Energy Element / January 2020

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Warm and windy December sees demand drop

Both day-ahead gas and power contracts dropped last month as December saw temperatures above seasonal normal levels and record levels of LNG imports. These falls fed into the forwards curve, with all seasonal gas and power contracts declining.

Day-ahead gas prices reversed some of the previous month's gains, falling by 15.5% to average 32.42p/th in December. Prices dropped last month due to greater supply versus demand, which is unusual at this time of year where demand typically increases. Temperatures initially dropped in December, but rose to nearly 9°C on 7 December and remained an average of 1.51°C above seasonal normal levels for the rest of the month, resulting in lower than normal demand. High LNG imports added to the decline in prices, with send-out reaching a fresh 11-year high of 137.8mcm on 5 December as the Isle of Grain looked to offload some of its LNG storage. These downward price drivers also impacted upon seasonal gas contracts, which fell by 6.9% on average, extending the previous month's losses.

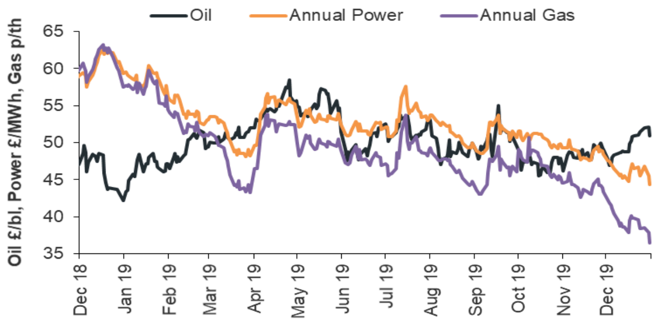
Day-ahead power also reversed some of November's gains, falling 12.8% to average £40.16/MWh in December as power demand dipped amid higher than seasonal normal temperatures. Power prices were also weighed upon by high wind speeds across the UK, with wind generation surpassing 16GW. This even resulted in negative day-ahead hourly power prices on 9 December for the first time in the GB market. Power prices were at their lowest in the run up to Christmas as industrial demand suffered and finished the decade at a fresh two-month low of £33.00/MWh. A comfortable month for supply and demand, alongside lower gas prices, caused seasonal power prices to drop by 3.3% on average.

Oil prices rise following OPEC cut decision, EU ETS carbon climbs

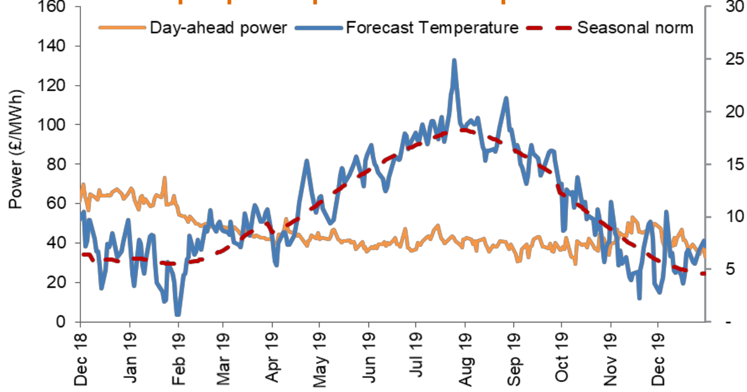
Brent crude oil gained a further 3.7% to average $64.86/bl as oil prices in December continued to find some stability. The outcome of the meeting between OPEC and OPEC+ allies in Vienna on 5-6 December was an agreement to cut oil supplies by 1.7mn barrels per day, equal to 1.7% of the current global daily supply. Further support was provided when President Donald Trump tweeted that the US was "getting close to a big deal with China", a statement which appeared to hold true as China agreed in principle to sign a Phase One Trade Deal and are expected to physically sign early in the New Year. The news resulted in oil trading close to $70.00/bl at sixth month highs, but finished the decade slighty lower at $66.76/bl.

EU ETS carbon rose 3.0% to average €25.32/t in December. Carbon remained relatively flat for the first half of the month, but notably rose following the result of the UK general election. API 2 coal fell 7.0% to average $59.34/t, continuing its steady decline. Aberthaw coal-fired plant in Wales closed last month, leaving only five remaining operational in the UK.

