

**AT A GLANCE:** BREXIT DOES NOT FAZE UK DIPLOMATS IN EU ENERGY TALKS – COMMISSION REPORTS ON ELECTRICITY AND GAS MARKETS OUT – ARE CYBERATTACKS THE NEW CHALLENGE FOR RENEWABLE ENERGY?

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#### BREXIT

## Brexit does not faze UK diplomats in EU energy talks

London may be slamming the door on the EU but there's no sign of reduced activity on energy issues.

In one room in Brussels, U.K. and EU officials are trying to divorce. In another, where countries are haggling over the shape of the EU's energy laws, U.K. civil servants are acting as if Brexit isn't underway.

Britain opposed a compromise deal on future EU energy efficiency rules during a long and difficult meeting of EU energy ministers last month. It pushed to water down the European Commission's **proposed energy savings goals** for the next decade – even though the rules might never apply to the U.K, since it is not clear whether the country will remain part of the EU's internal energy market after Brexit.

EU **ministers agreed on 26 June** that the bloc should aim for a 30 percent energy efficiency target for 2030, but left open the idea of whether this should be binding or just guidance.

The U.K. opposed the 30 percent target, preferring instead the original 27 percent goal, and asked for more flexibility for the measures it could count toward its national progress. Its position was at odds with France, Germany and other more ambitious Western European countries. It aligned with the U.K.'s traditional Central and Eastern European allies, which broadly pushed for the same goal.

The U.K. was "disappointed" with Brussels' proposal to boost the target to 30 percent and "cannot support" the proposed compromise on energy efficiency because "we do not believe it strikes the right balance to provide sufficient flexibility to reach our ambitions," Richard Harrington, a junior minister at the U.K.'s Department for Business, Energy and Industrial Strategy, said during June's Energy Council meeting.

There is still a big question over whether EU energy rules will apply to the U.K. after Brexit, but the government is hinting it may be eyeing a softer energy break-up with the bloc.

British Business and Energy Secretary Greg Clark told MPs in Westminster during a parliamentary hearing in April that "energy is a good example of an area in which there is clearly huge mutual interest," describing a hard break between the EU and U.K. energy markets as a "bad thing."

**Source: Politico Pro**



British Business and Energy Secretary  
Greg Clark/Wikipedia

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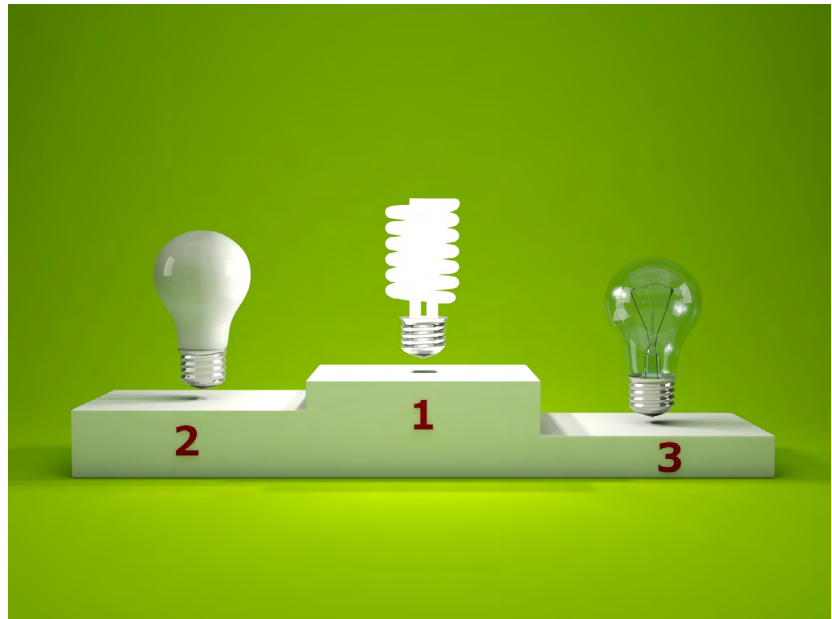
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## ENERGY EFFICIENCY

# EU study flags potential of higher energy savings goal



Increasing the EU's 2030 energy efficiency target beyond the 30% currently under consideration in Brussels would lead to higher climate and health benefits, a **study** for the European Commission showed earlier this month.

A 40% energy savings goal would help the EU slash greenhouse gas emissions by 46.6% by 2030, overshooting by almost seven points its target for that year, according to the report prepared by consultancies Cambridge Econometrics and EY.

