

# Priorities for the „Energy Union“

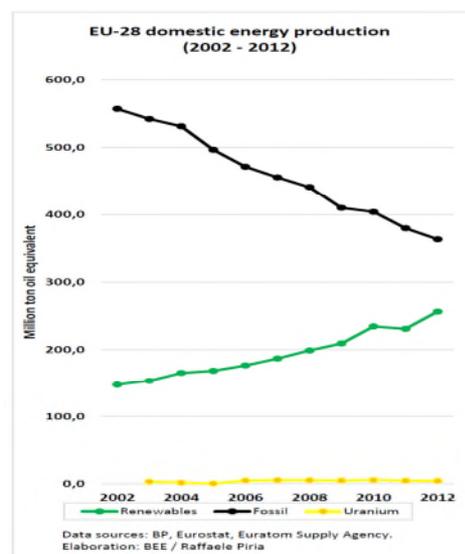
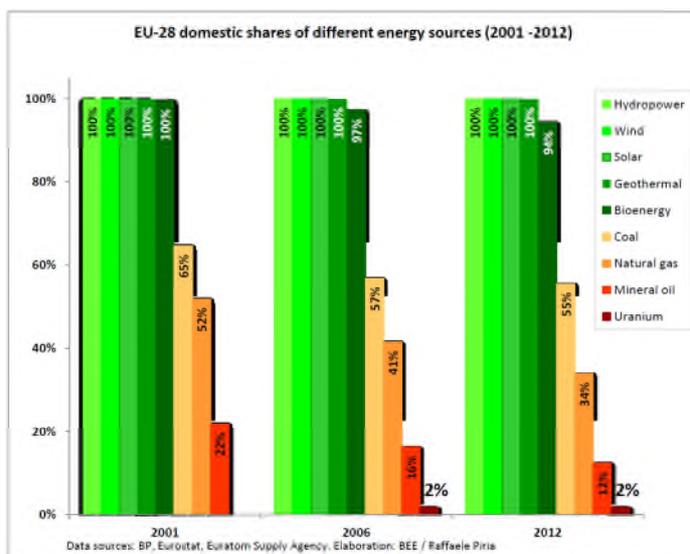
*Proposals from the German Renewable Energies Federation (BEE) (08.01.2015)*

Many different concepts, ideas and priorities are attached to the “Energy Union” as a perspective for the EU’s energy policies. The notion was introduced into the debate by Poland’s former Prime Minister, Donald Tusk, who is now the President of the European Council. His principal objective was to improve the security of fossil fuel supply by diversification of supplier countries and by bundling the purchasing power of the EU Member States. This was a short sighted approach, because it would only cure symptoms instead of changing content. Meanwhile, more comprehensive approaches are being discussed aiming at an “Energy Union” with broader objectives clearly exceeding a buyers’ community for fossil fuels. The „Mission Letter“ from the new President of the European Commission, Jean-Claude Juncker, to the (then designated) Vice-President for the „Energy Union“, Maroš Šefčovič, contains an extended concept, among other things by explicitly positive reference to the positive role which Renewable Energies have to play in this context:

*“Achieving a European Energy Union is one of the priority projects of this Commission. Your objective will be to bring about, in the course of this mandate, a resilient Energy Union, with a forward-looking climate change policy, by steering and co-ordinating the delivery of key initiatives. We need to pool our resources, combine infrastructures and unite our negotiating power vis-à-vis third countries. We need to diversify our energy sources, and reduce the high energy dependency of several of our Member States. I want to keep our European energy market open to our neighbours. However, if the price of energy from the East becomes too expensive, either in commercial or political terms, Europe should be able to switch swiftly to other supply channels. We need to be able to reverse energy flows when necessary.*

*And we need to strengthen the share of renewable energies on our continent. This is not only a matter of responsible climate policy. It is, at the same time, an industrial policy imperative if we still want to have affordable energy at our disposal in the medium term. I strongly believe in the potential of “Green Growth” and I want the EU to become the world number one in renewable energies”.*

With decreasing domestic shares of fossil resources and with the dependence of nuclear energy from only a few and mostly insecure uranium suppliers (cf. the graphs below) it is obvious to focus the „Energy Union“ around the transition towards Renewable Energy and Energy Efficiency.



