Brazil Market Increasing Opportunities for U.S. Suppliers of Oil & Gas Equipment and Services

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Report Highlights:

Brazil is South America's largest oil producer, the world's 7th largest oil consumer and has the largest recoverable ultra-deep (pre-salt) oil reserves in the world.

Significant energy reforms and frequent oil finds are driving IOCs from around the world to come to Brazil and get involved in ambitious offshore projects alongside Petrobras. New investments in exploration, production and refining over the 2017-2021 period are estimated at over $US 80 billion.

The Brazilian economy is rebounding and with lowered local content requirements, there is an increasing potential for U.S. exports of oil & gas equipment and services over the next several years.

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Brazil currently ranks 10^{th} in world crude oil production, and is the largest in Latin America, according to the International Energy Agency. Brazil is also the 7^{th} largest oil consumer, according to a recent presentation by the Brazilian Petroleum and Gas Institute (IBP). The same sources indicate that Brazil owns the 15th largest world proven reserves of 12.67 billion barrels of oil and 372 billion cubic meters of gas. Upstream Analytics and Global Data Energy noted recently that Brazil holds the top spot among the top ten countries with the largest remaining recoverable ultra-deepwater oil reserves, with 20,462 million barrels expected to be economically recovered in the country.

The 2016 Rio Industry Federation Oil and Gas Report estimates investments in the Brazilian oil and gas sector over US$ 500 billion, just to develop the already discovered and the to-be-developed upstream pre-salt fields.

In 2017, data from the Brazilian National Oil Regulator (ANP) shows that Brazil produced 2.6 MMbpd of oil, 95% of which comes from offshore, very deep water. The development of deep-water and especially 'pre-salt' resources have driven dramatic increases in Brazil's production, with pre-salt production surpassing 50% of overall production in 2017, with an average of 1.7 MMbpd. Natural gas production reached 113 MMm3/day in 2017.

Recent reforms in Brazil's offshore O&G sector are being driven by Petrobras cash issues, the reduced world oil price, and changes to the Brazilian Administration. One such reform took place on October 5, 2016, when Brazil's lower house passed a bill (PL-04567/2016) that removed restrictions on offshore oil and gas production and reshaped state-owned oil company Petrobras's role in Brazil's deep water "pre-salt" oil and gas fields. The bill amended a 2010 law to allow greater Independent Oil Companies (IOC) participation in offshore exploration and production in future pre-salt auctions. The 2010 law, known as the pre-salt law in Brazil, required Petrobras to serve as sole operator and minimum 30% equity holder in all offshore pre-salt oil and associated gas fields. While Petrobras still maintains right of first refusal under the new law, its previously burdensome production and equity requirements have been lifted.

There were three bidding rounds in 2017 where companies like Exxon, Shell, Statoil, Petrobras, and others won several oil blocks. Additional bidding rounds are scheduled through 2019 with new investments estimated at US$ 80 billion that includes more than 300 offshore wells, 17 new production units, and 600 km of gas pipelines, according to the Brazilian Petroleum and Gas Institute (IBP).

Other Reforms:

On March 28, 2017, a new local content requirement (LCR) resolution lowered the percentage of Brazilian-made goods and services required for new oil and gas exploration and production projects. New global LCRs for deep-water oil and gas **exploration** fell by half on average, to a minimum of 18% – down from 37% for previous auctions – and LCRs for deep-water **production** development will now follow macro-segments: 25% for oil/gas well construction; 40% for subsea production activities; and 25% for oil offshore production units. Previous LCR for the production/development phase was 55%. Onshore exploration and development LCRs, previously at 70% and 77%, respectively, were reduced to 50% as well.

On December 13, 2017, the Lower House of Congress approved the extension of the **Repetro** oil and gas import tax break regime through 2040. The new law meets a critical ask of IOC's to allow them long-term exploration and developments commitments in Brazil. At the same time, this new piece of regulatory adjustment to the Brazilian oil and gas sector should attract more players to operate in Brazil, thus increasing the potential for U.S. exports of oil and gas equipment and services over the next several years.

The largest oil player in Brazil is still the national oil company Petrobras. As of December 2017, Petrobras production accounted for 94% of the national supply. After Petrobras, companies like Statoil (2%), Shell (2%), Chevron, and others (1% ea.) were the other main oil producers and/or operators in Brazil.

Despite financial constraints and significant decreased five-year investment plan, Petrobras will invest US$74.5 billion during the 2018-2022 period, thus remaining one of the world largest investors. The E&P area will receive US$60.3 billion). A total of US$13.1 billion will be invested in the refining and natural gas segments.

