Energy Union

EXPANDING EU ENERGY INVESTMENTS SMARTLY


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Although comprehensive information on EU energy investment is limited and unreliable, it is clear that the sector has witnessed an unprecedented cyclical boom in the period 2005 to 2011, driven by renewable energy investments. Investment in renewables was around EUR 95 billion in 2011 and dropped sharply to EUR 50 billion in 2013[1]. The EIB has financed a significant part of this investment (about EUR 11bn a year in the period 2010-13). The energy investment boom, combined with the decline in energy consumption since the start of the crisis, has generated substantial overcapacity in the electricity and gas sectors. This has contributed to lower wholesale prices and corresponding lower returns, particularly for gas power stations.

Policy makers propose expanding energy investment, particularly low carbon energy investment, to contribute to both economic recovery and to achieve energy and climate change objectives. This expansion needs to be carefully considered.

Different studies by the European Commission conclude that to achieve the EU objectives, substantial investment are needed, with estimates of between 180 and 200 billion euros a year, of which 110 euros in the energy sector. Three sectors account for 90% of the needs: renewable energy, energy networks and energy efficiency (EE). Let's analyse these three sectors in turn, with a focus on the period to 2020.

To achieve the objective of 20% of energy consumption being from renewables by 2020, the investment needs are very likely lower than the level of investment in 2013. Therefore, expanding renewable investment does not seem necessary, in the context of the current renewable energy objectives set for 2020. This is due to the cost decline in most of renewable energy technologies and lower renewable energy needs compared to the past, given lower consumption.

About two thirds of the investment needed in energy networks if for electricity networks, followed by gas. A substantial expansion of electricity transmission network investment will be required compared to the past[2]. Investments in electricity distribution may also need to expand.

Overall investment in the energy sector needs to increase moderately. The investment requirements in the energy sector may be slightly higher than pre-boom level, but lower than the levels seen in the peak of 2010-11. However, outside the energy sector, in the energy efficiency area, the investment needs to expand substantially. Leaving aside transport, investment needs related to energy efficiency are expected to be around EUR 85 bn per year (about 75% of total energy sector investment), mostly in buildings (70% of the total). Current energy efficiency investment is not known, but is estimated to be a fraction of what is needed.

Issues of financing ability

Expansion of energy investment raises a variety of issues. Increasing investment in electricity transmission raises issues of financeability, as a recent study of Florence School of Regulation shows. Most of investment will need to be financed on the basis of the company's balance sheet. In order to keep adequate financial ratios allowing them to raise debt in good condition, an increase in electricity tariffs above inflation may be required, the study concludes. This is difficult. Concerning investments in renewable energy, changes introduced in many renewable energy support frameworks in recent years, notably in Southern Europe countries, have introduced substantial regulatory uncertainty. This makes hard to finance the required investment in these countries.

Expanding investments in energy efficiency is the most urgent, but also the most complex. It implies developing action across the different subsectors, as each one requiring a different approach. The list of sectors is large: private residential buildings, social housing, public buildings, SME, large industries, ESCOs and utilities (demand side obligations). The implementation of the EU energy efficiency policies should allow a quick stimulus to energy efficiency investment. However, expanding energy efficiency investments should be done in the most economically efficient way. We need to develop energy efficiency with innovative approaches that use grants very efficiently. A substantial part of the energy efficiency investment potential is profitable, but there are substantial non-financial barriers that hinder its development (imperfect information, hidden costs, split incentives, etc.). A combination of regulatory measures, information/technical assistance and finance/grants is necessary.

To sum up, the new energy investment cycle should be driven by energy efficiency, followed by investment in energy networks and renewable energy. This increase will contribute significantly to economic recovery. This expansion is not easy. Investments should be developed smartly, by minimising its cost, particularly from public budget. The EIB can play a substantial contribution to this, both by facilitating access to long term finance and by developing new financial instruments (off-balance sheet, third party finance, etc), as well as new technical assistance instruments.

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1) From IEA, World Energy Investment Outlook 2014 and Boomberg/NEF.
2) See Florence School of Regulation, Financing investment in the European Electricity. Transmission Network policy brief, April 2013.