A small step forward towards the energy system of the future

A BEE position paper on selected aspects of the European Commission’s *Clean Energy for All Europeans Package*

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Our perspective

The German renewable energy industry welcomes the Commission’s “Clean Energy for All Europeans” proposals as a first step in the European transition towards the energy system of the future. As the voice of the renewable energy industry in Germany, the German Renewable Energy Federation (BEE) is committed to creating a secure, cost-efficient and innovative future for both consumers and companies at both the national and the European level. We support the essence of the proposals, but wish to stress that their design needs far-reaching amendments if they are to lay the foundation for the future energy system.

As also stressed by Member States at the February 2017 Energy Council, quality of the legislation should be given priority over quick negotiations. BEE believes that while the proposals point in the right direction on a number of issues, certain aspects need to be carefully reviewed. The high shares of renewable energy and the high degree of system flexibility needed for the energy system of the future require stable, transparent and ambitious regulatory frameworks, which offer investors certainty and incentivize innovation.

It is noteworthy that, while the package includes some much needed and positive proposals, its lack of ambition in both general and specific terms, especially compared to the effort required to address the challenges of climate change, in accordance with the Paris Agreement, is disconcerting.

Without an ambitious deployment of renewable energy and significantly increased energy efficiency and system flexibility, Europe will not reach its long-term commitments. In its current form, the European emissions trading system will, until 2030, remain an ineffective instrument. We suggest the following amendments: increase the annual degression factor of certificates on the market; include larger parts of the industry in the system without increasing the number of available certificates; limit the free allocation of certificates for industrial enterprises and link their allocation to significant greenhouse gas savings and/or energy efficiency measures; and introduce a steadily rising minimum price for certificates. Member States should also apply additional measures in order to reach their national climate targets.

As regards our views on the Clean Energy Package, we are happy to provide constructive input on a number of issues, and have tried to summarize the most relevant points in this paper’s following chapters.

Ambitious and binding goals and a strong and transparent governance for 2030 (RED – COM (2016) 767 final Art. 1 and 3, GOV – COM (2016) 759 final Art. 3, 4 and 27)

With the current proposals, the European Commission fails to set the pillars for strong domestic renewable energy markets. While BEE welcomes the increase of the European energy efficiency target to 30 per cent, and the change of nature to being binding, the ambition in terms of renewable energy (at least 27 per cent) is too low to live up to the European Union’s international climate commitments and to EU’s aspiration to technology leadership (RED Art. 1.1). We therefore call on the European Parliament to act more ambitiously and increase the binding EU renewables’ target to at least 45 per cent.

BEE supports the European Commission in its pursuit of an ambitious timeframe for Member States within which they should submit their national energy and climate plans and provide investors with
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clarity after 2020. That the 2020 targets shall serve as benchmark for the further deployment of renewable energy (GOV Art. 3.3) and that Member States shall pursue a linear development corridor (GOV Art. 4.a) are also positive.

However, in the absence of national renewable energy targets or benchmarks, we deem the Commission’s governance proposals insufficient for providing the necessary investor certainty that would ensure implementation of the European objectives, as they are based on a formally tight but, in practice, very flexible framework, as well as on a weak gap filler (GOV Art. 27.4). In light of the coming legislative process, we will strive to establish national binding targets and trajectories towards 2030. We call on the European Parliament to support the re-establishment of national targets and to provide certainty by requesting clarity regarding the binding European instrument that will be triggered in case of a target delivery gap. To this end, national plans should be, if necessary, revised and one clearly defined gap-filling instrument brought into force before 2024, in order to prevent years of renewable energy deployment being lost.

Renewable energy remuneration (COM (2016) 767 final Art. 4, 6 and 22)

BEE is critical of the article regarding the existence and design of the national remuneration mechanisms. As the proposals currently read, this central element that ensures investor certainty is determined according to the arbitrariness of State aid guidelines instead of subjecting it to a legitimate and democratic co-decision procedure (Art. 4.1).