Crude oil and annual wholesale gas and power prices



Spot power prices and temperatures



The month-ahead: Continued mild weather to hamper demand

Gas and power prices could struggle to rise in January, with forecasts of above seasonal normal temperatures expected to restrict demand and a comfortable supply outlook amid strong LNG imports. The full extent of OPEC supply cuts will be seen in the New Year as trading returns to normal, while EU ETS carbon prices could remain volatile as the UK prepares to leave the EU.

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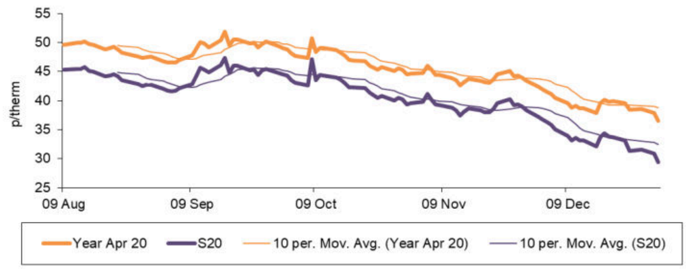
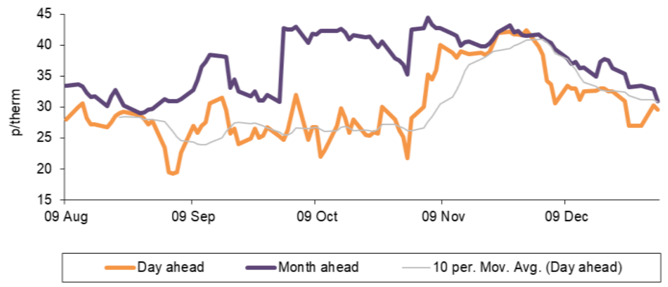
Annual gas prices



All seasonal gas contracts continued to fall in December, down a further 6.9% on average. Summer 20 gas was 13.8% lower, averaging 33.60p/th and winter 20 gas was down 7.5% to finish the month at 45.41p/th. Future gas trading contracts continued to fall with oversupply in the global LNG market expected.

The annual April 20 gas contract dropped 10.3% to average 39.51p/th, 29.1% lower than in December 2018 when it averaged 55.70p/th.

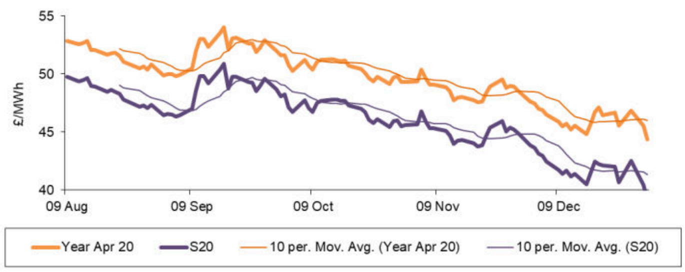
Spot gas prices



Day-ahead gas prices fell 15.5% to average 32.42p/th in December following a sixth month high in November. The month-ahead contracts also fell, with January 20 and February 20 sliding 16.4% and 15.7% respectively to average 36.89p/th and 37.56p/th December.

Gas prices subsided in December with lower demand, as temperatures rose above seasonal normal levels for much of the month, following a cold November where demand was relatively higher. Record high LNG send-out early in December also contributed to an oversupplied gas system which weighed further on prices.

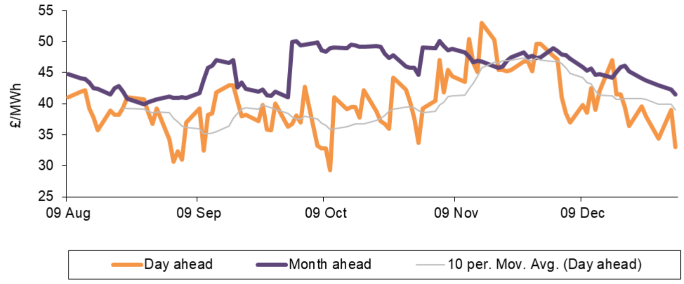
Annual power prices



Seasonal power contracts moved down 3.3% on average, with summer 20 power declining 7.0% to £41.86/MWh, and dropping below £40/MWh at the end of the month for the first time since April. The winter 20 power contract slipped 3.7% to £50.47/MWh.

