspan Precision Products, Inc.
- Industrial Degauss
- Insight Manufacturing
- JDA Global LLC
- Kepner Plastics Fabricators, Inc.
- Laserline Inc.
- McCrometer, Inc.
- MSC Software
- Nuvaair
- PacSeal Hydraulics, Inc.
- Poseidon Robotics, LLC
- Proco Products, Inc.
- SC Hydraulic Engineering
- Synectic Systems Group
- SYNMAC, Inc.
- Teledyne
- TMT Laboratories
- Turner Designs Hydrocarbon Instruments
- Upwing Energy

<sup>15</sup> This representative list of over 2,400 US suppliers was developed through company databases and public sources. This list greatly underestimates the number of companies who supply the industry. Companies may no longer be active suppliers to the industry, may have merged, ceased to do business, or are included in error.

## California (Continued)

- Vantage Technology
- Village Marine Watermakers
- Wellbore Navigation, Inc.
- WeTechnologies, Inc.

## Colorado

- 3D at Depth, Inc.
- BAND-IT IDEX, Inc.
- BVM Corporation
- CoorsTek Technical Ceramics
- Decision Point Associates, Inc.
- Freewave Technologies Inc.
- Gates Corporation
- IMI Precision Engineering
- Johns Manville
- JourneyApps
- Micro Motion
- PROTEM USA
- PTI Group USA LLC
- Quadco Inc.
- Solvaqua Inc.
- Sundyne Corporation
- TCI USA Inc.

## Connecticut

- A.K.O., Inc.
- Advanced Testing Systems, Inc.
- APS Technology Inc.
- Ashcroft Inc.
- Baumer Ltd.
- Burndy Corp...
- CS Unitec
- Global Dynamix Inc.
- J.R. Merritt
- Lee Company
- Oceanweather Inc.
- OFS Fitel LLC
- Omega Engineering Inc.
- PMC Engineering, LLC
- Point Lighting Corporation
- Praxair, Inc.
- Process Measurement & Controls
- Pro-Lock USA LLC
- Remote Automation Solutions
- RSCC Wire & Cable LLC
- Softex
- Solidification Products International Inc.
- Stanley Black & Decker

- The Lee Company
- TUV Rheinland
- United Rentals
- Walz & Krenzer, Inc.
- Ward Leonard Electric Company
- Winchester Interconnect

## Delaware

- DuPont
- Maritime Administration
- Pole Star Space Applications
- Quantum Polymers
- Schagrin Associates

## Florida

- ABCO Products, Inc.
- American Industrial Plastics, Inc.
- American Steel Products
- Artmark Products Corporation
- Atlantic Marine, Inc. (Mobile)
- Bellows Tech
- Belzona
- Citel, Inc.
- Citrix Systems, Inc.
- Consilium Marine U.S. Inc.
- Continental Shelf Associates & Subsidiaries
- CSX Transportation
- Eastern Shipbuilding Group, Inc.
- Enviro Voraxial Technology
- Global Satellite USA
- Governor Control Systems, Inc.
- H G Harders & Sons, Inc.
- Hercules Sealing Products
- Hoerbiger Compression Technology
- KE Marine
- Lightning Master Corporation
- Manown Engineering Co., Inc.
- Marine Rescue Technologies
- Maritech Machine Inc.
- Metals USA
- Miami Diver, Inc.
- Neptune Research, Inc.
- Numara Software, Inc.
- Ocean Motions Company
- Oceaneering International
- Padgett Swann Machinery Co.

- Pensacola Testing Laboratories, Inc.
- Quala
- Quality Plus Services, Inc.
- Sky Enterprises
- Southern Spring & Stamping Inc.
- Spurs Marine Manufacturing Inc.
- Stainless Structural LLC
- Tiger Direct, Inc.
- Virtual Media Integration, Ltd.
- W&O Supply
- W. W. Grainger, Inc.
- World Fuel Services, Inc.
- Worldwide Drilling Resource

## Georgia

- Air France-KLM/ Delta
- Amerair Industries, Inc.
- American Boa, Inc.
- Bekaert Corporation
- Bourdon USA
- BrandSafway
- Crane Control Systems LLC
- Dell Marketing LP
- Deutz Corporation
- Donovan Marine, Inc.
- E. L. I., Inc.
- Executrain
- Filowire, Inc.
- Hope Industrial Systems Inc.
- Imes Inc.
- Interface, Inc.
- Jas Worldwide Management
- JB Systems
- JIT Warehousing & Logistics LLC
- Mencom Corporation
- Mustang Computers & Supplies Inc.
- MyCelx Technologies Corporation
- Nexeo Solutions, LLC
- Nivis
- OBL
- PC Weather Products
- Ronson Technical Products
- Sigma Thermal Inc.
- Sikora International Corp.
- Slingco America, Inc.
- SOTEC, LLC

## Georgia (Continued)

- Specialty Application Services, Inc.
- STW Technic LP
- Vericor Power Systems
- WEG Electric Corporation
- WIKA Instrument Corporation

## Hawaii

- Structural Solutions

## Idaho

- One Bridge Solutions Inc.

## Illinois

- Air Cycle Corporation
- Anixter, Inc.
- Apex Engineering Products Corporation
- Applus+
- Axon Cable
- B & B Electronics Mfg., Co.
- Basler Electric Company
- Bosch Rexroth Corp...
- Burlington Northern And
- Caterpillar Inc.
- CDW Computer Centers Inc.
- CDW Direct
- CEJN North America
- Chicago Pneumatic Tool Co.
- Cintas Corporation
- Clements National
- Clifford-Jacobs Forging
- Coleman Cable Inc.
- Cornell Forge
- Davis Instruments
- Dexter Magnetic Technologies, Inc.
- Diesel Radiator Company
- Dynapar
- Eaton
- Energy Alloys Inc.
- Federal Signal
- Finkl Steel
- Fuchs Lubricants Co.
- Gallagher Benefit Services
- Grainger
- Groves Industrial Supply
- Holland Company
- Howco Metals Management LLC

- Ideal Electric
- IDEX
- IFS
- IMT Forge Group
- Industrial Air Solutions,
- ITH Engineering Inc.
- John Deere Power Systems
- Joliet Electric Motors
- LA MARCHE MFG. CO.
- Legrand
- Lillbacka USA Inc.
- MAGNETROL
- Magnet-Schultz
- Martin Engineering
- McMaster-Carr Supply Company
- Mittal Steel
- Morgan Bronze Products, Inc.
- MSC Industrial Supply Co.
- MW Industries, Inc. Energy Solutions
- Nitto Kohki USA Inc.
- Nord-Lock Inc.
- Norman Filter Company
- Partex Marking Systems Inc.
- Phoenix Solutions
- Roda Specialty Steel
- S. Himmelstein & Company
- Smalley
- Stucchi USA
- Wandfluh of America
- Wilkes and McLean

## Indiana

- Advanced Designs Corporation
- Allison Transmission
- Cummins Inc.
- Flodraulic Group
- Floway Inc.
- Fronius
- NRP-Jones, LLC
- Piezo Technologies
- RH Machine
- Sullivan-Palatek, Inc.
- The Diamond Chain Company
- Transmark
- Valbruna Slater Stainless Inc.

## Iowa

- Advanced Heat Treat Corp...
- Crystal Group Inc.
- Morse Rubber LLC

- Rocklin Manufacturing Co.

## Kansas

- Enduralock
- Viking Blast & Wash Systems
- WireCo WorldGroup

## Kentucky

- Big Ass Fans
- Bonfiglioli USA
- Mubea Inc.
- Teekay Offshore/ Altera

## Louisiana

- Acadian Total Security
- Accu-Line Wireline Services, LLC
- Acme Truck Line Inc.
- Advance Products & Systems
- Aggreko LLC
- Air Compressor Energy Systems, Inc.
- Allendorph Specialties Inc.
- American Pollution Control Corporation (AMPOL)
- American Polymer Products
- Aqueos Subsea
- Aries Marine Group
- ATR, LLC
- Bayou Wasco Insulation, LLC
- Becnel Rental Tools
- Benoit Premium Threading
- Better Pumps & Solutions, LLC
- Bilco Tools Inc.
- Bis Salamis Inc.
- Blake International USA Rigs
- BNA Marine Services, LLC
- Bollinger Shipyards Lockport
- Bonaventure Safety, LLC.
- Bourque Sales & Service, Inc.
- Boysenblue Celtec International, Inc.
- Braeden Engineering
- Brand Energy Solutions
- Bristow Group
- Broussard Brothers, Inc.
- Burner Fire Control
- Cad Oilfield Specialties
- Canal Barge Company, Inc.
- Capital Valve & Fitting Co., Inc.
- Central Boat Rentals
- Central Dispatch, Inc.

## Louisiana (Continued)

- CETCO Oilfield Services
- Charter Supply Company
- CheckPoint Pumps & Systems
- Chem Spray South
- Chet Morrison Contractors
- C-Innovations
- Clean Blast LLC
- CleanCut, LLC
- Coastal Fire Protection LLC
- Coastal Risk Services, LLC
- Coastal Safety Management LLC
- Cochrane Technologies, Inc.
- Commercial Diving Supply, LLC
- Connector Specialists, Inc.
- C-Port, LLC
- Creative Manufacturing Services LLC
- Crescent Safety Services
- Crosby Energy Services
- Crosby Tugs
- Cross Logistics, Inc.
- Cross Services, Inc.
- Crown Oilfield Instrumentation
- Cutting Underwater Technologies
- D & D Machine Works, Inc.
- Danos
- Data Technology Solutions
- Datacom
- DCL Mooring and Rigging
- DEL Tank & Filtration Systems
- Delmar Systems, Inc.
- Delta Bolt LLC
- Digital and Electronic Resources
- Digital Machining Systems
- Diversified Well Logging Inc.
- Doerle Food Service
- Don Abney, Inc.
- Donnie Williams Tool Co., Inc.
- Downey Engineering Corp...
- Dryden Supply, Inc.
- Ductz Of South Louisiana
- Dupre' Interests LLC
- Dynamic Industries Inc.
- Ed Roe's Welding Inc.
- Edison Chouest Offshore
- Elliott Technical Controls, Inc.
- Emd Services International (EMDSI)
- ENE Consultants
- Energy Pipe & Supply Inc.
- Engineering Dynamics, Inc.
- Envirochem
- Environmental Drilling Solutions
- Enviro-Tech Systems
- EPS Logistics
- ESS Support Services
- ESSI Corporation
- Evans Equipment & Environmental
- Expert E&P Consultants
- Expert Riser Solutions
- Falck Alford
- Fire & Safety Specialists, Inc.
- Fire Boss of Louisiana, Inc.
- Fitzgerald Inspection Inc.
- Force Power Systems, LLC
- Fouchon Heavy Lift, LLC
- Francis Torque Service
- Frank's International
- G T Michelli Company Inc.
- Gachassin, Inc.
- Gaffey, Inc.
- Galvotec Corrosion Services
- Gauthiers' - A MODEX Company
- General Marine Leasing
- Gladtags
- Global Manufacturing Inc.
- Globalstar
- Grand Isle Shipyard
- Greater Lafourche Port Commission
- Green Marine & Industrial Equipment Co.
- Gulf Coast International, LLC
- Gulf Coast Marine Associates, Inc.
- Gulf Coast Monitoring
- Gulf Coast Training Technologies
- Gulf Engine & Equipment, Inc.
- Gulf Island Fabrication, Inc.
- Gulf Offshore Logistics, LLC
- Gulf Offshore Research Institute (GORI)
- Gulf South Marine
- Gulf States Engr. Co.
- Gulfstream Services Inc.
- H & E Equipment Services, Inc.
- Hadco Services, Inc.
- Halo Branded Solutions Inc.
- Hanagriff's Machine Shop, Inc.
- Harvey Gulf International Marine
- HB Rentals
- Herbert Crappell Construction
- HLR Controls, Inc.
- Hole Opener Corporation
- Hornbeck Offshore Services
- Hose Specialty & Supply Co.
- Houma Armature Works & Supply, Inc.
- Huber, Inc.
- Ideal Energy Solutions LLC
- Industrial Instrument Works, Inc.
- Industrial Screw & Supply Company
- Industrial Solutions Group
- IntegriCert
- Island Operating
- J & J Metalworks, Inc.
- J. H. Menge
- Jack Vilas & Associates, Inc.
- Jackson Offshore Operators
- JM Test Systems, Inc.
- John H. Carter
- John W Stone Oil Distributor LLC
- John W. Fisk Company
- JohnPac
- Jotun
- K & B Machine Works, Inc.
- Kevin Gros Consulting & Marine
- Keystone Engineering
- Kidder, Inc.
- Kilgore Marine
- Knight Energy Services
- K-Tek
- L & L Oil and Gas Services
- Laborde Marine LLC
- Lafayette Electrical & Marine Supply Inc.
- Lafayette Power Sports
- Lafayette Steel Erector, Inc.
- Lapeyre Stair, Inc.
- LeBlanc & Associates, Inc.
- Linear Controls, Inc.
- Lirette Ford Lincoln Mercury, Inc.
- Living Quarter Technology, Inc.

## Louisiana (Continued)

- Loadmaster Derrick & Equipment, Inc.
- Louisiana Crane & Electrical
- Louisiana Economic Development
- Louisiana Environmental Monitoring
- Louisiana International Marine LLC
- Louisiana Machinery Company, LLC.
- Louisiana Safety Systems
- Louisiana Valve Source Inc.
- M & M International, LLC.
- M&M International, LLC
- M.C. Forklift & Truck Service, Inc.
- M.H. Reeves Consulting
- M.M. Industries
- Magnum Mud Equipment Co. Inc.
- Major Equipment & Remediation Services
- Marine Systems, Inc.
- Marine Technologies, LLC
- Mark Tool Co.
- Martin Holdings
- Martin Terminal
- Matherne Instrumentation
- Max Welders, Inc.
- Maxim Evaporators of America
- MB Industries, LLC
- McDaniel Controls, Inc.
- Medi-Chest, Inc.
- Metallurgical & Materials Technologies, Inc.
- MM Plastics Mfg., Inc.
- MMR Group, Inc.
- Modern Engineered Products
- Monkey Pumps
- Moody Price
- Morgan City Rentals
- MTE Engineered Materials, LLC
- M-Tec/Rise
- NDT Repair Service & Supply, Inc.
- New Century Fabricators
- New Industries
- Newpark Environmental
- NuTec, Inc.
- Orion Instruments
- ORIONCASE

- OS Mats
- Otto Candies, LLC
- Pharma-Safe Industrial Services, Inc.
- PHI Aviation, Inc.
- Phuel Oil Tools
- PMI Energy Services
- Prime Tank, LLC
- Quality Companies
- R&R Manufacturing
- Reliable Industries
- Robin Instrument & Specialty, LLC
- Roy Supply Co.
- Ruelco
- Safety Management Systems, LLC
- Scurlock Electric
- Seasafe Inc.
- SeaTran Marine
- Sidewinder Pumps Inc.
- Smith Mason & Co., LLC
- Southern Precision Inc.
- Specialty Equipment Sales
- Stallion Oilfield Services Ltd.
- Suretank USA / AmGulf Fabrication
- Survival Systems International
- TANTRUM Lab
- The Gauge House, LLC
- Thraco Industrial
- UPPERLINE EQUIPMENT COMPANY
- V and P Sales
- VarTech Systems Inc.
- Vector Sales Incorporated
- Zealous Energy Services

- Metal Bellows
- Thermo Fisher Scientific
- TMC Compressors of the Seas
- United Electric Controls
- Vacuum Barrier Corporation
- Veolia
- Woods Hole Group

## Michigan

- AttaBox
- Laser Marking Technologies, LLC
- Nabtesco Motion Control, Inc.
- R.M. Young Company
- ViewTech Borescopes

## Minnesota

- 3M
- Boerger, LLC
- Boll Filter Corporation
- Cortec Corporation
- Det-Tronics
- Doering Company
- Donaldson Company, Inc.
- Graco Inc.
- Hydra-Cell Pumps Wanner Engineering
- Mesabi
- NatureWorks
- NIDEC - KATO Engineering
- Omnetics Connector Corporation
- Pentair
- Precision Associates, Inc.
- Windings, Inc.
- Zerust Corrosion Solutions

## Maine

- DeepWater Buoyancy
- Modula

## Maryland

- Dunlop Protective Footwear
- Rayco-Wylie Systems
- Sauer Compressors USA

## Massachusetts

- Asahi/America, Inc.
- Electrochem Solutions, Inc.
- FM Approvals
- GE

## Mississippi

- Bosarge Diving Inc.
- Daily Equipment Company
- Dixie Glass & Trim Inc.
- Gibson Electric Motor
- Industrial Maint & Machine Inc.
- Ingalls Shipbuilding
- Jerry Pittman and Associates
- Pascagoula Bar Pilots
- Performance Inflatables
- Signal International Inc.
- Southern Inspection Services
- The Anchor Works
- Tube-Mac Piping Technologies Ltd.