With our proposals we wish to outline how the „Energy Union“ should be shaped in order to effectively support Europe’s energy transition towards Renewable Energy and Energy Efficiency in all sectors (electricity, heating & cooling, transport). Due to the political tensions with Russia ad-hoc measure will certainly be necessary to cope with short-term shortages. It is important not to limit the “Energy Union” to these ad-hoc activities, but to design it as the strategic project for Europe’s energy future.

More cooperation among Member States is important for extensions of gas and power grids and for upgrading interconnections to a reasonable minimum capacity. Cooperation should, however, not be limited to this. Cooperation should be extended to incentivizing and supporting pilot projects with physical energy flow between neighbouring regions and/or countries aiming at local, national and regional transition of the energy system. Stable and reliable framework conditions aiming at gradually overcoming national borders and borders of control areas should be agreed on and tested.

Furthermore, increasing integration of the power sector, the heating & cooling sector and the transport sector in terms of energy supply and consumption should be factored in from the beginning. The ongoing discussions about gas shortages underlines that need for a comprehensive and encompassing energy debate instead of a mere electricity debate. Gas is primarily used for heat supply and has to be replaced accordingly. Developing the EU towards a community for Renewable Energy and Energy Efficiency, for a sustainable, secure, safe, cost-effective, clean and climate friendly energy system should be the core task of the “Energy Union”.

We believe that the “Energy Union” should focus on the following priorities:

- 1.) Renewable Energies as the key for security of supply
- 2.) The “Energy Union” as the reliable framework for Europe’s energy transition
- 3.) Intelligent integration of centralized and decentralized structures in future-apt markets
- 4.) Creating cross-border model regions for sustainable energy supply
- 5.) Sustainable energy supply for employment and societal prosperity
- 6.) Climate protection without deviation or aberration: Renewable Energy and Energy Efficiency

These priorities will be further detailed on the following pages.

## 1.) Renewable Energies as the key for security of supply

Reliable availability of clean and affordable energy is an important fundament of our society and should therefore also be the basic element of the “Energy Union”. Without electricity, heating (or cooling) and transport service every-day life is hardly imaginable in Europe. Precaution for political crises and depleting resources is necessary to maintain supply security at affordable costs.

**Accelerated shift towards domestic renewable energy sources** is a remedy against practical and financial risks like increasing or volatile costs for fossil fuel imports. Costs of Renewables have drastically decreased in the last few years. It is almost beyond dispute today that onshore windpower and photovoltaics are already the cheapest energy sources – despite markets which are not functioning or which are functioning according to a logic which is inappropriate for variable Renewables. Those who are using Renewable Energy do not have to fear the end of fossil resources and they are widely protected against politically motivated supply disruptions or cost increases.

If the “Energy Union” is to focus on permanent supply of affordable energy, there is no rational, efficient or sustainable solution without **accelerated deployment and priority use of Renewable Energy**. Recently reiterated requests to actively support nuclear as well as conventional and unconventional fossil fuels as “low carbon” or “lower carbon” sources, will lead us in the opposite direction and cannot reasonably be part of future oriented “Energy Union”. The “Energy Union” must help accelerate the **energy transition in the EU as a whole as well as in the individual Member States** by maintaining or – where they are not yet in place – creating enabling framework conditions. On the way to a “Level Playing Field” for all energy sources the **removal of all subsidies for fossil and nuclear energy** is overdue. Only then will the societal costs for unsustainable energy no longer be borne by all taxpayers, but become part of the specific costs of these energy sources. This would quickly remove the competitive advantage of fossil and nuclear energy.

