



Global

Corporate

Venturing

April 2018

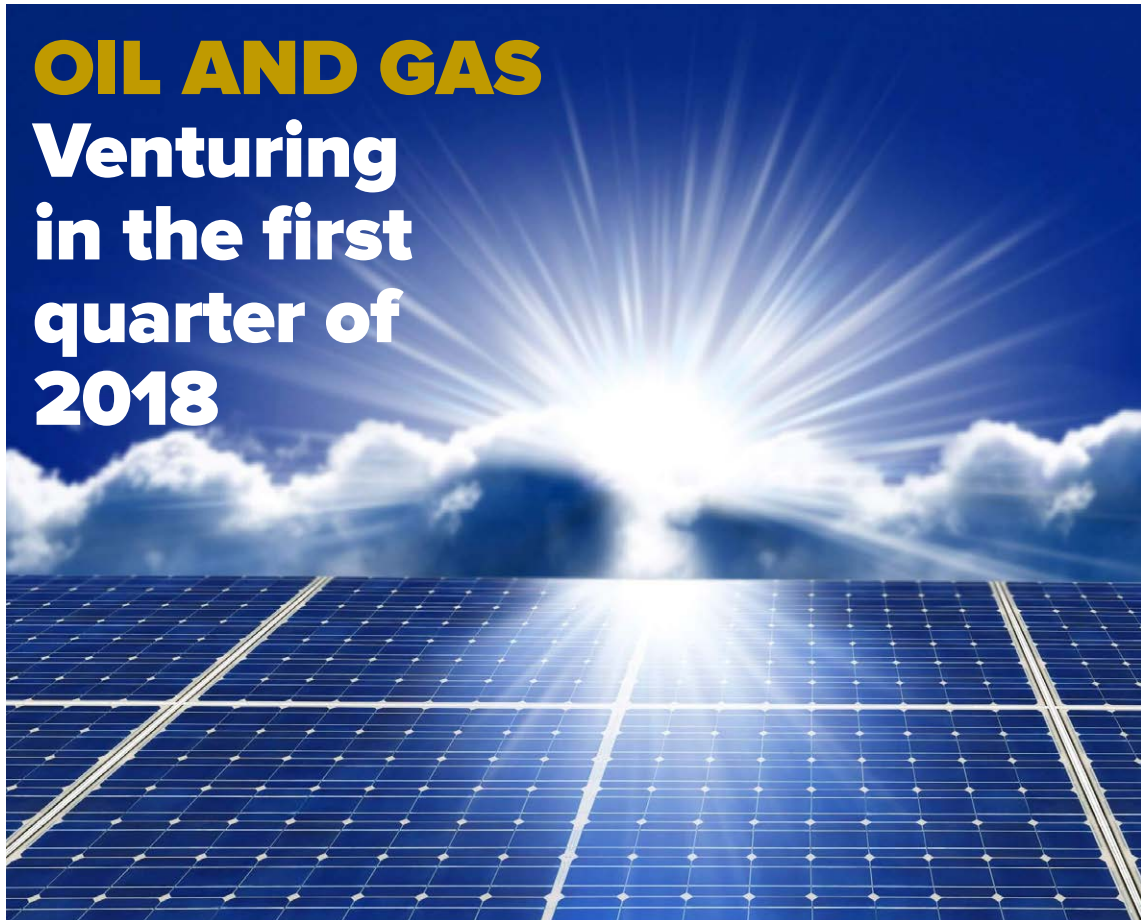
Oil and gas sector review Q1 2018



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OIL AND GAS

Venturing in the first quarter of 2018

Kaloyan Andonov, analyst at GCV Analytics

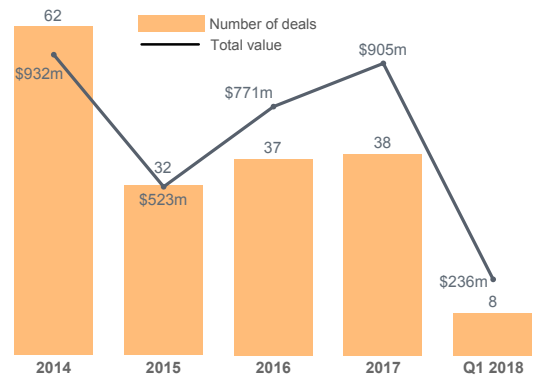
Over the past few years, there has been a general shift in the focus of investments made by oil and gas corporate venturers. The majority of disclosed investments went into non-core areas, such as cleantech and IT. More recently, there have also been commitments to businesses developing transport and mobility technologies, as oil and gas investors anticipate the disruptive impact of connected, autonomous and electric vehicles. Through the first quarter of 2018, in particular, we saw new investments in core oil and gas operation technologies, cleantech, transport as well as in IT.

The average size of deals in which oil and gas corporate venturers participated through the first quarter of 2018 was \$28.3m, considerably higher than 2017's \$25.45m.

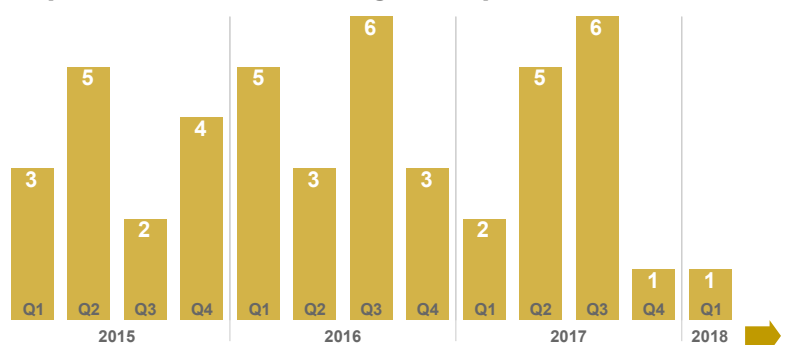
