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#ENERGY

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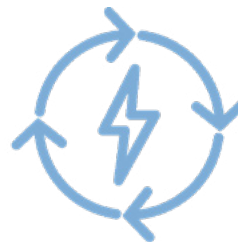
NEW BEGINNINGS

THE EUROPEAN GREEN DEAL STARTS WITH THE ENERGY TRANSITION

This series is a cooperation between the Jacques Delors Institutes in Berlin and Paris and makes concrete proposals for the EU's next institutional cycle.

Climate change is here. Global average temperatures have already risen by more than 1°C. Extreme weather events are more frequent and more intense. As European Commission President-elect Ursula von der Leyen puts it: "Whether it is Finnish wheat farmers facing drought or the French facing a deadly heatwave: we are all feeling quite clearly the effects of climate change"¹.

In order to do so, the next **European Commission should deliver Ursula von der Leyen's promise on a 'European Green Deal'. Such Deal should articulate three key components: climate ambition, innovation-based competitiveness, and social justice.** They are vital to build a broad political coalition, and to deliver the policies that speed up the energy transition.



Yet, **the world is not moving fast enough to avoid irreversible climate devastation**². The Paris Climate Agreement has enshrined the end-goal of 'climate-neutrality': reducing greenhouse gas emissions to such an extent that it becomes possible to offset the remaining emissions with carbon sinks (e.g. forest, agriculture).

To fight climate change at home and abroad, **Europe must become the prototype of a successful transition to a climate-neutral economy, starting with an energy transition** that also allows Europe to become more prosperous, socially fair and politically united.

1 ■ Climate change: a defining political challenge for Europe

Climate change is key for the political future of Europe and is an area where EU action can make a real difference. Alongside the economy, unemployment and migration, **climate change is now a key political priority for European citizens** (see figure 1). This is especially the case for northwestern Europeans, while EU citizens in the South and the East prioritise other topics, such as unemployment and the economy (see figure 2)³.

1. Ursula von der Leyen, Speech at the European Parliament, Strasbourg, 16 July 2019

2. International Panel on Climate Change, 1,5°C Report, 2018.

3. This also partially explains the geographical origin of green MEPs in the European Parliament, as most of them are coming from northwestern countries.

