



Talking energy is a periodic energy news publication prepared by Analysts at NRG Expert discussing key energy topics and delivering insights on major energy news events.

Talking Energy compiles news stories and events from around the world and presents them to the reader in a bite-sized form. Copyright of the articles lies with the author/publisher of the referenced works and reproduction here is assumed to be fair use. Analyst insights and other NRG Expert original content is copyright © NRG Expert. : NRG Expert is not acting as a financial advisor and the opinions or views contained herein are not intended to be, and do not constitute, financial, investment, or legal advice.

We hope you find it both interesting and informative and we would welcome your feedback.

If you would like any further information or would like to be included in our mailing list, please contact:

+44 (0)20 8432 3059

talkingenergy@nrgexpert.com

22 July 2014

Contents

- Share Price Data 2
- Industry News 3
- Political Developments and National Trends 4
- Electric Vehicles 5
- Green Energy 6

Companies and institutions mentioned in this report.

- American Council for an Energy-Efficient Economy 4
- Argonne National Laboratory 3
- BMW 3, 5
- Daimler AG 5
- Dalhousie University 3
- Department of Energy and Climate Change (UK) 4
- Dominion Resources Inc. 3
- EPFL 6
- Gamesa 6
- General Motors 3, 5
- Iberdrola Ingeniería 6
- IPPR 4
- Keystone XL 4
- LG Chem 5
- Nissan 5
- Renault 5
- RGA Labs Inc. 3
- Samsung SDI Co. 5
- Tesla Motors 2, 3
- University of New South Wales 5
- Volvo 5



To advertise in future editions of this newsletter, please contact us at: info@NRGExpert.com or call +44 (0)20 8432 3059



Share Price Data

Company	Currency	Price 17/7/14	Price 3/7/14	Percentage Difference
Vestas Wind Systems A/S	DKK	257	230.3	11.59%
Electricite de France SA	EUR	22.515	29.52	-23.73%
GDF Suez SA	EUR	19.665	19.805	-0.71%
E.ON	EUR	14.56		
Alstom SA	EUR	27.38	21.85	25.31%
Enel S.p.A.	EUR	4.122	4.104	0.44%
BP plc	GBX	496.1	484.85	2.32%
BG Group plc	GBX	1187.38	1141.5	4.02%
Royal Dutch Shell Plc	GBX	2416.24	2216.5	9.01%
National Grid plc	GBX	857.91	817	5.01%
Gazprom OAO	RUB	140	133.99	4.49%
Exxon Mobil Corporation	USD	102.31	96.78	5.71%
Chevron Corporation	USD	130.08	117.34	10.86%
PetroChina Company Limited (ADR)	USD	129.76	111.81	16.05%
ConocoPhillips	USD	84.68	69.48	21.88%
First Solar, Inc.	USD	61.45	68	-9.63%
BHP Billiton Limited (ADR)	USD	71.47	70.08	1.98%
Nordic American Tanker Ltd	USD	9.02	9.46	-4.65%
Sinopec Shanghai Petrochemical Co. (ADR)	USD	29.89	24.93	19.90%
ABB Ltd (ADR)	USD	22.79	25.73	-11.43%
Petroleo Brasileiro Petrobras SA (ADR)	USD	16.03	14.22	12.73%
Energy Transfer Partners LP	USD	56.73	54.02	5.02%
Acorn Energy Inc	USD	2.28	2.96	-22.97%
Duke Energy Corp	USD	72.36	71.14	1.71%
Tesla Motors Inc	USD	215.4	207.52	3.80%
Enbridge Inc (USA)	USD	48.59	45.97	5.70%
TransCanada Corporation (USA)	USD	50.74	46.54	9.02%

Had you bought one of each of the shares above on December 31, 2012, your portfolio would have increased in value by 58.89%.¹



Battery Fueling

Innovating EV Fueling
www.batteryfueling.com



¹ Past performance is not an indication of future results nor does the information contained in any part of this document constitute financial advice.



