

THE EUROPEAN UNION ENERGY TRANSITION: KEY PRIORITIES FOR THE NEXT FIVE YEARS

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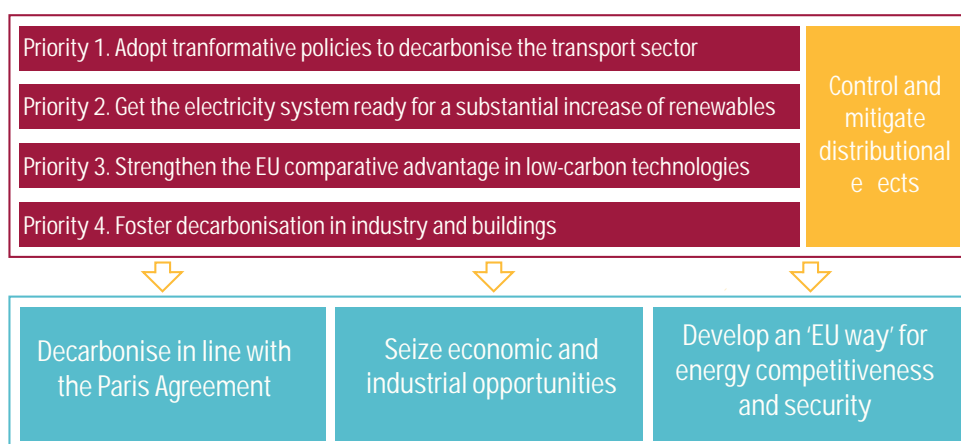
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FOUR PRIORITIES UP TO 2024 TO FOSTER THE EU ENERGY TRANSITION



THE ISSUE

Over the last decade, the European Union has pursued a proactive climate policy and has integrated a significant amount of renewable technologies – such as solar and wind – into the established energy system. These efforts have proved successful and continuing along this pathway, increasing renewables and improving energy efficiency would not require substantial policy shifts. But the EU now needs a much deeper energy transformation to: i) decarbonise in line with the Paris agreement; ii) seize the economic and industrial opportunities offered by this global transformation; and iii) develop an EU approach to energy competitiveness and security, as the EU has neither the United States' shale potential nor China's top-down investment possibilities.

POLICY CHALLENGE

A full-fledged energy transition is becoming economically and technically feasible, with most of the necessary technologies now available and technology costs declining. The cost of the transition would be similar to that of maintaining the existing system, if appropriate policies and regulations are put in place. In short, the EU could benefit from deep decarbonisation irrespective of what other economies around the world do. The transition can also be socially acceptable, if the right policies are put in place to control and mitigate the distributional effects of deeper decarbonisation. The time to act is now, because energy is a rigid system in which infrastructure and regulatory changes take a decade to be fully implemented, while competition is not sleeping – as Chinese solar panels and the rise of the electric vehicles industry clearly show. Policy choices made up to 2024 will define the shape of the EU energy system by 2050.

1 SETTING THE RIGHT ENERGY PRIORITIES FOR THE NEW EU INSTITUTIONAL CYCLE

The new members of the European Parliament and European Commission who start their mandates in 2019 should put in place major policy elements to unleash the energy transition. Political capital is – as always – limited, but four priorities are crucial to foster the EU en

out by car-sharing options); and iii) R&D support for alternative vehicles.

Electric vehicles have emerged as a promising option to decarbonise the energy input into transportation. With smart charging, electric vehicles might also add additional flexibility to the

to allow a more flexible flow of electricity. Secondly, it would need a framework for common data coding and sharing, offering protection from fragmentation, cyber threats or dominance abuse. A third layer would be the tariffs charged by the distribution platforms, but this might be left entirely to national legislation, with a safeguard in EU competition law against abuse of dominant position by any distribution platform.

As decentralisation and digitalisation

It should be noted that it is mainly applied research done outside universities and national laboratories that is responsible for technology development in energy efficiency. Energy efficiency patents are positively associated with other non-energy innovations, and so general policies to promote innovation will also foster energy conservation inventions (Rexhäuser and Löschel, 2015).

Other examples for strategic R&D are potential breakthroughs in electrochemical or alternative storage technologies, the hydrogen economy or carbon capture and utilisation. A smart low-carbon transformation with low regulatory uncertainty and ambitious goals would increase the EU's competitiveness in the global marketplace. As well as basic research into immature technologies, learning-by-doing of near-commercial technologies can substantially drive down technology costs. Clear and stable market signals such as a minimum price on carbon that increases over time in all sectors of the EU economy will accelerate the deployment of these technologies. Renewable support schemes that focus on market integration of renewable energy generation would foster more flexible energy systems. Standards are essential for developing smart and flexible grid systems in the EU.

PRIORITY 4: FOSTER THE DECARBONISATION OF INDUSTRY AND BUILDINGS

Industry currently produces 25 percent of Europe's GHG emissions (European Environment Agency, 2018b), and is subject to the EU emissions trading system (ETS) and thus exposed to a carbon price.

is, together with the fact that industry is generally considered the most energy-efficient sector, has led to no particular policies being proposed beyond carbon trading for the decarbonisation of industry. However, there are four elements that would justify a more active stance: i) Industry does not feel the full impact of the carbon price because of the protective measures devised by the EU to prevent loss of competitiveness. Many industrial sectors still receive free carbon allowances; ii) the EU would like to see growth in the manufacturing sector; iii) When it comes to full decarbonisa-

tion, industry faces many more technical challenges than other sectors, in particular in relation to process emissions (that is, emissions not associated with energy use); iv) the circular economy will also induce a significant move in the EU industrial sector towards more recycling. 167.55 (o)-20 ()TJETEMC /Span A

and municipal governments.

3 KEY ACTIONS FOR THE NEW EU COMMISSIONERS AND LAWMAKERS

Members of the European Parliament and European Commission who will start their mandates in 2019 have the historical task of unleashing the deeper