## Mississippi (Continued)

- Vicksburg Marine Inc.

## Missouri

- Aurora Technologies, Inc.
- Closed Loop Recycling
- Continental Disc Corporation
- Custom Sensors & Technology
- EaglePicher Technologies
- Emerson
- Fike Corporation Grainger
- INDEECO
- LaBarge, Inc.
- PAS Technologies
- Scienco/Fast
- SFA Companies
- St Louis Metallizing
- St. Louis Pipe & Supply
- Tarmac International Inc.
- Tnemec Company, Inc.
- Tubular Steel, Inc.
- Vulcan Drying Systems

## Montana

- Connector Tech LLC

## Nebraska

- Kiewit Energy Group
- PayFlex Systems USA, Inc.

## Nevada

- American Grating
- Click Bond, Inc.
- Rice Hydro, Inc.

## New Hampshire

- Bortech Corp.
- Citadel Computer Corporation
- New Hampshire Ball Bearings, Inc.
- Skeie Industrial Equipment & services, LLC
- Sponge-Jet, Inc.

## New Jersey

- BASF
- Cogne Specialty Steel USA, Inc.
- Custom Alloys

- Dialight
- EMD Chemicals, Inc.
- Evonik Corporation
- Felman Trading
- Gaffney-Kroese Supply Corporation
- General Magnaplate Corporation
- GGB Bearing Technology
- Godwin Pumps
- Grignard Company, LLC
- Helidex Offshore LLC
- Hilman Inc.
- Hilman Rollers
- Honeywell
- Hytorc
- IBOCO
- Identropy, Inc.
- IEEE/Oceanic Engineering Society
- ISP
- ISS Machinery Services
- John Wiley & Sons
- Kallman Worldwide, Inc.
- KEYENCE Corporation of America
- Kiswire
- KOPO International
- Kulite Semiconductor Products, Inc.
- Leistritz Advanced Technologies Corp.
- Mimeo.Com, Inc.
- Mistras Group Inc.
- Panel Components & Systems
- Powell Electronics Inc.
- RIA Connect
- Ringfeder Corporation
- Rotor Clip Company
- Seals Eastern Inc.
- Servometer
- Siemens
- SIKA USA Inc.
- TDK-Lambda Americas
- Titanium Industries
- Vass Pipe
- Versa Products Company Inc.
- Vita Motivator Company Inc.
- Westfalia Separator Inc.

## New Mexico

- Flow Science Inc.
- Murchison Drilling Schools

## New York

- AboveNet
- AIChE
- AirSep Corporation
- Ambrell Corporation
- America Trade LLC
- AMICO
- Amphenol Industrial/Pyle National
- API Heat Transfer
- Apple Rubber
- Automated Dynamics
- Bamberger Polymers, Inc.
- BFG Marine Inc.
- Blume Worldwide Services
- Busby Metals, Inc.
- Canty Inc.
- Columbus McKinnon Corporation
- Corning
- Cortland Cable Co.
- CWorks Systems Inc.
- Daikin America Inc.
- Delaware Manufacturing Industries Corporation (DMIC)
- Derrick Corporation
- DSR Corp.
- East Hills Instruments, Inc.
- Enecon Corp.
- ESM Group Inc.
- Fiber Instrument Sales, Inc.
- Flexim Americas
- Flygt
- G Bopp USA
- G.W. Lisk Company
- Global Strategic Communications
- Golden Promise Equipment Inc.
- GP:50 NY Ltd.
- IrisVR
- ITT Corporation
- Knovel
- Kracht
- Linuo Valve
- Lockton Global Energy & Marine
- Medima
- Metro Marine Design Associates Inc.
- Moog Inc.
- National Response Corp.



## New York (Continued)

- PCB Piezotronics, Inc.
- PIE Calibrators
- Rotork Controls, Inc.
- Samco Technologies Inc.
- Scotiabank
- Stellar Technology
- Stemcor USA Inc.
- Sumitomo
- Superior Glove
- Tech Products
- Tel-Tru Manufacturing Co.
- Temper Companies
- Timco, Inc.
- Viatran Corporation
- VJ Technologies, Inc.
- Wacker Chemical Corporation

## North Carolina

- Alltec LLC
- Best Pump Works
- Bucci Industries USA
- Cavotec USA Inc.
- Dimension Data North America, Inc.
- Doosan Infracore Portable Power
- Electros witch
- FMI Corporation
- GlenGuard
- Global Knowledge Intermediate
- Hoffer Flow Controls
- Ingersoll Rand Inc.
- James Tool, Machine & Engineering, Inc.
- KRAL-USA, Inc.
- Lord Corp...
- Mackay Marine, Division of Mackay Communications
- MTS Sensors
- Roblon Industrial Fiber
- RSC Bio Solutions
- Saft America Inc.
- Scott Safety
- SOS Global Express
- SPX Flow
- SSI Schaefer Systems International
- Tandemloc, Inc.
- Toromont Energy

## North Dakota

- Revel Digital

## Ohio

- Adalet
- Akron Electric, Inc.
- American Augers, Inc.
- American Waste Mgt Services
- Anchor Fluid Power
- Applied Industrial Technologies
- Ashtabula Iron & Metal
- Aubert & Duval
- Avtron Industrial Automation
- Battelle
- Bearing Distributors
- Bearing Engineered Solutions
- Bronx International Inc.
- Brush Wellman Inc.
- Canton Drop Forge
- Carboline
- CAS Dataloggers
- Centurion Technologies, LLC
- Chalfant
- Cincinnati Gearing Systems
- Clark-Reliance
- Cognis Corporation
- Compass Systems & Sales
- Connell Inc.
- Control Transformer, Inc.
- Cubbison Company
- Dilworth Machine
- Expo Technologies, Inc.
- Federal Process Corporation
- Ferrotrade Corporation
- Ferry Cap & Set Screw
- Gastronics, Inc.
- Giant Industries Inc.
- Glunt Industries Inc.
- Gorman-Rupp Pumps
- H&S Tool, Inc.
- Hammelmann
- HydraTech Engineered Products
- Integrated Project Resources
- Ken Greco, Inc.
- Kenexis Consulting
- Konecranes, Inc.
- Lincoln Electric Company
- Lyden Oil Co.
- MarFlex
- Middough Inc.

- Midwest Industrial Contractors
- Milliron Iron & Metal Inc.
- Nelson Fastener Systems
- Nelson Stud Welding, Inc.
- Network Technologies Inc.
- Niles Iron & Metal Co., LLC
- Norbar Torque Tools, Inc.
- Noshok, Inc.
- Ohio Edison
- P M C Industries Corp.
- Parker Hannifin Corporation
- Pepperl+Fuchs
- PLIDCO
- Presrite Corporation
- Protrade Steel Co. Ltd.
- PSC Metals Inc.
- Ralston Instruments, LLC
- Republic Engineered Products
- RFD Beaufort Inc.
- Richards Industries
- Rittal Corporation
- Safeguard Technology Inc.
- Scrap Dynamics Corporation
- Sherwin-Williams
- Solon Manufacturing Co.
- Sprague Products
- Swagelok
- Technical Translation Services
- The David J Joseph Co.
- Timcal America
- TJB Couplers
- TPC Wire & Cable Corp.
- Tylok International, Inc.
- Vogelsang USA
- Wooster Products Inc.

## Oklahoma

- AAPG
- Aceco Valve Inc.
- American Foundry Group
- Bertrem Products, Inc.
- Bronco Manufacturing, LLC
- BS&B Safety Systems
- Conley Corporation
- Consolidated Turbine Specialists, LLC
- Continental Wire Cloth, LLC
- D&L Oil Tools
- Den-Con Companies
- Double Life Corporation
- Engatech Inc.
- GEFCO
- Geophysical Research Co., LLC

## Oklahoma (Continued)

- Green Thermal Solutions
- Gunnebo Johnson Corp.
- Hetronic USA
- Hydro Foam Technology Inc.
- John M. Campbell & Co./PetroSkills
- Kenco Engineering
- Kerr Pumps
- Kimray, Inc.
- King Oil Tools/Gefco, Inc.
- KT Plastics Inc.
- Lee C. Moore, A Woolslayer Company
- Mad, Ltd.
- Mathey Dearman, Inc.
- Oilfield Improvements, Inc.
- Oiltizer
- Oklahoma Forge, Inc.
- Perkins Pacific
- Piper Valve Systems
- PRESCOR, LLC
- Primenergy Production Equipment, LLC
- Reel-O-Matic
- Service Pump & Compressor
- Shumate Energy Technologies, Inc.
- Specific Systems, Inc.
- Technical Control System
- Teledrift, Inc.
- The Crosby Group
- Thompson Pump Company
- Tri-Lift Services
- Tulsa heaters
- Tulsa Power, Inc.
- TWG
- US Safety Sign & Decal
- Webco Industries Inc.
- Whitco Supply
- WInches Inc.
- Woolslayer Companies, Inc.
- ZEECO

## Oregon

- Allied Systems Company
- Columbia Industrial Products
- Columbia Industries LLC
- Entro Industries
- Equipmentland
- FLIR Systems
- GasGun, Inc.

- GrayGo International Inc.
- Greenberry Industrial
- LaCrosse Footwear
- Skookum
- Technical Marine Service, Inc.
- The Ulven Companies
- Tinitron, Inc.
- Ulven Companies
- Wolf Steel Foundry

## Pennsylvania

- Affival Inc.
- AGC Chemicals Americas, Inc.
- ALPha Laser-Us, Inc.
- AMETEK
- Amg Resources Corporation
- Anker Industries
- ANSYS
- Arkema Inc.
- ASTM International
- Azcon Corporation
- Bedford Reinforced Plastics Inc.
- Billet Industries, Inc.
- Blank Rome
- Bodine Business Products
- Bolttech Mannings
- C/G Electrodes, LLC
- CAB Products (Cambria County Association for the Blind)
- Canary Labs Inc.
- Carpenter Technology Corporation
- Chromalox
- Co-Ax Valves Inc.
- Core Furnace Systems Corp.
- CP Industries
- CRC Industries
- Daisy Data Displays
- Dell Marketing LP
- DFT Inc.
- Dominion
- Durameter Milton Roy
- EBC Industries
- Elizabeth Carbide Components
- Elliott Group
- Ellwood Group
- Ensinger
- EST Group
- Femco Machine Company
- Fiber-Line, Inc.
- Foerster Instruments
- FORTA Corp. - Drilling Products Div.
- GAI-Tronics
- Gamajet Cleaning Systems Inc.
- GEA North America
- General Carbide Corporation
- General Dynamics
- Gottlieb Inc.
- Haskel International, LLC
- Hetrick Manufacturing
- High Pressure Equipment Company
- HYDAC Technology Corp.
- Ice Qube Inc.
- IMI PBM
- IMS Systems Inc.
- Innovative Pressure Technologies
- International SOS Assistance
- IPT
- Key Bellevilles
- Kroff Chemical Company
- Latrobe Specialty Steel
- Liberty Iron & Metal
- Linc Milton Roy
- Linde, Inc.
- LMI / Milton Roy
- LTC, Inc.
- Maxpro Technologies
- MECCO
- Megator
- Mercer Company
- Mercer Lime & Stone Co.
- Metalico
- Milton Roy Company
- PBM Inc. Valve Solutions
- PEI-Genesis
- Penn United Technologies, Inc.
- PhiladeLPhia Mixing Solutions, Ltd.
- Philly Shipyard
- Phoenix Contact
- PNC Bank
- Pressure Products Industries, Milton Roy
- Quadax Valves Inc.
- Quaker Houghton
- Rajant Corporation
- RDP Electrosense
- Sap America, Inc.
- Schramm, Inc.
- Schroeder Industries, LLC
- Science Application Int'l Corp.
- Silcotek Corporation



## Pennsylvania (Continued)

- SKF USA, Inc.
- Software House International
- Specialty Bar Products
- Strongarm Designs
- Superbolt, Inc.
- TE Connectivity
- TorcUP
- Tube City
- U.S. Steel Corporation
- Universal Refractories
- Van Gas Technologies
- Victrex
- VideoRay
- Voith Turbo
- Wabtec Corporation
- Whitehill Manufacturing Corporation
- Williams Milton Roy

## Rhode Island

- Alloy Wire International
- Bad Dog Tools
- Clarke Valve
- Dellner Brakes AB
- Igus
- KVH Industries, Inc.

## South Carolina

- AFL
- CIRCOR
- Dantherm Cooling
- Grace Distributing
- InsulFab
- Life Cycle Engineering
- Staubli Corporation
- Tobul Accumulator, Inc.
- WEC Equipment & Machining Solutions
- Zapp Precision Wire
- Zeus Inc.

## South Dakota

- Macurco Gas Detection
- Sioux Corporation

## Tennessee

- Bailey-Parks Urethane, Inc.
- Heatec, Inc.

- JDS Technologies, Inc.
- MCR Safety
- Thomas & Betts Corporation
- Tradequip
- TS3 Technology, Inc.
- USA Borescopes

## Texas

- 2H Offshore, Inc.
- 3C Metal
- 4E Valve
- 4G Wireline Systems
- 5Elem USA Inc.
- A&B Valve
- A.Hak
- A/M Air Starters
- A1 Graphic Solutions
- A1 Tags
- AADE
- AAR Incorporated
- ABB
- Able Infosat Communications, Inc.
- Abrado
- ABS
- ABSG Consulting Inc.
- Accudata Systems, Inc.
- Accumulators Inc.
- Accuturn Manufacturing, Inc.
- Acme Cleaning Equipment Inc.
- ACME Multitech Services
- Action Specialties LLC
- Acumen International, Inc.
- Acute Technological Services, Inc.
- ADD Energy
- Admiralty Marine and Structural
- Adobe Equipment
- Advanced Energy Solutions
- Advanced Technology Valve
- Advanced Welding Services, Inc.
- Advisian
- AER Supply Ltd.
- AFGlobal Corporation
- Agar Corporation
- AGI Industries, Inc.
- AIMS International
- Air Comfort Incorporated
- Air Liquide
- Air Starter Components, Inc.
- Airborne Oil & Gas
- Airdyne Inc.
- Alabastron
- Alamo Iron Works
- Alamo Transformer Supply Company
- Alan C. McClure Associates, Inc.
- Alatas Americas Inc.
- Alexander/Ryan Marine & Safety Co.
- Alimak Hek Inc.
- Allamon Tool
- Allesco
- Allied Alloys
- Allied Electronics, Inc.
- Alloy & Stainless Fasteners
- Alloy Machine Works
- Alloy Metals & Tubes International, Inc.
- All-Pro Fasteners
- Allseas USA, Inc.
- Alltrans TC
- ALPha Oil Tools
- ALPha Slip Rings, Inc.
- Altex Electronics, Ltd.
- ALTISS Technologies,
- Ambox Limited
- AMCi Wireless
- AmerCable Incorporated
- Ameresco Solar, LLC
- America IIsintech
- American Alloy Steel
- American Block
- American Clutch & Equipment Co.
- American Completion Tools
- American Connectors
- American Shipping & Chartering
- American Spincast
- American Torque Wrench Inc.
- Ameriflex
- Amerjin Co., LLC
- Ameron International
- AmerRig Services
- Amosco
- Amtex Machine Products
- Analytical Systems KECO
- Andon Specialties
- Ani Direct LP
- Anson Flowline Equipment Inc.
- Anthelion Systems, Inc.
- Apache Pressure Products
- Apergy

