E3G

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Offshore grids and the Jobs, Growth and Investment Package

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My first priority as Commission President will be to strengthen Europe's competitiveness and to stimulate investment for the purpose of job creation. … The focus of this additional investment should be in infrastructure, notably broadband and energy networks.

-Jean Claude Juncker, Political Guidelines for the next European Commission, 15 July 2014

Summary

- Offshore electricity grids in the Northern and Baltic seas represent high value investment for Europe and are a strong fit for the proposed Jobs, Growth and Investment package. They involve swift payback periods, highly-skilled jobs in an area of European competitive advantage, and significant economic and environmental co-benefits.
- By front-loading the existing offshore grid project pipeline, €50bn of new investment could be brought forward before 2020 (and over €100bn by 2030).
- To unlock this investment, the Investment package should include three key measures:
    1. Prioritise North Seas offshore grid infrastructure through the creation of a single large 'Project of Common Interest'
    2. Address the financing constraints of project developers, for example through scaling up the Project Bonds initiative, setting up a new EIB lending facility for electricity infrastructure, and/or establishing a North Seas Grid company for corporate financing of offshore grid infrastructure.
    3. Incentivise acceleration of project development, for example through allowing project developers a merchant return on investment for the first 3 years of project operation.

Making the Investment Package work for Europe

The new Commission is right to focus on increasing levels of investment in the European economy through its proposal for a €300 billion 'Jobs, Growth and Investment' package. For this package to work for Europe, its constituent elements should meet three criteria:

> Productive investment: Investments taken forward as part of the Jobs, Growth and Investment package will need to be economically viable in themselves as projects. Such projects should also deliver economic, social and environmental co-benefits.

> Deployable investment: To respond to the challenges presented by the recent decline investment levels in Europe, investment projects brought forward by the Jobs, Growth and Investment package need to be able to be deployed over the short term (within 3-5 years) and need to make use of underutilised capacity in the European economy (rather than displacing private investment).

> Scalable investment: Investment projects in the Jobs, Growth and Investment package should focus on sectors capable of supporting Europe's future growth, rather than subsidising sectors in structural decline.

Productive investment

Europe's electricity infrastructure networks are currently badly underdeveloped – which means new investments are highly beneficial for Europe's economy. Recent European Commission analysis identified that investment of €60-100bn investment in offshore electricity grids could repay its initial investment cost within 1-3 years[1]. Offshore grids also offer significant co-benefits including integrating renewable energy, increasing energy security and reducing energy imports. Offshore wind energy could form 4-12% of EU power consumption by 2030.

Deployable investment

There is already a strong project pipeline for electricity transmission infrastructure in the North Seas and Baltic Seas region; ENTSO-E have identified specific projects with a combined investment value of €100 billion in the North Seas region alone by 2030[2]. This pipeline includes 13 subsea interconnections planned alongside 3 'meshed grid' projects. Yet despite this strong pipeline, recent E3G/Baringa analysis shows that projects face significant regulatory and policy risk and therefore major financing challenges – with a strong possibility of delay or even cancellation[3].

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[1] Tractabel Engineering, GDF Suez, Ecofys and PWC (2014) Study of the benefits of a meshed offshore grid in the Northern Seas Region. http://ec.europa.eu/energy/infrastructure/studies/doc/2014_nsog_report.pdf

[2] ENTSO-E (2014) Regional Investment Plan – North Sea https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Pages/default.aspx

[3] E3G/Baringa (2014) North Seas Grid Project Pipeline Analysis: Key findings. http://e3g.org/x4mL

As a result, expectations of future growth in electricity transmission infrastructure have not yet translated into a bankable order book for technology and cable manufacturers. Europe's manufacturing capacity is underutilised, and several leading cable and HVDC technology manufacturers have been forced to undergo job losses in recent years. Given this underutilised production capacity, a key focus should be on frontloading the current project pipeline, with the aim of bringing forward at least €50 billion of investment before 2020.

Scalable investment

Offshore grid investment involves high-end manufacturing and technology development. Electricity grid infrastructure including HVDC technologies represents a growth industry for Europe. The European Commission foresees cumulative European power grid investments to reach €1.3-2 trillion between 2010 and 2050[4].

