

Renewable Energy Sources Act – Progress Report 2007

Background Information

This document provides background information, facts and figures on the Renewable Energy Sources Act – Progress Report 2007.

The Progress Report, which comprises around 200 pages, contains the following, as agreed by the Federal Government:

- *Information* on the expansion of renewable energies (RE) to date, especially due to the promotion of renewables through the Renewable Energy Sources Act (EEG), the impacts on energy supply, reduction of CO₂ emissions and economic effects (jobs, turnover, costs, benefits etc.);
- *Statements* on the market integration of RE in the electricity sector and the production costs of renewable-generated electricity in the individual RE sectors and technologies;
- *Specific policy recommendations* for the forthcoming revision of the EEG and statements about the future prospects for renewable energies to 2020/2030 with new targets to implement the Meseberg decisions.

1. The Renewable Energy Sources Act – a successful model of best practice

- The EEG is the key instrument for the promotion of renewable energies.
- The EEG is effective and efficient.
- No other instrument has resulted in more CO₂ reductions.
- The EEG also creates jobs and future-proof industrial structures.
- This is recognised abroad as well – which is why a total of 18 EU Member States and at least 30 other countries have introduced similar legislation based on feed-in tariffs for electricity from renewable energy sources.
- The EEG has therefore proved its worth.

2. The EEG's success in figures

- Since the Renewable Energy Sources Act entered into force in 2000, the share of renewable energies in total electricity generation in Germany has almost doubled, from 6.3% in 2000 to 11.6% in 2006.
- Forecasts for the current year indicate that a share well above 13% will be achieved for 2007. This means that the target for 2010 – at least 12.5% – will be exceeded as early as 2007.
- The EEG is a powerhouse for climate protection: in 2006, carbon dioxide (CO₂) emissions were reduced by around 44 million tonnes solely through the EEG – some 6 million tonnes more than in 2005.
- Together, all the renewable energies cut Germany's CO₂ emissions by around 100 million tonnes in 2006 (this includes electricity remunerated under the Act, electricity generated outside the scope of the Act, RE heating, and biofuels).
- According to a recent analysis, domestic turnover from the installation and operation of renewable energy systems increased from € 12.3 billion in 2004 to € 18.1 billion in 2005 and reached approx. € 22.9 billion in 2006, with around € 14.2 billion of this latter figure being directly attributable to the Renewable Energy Sources Act.
- This has been accompanied by a substantial increase in employment in the renewables industry. The number of people employed in all the renewable energy sectors rose from 160,000 in 2004 to around 236,000 in 2006. Around 134,000 of these jobs, i.e. almost 60%, were created as a result of the Renewable Energy Sources Act.
- Of these 134,000 jobs resulting from the Renewable Energy Sources Act, wind energy accounted for the major share, i.e. around 82,000 jobs, followed by photovoltaics with 27,000, 22,000 in bioenergy power generation, and around 3,000 in hydropower.
- Other effects of the Renewable Energy Sources Act (EEG) are significant savings due to avoided energy imports (hard coal and gas imports for electricity generation), and, with conventional power being substituted by electricity from renewables, avoidance of environmental damage from CO₂ emissions and hence its resulting external costs.

3. Fine-tuning the EEG and renewables expansion

- In light of its success to date, the basic structure of the EEG should be maintained, but it should continue to be improved and adapted to current developments.
- Building on the decisions adopted at Meseberg, the expansion of renewable energies should continue and the share of renewables in electricity consumption in Germany should be increased to 25-30% by 2020, with continued steady expansion thereafter. In this way, renewable energies will make a key contribution to ensuring that Germany fulfils its climate commitments.
- To this end, however, fine-tuning of the Act is required to facilitate an optimum response to the current situation at all times. The Progress Report contains 20 pages of policy recommendations which primarily relate to provisions of the EEG but also include flanking measures outside the scope of the Act. In particular, the policy recommendations relating to the EEG should be implemented as part of the Act's forthcoming revision.