## Texas (Continued)

- Applied Energy Company, Inc.
- APS Hydraulic Services
- Aqua-Chem, Inc.
- Arc Specialties, Inc.
- Arefco Seals, Inc.
- Argo International Corporation
- Arrow Industrial Equipment
- Asel-Tech
- AssetNation Inc.
- Astro Controls, Inc.
- A-T Controls
- AT&T
- Athens Group
- Atlas Industrial Supply Inc.
- ATPI
- Atsco
- Audubon Companies
- Automatic Power, Inc.
- Autronica Fire and Security
- Aveva, Inc.
- Avigilon USA Corporation
- Aviva Metals
- AXON Energy Services
- Aztec Manufacturing
- Aztec Tubular Products
- AZZ Energy
- B & W Pipe Inc.
- Baker Hughes
- Ball & Seat Specialties Co.
- Bardex Corporation
- Bardot Group
- Bartec US Corp.
- Bastion Technologies, Inc.
- Bates Reliable Solutions LLC
- Bauer-Pileco Inc.
- Beacon Maritime Inc.
- Bechtel
- Beeco Motors & Controls, Inc.
- Bell Engineering, Inc.
- Belsim Engineering
- Belven, Inc.
- Bemex International
- Bench Tree
- Bernard Controls Inc.
- Bestolife Corporation
- Beta International
- Beveridge & Diamond
- BI Builders Inc.
- Billy Pugh Co., Inc.
- Bishop Lifting Products
- Bitswave Inc.
- Black Angus Steel & Supply
- Black Diamond Group
- Black Sea Technology Inc.
- Blackwell Plastics
- Bluewater Solutions, Inc.
- Bob Herbert & Associates, Inc.
- Bodycote Surface Technology
- Boedeker Plastics, Inc.
- Bolton Alloys LC
- Boskalis Offshore
- Brandt Companies
- Brennan Industries
- Bridon American Corporation
- Brown Corrosion Services, Inc.
- BTI Services
- Burrow Global
- Bush Hydraulics
- Butcher Fabricators
- Buxton Interests, Inc.
- BW Offshore
- C.A. Richards & Associates, Inc.
- C.C. Gasket & Fastener, Ltd.
- C.W. Rod Tool Co., Inc.
- Cameron International, (Schlumberger)
- Camesa
- Cam-Tech Products, Inc.
- Canyon Manufacturing
- Capital Process Management, Inc.
- CapRock Communications
- CARBER
- Castrol Offshore
- Catapult Systems Inc.
- C-Automation, Inc.
- Cavo Drilling Motors
- C-B Gear & Machine Inc.
- CCC Group, Inc.
- CCI Piping Systems
- CDQ International, LLC.
- CDR Strainers & Filters, Inc.
- Cenergy
- Centerline Manufacturing
- Ceram-Kote Coatings, Inc.
- Chickasaw Distributors
- Choice Rescue & Safety Services
- Civeo Offshore
- C-Job Naval Architects
- CK POWER
- ClampOn
- ClockSpring|NRI
- CMP Products
- Coastal Foundry Company
- Cobra Rig Products
- Coleman Filter Company
- Conhagen: Rotating Equipment
- Container House Intl Inc.
- Control Flow, Inc.
- Copper State Rubber
- CORE Laboratories
- Corrosion Resistant Alloys
- Cortland Company
- Corvalent
- Cotech Irm Services Inc.
- Couplings International
- CPSI Production Co., LP
- Crane Pro Parts
- Craneworks, Inc.
- Crawford Electric Supply
- Crispin Energy Inc.
- CS&P Technologies
- CT Gasket & Polymer
- C'Treat Offshore Inc.
- Cubility
- Cudd Energy Services
- Custom Power
- Custom Safety Products, Inc.
- Cutting Tools, Inc.
- Cyclone Steel Services, Inc.
- D Reynolds Company LLC
- D&S Machine Works, Inc.
- Da Mid South
- Dal-Air Investment Castings, Inc.
- Dale Fastener Supply
- Daniel Measurement and Control, Inc.
- Dan-Loc Group
- Danmar Industries, Inc.
- Daytech Instruments
- De Nora Water Technologies
- Deansteel Manufacturing Co.
- Deco Plastics, Inc.
- Deep Down, Inc.
- Deep Sea Development Services Inc.
- Deep Sea Quality Consulting, Inc.
- Deep Trend Inc.
- Deepsea Technologies
- Deepwater Corrosion Services Inc.
- Del Mar Systems
- DELTA CENTRIFUGAL
- Delta Screens
- Delta Steel, LP

## Texas (Continued)

- Denso North America
- Design Staff, Inc.
- Devon Industries, Inc.
- DHL Global Forwarding
- DIAB Sales, Inc.
- Diamond Hydraulics Inc.
- Diamond Offshore
- Diamond Wire Spring
- Diamondback Industries
- DiaPac LLC
- Distribution International
- DistributionNOW
- Dixie Pipe Sales L.P.
- DK-LOK
- D-LOK
- DNP-Americas
- DOF Subsea
- Dooley Tackaberry, Inc.
- Downhole Products
- Dox Steel
- Doyles
- DPS Offshore, Inc.
- Draco Spring Manufacturing Company
- Draeger Inc.
- Drago Supply Co.
- Dragon Products
- Draka Offshore
- Drake Industries, Inc.
- DrawWorks LP.
- Drew Marine Usa, Inc.
- Drilex / Toro Downhole Tools
- Drilling & Production Resources
- Drilling Controls, Inc.
- Drillmec
- Drilltec Technologies Corporation
- Dril-Quip, Inc.
- DTC International
- DTI
- Dualco Inc.
- Duramast Industries, Inc.
- Durmat Inc.
- DURUM USA
- Dutton's Navigation Inc.
- Duxaoil Texas LLC
- DWD International, Ltd.
- DXP Enterprises, Inc.
- DXP Sepco
- Dyna Torque Technologies, Inc.
- Dynamic Flow Computers, Inc.
- DYNAMICS Scientific Production Center USA, Inc.
- E. J. Reynolds Company
- E.H. Wachs Industrial Products
- EzS Warning Signals
- Eagle Electronics Resources Inc.
- Eagle Gasket
- East Texas Machine Works
- Eastham Forge, Inc.
- Ecad, Inc.
- Echometer Company
- Eckel International Inc.
- Ecodyne MRM, Inc.
- Ecom Instruments Inc.
- EDG, Inc.
- Edgen Murray Corp...
- EEW Group
- EFC Americas Inc.
- Efird Corrosion International
- EGS Systems Inc.
- Electro Mechanical Industries, Inc.
- Electronic Power Design, Inc.
- Electronic Technical Services Corporation
- Elgin Separation Solutions
- Elite Precision Fabricators, Inc.
- Elite Seal Inc.
- Ellington & Associates
- Encore Industrial Products
- Enduro Composites
- ENERFLEX
- Energy & Technology, Corp.
- Energy Aviation LLC
- Energy Valve and Supply Company, LLC (ENVASCO)
- EnerMech Mechanical Services, Inc.
- EnerQuip - Torque Solutions
- Enertech Services International Inc.
- ENGIE Resources
- Engineered Pressure System, Inc.
- Engineered Spring Products
- EnQuest Energy Solutions
- Enteq Upstream
- Enterprise Offshore Drilling
- Enventure Global Technology
- Enverus
- Epcon Industrial Systems, LP
- EPI Materials Testing Group
- Equipment Management Services LLC
- Equipment Resources
- Equipment Valve & Supply
- ERA Group
- Erdos Miller
- ES&H Consulting Services, Inc.
- ESCO GROUP LLC
- Esco Products, Inc.
- ESI, Inc.
- ETA International Inc.
- EthosEnergy
- Eutex International, Inc.
- Exceed Oilfield Equipment
- Excel Engineering, Inc.
- Excell Battery Corporation
- Exmar Offshore Company
- Express Bolt & Gasket
- Expro
- Exterran
- Extreme Coatings
- E-Z Line, Inc.
- F.W. Gartner
- Falcon Electric Inc.
- FalconView Energy Products
- Fann Instrument Company
- Farmers Copper Ltd.
- Fastenal
- Fastorq
- FBV Inc.
- FCI
- FCI Forged Components, Inc.
- Fearnley Procter Inc.
- Federal Flange
- Fibergrate Composite Structures
- Field Industries LLC
- Fielder Electric Supply Co., Inc.
- Fifth Ring
- Filtration Technology Corporation
- Fire Protection Service, Inc.
- Fishbone Safety Solutions Ltd.
- FITOK Inc.
- Five Star Metals, Inc.
- Flare Industries, Inc.
- Flexible Lifeline Systems, Inc.
- Flo Trend Systems
- Flow Safe, Inc.
- Flowserve
- Fluid Systems, Inc.
- Fluor
- FM Oilfield Services Solutions LLC

## Texas (Continued)

- Forge USA
- Forged Components, Inc.
- Forged Vessel Connections, Inc.
- Forrester Research, Inc.
- Forum Energy Technologies
- Forum Services
- FoundOcean Limited
- Freeman & Curiel Engineers, LLP
- Freemyer Industrial Pressure, LP
- Freudenberg Oil & Gas Technologies
- Friede & Goldman, Ltd.
- Fugro USA Marine, Inc.
- Fusion Inc.
- FutureOn
- Fuzzy's Industrial Maintenance & Manufacture, LP
- G A S Unlimited Inc.
- G.A.M. RecuHeat, Inc.
- G.M. International Safety Inc.
- G.P.M. International Inc.
- GAC Group
- Gagemaker LP
- Galloway Johnson Tompkins
- GaLPerti Engineering and Flow Control USA Inc.
- Galtway Industries
- Galvotec
- Gardner Denver
- Gartner Coatings, Inc.
- Gateway International Transport, Inc.
- Gaumer Process
- Gaus Anodes International
- GB Tubulars
- GBA-Corona
- GDS Corp.
- Gearench
- General Monitors Systems
- General Plastics Mfg., Co.
- Generon
- Genesis Oil & Gas
- Geoforce, Inc.
- Geophysical Pursuit Inc.
- Geoscience Earth & Marine
- Geospace Offshore
- GHX, Ind.
- Gibson Applied Technology & Engineering (GATE)
- Gill Services, Inc.
- Glider Products LLC
- Global Downhole Tools
- Global Fabrication Services, Inc.
- Global Maritime Inc.
- Global Shop Solutions
- Global Thermoelectric Corp.
- Globaltech Motor & Controls, Inc.
- GN Solids America LLC
- Goodwin International
- Gotco International
- GOWell
- GPS Integrated Systems, Inc.
- Grayloc Products LLC
- Griffin Americas
- GS-Hydro US, Inc.
- GSM, Inc.
- Gulf Coast Downhole Technologies
- Gulf Coast Engineered Solutions, Inc.
- Gulf Copper
- Gulf Electroquip Ltd
- Gulfex
- GulfMark
- GustoMSC
- GX Technology Corp.
- H&D Distributors
- Hacker International
- Hagemeyer North America, Inc.
- Hahn Equipment Co. Inc.
- Halliburton
- Hamilton Metals
- Ham-Let Advanced Control Technology
- Hampco
- Hamworthy Inc.
- Hannon Hydraulics
- Hart Heat Transfer Products
- Hastik-Baymont, Inc.
- Hatlenboer-Water Americas
- Hatfield and Company
- Hawke International
- Hayata
- Hayes Industries
- Haynes Wire Rope
- HC Thermal
- HCL Clamping Solutions
- HDI Instruments, LLC.
- Heatric
- Heerema Marine Contractors (U.S.) Inc.
- Heilind Electronics
- Hempel (USA) Inc.
- Hi-Cad America
- High Performance Cables, Inc.
- Hiller Offshore Services, Inc.
- HMi Elements
- Hobark International Ltd.
- Holloway Houston
- Holt Power Systems
- Hoover Ferguson Group, Inc.
- Hose & Fittings, Inc.
- Hot-Hed Inc.
- Houghton International
- Houston Center Valve & Fitting, LP
- Houston Mechatronics
- Houston Motor & Control, Inc.
- Houston Offshore Engineering
- Houston Pipe Benders
- Houston Steel Equipment Co.
- HS Energy LLC
- Hufco
- Huisman Equipment
- Hunt Engine, Inc.
- Hunting Energy Services
- Hydradyne
- Hydraquip, Inc.
- Hydraulic Equipment Service, Inc.
- Hydrological Solutions, Inc.
- Hy-lok USA, Inc.
- I.T.S.
- IBY OUTLET
- ICS Triplex, Inc.
- IDARE
- IEC Systems, LLC
- Ignition Systems & Controls, Inc.
- Impac Systems Engineering
- Impact Fluid Solutions, LLC
- Impact Selector, Inc.
- ImpactWeather, Inc.
- Independent Propane Company
- InduMar Products, Inc.
- Industrial Air Tool, LP, LLP
- Industrial Diesel Inc.
- Industrial Piping Special
- Industrial Scale Co. Inc.
- Industrial Solutions & Innovations LLC
- Infinity Marine Offshore

## Texas (Continued)

- InfoChip
- Infrared Cameras Inc.
- Inman Texas Company
- Innova Drilling and Intervention
- Innovative Electronics
- Innovative Fluid Power
- INS - Industrial Networking Solutions
- Insite Objects, Inc.
- Institute of Marine Engineering, Science and Technology (IMarEST)
- Integrated Applications Engineering Inc.
- Integrated Drive Systems
- InterLink Controls
- InterMoor
- International Clamps, Inc.
- International Oilfield Valve Parts
- International Paint
- Intertek Caleb Brett
- Intrepid Industries Inc.
- Intsel Steel Distributors - Triple S Steel
- ION (Previously Spectrum GEO) / TGS
- ION PRO Services, LLC
- IPT Global
- Ironclad Performance Wear
- i-Tech 7
- ITP Interpipe
- itRobotics
- IWS Gas & Supply of Texas
- J & J Technical Services
- J D Marine LLC
- J. D. Fields & Co., Inc.
- Jackup Structures Alliance, Inc.
- JAE Electronics Inc.
- James Fisher Offshore
- JAS Distributing LLC
- JDR Cables
- Jelec USA
- Jet Machine Works, Inc.
- Jet-Lube
- Jhump & Associates, LLC
- Jireh Consulting LLC
- Joda Transportation
- Johnny's Gauge & Meter Repairs
- JT Oilfield Mfg. Co., Inc.
- K & K Insulation, Inc.
- Kalsi
- Kam Controls Inc.
- Kana Energy Services Inc.
- Katch Kan USA
- KBR
- Kefco Offshore, Inc.
- Kemlon Products
- KEM-TRON Technologies, Inc.
- Kennametal
- Kennedy Wire Rope & Sling
- Kentec Composites
- Keppel Offshore & Marine USA, Inc.
- Kerger Marine Electric, Inc.
- KeyDrill Technology LLC
- Keystone Machine Works, Inc.
- KIDD PipeLine & Specialties
- Kinder Morgan
- KLT Carbide Co., Ltd.
- KnightHawk Engineering Incorporated
- Kobelco Compressors America, Inc.
- Koch Heat Transfer Company
- Kodiak-Terra USA Inc.
- Kongsberg
- L & S Cryogenics, Inc.
- L D Systems, LP
- L.C. Eldridge Sales Company, Inc.
- L/K Oil Field Products, Inc.
- LABORDE Products Inc.
- Lamons
- LaMOT Valve & Arrestor
- Lancaster Flow Automation
- Landy Energy Services, Inc.
- Langley Alloys
- Lantana Communications
- Lark Heat Treating
- Laser Welding Solutions
- Laversab, Inc.
- Lawson Products Inc.
- LBO Inc.
- Lebus International Inc.
- Lee Engineering & Construction Co.
- Leecyn
- LeTourneau Technologies, Inc.
- Lewis-Goetz And Company, Inc.
- LHR Services and Equipment, Inc.
- Lincoln Manufacturing, Inc.
- Lloyd's Register
- Loadcraft Industries, Ltd.
- Loadmaster Universal Rigs, Inc.
- Loftin Equipment Co.
- Logan Industries International, Inc.
- Logik Precision, Inc.
- Lone Star Companies
- Lone Star Diving, Inc.
- Lone Star Fasteners, LP.
- Lone Star Heat Treating Corp.
- Lonestar Deepwater LLC
- LoneStar Forklift, Inc.
- LoneStar Group
- Longwood Elastomers
- Looper Goodwine
- Loran International Sales, Inc.
- Louisiana Electric Rig Service, Inc.
- LSI Interest, Ltd
- LSPHE(US), Inc.
- LTS Energy
- Lumen Digital Corp.
- M & F Gauge
- M & H Engineering
- M D Cowan Inc.
- M G Maher & Co. Inc.
- M&I Electric
- M&J Valve Services, Inc.
- M&L Industries, LLC
- MacArtney Offshore, Inc.
- Macdermid Offshore Solutions
- Mackay Communications, Inc.
- Magtech
- Malin International Ship Repair & Drydock,
- Maloney SmartSphere
- MAN Diesel & Turbo North America Inc.
- Manifold Valve Service
- Marine Aluminum Group
- Marine Chemists, Inc. of Texas
- Marine Computation Services Kenny Ltd.
- Marine Equipment, Inc.
- Marine Medical, Inc.
- Marine Salvage & Services, Inc.
- Marshall Machine, LLC
- Marsol Technologies Inc.
- Martin Fluid Power
- Martin Midstream Partners ,LP
- Marubeni-Itochu Tubulars American, Inc.

