Berlin, 21 January 2014

Key elements of a revised Renewable Energy Sources Act

1. Introduction

The energy turnaround is a right and necessary step as we make the transition into an industrial society that lives sustainably and makes a true commitment to preserving the environment, also for generations to come. It is making our country and our economy less dependent on ever-scarcer fossil resources, is key in allowing Germany to make an appropriate contribution to combating climate change, and gives rise to new growth in sectors offering significant potential for new jobs. In other words, our energy reforms lay the basis for the success of our country in economic, social, and environmental terms.

The Federal Government will therefore systematically and persistently continue its effort of developing an energy system that will dispense with nuclear power and increasingly rely on renewable energies. One of the key challenges we face as we carry out these reforms in a consistent manner is to achieve a swift overhaul of the Renewable Energy Sources Act (EEG). The new EEG will have to break with the current dynamic development of costs so as to limit future rises of electricity prices. Other vital challenges that we intend to address in the short and medium terms include those of maintaining security of supply, developing an electricity market design that is fit for the future, further developing the regulatory environment for combined-heat-and-power, transposing the European Energy Efficiency Directive into German law, further developing the rules on network reserve, upgrading the distribution networks, further accelerating the construction of new grids, and completing the internal market for energy. We will be asking the Federal Network Agency to immediately report to us any short-term risks to the security of supply and, if necessary, to suggest any measures that should be taken.

The amendment to the EEG is to ensure that the share of renewables in our electricity supply rises to 40-45 per cent by 2025 and to 55-60 per cent by 2035 whilst also achieving an affordable and secure supply of electricity for private households and industry.

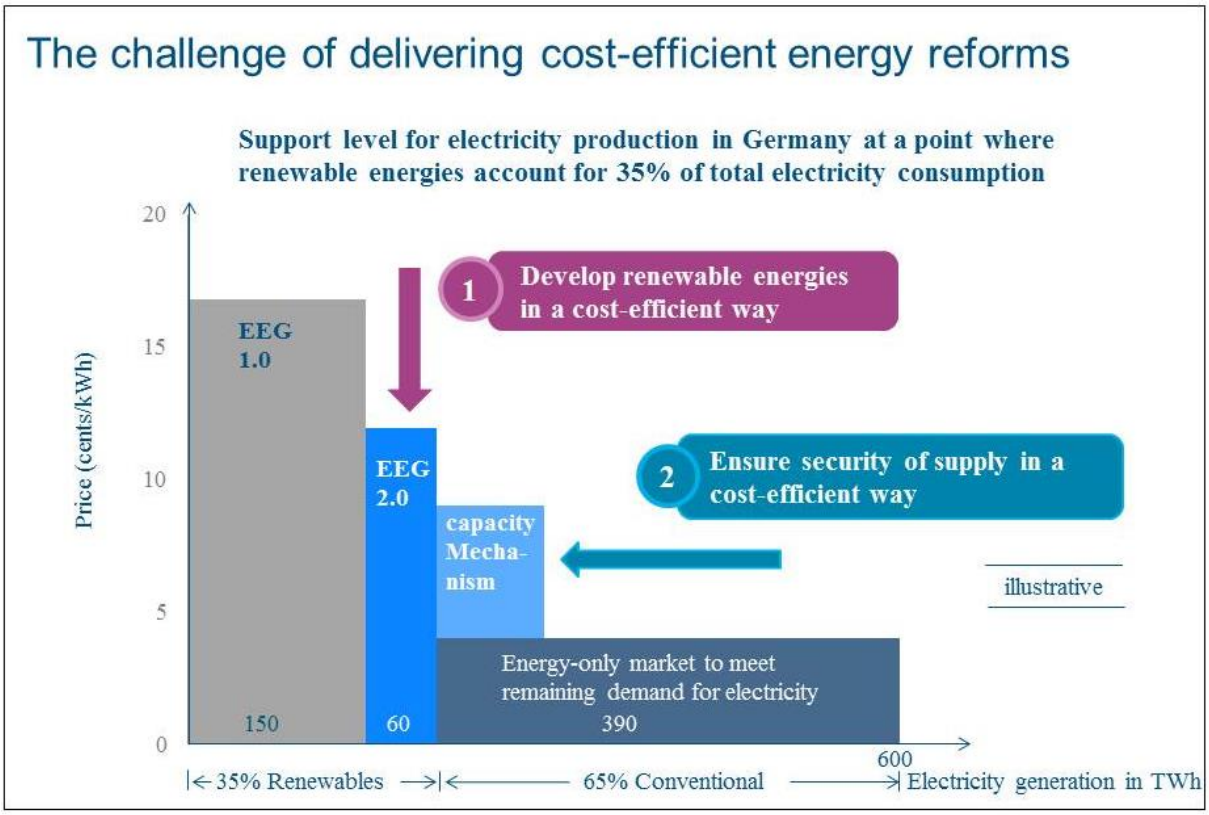
In line with what has been set out in the Coalition Agreement, the amendment is to be based on the following principles:

