



THE EUROPEAN WIND ENERGY ASSOCIATION

Free movement of electricity



www.ewea.org

Grids for a renewable, energy-secure future

Wind energy and other renewables have a big role to play in Europe's future but they need to be supported by Europe-wide electricity grids and a fully functioning single market for electricity in Europe.

The missing links

Just as oranges grown in Spain can travel to Sweden, or German cars are available in Ireland, electricity needs to travel from wherever it is produced to wherever it is needed. Today there are very few interconnections between countries, which leaves us exposed to inflated power prices and an inefficient use of the national power generation.

Electricity needs to be bought and sold within Europe to bring electricity prices down, to cut the risk of supply shortages, to make efficient use of power plants and to help Europe make the most use of its wind power plants and other renewable electricity sources.

For a renewable energy future, Europe needs more and better electricity grids than those currently existing across the continent, and it needs an integrated market that creates EU-wide market rules.

Ageing grids

Did you know that Europe still operates on an electricity system designed decades ago when fossil fuels were the only major power source available?

Moreover it is still largely national – there are few interconnections between European coun-



Sometimes we all need a bridge... so does our electricity

tries. A modern grid - that connects onshore and offshore wind farms with consumers EU-wide – would make trade in electricity throughout Europe possible. A European grid would strengthen competition in the electricity market, driving down electricity prices and offsetting the investment cost needed. It would enhance the continent's energy security all the while creating thousands of jobs.

We must stop thinking of electricity grids as national infrastructure and start developing them – onshore and offshore – to become European highways of electricity trade. The faster we build

new grids, the sooner large amounts of renewable energy can be brought online, limiting the risk of disruption from fuel import shortages, or when the cost of fossil fuels becomes too expensive.

We know we must update and extend our energy infrastructure – now is a golden opportunity to create an electricity grid for Europe that will enable us to slash carbon emissions in the power sector (the biggest contributor to carbon in the atmosphere) and relieve us from some of our dependency on Russian gas and Middle Eastern oil.

FACT BOX

Driving the grid

In 2010, the European Network of Transmission System Operators for Electricity (ENTSO-E) drew up a plan to develop Europe's grids over 10 years. For cross-border projects in Europe, it estimates that 28,500 km of new grid lines will be driven by creating a single energy market, 26,000 km will be driven by security of supply concerns, and 20,000 km will be driven by bringing new renewable energy sources online.

What are the drivers for new or refurbished power lines?

Driven by Security of Supply (SoS): 26,000 km of power lines

Driven by Renewable Energy Sources (RES): 20,000 km of power lines

Driven by Internal Energy Market (IEM): 28,500 km of power lines

ENTSO-E

Incomplete markets

Did you know that in a European Union in which there is free movement of goods, services and people, there is still no freedom of movement for electricity? Europe's electricity grids are built to service national markets – electricity rarely travels across borders, which drastically reduces the chances for more competition in the electricity market and the downward pressure that would have on electricity prices.

When it comes to electricity, Europe would greatly benefit from being more connected. Surplus electricity made by Irish wind farms could be traded rather than wasted. Windy conditions in the North Sea could light homes and businesses in southern Germany. A single European market would make that possible.

A European market for electricity would unlock the potential of renewables affording us access a free, non-polluting fuel – wind energy. The vast amounts of energy ready to be tapped in our seas – offshore wind – could come online.

It's the economy, stupid

Europe pays 2.5% of its annual GDP to import energy. With an internal market for energy, the EU would increase its GDP by 0.6%-0.8%, create five million more jobs by 2020 and save each consumer €100 a year according to the European Commission – do we need any more reasons to start making changes today?

Freedom for electricity

In September 2011, the European Wind Energy Association, EURELECTRIC and Europacable launched a campaign for the free movement of electricity to call for fast progress on

building the necessary grid infrastructure developments. Today the campaign is supported by 14 other associations and 18 companies, bringing the total to 35. The campaign comes

at the same time as the European Commission publishes new legislation on electricity infrastructure developments throughout Europe. The European Parliament and Council will

discuss the draft legislation in the coming months so the campaign calls on its supporters to make its voice heard now. To add your voice to ours, visit www.freedomforelectricity.eu.

Free movement of electricity

Twenty five years after the Single European Act, Europe urgently needs greater freedom of movement in electricity: a single internal power market and a network infrastructure to facilitate it.

A single electricity market will increase competition, improve security of supply, help deliver climate goals and integrate modern energy technologies including renewables.

Whilst development of a single power market is progressing, development of the infrastructure urgently needs a very major boost. To bring freedom of movement to and enhance cross-border trade in Europe's electricity, the European Parliament and the Council of Ministers must:

- Speed up, simplify and better coordinate permitting and planning procedures for electricity infrastructure projects
- Agree new financing mechanisms to support the necessary electricity infrastructure projects
- Address environmental concerns and social acceptance issues related to the necessary grid extensions at an early stage.



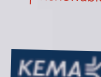
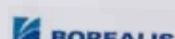
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More information www.freedomforelectricity.eu

Calling for grid investment

WWF Energy report 2011

“An integrated, intelligently managed grid is a top priority investment in the coming decades. The Commission should propose a legal and financing framework based on a 40-year vision that facilitates a full transition to renewables.”

Frauke Thies, EU energy campaigner, Greenpeace, Battle of the Grids report, January 2011

“A grid that allows more renewable power into the system and puts the market to work to build down the cost of clean electricity is a grid worth building.”

Michael Köhler, Head of Cabinet Commissioner Oettinger, European Commission

“We want [a European grid] because this is a prerequisite for facing renewables on a massive scale and therefore meeting our technology and de-carbonisation targets. We need it because without trans-border connections, we won't have a single market. And we need a single market to ensure security of supply and therefore solidarity in energy for all our citizens, and we also need it for more competitiveness and competition.”

