



2018 RESTRICTED CARBON SCENARIO ANALYSIS

Climate change is an important priority for Pioneer and our stakeholders. As such, our strategy is to manage our environmental footprint proactively and limit emissions of methane and other greenhouse gases from our

operations. We are committed to working with industry and communities to address our impacts to the environment while ensuring the supply of sustainable, abundant and affordable energy.

In addition to our efforts to limit emissions from our activities, we assess the potential impact of growing alternative energy sources and climate change policy on global fossil fuel demand and Pioneer's long-term business prospects. A summary of this assessment is included below.

As part of Pioneer's strategic planning process, management prepares and reviews with the Board of Directors long-term scenarios under varying assumptions to stress test the company's business outlook. When evaluating possible future business scenarios, Pioneer considers several published energy forecasts and analyses by leading official agencies such as, but not limited to:

- **The U.S. Energy Information Administration's (EIA) International Energy Outlook**
- **The Organization of Petroleum Exporting Countries' (OPEC) World Oil Outlook**
- **The International Energy Agency's (IEA) World Energy Outlook**

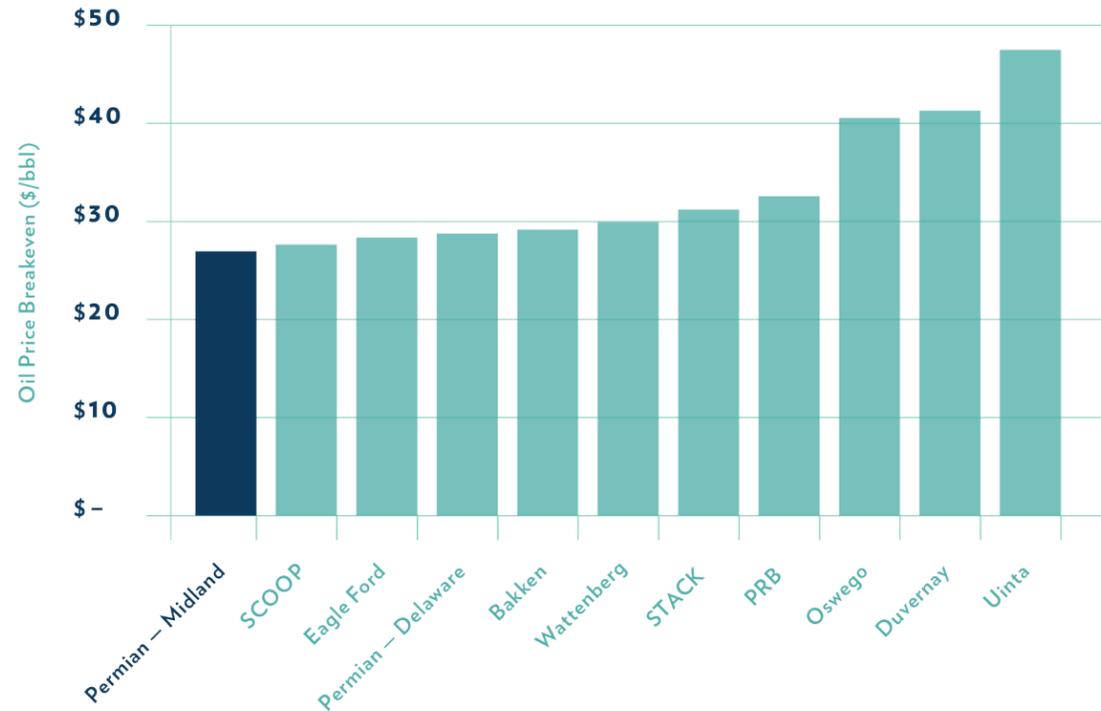
Pioneer also engages private commodity market analysis firms to provide the company with industry and economic projections, which are utilized to test management's assumptions of future business conditions.

In 2017, the Permian Basin reached a new oil-production record of over 815 million barrels to reaffirm its position as a key energy source for

the global market (IHS Markit, 2017). Current forecasts and estimates indicate that the resource potential of the Permian Basin will continue to grow. Most recently, the EIA's 2018 Outlook projects oil growth from around 2.5MM BPD per year to over 4MM BPD by 2030 (EIA, 2018). These rates of production are founded upon the Permian Basin's more than 150 billion barrels of oil equivalent of recoverable resources. Moreover, as the only major basin where U.S. oil shale production continued to grow amidst the 2014 oil price downturn, the Permian Basin has demonstrated its long term productivity (EIA, Drilling Productivity Report, 2017). Pioneer is in a particularly strong position to benefit from the Permian Basin's quality assets as the largest acreage holder with approximately 750,000 gross acres in the eastern part of the Permian Basin, also known as the Midland Basin.