Instead of solely concentrating on amending remuneration mechanisms for renewable energy, the proposals should reflect the paradigm shift necessary to design the future energy system, one that is flexible and at the heart of which lie high shares of variable renewables. As such, they should incentivize flexibility by encouraging grid reinforcement and expansion, the removal of conventional inflexible capacity and the development of new business models which connect the power, the heating and cooling and the transport sectors. In light of these requirements, the proposals put forward by the Commission, where renewable deployment, supply and demand and grid expansion are connected, fall short of achieving the necessary transformation. Just the opposite in fact, as they limit the development of renewables by an indiscriminate dependency on grid expansion and inflexible fossil-nuclear overcapacity (Art 4.1). We therefore suggest amending the article to adequately reflect this fact, while addressing the issue of grid reinforcement and development, as well as the removal of inflexible conventional capacity elsewhere, for example in the national energy and climate plans required by Regulation (COM) 2016 759 final on the Governance of the European Union.

In recent years, the German renewable energy industry has contributed to the discussion by putting forward several common principles which could be anchored in the revised RED and ensure predictability and certainty for investors. We would like to reiterate some of them as follows:

- **Technology specific remuneration mechanisms:** Technology specific remuneration mechanisms account for the need to replace conventional power plants with a broad array of renewable technologies, thus ensuring system stability and supply security. An “energy monoculture” is also more difficult to fit into the overall system than a balanced energy mix, as it requires the development of more grids and storage options, as well as other flexibility options, thus increasing system integration costs. Technology neutrality also represents a static approach to cost-efficiency: it solely concentrates on the status quo of costs and
ignores differences between the learning curves of different technologies. Technology specific remuneration mechanisms ensure the technological and systemic innovation essential for European technology leadership. It should thus be made clear that national remuneration mechanisms can be designed to account for the specificities of renewable energy technologies.

- **Free choice of market-compatible support and allocation instruments:** The existing directive has encouraged Member States to design their price-finding and remuneration mechanisms in a flexible way, heeding to their energy policy choices. The revised directive should continue to allow for differences.

- **Criteria for decentralised and community power projects:** Future remuneration mechanisms should allow for many stakeholders to participate and compete within the market. BEE thus welcomes the provision for renewable energy communities as put forward by the Commission (Art. 22).

- **Periodic monitoring and correction:** We also think that a monitoring mechanism, as well as clear and fair correction measures, should lie at the core of every well-designed remuneration mechanism. In particular, tenders should be carefully monitored, as this instrument cannot sufficiently serve to attain the goals of cost-efficiency, effectiveness and broad public participation that are required for the energy transformation. We thus support the inclusion of provisions for the evaluation of remuneration mechanisms every four years at least, as proposed by the Commission (Art. 4.4). We also encourage ensuring complementarity with the development of the national energy and climate plans as required by Regulation (COM) 2016 759 final on the Governance of the European Union.

- **No retroactive changes:** BEE supports the initiative of the Commission to protect previous investments from retroactive measures (Art. 6). This is essential to ensure the economic viability of existing assets in all EU Member States. However, the provisions are weakened by making them conditional to State aid guidelines. It should be made clear that financial support granted to existing assets is not affected by new State aid rules.

**Opening of remuneration schemes (COM (2016) 767 final Art. 5)**

BEE generally welcomes Member States’ increased efforts to think about their energy policies within a more European context, as well as working more closely with their neighbouring countries on a voluntary basis. To this end, a suitable framework is provided by the cooperation mechanisms foreseen in the Renewable Energy Directive.

The Europeanization of energy policies, however, cannot be an end in itself: It must follow a careful analysis of possible benefits and potential negative impacts of single measures. A general obligation to open remuneration schemes and to meet certain thresholds, as proposed by the Commission, ignore the fact that this type of action would result in a wide range of questions and challenges in terms of practical implementation, which derives from the diversity of regulatory and geographical conditions in Member States. Therefore, BEE strongly advises fostering voluntary cooperation between Member States (Art. 5.1).

One fundamental prerequisite for opening national remuneration mechanisms and that is central to maintaining public acceptance for the energy transition process is the physical import of electricity.
There should be adequate proof provided that power generated in one Member State, but remunerated by another, is transmitted to the former, in order to reassure tax-payers and the public of the positive effects of increased transnational cooperation when developing renewables (Art. 5.4). Any system opening must at least be conditional to available interconnector capacity.