## 2.) The “Energy Union” as the reliable framework for Europe’s energy transition

To achieve the objective of establishing domestic Renewables as the core of the EU’s energy supply security stable and reliable framework conditions are necessary so that the energy transition remains attractive for private and public investors. And this is where a lot is going wrong in the EU. The Internal Energy Market is by far not yet completed and **continued dominance of utilities from the fossil and nuclear past is considerably disturbing markets** in most of the EU Member States. These markets by themselves are not able to channel a majority of investment decisions towards cost efficient and sustainable Renewable Energy. As long as fossil and nuclear oligopolies are impeding the energy transition by obstructing new and independent market players, **targets and politically binding objectives will continue to be necessary**, in order to stabilize and accelerate the transition. The Renewable Energies Directive with the **binding 2020-targets for EU and for each Member State** has proven to be an important instrument for monitoring and enforcing the implementation of jointly agreed objectives – despite weaknesses in detail and despite wilful deviations by individual Member States. The mix of coordination and monitoring on EU-level and final responsibility on Member State level has proven to be particularly useful for successfully implementing binding national targets.

Unfortunately, however, neither the Directive nor appeals from clear-sighted actors could prevent a number of Member States from building on the idea of reducing the 2020 targets and watering down the Renewables Directive in the process of elaborating a 2030 framework. Several Member States have started lowering considerably their ambitions in the area of Renewable Energy and Energy Efficiency. This has led to increased uncertainty of potential investors and has already so much slowed down the growth of Renewables in the EU that experts believe that the objective of a 20%-share of Renewables in Europe’s gross final energy consumption in 2020 will not be achievable without further measures.

The European Council’s Conclusions of October 2014, which are hardly more than extending a Business-as-usual scenario, have not contributed to removing or reducing uncertainties – rather the opposite. It is necessary to take action to improve this framework. **Maintaining and creating clear and reliable framework conditions for swift deployment of Renewable Energies must be a core element of an “Energy Union”**. And this has to be accompanied by precise and binding new “governance” for the EU and for each Member State.

### 3.) Intelligent integration of centralized and decentralized structures in future-apt markets

For accelerating and permanently stabilising the energy transition, new market structures and models are necessary in order to facilitate and accelerate the transformation of the energy supply in Europe. **Completing the Internal Energy Market** will be a key element of the “Energy Union” but will be only part of the answer. The completion itself is by far not yet accomplished, although all three Internal Market Packages are said to be transposed in all Member States. The European Commission has started a „*systematic non-conformity assessment*“ in autumn 2014 resulting in initially nine cases of „*incorrect transposition or bad application*“.

**The formal completion of the Internal Energy Market will not be a sufficient** as an incentive for the continuation of the transition or at least removing major hurdles. Although unbundling of energy production and grid operation and the objective of cross-border energy flows and transparency rules are extremely important – **more is needed to develop a future oriented energy system in Europe.**

**At present, the introduction of capacity markets is the biggest risk for the internal market in the electricity sector.** National capacity markets lead to massive distortions among Member States with different approaches. They have become instruments for selectively channeling capacities into specific countries – to the detriment of investors in other countries. Even without these distortions between Member States capacity markets result in distortions within Member States, because they have different impact on different technologies. They are thus not technology neutral, but they are shifting weights among the technologies.

**Less market failures** and less impact of capacity markets means less price distortion in favour of the incumbent utilities. It is necessary to **internalize external costs**, which are at present borne by consumers or tax payers across the board, in order to come closer to true prices which are favourable for clean and sustainable energy. Market coupling and interconnections are important to facilitate small and large scale energy flows across borders. But they are not sufficient, as long as the market design is not design according to the specific requirements of variable and often decentralized Renewable Energies with an intelligent integration of central and decentralized structures. **The value of energy production will no longer be defined by inflexible “baseload”, but by flexibility options with regard to production and consumption;** no longer will it be defined by the merit order of the incumbent power sector, but by the appropriateness of production technologies and consumers for flexible markets with (maximum) 15 minutes “gate-closure” times.