4. Key measures

- Improvements in the expansion of offshore wind energy, although no new rate of remuneration has been fixed as yet.
- Onshore wind energy: better incentives for repowering and for system services.
- Better conditions for electricity generation from biomass: in particular, an increase in the fees paid to small-scale biomass and especially biogas plants, and increased bonuses for CHP and the use of cultivated biomass; introduction of 1% degression p.a. for all biomass bonuses. Palm and soya oil to be remunerated only once an effective certification scheme to safeguard their sustainable cultivation is in place; similar criteria should apply to the sustainability of biomass cultivation.
- A boost for the expansion of geothermal electricity generation, especially through higher fees and investment subsidies through the MAP, also to cover drilling risks.
- Adjustment of fees payable for electricity from solar radiation (photovoltaics). The high rate of growth in photovoltaics has resulted in a decrease in manufacturing costs (learning curves), which offers scope for a one-off reduction in fees and an increase in the rate of degression.
- Measures to avoid powering-down of RE plants due to grid bottlenecks. To this end, grid integration should be improved and optimised feed-in management introduced.

5. The EEG does not push up prices – increased electricity costs are not caused by renewable energies

The additional costs associated with more intensive renewables expansion are affordable:

- In 2006, the EEG levy amounted around 0.75 ct/kWh.
- This is equivalent to less than 4% of domestic electricity costs.
- Renewables expansion currently adds around € 1/month to the average domestic electricity bill.
- Just 13% of the substantial electricity price increases between 2002 and 2006 for households are due to the EEG; 75% of the increase is due to production, transport and distribution costs. Similarly, the new end-of-year price increases that have been announced for households cannot be attributed to the Renewable Energy Sources Act.

6. Key policy recommendations for the revision of the Renewable Energy Sources Act (EEG) – Breakdown by sector

Sector	Provisions within the scope of the Renewable Energy Sources Act Overview (effective as of 1.1.2009)	Flanking measures Overview
Cross-sectoral	<ul style="list-style-type: none"> • A uniform remuneration period of 20 years for all RE sectors • The principle of exclusive use to be elaborated, making payment of fees for electricity generated from a mix of renewable sources more straightforward • Clarification of the prohibition of multiple sale • Feed-in management to involve the use of all economically viable opportunities for grid optimisation using best available technologies • Mandatory use of technologically optimised feed-in management with the aim of safeguarding grid security at the lowest possible cost and maximum possible feed-in from RE plants • Obligation of RE plant operators to ensure that their systems can be regulated by remote control by the grid operator in the event of grid bottlenecks • Introduction of an appropriate hardship scheme for RE plant operators to be considered • Administration of the special equalisation scheme for energy-intensive enterprises to be improved 	
Hydropower	<ul style="list-style-type: none"> • Amendment of fee categories; an increase in the fees paid for plants with a capacity up to and including 5 MW, especially new plants • For systems with a capacity of over 5 MW: abolition of the cut-off date, the upper limit of 150 MW and the requirement for modernisation to result in an increase in the electrical energy of at least 15% • Appropriate modification of remuneration rates due to changed remuneration period 	<ul style="list-style-type: none"> • Development of a strategy to introduce an inter-plant remuneration system for the ecological modernisation of several plants within a single river basin district • Simplification of approval procedure under water law • Remuneration under the Act to be based on clear criteria laid out in the Renewable Energy Sources Act (EEG), Federal Water Act (WHG) and the Environmental Code (UGB)
Landfill gas, sewage gas and mine gas	<ul style="list-style-type: none"> • Increase in the remuneration rate for landfill gas plants with a capacity up to and including 500 kW_{el} • Reduction in fees for mine gas plants with a capacity above 1 MW_{el} • Amendment of capacity categories for mine gas plants to 0-1 MW_{el}, 1-5 MW_{el} and >5 MW_{el} Adaptation of remuneration rates as follows: capacity up to and including 1 MW_{el}: 7.16 ct/kWh (currently 7.16 / 6.16 ct/kWh) 	