## Texas (Continued)

- Marvel Industrial Coatings
- Master Flo Valve (USA)
- MasterWord Services, Inc.
- Matthews-Daniel Company
- Maudlin Products
- Maxim Silencers Inc.
- MCC Chemicals Inc.
- McCoy Global
- McDermott International
- McDonough Marine Service
- McElroy Translation Company
- McFarland Tritan LLC
- McGriff, Seibels & Williams of Texas, Inc.
- McKenzie Equipment Company, Inc.
- MCM Centrifugal Pumps
- MCM Oiltools
- McNichols Company
- MCS Kenny
- MCT Brattberg
- Mechtec Corporation
- Mercer Valve Company Inc.
- Meridian Equipment, Inc.
- Merpro Americas, Inc.
- Merrick Systems, Inc.
- Merrimac Manufacturing, Inc.
- Metal Coatings Corp...
- Metco-Materials Evaluations
- MHWIRTH Inc.
- M-I SWACO
- Michelli Weighing & Measurement
- Micron Eagle Hydraulics Inc.
- Micro-Smart Systems
- MicroTesla Magnetic Field Effects
- Mid-West Electric Co., Inc.
- Midwest Hose & Specialty
- Miller Lifting Products
- Mitsubishi Forklift Trucks of Houston
- Mitutoyo America Corporation
- MLC Cad Systems
- Moduspec Usa Inc.
- Mohr Engineering Division
- Monarch Stainless, Ltd.
- Monroe Environmental
- Morris Metals Service, Inc.
- Morrison Energy Group
- Moss Seal Company
- Motive Drilling Technologies
- Moulding Specialists, Inc.
- MRC Global
- MSO Seals & Gaskets
- MTS Threaded Products Co.
- Mud Technology International, Inc.
- Mustang Power Systems
- Myrex Industries
- NALCO Champion
- Namasco
- Nance International
- NATCO
- National Bronze & Metals, Inc.
- National Instruments
- National K Works
- National Oilwell Varco (NOV)
- National Service Alliance
- National Specialty Alloys, LLC
- Nedschroef Corporation
- Neptune
- Net Safety Monitoring Inc.
- New Tech Systems
- Neway Oilfield Equipment LLC
- Neway Valve Inc.
- Newpark Drilling Fluids
- Nick's Fastener & Industrial Supply
- NLB Corp.
- NMA Maritime & Offshore Contractors
- Noble Corporation
- Noble Denton Marine, Inc.
- Norriseal Wellmark
- Norson Services LLC
- North American Plastics
- North Shore Supply Company
- Nova Forge Corp.
- Numeric Engineering
- Occucare International
- Oceaneering International, Inc.
- OceanWorks International Inc.
- OCS Group
- O-D Rentals, Inc.
- Odessa Pumps & Equipment Company, a DistributionNOW Company
- OEM Components, Inc.
- OEMic Inc.
- OES Oilfield Services (USA), Inc.
- OET Global, Inc.
- Offshore Commissioning Solutions
- Offshore Energy Services
- Offshore Marine Cable Specialists
- Offshore Oil Services, Inc.
- Offshore Rig Movers International
- OFS Energy Fund
- Oglænd System
- Oil Guide Online Inc.
- Oil States International
- Oildata Wireline Services
- Oilfield Equipment Marketing
- Oilfield Motor and Control, Inc.
- Oil States
- Oilwell Tubular Consultants, Inc.
- Okonite Company
- Oriden Technology
- Oliver Valves Ltd.
- Omron Oilfield & Marine
- Online Valves
- Onsite Treatment Technologies Inc. AKA OTT A/S
- Open & Close Equipment
- Openfield Technology
- Outernet Management, LP
- Oxifree Metal Protection
- P E C Manufacturing
- PAC Stainless
- Pacific Drilling, S.A.
- Packard International Inc.
- Panolin
- Paperboard Packaging Solutions
- Parco Inc.
- Partin Ltd. Partnership
- Pason Offshore Corp.
- Path Consulting, Ltd.
- PDS Bartech
- Pegasus International, Inc.
- Pegasus Vertex Inc.
- Pem-Tech, Inc.
- PennWell
- Pentagon Freight Services
- PERC Engineering
- Performance Pipe
- Performance Pulsation Control
- Perituza Software Solutions
- Perkins Drilling Tools, Inc.
- PERMA-PIPE OIL & GAS
- Permenter Controls Service, Inc.
- Petreco
- Petro Amigos



## Texas (Continued)

- Petro-Base Group
- Petrohab Habitats
- Petro-Hunt
- Petrolstar Tools And Services Inc.
- PetroMaterials USA Inc.
- Petron Industries, Inc.
- PETROPANGEA Inc.
- Pharos Marine Automatic Power, Inc.
- Phase Dynamics, Inc.
- PHDSOFT
- Pileco, Inc.
- Pipe Distributors Inc.
- Pipeco Service LP
- Pipeline Pigging Products, Inc.
- Pipeline Technique Ltd.
- Pivot City Corporation
- PJ Valves
- Plusco, Inc.
- PMR Global, Inc.
- Pneumatic and Hydraulic Company LLC
- Port-A-Cool, LLC
- Powell Industries
- PPHB
- Pratica
- Precision Energy Products
- Precision Flamecutting and Steel
- Precision Powered Products
- Premium Welding, Inc.
- Premsol Specialized Services
- Preng & Associates LLC
- PressureLinks LP
- Prime
- Pro Box, Inc.
- Probe
- Procegas LLC
- Process Level Technology Ltd.
- Process Safety & Reliability Group
- Process Solutions
- Production Management
- Professional Testing (EMI), Inc.
- Project One Logistics
- Proserv
- Pro-Tech Welding
- PRT Offshore
- PSI Automation
- PSRG Inc.
- Puffer-Sweiven
- Pulse Directional Technologies Inc.
- Pumps and Controls
- Purge Solutions
- QA Bearing Technologies Ltd.
- QCI Marine Offshore, LLC
- QMAX America
- Quality Bit & Supply
- Quality Connector Systems, LLC
- Quality DEF Solutions
- Quality Mat Company
- Quest Integrity Group, LLC
- Quietaire
- R R Williams & Associates
- R&M Energy Systems
- R. STAHL, Inc.
- Radio Holland USA Inc.
- Radix Engineering & Software
- Radoil, Inc.
- Ram Winch & Hoist
- Rampart Products
- Ramtech Building Systems, Inc.
- RandoLPh Austin Company
- Ranger Steel Supply Corp.
- RAPID-TORC Inc.
- Rawson
- RBG USA, Inc.
- Redding Communications
- Redman Pipe & Supply
- Reed-Hycalog LP
- Reliable EDM
- Reliable Pumps Consultants
- Relyon Nutec
- Remora ASA
- Retsco
- Rexel
- RFR Vertex LLC
- RG Petro-Machinery Group
- Rice Electronics
- Rickmers-Linie
- Right Angle Gear
- Rignet
- RigStat
- Rime Downhole Technologies
- Ringers Gloves
- Riversand Technologies, Inc.
- Roberts Production Tools
- Robsco, Inc.
- Rock-Oilfield Group
- Rockpoint Apparel
- Rocsole Inc.
- Rosemount Analytical
- Roxtec
- RPS Solutions
- RR Valve Inc.
- Rubicon Oilfield
- Rust Patrol
- RYCO Hydraulics, Inc.
- Ryerson
- S & N Pump Company Inc.
- Sabine Pilots
- Sabine Universal Products, Inc.
- Safeguard Global
- Safety Rx
- Safety Savings & Environmental LLC
- Safety Solutions
- SAIPEM America
- Salamander Solutions Inc.
- Salt and Light Energy Equipment
- SandX
- Santini Export Packing Corp.
- Santo Oilfield Supplies
- Sapura USA Holdings, LLC
- SAS Environmental Services Ltd.
- SAS USA
- SBM Atlantia
- SC Pipe Services Inc.
- Scana Offshore Services
- Scan-Pac Mfg., Inc.
- SCF Industry Technology Inc.
- Schlumberger
- SCorp.ion Oil Tools, Inc.
- SEA CON
- Seacoast Electric
- SEACOR Marine Inc.
- Seadrill
- Seals & Packings, Inc.
- Seamar Divers, Inc.
- Seaquest Diving LLC
- Seatrax Marine Cranes
- Seatrax, Inc.
- Seaward Safety, Inc.
- Select Industries, Inc.
- Sellers Sales Company, Inc.
- Semco Maritime US
- SENSEAR Texas
- Sepam Group
- Sercel
- Servi Fluid Power Inc.
- Severn Trent DeNora
- Shanco Equipment Specialists
- Shaw Pipeline Services
- Shawcor



## Texas (Continued)

- Shea Writing and Training Solutions
- Shermco Industries, Inc.
- Sidus Solutions LLC
- Sigma Solutions, Inc.
- SIPCO Mechanical Linkage Solutions
- Smith & Associates
- Smith International Inc.
- SOFEC
- Solar Turbines
- Sonardyne
- Sonica Supply Co.
- Sooner Pipe, LP
- Source IEC
- Source IEx
- South Coast Technology, Inc.
- Southern California Valve
- Southwest Electric Supply Inc.
- Southwest Electronic Energy Group
- Southwest Impreglon
- Southwest Materials Handling Co.
- Southwest Ocean Services, Inc.
- Southwest Oilfield Products, Inc.
- Southwest Research Institute
- Southwest Stainless, L.P.
- Southwest Wire Rope LP
- Sparkhound
- Sparrows Offshore, LLC
- Spartek Systems
- Spears Mfg Co.
- Special Piping Materials
- Specialties Company
- Specialty Rental Tools and Supply
- Specialty Steel Supply, Inc.
- Specialty Wire & Cable Inc.
- Spectra Sensors
- Spectrex, Inc.
- Spectrum Batteries Inc.
- Spectrum Geo Inc.
- SPET, Inc.
- SPIFIL Inc.
- SPIR STAR
- Spitzer Industries
- Spring Bolt and Nut Manufacturing
- SPT Group, Inc.
- Stainless Steel Custom
- Steel Supply, LP
- Stena Drilling
- Stewart & Stevenson
- Stewarts-USA, LLC
- Stooss USA
- StormGeo, Inc.
- Stratos
- Stress Engineering Services
- STS Products, Inc.
- STVA Scaffolding & Shoring
- STX US Marine
- Sub-Atlantic
- Subsea 7
- Subsea Coating Technologies
- Subsea Systems, Inc.
- Subsea Technologies, Inc.
- Sulzer Pumps
- Summit International
- Sun Coast Resources, Inc.
- Sunbelt Steel
- SunSource
- Superior DrillPipe Mfg, Inc.
- Superior Energy Services
- Superior Threaded Products, LP
- Supreme Integrated Technology Inc.
- Sure Cast Inc.
- Surface Techniques, Inc.
- Swift Technical Services
- Swift-JB International, Inc.
- SYNERGY Industries
- Systel Rugged Computers
- T H Hill Associates Inc.
- T Rex Engineering & Construction LC
- T.S. Moly-Lubricants, Inc.
- T3 Energy Services, A Unit of Robbins & Myers Inc.
- Tailwind Air Charters
- TALON Technical Sales Inc.
- TAM International, Inc.
- Taylor-Wharton America Inc.
- TCR Inc.
- TEAM, Inc.
- TEC Sales
- Technical & Scientific Application
- Technical Industries, Inc.
- Technip
- TechnipFMC
- Technogenia, Inc.
- Technology and Calibration, Inc.
- TECHNOMARK North America
- TechTrans International, Inc.
- TEEX
- Tejas Completion Solutions
- Tejas Tubular Products, Inc.
- Tenaris
- Tesco Corporation
- Tesi Group, LLC
- Tetra Technologies, Inc.
- Texas Bolt & Nut Company Ltd
- Texas Custom Engineering
- Texas Engineering Experiment
- Texas First Industrial Corp.
- Texas Institute of Science (TXIS)
- Texas International Oilfield Tools, Ltd.
- Texas Nameplate Company
- Texas Nameplate Company, Inc.
- Texas Pipe & Supply Co. Inc.
- Texas Pipe Works, Inc.
- Texas Sensors and controls LLC
- Texas Steel
- Texma Petroleum Machinery
- TFE Company
- TGS
- The Artex Group, LLC
- The Eads Company
- The Harding Group, Inc.
- The Nut Place, Inc.
- The REACH Group
- The Rochester Corporation
- The Subsea Company LLC
- The Watermaker Co., Inc.
- Thermal Edge Inc.
- Thrustmaster
- Tideland Signal
- Tidewater Inc.
- Tiger Rentals
- Titan BOP Rubber Products
- Titan Specialties, Ltd.
- Titan Subsea Innovations
- Titanium Engineers, Inc.
- Tiw Corporation
- Tomahawk Safety
- Tomax
- Toolmen Corporation
- TorcSill
- Toro Downhole Tools
- Torque Tools Inc.