1- ENERGY & CLIMATE

2- EUROZONE

3- TRADE

4- FOREIGN & SECURITY POLICY

5- DIGITAL

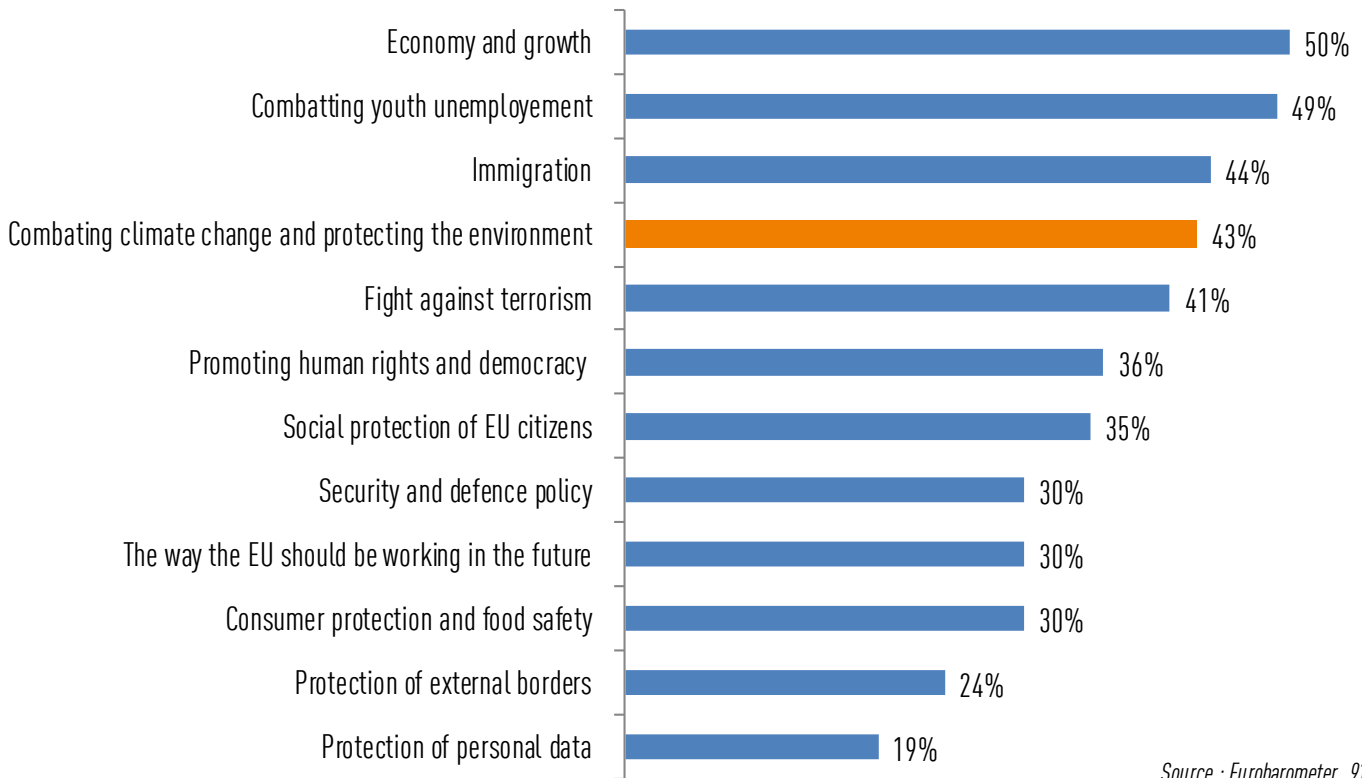
6- DEMOCRACY

7- MIGRATION

8- EMPLOYMENT & SOCIAL POLICY

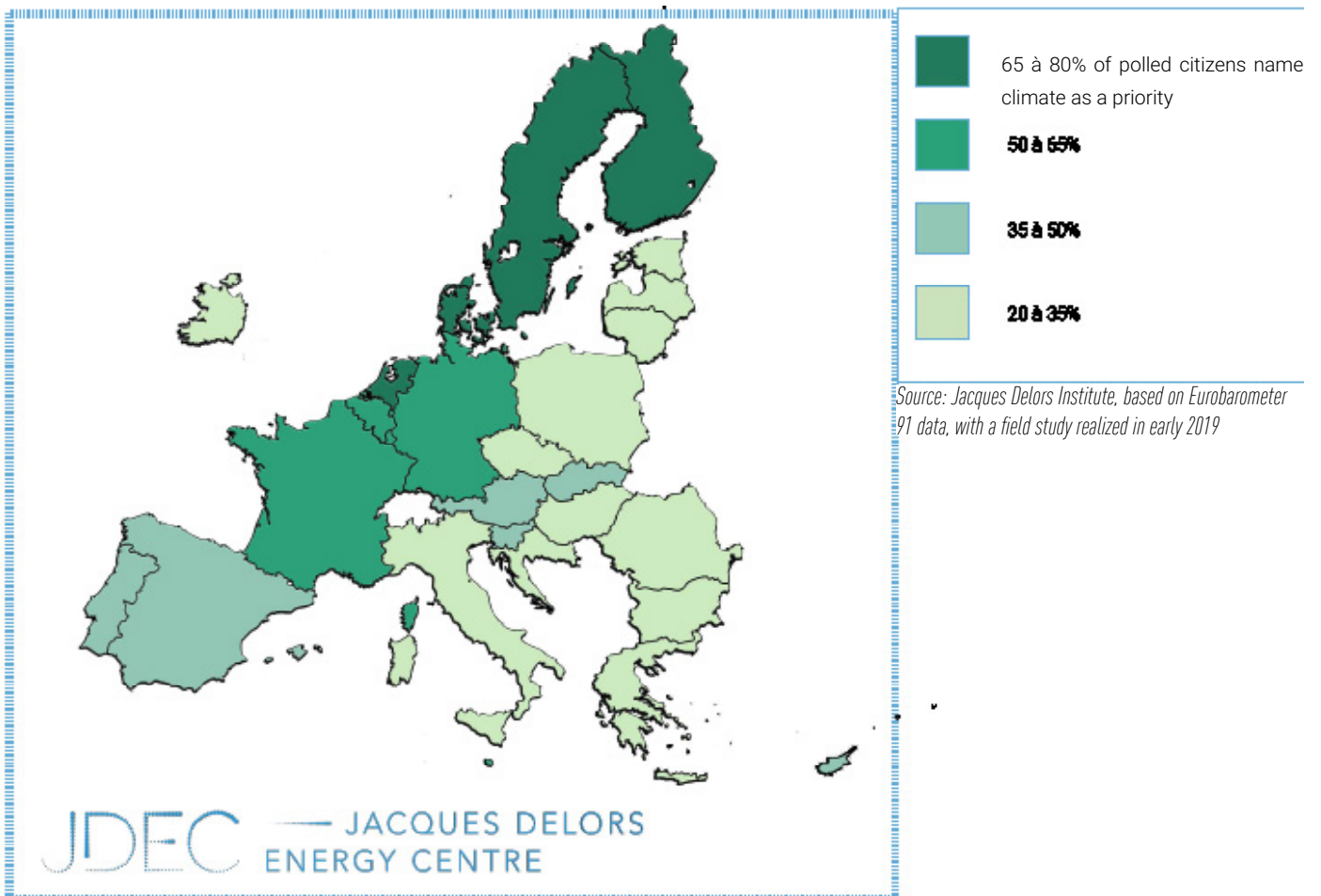
9- BUDGET

FIGURE 1 ■ Which following themes should be discussed as a matter of priority during the electoral campaign for the next European Parliament elections ? Firstly ? And Then ? (Max 6 answers) (% - EU)



Source : Eurobarometer 91.1

FIGURE 2 ■ Percentage of EU citizens who consider that 'fighting climate change and protecting the environment' should be a top-priority during the EU elections (max. 6 answers)



Climate change is also a policy area where the EU is powerful. At the international level, the EU plays an essential role in the Paris Climate Agreement. While Europe only emits 10% of global greenhouse gas emissions, it accounts for 20% of the global economy and 30% of high-level scientific publications. The EU can thus become the prototype of a successful global transition to a climate-neutral economy. And **where Europe leads, others strive for more**, as China, Chile or California already do.

