As Brexit looms, Northern Ireland faces power shortages, political turmoil

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By Andrew Coffman Smith

Northern Ireland may face severe power shortages after more than one-third of its electricity generation failed to secure capacity contracts under a new wholesale electricity market integrating Ireland's grid with the wider European power system.

In a worst-case scenario, under a "no deal" Brexit that cuts Northern Ireland's power system off from the independent Republic of Ireland, the north could expect blackouts and steep electricity price hikes starting in March 2019, when the United Kingdom departs the European Union.

Adding to the crisis, the collapse of the regional government has endangered a cross-border transmission project needed to import new electricity supplies.

To avoid calamity, Northern Ireland's utility regulatory agency and its power grid operator are in talks with power generator AES Corp. to keep online almost 660 MW of coal- and natural gas-fired capacity, at two separate facilities, currently slated for early retirement.

Northern Ireland's only coal-fired units, at AES Corp.'s Kilroot facility in Carrickfergus could soon shut down.

Source: Richard Luney

Northern Ireland's capacity free-fall

Poor planning and unforeseen consequences have helped create Northern Ireland's looming energy crisis. Despite being a part of the UK and operating under an all-Ireland Single Electricity Market since 2007, Northern Ireland's power system is only tenuously connected to Britain and the Republic of Ireland, largely by two transmission lines: The 250-kV, 500-MW undersea high-voltage, direct-current Moyle Interconnector to Scotland, which historically operates at half capacity, and a 275-kV, 300-MW overhead line to the Republic of Ireland that was offline for 20 years after being sabotaged by the outlawed Irish Republican Army in 1975.

According to the Republic of Ireland's state-owned EirGrid Group — parent company of the Republic of Ireland's power grid operator, EirGrid, and of Northern Ireland's grid operator System Operator for Northern Ireland Ltd., or SONI — more than three-fourths of the north's 2,690 MW of installed dispatchable generation capacity in 2016 came from three power plants. Two of those plants are owned by AES Corp. and located in County Antrim: the gas- and oil-fired Ballylumford facility and the coal- and oil-fired Kilroot facility. In addition, the north had about 1,120 MW intermittent renewables, mostly wind, to meet an all-time winter peak demand of 1,777 MW.

Northern Ireland customers pay some of the highest electricity prices in Europe. Blaming increases in fuel costs, Northern Ireland's largest electricity supplier — Viridian Group Holdings Ltd subsidiary Power NI Energy Ltd — in October raised rates almost 14%, or £68 per year for an average household, after raising them nearly 6% in 2017, reported the BBC.

To help lower energy costs, Northern Ireland has merged its power system with the wider European power market. On Oct. 1, after four years of planning, EirGrid and SONI launched the Integrated Single Electricity Market, or I-SEM, which overhauled the all-island market and gave access to Europe's continent-wide markets.
The I-SEM requires generators and power suppliers to bid into day-ahead, intra-day and balancing markets. These new market arrangements are "designed to ensure greater competition and save consumers money by putting downward pressure on wholesale prices," SONI spokesperson Natasha Sayee said in an email.

The launch of I-SEM coincided with the scheduled Oct. 1 retirement of two dual-fuel, coal- and oil-fired units totaling about 515 MW at Kilroot, in addition to the Dec. 31 closure of a 145-MW gas-fired unit at Ballylumford. AES announced those retirements after the units failed to win one-year commitment contracts through the I-SEM's first capacity auctions, in December 2017. Without the capacity contracts, which came into effect Oct. 1 and pay generation units to be available at all times to meet demand, AES said the three units cannot cover their fixed costs.

However, Northern Ireland's Utility Regulator has yet to approve the retirements and negotiations are underway between the regulator, SONI and AES to delay them. In an Oct. 8 email, regulators confirmed that they are in the "final stages of discussions," while AES in a Oct. 3 news release expressed hope that the parties will find a way to keep the units online to ensure grid reliability.

The loss of the Kilroot and Ballylumford units would deepen and hasten the looming power shortage. A 2017 report by EirGrid foresaw a capacity deficit in Northern Ireland of 100 MW for 2020 and 220 MW for 2024, as a result of previously scheduled retirements, including the two Kilroot coal units in 2023. Retiring the Kilroot and Ballylumford units in 2018 could increase the deficit to 380 MW for 2019 — or worse if 425 MW of assumed "capacity reliance" imports from the two existing interconnectors become unavailable.

