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German Renewable Energy Federation

National renewable energy remuneration mechanisms

Introduction

In Europe, renewable energy investment has been driven by stable and clear investment conditions. These include a strong Renewable Energy Directive with national binding goals for Member States, and national remuneration schemes. The national remuneration mechanisms have been particularly instrumental in creating a home market, something that needs to be preserved as investment uncertainty is expected to rise due to the lack of binding national goals. What we need is for all EU Member States to set credible and reliable policies to increase the share of renewables, as is required by the existing directive, leading to a share of at least 27% renewable energy in gross final energy consumption by 2030. In this context, the goal of at least 27% renewable energy should be understood as a minimum threshold, as this value lacks ambition and cannot deliver a long-term decarbonisation as agreed upon in Paris and enshrined in European and Member State legislation.

In 2016, the European Commission launched a consultation on a new energy market design, one that will be fit for renewables and foster their participation in electricity markets[1]. While the revision of current energy markets is a welcome step in the right direction, it should not be regarded as a silver bullet. National remuneration mechanisms will still be needed until the further developed energy system includes removal of priority dispatch for conventional power generation and conventional CHP, full internalization of external costs, fair use of insurance premiums for nuclear power, reinforcement and expansion of the grid at both transmission and distribution levels and non-discriminatory participation of renewables in functioning and liquid intraday and balancing markets.

Furthermore, one of the much-discussed changes is the opening up of national remuneration mechanisms to producers from other EU Member States. This should only be carried out according to clearly defined criteria, such as the existence of physical transfer of power, and according to a cooperation agreement discussed and decided upon by the Member States involved. There is currently no need to introduce harmonized, EU-wide remuneration schemes, as national remuneration mechanisms have increasingly been converging over the past years. Moreover, such schemes would not reap any benefits in terms of their effectiveness and cost-efficiency. First of all, national markets and the degree of technological maturity differ from one Member State to the other – but so too do refinancing conditions, prequalification requirements and taxation systems. Secondly, in light of existing market failures, overcapacity of conventional generation capacity, and the introduction of capacity mechanisms in some Member States, there is an increased need for national renewable energy remuneration mechanisms.

[1] European Commission, Communication „Launching the public consultation process on a new energy market design“, COM(2015) 340 final, Brussels, 15.7.2015

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National remuneration mechanisms necessary to correct market failures

1. No level playing field for renewable energy

The objective of the renewable energy sector is to be competitive within functioning, fair and liberalized markets. Unfortunately, there is, as yet, no level playing field for renewables against heavily subsidized fossil fuels and nuclear energy. While the transparency of renewable energy remuneration mechanisms lays bare the support given to these technologies, the support of fossil and nuclear power generation is often not visible and thus difficult to challenge. However, in its World Energy Outlook, the International Energy Agency quantifies worldwide subsidies for fossil fuels at $493 billion per year, which is four times more than is received by the renewable energy sector[2].

Furthermore, new power plants compete with ones already paid-off, and technologies already far ahead on the learning curve challenge those that still have a long way to go.

The integration of renewable energy would be facilitated were it on a level playing field with conventional generation. As long as this is not the case, the development of renewable energy requires the existence of national remuneration mechanisms.

2. Conventional overcapacity

With high shares of renewable energy at its core, the future energy system will require a high degree of flexibility. Prices reflecting scarcity and negative prices are a necessary precondition both for the development of technologies that can provide this flexibility and encouraging competition between these technologies. Obstacles such as current fossil fuel and nuclear overcapacities should be reduced to allow for peak prices that incentivize the development and competition of flexibility options.

Current overcapacity on the German and European power markets neither allows for refinancing investments nor provides incentives for flexibility options. Within the existing system, renewable power production can only expand if the national remuneration mechanisms are maintained.

3. External costs not internalized

Unfortunately it is still not possible to compare prices of renewable power generation with those of fossil fuel and nuclear power generation. While renewables are still considered expensive – despite a massive decrease in costs in recent years, as well as their benefits not being properly quantified – fossil and nuclear power generation prices do not reflect the real costs, as their external costs are not internalized. No nuclear power plant would be running today, were it required to take out appropriate insurance policies or offer solutions for the safe disposal of nuclear waste; nor would there be any lignite-fired power plant running if greenhouse gas costs were fully internalized.

[2] http://www.worldenergyoutlook.org/media/weowebsite/2015/WEO2015_Factsheets.pdf

4. ETS not functioning

The EU Emissions Trading System (ETS) should reflect the "true" costs of greenhouse gas emissions and thus reduce conventional overcapacity. However, the currently low price of carbon cannot incentivize any renewable investment, and the desired result to create a self-reliant sustainable energy market is falling short of its goal. A significant and progressive reduction in the surplus of allowances would eventually increase the carbon price to levels that adequately reflect environmental impacts, as would the introduction of a minimum carbon price. Even if successful, these changes and the ETS would probably not be able to incentivize the development of all renewable energy technologies. For now, national remuneration mechanisms are necessary to deliver decarbonisation of the power sector in the absence of a functioning emissions trading system.

5. National remuneration mechanisms work

The renewable industry wants to contribute to bringing down the cost of energy. Investments made possible by long-term binding and ambitious targets supported by well-designed remuneration mechanisms help drive down costs and will enable on-going reductions, for example via automatic tariff degressions. In Germany, the market premium encourages a market-based generation pattern, where market signals reach generators and determine their behaviour. This, together with better forecasting models for variable renewables, has led to a significant decrease in the occurrence of negative prices. Also, any remaining occurrences of negative prices are still lower than those of previous years. As more flexibility options are developed and become part of the market, this will continue to incentivize renewables' integration.

This success can be explained by Member States autonomy in deciding which energy mix they prefer and how to establish and design their remuneration mechanism. We would like to point out that well-designed national support for renewables has no negative impact on energy markets. Its legitimacy is not only provided by the Renewable Energy Directive, but also anchored in the need to reach our long-term European climate objectives of 80-95% reduction of greenhouse gas emissions by 2050 compared to 1990 levels.

Supporting renewables is especially relevant in light of the ambitious goal of the Paris Agreement[3] to limit global temperature rise to well under 2°C. This should be the time to reconsider our current goals and to set more ambitious ones, for which renewables are vital.

We believe that the combination of an intelligent, flexible ceiling, a market premium that allows market signals to reach renewable energy producers, and also dynamic degression, is the way forward to financing and integrating renewables into the market, until they gain a level playing field with conventional power generation and the market has been fully optimized. The design of these refinancing mechanisms should be left up to Member States, due to the highly differing conditions in each country.

[3] http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

Conclusion

As we move towards 2030, national remuneration mechanisms should continue to be part of the EU climate and renewable energy policy framework. Steady and continuous renewables deployment requires stable and credible framework conditions that build on a robust governance mechanism.

Increased coordination should not invariably result in the cross-border opening of national remuneration schemes. Renewables are predominantly domestic energy sources and their use reduces dependence on fossil fuel imports, particularly those coming from politically unstable regions, and contributes to strengthening security of supply, thus having a real impact on the energy system.

As long as there is no level playing field in the market, no reduction of conventional overcapacity, no phasing-out of fossil fuel and nuclear subsidies, and no properly functioning ETS, national remuneration mechanisms should continue to be the rule. Renewable energy should be increasingly, but also carefully, integrated in the redesigned European electricity market, whilst paying attention not to damage investor certainty nor bring renewable energy development to a halt.