The annual April 20 power followed its gas counterpart and lost 5.2% in December, averaging £46.17/MWh and finishing the decade at £44.38/MWh. This was 16.5% lower than in December 2018, when the contract averaged £55.28/MWh for the month.

Spot power prices



Day-ahead power declined 12.8% to average £40.16/MWh in December, where similarly to the day-ahead gas contract, it fell following high prices in November. January 20 power lost 10.3% to average £45.39/MWh.

Mirroring the trend seen in gas prices, day-ahead power fell following reduced demand on rising temperatures, though record high wind generation put further pressure on power prices, with day-ahead hourly prices trading at negative values for the first time in the GB market.

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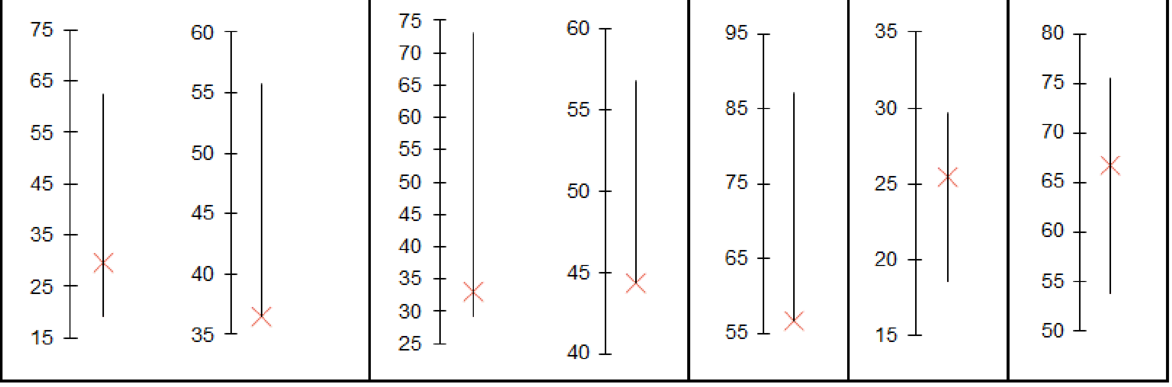
Key market indicators: 31/12/2019

		Gas (p/th)		Electricity (£/MWh)		Coal	Carbon	Brent crude
		Day-ahead	Year-ahead	Day-ahead	Year-ahead	($/t)	(€/t)	($/bl)
This month	31 Dec 19	29.55	36.48	33.00	44.38	56.60	25.44	66.76
Last month	2 Dec 19	39.80	42.32	47.75	47.62	63.00	24.71	61.84
Last year	31 Dec 18	59.10	52.74	65.00	54.12	85.75	25.18	53.82
Year-on-year % change		(50%)	(31%)	(49%)	(18%)	(34%)	1%	24%
Year high		62.50	55.73	73.00	56.79	87.25	29.66	75.54
Year low		19.30	36.48	29.25	44.38	56.60	18.60	53.82

This table shows the price at the end of this month compared with prices from the previous month and year. The graphs show the position of this month's prices with a red X and the range of prices over the year is represented by the black line.



Commodities

Carbon: EU Emissions Trading Scheme carbon is quoted as over-the-counter (OTC) latest opening prices. All carbon prices are in euros per tonne (€/EUA).

Coal: Coal is quoted as OTC latest opening prices. All coal prices are in US dollars per tonne ($/t).

Electricity: UK power base-load and peak-load are quoted as OTC latest opening prices. All UK electricity prices are in pounds per megawatt hour (£/MWh).

Gas: UK National Balancing Point (NBP) gas is quoted as OTC latest opening prices. All UK gas prices are in pence per therm (p/th).

Oil: Brent crude oil is quoted as OTC latest opening prices. All Brent crude oil prices are in US dollars per barrel ($/bl).

Language/ terms

Bearish: A bearish market shows a general decline in prices over a period of time.

Bullish: A bullish market shows a general increase in prices over a period of time.

Curve: A graph of forward prices over a future time period.

Margin: The indicated UK imbalance of a given settlement period. It is the difference between the sum of the indicated generation available, and the national demand forecast made by National Grid.

Over-the-counter (OTC): The trade of a commodity directly between two parties, often on standardised terms.