- The amended act defines a binding corridor for the deployment of renewable energies.
- The instruments used to effectively control the deployment of renewable energies are to be tailored to the various technologies.
- We will be developing renewable energies in a way that allows us to achieve our renewables targets whilst limiting the costs. As we expand the use of renewable energies, we will be focusing on those technologies that are cost-efficient.
- We will be eliminating existing over-compensation, eliminating bonuses, and making support available at degressive rates only.
- By 2017 at the latest, support levels are to be determined by way of bidding procedures. In the interest of better market integration of renewable energies, direct selling will be made compulsory.
- The costs will be shared appropriately among all users of electricity and in a way that does not endanger the international competitiveness of electricity-intensive industries.
- The amended EEG will be compatible with European regulations.
- It will be considerably less complicated than the preceding version.

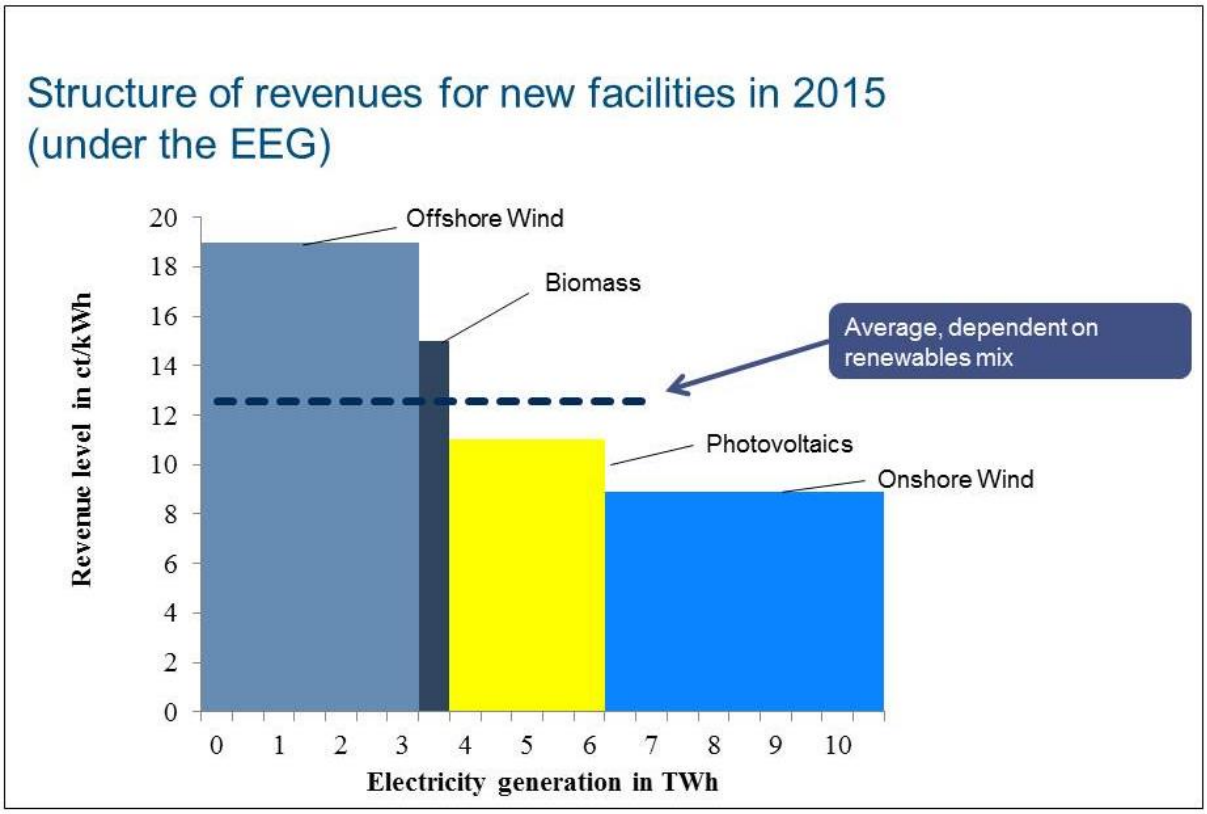
The Federal Government has agreed to fundamentally overhaul the EEG in order to significantly limit extent and speed of the overall cost increase , by simplifying the support schemes and thus stabilising the cost at a justifiable level. In addition to a clear deployment corridor, which will be defined in the new EEG, we also need better cost-efficiency, which means that we must eliminate over-compensation, make support available at degressive rates only, use a more market-based approach, limit the scope of application for the special equalisation scheme for electricity-intensive en-