**Significantly more cooperation across borders is necessary.** This is true for e.g. huge water reservoirs in Scandinavia or in the Alps, which could be more integrated with their neighbouring countries. Austria’s support for balancing grid bottlenecks in southern Germany with regard to northern Germany is a positive example. And so are the interconnections between Norway, UK, the Netherlands and Germany. Offshore windpower will be strongly reliant on cross-border grid connections in order to effectively reap the benefits of large scale grid integration. Another important fact to take into account is the **positive impact of a geographically distributed and balanced deployment of Renewables**, particularly small and decentralized installations. It will considerably reduce and better distribute the need for flexibility and balancing power in the system.

**Balancing markets should gradually be moved beyond the limits of national borders.** The quality of existing cooperations has to be enhanced. Joint access to minute-reserves, participation in joint

bidding platforms for primary balancing reserve and extending the admissible range of exchange of primary controlling power with neighbouring countries should be next steps on the way towards cross-border balancing markets. Shorter gate-closure and shorter power blocks would facilitate the integration of Renewable Energy and Storage Systems into the balancing markets and thus accelerate the transformation of the energy system.

The objective of a useful “Energy Union” should be to **create flexibility driven markets** and cross-border transmission and distribution grids, which meet the needs of this objective. Without shifting away from the incumbent centralized energy production in large power plants towards more decentralized production, closer to consumption, the energy transition will not succeed.

Completion of the Internal Market and developing flexibility driven markets and the respective technical preconditions of new power lines in transmission and distribution grids, intelligent network control and demand side integration – all this is necessary but not sufficient. Increasingly, flexibility will be needed, not only within the electricity sector. **Cross-sector flexibility options will have to be developed und unlocked.** Grid enhancement and new storage technologies for electricity and for heating on different time level and of different size, heating with excess electricity, electric vehicles as storage for the power grid, power-to-gas, power-to-heat, biogas-to-power, -to-heat and –to-mobility and many more options can be imagined and they will be necessary.

The “Energy Union” should actually promote real **grid integration and technical as well as market integration of the so far widely separated sectors of power, heating & cooling** in order to tap synergies and always and everywhere guarantee the supply of energy services from Renewable Energy Sources. Pilot projects of the “Energy Union” should envisage **system transformation** towards a sustainable energy supply. **Renewable Energy, flexible structures and Energy Efficiency** should be the main pillars.

#### 4.) Creating cross-border model regions for sustainable energy supply

The proposed objectives and principles should be proven by practical examples. A clean, secure and affordable energy supply in Europe must rely on **regions, communities, cooperatives and other actors below Member State level**. Cross-border cooperation for the energy transition should be considered a central element and supported as good practise example for further actors.

**Cross-border projects** are excellent opportunities to explore and further develop the **convergence of different framework conditions** in different EU Member States and to further convergence of different regulatory and legal aspects, of markets and support systems – **driven by practical needs** instead of ideology. The cooperation mechanisms of the Renewable Energies Directive are a good basis, which could reasonably be applied on a matter of fact basis. At the same time, well designed decentralized projects could facilitate cross-border enhancement and/or extension of infrastructure, distribution grids and probably also distribution grids. In the projects, **regional direct marketing of green power** should be included, which – so far – is meeting practical and legal barriers. Pilot projects for testing marketing models and developing related legal and regulatory frameworks could be a core element of cross border cooperation. Using the grid including for storage purposes for electricity, heating and transport would be another useful element.