## Texas (Continued)

- Total Instrumentation & Controls Inc.
- Total Safety
- Total Valve & Equipment, LLC
- TowWorks, LLC
- TRACERCO
- Trademarks Promotional Products, LP
- Transfer Oil Inc.
- Transocean
- TransPerfect Translations
- Tranter
- Tranter, Inc.
- Trelleborg Offshore
- Trendsetter Electronics
- Trendsetter Engineering Inc.
- Tri Tool
- Tri Wave, LLC
- Tri-Elements Petroleum Products, Inc.
- Trionics, Inc.
- Tristar Electronics Corporation
- Tri-Star Thread Protectors
- TSC Offshore Group, Ltd.
- TSP Mfg
- TTGM
- TTI, Inc.
- Tube Supply
- Tubular Instrumentation and Controls
- Tubular Perforating Manufacturing
- Tubular Perforating Manufacturing, Ltd.
- Turbofab
- Turner Oilfield Services
- TVC - Tiger Valve Company
- TXY-Tech Inc.
- Tyndale Company, Inc.
- Type B Solutions
- U.S. Bolt Manufacturing, Inc.
- U-Bolt-It, Inc.
- Ulterra
- Ultra Deep, LLC
- UNIBROM
- Union Wire Rope
- Unique Group
- Unitech International
- United Laboratories
- United Vision Logistics
- Univar Usa, Inc.
- Universal Bacteria Specialist, Inc.
- Universal Marine Electric Inc.
- Universal Power Group Inc.
- Universal Steel America, Inc.
- Universe Technical Translation Inc.
- Upstream Engineering, LLC
- USA Fasteners
- UTC Overseas
- Utex Industries
- Valaris
- Vallourec
- Vallution LLC
- ValTek Industries
- Valwu International Inc.
- VAM Drilling USA
- Van Beest
- Vanco Ring Gasket Specialty, Inc.
- Vantran / Bolin Industrial
- Varel International Energy Services
- Velosi
- Venable LLP
- Veriforce
- Veris Global, LLC
- Versabar, Inc.
- VIKING Life-Saving Equipment
- Vimarc Inc.
- Visuray
- Vitzrocell USA, Inc.
- VIV Solutions
- VME Process Inc.
- VN & Unique Solutions, Inc.
- Vortex Ventures Inc.
- W & O Supply Inc.
- Wagner Plate Works
- Warner & Hughes Corp.
- Warrior Rig USA
- Washing Equipment of Texas
- Waters International, Inc.
- Watkins & Associates Executive Search
- Weatherford
- Weiler Pipe
- Weir
- Welbor Technology, Inc.
- Weldinghouse, Inc.
- Well Resolutions Technology, Inc.
- Welldynamics Inc.
- Wellhead Distributors International
- West Engineering Services
- West Houston Valve & Fitting
- Western Data Systems
- Western Rubber & Mfg.
- Westland Bunker
- Westney Consulting Group, Inc.
- WGIM
- Whitefield Plastics
- Wholesale Electric Supply Co.
- Wichita Clutch
- Wild Well Control
- Wilkens Weather Technologies
- Wilson Industries Inc.
- Wilson Supply
- Windlass Engineers
- W-Industries
- Winston / Royal Guard
- Winters Instruments
- Wireline Technologies Inc.
- WM Healthcare Solutions, Inc.
- WMCO Brandt Instruments, Inc.
- WMG Enterprises II, Inc.
- WN Global
- WOM
- Womack Machine Supply Co.
- Wood
- Wood Mackenzie
- Woodco USA
- World Supply Inc.
- Worldwide Oilfield Machine, Inc.
- WorleyParsons
- Woven Metal Products
- Wozair USA
- WPI WELLKIN Inc.
- WPT Power Corporation
- WT Well Testing
- WW Industries
- Xodus Group Inc.
- Yellow Freight System, Inc.
- Zentech, Inc.
- Zep Incorporated
- Zerl's Welding and Fabrication Inc.
- Zyfire Hose Corporation

## Utah

- Automation Products Group, Inc. (APG)
- Beijer Electronics, Inc.
- Ceramatec, Inc.
- ITT Acoustic Systems
- Juniper Systems
- Pepcon Systems
- Power Innovations International Inc.
- Quartzdyne
- Quartzdyne Electronics
- Rhotheta USA Inc.
- Seven Canyons Composites
- Tanklogix
- Trans-System Logistics LLC
- US Synthetic Bearings
- Weather Hawk

## Vermont

- Superior Technical Ceramics Corp.

## Virginia

- Aerial Machine and Tool Corp.
- Alfa Laval Inc.
- American Heavy Industries
- Anton Paar USA
- Approva Corporation
- Bauer Compressors, Inc.
- Booz Allen Hamilton
- BWX Technologies
- Coastal Training Technologies Corp.
- Energy Maritime Associates
- Focal
- Freyssinet, Inc.
- Independent Project Analysis
- Inst. Air Receiver
- Iridium
- Katec Inc.
- Liebherr USA, Co.
- Marine Spill Response Corp.
- Mobil Industrial Lubricants
- NBB Controls, Inc.
- Optical Cable Corporation
- Par Marine Services
- Roos Consulting Group
- SAIC
- Sea Technology Ltd.
- SF Marina Systems USA
- SkyBitz

- Software AG USA, Inc.
- Strongwell
- Syntech Technology, Inc.
- Triple Canopy, Inc.
- W R Systems
- Weidmuller

## Washington

- Columbia Analytical Services Inc.
- Custom Sensor Design, Inc.
- Eagle Pro Industrial Tools, Inc.
- Elliott Bay Design Group
- Fluke Corporation
- Guido Perla & Associates, Inc.
- Kenworth Truck Company
- Laser Processing
- Markey Machinery Company Inc.
- Marsh Bellofram Group of Companies
- Measurement Technology NW
- Mustang Sampling
- Mustang Survival
- PACCAR International
- Paine Electronics, LLC
- Paroscientific Inc.
- PCC Energy Group
- Rasmussen Equipment Company
- Rugged Controls
- Safeworks
- Samson Rope
- Schweitzer Engineering Laboratories
- SkoFlo Industries Inc.
- Smith Berger Marine, Inc.
- Trident Fittings
- Washington Chain & Supply
- Winshuttle, Inc.

## West Virginia

- Advanced Technical Solution, Inc.
- TorsionX

## Wisconsin

- Alloy Products Corp.
- Appleton Marine, Inc.
- Cordstrap USA
- Diesel & Gas Turbine Worldwide

- Durst Power Transmission Products
- Dynatect
- Dynex/Rivett Inc.
- Ellsworth Corporation
- Enerpac
- Fairbanks Morse Engine
- Frentzel Products, Inc.
- Gleason Reel Corp.
- Hy-Safe Technology
- Inductotherm Group
- Innovative Hydraulics LLC
- Kabelschlepp America Inc.
- Marathon Electric Generators
- Marking Services, Inc.
- Mastergear USA
- Meltric Corporation
- Northern Pump
- Peterson
- Rockwell Automation
- Safway Services
- Snap-On
- Team Industries, Inc.
- Thermal Transfer Products
- Twin Disc
- WAGO Corporation
- Weinbrenner
- Young Touchstone

## Wyoming

- American Mobile Research, Inc.
- Black Hills Lignite LLC
- L&H Industrial

## Data Tables by Case

### Gulf of Mexico Economic Impacts

**Table 3: Projected Base Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**

	2018	2019	2020	2021	2022	2023	2024	2025
Oil	1,760,000	1,890,000	1,802,741	1,819,873	1,923,915	2,016,547	2,127,102	2,172,814
Natural Gas	445,000	450,000	416,287	389,320	387,443	387,585	396,576	395,893
Total BOE	2,205,000	2,340,000	2,219,028	2,209,193	2,311,357	2,404,132	2,523,678	2,568,707

	2026	2027	2028	2029	2030	2031	2032	2033
Oil	2,228,486	2,257,200	2,305,052	2,313,179	2,360,485	2,382,172	2,385,983	2,333,358
Natural Gas	398,838	399,022	405,150	405,559	414,527	419,657	421,028	410,939
Total BOE	2,627,324	2,656,222	2,710,202	2,718,738	2,775,012	2,801,829	2,807,011	2,744,297

	2034	2035	2036	2037	2038	2039	2040
Oil	2,278,303	2,217,081	2,134,855	2,015,404	1,888,518	1,750,072	1,661,183
Natural Gas	400,567	390,143	376,626	356,058	334,084	310,848	295,939
Total BOE	2,678,870	2,607,224	2,511,481	2,371,462	2,222,602	2,060,920	1,957,123

Source: Energy and Industrial Advisory Partners

**Table 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**

	2018	2019	2020	2021	2022
G&G	\$160	\$156	\$148	\$176	\$241
Drilling Tangibles	\$1,211	\$1,310	\$986	\$814	\$1,280
Trees	\$627	\$451	\$336	\$440	\$518
Manifolds	\$328	\$237	\$177	\$231	\$272
Other Subsea Hardware	\$143	\$130	\$77	\$81	\$126
Control Umbilical, Flying Leads	\$373	\$268	\$208	\$280	\$323
Infield FL	\$119	\$102	\$54	\$70	\$100
Export PL	\$782	\$658	\$385	\$490	\$691
Infield Risers	\$61	\$53	\$29	\$35	\$50
Export Risers	\$30	\$25	\$14	\$19	\$26
Fixed Platforms & Facilities	\$135	\$114	\$123	\$173	\$212
Floating Production Units & Facilities	\$1,155	\$825	\$990	\$1,458	\$1,375
Installation	\$1,439	\$1,328	\$834	\$1,009	\$1,359
OPEX	\$13,816	\$13,829	\$12,276	\$13,406	\$14,226
Decommissioning CAPEX	\$1,100	\$773	\$696	\$858	\$785
Drilling	\$5,560	\$5,847	\$4,682	\$3,999	\$7,273
Engineering CAPEX	\$792	\$663	\$528	\$638	\$756
Engineering OPEX	\$863	\$864	\$877	\$882	\$889
Natural Gas Processing and Transportation	\$163	\$157	\$152	\$141	\$136
Total	\$28,857	\$27,789	\$23,574	\$25,199	\$30,640

	2023	2024	2025	2026	2027
G&G	\$263	\$278	\$296	\$302	\$300
Drilling Tangibles	\$1,348	\$1,235	\$1,238	\$1,226	\$1,263
Trees	\$496	\$481	\$479	\$477	\$481
Manifolds	\$262	\$253	\$251	\$251	\$254
Other Subsea Hardware	\$129	\$126	\$129	\$132	\$133
Control Umbilical, Flying Leads	\$309	\$302	\$302	\$300	\$303
Infield FL	\$95	\$91	\$94	\$94	\$90
Export PL	\$669	\$629	\$616	\$622	\$637
Infield Risers	\$49	\$46	\$46	\$46	\$46
Export Risers	\$25	\$24	\$24	\$24	\$24
Fixed Platforms & Facilities	\$183	\$152	\$158	\$181	\$199
Floating Production Units & Facilities	\$1,283	\$1,430	\$1,412	\$1,375	\$1,283
Installation	\$1,325	\$1,253	\$1,330	\$1,297	\$1,277
OPEX	\$14,321	\$14,435	\$14,466	\$14,513	\$14,551
Decommissioning CAPEX	\$827	\$754	\$827	\$757	\$803
Drilling	\$8,435	\$8,612	\$9,473	\$9,942	\$10,354
Engineering CAPEX	\$745	\$723	\$738	\$724	\$725
Engineering OPEX	\$895	\$902	\$904	\$907	\$909
Natural Gas Processing and Transportation	\$137	\$138	\$139	\$139	\$140
Total	\$31,795	\$31,863	\$32,922	\$33,309	\$33,773

Source: Energy and Industrial Advisory Partners

**Table 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**  
(Continued)

	2028	2029	2030	2031	2032
G&G	\$291	\$282	\$274	\$265	\$255
Drilling Tangibles	\$1,238	\$1,196	\$1,166	\$1,125	\$1,097
Trees	\$491	\$475	\$429	\$385	\$364
Manifolds	\$260	\$251	\$226	\$202	\$192
Other Subsea Hardware	\$134	\$133	\$125	\$114	\$108
Control Umbilical, Flying Leads	\$312	\$304	\$274	\$245	\$231
Infield FL	\$92	\$96	\$90	\$80	\$72
Export PL	\$669	\$691	\$633	\$548	\$489
Infield Risers	\$47	\$49	\$45	\$39	\$36
Export Risers	\$25	\$26	\$24	\$21	\$19
Fixed Platforms & Facilities	\$211	\$218	\$199	\$154	\$110
Floating Production Units & Facilities	\$1,430	\$1,412	\$1,320	\$1,137	\$1,100
Installation	\$1,249	\$1,332	\$1,246	\$1,130	\$1,001
OPEX	\$14,647	\$14,710	\$14,775	\$14,784	\$14,804
Decommissioning CAPEX	\$733	\$781	\$710	\$758	\$688
Drilling	\$10,111	\$9,738	\$9,474	\$9,165	\$8,980
Engineering CAPEX	\$734	\$740	\$690	\$634	\$589
Engineering OPEX	\$915	\$919	\$923	\$924	\$925
Natural Gas Processing and Transportation	\$141	\$143	\$145	\$146	\$146
Total	\$33,729	\$33,494	\$32,770	\$31,858	\$31,205

	2033	2034	2035	2036	2037
G&G	\$239	\$222	\$206	\$199	\$202
Drilling Tangibles	\$1,046	\$993	\$895	\$832	\$806
Trees	\$347	\$303	\$245	\$205	\$205
Manifolds	\$183	\$159	\$129	\$108	\$108
Other Subsea Hardware	\$104	\$97	\$83	\$71	\$65
Control Umbilical, Flying Leads	\$222	\$195	\$158	\$130	\$127
Infield FL	\$70	\$67	\$55	\$44	\$37
Export PL	\$480	\$446	\$366	\$292	\$250
Infield Risers	\$35	\$33	\$27	\$22	\$18
Export Risers	\$19	\$18	\$15	\$12	\$9
Fixed Platforms & Facilities	\$79	\$63	\$65	\$83	\$94
Floating Production Units & Facilities	\$1,045	\$953	\$715	\$642	\$550
Installation	\$982	\$907	\$777	\$599	\$558
OPEX	\$14,785	\$14,779	\$14,717	\$14,679	\$14,595
Decommissioning CAPEX	\$736	\$667	\$716	\$647	\$695
Drilling	\$8,576	\$8,141	\$7,346	\$6,839	\$6,616
Engineering CAPEX	\$572	\$524	\$455	\$397	\$382
Engineering OPEX	\$924	\$924	\$920	\$917	\$912
Natural Gas Processing and Transportation	\$144	\$140	\$136	\$131	\$124
Total	\$30,589	\$29,630	\$28,026	\$26,847	\$26,354

Source: Energy and Industrial Advisory Partners

**Table 4: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**  
(Continued)

	2038	2039	2040
G&G	\$215	\$233	\$241
Drilling Tangibles	\$809	\$864	\$959
Trees	\$253	\$335	\$408
Manifolds	\$133	\$176	\$213
Other Subsea Hardware	\$70	\$85	\$105
Control Umbilical, Flying Leads	\$156	\$208	\$257
Infield FL	\$41	\$54	\$74
Export PL	\$279	\$350	\$474
Infield Risers	\$21	\$27	\$37
Export Risers	\$10	\$14	\$19
Fixed Platforms & Facilities	\$82	\$68	\$78
Floating Production Units & Facilities	\$807	\$1,027	\$1,393
Installation	\$572	\$816	\$1,025
OPEX	\$14,577	\$14,537	\$14,565
Decommissioning CAPEX	\$626	\$676	\$608
Drilling	\$6,630	\$7,113	\$7,936
Engineering CAPEX	\$418	\$507	\$606
Engineering OPEX	\$911	\$909	\$910
Natural Gas Processing and Transportation	\$117	\$110	\$104
Total	\$26,724	\$28,106	\$30,014

Source: Energy and Industrial Advisory Partners



**Table 5: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment (Number of Jobs)**

	2018	2019	2020	2021	2022	2023	2024	2025
Texas	155,767	147,462	124,455	132,628	161,355	167,533	166,195	171,812
Louisiana	95,089	94,621	83,231	87,732	102,937	106,897	107,441	110,391
Mississippi	20,926	20,415	17,940	19,056	22,452	23,284	23,273	23,961
Alabama	29,053	28,011	24,569	26,630	30,172	30,802	30,660	31,253
Other U.S. States	59,631	54,989	44,680	51,731	61,701	62,235	62,494	64,451
Total	360,465	345,498	294,876	317,778	378,617	390,751	390,063	401,868

	2026	2027	2028	2029	2030	2031	2032	2033
Texas	173,196	176,309	175,180	174,199	169,730	165,544	161,509	158,746
Louisiana	111,790	113,385	113,004	112,323	111,267	109,996	108,978	107,603
Mississippi	24,193	24,570	24,445	24,335	23,966	23,620	23,269	22,978
Alabama	31,351	31,707	31,664	31,698	31,232	30,796	30,305	30,041
Other U.S. States	64,436	64,434	64,993	65,563	63,389	60,306	58,029	56,936
Total	404,966	410,406	409,287	408,118	399,584	390,262	382,091	376,305

	2034	2035	2036	2037	2038	2039	2040
Texas	153,138	145,488	132,010	136,828	137,843	145,254	154,006
Louisiana	105,693	102,489	100,068	98,920	98,939	101,014	104,280
Mississippi	22,437	21,666	20,994	20,759	20,775	21,415	22,235
Alabama	29,406	28,590	27,803	27,545	27,596	28,371	29,280
Other U.S. States	54,473	50,070	46,449	44,874	46,658	51,715	57,767
Total	365,146	348,302	327,324	328,927	331,811	347,769	367,568

Source: Energy and Industrial Advisory Partners

**Table 6: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Direct vs. Indirect and Induced Supported Employment (Number of Jobs)**

