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New Report from Hitachi ABB Power Grids Confirms North America's Sustainable Energy Future

Economics will drive over 37 GW of coal generation offline, making way for gas and renewable growth. Natural gas is expected to remain the dominating, long-term energy source to 2044.

Zurich, 17 September, 2020 – A new report from Hitachi ABB Power Grids, a global technology leader, confirms that the future of the North American energy industry is undeniably green. According to the report, titled 'North American Power Reference Case: Spring 2020,'*1 renewable energy generation is estimated to see double-digit growth in the next 25 years. The Report draws upon data compiled by the business entity's intelligence service, Velocity Suite*2, which has been informed by its proprietary capacity expansion model, and its well-established PROMOD production cost model.

Driven by declining capital costs and overlapping state, utility, and corporate cleanenergy priorities and regulations, renewable energy and natural gas are expected to dominate North American power generation for the next two decades. The Report forecasts that almost 50 percent of coal power generation will cease by 2044, with economics being the single biggest factor contributing to one third of that decline. At that time, solar is forecast to generate twice what coal produces now — four times the growth expected from where we stand today. Furthermore, wind generation is expected to reach 191 GW – almost double what coal will deliver in 2044.

"By 2044, North America's dependency on fossil fuel-based energy sources will be a fraction of what it is today," said Greg Toothaker, Vice President, Energy Portfolio Management at Hitachi ABB Power Grids. "Combined, the global pandemic and the oil price shock have led to a forecasted 20 percent decrease in overall energy spending for 2020, whilst major oil companies have left capital investments in renewables untouched, thus reinforcing the future of sustainable energy in North America."

"ARC views Hitachi ABB Power Grids' forecasts as timely and relevant, and holds this research in high regard. We also feel that this insight would be valuable to any participant in the North American energy market seeking to deliver more renewables to the energy mix," said Ed O'Brien, ARC Advisory Group, Inc.

Report - key highlights:

✓ Natural gas key to renewable investments. Cheap natural gas prices and the energy source's ability to fill in where sustainable energy falls short will speed investment growth. Prices for natural gas are expected to remain under \$4/MMBtu until the early 2030's. By 2044, natural gas is likely to account for over 43 percent of total North American consumption and is expected to remain the largest power supply source – outstripping energy generation from wind and solar. As an energy source, gas is regarded as a 'stop-gap' solution for renewables.

- ∠ Load growth from COVID-19 expected to rebound in 2021. The 2020 load growth is expected to be about five percent lower on average across all regions compared to pre-economic downturn forecasts. Despite lower energy consumption, the pandemic has impacted the oil and gas industry in ways previously unseen, greatly affected by response measures such as social distancing and stay-at-home, which resulted in changes in energy consumption habits. A full economic recovery for the oil and gas industry by 2023 is predicted in the Report.
- Renewable construction costs drop year-on-year. The Report also predicts that construction costs for onshore wind will drop by two percent each year through to 2030. In turn, solar construction costs in 2044 are expected to drop to about \$1,100/kW from their current cost of \$1,400/kW. These lowered construction costs combined with a four-and-a-half percent price drop in certain battery storage systems continue to improve the attractiveness of renewable energy sources.

The report also includes details on regional energy source growth and declines, as well as international trends through to 2044, taking into account the impact of the COVID-19 pandemic.

Note:*1 https://software.response.e.abb.com/EPM_Market_Intelligence_Services

*2 https://www.hitachiabb-powergrids.com/offering/product-and-system/enterprise/energy-portfolio-management/market-intelligence-services/abb-velocity-suite

Further information

For more detailed Report findings or to purchase the 'North American Power Reference Case: Spring 2020' Report, please visit:

https://software.response.e.abb.com/EPM Market Intelligence Services

About Hitachi ABB Power Grids Ltd.

Hitachi ABB Power Grids is global technology leader with a combined heritage of almost 250 years, employing around 36,000 people in 90 countries. Headquartered in Switzerland, the business serves utility, industry and infrastructure customers across the value chain, and emerging areas like sustainable mobility, smart cities, energy storage and data centers. With a proven track record, global footprint and unparalleled installed base, Hitachi ABB Power Grids balances social, environmental and economic values. It is committed to powering good for a sustainable energy future, with pioneering and digital technologies, as the partner of choice for enabling a stronger, smarter and greener grid. https://www.hitachiabb-powergrids.com

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