“Electricity prices in most of Europe's member states are too high. And they are too high because the market is not yet functioning on a European level with a decent degree of competition.”

Eddie O'Connor, CEO, Mainstream Renewable Power, Ireland

“If we are going to agree to cut emissions in Europe by 80% by 2050 it looks very much as if we're going to have to have an electricity system that has no CO₂ whatsoever.”

“We're moving from a situation where we pay very little money for our current infrastructure to a situation where we build lots of renewable power and lots of transmission lines to carry it from where the power exists to where the people are, and once we've done that, the rest of the costs are practically zero because the fuel is free.”

Günther Oettinger, European Commissioner for Energy

“We need to strengthen the European electricity grid to achieve Europe's ambitious energy and climate policy objectives.”

(www.renewables-grid.eu)

European Photovoltaic Industry Association

“For the EU, updating the grid is a win-win proposition: it will ensure security of energy supply and reinforce the efficient integration of renewables, but it will also help Europe to achieve its important goals of climate change reduction and sustainable economic growth.”

Volker Wendt, Director Public Affairs, Europacable

“Europe needs more grids. They need to be reliable, affordable and publically acceptable. We, the European wire and cable industry, offer a technology that can make the development of these grids faster – underground cabling.”

Lucie Tesniere, Policy Advisor, European Renewable Energy Council

“There is a sense of urgency today. The European Commission has a target of completing the single energy market by 2014 – this means new transmission lines, new inter-connectors and for that significant investment will be required. A sound regulatory framework and streamlined permitting procedures for the grid are now essential.”

Climate Parliament – a letter signed by 14 MEPs and sent to European Commission President José Manuel Barroso, December 2010

“Substantial funds should be devoted to supporting new long-distance grid connections to enable us to combine Europe's wind, solar, hydroelectric, geothermal and other renewable energy sources into a reliable supply for everyone.”

“Climate policy and consumer demand are hurtling us towards a smarter, more efficient Europe-wide grid that is already opening up vast new technological, business and consumer opportunities.”

EURELECTRIC Renewables Action Plan, November 2011

“Infrastructure is the backbone of the EU energy system. Investments urgently need to be directed towards it to allow Europe to complete the internal energy market, connect renewable generation, and enhance networks' resilience and supply security.”

Dr Johannes Meier, European Climate Foundation, Power Perspectives 2030 report

“The grid is the glue that will hold together our decarbonised power system. We must be more efficient to deliver this in the most effective way, the grid needs to get smart. Only by getting a clear policy direction to 2030 will it be possible to achieve the decarbonisation goal.”



Building electricity bridges

The European Commission has recognised Europe's need for modernised and extended electricity grids. In October it unveiled a €9.1 billion package to leverage investment to modernise and extend Europe's energy infrastructure. "This is the very first time the EU is co-financing the construction of large energy infrastructure from its regular budget," the Commission said on launching its plans.

The package is based on cross-border projects in Europe and includes an offshore grid in the North Sea as a priority.

Speeding up permitting procedures is another crucial element of the package. Today it can take literally decades for new electricity grid infrastructure to jump through all the hoops and hurdles of the planning process – the new package wants to drastically shorten deadlines, and create a one-stop-shop for planners so that they do not need to get permission from many different authorities.

The draft legislation is due to be discussed by Parliament and Council in the coming months. Help make the call supporting this legislation strong - now is the time to make your voice for the free movement of electricity heard!

www.freedomforelectricity.eu



1. P. Nyrup Rasmussen (President, Lindoe Offshore Renewable Centre), E. O'Connor (CEO, Mainstream Renewable Power) and J. Kjaersgaard (CEO, Siemens Wind Power) signing the statement

2. Freedom for electricity campaign at EWEA OFFSHORE 2011, Amsterdam

3. EWEA staff promoting free movement of electricity



Friends of the Supergrid (FOSG) have welcomed the Commission Regulation proposal on 'Guidelines for trans-European energy infrastructure'. They hail it as a "major step forward for the acceleration of the building of much needed new electricity infrastructure, including Supergrid. Once built, this infrastructure will allow the integration of large quantities of renewable energy across Europe and will see significant progress towards the creation of the internal electricity market", they say. FOSG is calling on the European Parliament and the

Council to adopt the core proposals in this regulation.

FOSG members: 3E, ACS Group, Alstom Grid, CESI, CG, DONG Energy, DEME Blue Energy, Elia, GE, HOCHTIEF Solutions AG, Intel, Mainstream Renewable Power, National Grid, Nexans, Parsons Brinckerhoff, Prysmian Cables & Systems, Red Electrica de Espana, RTE, Siemens, Vattenfall, Visser & Smit Marine Contracting, wpd think energy.

The **Renewables Grid Initiative** is also calling for the adoption of the

European Commission's proposals. They say: "In October, the European Commission put forward a draft law making it easier to build and finance crossborder power lines, which are essential to making Europe's energy system greener. The **Renewables Grid Initiative** supports Europe's ambition to boost renewable electricity and cut carbon emissions."

Renewables Grid partners: WWF, RSPB, Natuur en Milieu, Germanwatch, 50Hertz, Elia, National Grid, RTE, Statnett, Swissgrid, and TenneT.

Do you want to keep up with the very latest EU wind energy news?



www.ewea.org/blog

About EWEA

EWEA is the voice of the wind industry, actively promoting wind power in Europe and worldwide. It has over 700 members from almost 60 countries, including wind turbine manufacturers with a leading share of the world wind power market, plus component suppliers, research institutes, national wind and renewables associations, developers, contractors, electricity providers, finance and insurance companies, and consultants. This combined strength makes EWEA the world's largest and most powerful wind energy network.

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