Spark/ Dark spread: The theoretical net income of a gas/ coal-fired power plant from selling electricity having purchased the necessary fuel. The clean spark/ dark spread is this net income adjusted for the cost of carbon.

Disclaimer

Conservatives win majority in General Election

The Conservative Party won the 2019 General Election, with a majority of 80 seats. The party won 365 seats across the UK, an increase of 47. Labour had its worst result since 1935, losing 59 seats and falling to 203 in total. Labour Leader Jeremy Corbyn announced he would not take the party into the next General Election, with a leadership election expected to take place in 2020.

The Liberal Democrats' seat tally fell 1 to 11, with Leader Jo Swinson losing her seat to the SNP. The SNP increased their number of seats by 13, to 48 in Scotland. The Green Party retained their 1 seat. The Brexit Party gained no seats. The majority allows Prime Minister Boris Johnson to go forward with plans to take the UK out of the EU on 31 January, and fulfil the other promises put forward in the Conservative manifesto. Significant energy policy pledges in the manifesto include:

- Reach net zero Green House Gas emissions by 2050.
- Delivering 40GW of offshore wind capacity by 2030, as well as enabling new floating wind farms.
- £9.2bn for energy efficiency measures in households, schools and hospitals.
- £1bn to create a fast-charging network that will ensure everyone is within 30 miles of a rapid EV charging station.
- Consult on a date to stop the sale of conventional vehicles.
- £800mn to build a fully deployed carbon capture storage (CCS) cluster by the mid-2020s.
- £500mn to help energy-intensive industries to transition to low-carbon techniques.

Energy UK, which represents energy suppliers, said: "While Brexit will continue to dominate the political agenda - and there will be important issues to now focus on as we look to the future relationship with Europe - we must also quickly break the hiatus in energy policy, therefore it is welcome to hear the continued commitment from the Prime Minister to delivering net zero emissions by 2050."

RenewableUK, representing wind energy generators, said: "We look forward to working with the new government to grow the UK's renewable energy sector and deliver on the commitments to 40GW of offshore wind by 2030 and developing floating wind projects. Rapid expansion of renewables, including low cost onshore wind and innovative tidal energy, is key to decarbonising our economy and will provide huge benefits for consumers and businesses across the UK."

The Renewable Energy Association (REA) said: "We welcome the Conservatives' commitment to achieve net zero targets, as set out in their manifesto. However, to achieve this, the new Government must be more ambitious and commit to wholesale systems change across energy."

BBC Conservatives Energy UK RenewableUK REA

UN Secretary-General "disappointed" with outcome of COP25 (ES695)

UN Climate Change Conference COP25 ended on 15 December, with a compromise deal for all delegates to present new, improved carbon cutting plans by the time of COP26 in Glasgow. As reported by the *BBC*, divisions arose over plans for carbon markets, with the issue being delayed until COP26. Supported by the EU and small island states, the push for higher ambition was opposed by a range of countries including the US, Brazil, India and China. UN Secretary-General António Guterres said: "I am disappointed with the results of COP25. The international community lost an important opportunity to show increased ambition on mitigation, adaptation & finance to tackle the climate crisis. I am more determined than ever to work for 2020 to be the year in which all countries commit to do what science tells us is necessary to reach carbon neutrality in 2050 and a no more than 1.5-degree temperature rise."

During the conference, Guterres urged business and civil society leaders to press governments into articulating policies that support private sector efforts to address climate change. Speaking on 11 December, he said: "I'm meeting more and more business leaders that complain that they cannot do more because governments will not allow them to do so, because of the environment that is still created in the bureaucratic, administrative, tax regulatory and other frameworks that are under government control."

BBC UN - Secretary-General statement UN

EC presents European Green Deal for 2050 net zero target

The European Commission (EC) presented the European Green Deal on 11 December, which sets out how to make Europe the first climate-neutral continent by 2050

The EC said the deal, shown in Figure 1, provides a roadmap to move to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. The EC will present the first 'European Climate Law' by March 2020. It will also present the Biodiversity Strategy for 2030, the new Industrial Strategy and Circular Economy Action Plan, the Farm to Fork Strategy for sustainable food and proposals for pollution-free Europe. Work will begin immediately for increasing the ambition on Europe's 2030 emissions targets, setting a realistic path to the 2050 goal. By summer 2020, there will be a comprehensive plan to increase the EU 2030 climate target to at least 50% and towards 55% of emissions compared with 1990 levels "in a responsible way".

