

POLICY PAPER

ENERGY AND CLIMATE UNION

HOW TO BECOME "THE NUMBER ONE" ON RENEWABLES



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The establishment of a strong, resilient and democratic energy and climate union represents a unique opportunity to become "*the world number one in renewable energies*" as stated by president Juncker in his political pledge¹ and to pave the way to an energy system exclusively relying on renewable energy sources (RES). However, the "*note de cadrage*" circulated by vice-president Šefčovič last week turned disappointing due to the little room offered to renewables in the energy and climate union. Although a whole section is dedicated to "*decarbonisation of the economy*", the content of this chapter is way too weak and does not reflect the steps to take to actually become a credible world number one.

Facts about RES - deconstructing the myth

1. RES are not over-subsidised, they received less subsidies than other sources (nuclear & fossil)

If we take the latest study from Ecofys "*Subsidies and costs of EU energy*", it is clear that other energy sources, chiefly nuclear but also fossil fuels, benefitted from way more public support than RES. Hence they are now relying on their vested interests caused by this large historical support. Still in 2015, some governments massively subsidise nuclear, such as the UK State aid to Hinkley Point worth € 20 bn.

2. RES are not expensive: they achieved extraordinary cost reductions

Cost reductions achieved over the last decade are extraordinary. For instance, PV module prices were divided by five in six years (IEA) and a further halving of costs is anticipated. At the same time, other traditional technologies became more and more expensive. This is the case of nuclear (Olkiluoto and Flamanville EPR are estimated between € 8 and 10 bn each) as well as coal plants (real costs of carbon capture and storage cannot be estimated but likely to increase the electricity price by 70 to 80 %).

Instead of welcoming opportunities offered by renewables, the text as it stands makes a negative spin on public subsidies purportedly offered to RES-based power generation and on the alleged stress for the grid caused by RES variable nature. In addition, the dimension dealing with innovation only refers to a very vague action described as "*an R&I strategy to maintain European technological leadership and expand export opportunities*" lacking details on how to reach this result. Surprisingly, photovoltaic is completely forgotten in this dimension although the International Energy Agency identified this sector as the power source with the largest relative growth potential in the next decade.

¹ Jean-Claude Juncker, [A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change](#), 15 July 2014.

We do not share this negative spin. Renewables are not a problem but on the contrary represent a solution for a better energy future at European and global level. They are present in infinite proportions throughout the world and as such are a unique means to democratise and pacify access to energy. Renewables contribute to restore hope for billions of people living on planet earth and create perspectives for future generations:

- Hope in our capacities to fight climate change and to limit the increase of the temperature to 2°C (even 1.5°C) by the end of the century;
- Hope for the 1.3 billion vulnerable people (almost the equivalent to the population of India)² who are unable to access electricity despite an endless potential on the earth, e.g. in Africa;
- Hope for economic growth and competitiveness of SMEs and manufacturing industry regarding the potential revenues induced by innovation in the field of renewables, for instance the German Energiewende led to tripling the annual number of RES-related patents;³
- Hope for the workforce in light of the immense potential on job creation linked to renewables: in 2012, there were 1.2 million direct and indirect jobs in the renewable energy sector,⁴ a figure likely to increase up to 1.7 million jobs in 2030 in Europe⁵ and 6.9 million jobs worldwide.⁶

If the European Union wants to meet its climate, social, and economic objectives and to become "*the world number one*", we need to work in parallel on three dimensions:

- A vivid domestic market, condition *sine qua non* for a world leadership;
- An innovation strategy coupled with a robust industrial policy to maintain or regain our position;
- Stronger support to export opportunities and providing solutions for developing countries using the international 2015 *momentum*.

1. A vivid domestic market

Firstly, we need to work on a **market design** respectful of the high share of renewables in the mix. The so-called "merit order" in energy-only markets leads to situation penalising renewables. During periods when the sun shines and the wind blows, electricity prices are so much below the average (thanks to the low running costs) that renewables power plants cannot properly remunerate themselves. This market design is not fit for renewables and should be adapted to the new reality.