	2018	2019	2020	2021	2022	2023
Direct	68,677	69,356	60,143	62,650	74,769	78,263
Indirect and Induced	291,788	276,142	234,732	255,128	303,848	312,488
Total	360,465	345,498	294,876	317,778	378,617	390,751

	2024	2025	2026	2027	2028	2029
Direct	79,142	81,604	83,035	84,298	84,010	83,249
Indirect and Induced	310,921	320,265	321,930	326,108	325,277	324,869
Total	390,063	401,868	404,966	410,406	409,287	408,118

	2030	2031	2032	2033	2034	2035
Direct	82,733	81,881	81,405	80,217	78,959	76,493
Indirect and Induced	316,851	308,382	300,686	296,087	286,187	271,809
Total	399,584	390,262	382,091	376,305	365,146	348,302

	2036	2037	2038	2039	2040
Direct	74,869	73,945	73,926	75,153	77,570
Indirect and Induced	252,455	254,982	257,885	272,616	289,998
Total	327,324	328,927	331,811	347,769	367,568

Source: Energy and Industrial Advisory Partners

**Table 7: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP \$ Millions**

	2018	2019	2020	2021	2022	2023
Texas	\$13,196	\$12,638	\$10,730	\$11,334	\$13,922	\$14,530
Louisiana	\$7,929	\$7,933	\$6,962	\$7,283	\$8,666	\$9,042
Mississippi	\$1,525	\$1,504	\$1,321	\$1,385	\$1,671	\$1,746
Alabama	\$2,381	\$2,323	\$2,042	\$2,197	\$2,504	\$2,563
Other U.S. States	\$4,609	\$4,291	\$3,547	\$4,065	\$4,858	\$4,933
Total	\$29,640	\$28,690	\$24,602	\$26,264	\$31,620	\$32,814

	2024	2025	2026	2027	2028	2029
Texas	\$14,486	\$15,010	\$15,188	\$15,465	\$15,370	\$15,246
Louisiana	\$9,106	\$9,382	\$9,525	\$9,671	\$9,633	\$9,556
Mississippi	\$1,751	\$1,810	\$1,835	\$1,867	\$1,857	\$1,842
Alabama	\$2,562	\$2,612	\$2,628	\$2,657	\$2,656	\$2,653
Other U.S. States	\$4,988	\$5,144	\$5,167	\$5,179	\$5,231	\$5,250
Total	\$32,893	\$33,959	\$34,343	\$34,839	\$34,747	\$34,547

	2030	2031	2032	2033	2034	2035
Texas	\$14,893	\$14,536	\$14,224	\$13,956	\$13,489	\$12,808
Louisiana	\$9,468	\$9,353	\$9,271	\$9,137	\$8,970	\$8,674
Mississippi	\$1,815	\$1,786	\$1,761	\$1,733	\$1,691	\$1,625
Alabama	\$2,622	\$2,586	\$2,553	\$2,528	\$2,480	\$2,410
Other U.S. States	\$5,100	\$4,877	\$4,728	\$4,635	\$4,452	\$4,114
Total	\$33,897	\$33,138	\$32,536	\$31,990	\$31,082	\$29,633

	2036	2037	2038	2039	2040
Texas	\$11,501	\$12,074	\$12,166	\$12,770	\$13,535
Louisiana	\$8,464	\$8,358	\$8,362	\$8,540	\$8,839
Mississippi	\$1,574	\$1,553	\$1,555	\$1,604	\$1,674
Alabama	\$2,351	\$2,327	\$2,333	\$2,389	\$2,464
Other U.S. States	\$3,862	\$3,735	\$3,874	\$4,221	\$4,668
Total	\$27,752	\$28,047	\$28,290	\$29,524	\$31,179

Source: Energy and Industrial Advisory Partners

**Table 8: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by Type \$ Millions**

	2018	2019	2020	2021	2022	2023
Bids	\$291	\$387	\$180	\$242	\$351	\$299
Rentals	\$103	\$107	\$106	\$106	\$111	\$115
Royalties	\$4,715	\$4,852	\$2,451	\$3,449	\$5,110	\$5,449
Other Revenues	\$54	\$15	\$21	\$30	\$45	\$48
Total	\$5,163	\$5,361	\$2,759	\$3,828	\$5,617	\$5,911

	2024	2025	2026	2027	2028	2029
Bids	\$339	\$359	\$373	\$364	\$346	\$339
Rentals	\$121	\$123	\$126	\$127	\$130	\$130
Royalties	\$5,949	\$6,235	\$6,567	\$6,814	\$7,039	\$7,216
Other Revenues	\$52	\$54	\$57	\$60	\$61	\$63
Total	\$6,461	\$6,772	\$7,123	\$7,365	\$7,577	\$7,748

	2030	2031	2032	2033	2034	2035
Bids	\$329	\$321	\$289	\$276	\$273	\$284
Rentals	\$133	\$134	\$135	\$132	\$128	\$125
Royalties	\$7,488	\$7,724	\$7,826	\$7,928	\$7,864	\$7,799
Other Revenues	\$65	\$67	\$68	\$69	\$69	\$68
Total	\$8,015	\$8,247	\$8,317	\$8,405	\$8,335	\$8,276

	2036	2037	2038	2039	2040
Bids	\$303	\$329	\$353	\$353	\$317
Rentals	\$120	\$114	\$107	\$99	\$94
Royalties	\$7,698	\$7,304	\$6,970	\$6,569	\$6,304
Other Revenues	\$67	\$64	\$61	\$57	\$55
Total	\$8,189	\$7,811	\$7,491	\$7,079	\$6,770

Source: Energy and Industrial Advisory Partners

**Table 9: Projected Base Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues by State \$ Millions**

	2018	2019	2020	2021	2022	2023	2024
Texas	\$51	\$58	\$95	\$101	\$101	\$101	\$101
Louisiana	\$83	\$95	\$156	\$165	\$165	\$165	\$165
Mississippi	\$28	\$32	\$52	\$55	\$55	\$55	\$55
Alabama	\$27	\$31	\$50	\$53	\$53	\$53	\$53
Total	\$188	\$215	\$353	\$375	\$375	\$375	\$375

	2025	2026	2027	2028	2029	2030	2031
Texas	\$101	\$101	\$101	\$101	\$101	\$101	\$101
Louisiana	\$165	\$165	\$165	\$165	\$165	\$165	\$165
Mississippi	\$55	\$55	\$55	\$55	\$55	\$55	\$55
Alabama	\$53	\$53	\$53	\$53	\$53	\$53	\$53
Total	\$375	\$375	\$375	\$375	\$375	\$375	\$375

	2032	2033	2034	2035	2036	2037	2038
Texas	\$101	\$101	\$101	\$101	\$101	\$101	\$101
Louisiana	\$165	\$165	\$165	\$165	\$165	\$165	\$165
Mississippi	\$55	\$55	\$55	\$55	\$55	\$55	\$55
Alabama	\$53	\$53	\$53	\$53	\$53	\$53	\$53
Total	\$375	\$375	\$375	\$375	\$375	\$375	\$375

	2039	2040
Texas	\$101	\$101
Louisiana	\$165	\$165
Mississippi	\$55	\$55
Alabama	\$53	\$53
Total	\$375	\$375

Source: Energy and Industrial Advisory Partners

**Table 10: Projected Base Case LWCF Distributions \$ Millions**

	2018	2019	2020	2021	2022
LWCF	\$0.89	\$0.88	\$0.46	\$0.64	\$0.95
LWCF - GOMESA	\$0.08	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.97	\$1.01	\$0.59	\$0.77	\$1.07

	2023	2024	2025	2026	2027
LWCF	\$1.00	\$1.09	\$1.14	\$1.20	\$1.24
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.12	\$1.21	\$1.27	\$1.32	\$1.37

	2028	2029	2030	2031	2032
LWCF	\$1.28	\$1.31	\$1.35	\$1.39	\$1.40
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.40	\$1.43	\$1.47	\$1.51	\$1.53

	2033	2034	2035	2036	2037
LWCF	\$1.42	\$1.40	\$1.39	\$1.38	\$1.32
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.54	\$1.53	\$1.52	\$1.50	\$1.44

	2038	2039	2040
LWCF	\$1.26	\$1.19	\$1.14
LWCF - GOMESA	\$0.13	\$0.13	\$0.13
Total	\$1.39	\$1.32	\$1.27

Source: Energy and Industrial Advisory Partners

## No Leasing Case Impacts

**Table 11: Projected Base Case vs. No Leasing Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**

	2018	2019	2020	2021	2022	2023
Oil (No Leasing Case)	1,760,000	1,890,000	1,802,741	1,819,873	1,923,915	2,016,547
Oil (Base Case)	1,760,000	1,890,000	1,802,741	1,819,873	1,923,915	2,016,547
Natural Gas (No Leasing Case)	445,000	450,000	416,287	389,320	387,443	387,585
Natural Gas (Base Case)	445,000	450,000	416,287	389,320	387,443	387,585
Total BOE (No Leasing Case)	2,205,000	2,340,000	2,219,028	2,209,193	2,311,357	2,404,132
Total BOE (Base Case)	2,205,000	2,340,000	2,219,028	2,209,193	2,311,357	2,404,132

	2024	2025	2026	2027	2028	2029
Oil (No Leasing Case)	2,121,811	2,162,987	2,208,075	2,188,331	2,156,312	2,008,952
Oil (Base Case)	2,127,102	2,172,814	2,228,486	2,257,200	2,305,052	2,313,179
Natural Gas (No Leasing Case)	395,017	392,998	392,824	384,126	375,090	345,986
Natural Gas (Base Case)	396,576	395,893	398,838	399,022	405,150	405,559
Total BOE (No Leasing Case)	2,516,828	2,555,985	2,600,900	2,572,457	2,531,402	2,354,938
Total BOE (Base Case)	2,523,678	2,568,707	2,627,324	2,656,222	2,710,202	2,718,738

	2030	2031	2032	2033	2034	2035
Oil (No Leasing Case)	1,905,410	1,797,492	1,725,256	1,630,683	1,499,771	1,364,187
Oil (Base Case)	2,360,485	2,382,172	2,385,983	2,333,358	2,278,303	2,217,081
Natural Gas (No Leasing Case)	325,156	304,320	291,561	274,804	250,731	225,796
Natural Gas (Base Case)	414,527	419,657	421,028	410,939	400,567	390,143
Total BOE (No Leasing Case)	2,230,566	2,101,812	2,016,816	1,905,487	1,750,501	1,589,984
Total BOE (Base Case)	2,775,012	2,801,829	2,807,011	2,744,297	2,678,870	2,607,224

	2036	2037	2038	2039	2040
Oil (No Leasing Case)	1,224,188	1,094,963	980,618	877,708	788,861
Oil (Base Case)	2,134,855	2,015,404	1,888,518	1,750,072	1,661,183
Natural Gas (No Leasing Case)	199,845	176,285	155,742	137,526	122,031
Natural Gas (Base Case)	376,626	356,058	334,084	310,848	295,939
Total BOE (No Leasing Case)	1,424,034	1,271,248	1,136,361	1,015,234	910,892
Total BOE (Base Case)	2,511,481	2,371,462	2,222,602	2,060,920	1,957,123

Source: Energy and Industrial Advisory Partners



**Table 12: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**

	2018	2019	2020	2021	2022
G&G	\$160	\$156	\$148	\$176	\$230
Drilling Tangibles	\$1,211	\$1,310	\$986	\$814	\$1,266
Trees	\$627	\$451	\$336	\$440	\$506
Manifolds	\$328	\$237	\$177	\$231	\$267
Other Subsea Hardware	\$143	\$130	\$77	\$81	\$125
Control Umbilical, Flying Leads	\$373	\$268	\$208	\$280	\$318
Infield FL	\$119	\$102	\$54	\$70	\$99
Export PL	\$782	\$658	\$385	\$490	\$691
Infield Risers	\$61	\$53	\$29	\$35	\$50
Export Risers	\$30	\$25	\$14	\$19	\$26
Fixed Platforms & Facilities	\$135	\$114	\$123	\$173	\$210
Floating Production Units & Facilities	\$1,155	\$825	\$990	\$1,458	\$1,375
Installation	\$1,439	\$1,328	\$834	\$1,009	\$1,345
OPEX	\$13,816	\$13,829	\$12,276	\$13,406	\$14,215
Decommissioning CAPEX	\$1,100	\$773	\$696	\$858	\$850
Drilling	\$5,560	\$5,847	\$4,682	\$3,999	\$7,191
Engineering CAPEX	\$792	\$663	\$528	\$638	\$757
Engineering OPEX	\$863	\$864	\$877	\$882	\$888
Natural Gas Processing and Transportation	\$163	\$157	\$152	\$141	\$136
<b>Total</b>	<b>\$28,857</b>	<b>\$27,789</b>	<b>\$23,574</b>	<b>\$25,199</b>	<b>\$30,545</b>

	2023	2024	2025	2026	2027
G&G	\$232	\$208	\$168	\$121	\$88
Drilling Tangibles	\$1,287	\$1,141	\$980	\$704	\$489
Trees	\$477	\$437	\$378	\$288	\$201
Manifolds	\$253	\$231	\$199	\$151	\$104
Other Subsea Hardware	\$125	\$118	\$108	\$86	\$59
Control Umbilical, Flying Leads	\$301	\$279	\$241	\$182	\$124
Infield FL	\$93	\$88	\$81	\$68	\$46
Export PL	\$669	\$629	\$568	\$469	\$312
Infield Risers	\$48	\$45	\$41	\$33	\$22
Export Risers	\$25	\$24	\$22	\$18	\$12
Fixed Platforms & Facilities	\$178	\$147	\$153	\$157	\$131
Floating Production Units & Facilities	\$1,228	\$1,283	\$1,027	\$862	\$587
Installation	\$1,292	\$1,173	\$1,131	\$883	\$685
OPEX	\$14,259	\$14,268	\$14,151	\$14,009	\$13,810
Decommissioning CAPEX	\$969	\$1,052	\$1,180	\$1,236	\$1,279
Drilling	\$8,024	\$7,921	\$7,394	\$5,593	\$3,891
Engineering CAPEX	\$739	\$708	\$651	\$548	\$436
Engineering OPEX	\$891	\$892	\$884	\$876	\$863
Natural Gas Processing and Transportation	\$137	\$137	\$138	\$136	\$134
<b>Total</b>	<b>\$31,226</b>	<b>\$30,780</b>	<b>\$29,494</b>	<b>\$26,420</b>	<b>\$23,274</b>

Source: Energy and Industrial Advisory Partners

**Table 11: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions (Continued)**

	2028	2029	2030	2031	2032
G&G	\$70	\$61	\$53	\$42	\$30
Drilling Tangibles	\$341	\$292	\$264	\$234	\$183
Trees	\$173	\$178	\$174	\$144	\$96
Manifolds	\$88	\$91	\$91	\$77	\$52
Other Subsea Hardware	\$42	\$41	\$41	\$38	\$27
Control Umbilical, Flying Leads	\$106	\$114	\$113	\$92	\$58
Infield FL	\$34	\$38	\$38	\$34	\$20
Export PL	\$198	\$215	\$243	\$250	\$174
Infield Risers	\$16	\$17	\$18	\$17	\$11
Export Risers	\$7	\$8	\$9	\$9	\$6
Fixed Platforms & Facilities	\$106	\$100	\$94	\$69	\$38
Floating Production Units & Facilities	\$697	\$678	\$532	\$257	\$37
Installation	\$484	\$575	\$538	\$441	\$244
OPEX	\$13,561	\$13,277	\$12,983	\$12,719	\$12,442
Decommissioning CAPEX	\$1,353	\$1,362	\$1,371	\$1,347	\$1,411
Drilling	\$2,679	\$2,292	\$2,062	\$1,825	\$1,424
Engineering CAPEX	\$397	\$403	\$381	\$322	\$254
Engineering OPEX	\$848	\$830	\$811	\$795	\$778
Natural Gas Processing and Transportation	\$129	\$122	\$114	\$107	\$102
Total	\$21,328	\$20,695	\$19,930	\$18,818	\$17,386