Many oil and gas corporate venturers continue to be focused on investing for a future dominated by renewable and sustainable energy as well as, since recently, in mobility and transport. This last area encompasses not only automotive but also air and other types of transport.

France-based oil and gas company Total leads in number of cleantech investments. The UK-based BP and Royal Dutch Shell have also been very active in that space, though their portfolios are more diversified. BP, Shell and Spain-based Repsol have also made investments in the

Deals by oil & gas corporate investors 2014-18

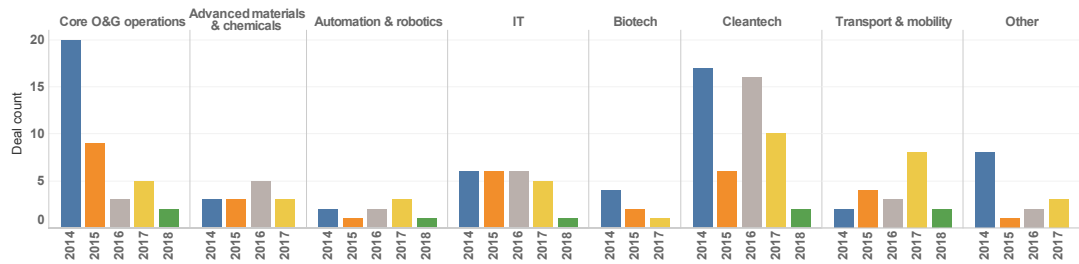


Corporate-backed deals in oil & gas enterprises 2015-18



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Type of oil & gas corporate venturing deals 2014-Q1 2018



mobility space. Norway-based Statoil has placed bets on the cleantech space, but more so on oil and gas core operation technologies. US-based Chevron has made commitments to core energy operations and IT, much like its peer Saudi Aramco.

Deals and exits

Oil and gas companies among the top corporate venture investors from the industrial and energy sectors were UK-based BP and Saudi Arabia-based Saudi Aramco.