Secondly, we need to ensure the **full implementation of the legislation** to meet our 2020 objectives. It goes through putting more pressure on the countries lagging behind such as Belgium, France, Latvia, Luxembourg, Malta, the Netherlands, Slovenia and the United Kingdom.

² World Bank, [SE4ALL Global Tracking Framework](#).

³ Craig Morris, [Renewable energy patents boom in Germany](#), 21 August 2014.

⁴ European Renewable Energies Federation.

⁵ Mario Ragwitz *et. al.*, [Employment and growth effects of sustainable energies in the European Union](#), August 2014.

⁶ Jay Rutowitz, Alison Atherton, [Energy Sector Jobs to 2030: A Global Analysis](#), Greenpeace International, 2009.

The fourth dimension of the energy and climate union on "decarbonising the economy": a negative wording for renewables

"To become the number one in renewables, the cost of renewable energy has to reduce further"

"Investment decisions in renewables have to take into account the physical realities of both resource availability and the grid, bottlenecks, public acceptance, consumption location, national risk profiles and administrative barriers"

"This Commission will facilitate cooperation and convergence of national support schemes leading to fully effective cross border opening"

Thirdly, we need to combat the ongoing **crusade undertaken by the European Commission directorate-general for competition aiming to destroy national support schemes for renewables**. This attempt to ensure "*fully effective cross-border opening*" of national support schemes would undermine small-scale RES development and citizens' involvement as only large companies would be in a position to succeed in fully open auctions and tendering procedures. This is unacceptable as it only serves the interests of big oligopolies. This undemocratic change would kill self-consumption of self-produced energy and also critically undermine investors' confidence. On the contrary, the Commission

should **favour a gradual convergence** of national support schemes through regional cooperation and thanks to development of **standard contracts for cooperation agreements** foreseen under the RES directive to reduce red tape.

In addition, market signals should encourage the right investments. According to the IEA Mid-Term Renewable Energy Market Report 2014, EU investments are foreseen to stagnate or decrease until 2020. This is why we need a more proactive approach. In a context where broken ETS does not play its role, Commission and member states should make the best use of the upcoming European Fund for Strategic Investments (EFSI) and of the structural funds to **lower the cost of capital** for sectors with high capital costs such as renewables.

In the medium-term (2030), the objective is to drive investments by securing a **stable regulatory framework**. Retroactive changes such as the ones implemented in Spain notably are not acceptable. This implies the establishment of **strong governance with national binding targets** in a regional context. Without national binding targets preventing free-riders from passively getting the benefits from ambitious countries, and without an overall target higher than the weak 27% suggested by the Heads of State, there will be no buyer for cost optimised green electricity.

Power generation is not the only focus. According to the IEA, while some 45% of our power supply would be generated by renewables in 2040 under new policies scenario, this share is falling to 17% in the transport sector, far less than in the United States for instance.⁷ Thus the Commission's objective on transport (increasing **electric mobility**) **is a good way forward only if in parallel the share of renewables reaches a level well beyond 50% of the electricity mix**. Electric mobility should not represent an objective in itself if not accompanied by a higher penetration rate of RES electricity. It should also be complemented by investments all along the chain and not only on the vehicle fleet: fuels, services, transport management systems, integration of smart technologies.

⁷ International Energy Agency, World Energy Outlook 2014 (expressed in share of the primary energy demand).

Beyond electricity, we also encourage the Commission to think of a RES strategy for heating and cooling as one third of our energy is consumed in buildings for **heating and cooling** purposes. This is all the more necessary than 60% of the gas imported from Russia is burnt in district heating systems which should switch to biomass. A faster development of RES in the heating and cooling sector would subsequently show great geopolitical benefits.