	2033	2034	2035	2036	2037
G&G	\$19	\$11	\$8	\$8	\$10
Drilling Tangibles	\$125	\$75	\$44	\$28	\$35
Trees	\$58	\$33	\$19	\$15	\$19
Manifolds	\$30	\$16	\$9	\$7	\$9
Other Subsea Hardware	\$17	\$10	\$5	\$3	\$4
Control Umbilical, Flying Leads	\$32	\$15	\$8	\$6	\$8
Infield FL	\$10	\$6	\$3	\$2	\$2
Export PL	\$92	\$32	\$0	\$0	\$0
Infield Risers	\$6	\$3	\$1	\$1	\$1
Export Risers	\$3	\$1	\$0	\$0	\$0
Fixed Platforms & Facilities	\$19	\$6	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0	\$0	\$0
Installation	\$109	\$67	\$43	\$28	\$33
OPEX	\$12,167	\$11,859	\$11,514	\$11,127	\$10,712
Decommissioning CAPEX	\$1,416	\$1,429	\$1,458	\$1,500	\$1,555
Drilling	\$972	\$575	\$338	\$215	\$277
Engineering CAPEX	\$210	\$188	\$179	\$179	\$187
Engineering OPEX	\$760	\$741	\$720	\$695	\$670
Natural Gas Processing and Transportation	\$95	\$88	\$79	\$70	\$62
Total	\$16,142	\$15,155	\$14,429	\$13,886	\$13,583

Source: Energy and Industrial Advisory Partners

**Table 11: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions (Continued)**

	2038	2039	2040
G&G	\$10	\$9	\$5
Drilling Tangibles	\$41	\$48	\$37
Trees	\$27	\$27	\$15
Manifolds	\$13	\$13	\$7
Other Subsea Hardware	\$5	\$7	\$5
Control Umbilical, Flying Leads	\$11	\$11	\$6
Infield FL	\$3	\$4	\$3
Export PL	\$0	\$0	\$0
Infield Risers	\$1	\$2	\$1
Export Risers	\$0	\$0	\$0
Fixed Platforms & Facilities	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0
Installation	\$43	\$52	\$38
OPEX	\$10,313	\$9,920	\$9,603
Decommissioning CAPEX	\$1,518	\$1,520	\$1,345
Drilling	\$324	\$386	\$284
Engineering CAPEX	\$187	\$189	\$164
Engineering OPEX	\$645	\$620	\$600
Natural Gas Processing and Transportation	\$55	\$48	\$43
Total	\$13,194	\$12,857	\$12,158

Source: Energy and Industrial Advisory Partners

**Table 13: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs)**

	2018	2019	2020	2021	2022	2023	2024
Texas	0	0	0	0	-189	-1,923	-3,263
Louisiana	0	0	0	0	-246	-1,401	-2,540
Mississippi	0	0	0	0	-27	-232	-391
Alabama	0	0	0	0	0	-157	-273
Other U.S. States	0	0	0	0	-360	-1,258	-2,682
Total	0	0	0	0	-821	-4,970	-9,150

	2025	2026	2027	2028	2029	2030	2031
Texas	-14,696	-31,929	-50,979	-59,928	-61,974	-60,574	-61,311
Louisiana	-7,964	-16,420	-25,102	-30,031	-31,829	-32,940	-34,022
Mississippi	-1,624	-3,516	-5,568	-6,608	-6,967	-7,032	-7,243
Alabama	-1,497	-3,266	-5,390	-6,525	-7,073	-7,170	-7,515
Other U.S. States	-7,752	-14,405	-21,425	-25,560	-26,209	-26,126	-26,859
Total	-33,532	-69,536	-108,463	-128,652	-134,051	-133,841	-136,951

	2032	2033	2034	2035	2036	2037	2038
Texas	-63,657	-67,455	-67,076	-62,978	-75,872	-57,490	-60,555
Louisiana	-35,986	-37,779	-38,838	-38,116	-37,883	-38,392	-40,268
Mississippi	-7,578	-8,024	-8,129	-7,857	-7,581	-7,603	-7,984
Alabama	-7,927	-8,585	-8,744	-8,569	-8,313	-8,469	-9,097
Other U.S. States	-29,412	-31,407	-30,736	-27,615	-24,932	-23,868	-26,249
Total	-144,560	-153,250	-153,524	-145,135	-154,581	-135,820	-144,153

	2039	2040
Texas	-69,498	-83,179
Louisiana	-44,030	-49,676
Mississippi	-8,929	-10,363
Alabama	-10,362	-12,158
Other U.S. States	-31,802	-39,147
Total	-164,620	-194,524

Source: Energy and Industrial Advisory Partners

**Table 14: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Direct and Indirect and Induced Supported Employment Reductions (Number of Jobs)**

	2018	2019	2020	2021	2022	2023	2024
Direct	0	0	0	0	-821	-4,970	-9,150
Indirect and Induced	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

	2025	2026	2027	2028	2029	2030	2031
Direct	-33,532	-69,536	-108,463	-128,652	-134,051	-133,841	-136,951
Indirect and Induced	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

	2032	2033	2034	2035	2036	2037	2038
Direct	-144,560	-153,250	-153,524	-145,135	-154,581	-135,820	-144,153
Indirect and Induced	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

	2039	2040
Direct	-164,620	-194,524
Indirect and Induced	0	0
Total	0	0

Source: Energy and Industrial Advisory Partners

**Table 15: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions \$ Millions**

	2018	2019	2020	2021	2022	2023
Texas	\$0	\$0	\$0	\$0	-\$36	-\$222
Louisiana	\$0	\$0	\$0	\$0	-\$29	-\$143
Mississippi	\$0	\$0	\$0	\$0	-\$5	-\$26
Alabama	\$0	\$0	\$0	\$0	-\$4	-\$23
Other U.S. States	\$0	\$0	\$0	\$0	-\$33	-\$111
Total	\$0	\$0	\$0	\$0	-\$106	-\$524

	2024	2025	2026	2027	2028	2029
Texas	-\$392	-\$1,442	-\$1,442	-\$3,036	-\$4,729	-\$5,550
Louisiana	-\$258	-\$763	-\$763	-\$1,557	-\$2,352	-\$2,802
Mississippi	-\$45	-\$153	-\$153	-\$321	-\$494	-\$584
Alabama	-\$42	-\$150	-\$150	-\$309	-\$488	-\$591
Other U.S. States	-\$227	-\$634	-\$634	-\$1,161	-\$1,717	-\$2,032
Total	-\$965	-\$3,142	-\$3,142	-\$6,384	-\$9,781	-\$11,559

	2030	2031	2032	2033	2034	2035
Texas	-\$5,726	-\$5,662	-\$5,729	-\$5,974	-\$6,269	-\$6,263
Louisiana	-\$2,950	-\$3,052	-\$3,137	-\$3,316	-\$3,459	-\$3,551
Mississippi	-\$609	-\$616	-\$629	-\$659	-\$689	-\$699
Alabama	-\$637	-\$655	-\$683	-\$725	-\$776	-\$796
Other U.S. States	-\$2,092	-\$2,112	-\$2,181	-\$2,384	-\$2,516	-\$2,478
Total	-\$12,014	-\$12,097	-\$12,359	-\$13,059	-\$13,709	-\$13,786

	2036	2037	2038	2039	2040
Texas	-\$5,905	-\$6,515	-\$5,489	-\$5,755	-\$6,497
Louisiana	-\$3,472	-\$3,451	-\$3,484	-\$3,638	-\$3,954
Mississippi	-\$672	-\$652	-\$650	-\$677	-\$747
Alabama	-\$783	-\$773	-\$789	-\$843	-\$942
Other U.S. States	-\$2,248	-\$2,078	-\$2,002	-\$2,196	-\$2,590
Total	-\$13,080	-\$13,470	-\$12,415	-\$13,109	-\$14,730

Source: Energy and Industrial Advisory Partners

**Table 16: Projected No Leasing Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type \$ Millions**

	2018	2019	2020	2021	2022	2023
Bids	\$0	\$0	\$0	\$0	-\$351	-\$299
Rentals	\$0	\$0	\$0	\$0	\$0	\$0
Royalties	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenues	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	-\$351	-\$299

	2024	2025	2026	2027	2028	2029
Bids	-\$339	-\$359	-\$373	-\$364	-\$346	-\$339
Rentals	\$0	-\$1	-\$1	-\$4	-\$9	-\$17
Royalties	-\$15	-\$29	-\$62	-\$210	-\$457	-\$954
Other Revenues	\$0	\$0	-\$1	-\$2	-\$4	-\$8
Total	-\$354	-\$389	-\$436	-\$580	-\$816	-\$1,319

	2030	2031	2032	2033	2034	2035
Bids	-\$329	-\$321	-\$289	-\$276	-\$273	-\$284
Rentals	-\$26	-\$34	-\$38	-\$40	-\$45	-\$49
Royalties	-\$1,450	-\$1,905	-\$2,176	-\$2,396	-\$2,697	-\$3,011
Other Revenues	-\$13	-\$17	-\$19	-\$21	-\$24	-\$26
Total	-\$1,818	-\$2,276	-\$2,522	-\$2,734	-\$3,038	-\$3,370

	2036	2037	2038	2039	2040
Bids	-\$303	-\$329	-\$353	-\$353	-\$317
Rentals	-\$52	-\$53	-\$52	-\$50	-\$50
Royalties	-\$3,296	-\$3,349	-\$3,364	-\$3,289	-\$3,324
Other Revenues	-\$29	-\$29	-\$29	-\$29	-\$29
Total	-\$3,680	-\$3,760	-\$3,799	-\$3,721	-\$3,721

Source: Energy and Industrial Advisory Partners



**Table 17: Projected No Leasing Case LWCF Distributions \$ Millions**

	2018	2019	2020	2021	2022
LWCF	\$0.89	\$0.88	\$0.84	\$0.83	\$0.89
LWCF - GOMESA	\$0.08	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.97	\$1.01	\$0.96	\$0.95	\$1.01

	2023	2024	2025	2026	2027
LWCF	\$0.95	\$1.03	\$1.08	\$1.13	\$1.14
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.07	\$1.15	\$1.20	\$1.25	\$1.27

	2028	2029	2030	2031	2032
LWCF	\$1.14	\$1.08	\$1.04	\$1.01	\$0.98
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.26	\$1.21	\$1.17	\$1.13	\$1.10

	2033	2034	2035	2036	2037
LWCF	\$0.96	\$0.89	\$0.83	\$0.76	\$0.68
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$1.08	\$1.02	\$0.95	\$0.88	\$0.81

	2038	2039	2040
LWCF	\$0.62	\$0.57	\$0.51
LWCF - GOMESA	\$0.13	\$0.13	\$0.13
Total	\$0.75	\$0.69	\$0.64

## No Permits Case Impacts

**Table 18: Projected Base Case vs. No Permits Case Gulf of Mexico Oil and Natural Gas Production (BOE/D)**

	2018	2019	2020	2021	2022	2023
Oil (No Permits Case)	1,760,000	1,890,000	1,802,741	1,819,873	1,776,423	1,662,671
Oil (Base Case)	1,760,000	1,890,000	1,802,741	1,819,873	1,923,915	2,016,547
Natural Gas (No Permits Case)	445,000	450,000	416,287	389,320	358,886	317,918
Natural Gas (Base Case)	445,000	450,000	416,287	389,320	387,443	387,585
Total BOE (No Permits Case)	2,205,000	2,340,000	2,219,028	2,209,193	2,135,309	1,980,589
Total BOE (Base Case)	2,205,000	2,340,000	2,219,028	2,209,193	2,311,357	2,404,132

	2024	2025	2026	2027	2028	2029
Oil (No Permits Case)	1,501,906	1,356,821	1,225,871	1,107,666	1,000,954	904,607
Oil (Base Case)	2,127,102	2,172,814	2,228,486	2,257,200	2,305,052	2,313,179
Natural Gas (No Permits Case)	272,426	233,503	200,193	171,681	147,270	126,365
Natural Gas (Base Case)	396,576	395,893	398,838	399,022	405,150	405,559
Total BOE (No Permits Case)	1,774,332	1,590,324	1,426,064	1,279,347	1,148,224	1,030,971
Total BOE (Base Case)	2,523,678	2,568,707	2,627,324	2,656,222	2,710,202	2,718,738

	2030	2031	2032	2033	2034	2035
Oil (No Permits Case)	817,608	739,043	668,086	603,994	546,098	493,793
Oil (Base Case)	2,360,485	2,382,172	2,385,983	2,333,358	2,278,303	2,217,081
Natural Gas (No Permits Case)	108,458	93,116	79,968	68,697	59,033	50,745
Natural Gas (Base Case)	414,527	419,657	421,028	410,939	400,567	390,143
Total BOE (No Permits Case)	926,066	832,159	748,054	672,692	605,131	544,537
Total BOE (Base Case)	2,775,012	2,801,829	2,807,011	2,744,297	2,678,870	2,607,224

	2036	2037	2038	2039	2040
Oil (No Permits Case)	446,534	403,831	365,240	330,364	298,840
Oil (Base Case)	2,134,855	2,015,404	1,888,518	1,750,072	1,661,183
Natural Gas (No Permits Case)	43,634	37,531	32,293	27,795	23,932
Natural Gas (Base Case)	376,626	356,058	334,084	310,848	295,939
Total BOE (No Permits Case)	490,168	441,362	397,534	358,159	322,772
Total BOE (Base Case)	2,511,481	2,371,462	2,222,602	2,060,920	1,957,123

Source: Energy and Industrial Advisory Partners

**Table 19: No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**

	2018	2019	2020	2021	2022
G&G	\$160	\$156	\$148	\$176	\$6
Drilling Tangibles	\$1,211	\$1,310	\$986	\$814	\$97
Trees	\$627	\$451	\$336	\$440	\$21
Manifolds	\$328	\$237	\$177	\$231	\$11
Other Subsea Hardware	\$143	\$130	\$77	\$81	\$10
Control Umbilical, Flying Leads	\$373	\$268	\$208	\$280	\$13
Infield FL	\$119	\$102	\$54	\$70	\$9
Export PL	\$782	\$658	\$385	\$490	\$51
Infield Risers	\$61	\$53	\$29	\$35	\$4
Export Risers	\$30	\$25	\$14	\$19	\$2
Fixed Platforms & Facilities	\$135	\$114	\$123	\$173	\$6
Floating Production Units & Facilities	\$1,155	\$825	\$990	\$1,458	\$37
Installation	\$1,439	\$1,328	\$834	\$1,009	\$139
OPEX	\$13,816	\$13,829	\$12,276	\$13,406	\$13,755
Decommissioning CAPEX	\$1,100	\$773	\$696	\$858	\$1,106
Drilling	\$5,560	\$5,847	\$4,682	\$3,999	\$501
Engineering CAPEX	\$792	\$663	\$528	\$638	\$166
Engineering OPEX	\$863	\$864	\$877	\$882	\$860
Natural Gas Processing and Transportation	\$163	\$157	\$152	\$141	\$124
Total	\$28,857	\$27,789	\$23,574	\$25,199	\$16,919

	2023	2024	2025	2026	2027
G&G	\$2	\$0	\$0	\$0	\$0
Drilling Tangibles	\$24	\$4	\$1	\$1	\$0
Trees	\$0	\$0	\$0	\$0	\$0
Manifolds	\$0	\$0	\$0	\$0	\$0
Other Subsea Hardware	\$1	\$0	\$0	\$0	\$0
Control Umbilical, Flying Leads	\$0	\$0	\$0	\$0	\$0
Infield FL	\$0	\$0	\$0	\$0	\$0
Export PL	\$0	\$0	\$0	\$0	\$0
Infield Risers	\$0	\$0	\$0	\$0	\$0
Export Risers	\$0	\$0	\$0	\$0	\$0
Fixed Platforms & Facilities	\$0	\$0	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0	\$0	\$0
Installation	\$0	\$0	\$0	\$0	\$0
OPEX	\$13,363	\$12,829	\$12,233	\$11,603	\$10,968
Decommissioning CAPEX	\$1,469	\$1,897	\$2,101	\$2,252	\$2,335
Drilling	\$132	\$20	\$7	\$7	\$0
Engineering CAPEX	\$168	\$214	\$236	\$253	\$263
Engineering OPEX	\$835	\$802	\$765	\$725	\$685
Natural Gas Processing and Transportation	\$111	\$96	\$82	\$71	\$61
Total	\$16,104	\$15,860	\$15,425	\$14,912	\$14,311