A 35% energy efficiency target backed by the **European Parliament's lead negotiator** would lead to emissions cuts of 43.6% by 2030, while a 30% target, endorsed by both the Commission and EU countries, would only achieve a 40.7% reduction.

A drop in the EU carbon price induced by energy savings could boost coal power and hinder the EU's ability to curb pollutant emissions, SOx in particular, according to the study. And NOx levels would be influenced by growth within the transport and agriculture sectors, it added.

The EU institutions are set to launch informal talks to agree on the 2030 energy efficiency target once the Parliament adopts its negotiating position. The industry and energy committee is due to vote on a draft position in November. EU energy ministers adopted the Council position last month.

**Source: Ends Europe**

**Source: Politico Pro**

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AC-DC

## Creating Europe's new backbone for efficient power distribution

An ambitious research project which was launched in 2014 and which is funded by the European Commission, **BEST PATHS**, focuses on the development of high-capacity transmission networks needed to meet Europe's long-term energy goals and incorporation of renewable energy sources. BEST PATHS stands for "BEyond State-of-the-art Technologies for rePowering AC corridors and multi-Terminal HVDC Systems". It involves 39 partners and is coordinated by Red Eléctrica de España (REE), set to run until September 2018.



In a press release this month, BEST PATHS had a look back at the past decades and how the energy landscape changed in Europe. An increasing amount of electricity is now generated from renewable sources, such as solar and wind energy.

These developments now require new and efficient power infrastructure that spans the whole of Europe. Its long-distance backbone will consist of high-voltage direct-current transmission (HVDC) lines connected to a large number of voltage source converters (VSC). These will themselves be connected to alternating-current (AC) transmission lines, which are part of the local distribution systems. Power stations, solar and wind farms, and energy storage facilities will also feed into the main HVDC grid.

"HVDC is a key technology for transmitting large amounts of power over very long distances and allows the decarbonisation of the energy system. And climate change goals will only be achieved if we are able to carry power from clean sources to the locations where it is actually used," says Vicente González López, from Red Eléctrica de España, a company that has recently completed a 65 km long DC connection between France and Spain.

In this context, the European project BEST PATHS is investigating novel grid technologies that would allow a better integration of the energy supply in Europe. **Five large demonstration programmes** are exploring how a new European grid could be optimised for an efficient distribution of energy from the energy supplier to the individual user. Key to the new distribution infrastructure will be the change to using direct current for energy transport over long distances.

Alternating currents mainly flow at the surface of a conductor, with less current in the middle. Known as the skin effect, this phenomenon significantly increases loss due to the wire's resistance. With direct current, there is no skin effect and so the whole cross-section of the conductor is used by the current. This can reduce loss by 30 to 40% compared to AC lines.

Another advantage is that the power can be transmitted via two wires, while AC lines require three conductors to carry the three different phases of alternating current. Furthermore, plans are being developed for superconducting high-voltage DC transmission lines that reduce power loss even more.

**Source: Dods**

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#### ELECTRICITY MARKET

## EU market plans to allow 'free riding' – generators

Firms providing 'demand response' services in a market increasingly based on variable power production should be made to compensate generators for lost sales, a new **report** suggests.

The European Commission sees demand response – where

consumers are rewarded for switching off when electricity is scarce – as crucial to the integration of unpredictable wind and solar power into the electricity network.

"Aggregators can serve as important players to enable a more flexible power system in line with needs engendered by high shares of intermittent renewable energy feed-in," the analysis by Norwegian certification firm DNV GL notes.

But the **proposed Directive** to revise the electricity market rules would allow these aggregators to charge for balancing the grid without compensating suppliers for lost revenue, says the report by power utilities' lobby Eurelectric.

The provision that "aggregators shall not be required to pay compensation to suppliers or generators" would offer a free ride for the third party service providers at the expense of electricity producers and suppliers, the authors argue.

The Commission's proposal states that all customer groups – industrial, commercial and households – should have access to the energy markets to trade their self-generated electricity and "flexibility", such as the ability to reduce demand at short notice.

The proposal is currently being debated by EU governments and the European Parliament, whose lead negotiator has already caused concern in the solar and wind power sectors by proposing a **complete abolition of priority grid access** for power from renewable sources.

**Source: Ends Europe**



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## Commission published reports on electricity and gas markets



The European Commission published reports for the first quarter of 2017 on European **electricity** and **gas** markets. They provide information about the most recent developments of the European internal energy market at national, regional and EU level, and are aimed at energy analysts, professionals and researchers, academics, and members of local and national governments.