Figure 1: The European Green Deal

Source: EC

To achieve these additional emissions reductions, the EC will, by June 2021, review and propose to revise where necessary, all relevant climate-related policy instruments. This will contain the Emissions Trading System, including a possible extension of European emissions trading to new sectors of the economy. It will also include Member State targets to reduce emissions in sectors outside the Emissions Trading System, and the regulation on land use, land use change and forestry. The EC will propose to amend the Climate Law to update it accordingly.

Meeting the objectives of the European Green Deal will require significant investment, the EC said. Achieving the current 2030 climate and energy targets is estimated to require €260bn (£219bn) of additional annual investment, representing about 1.5% of 2018 GDP.

EC

CCC urges action from new government

The Committee on Climate Change (CCC) has written to Prime Minister Boris Johnson, calling for his new government to accelerate action on climate change. Published on 18 December, the letter was written by CCC Chair Lord Deben, who set out five priorities for the government.

These were: An ambitious and properly funded strategy for entirely removing fossil fuels from the UK's building stock, with action beginning immediately and standards that set a clear path for the longer-term. Rapid progress in the implementation of the manifesto commitment to consult on an earlier phase-out of petrol and diesel cars, ideally by 2030. Delivering on the manifesto commitment for 40GW of offshore wind by 2030 – and ensuring that any market reforms are complementary to the net zero goal. Developing an ongoing mechanism to pay for emissions reductions from industry and an approach to delivering hydrogen and CCS infrastructure, alongside promised capital support. Introducing a world-leading package through the Agriculture and Environment Bills to cut emissions from agriculture.

CCC

Thinktanks put forward market-led approaches to net zero

Two centre-right thinktanks have released reports on how a market-led approach could enable the UK to achieve net zero, following the Conservatives winning the General Election.

Centre-right thinktank Onward published a report on 28 November that presents a plan to decarbonise the UK economy "without undermining competitiveness, hitting consumers or overburdening taxpayers." The report, *Costing the Earth*, recognises the significant progress to date, such as the near complete phase-out of coal in the GB power sector. However, it highlights lack of progress in decarbonising heat and transport. It claims the incentives regime for carbon is patchy, complex and highly susceptible to abrupt policy changes; this has ended up hitting consumer bills and undermining the living standards of the poorest in society. The report sets out a "principled approach to net zero", guided by six core principles:

- The use of markets where possible.
- A balance between government action and market economics to foster innovation.
- Maximising synergies between decarbonisation and other societal challenges, such as public health and well-being.
- Ensuring a just transition while maintaining fiscal prudence so that it is fair for present and future generations.
- Efficient institutional frameworks to ensure that the government and regulators act to achieve net zero target.

Additionally, Thinktank Policy Exchange has urged the government to take a market-led approach to help reduce emissions in a new report on the new government's first 100 days in office. Published on 15 December, The First Hundred Days charts the policies that the new Conservative government should implement in the first 100 days of office in order to achieve its manifesto pledges. Policy Exchange highlights that the Conservative manifesto promised "our first Budget will prioritise the environment". The thinktank says it should do so in a way that galvanises industry to invest in technologies that will propel the UK to net zero emissions by 2050.

Policy Exchange made a number of recommendations for policies the government should announce at the next Budget. A Comprehensive Fiscal Review should take place, with the aim of aligning all fiscal policies with net zero. The outcome of this should be a set of net zero principles to apply to all tax and spending policies.

VAT on critical clean energy technologies, such as batteries and solar panels, should be immediately eliminated. A broader review of VAT, taking advantage of "post-Brexit freedoms" should ensure that all emissions reduction technologies are consistently zero-rated, while polluting technologies should be standard rated. The review should also consider plans for an economy-wide carbon tax, with border adjustments and dividends, in case current plans for an EU Emissions Trading Scheme (ETS)-linked UK ETS do not prove viable. Policy Exchange urges for the implementation of the Conservative manifesto commitments to nuclear, hydrogen and carbon capture and storage (CCS), including but not limited to the £800mn promised for a CCS industrial cluster. The thinktank highlights the use of small modular reactors and the importance of concurrent development across different generations of nuclear technologies.

