IBM Newsroom

bp joins the IBM Quantum Network to advance use of quantum computing in energy

LONDON, Feb. 15, 2021 /PRNewswire/ -- IBM (NYSE: IBM) today announced bp has joined the IBM Quantum Network to advance the use of quantum computing in the energy industry.

By joining the IBM Quantum Network™ as an Industry Partner, bp will have access to IBM's quantum expertise and software and cloud-based access to the most advanced quantum computers available via the cloud. This includes access to a premium 65-qubit quantum computer, the largest universal quantum system available to industry today, and an important milestone on the IBM Quantum roadmap to a 1,000-plus qubit system, targeted for the end of 2023.

bp will work with IBM to explore using quantum computing to solve business and engineering challenges and explore the potential applications for driving efficiencies and reducing carbon emissions.

"bp's ambition is to become a net zero company by 2050 or sooner and help the world get to net zero. Next-generation computing capabilities such as quantum computing will assist in solving the science and engineering challenges we will face, enabling us to reimagine energy and design new lower carbon products," said Morag Watson, senior vice president, digital science and engineering for bp.

Quantum computing has the potential to be applied in areas such as: modelling the chemistry and build-up of various types of clay in hydrocarbon wells – a crucial factor in efficient hydrocarbon production; analyzing and managing the fluid dynamics of wind farms; optimizing autonomous robotic facility inspection; and helping create opportunities not yet imagined to deliver the clean energy the world wants and needs.

In 2020, bp announced its net zero ambition and its new strategy. By the end of this decade, it aims to have developed around 50 gigawatts of net renewable-generating capacity (a 20-fold increase), increased annual low carbon investment 10-fold to around $5 billion and cut its oil and gas production by 40%.

Joining the IBM Quantum Network will enhance bp's ability to leverage quantum advances and applications as they emerge and then influence on how those breakthroughs can be applied to its industry and the energy transition.

"bp joins a rapidly growing number of clients working with IBM to explore quantum computing to help accelerate the discovery of solutions to some of today's biggest challenges," added Dario Gil, Senior Vice President and Director of IBM Research. "The energy industry is ripe with opportunities to see value from the use of quantum computing through the discovery of new materials designed to improve the generation, transfer, and storage of energy."

bp joins more than 130 members of the IBM Quantum Network, a global community of Fortune 500 companies, start-ups, academic institutions and research labs working to advance quantum computing and explore practical applications. Together, members of the Network and IBM Quantum teams are researching and exploring how quantum computing will help a variety of industries and disciplines, including finance, energy, chemistry, materials science, optimization and machine learning, among many others.

For more information about the IBM Quantum Network, as well as a full list of all partners, members, and hubs, visit https://www.research.ibm.com/ibm-q/network/.

IBM Quantum Network™ is a trademark of International Business Machines Corporation.

About bp
bp's purpose is to reimagine energy for people and our planet. It has set out an ambition to be a net zero company by 2050, or sooner, and help the world get to net zero, and recently announced its strategy for delivering on that ambition. For more information visit bp.com.

About IBM Quantum
IBM Quantum is an industry-first initiative to build universal quantum systems for business and science applications. For more information about IBM's quantum computing efforts, please visit www.ibm.com/ibmq.

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Cautionary statement
In order to utilize the 'safe harbor' provisions of the United States Private Securities Litigation Reform Act of 1995 (the 'PSLRA'), bp is providing the following cautionary statement. This press release contains certain forward-looking statements – that is, statements related to future, not past events and circumstances – which may relate to one or more of the financial conditions, results of operations and businesses of bp and certain of the plans and objectives of bp with respect to these items. These statements are generally, but not always, identified by the use of words such as 'will', 'expects', 'is expected to', 'aims', 'should', 'may', 'objective', 'is likely to', 'intends', 'believes', 'anticipates', 'plans', 'we see' or similar expressions. In particular, the following, among other statements, are all forward-looking statements: statements relating to bp's net zero carbon goals including its ambition to be a net zero company by 2050 or sooner and to help the world reach net zero; statements relating to bp's 2030 aims including to have developed around 50 gigawatts of net renewable generating capacity, to have increased annual low carbon investment 10-fold to around $5 billion and to cut oil and gas production by 40%. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will or may occur in the future and are outside the control of bp. Actual results may differ from those expressed in such statements, depending on a variety of factors including the risk factors set forth in our most recent Annual Report and Form 20-F under "Risk factors" and in any of our more recent public reports. Our most recent Annual Report and Form 20-F and other period filings are available on our website at www.bp.com, or can be obtained from the SEC by calling 1-800-SEC-0330 or on its website at www.sec.gov.

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