Petrobras is undergoing an aggressive divestment plan that creates strategic partnerships in the areas of E&P, refining, transportation, logistics, fuel distribution among other segments.

The Brazilian domestic oil and gas sector is contracting from the low global price of oil, and Petrobras has been reevaluating its service and supplier contracts. It is a good time for U.S. companies to consider joint-venture partnerships and/or company acquisitions in Brazil. Firms who are prepared to take advantage of the situation now should be better positioned to compete for service and supplier contracts in the future.

Market Opportunities:

On April 11, 2017, the Petrobras Strategic Procurement Department provided the U.S. Commercial Service Rio a list of critical goods and services. Petrobras noted, however, that they "cannot guarantee a concrete demand for all the listed items, but they are open to evaluating market opportunities and new business models".

Category: Well services, FPSO and Rig Leasing

- FPSO and floating rig leasing
- Well integrated construction services
- Services of cementing, well evaluation, drilling, and logging
- Managed pressure drilling (MPD) services
- Fluid, completion, and casing management services
- Mudlogging
- Diving Support vessels

Category: EPC and Engineering Services, Project Design, and Revamp

- EPC/Construction & assembly of stationary oil production units (UEP) and industrial plants
- EPC/Construction & assembly of land pipelines
- Maintenance of UEPs, oil and gas pipelines
- Technical conformity assessments
- Industrial unit projects
- Oil and petrochemical processing projects
- Support to engineering project management
- Civil construction

Category: Subsea Systems and EPCI

- Flexible lines and accessories
- EPCI for subsea projects
- ROV and diving support systems
- Manifolds, subsea PLEMs and PLETs, tools, and parts
- Electro-hydraulic umbilicals and accessories
- Wet Christmas trees, associated tools, and spare parts
- Polyester cables, mooring, and anchor systems
- Drill pipe risers
- Subsea equipment (pigs, ESDVs, and others)
- Geodesy

Category: Valves, Tubing, Fittings, and Static Equipment

- Casing tubes (OCTG)
- Pressure vessels
- Heat exchangers
- Manual and actuated valves: sphere, butterfly, globe, retention, and other types
- Process ovens and towers

Category: Industrial Equipment

- Turbogenerators and turbo compressors
- Motor pumps and motor compressors
- Cranes
- Maintenance support for rotary equipment

Category: Logistics

- Vessel, airplane, and helicopter leasing
- Storage, transportation, and materials control
- Port tugs/dredges
- Land load and personnel transportation

Category: HSE, IT, and Geophysical

- Software development, maintenance, licensing, and technical support
- Seismic acquisition and processing
- Environmental Defense Centers (CDAs)

Category: Chemicals and Catalysts

- UFCC and HDT catalysts
- Chemical products for oil/gas exploration and production
- Chemicals (gas dehydrators, corrosion inhibitors, additives, and several others)
- Solvent and kerosene markers
- Special gases, nitrogen, etc
- Lubricant oil for engines and pumps

Other Items:

- Accounting payment outsourcing services
- International inspection services
- Catering, sea and land lodging services
- Facilities (cleaning services)

In the oil onshore segment, independent Brazilian oil producers noted that best sales prospects could include:

- Drilling rigs
- Flow measurement equipment
- Mobile well test plants
- Pig valves
- Pig launchers
- Chokes
- Electrical panels
- Completion tool

Aside from Petrobras, 47 local and 49 foreign companies hold oil exploration and appraisal areas in Brazil. Hence, opportunities to supply these oil companies in Brazil also exist.

Additionally, as ANP has renewed the exploration and production concession contracts of several fields lately, in exchange for increased production, deep-water oilfield life extension services should be in high demand. The same demand will apply to operational efficiency programs.

Oil platform decommissioning is another good prospect in Brazil as many of Brazil's offshore production units are aging. Of the 158 oil & gas offshore production platforms in Brazil, 67 have been in operation for over 25 years and will soon need to be decommissioned.

HIGH DEMAND: Specifically, industry sources believe that the following decommissioning areas will be in demand:

- Fixed oil platform disposal units
- Creation of artificial reefs
- Well abandonment
- Waste and effluent management for exploration and production activities
- Environmental licensing for decommissioning projects
- Decommissioning plan elaboration
- Ballast water and bio invasion
- Subsea decommissioning
- Engineering dismantling of offshore structures