terprises that compete internationally, and adopt balanced rules applying to self-suppliers.

The diagram below illustrates the challenges we face as we seek to implement the energy turnaround in a cost-effective way. It shows the total support for electricity generated from renewable and conventional sources at a point in time where renewable energies will account for 35 per cent of our electricity consumption (which is expected for 2020). Currently, Germany's consumption adds up to some 600 TWh of electricity per year, of which 25 per cent is generated from renewable energies supported according to the provisions set out in the EEG 1.0 (2000-2014). The average revenue in the support scheme across all technologies is about 17 cents/kWh. As we are all agreed on the fact that commitments made by the legislator cannot be withdrawn retroactively, we will have no alternative but to pay for our "learning curve". By introducing a completely overhauled EEG 2.0, we will, however, be able to considerably bring down the costs for the next stage of the deployment process (from 25 to 35 per cent; roughly 60 TWh/a). The remaining demand for electricity will be met by the residual power plants. Currently, the wholesale price for future deliveries of electricity (futures) is around 4 cents/kWh. In most cases, revenues generated from the sale of electricity are covering no more than the operational costs, not the costs of investment. Generation costs for a new black coal or gas-fired power plant are currently between 7 and 11 cents/kWh. Because of this situation, there is a danger that there might not be sufficient power-plant capacity available in times of peak demand. The coalition has therefore agreed to create capacity mechanisms for the medium term. As the Federal Government has no influence on price levels at the wholesale electricity market and does not want to renege on the commitments set out in the EEG 1.0, its main priority in putting cost-effective energy reforms into place must be to reduce to a minimum the support for renewable energy from additional generation capacities (EEG 2.0) as well as the cost of any capacity mechanism.



The second figure shows the effects of the proposal for an overhaul of the EEG presented here. It provides an overview of the total support that would be made available for renewable-energy installations built in 2015. By focusing on the most cost-effective technologies, namely onshore wind farms and photovoltaics, and by concomitantly lowering the guaranteed support, the average support level will fall to about 12 cents/kWh. The use of biomass, which is a comparatively expensive source of renewable energy, will be limited considerably, and mostly restricted to installations using waste and residual materials. Offshore wind energy, a technology still in its infancy, will account for a rather high share of the overall cost. This is justified by the technological and industrial potential of offshore wind, which also offers the prospect of economic growth and employment.