In order to capitalize on this significant resource potential, more than 95 percent of Pioneer's current and expected future capital expenditures are directed to the Midland Basin, where Pioneer holds more than 20,000 undrilled wells with economic returns. The profitability of the Midland Basin is particularly evident when compared with other onshore U.S. liquid-rich basins. As Figure 1 illustrates, the Midland Basin is among the best-in-class with an estimated oil price breakeven cost of approximately \$26 per barrel as of mid-2018.

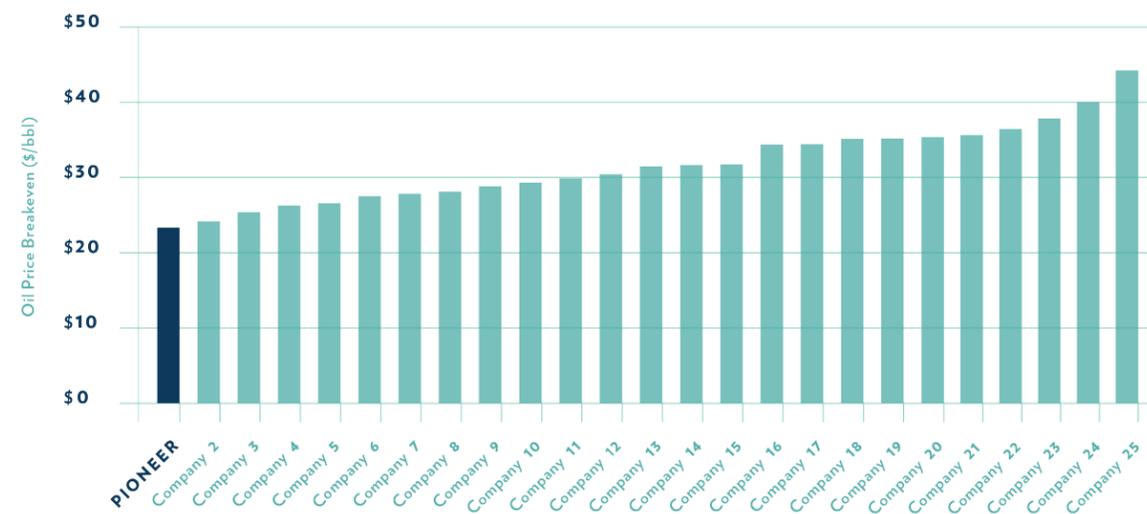
Figure 1 Graphic: Oil Breakevens by Basin



Source: Citigroup research report published on 3/26/2018; assumes commodity prices of \$50/BBL oil and \$3.00/Million British Thermal Units (MMBTU)

Additionally, Pioneer is recognized as a leading low-cost operator (including costs to drill, complete and operate the wells), when compared to other North American oil shale players in the industry. (See Figure 2.)

