

# Oil Sands and Heavy Oil Worldwide: Production and Infrastructure Markets

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## Abstracts

Dense and viscous, bitumen is counted along with extra-heavy crude oil and heavy crude oil as unconventional crude oil resources that are finding a growing role in upstream operations and producer portfolios worldwide. Between 2007 and 2011, global unconventional crude oil production rose at a rate nearly four times higher than total crude oil production (compound annual growth rate [CAGR] of 1.5% to 0.4%) and represented nearly half of the total production gains (518,000 barrels a day of 1.06 million barrels a day). In this report, SBI Energy details historical and forecast trends in heavy oil, extra-heavy oil and bitumen production (in barrels a day), associated annual capital spending (CAPEX) volumes, and annual market volumes for project infrastructure on a global, regional and country basis between 2007 and 2021.

**Oil Sands and Heavy Oil Worldwide – Production and Infrastructure Markets** is an informative and comprehensive resource featuring data-driven analysis of global crude oil resources with an American Petroleum Institute (API) gravity equal to or less than 22.2° (degrees) and viscosity above 100 centipoise (cP) or, the viscosity of maple syrup. With such features, unconventional crude oil resources like heavy oil, extra-heavy oil and crude bitumen can present unique challenges to traditional well production. In the Canadian oil sands, rounds of steam assisted gravity drainage (SAGD) projects are anticipated for completion each year through 2016, with each project using continuous injection of steam into horizontal wells to mobilize bitumen. Other industry projects are profiled worldwide, where steam well injection, water injection (secondary recovery), advanced drilling and other development strategies are employed to unlock heavy oil, extra-heavy oil, and bitumen.

SBI Energy's review of unconventional crude oil development and production provides historical and forecast (2007-2021) production rates by resource type and country

(Canada, the United States, Venezuela) or region (Latin America [excluding Venezuela], the Middle East, Russia and Central Asia, Asia-Pacific, Africa, and Europe); historical and forecast development and production CAPEX volumes for unconventional crude oil by country or region; historical and forecast infrastructure markets for well fields, production facilities, subsea fields, and offshore topsides by country or region; historical and forecast upgrader facility expenditures for synthetic crude oil production in Canada and Venezuela; and market breakouts for the leading Canadian oil sands infrastructure market by well pad infrastructure, oil treating systems, water treating systems, steam generation systems, and cogeneration equipment. Remaining report content includes technical and operational overviews of unconventional crude oil production and conversion to synthetic crude oil, leading regional drivers for unconventional crude oil development and production, and roles for North American (U.S. and Canadian) manufacturers and fabricators in regional and overseas supply chains.

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Baker Hughes

Flint Energy Services

GE Water & Process Technologies

IST/Aecon

PCL Industrial Management

Veolia WST

Weatherford

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