2. A stronger innovation and industrial policy

The Commission seems to make the right observation when indicating that "*energy dependence should not be turned into technology dependence*". This is absolutely true and **RES technology leadership** is a must. As necessary as they are, will the actions mentioned in this dimension of the energy and climate union (inducement prize, up-skilling of workers, reinforced SET-Plan) be enough? We can doubt about it. In addition, we propose to make the best use of both structural funds and the EFSI. Both the € 38 bn of the structural funds dedicated to sustainable energy and the € 20 bn from the EFSI should target innovative RES projects.

Europe still has world industrial leaders in the wind and smart grid sectors, such as Enercon, Acciona, Vestas, Siemens, Alstom, ABB... The wind sector recently reported great trade performance in a context of a fast growing world market: Africa's largest wind farm came on line with the commissioning of the 300 MW Tarfaya plant in Morocco, and South Africa's market made a strong start with 560 MW. Brazil's 2,472 MW in new installations is a breakthrough, while Chile (506 MW) and Uruguay (405 MW) also show strong records.⁸ Overall, every 12 days there is new wind capacity added in the world equivalent to an EPR nuclear power plant (1650 MW)! The challenge is to keep this leadership in the **next phase of development of wind energy: off-shore**. In this respect, we need to prioritise energy generation and transmission in the North Sea and in the Baltic Sea through ambitious plans, and to continue technology development of deep off-shore wind mills such as floating platforms.

In addition to wind, **photovoltaic must be at the heart of an industrial policy** for renewables. A new investment cycle is expected in the photovoltaic sector to meet the demands of a growing global market. The bulk of the photovoltaic cells and modules are manufactured outside the European Union, mostly in China. The EU thus needs to be fully part of this new investment cycle in order to maintain its leadership on research & development, on machinery, on some other segments like inverters and balance of systems, and to re-install a leadership in equipment production (cells and modules). The overall objective is that by 2020 the EU is in a position to meet at least 20% of its own market with cells and modules manufactured domestically. The European Union should also aim to maintain its expertise on system integration such as small-scale PV solutions for developing countries, as mentioned in a previous [Policy Paper](#).⁹

Innovation should also rely on the contribution of **cities**. Initiatives such as Smart Cities and Communities as well as the Covenant of Mayors and its 6,000 parties should be exploited to their full potential. The energy transition is not all about technologies, it is also about **social innovation and system integration** and cities are in the best situation to actually trigger this shift.

⁸ EWEA, [Wind in Power: 2014 European Statistics](#), February 2015 and GWEC, [Global Wind Statistics 2014](#), 10 February 2015.

⁹ Claude Turmes, [Manufacturing PV cells and modules: Europe can do better](#), 3 December 2014.

3. Support to exports and solutions agenda for international talks

2015 is the year of the Paris conference and the EU should use this opportunity to develop new markets for our RES know-how, both in terms of individual technologies (such as wind mills) but also in terms of system integration, notably in the urban environment. Making cities smarter throughout the world would ensure **a sizeable market for European companies on green technologies** exists. Not only urban areas are concerned: rural areas are also in desperate needs of electrification and small-scale photovoltaic systems coupled with batteries are part of the solution. This is very much relevant to supply African remote regions with the necessary power.

A good way for the European Union to promote this agenda is to link it with the COP21 discussions at global level ahead of the Paris Conference: as the world's largest contributor to development aid, the EU has full legitimacy to push for this **solutions' agenda in international talks** and to upscale initiatives such as the Sustainable Energy for All (SE4ALL) programme launched in 2011 by UN Secretary-General Ban Ki-moon to "*achieve a broad-based transformation of the world's energy systems and build a more prosperous, healthier, cleaner and safer world*".¹⁰ This agenda is much more positive than export credits for coal still granted by some member states and currently under review at the OECD level.

To conclude, we are convinced that killing the RES domestic market would have negative consequences on our growth, competitiveness and export potential in addition to threatening our climate change objectives. The Commission needs political courage to promote a dynamic domestic market coupled with proactive industrial, innovation and commercial support to open the door to the energy transition and restore the hope of many people throughout the world.

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¹⁰ <http://www.se4all.org/about-us/>