Both reports cover wholesale and retail markets: they include details of energy prices, market trading volumes, consumption, storage, imports and exports. They pool data from both publicly available and commercial databases to create a unique information source that covers the whole EU and some neighbouring countries. They also provide a brief outlook on the energy markets of the EU's main energy trading partners. In addition, they analyse the impact of European energy policy measures on markets.

**Source: Dods**



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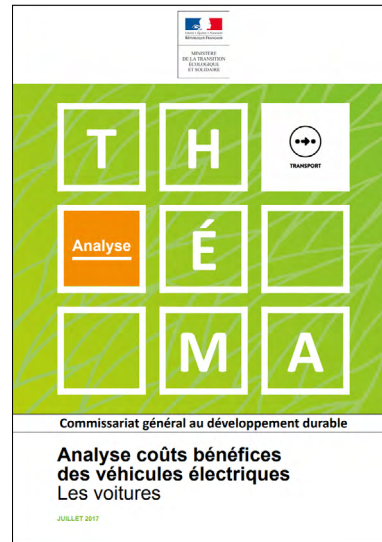
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## ELECTRIFICATION OF TRANSPORT

**The electric car revolution is coming to your street**

Electric cars have the highest value for society and individuals in dense urban areas, but even in the long-term, they fall short in competition with petrol- and diesel-fueled cars for motorists who use them both in cities and in rural areas, the French body in charge of advising the government on environmental issues found in a **new report**. The analysis compared economic and environmental costs linked to both types of vehicles for society as a whole and for the individual consumer.

Electric cars will be the better choice for individual users and society in 2030 in cities, especially as their production costs go down. However, combustion engines will keep their edge over electric vehicles for mixed uses (meaning in cities and rural areas), because they're still more efficient at higher speeds, the analysis found when taking into account production costs and CO2 emissions from battery production. It's worth noting that the analysis is based on the French energy mix, which is relatively low-carbon thanks to a high share of nuclear power in the country. The report also stresses that car-sharing services are key to increasing the economic performance of electric cars, because they allow drivers to share the cost of infrastructure to charge the cars (rather than each having a charging point at home).

Increased demand for metals and rare earth materials could make the switch to renewable energy and electric cars more environmentally costly than we think, Riccardo Puliti, global head of the energy and extractives practice group at the World Bank, warned in the **Financial Times**. Intensified mining could lead to "potentially significant impacts for local ecosystems, water systems and communities" if the transition is not managed properly, Puliti said.

**Source: Politico Pro**

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## SMART BUILDINGS

# Home Energy Saving Kit



In June 2017, as part of **EU Sustainable Energy Week**, four innovative sustainable energy projects received EU Sustainable Energy Awards. The Home Energy Saving Kit project, which supplies energy saving toolkits to households in Dublin, Ireland, was the winner of the Consumers category.

The Home Energy Saving Kit idea originated in Australia and was picked up by **Codema**, the Dublin's energy agency. The kits contain six practical tools which address key areas of energy use in the home, such as space heating, hot water and electricity consumption. The tools in the kit can also help to identify common issues such as lack of insulation, poor ventilation and the appliances that might be driving up electricity bills. Each tool has the following function:

- Fridge/ Freezer Thermometer - to measure the temperature of your fridge and freezer accurately and adjust accordingly
- Thermal Leak Detector - to detect energy leaks in your home by showing you the temperature differences with a coloured LED spot. This helps to spot thermal air leaks and identify areas for additional insulation and/or draught proofing
- Temperature and Humidity Meter - to identify both the temperature as well as the humidity levels in the home
- Plug-In Energy Monitor - to understand how much energy the appliances in the home use and help calculate their running cost
- Radiator Key - to bleed radiators if a wet central heating system is in place, by releasing trapped air and making the radiators run more efficiently
- Stopwatch - to measure the flow rate of water taps, showers and bath to ensure that no water or energy is wasted.

The kit is also contains by a step-by-step user manual to guide you on how to use each tool correctly (there are also online demonstration videos). Finally, each kit contains a survey form so the public can give us feedback, and this will help us evaluate the impact that the kits are having on user behaviour, and a blue envelope for the householder to keep.

Codema is committed to expanding this project to the entire Dublin region and is expected to begin that process next year. Ireland's Minister for Communications, Climate Action and Environment, Denis Naughten, has also announced that he intends to roll the scheme out to other parts of Ireland, such as Galway, Roscommon and Leitrim.

**Source: Dods**