Within Europe itself, the EU has built solid policies that can effectively fight climate change (e.g. energy, agriculture, research and innovation). **In this paper we focus on energy policy**: i.e. what should the EU do to deliver climate-neutral **electricity, transport, heating and cooling**, to all European citizens and businesses.

2 ■ The European energy transition has already started

To fight climate change, Europe needs to complete its energy transition. This is a historic endeavour, as no such transition ever occurred throughout history.

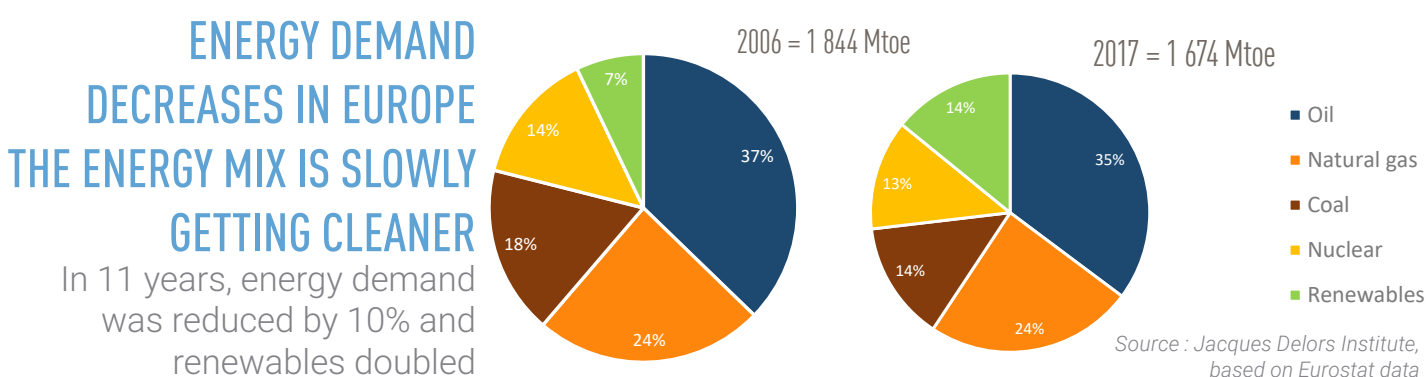
Over the last two centuries, energy demand kept on growing and humans consumed increasing quantities of biomass, coal, oil, gas and nuclear. Today's energy system is therefore the result of past energy additions, a system where we consume massive quantities of dirty fossil fuels.⁴ **We must therefore complete the first-ever energy transition**, where energy efficiency helps to decrease energy demand, all while substituting fossil fuels with renewables.