We propose to support and implement projects particularly in critical cross-border regions. For example, **German and Polish regions** could jointly work on intelligent solutions for a secure energy supply from wind, solar, biomass, hydropower and geothermal energy, and at the same time including grid and storage solutions and testing synergies between the power and the heating sectors. **Spanish and French** energy producers could tackle the lacking interconnections e.g. in the Basque Region or in Catalonia in order to develop a cross-border regime. **Ireland and the UK** could cooperate in order to develop a truly sustainable energy supply – based on their huge wind resources and on other renewables. **Austrian regions** could cooperate across the borders with **Slovenia, Croatia, Hungary or Slovakia**. **Bavaria, Saxony and the Czech Republic** could develop joint projects, just to name a few examples. **Supporting such regional cooperations and coordinating them on EU-level could be a key element of a future “Energy Union”**.

## 5.) Sustainable energy supply for employment and societal prosperity

Already today, Renewable Energy is contributing significantly to a stable economy – not only – in the EU. **More than one per cent of the GDP** was produced by Renewable Energies. Experts have calculated that ambitious targets and policies could increase this contribution by 50%. Secure framework conditions and ambitious and clear targets and policies would mobilize more billions for future oriented Investment and at the same time contribute to a wider distribution of societal wealth by **encouraging citizens to become actors of the energy transition**. This would significantly contribute to growing “human capital” as implied by the European growth strategy.

**More than 1.1 million people are employed in the Renewable Energy sector in the EU**, a figure which could be doubled by reaching the 2020-targets and which could increase to more than 4 million in 2030. Due to the often decentralized character of most Renewable Energies, these jobs are not limited to a few factories, but they – particularly for maintenance works by craftsmen and for suppliers – distributed all over the country.

Finally, Renewable Energies were and are saving costs of fossil fuel imports. More than **540 billion Euros** were spent for imports in 2013. With ambitious policies, this amount could easily be reduced by 50% until 2030, if not reduced by two thirds.

**As an added value compared to the present situation increasing these benefits should be a core task of the “Energy Union.**

## 6.) Climate protection without deviation or aberration: Renewable Energy and Energy Efficiency

The **necessity to maintain the chance of limiting global warming to a maximum of +2°C** until the end of the century imperatively requires to at least reduce global GHG emissions by 50% until 2050; industrialized countries, including the EU, must **reduce emissions by 80 to 95%** and thus nearly completely decarbonize their economies. It is widely undisputed that this implies a complete decarbonization of the energy sector by the middle of the century.

Further risks for people and environment are associated with conventional and nuclear energy production. The risks are not included in energy prices so far and thus impeding market penetration of Renewables. It is unlikely that this will change in the near future – due to the **nearly complete failure of the Emissions Trading System** so far and the obvious unwillingness of most EU Member States to implement effective reforms or at least to impose national minimum prices for CO<sub>2</sub>. The reforms discussed so far will definitely not be sufficient to revive the system.

In contrast, Renewable Energy is CO<sub>2</sub> free or CO<sub>2</sub> neutral, because they are only emitting what was absorbed during their growth period. Even including all phases of their life, in a cradle to cradle analysis Renewables are by far superior to conventional and nuclear energy. The technologies are available for using them in all sectors – for electricity, heating & cooling and transport. The costs are considerably decreasing and will continue doing so. Alleged alternatives like CCS or unconventional gas or oil are either not economically viable and/or they imply significant risks for health and environment and therefore meet strong opposition. Nuclear power is not only meeting strong resistance, but for the not fully controllable technology already and for the unsolved waste problem it should not be taken into consideration as a serious option. In addition, with the British project “Hinkley Point C”, trying to build two new reactors and supporting them for 35 years with inflation indexed with 11 €/ct/kWh, it is obvious that for cost reasons – even without full internalization of waste storage and other external costs and even without the risks of an accident – nuclear is not a rational option.

**Acknowledging the fact that Renewable Energies and Energy Efficiency are the only reliable options for maintaining a chance of achieving the decarbonization of the energy sector in due time and at affordable costs should be the core element of the “Energy Union”.**