US-based electrical generator producer EtaGen completed an \$83m series C round that featured wind turbine services provider KCK Group and energy companies American Electric Power, Centrica and Statoil. Centrica and Statoil took part through their Centrica Innovations and Statoil

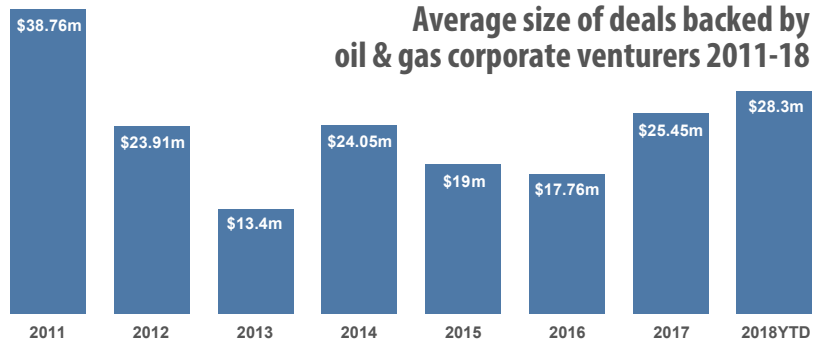
Energy Ventures units. Founded in 2010, EtaGen provides linear generator systems to commercial business customers which produce electricity by combining air and fuel to push magnets through copper coils. The systems are scalable and come in 250kW and 750kW packages.

US-based drone technology producer PrecisionHawk raised \$75m in funding in a round featuring a host of corporates. Mass media group Comcast, energy company Exelon and semiconductor technology provider Intel invested through respective subsidiaries Comcast Ventures, Constellation Technology Ventures and Intel Capital. Agribusiness Syngenta, chemicals producer DuPont and telecoms firms Verizon and NTT Docomo participated through their Syngenta Ventures, DuPont Ventures, Verizon Ventures and NTT Docomo Ventures units. Founded in 2010, PrecisionHawk has created an enterprise software platform that can be used to control unmanned aerial vehicles and enable users to process, model and analyse data collected by the drones.

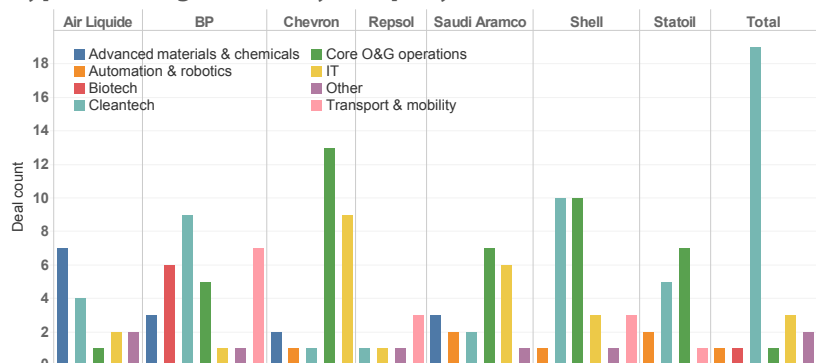
Bigdely, a US-based developer of an energy analytics platform for consumers, completed a \$27m series C round, which included energy utilities Eon and RWE. RWE participated through its renewables subsidiary, Innogy, while Exelon invested via Constellation Technology Ventures. Founded in 2011, Bigdely built an artificial intelligence-equipped web and mobile analytics platform that works with energy suppliers to provide users with details on their activity that can be used to save energy.