Industry News

- A Chicago area engineering consulting firm wants to buy Kewaunee Power Station, a television station is reporting. WBAY-TV, Green Bay, said Tuesday that RGA Labs Inc. of Barrington Hills, Ill., wants to buy the plant. The company indicated it wanted to purchase and re-activate the power plant, which was shut down by owner Dominion Resources Inc. in May 2013.²
- Japan's nuclear regulator has given preliminary approval for two reactors at a nuclear plant in the south of the country to restart. The Nuclear Regulation Authority (NRA) said the reactors at the Sendai plant had met new standards introduced after the Fukushima disaster. These are the first two nuclear reactors to pass this hurdle. All Japan's 48 reactors are currently stopped, but PM Shinzo Abe has been pushing for restarts where possible.³
- Over the last half-dozen years, a swarm of companies from around the world including General Motors has snapped up licenses for a lithium-ion electrode that promised to deliver the next big step in making electric cars competitive with conventional vehicles. The companies and outside researchers have worked feverishly to optimize the electrode, including an assault on a flaw that gravely undermined its performance. But in recent weeks, researchers working on the problem have gone public with a conclusion that the electrode, invented contemporaneously at Dalhousie University and at Argonne National Laboratory outside Chicago, won't realize the hopes to bring alive a mass-market electric-car age.⁴
- Electric vehicles are our fastest-growing alternative to oil-derived gasoline. Solar panels are our fastest-growing alternative to coal-powered electricity. They're both getting less expensive and more effective, driving our clean-energy revolution. And there's new evidence that these two great tastes can taste particularly great together, transforming how we consume and produce power in ways that will accelerate that green revolution.⁵
- Tesla Motors has officially announced the name of its new all-electric vehicle: Model 3. Competing directly against the BMW 3 Series, the Model 3 will go on sale in 2017. The only vehicle Tesla Motors sells right now is the Model S, but it will launch the Model X crossover next year.⁶

² From: <http://www.greenbaypressgazette.com/story/money/2014/07/15/chicago-company-shows-interest-kewaunee-nuclear-plant/12714441/>

³ From: <http://www.bbc.com/news/world-asia-28322558>

⁴ From: <http://qz.com/234345/the-most-promising-electric-car-lithium-ion-battery-needs-saving/>

⁵ From: <http://time.com/2981460/electric-cars-home-solar/>

⁶ From: <http://www.forbes.com/sites/amitchowdhry/2014/07/16/tesla-motors-officially-confirms-the-model-3-electric-vehicle-will-go-on-sale-in-2017/>



Political Developments and National Trends

- Germany has knocked the UK off the top spot to take first place in the 2014 International Energy Efficiency Scorecard, the American Council for an Energy-Efficient Economy (ACEEE) revealed today. The only report of its kind identifies best practices across 31 key metrics in the world's largest economies. China tied with France for fourth place, the UK and Japan tied for sixth, and the USA came thirteenth.⁷
- Cities should invest in green energy production to compete with the main UK energy suppliers, a centre-left think tank has recommended. Local authorities and customers could reap the benefits of renewable energy subsidies, a report by IPPR suggested. Regulators are currently probing whether the "big six" UK energy suppliers prevent effective competition in the UK energy market.⁸
- Almost £8bn was invested in renewable energy in the UK last year, according to a report by the Department of Energy and Climate Change (DECC). The report showed that £45bn has been invested in the UK's power generation and networks since 2010, supporting thousands of jobs, with an average of £7bn a year in renewables, which now produce 15% of the country's electricity.⁹
- UK Ministers will soon be driving to official engagements in electric cars while even Downing Street will be fitted with charging points, the UK Government has announced. More than 150 electric cars are to be introduced to official Government fleets from this Autumn as ministers seek to "lead by example" and boost public confidence in plug-in vehicles.¹⁰
- The West has so far refrained from "sectoral sanctions", also known as Level Three sanctions that would target entire sectors of Russia's economy. As a result, companies in Russia's crucial energy sector can still do business with Western partners, but they will probably find it harder to get Western loans.¹¹
- The U.S. ambassador to Canada is asking Canadians for "patience" on the Keystone XL issue on his first Independence Day in Ottawa. Bruce Heyman, in an interview with Hallie Cotnam on CBC Radio's Ottawa Morning, was asked about the diplomatic issue that has been dogging the Obama administration. "Keystone is a challenge that we have," Heyman said. "It is something that we are going to have to work on together. Right now, it is in a process and a decision will be made. But we are going to move on."¹²

⁷ From: <http://www.newswire.ca/en/story/1388451/germany-tops-world-energy-efficiency-ranking>

⁸ From: <http://www.bbc.com/news/business-28337124>

⁹ From: <http://www.theguardian.com/business/2014/jul/17/investment-uk-renewable-energy-sector-8bn>

¹⁰ From: <http://www.telegraph.co.uk/news/uknews/road-and-rail-transport/10973594/Government-cars-go-electric.html>

¹¹ From: <http://www.bbc.com/news/world-europe-28400218>

¹² From: <http://www.cbc.ca/news/politics/keystone-xl-process-requires-patience-u-s-ambassador-tells-canada-1.2696366>