To do so, **the EU has many cards up its sleeve**: broad popular support as 90% of Europeans favour energy efficiency and renewables⁵, active civil society and mayors⁶, workers and entrepreneurs, and the relevant investment capacity⁷.

The European energy transition is already underway. Europe's energy demand peaked in 2006, allowing newly deployed renewables to start substituting fossil fuels (see figure 3).

Most importantly, in the last ten years, the European Union went from no clear legal competence⁸ for acting on energy to having a comprehensive energy policy that is now in place⁹.

FIGURE 3 ■ Evolution of the eu primary energy mix



4. Jean-Baptiste Fressoz, "Pour une histoire désorientée de l'énergie", Entropia n°15, 2013.

5. Eurobarometer, *Special Eurobarometer 435 Report*, November 2015

6. Such as the 9.000 European Mayors from the *Covenant of Mayors*.

7. Eulalia Rubio, "An EU budget in support of the next commission's agenda", New beginnings, Jacques Delors Institutes in Paris & Berlin, September 2019

8. In EU Treaties, the first article that granted the EU a legal competence to develop an energy policy was the Article 194 introduced in December 2009, with the entry into force of the Treaty of Lisbon.

9. Jean-Arnold Vinois, Thomas Pellerin-Carlin, "L'Europe de l'Énergie existe: le citoyen l'a reconstruite", Décryptage de l'Institut Jacques Delors, Mai 2019.

This EU energy policy **has three clear targets**:

1. Reduce greenhouse gas emissions by 20 % by 2020 and 40% by 2030 –compared to 1990 levels. The EU is on track to achieve this. Ursula von der Leyen wants a more ambitious objective of 50% or 55% by 2030. She also proposes an EU Climate Law that creates a legal objective to make the EU climate-neutral by 2050.

2. Develop renewable energy, to cover 20% of EU energy demand by 2020, and 32% by 2030. Europe is not yet on track to achieve those targets, due to the lack of progress in several Member States.

3. Improve energy efficiency by 20% by 2020 and 32,5% by 2030. The EU can make it, if it takes the right decisions in the next five years, especially in the buildings and transport sectors.

To reach its energy and climate targets, the EU has set-up a comprehensive framework that articulates legislation, enabling tools, and financial support (see figure 4).

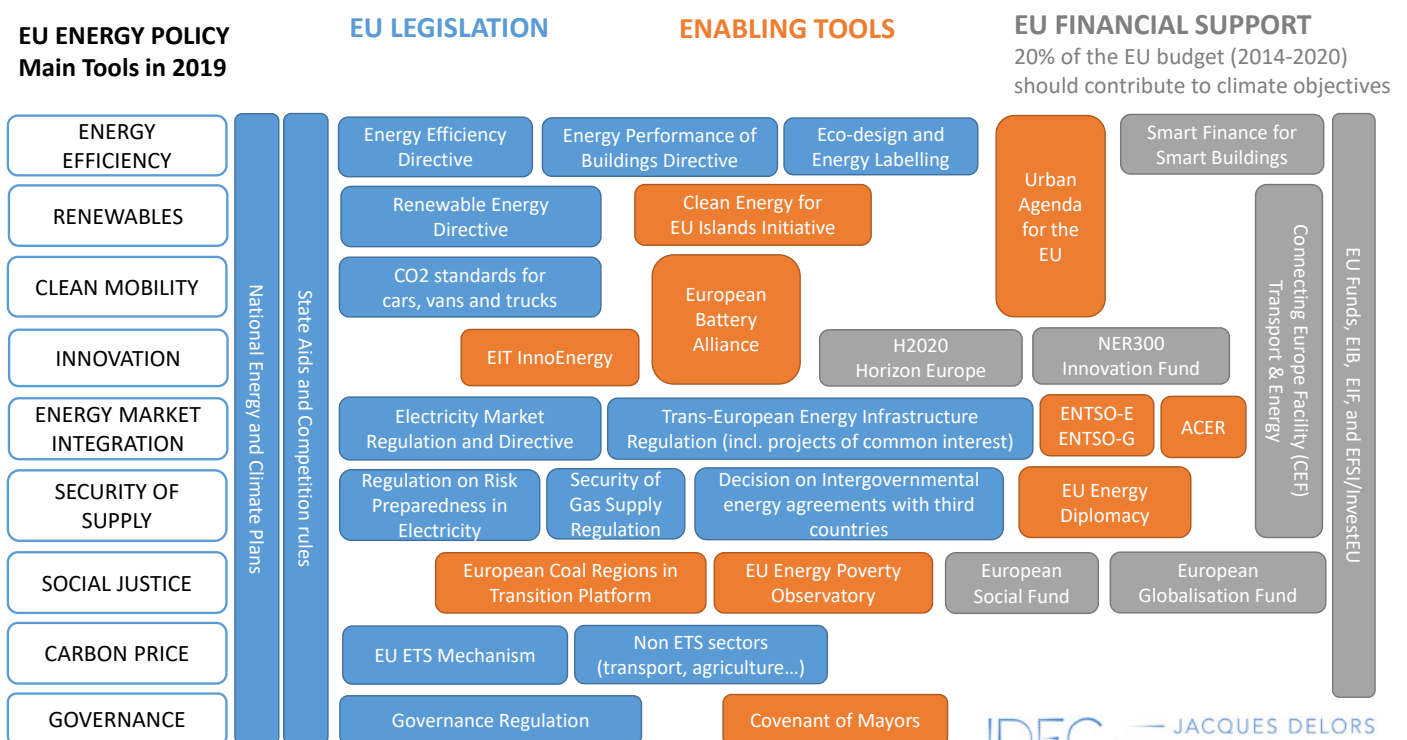
The European Commission should build on this set of tools to tackle three major challenges:

1. While fighting climate change is urgent, the evolution of our energy system is slow. We are on the right track because we are reducing energy demand and boosting renewables. Nevertheless, the pace remains too slow to effectively fight climate change.

2. Some policies raise concerns about international competitiveness. The tension lies between protecting dying industries (e.g. coal), helping those in transition (e.g. car manufacturers), and supporting emerging industries (e.g. offshore wind).

3. Several policies can have social consequences. The 2013 Bulgarian protests and the 2018 French Yellow Vests movement, set off by rising energy prices, show that the energy transition cannot be achieved at the expense of low-income citizens whose daily lives are strongly affected by such policies. It is time to understand that **the energy transition must be socially fair if it wishes to succeed.**

FIGURE 4 ■ Main EU energy policy tools in 2019



3 ■ A European Green Deal: ambitious, innovative and social

Ursula von der Leyen's number one priority for Europe is the "**European Green Deal**". Her Commission should elaborate a political project that articulates three components: climate ambition, innovation-based competitiveness and social justice.

This articulation is required from both a *policy* and a *political* perspective.

From a *policy* perspective, to deliver our climate ambition, we need innovative business models, technologies, processes, infrastructures and behaviours. We also need social policies that are inclusive of all workers and citizens in the transition.

From a *political* perspective, only a broad coalition can bring about change in Europe. **Europe thus needs climate ambition** to gather support from green-leaning parties, NGOs and citizens – especially in northwestern Europe (see figure 2). This ambition needs to be **supported by a serious agenda for innovation and competitiveness** in order to gather support from businesses as well as from pro-market and right-wing politicians and citizens. A **Social Pact for the Energy Transition**, for workers and poorer Europeans, is paramount to gather support from trade unions and social NGOs, as well as left-leaning politicians and citizens – especially in Southern and Central-Eastern Europe.

In the last section of this paper, we sketch the content of each of those three complementary policy priorities.

3.1 Climate ambition for the Green Deal

The European Commission, the European Parliament, and 24 of the 28 EU Member States already support the objective to make Europe climate-neutral by 2050. This will therefore become the official EU objective in the months to come, most likely under the EU Climate Law that Ursula von der Leyen proposes.

After that, the European Commission should elaborate a policy package to pave the way for the transformations needed to reach climate neutrality. For the energy transition, the European Commission should:

1. Elaborate an ambitious strategy for the deep renovation of European buildings, as they consume 40% of EU energy. We should therefore renovate 3% of all buildings every year – compared to the current rate of 1%-1.5%¹⁰. It also means drastically improving the quality of the renovation: small renovation such as roof insulation is not enough, only deep renovation of entire buildings can bring important energy savings¹¹.