UK-based jet chartering marketplace operator Victor received \$18m in funding from BP Ventures, the venturing unit of BP, along with aviation services provider BBA Aviation and unspecified existing investors. Founded in 2011, Victor provides an on-demand jet chartering service that enables users to choose a jet from about 200 partner flight operators

Average size of deals backed by oil & gas corporate venturers 2011-18

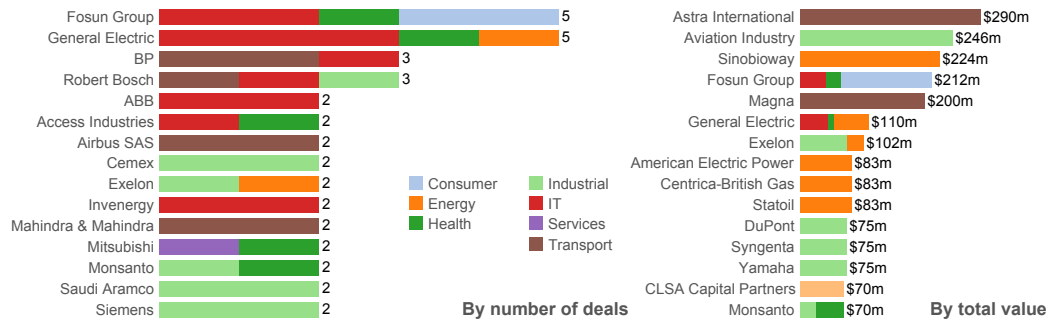


Type of oil & gas deals by company 2014-Q1 2018



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Top energy and industrial corporate investors Q1 2018



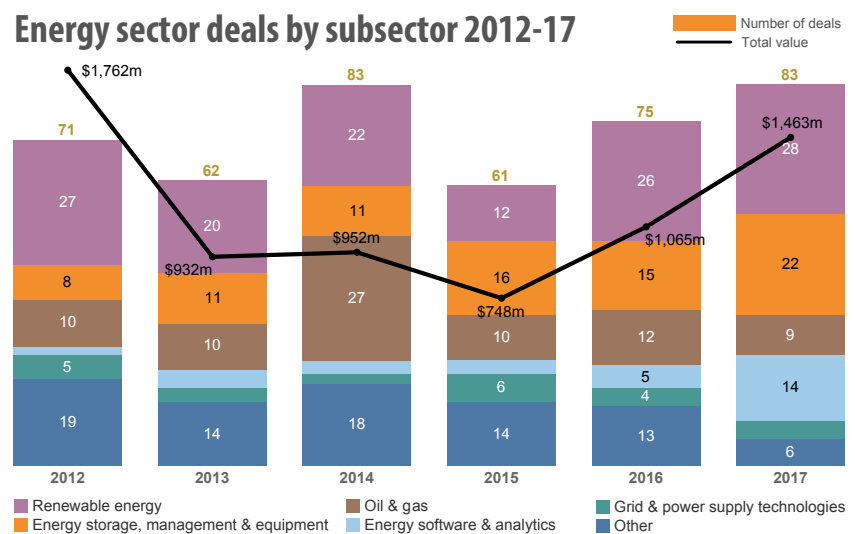
based on price and aircraft specifications. The funding will go to establishing Alyssum Group, an investment vehicle that will connect parts of the aviation industry including operators, brokers, flight planners and fuel providers so they can share data.

RigUp, a US-based oilfield services marketplace operator backed by industrial equipment manufacturer General Electric (GE) attracted \$15.8m in series B funding that was secured with a \$30m lending facility from Silicon Valley Bank. Founded in 2014, RigUp runs a bidding, compliance and invoicing platform that links oilfield operators with service and equipment providers. The portal offers access to a network of more than 22,000 providers spanning more than 100 service categories.

US-based industrial valve manufacturer Clarke Industrial Engineering closed a \$10m series B round co-led by the venturing subsidiaries of Saudi Aramco and Chevron. Saudi Aramco Energy Ventures and Chevron Technology Ventures invested alongside angel syndicate New World Angels. The funding followed a \$3.1m series A round that Clarke raised between 2015 and October 2017. Founded in 2011, Clarke produces industrial valves that control flow quality and pressure as fluids pass through conduits, such as pipelines.