**Access, dispatch, redispach and curtailment of renewable energy installations (Reg. – COM (2016) 861 final Art. 11 and 12, Dir. – COM (2016) 864 final Art. 6)**

Priority grid access and dispatch for renewable energy have been important drivers to ensure investment certainty and to address market failures and lagging infrastructure development. As it stands now, the European Commission’s proposals drastically limit priority dispatch (Reg. Art. 11) and remove priority grid access (Dir. Art. 6). They address the issue of redispach, but here provisions are overreaching and unclear (Reg. Art. 12). While we welcome the introduction of a curtailment order and provisions referring to the financial compensation of operators, we strongly criticize the removal of priority dispatch for systems over 500 kW and have great doubts about the mandatory introduction of market-based curtailment or redispaching mechanisms. Member States should provide evidence of functioning non-discriminatory markets fit for flexible generation and loads, including the internalization of external costs, before phasing-out priority dispatch for renewable energy installations. In addition, installed electric capacity should not be the basis for assessment of biomass plants, but rather the average electric capacity\(^1\) so as not to discriminate against biogas plants that operate flexibly nor those with biomethane upgrading.

Furthermore, we regard the loss of priority dispatch for generating installations of which capacity is increased as a critical issue. Investors need certainty and should not be subjected to retroactive measures. BEE therefore suggests allowing for a 20% capacity increase (in line with technical progress) and ensuring that the capacity increase in question is only considered as such if the average electric capacity increases also.

As regards redispach, we are wary of the introduction of so-called redispach markets. Although a regional approach to market-based curtailment might incentivize system flexibility, we are fully aware of the risks involving strategic bidding and the further development of energy-only markets.

Clarification is also needed in regard to the curtailment order and remuneration provisions. Renewables should only be curtailed if no other alternative exists and should receive a compensation of at least 90% of the net revenues from the sale of electricity on the day-ahead market, including lost financial support. Furthermore, if annual lost revenues exceed 1 per cent of the revenues of that year, the operators affected are to be given 100 per cent compensation from that point in time. We therefore call on European legislators to ensure that renewable energy systems are curtailed last and are compensated accordingly.

Last but not least, the curtailing of renewable energy in order to allow the cross-border flow of conventional energy should not be permissible. Where priority dispatch is used as a ground for curtailing cross-border capacities, the responsible TSOs must ensure that the scale and duration are clear, as well as justify the measure.

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\(^1\) The average electric capacity is defined as the annual power output divided by the annual operating hours.
Electricity and capacity markets (COM (2016) 861 final Art. 5-7, 9, 21-24)

The German Renewable Energy Federation welcomes the integration of renewable electricity into the electricity market as long as a level playing field is ensured. In order for renewable electricity to respond to market price signals, it is necessary to make markets fit for renewables. Their current structure and operation is, however, not designed to accommodate increasing shares of renewable energy. For one, both fossil and nuclear capacity should be removed from the market – urgently in those Member States that have significant overproduction of electricity – the external costs of these technologies internalized and their subsidies removed. Unfortunately, the European Commission’s proposals only marginally address these issues, for example by introducing an emission performance standard of 550 gr CO₂/kWh for plants participating in a capacity mechanism (Art. 23).

While we completely disagree with the introduction of capacity mechanisms, as they distort markets and lock-in inflexible and polluting capacity, we welcome the proposal to set a threshold that addresses the current overcapacity in Europe. More ambition is needed, however, and thus we propose decreasing this threshold to 350 gr CO₂/kWh and applying it as soon as the ordinance enters into force. Furthermore, we request the following: limiting participation in capacity mechanisms to the existing conventional capacity that respects sustainability criteria; allowing the participation of decentralized installations; and adapting existing mechanisms in order that they comply with the ordinance immediately after it enters into force.

Secondly, and most importantly, intraday, day-ahead and balancing markets should function properly and allow for the participation of renewable energy. The Commission’s proposals represent first steps in this direction, as they positively address the introduction of common rules for short-term markets and the free formation of prices (Art. 5-7 and 9). We strongly support the provisions that require Member States and market operators to accommodate increasing shares of renewable energy as well as increased demand responsiveness and other flexibility options.