2. Build a comprehensive strategy for clean mobility, as transport consumes 33% of EU energy. The Commission should:

- Help States, regions and cities to **reduce transport needs**. This implies rethinking urban planning to reduce distances between residential areas and the workplace, but also favouring working methods like teleworking.
- Encourage a **shift from dirty modes of transport towards cleaner ones**. For short distances, it is about shifting from using cars to **walking, biking and using public transport**. Several cities are already becoming car-free, like [Pontevedra](#) in Spain. For long distances, it is key that the pollution of the **aviation** sector is reflected in the price of plane tickets, including via a fairer taxation. The EU should also better support innovation in the **railway** sector, including freight and night trains.

¹⁰. Source: European Commission, [A Clean Planet for all – in depth analysis](#), November 2018, Figure 41

¹¹. For instance, [EnergieSprong](#) is already doing whole house refurbishment, delivering Net Zero Energy Buildings.

- Replace polluting transport modes by cleaner options. This involves shifting to **electric vehicles**¹² and agreeing on a date to end sales of new diesel and gasoline cars in Europe (e.g. by 2040). Cities are already investing in fleets of clean buses but the EU and local authorities should do more.

3. Accelerate the change in the electricity and gas sectors. The EU should coordinate the European coal phase-out that currently occurs with uncoordinated national decisions¹³. Renewables should be developed at scale to replace the electricity currently generated by the coal and nuclear units that are phased-out. Coupling the electricity and gas sector is key. The latter should transform itself including through energy efficiency-based business models, 'green gas' and 'green hydrogen'.

4. Engage EU companies to draft an **"EU Business Climate Pledge"**¹⁴ as part of Ursula von der Leyen's "European Climate Pact".

5. Support businesses and citizens in making the greenest choices. This is now well studied¹⁵ and several techniques are experimented in Europe: roll out of smart meters with consumption comparison tools that help consumers optimise their consumption at home (e.g. *Opower*, *Wivaldy*), innovative business models based on zero-carbon energy as a service (e.g. *Centrica*, *Engie*) or mobility as a service (e.g. *Renault Mobility*).

6. Lead by example. The Commission should practice what it preaches, for instance by renovating its own buildings and making more use of trains as a transport mode. It should also create the position of European Commission First Vice-President for Climate – or for the 'Green Deal', charged with overseeing all relevant policies on a daily basis.

3.2 Innovation-based competitiveness for the Green Deal

In the global economy, **the competitiveness of EU businesses rests on their capacity to innovate**. Technology plays an integral part in innovation¹⁶. Yet, most of the innovative efforts required today go beyond technology¹⁷, e.g. innovations related to business models for clean mobility, financing schemes for energy efficiency renovation, behaviours and social norms for tourism, etc.

To build up competitiveness, policymakers and businesses need to **tap the dormant innovative potential in Europe**. The Juncker Commission has done a lot¹⁸. The von der Leyen Commission should furthermore:

1. Better fund innovation, starting by investing at least **€120 billion** in its main Research and Innovation Programme (Horizon Europe) and use other tools¹⁹ to support the development of the existing innovation ecosystem, especially in Central-Eastern Europe.

12. Emilie Magdalinski et al., "Electric Vehicles", Policy Brief, May 2019.

13. Many EU States have decided to phase-out coal: such as France, Sweden, Slovakia Ireland, and Italy (by 2022-2025), Finland, Netherlands and Portugal (2029-2030) and Germany (by 2038). Source: <https://beyond-coal.eu/data/>

14. The content of such pledge is detailed in a forthcoming Jacques Delors Energy Centre note, produced for the Franco-German Businesses Evian Meeting. This pledge draws on the experience led by *U.S. businesses with the Obama Administration*.

15. See for instance ENABLE.EU, *Written synthesis of ENABLE.EU's findings*, June 2019.

16. Thomas Pellerin-Carlin, et al., *Innovation for the energy & climate transition*, Jacques Delors Institute, MOOC, July 2019

17. Climate Strategy & Partners, *Funding Innovation to Deliver EU Competitive Climate Leadership*, October 2018

18. Thomas Pellerin-Carlin, *Invest in the clean energy future we want*, Jacques Delors Institute Policy Brief, January 2019.