Figure 2 Graphic: Oil Breakevens by Company

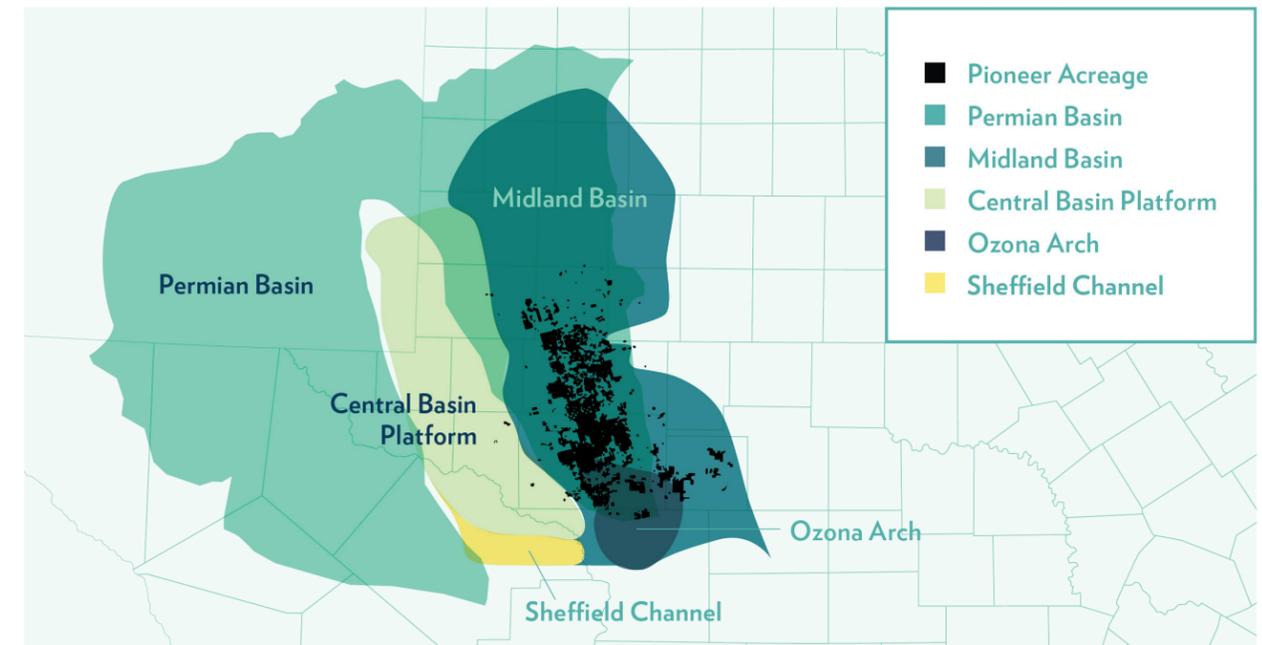


Source: 2018 Oil & Gas Price Breakeven Analysis and Basin Benchmarking Update, Citi Research, published March 26, 2018
Breakevens reflect each respective company's production-weighted oil assets (at \$3MMBTU gas price).

Companies include: APC, CDEV, CHK, CLR, CPE, DVN, ECA, HES, MRO, NBL, NFX, OAS, PE, SRCI, WLL, WPX, XEG, XOG.

Pioneer expects to remain a leading low-cost operator by leveraging the company's supply chain, vertically integrated services and new technologies to develop its prolific Midland Basin asset highlighted in Figure 3.

Figure 3 Graphic: Pioneer Permian Basin Acreage



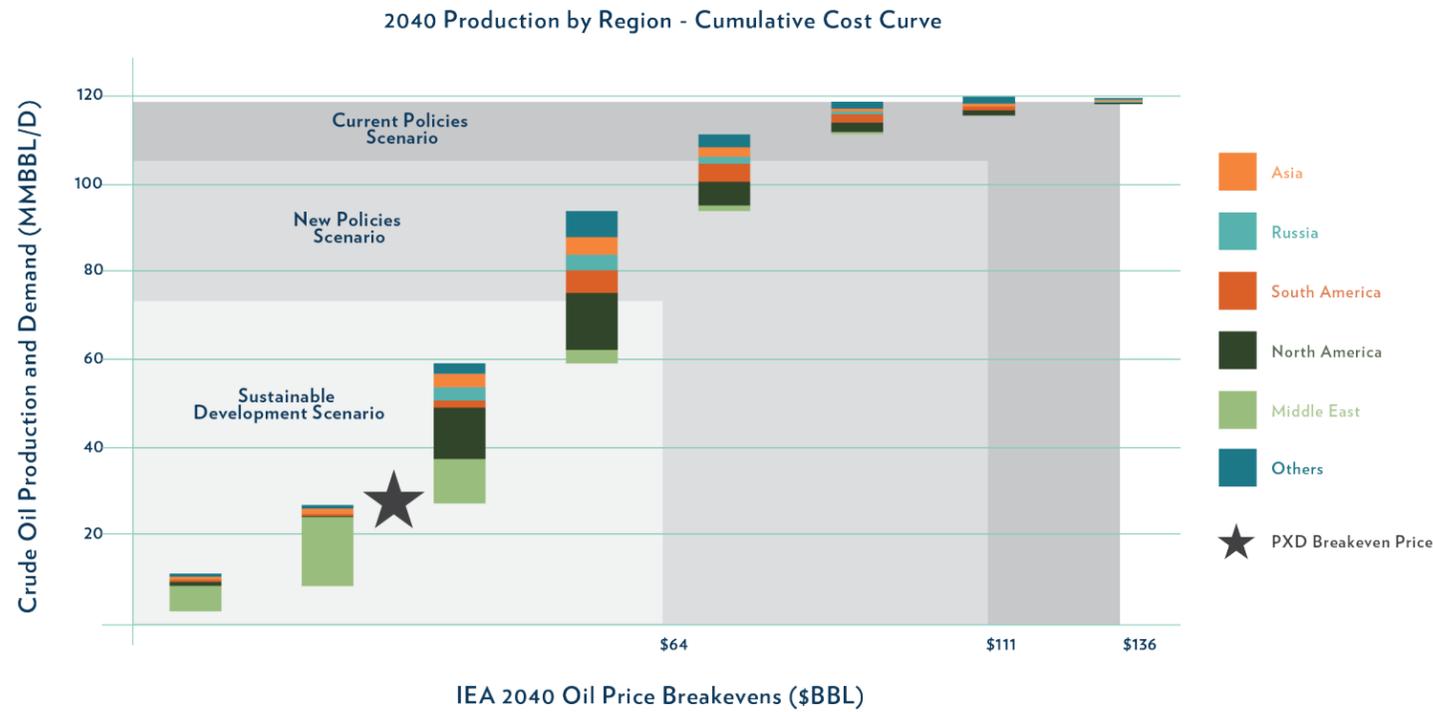
To assess the potential impact of growing alternative sources and climate change policies, Pioneer considered the scenarios set out in the broadly referenced IEA 2017 World Energy Outlook (WEO). The World Energy Outlook describes three scenarios, each of which assumes different levels of climate change policy and regulation. World Energy Outlook's Current Policies Scenario assumes a continuation of existing policies; the New Policies Scenario accounts for broad policy commitments and plans that have been announced by countries to reduce greenhouse gas emissions and phase out fossil fuels.