U.K. Member of Parliament Sammy Wilson, of Northern Ireland's Democratic Unionist Party, slammed the "complacent" claim that the north can do without Ballylumford and Kilroot. "On many days, Ballylumford alone supplies over 40% of Northern Ireland's electricity," Wilson said in an email. "I am at a loss to understand how one can remove 40% of the electricity supply and not face outages."

Blackouts would devastate Northern Ireland's economy and scare off investment, "especially since many of the investors we are attracting now are high energy users," Wilson said.

Northern Ireland Assembly member Jim Allister, of the Traditional Unionist Voice, blamed mismanagement by EirGrid for Northern Ireland's "perilous dependency" on southern power supplies, despite SONI's obligation to maintain operational independence.

Fears of an 'insecure, isolated NI market'

A "no-deal" Brexit, in which the U.K. would leave the EU without agreed arrangements on trade and other matters, could worsen Northern Ireland's energy crisis. Anonymous U.K. officials working on Brexit told the BBC in late September that if there is no deal, resulting in a "hard" Irish border with tariffs and custom checks, Northern Ireland's electricity market could be physically cut off from the south, "leaving an insecure, isolated NI market" with rolling blackouts, reduced power supplies and electricity price hikes of up to 34%.

Energy chaos would likely prompt government intervention. An earlier U.K. government contingency plan, leaked in July to the Financial Times, said that thousands of generators on barges in the Irish Sea would be required to keep Northern Ireland's lights on. During a two-week mass strike by Protestants in 1974, Britain floated the idea of nuclear submarines powering Northern Ireland but scrapped the plan for being incompatible with the grid.

The surest way to safeguard the Northern Ireland grid, the unnamed U.K. officials told the BBC, is through continued U.K. participation in, and regulatory alignment with, the EU's Internal Energy Market. A hard Brexit would make energy trading between Northern Ireland and Europe extremely difficult or impossible.

In an email, a spokesperson with the U.K. Department for Business, Energy and Industrial Strategy said that Britain is working to preserve Ireland's SEM in any post-Brexit scenario. Nevertheless, "we must ensure we are prepared for all eventualities and develop plans for a range of scenarios, including the unlikely event that negotiations with the EU break down," they said.
"There is no immediate risk to electricity security of supply in NI, either as a result of the new I-SEM or related to Brexit uncertainties," Utility Regulator spokesperson Adele Boyle said in an email. "We will take no chances with security of supply."

**Political deadlock continues**

The absence of a fully-functioning government is also contributing to holdups in energy infrastructure construction. In January 2017, Northern Ireland's power-sharing administration collapsed over a flawed wood pellet-heating subsidy. Fueled by sectarian divisions, the political deadlock continues.

With the NI Assembly and Executive both shut down, civil servants assumed decision-making and in January the Northern Ireland Department of Infrastructure green-lighted the planned 400-kV, 1,500-MW North South Interconnector, which seeks to tap into south's larger power pool as a solution to the north's power needs. The controversial £250 million high-voltage alternating current line would run about 140 kilometers from County Meath in the south to a planned substation in County Tyrone in the north.

Opponents in the south have appealed the overhead line's approval to the Irish Supreme Court, and the Department of Infrastructure's approval in the north is under judicial review after an appeals court ruled in July that the agency lacked authority to approve an earlier infrastructure project without Executive oversight. The Irish News reported that Department of Infrastructure officials warned that halting the Interconnector threatens blackouts by 2021 as demand outstrips supply. Meanwhile, a 480-MW gas-fired Belfast plant being developed by Evermore Energy is also in permitting limbo.

Electricity Association of Ireland CEO Dara Lynott said in an email that the trade group is waiting on London's newly appointed secretary of state for Northern Ireland to deliver legislation enabling key decision-making without the executive.

Even if the Interconnector is approved, it will be too late to meet the 2021 capacity deficit. According to SONI, construction is anticipated to begin in 2019 at the earliest, and the line will not come online until 2023.

"With virtually all our eggs in the North South Interconnector basket, which is slipping further away, the threat to our security of supply is increasing," unionist lawmaker Allister said.

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**A Belfast street mural highlights Northern Ireland's centuries-old sectarian divide, which fuels political gridlock at the expense of energy projects.**

*Source: Andrew Coffman Smith*

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