2. The overhaul of the EEG in a European context

Our support for renewable energies is part of a larger European context. The Federal Government is in favour of a binding EU climate target of at least 40 per cent by 2030 as part of a triple-target structure of greenhouse-gas reductions, higher use of renewable energies, and energy efficiency.

The review of the EEG is happening in parallel with the review of the European rules on State Aid for the support of renewable energies. Whilst the Federal Government maintains that the provisions of the EEG do not constitute State Aid, we will nevertheless be taking account of and an active part in the discussions on new European State Aid rules. After all, better market integration of renewables and other issues that the European Commission is concerned with are also in our national interest. The Federal Government intends to comply with the new rules on State Aid to the greatest possible extent. If this is to happen, however, the European rules will have to be shaped in a way that still leaves scope for funding of renewables in line with na-

tional requirements and for safeguarding the competitiveness of electricity-intensive industries.

3. Schedule for the review of the EEG

The bill for a new EEG is to be adopted within the first semester of 2014. The Federal Government will be adopting the bill in Cabinet on 9 April 2014. The first debate in the Bundesrat is scheduled for 23 May 2014. Debates in the Bundestag are to take place in May and June. It is our hope that the amendment will be adopted by the Bundestag on 26/27 June and by the Bundesrat on 11 July 2014. This should make it possible for the review to be completed before the summer recess. The new EEG is to enter into force on 1 August 2014.

4. Protection of investors' legitimate expectations

The amendment of the EEG is to enter into force on 1 August 2014. The new provisions will apply to any installations that begin operating as of this date. The existing EEG stipulates that the terms and conditions under which funding is provided in line with the EEG should be reviewed in 2014. It has thus been known long in advance that the legal situation might change in the course of this year. In today's meeting, the Cabinet set a specific date for the expected entry-into-force of the new legislation to ensure that all parties affected by this have sufficient time to adapt to these changes, in particular when dealing with prior and future investments.

To ensure that investors' legitimate expectations are protected, the EEG of 2012 will continue to apply for installations that start operating up until 31 December 2014, provided that the approval of these dates back to before 22 January 2014.

Older installations are protected by the principle of grandfathering.

5. Reliable deployment corridor

The envisaged binding deployment corridor will on the one hand lay the basis for an effective and sustainable deployment of renewable energies, and on the other hand provide for an optimal integration of electricity from conventional and renewable energies, as well as for a better synchronisation with the network expansion. By 2025, between 40 and 45 per cent of our electricity demand is to be covered by renewable energies. By 2035, these are to account for between 55 and 60 per cent of our energy consumption. These intermediate targets will be laid down in the new EEG.

The various technologies demand very different rules, both in technical and economic terms. This is why the instruments used to control the rate of the extension are to be tailored in a technology-specific way:

- Generation capacity from **offshore wind energy** is to reach 6.5 gigawatts of capacity by 2020 and 15 gigawatts by 2030. For the time up to 2020, rules for quantitative control are to apply. Under these rules, priority will be given to projects that have already been given unconditional approval for connection to the grid. For the time between 2020 and 2030, two new offshore wind parks are to be constructed per year. As of 2020, bidding procedures or other suitable and cost-efficient instruments are to be used in order to ensure compliance with the deployment corridor.

- Generation capacity from **onshore wind energy** is to increase by up to 2,500 megawatts per year. The new EEG will usher in a new scheme under which premiums will adjust automatically to ensure that, in the long run, the volume of new capacity remains inside the corridor. This scheme is known as the “flexible cap”.

- Generation capacity from **solar energy** is to increase by up to 2,500 megawatts per year. The “flexible cap” scheme will continue to apply.