BP Ventures co-led a £5.5m (\$7.7m) funding round for UK-based car subscription service Drover, along with venture capi-

Energy sector deals by subsector 2012-17



Top deals backed by oil & gas corporate venturers Q1 2018

Company	Round	Sector	Size	Venture investors
EtaGen	C	Energy	\$83m	American Electric Power Centrica-British Gas Independent KCK Group Khosla Ventures Statoil
PrecisionHawk	-	Industrial	\$75m	Comcast DuPont Exelon Innovate Indiana Fund Intel Millennium Technology Value Partners NTT Docomo Senator Ventures Syngenta Third Point Ventures USAA Verizon Yamaha
Bidgely	C	Energy	\$27m	Eon Exelon Georgian Partners Khosla Ventures RWE Innogy
Victor	B	Transport	\$18m	BBA Aviation BP undisclosed investors
Clarke Industrial Engineering	B	Industrial	\$10m	Chevron New World Angels Saudi Aramco
Drover	-	Transport	\$7.7m	BP Cherry Ventures Partech Ventures undisclosed investors
FreeWire Technologies	-	IT	\$5.7m	BP undisclosed investors
Gryphon Oilfield Solutions	-	Industrial	-	CSL Capital Management Saudi Aramco



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tal firms Cherry Ventures and Partech Ventures. The round also featured unnamed existing investors and followed £2m in a pre-seed round co-led by Version One Ventures and Forward Partners. Founded in 2015, Drover runs a mobility-as-a-service platform that allows customers to hire cars on a subscription basis.

BP Ventures also co-invested with Stanley Ventures, the investment arm of tool manufacturer Stanley Black & Decker, an undisclosed sum in US-based mobile and networked energy storage technology developer FreeWire Technologies. Founded in 2014, FreeWire Technologies manufactures mobile electric vehicle charging stations that can help traditional petrol stations meet the recharging demand of electric vehicles in the near future.

Saudi Aramco Energy Ventures co-invested an undisclosed sum along with private equity firm CSL Capital Management in US-based oilfield completion tool developer Gryphon Oilfield Solutions. Gryphon will reportedly put the funding toward commercialising and expanding its business. Founded in 2016, the company provides oil and gas related tools and services, such as zonal isolation service, coiled tubing facility and casing equipment tools.

Funds

Total Energy Ventures, the corporate venturing subsidiary of Total, agreed to form a RMB1.5bn (\$239m) fund in partnership with two other investors – equity firm Cathay Capital and Hubei High Technology Investment Guiding Fund Management, each providing RMB300m to the fund which will be overseen by the local government in the Chinese province of Hubei. Total Energy Ventures agreed to invest approximately \$48m.

The Cathay Smart Energy Fund will target China's new energy sector – renewable energy, energy storage, distributed energy, smart energy, internet-connected energy and low-carbon technologies.

People

Robert Bosch Venture Capital (RBVC), the corporate venturing subsidiary of Germany-based industrial equipment maker Robert Bosch, appointed Xiaoguang Sun head of venture capital in China. Sun moved from private equity firm Yellow River Capital, where he had been partner and managing director from 2016. He had previously spent eight years as a director at chipmaker Intel's investment arm, Intel Capital.



George Gogolev

Steel producer and mining company Severstal hired George Gogolev from state-owned fund of funds Russian Venture Company as head of disruptive innovation. Gogolev had originally joined Russian Venture Company in 2012 as the head of its high-tech product markets development initiative. He moved through a variety of roles before finally being appointed director of corporate innovation and technology transfer in August 2017.

Lisa Lambert, former managing partner at venture capital firm Westly Group, rejoined the corporate venturing community as senior vice-president and chief technology and innovation officer at UK and US-listed energy utility National Grid. Before joining Westly, Lambert had worked at Intel Corporation for 19 years as vice-president and managing director of corporate venturing unit Intel Capital's software and services group. At National Grid Ventures,

Lambert will be in charge of venture and growth capital investing, internal and external innovation projects such as technology scouting, incubations and accelerations, and technology commercialisation. ♦



Lisa Lambert