19. Eulalia Rubio, Fabian Zuleeg, Thomas Pellerin-Carlin, Emilie Magdalinski, Marta Pilati, Philipp Ständer *Mainstreaming innovation funding in the EU budget*, Jacques Delors Institute, Study, May 2019

2. Tackle the investment challenge.

Europe needs to re-allocate public and private investment, away from fossil fuels and towards clean energy. The European Commission should thus improve **carbon pricing** mechanisms, and deliver on Ursula von der Leyen's **Sustainable Europe Investment Plan to unlock €1.000 billion** of investment in the 2020 decade.

3. Invest in the cleanest and most innovative solutions. Elaborating an EU-wide **"Buy Clean Act"** would provide a significant market to clean innovations, such as low-carbon cement for the buildings sector. EU diplomacy could then engage international partners to adopt similar provisions, thus **ensuring more climate-friendly international trade** and supporting those EU businesses that provide the cleanest options on the global market.

4. Mobilise innovators and entrepreneurs. This is where **EU Research and Innovation Missions** come in, especially the idea to **make a hundred European cities climate neutral by 2030**²⁰. Those cities will be the laboratories of the innovative solutions that deliver climate neutrality.

5. Elaborate an industrial strategy for the transition to climate-neutrality. Europe needs large industrial projects to build the future we want. We now have a blueprint: the **European Battery Alliance**, an initiative developing a competitive, sustainable and circular value chain for battery manufacturing in Europe²¹. It can inspire similar initiatives in other sectors, like green hydrogen, low-carbon cement and steel, etc.

3.3 Social justice for the Green Deal

The energy transition is not *by nature* a social one. Rising energy prices without the proper supporting framework can be unfair and lead to unrest. There are, however, many ways to ensure a socially fair energy transition. The EU, together with Member States, regions and cities, as well as with businesses, trade unions and NGOs, must build a **Social Pact for the Energy Transition**²². This Pact will ensure that **workers** are accompanied in the transition – starting with coal workers²³, develop the **training of young Europeans** in clean energy jobs and **protect European families from energy poverty**.

Concretely, the new Commission should:

1. Allocate adequate EU funding for regions and workers who lose their jobs as a result of the transition. Ursula von der Leyen wants to create the **'Just Transition Fund'** the Jacques Delors Institute called for²⁴. But this is not enough. The EU should also earmark some of its regional and social funding to properly support regions and workers, starting with those affected by the coal phase-out.

2. Create EU centres of excellence for apprentices in specific energy transition jobs (e.g. energy efficiency audits, installation of heat pumps). With the support of grants and an extended Erasmus Pro programme, the EU has the opportunity to make young Europeans key actors of the energy transition.

²⁰ Mariana Mazzucato, [Mission-Oriented Research & Innovation in the European Union](#), European Commission, February 2018

²¹ See European Commission's [Strategic Action Plan on Batteries](#), 17 May 2018

²² Jacques Delors, Sofia Fernandes, Thomas Pellerin-Carlin, ['Europe Needs a Social Pact for the Energy Transition'](#), Brief, Jacques Delors Institute, January 2018.

²³ Thomas Pellerin-Carlin, Monika Oczkowska, [Just Energy transition: A reality test in Europe's Coal regions](#), Jacques Delors Institute, May 2019.

²⁴ Jacques Delors, Sofia Fernandes, Thomas Pellerin-Carlin, ['Europe Needs a Social Pact for the Energy Transition'](#), Brief, Jacques Delors Institute, January 2018.

3. Set the objective of 'zero energy poverty' by 2030. This can build on an ambitious narrative stating that **'not a single European family should suffer from cold at home in winter'**. Such an objective requires clear measures and financing tools to tackle the root cause of energy poverty: energy inefficient buildings. Public money should help renovate buildings rather than subsidise further fossil fuel consumption.

Conclusion

Ursula von der Leyen has chosen to make the 'European Green Deal' the number one priority of her term as President of the European Commission. She will need to deliver concrete steps forwards, including by speeding-up the transition to a clean energy future. To do so, **she needs to build a broad coalition both in Parliament and among EU governments and societies on this priority.**

This is why we argue that **the European Commission should structure the 'European Green Deal' around three complementary policy priorities: climate ambition** to set the direction, **innovation-based competitiveness** to help EU companies develop the clean energy solutions for Europe and the world, and **social justice** to ensure an inclusive transition that improves the living conditions of all Europeans.

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