- With regard to **bioenergy**, we expect that the focus on waste and residual materials will mean that some 100 megawatts of capacity will be added annually.

Support levels here will decline sharply to ensure that this target is not exceeded.

- The market for **geothermal energy** and **hydropower** is such that there is no need to exercise quantitative control here.

A new register of all renewable energy installations will help us stay on target with our reforms. In addition to making it easier for us to ensure that the deployment of renewable energies progresses according to plan, it will also provide the necessary data for better system integration.

By 9 April 2014, we will be tabling a bill for an opening-clause to be introduced into the Federal Building Code so as to allow the Länder to stipulate their own rules on minimum distances between wind power installations and housing.

6. Integration of renewable energies into the electricity market

Better integration of renewable energies into the national and European electricity markets is another key objective of the EEG reform. For this purpose, the sliding market premium will become mandatory. The premium will be introduced gradually in order to allow market players to adapt. Therefore, a *de minimis* threshold will be introduced, which will be lowered annually. The following installations will have to directly sell their electricity:

- as of 1 August 2014: all new installations with a capacity of at least 500 kW,
- as of 1 January 2016: all installations with a capacity of at least 250 kW,
- as of 1 January 2017: all installations with a capacity of at least 100 kW.

The management premium will expire and be integrated accordingly into the premium. Furthermore, it must be possible to control all new installations remotely in future in order to guarantee better market integration.

Plant operators fear that mandatory direct selling will result in a rise in financing costs since revenues would not be guaranteed continuously, for instance in case a direct

seller is not available. Against this background, “default selling” will be introduced: plant operators who temporarily cannot directly sell the power that they generate may offer it to a “default seller”. They then receive 80 percent of the value which they would altogether have yielded with the market premium. This is a strong economic incentive to restrict use of the default selling to an emergency.

In addition, all variants of the green electricity privilege will be abolished. The European Commission has expressed considerable concerns that the green electricity privilege is not in line with European legislation since it is restricted to support for domestic renewable electricity. Besides, support via the green electricity privilege is more expensive than direct selling in the context of the market premium.

7. Bidding procedures: a new funding instrument

By 2017 at the latest, the level of support for renewable energies is planned to be determined by means of competitive bidding. In a first step, experiences are planned to be gained within the framework of at least one pilot project. The new EEG lays the foundations for a new bidding model for open space photovoltaic installations. This model will be specified in an Ordinance immediately after the reform. The bidding is planned to comprise installed capacity of 400 MW annually; this volume is planned to be part of the target corridor. Thus the promotion of open space PV-installations within the scope of the EEG will be based completely on bidding procedures. The German Federal Government will report to the Bundestag on its experience with the bidding procedure; for this purpose, statutory reporting requirements will be introduced.

8. Integration of renewable energies into the grids

The German Federal Government attaches particular significance to closely linking the deployment of renewable energies and the expansion of the grids. In this context, the feed-in of electricity both from renewables and from conventional energies should be taken into account. This requires an overall approach in the Energy Industry Act (*Energiewirtschaftsgesetz*). This approach, which must also take account of the measures regarding the feed-in management as agreed in the Coalition Agreement,

is currently being elaborated, also taking into consideration the debates in various government circles. Against this background, the EEG reform will not yet include a stipulation on grid integration; such a stipulation will soon be adopted in a second step.

9. Cost-effective deployment of individual technologies

a) Support for onshore wind energy

Support levels for onshore wind energy will be reduced. The repowering bonus will be abolished. The system services bonus, which would anyway expire at the end of 2014, will be phased out. In addition, the current over-compensation, in particular at sites with favourable wind conditions, will be reduced. By 2015 support levels at profitable sites will be 10 to 20 percent lower than in 2013.

On the other hand, it will be guaranteed in line with the Coalition Agreement that economic operation at all favourable onshore sites continues to be possible. In this context, the two-tier reference yield model will be further developed in order to take better account of the different site qualities.