In 2016, the WEO introduced the 450 Scenario, which constructs an energy consumption pathway aiming to limit global increase in

temperature to 2 degrees Celsius by restricting the concentration of greenhouse gas emissions in the atmosphere to less than 450 parts per million of carbon dioxide (CO₂). In 2017, the WEO introduced the new Sustainable Development Scenario (SDS) which extends beyond the scope of the 450 Scenario by mapping an energy consumption pathway that simultaneously limits global increases in temperature to 1.5 degrees Celsius and also achieves universal access to modern energy and cleaner air through the reduction of energy-related pollutants.

These scenario characteristics reflect an energy landscape aligned with the 2015 Paris Climate Agreement and the objectives of the three United Nations Sustainable Development Goals (SDGs) that are most closely related to energy.

Figure 4 Graphic: Production Potential by Asset – Cumulative Global Breakeven & 2040 Oil Prices



Pioneer believes the World Energy Outlook’s 450 Scenario and Sustainable Development Scenario represent ambitious efforts to reduce future global oil demand, and, as such, serve as a robust test of the company’s ability to efficiently deploy capital and profitably develop and produce its resources in an environment of significant demand constraint.

Figure 4 depicts the global demand for oil in 2040 for each of the 2017 World Energy Outlook’s three main scenarios and the likely oil sources that would satisfy that demand. This analysis assumes the relative volume output of basins producing today and that the resources with the lowest available breakeven costs are likely to satisfy demand.

Significance of 2040: The benefit of assessing potential oil demand and production in the year 2040 is that it allows Pioneer, its investors, and various stakeholders to evaluate the long-term impacts that political, economic, and technological factors might have on oil demand over an extended period.

Scenario Constraints: The varying global oil demands forecasted in the Sustainable Development, New Policies and Current Policies Scenarios are represented by the overlapping square boxes that comprise the backdrop to Figure 4. These ranges reflect and correspond to the socio-economic and other demand parameters outlined by each of the World Energy Outlook’s three scenarios.

The Sustainable Development Scenario has the greatest impact on oil demand since demand declines to 72.9MM bpd and a maximum oil price of \$64 USD. Comparatively, the New Policies Scenario expects higher oil demand ranging between 73MM bpd to 104.9MM bpd. Stronger oil demand supports higher oil prices as suggested by the New Policies Scenario where prices reach up to \$111 USD. Finally, the Current Policy Scenario results in demand of 118.8MM bpd and an oil price reaching \$136 USD.

Cost Curve: Overlaying the three World Energy Outlook 2040 scenarios shown in Figure 4 is a relative cost curve based upon Rystad Energy data that highlights production volumes grouped by current breakeven price and geographic region.

Each position along the curve represents a segment of additional oil production that becomes commercially viable in response to an increase in price. Using this methodology, the lowest cost resources are considered to be developed first; however, it is assumed each region’s respective position on the cost curve will remain relative and thus comparable in the long term.

The Pioneer Natural Resources Story: As indicated in Figure 2, the \$23/BBL breakeven cost attributed to Pioneer by Citi Research is well within the borders of the Sustainable Development Scenario, indicating the company is in a strong position to produce oil and gas economically and help meet global demand for oil. This assessment is consistent with the June 2018 updated “2 Degrees of Separation” analysis compiled by The Carbon Tracker Initiative, which examined the oil sector’s economic viability in a carbon-constrained regulatory environment.

Their analysis found that Pioneer is among the least exposed oil producers to 2025 carbon-related capital expenditures (Carbon Tracker, 2018). The study also notes that companies like Pioneer, which have a relatively low percentage of potential future capital directed to high cost projects, are more aligned with a 2-degree and 1.75-degree warming limit. This reinforces our belief that we are in a strong position to produce oil and gas economically in a carbon-constrained scenario.