Sector	Provisions within the scope of the Renewable Energy Sources Act Overview (effective as of 1.1.2009)	Flanking measures Overview
Biomass	<ul style="list-style-type: none"> • Increase of 1 ct/kWh in basic rate of remuneration for new and existing facilities with a capacity up to and including 150 kW_{el} • Increase from 6 to 7 ct/kWh in NawaRo bonus for electricity from biomass (new and existing facilities) with a capacity up to and including 500 kW_{el} • In addition, increase of 1 ct/kWh in the NawaRo bonus for electricity from biogas (new and existing facilities) with a capacity up to and including 150 kW_{el}, if at least at least 30% farm manure is used • Increase in the NawaRo bonus for electricity generated by the burning of wood from landscape management or short-rotation plantations, from 2.5 ct/kWh to 4 ct/kWh for facilities with a capacity of 0.5-5 MW_{el} • Increase in the CHP bonus from 2 to 3 ct/kWh. • Reduction in the degressive rate of remuneration for new facilities from 1.5% to 1% p. a.; introduction of annual depression of 1% for all (previously non-degressive) biomass bonuses from 2010 • Exclusion of palm and soya oil from the NawaRo bonus scheme until an effective certification scheme to safeguard their sustainable cultivation is in place • The principle of exclusive use to be elaborated and made more flexible; use of certain plant by-products in systems using cultivated biomass; pro rata remuneration based on a positive list 	<ul style="list-style-type: none"> • Regular review and if necessary amendment of regulations concerning good practice in agriculture and forestry • Adoption of measures to reduce methane emissions from biogas facilities • The Federal Government to lobby at European level for the establishment of sustainability criteria for cultivated biomass. At the same time, the basis for authorisation to be introduced in the EEG for an ordinance which defines sustainability criteria for the cultivation of renewables. • Promotion of biogas microgrids via the Market Incentive Programme for Renewable Energies (MAP) / Joint Task of Improving Agricultural Structures and Coastal Protection (GAK) (or through inclusion in the technology bonus scheme).
Geothermal	<ul style="list-style-type: none"> • Reduction in the number of capacity categories from four to two, and increase in basic fees • Introduction of a heat cogeneration bonus of 2 ct/kWh • Introduction of a technology bonus of 2 ct/kWh for non-hydrothermal technologies 	<ul style="list-style-type: none"> • Provision of support for development of local district and district heating networks, to distribute the waste heat utilised, through other funding programmes • Creation of a fund to provide security for the exploration risk, with drilling risks being covered by investment subsidies through the MAP • Further R&D measures
Wind energy	<ul style="list-style-type: none"> • Setting the rate of degression for new onshore wind farms at 1 to 2% p. a. • Improvement of repowering incentive in Article 10 (2) • Increase in grid stability by improving the technical properties of onshore wind farms; appropriate remuneration to be considered • Improvement in fees paid to offshore wind farms under Article 10 (3) by increasing initial fees from 8.74 to 11-14 ct/kWh, with a decrease in the lower rate of remuneration from 5.95 ct/kWh to 3.5 ct/kWh 	<ul style="list-style-type: none"> • Development of a strategy for the utilisation of building planning law in order to boost repowering • Implementation of the strategy in dialogue with the federal states (<i>Länder</i>) with the aim of dismantling administrative obstacles at <i>Land</i> level • Assessment of how the interest of local communities in the establishment or renewal of wind farms (repowering) can be increased
Solar radiation	<ul style="list-style-type: none"> • Stepped increase in degressive rates to a standard 7% from 2009 and to 8% from 2011 • One-off reduction of 1ct/kWh in basic rate of remuneration from 1.1.2009 	

	<ul style="list-style-type: none"> • Introduction of a new category for roof systems with a capacity of over 1000 kW_p and a reduction in the remuneration rate to 34.48 ct/kWh 	
Future prospects	<ul style="list-style-type: none"> • More ambitious targets to be set in the Renewable Energy Sources Act for the share of renewable energies in electricity generation - 25-30% by 2020, to replace the current target of "at least 20%", and - continued steady expansion after 2020 	