A “flexible cap” like in the case of photovoltaics is planned to be introduced; it aims to guarantee that the deployment will not permanently be higher or lower than planned.

b) Offshore wind energy

As regards offshore wind energy, the “acceleration model” will be extended by two years until 31 December 2019 as provided for in the Coalition Agreement. Depending on technological developments and the related cost cuts, the remuneration will be reduced by 1 cent/kWh in 2018 and 2019.

Furthermore, it is very important for the medium-term development of the EEG surcharge that funding in accordance with the “basic model”, which aims at longer fund-

ing periods at lower rates, remains attractive for investors in economic terms compared with the “acceleration model”. Against this background, degression will be smaller in the basic model than in the “acceleration model”.

c) Photovoltaics

Funding of solar energy as provided for by the 2012 revision of the stipulations for photovoltaics (PV) has proved its worth. However, the economic operation of PV installations largely depends on the power generated for the producers’ self-consumption. Against this background, funding will be closely linked with the planned amendments regarding power generated for the producers’ self-consumption.

d) Biomass

In line with the Coalition Agreement, funding will be largely restricted to waste and residues. For this purpose, the higher support levels for the substance tariff classes I and II, i.e. especially for renewable raw materials, will be abolished.

In the last few years, the deployment of biogas installations has largely been due to the expansion of existing installations, which are remunerated in accordance with the higher support levels of the 2009 EEG. In order to guarantee cost-effective deployment in the future, the expansion of existing biogas installations will be remunerated on the basis of the new EEG.

Furthermore, due to the high cost of biogas processing, the gas processing bonus for new installations will be abolished.

In order to stay within the deployment corridor, the support rates for new biogas installations will be reduced to a greater extent if the annual biogas deployment exceeds 100 MW.

The incentive for more flexible power generation on the market will be increased for existing and new biogas installations. As a consequence, the total cost of biogas-based power generation will be reduced.

e) Hydropower

Funding of hydropower will basically be continued. The criteria that must be met for funding will be simplified.

f) Geothermal energy

Funding of geothermal energy will basically be continued. The technology bonus will be abolished.

10. Adequate distribution of costs

a) Special equalisation scheme

The “special equalisation scheme” will be further developed in line with European legislation with the aim to safeguard the competitiveness of electricity-intensive industries and to secure jobs in these sectors. At the same time, these industries will have to make an adequate contribution to the deployment of renewable energies. The German Federal Government is reviewing the privileges for these industries especially on the basis of objective criteria in line with European legislation. In addition, the companies benefitting from the privileges should in future make an adequate contribution to the costs. For this purpose, the German Federal Government is engaged in a constructive dialogue with the European Commission in order to create a robust long-term basis for the special compensation arrangement. The dialogue aims at an agreement in the near future to guarantee that the companies concerned can submit their applications for 2015 in the third quarter of 2014.

The existing provision on rail operators contained in the special equalisation scheme mainly benefitted large transport companies. In future, there will be a uniform rule on the contribution to the costs of the deployment of renewable energies for all rail operators. This helps to prevent distortions of competition among the individual rail operators. As a result, the rail operators will make an adequate contribution to the costs of the deployment of the renewable energies. Short-distance and long-distance railway operators continue to be subject to an exemption rule on the EEG surcharge; the details remain to be laid down within the framework of the legislative procedure.

b) Self-consumption

In future, the entire power generated for the producers' self-consumption will basically be subject to the EEG surcharge. The electricity generated and consumed by the power plants themselves will be exempted.

All new power generators will contribute to the financing of the EEG by paying a minimum surcharge, with the new EEG guaranteeing the economic operation of renewable energy installations, of CHP plants and of blast furnace gas uses. A *de minimis* threshold will be introduced for smaller installations. Legitimate expectations regarding existing installations will be protected.