Source: Energy and Industrial Advisory Partners

**Table 17: No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**  
(Continued)

	2028	2029	2030	2031	2032
G&G	\$0	\$0	\$0	\$0	\$0
Drilling Tangibles	\$0	\$0	\$0	\$0	\$0
Trees	\$0	\$0	\$0	\$0	\$0
Manifolds	\$0	\$0	\$0	\$0	\$0
Other Subsea Hardware	\$0	\$0	\$0	\$0	\$0
Control Umbilical, Flying Leads	\$0	\$0	\$0	\$0	\$0
Infield FL	\$0	\$0	\$0	\$0	\$0
Export PL	\$0	\$0	\$0	\$0	\$0
Infield Risers	\$0	\$0	\$0	\$0	\$0
Export Risers	\$0	\$0	\$0	\$0	\$0
Fixed Platforms & Facilities	\$0	\$0	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0	\$0	\$0
Installation	\$0	\$0	\$0	\$0	\$0
OPEX	\$10,304	\$9,617	\$8,939	\$8,271	\$7,588
Decommissioning CAPEX	\$2,449	\$2,531	\$2,536	\$2,533	\$2,562
Drilling	\$0	\$0	\$0	\$0	\$0
Engineering CAPEX	\$276	\$285	\$285	\$285	\$288
Engineering OPEX	\$644	\$601	\$559	\$517	\$474
Natural Gas Processing and Transportation	\$52	\$45	\$38	\$33	\$28
Total	\$13,725	\$13,079	\$12,358	\$11,638	\$10,941

	2033	2034	2035	2036	2037
G&G	\$0	\$0	\$0	\$0	\$0
Drilling Tangibles	\$0	\$0	\$0	\$0	\$0
Trees	\$0	\$0	\$0	\$0	\$0
Manifolds	\$0	\$0	\$0	\$0	\$0
Other Subsea Hardware	\$0	\$0	\$0	\$0	\$0
Control Umbilical, Flying Leads	\$0	\$0	\$0	\$0	\$0
Infield FL	\$0	\$0	\$0	\$0	\$0
Export PL	\$0	\$0	\$0	\$0	\$0
Infield Risers	\$0	\$0	\$0	\$0	\$0
Export Risers	\$0	\$0	\$0	\$0	\$0
Fixed Platforms & Facilities	\$0	\$0	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0	\$0	\$0
Installation	\$0	\$0	\$0	\$0	\$0
OPEX	\$6,897	\$6,226	\$5,580	\$4,931	\$4,284
Decommissioning CAPEX	\$2,561	\$2,497	\$2,402	\$2,359	\$2,292
Drilling	\$0	\$0	\$0	\$0	\$0
Engineering CAPEX	\$288	\$281	\$270	\$265	\$258
Engineering OPEX	\$431	\$389	\$349	\$308	\$268
Natural Gas Processing and Transportation	\$24	\$21	\$18	\$15	\$13
Total	\$10,202	\$9,413	\$8,619	\$7,878	\$7,115

Source: Energy and Industrial Advisory Partners

**Table 17: No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Spending \$ Millions**  
(Continued)

	2038	2039	2040
G&G	\$0	\$0	\$0
Drilling Tangibles	\$0	\$0	\$0
Trees	\$0	\$0	\$0
Manifolds	\$0	\$0	\$0
Other Subsea Hardware	\$0	\$0	\$0
Control Umbilical, Flying Leads	\$0	\$0	\$0
Infield FL	\$0	\$0	\$0
Export PL	\$0	\$0	\$0
Infield Risers	\$0	\$0	\$0
Export Risers	\$0	\$0	\$0
Fixed Platforms & Facilities	\$0	\$0	\$0
Floating Production Units & Facilities	\$0	\$0	\$0
Installation	\$0	\$0	\$0
OPEX	\$3,676	\$3,109	\$2,558
Decommissioning CAPEX	\$2,154	\$1,994	\$1,888
Drilling	\$0	\$0	\$0
Engineering CAPEX	\$242	\$224	\$212
Engineering OPEX	\$230	\$194	\$160
Natural Gas Processing and Transportation	\$11	\$10	\$8
Total	\$6,313	\$5,531	\$4,826

Source: Energy and Industrial Advisory Partners

**Table 20: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs)**

	2018	2019	2020	2021	2022	2023	2024
Texas	0	0	0	0	-70,206	-77,634	-73,942
Louisiana	0	0	0	0	-27,949	-34,379	-36,871
Mississippi	0	0	0	0	-6,916	-8,033	-8,065
Alabama	0	0	0	0	-7,608	-8,489	-8,304
Other U.S. States	0	0	0	0	-35,267	-38,101	-38,424
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-147,945</b>	<b>-166,637</b>	<b>-165,606</b>

	2025	2026	2027	2028	2029	2030	2031
Texas	-79,937	-82,509	-87,793	-88,525	-89,933	-88,857	-88,115
Louisiana	-42,367	-46,561	-51,176	-53,871	-56,420	-58,760	-60,837
Mississippi	-9,083	-9,732	-10,624	-11,003	-11,444	-11,721	-12,016
Alabama	-9,344	-10,033	-11,128	-11,802	-12,635	-13,116	-13,623
Other U.S. States	-40,907	-41,554	-42,373	-43,719	-45,155	-44,003	-41,933
<b>Total</b>	<b>-181,640</b>	<b>-190,389</b>	<b>-203,094</b>	<b>-208,920</b>	<b>-215,587</b>	<b>-216,457</b>	<b>-216,523</b>

	2032	2033	2034	2035	2036	2037	2038
Texas	-87,159	-87,876	-86,554	-83,464	-105,127	-82,850	-88,830
Louisiana	-63,163	-65,182	-66,786	-67,042	-67,935	-70,189	-73,588
Mississippi	-12,281	-12,629	-12,809	-12,771	-12,760	-13,226	-13,995
Alabama	-14,031	-14,715	-15,149	-15,425	-15,620	-16,402	-17,579
Other U.S. States	-40,616	-40,532	-39,206	-35,965	-33,385	-32,906	-35,885
<b>Total</b>	<b>-217,250</b>	<b>-220,933</b>	<b>-220,504</b>	<b>-214,668</b>	<b>-234,827</b>	<b>-215,573</b>	<b>-229,877</b>

	2039	2040
Texas	-101,285	-114,275
Louisiana	-78,895	-85,182
Mississippi	-15,378	-16,857
Alabama	-19,468	-21,362
Other U.S. States	-42,122	-49,211
<b>Total</b>	<b>-257,148</b>	<b>-286,886</b>

Source: Energy and Industrial Advisory Partners

**Table 21: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Supported Employment Reductions (Number of Jobs)**

	2018	2019	2020	2021	2022	2023	2024
Direct	0	0	0	0	-20,783	-26,794	-29,987
Indirect and Induced	0	0	0	0	-127,162	-139,844	-135,619
Total	0	0	0	0	-147,945	-166,637	-165,606

	2025	2026	2027	2028	2029	2030	2031
Direct	-34,751	-38,581	-42,284	-44,519	-46,370	-48,439	-50,134
Indirect and Induced	-146,889	-151,808	-160,810	-164,400	-169,218	-168,018	-166,389
Total	-181,640	-190,389	-203,094	-208,920	-215,587	-216,457	-216,523

	2032	2033	2034	2035	2036	2037	2038
Direct	-52,253	-53,695	-54,998	-55,001	-56,022	-57,389	-59,698
Indirect and Induced	-164,997	-167,238	-165,506	-159,667	-178,806	-158,184	-170,179
Total	-217,250	-220,933	-220,504	-214,668	-234,827	-215,573	-229,877

	2039	2040
Direct	-63,096	-67,621
Indirect and Induced	-194,052	-219,266
Total	-257,148	-286,886

Source: Energy and Industrial Advisory Partners



**Table 22: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Contributions to GDP Reductions \$ Millions**

	2018	2019	2020	2021	2022	2023
Texas	\$0	\$0	\$0	\$0	-\$6,142	-\$6,958
Louisiana	\$0	\$0	\$0	\$0	-\$2,553	-\$3,171
Mississippi	\$0	\$0	\$0	\$0	-\$583	-\$693
Alabama	\$0	\$0	\$0	\$0	-\$633	-\$735
Other U.S. States	\$0	\$0	\$0	\$0	-\$2,659	-\$2,914
Total	\$0	\$0	\$0	\$0	-\$12,571	-\$14,471

	2024	2025	2026	2027	2028	2029
Texas	-\$6,848	-\$7,474	-\$7,474	-\$7,808	-\$8,308	-\$8,418
Louisiana	-\$3,432	-\$3,934	-\$3,934	-\$4,318	-\$4,719	-\$4,944
Mississippi	-\$714	-\$803	-\$803	-\$862	-\$933	-\$962
Alabama	-\$759	-\$862	-\$862	-\$939	-\$1,038	-\$1,107
Other U.S. States	-\$3,002	-\$3,219	-\$3,219	-\$3,309	-\$3,398	-\$3,527
Total	-\$14,755	-\$16,290	-\$16,290	-\$17,237	-\$18,397	-\$18,957

	2030	2031	2032	2033	2034	2035
Texas	-\$8,535	-\$8,488	-\$8,439	-\$8,413	-\$8,458	-\$8,354
Louisiana	-\$5,139	-\$5,331	-\$5,492	-\$5,688	-\$5,835	-\$5,952
Mississippi	-\$989	-\$1,008	-\$1,025	-\$1,045	-\$1,063	-\$1,071
Alabama	-\$1,179	-\$1,229	-\$1,276	-\$1,322	-\$1,379	-\$1,419
Other U.S. States	-\$3,626	-\$3,566	-\$3,431	-\$3,367	-\$3,362	-\$3,273
Total	-\$19,467	-\$19,622	-\$19,662	-\$19,835	-\$20,096	-\$20,069

	2036	2037	2038	2039	2040
Texas	-\$8,052	-\$9,138	-\$8,004	-\$8,496	-\$9,500
Louisiana	-\$5,935	-\$5,996	-\$6,165	-\$6,437	-\$6,871
Mississippi	-\$1,054	-\$1,049	-\$1,076	-\$1,129	-\$1,226
Alabama	-\$1,438	-\$1,461	-\$1,523	-\$1,617	-\$1,758
Other U.S. States	-\$3,031	-\$2,865	-\$2,830	-\$3,063	-\$3,502
Total	-\$19,510	-\$20,509	-\$19,597	-\$20,742	-\$22,857

Source: Energy and Industrial Advisory Partners

**Table 23: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenue Reductions by Type \$ Millions**

	2018	2019	2020	2021	2022	2023
Bids	\$0	\$0	\$0	\$0	-\$351	-\$299
Rentals	\$0	\$0	\$0	\$0	-\$8	-\$20
Royalties	\$0	\$0	\$0	\$0	-\$391	-\$957
Other Revenues	\$0	\$0	\$0	\$0	-\$3	-\$8
Total	\$0	\$0	\$0	\$0	-\$754	-\$1,284

	2024	2025	2026	2027	2028	2029
Bids	-\$339	-\$359	-\$373	-\$364	-\$346	-\$339
Rentals	-\$36	-\$47	-\$58	-\$66	-\$75	-\$81
Royalties	-\$1,753	-\$2,350	-\$2,968	-\$3,487	-\$4,003	-\$4,418
Other Revenues	-\$15	-\$21	-\$26	-\$30	-\$35	-\$39
Total	-\$2,143	-\$2,777	-\$3,424	-\$3,948	-\$4,459	-\$4,876

	2030	2031	2032	2033	2034	2035
Bids	-\$329	-\$321	-\$289	-\$276	-\$273	-\$284
Rentals	-\$89	-\$94	-\$99	-\$99	-\$99	-\$99
Royalties	-\$4,920	-\$5,354	-\$5,662	-\$5,903	-\$6,007	-\$6,089
Other Revenues	-\$43	-\$47	-\$49	-\$52	-\$52	-\$53
Total	-\$5,380	-\$5,817	-\$6,099	-\$6,330	-\$6,432	-\$6,525

	2036	2037	2038	2039	2040
Bids	-\$303	-\$329	-\$353	-\$353	-\$317
Rentals	-\$97	-\$93	-\$88	-\$82	-\$78
Royalties	-\$6,114	-\$5,866	-\$5,647	-\$5,353	-\$5,192
Other Revenues	-\$53	-\$51	-\$49	-\$47	-\$45
Total	-\$6,567	-\$6,339	-\$6,137	-\$5,834	-\$5,633

Source: Energy and Industrial Advisory Partners

**Table 24: Projected No Permits Case Gulf of Mexico Offshore Oil and Natural Gas Government Revenues Reductions by State \$ Millions**

	2018	2019	2020	2021	2022	2023
Texas	0	0	0	0	0	-\$1
Louisiana	0	0	0	0	0	-\$1
Mississippi	0	0	0	0	0	\$0
Alabama	0	0	0	0	0	\$0
Total	\$0	\$0	\$0	\$0	\$0	-\$2

	2024	2025	2026	2027	2028	2029
Texas	-\$4	-\$8	-\$12	-\$16	-\$21	-\$25
Louisiana	-\$7	-\$14	-\$20	-\$27	-\$34	-\$41
Mississippi	-\$2	-\$5	-\$7	-\$9	-\$11	-\$14
Alabama	-\$2	-\$4	-\$6	-\$9	-\$11	-\$13
Total	-\$15	-\$31	-\$45	-\$60	-\$78	-\$92

	2030	2031	2032	2033	2034	2035
Texas	-\$29	-\$32	-\$36	-\$38	-\$42	-\$44
Louisiana	-\$47	-\$53	-\$59	-\$63	-\$68	-\$73
Mississippi	-\$16	-\$18	-\$20	-\$21	-\$23	-\$24
Alabama	-\$15	-\$17	-\$19	-\$20	-\$22	-\$23
Total	-\$107	-\$119	-\$134	-\$142	-\$154	-\$165

	2036	2037	2038	2039	2040
Texas	-\$47	-\$50	-\$53	-\$55	-\$58
Louisiana	-\$77	-\$82	-\$86	-\$90	-\$94
Mississippi	-\$26	-\$27	-\$29	-\$30	-\$31
Alabama	-\$25	-\$26	-\$28	-\$29	-\$30
Total	-\$174	-\$186	-\$195	-\$204	-\$214

Source: Energy and Industrial Advisory Partners

**Table 25: Projected No Permits Case LWCF Distributions \$ Millions**

	2018	2019	2020	2021	2022
LWCF	\$0.89	\$0.88	\$0.46	\$0.64	\$0.82
LWCF - GOMESA	\$0.08	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.97	\$1.01	\$0.59	\$0.77	\$0.94

	2023	2024	2025	2026	2027
LWCF	\$0.78	\$0.73	\$0.67	\$0.62	\$0.58
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.90	\$0.85	\$0.80	\$0.75	\$0.70

	2028	2029	2030	2031	2032
LWCF	\$0.53	\$0.48	\$0.44	\$0.41	\$0.37
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.65	\$0.61	\$0.57	\$0.53	\$0.50

	2033	2034	2035	2036	2037
LWCF	\$0.35	\$0.32	\$0.29	\$0.27	\$0.25
LWCF - GOMESA	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Total	\$0.47	\$0.45	\$0.42	\$0.40	\$0.37

	2038	2039	2040
LWCF	\$0.23	\$0.21	\$0.19
LWCF - GOMESA	\$0.13	\$0.13	\$0.13
Total	\$0.35	\$0.33	\$0.32

Source: Energy and Industrial Advisory Partners



# Contact

## Houston

**Sean Shafer**  
Managing Partner

s.shafer@eiapartners.com  
Tel: +1 713-309-9020

1210 W Clay, Suite 3, 77019, Houston, TX

## New York

**Cameron Lynch**  
Managing Partner

c.lynch@eiapartners.com  
+1 (212) 763-8901

156 W 56th, 3rd Floor, New York, NY 10019

[www.eiapartners.com](http://www.eiapartners.com)

**E I A P**  
— ENERGY & INDUSTRIAL —  
ADVISORY PARTNERS