Europe is currently a world leader in advanced grid technologies and most of the leading companies in this space are European. Major HVDC grid infrastructure expansion is expected in coming years in China, Brazil, India and the USA – including in 'meshed' HVDC grid configurations and advanced smart control technologies - meaning there is significant long-term growth potential from continuing to develop this market.

Bringing forward offshore grid investments

Three measures are needed as part of the Jobs, Growth and Investment package to bring forward investment in offshore grid infrastructure in the North Seas and Baltic Sea region:

1. *Prioritise North Seas offshore grid infrastructure through the creation of a single large 'Project of Common Interest'*

The first step to increase investments in offshore infrastructure is to make full use of the existing regulatory levers. Proposals for North Seas offshore grid infrastructure should be combined into a single EU 'Project of Common Interest'. This would enable offshore grid investments to benefit from regulatory prioritisation, a faster permitting process and access to financing mechanisms through the Connecting Europe Facility. This should be supplemented through the appointment of an independent 'European Coordinator'[5] to facilitate implementation of the North Seas Grid project and to drive political agreement between North Seas countries on agreeing investment overcoming the regulatory barriers.

2. *Address the financing constraints of project developers, through scaling up electricity infrastructure investment through the Project Bonds Facility or through establishing a new EIB lending facility for offshore electricity infrastructure, and establishing a North Seas Grid company for corporate financing of offshore grid infrastructure.*

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[4] European Commission (2011) Roadmap to a http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011SC0288&from=EN

[5] In accordance with Article 6 of the TEN-E regulation 2013

The limited financing capacity of Transmission System Operators place major constraints on the pace of offshore grid infrastructure development in Europe[6]. There are significant amounts of institutional investor capital interested in investing in these types of projects but they do not have the capacity to assess or price risk properly. The Project Bond Initiative could potentially be a vehicle for addressing these issues. However access is currently contingent on receiving funding from the Connecting Europe Facility (CEF). The CEF has so far been primarily focused on transport and gas infrastructure, which has limited the potential for essential electricity infrastructure projects to benefit from this mechanism – so the rules surrounding Project Bonds may need to be reassessed. Alternatively, to address the financing capacity constraints in the short term, the EIB could establish a dedicated lending facility for offshore electricity infrastructure. As electricity infrastructure tends to offer stable regulated returns, this facility could be established without jeopardising the EIB's credit rating.

In addition, as offshore grid infrastructure developed is scaled up, a dedicated North Seas Grid company should be established to enable financing and build-out offshore grid infrastructure. Existing TSOs could be shareholders in the new venture alongside beneficiary countries and the EU. Such a structure would enable a lower cost of capital than relying on project finance alone and will enable offshore grid investment to scale up more rapidly than if channelled through existing TSO balance sheets.

3. *Incentivise acceleration of project development, for example through allowing project developers a merchant return on investment for the first 3 years of project operation.*

As well as addressing the scale of investment, the new package will also need to ensure that investment can be brought forward swiftly. Regulators currently often see deferred investment in transmission infrastructure as an economic benefit rather than as a problem, as they do not take into account Europe's wider economic context or current underutilisation of production capacity. As a result, many electricity transmission projects face unnecessary delay in securing regulatory approval and access to regulated returns.

Many of the projects, however, could be highly profitable and economically beneficial over the short term. To incentivise accelerated project development, the European Commission could grant an exemption window from the provisions of the 3rd energy package for an initial 3 year period to offshore grid projects to enable them to earn a 'merchant' return through electricity price arbitrage – after which they could revert to a regulated return. This provides an incentive not just to develop the necessary projects, but also to bring them forward more rapidly than would otherwise be the case. Alternatively, a premium incentive for accelerated project development could be built into the regulated returns offered to offshore grid infrastructure developers.

[6] Florence School of Regulation (2013) Financing Investment in the European Electricity Transmission Network: Consequences on Long-Term Sustainability of the TSOs Financial Structure. http://fsr.eui.eu/Publications/POLICYbrief/Energy/2013/PB201303.aspx