Onward Policy Exchange

Private sector companies pledge net zero carbon buildings

The World Green Building Council announced on 11 December that seven world-leading private sector companies have pledged to cut emissions from their buildings to net zero, by signing up to the Net Zero Carbon Buildings Commitment. The companies include Goldman Sachs, Hudson Pacific Properties, Lendlease Funds Management Australia and Petinelli. They have pledged to take urgent action to ensure their own portfolios of buildings operate at net zero carbon by 2030 at the latest. Additionally, the Building Societies Association (BSA) announced on 11 December that it has joined the Coalition for the Energy Efficiency of Buildings (CEEB). The CEEB aims to develop the market for financing net zero carbon and climate-resilient buildings in the UK by accelerating the pace of financial innovation and scale-up. The formation of the CEEB, which comprises global experts from financial services, local and national government, energy and construction industries and academia, was announced by the Green Finance Institute on the same day.

World Green Building Council BSA

NEST publishes more ambitious climate strategy

Pension scheme NEST, representing 8.5mn UK workers, announced on 18 December that it is boosting efforts to tackle the risks of climate change. Nest launched its latest Responsible Investment report with news about how it is incorporating environmental, social and governance (ESG) issues in new asset classes like private infrastructure debt.

The scheme's Climate Aware Fund (CAF) – a key tool which helps give the 99% of members invested in Nest's default funds exposure to global stocks and shares – increases investment into companies which are seeking to adhere with the UN's Paris Accord agreement to limit global warming to 2C. However, Nest said wants to go further and is currently testing a more ambitious target of 1.5C.

NEST

Growth in global coal power generation reached an all-time high in 2018

Coal remains a major fuel in global energy systems, accounting for almost 40% of electricity generation and more than 40% of energy-related carbon dioxide emissions. Published on 17 December, the International Energy Agency's (IEA's) annual coal market report, Coal 2019, has analysed recent developments and forecasts through 2024 for coal supply, demand and trade. The report finds that the rebound in global coal demand continued in 2018, driven by growth in coal power generation and reached an all-time high. Coal also maintained its position as the largest source of electricity in the world with a 38% share.

Coal use in the European Union (EU) remains under heavy pressure from policies to reduce air pollution from coal plants and raise carbon prices, as well as decisions by several countries to adopt plans to phase out coal power generation. Wind and solar PV continued to increase their shares of power generation in 2019 and unusually low gas prices pushed a lot of coal out of the market. In IEA's forecast, coal recovers part of its competitiveness in the coming years, but coal plant retirements and further growth in renewables combine to reduce coal generation by more than 5% per year through 2024.

IEA

London is to launch its first 24/7 zero emission street to improve air quality

The City of London Corporation has granted plans to launch the UK's first 24/7 zero emission street to improve air quality in the Square Mile. Announced on 16 December, Beech Street, much of which runs under the Barbican Estate, is set to be restricted to zero emission vehicles, cyclists and pedestrians by Spring 2020, pending final approval by Transport for London (TfL). The experimental traffic order will run for a maximum of 18 months, during which time the impact on air quality and traffic will be monitored. It will use the trial to consider whether similar measures are suitable for other streets in the City of London. Chair of the City of London Corporation's Environment Committee Jeremy Simons said: "These measures are another important step towards cleaner air in the City. Drastically reducing air pollution requires radical actions, and these plans will help us eliminate toxic air on our streets."

City of London

PRI: mixed fortunes for companies responding to climate policies

New analysis by Vivid Economics has shown how the inevitable policy response to climate change will cause re-pricing of many the world's most valuable companies by 2025. Published on 9 December, Forecast Policy Scenario: Equity Markets Impacts was commissioned by Principles for Responsible Investment (PRI) – a proponent of responsible investment. It finds that 100 of the worst performing companies in Morgan Stanley Capital International's global equity index could lose 43% of their current value, equivalent to $1.4tn (£1.06tn). The 100 best performers would gain 33% of current value, equivalent to $0.7tn (£0.53tn). Electric utilities with strong renewables strategies could see their valuation double, at 104%. Automakers with the highest investments in electric vehicles could see their value increase by 108%.

PRI