Electric Vehicles

- LG Chem, the South Korean company that supplies batteries to General Motors and Renault among others carmakers, will offer electric vehicles more than 200 miles of range by 2016, reports Automotive News. Chief financial officer Cho Suk-jeh, who revealed LG Chem's ambitions last week, did not confirm which carmakers would use the new batteries, although LG Chem's technology can currently be found in the Chevrolet Volt and the Renault ZOE, as well as Volvo's popular V60 Plug-in Hybrid.¹³
- Bayerische Motoren Werke AG, or more popularly known as BMW, the largest luxury car maker in the world, expanded its order of batteries for electric cars from Samsung SDI Co. The expansion will see BMW spend billions of euros to secure a steady supply of batteries, which are the most expensive components of electric cars. The increase in order is about 20 percent to 30 percent at minimum, which will kick in by 2016.¹⁴
- Sunswift, a team of engineering students from the University of New South Wales, designed and built a car that holds the Guinness World Record for the fastest solar-powered vehicle. In 2011, that car reached a top speed of 88 km/h (55 mph). The team hopes that its newest vehicle, eVe, will break a 20-year-old electric vehicle record for the highest average speed over a 500 km (310 mi) distance.¹⁵
- In the last year, global registrations of electric vehicles from the first three years of the market reached 500,000 units. The U.S. plays a dominant role, with 200,000 vehicles registered, more than one-third of those in California.¹⁶
- China will waive a 10 percent purchase tax on electric cars as part of expanded measures to combat pollution and cut energy dependence. New-energy autos -- China's term for electric cars, plug-in hybrids and fuel-cell vehicles -- will be excluded from the levy from Sept. 1 to the end of 2017, according to a statement posted on the central government's website.¹⁷
- Daimler AG's Mercedes-Benz is set to begin shipping its first mass produced pure electric vehicle B-Class electric drive in the U.S. by the end of this month or early July. With this launch, Mercedes will now compete with models such as the Nissan Leaf and the popular Tesla Model S in the fast growing U.S. plug-in electric vehicle market.¹⁸

¹³ From: <http://ecomento.com/2014/07/21/lg-chem-targets-200-mile-electric-car-range-by-2016/>

¹⁴ From: <http://www.techtimes.com/articles/10462/20140716/bmw-expands-battery-for-electric-cars-agreement-with-samsung.htm>

¹⁵ From:

<http://www.engineering.com/ElectronicsDesign/ElectronicsDesignArticles/ArticleID/8085/Students-Build-Record-Breaking-Solar-Electric-Car.aspx>

¹⁶ From: http://phev.ucdavis.edu/news_items/are-plug-in-vehicles-turning-the-corner/

¹⁷ From: <http://www.bloomberg.com/news/2014-07-09/china-to-exclude-electric-cars-from-purchase-tax-amid-smog-fight.html>

¹⁸ From: <http://www.forbes.com/sites/greatspeculations/2014/06/25/mercedes-benz-bmw-battle-shifts-to-plug-in-electric-vehicles-in-the-u-s/>



Green Energy

- Solar, wind, biomass, geothermal and hydropower provided 55.7% of new installed US electrical generating capacity in first six months of 2014. According to the latest "Energy Infrastructure Update" report, solar alone has accounted for nearly a third of new US generating capacity 1 thus far in 2014: 32.1% (1,131 MW). By comparison, wind provided 19.8% (699 MW), followed by biomass (2.5% - 87 MW), geothermal (0.9% - 32 MW), and hydropower (0.5% - 16 MW).¹⁹
- Iberdrola Ingeniería and Gamesa to build wind farm in Honduras The new 50MW wind farm will be located in the municipality of San Marcos de Colón, 140 kilometres south of the Honduran capital Tegucigalpa and close to the border with Nicaragua. It will consist of 25 Gamesa G90 turbines with a unit capacity of 2MW each and a hub height of 70 metres with a rotor diameter of 90 metres. The wind farm will generate enough electricity to supply the needs of 100,000 homes and create around 200 jobs during the construction process.²⁰
- Scientists at EPFL have developed a method for improving the catalysis of water-splitting reactions used for storing wind and solar energy. The method chemically peels off the outermost surface of a catalyst, thereby maximizing its active surface for the reaction. A major challenge in renewable energy is storage. A common approach is a reaction that splits water into oxygen and hydrogen, and uses the hydrogen as a fuel to store energy.²¹



<http://www.talkingnrg.com>

¹⁹ From: <http://www.renewableenergyfocus.com/view/39403/federal-energy-regulatory-commission-releases-first-half-report-on-renewables/>

²⁰ From: <http://www.renewableenergymagazine.com/article/iberdrola-ingenieria-and-gamesa-to-build-wind-20140721>

²¹ From: <http://www.azocleantech.com/news.aspx?newsID=20487>