Real-time data and intelligent meters (COM (2016) 864 final Art. 18-24)

BEE welcomes the European Commission’s approach on the use of real-time data in the European energy system. With regard to an ever-increasing share of variable generation, the acquisition and use of real-time data is essential for a more flexible energy system and an adequate balancing of differences. Therefore, the implementation of smart meters (Art. 18-20) and the provision of the recorded data within a single format (Art. 22 and 23) are of crucial importance for the relevant market players.

Protecting data from manipulation and unauthorized access is just as essential as ensuring the right of access by electricity customers, as well as ensuring their permission is granted before others can access their data.

Real-time production and consumption data is a valuable asset and lies at the foundation of many potential business cases. Therefore, access and the use thereof must be paid for. This enables consumers, as providers of data, to become active market players and thus participate in the energy transformation. This can, in turn, lead to a flexible adjustment in demand, better predictions, a faster reaction time of market participants, and a secure supply of renewable energy.
Renewable self-consumers (COM (2016) 767 final Art. 21)

BEE welcomes the introduction of an EU-wide framework for renewable self-consumers. As proposed, Member States should be required to facilitate both self-consumption and different types of power purchase agreements (Art. 21.a). When establishing the framework, they should make sure that the producer of renewable energy, the operator of the plant and the consumer of said energy are not required to be a single legal entity. Furthermore, Member States should ensure that self-consumers can also be tenants, not only homeowners. Renewable electricity should be allowed to flow through either a line owned by the producer or consumer or the public grid and both within the premises as well as in geographic proximity. Most importantly, Member States should not subject self-consumed electricity to charges and taxes (Art. 21.a). In particular, volume-based charges should be avoided.

In addition, we call on European legislators to clarify the value of self-generated electricity fed into the grid, as renewable self-consumers are entitled to receive not only the market value of the electricity, but also remuneration (Art. 21.d). The current wording of the proposals questions the right to fair remuneration and should be revised.

Furthermore, the concept of self-consumption should be broadened to include industrial consumers (B2B solutions). We suggest introducing rules for the supply of power to third parties in direct geographical proximity. The goal is to enable direct contracts between industrial consumers and renewable energy producers, which is crucial for the full integration of renewable energy into all areas of the economy.

We therefore recommend the inclusion of a provision to establish B2B solutions between renewables’ power plants and industrial consumers. This provision should have a level-playing field for renewable electricity at its core, by broadening the definition of direct geographical proximity and by introducing price mechanisms for flexibility and systemic behaviour.

Renewable energy communities (COM (2016) 767 final Art. 22)

BEE strongly supports the Commission’s view of communities and citizens being a key element of the European energy transition. In this context, the Commission’s proposals are certainly an initial step in the right direction, yet still require further clarification. In particular, the terms “not-for-profit organisation” and “representatives of local public and local private socioeconomic interests” leave wide interpretational leeway (Art. 2.d) and should be reviewed carefully.

Sectoral coupling (COM (2016) 767 final Art. 24-26)

In order to achieve better integration of renewable electricity, increase the flexibility of the energy system, reduce the storage capacity required, ensure the refinancing of renewable energy via market and achieve decarbonisation in all areas of the energy system, in particular in the heating and cooling and in the transport sectors, one has to address the issue of sectoral coupling. If the desire to change the energy system is to be taken seriously, then high priority must be assigned to sectoral coupling. Unfortunately, framework conditions for many innovative ideas and technologies currently do not allow sectors to be linked.
We thus call on European legislators to ensure a level-playing field for renewable electricity by increasing the flexibility of electricity price components and adapting the taxation of energy sources to include the amount of greenhouse gas produced during use.

**Sustainability and greenhouse gas emissions savings (COM (2016) 767 final Art. 7, 25 and 26, ANNEX VI)**

In principle, we welcome the standardization of sustainability criteria for biofuels and biomass fuels used in the transport, the heating and cooling, and the power sectors. However, the number one priority should be replacing conventional fuels across all sectors. Therefore, in order to reach a substantial reduction in greenhouse gas emissions, it is vital not to disproportionately burden the biomass sector, thus reducing its mitigation contribution. The 7 per cent share of biofuels from food and feed crops was agreed upon with the European Commission as having no significant effect on land use change. In our view, there is no need to reduce this share even further as is suggested in the proposals (Art. 7). Such abrupt legal changes undermine investors’ trust in EU framework conditions, which should be stable and have a long-term view. These continuous changes may also affect investors’ future willingness to finance the much-needed advanced biofuels.

On the other hand, we very much welcome the introduction of minimum shares of energy for advanced biofuels and other biofuels (Art. 25), with the exception of waste-based fossil fuels. As their production requires the use of CO₂ from fossil sources, their inclusion is counterproductive and should be removed.

In addition, the basic data and calculation methodology for greenhouse gas emissions should be adapted to the different transport end energy fuels. Otherwise, the administrative effort is too great for small producers. As yet, there are not enough default values, especially for gaseous biomass fuels, therefore at least partial default values for cultivation of a range of crops or one value for all other crops than maize are needed (ANNEX VI).

We would also like to address the high level of greenhouse gas emission savings required from the use of biofuels, bioliquids and biomass fuels (Art. 26.7). In the energy sector, where it is vital to replace as much fossil and nuclear capacity as possible, savings of 70 and 80 per cent limit the amount of biofuels and biomass fuels that can be used. We believe that a threshold of 60 per cent greenhouse gas emission savings is sufficient, as it guarantees high savings while still allowing the replacement of a large amount of conventional fuels. In addition, we disagree with the setting of different standards for biofuels and biomass fuels in the transport and the power and heating sectors.

Amendments are also needed in regard to the exceptions for gaseous and solid biomass fuels from the sustainability criteria (Art. 26.1). BEE suggests changing the unit for setting the threshold for gaseous biomass fuels from installed electric capacity to average electric capacity. The reason is that biomass plants must become more flexible. To this end, biogas installations install two to five times the electric capacity, but do not produce more power over the year. The higher installed electric capacity only allows installations to store the gas during daytime and produce double the power during the night. In this way they can balance variable renewable energy. In order to avoid disadvantages due to this flexibility, the exception should be valid for 500 kW average electric capacity for gaseous biomass fuels.
**Renewable energy in the heating and cooling sector**

The European Commission is aware of energy consumption’s relevance within the heating and cooling sector, which accounts for half of Europe’s total, and the need to address it. In light of this realisation, however, the means and pace of the packages’ proposals are limited, especially in terms of the ambition of the renewable energy goal (RED) and the proposed increase in energy efficiency (EED).

Noteworthy is that the proposals see buildings as an increasingly important part of the future energy system. Buildings should no longer be regarded in isolation. The EPBD includes the introduction of a “Smartness Indicator” that should evaluate a building’s interaction with the rest of the energy system. Furthermore, the proposals clearly refer to the coupling of the building and the mobility sectors. In the future, buildings should contribute to the set-up of infrastructure for electromobility. Moreover, the right to energy generation and consumption in connection with buildings is strengthened. This too emphasizes the role of buildings as part of the future energy system.

Europewide, the renovation of the building stock requires urgent impulses. Here, it is uncertain as to whether the proposed financial offensive can provide relief. According to the European Commission, the lack of internalization of external costs and the fragmented heating market have meant only little progress has been made. It is thus unfortunate that the proposals do not mention the internalization of external costs. As a result, an improvement on the framework for increased deployment of renewable heating and cooling technologies looks unlikely.

The package also introduces a new instrument: In addition to maintaining the supplier’s obligation to reduce energy demand by yearly 1.5 percent (EED), the package proposes a supplier obligation to raise the share of renewables in the gross final energy consumption by an annual 1.0 percentage point (RED). Aside from a lack of clarity regarding the possible implementation of this new obligation, it also must be clarified as to how this path leads to or is linked to the overall EU goal of 27 per cent renewables by 2030.

In addition, district heating is highlighted as being a cornerstone for the achievement of political goals. The Commission intends to push grid operators to increase the share of renewable energy in district heating systems. This goes hand in hand with strengthening consumer rights to disconnect from the grid, if a local, more renewable heating solution is available.

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