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Renewable electricity generation
2005—2007
ESTONIA

Article 3(3) of Directive 2001/77/EC of the European Parliament and of the Council (on the promotion of electricity produced from renewable energy sources in the internal electricity market) lays down that "Member States shall publish, for the first time not later than 27 October 2003 and thereafter every two years, a report which includes an analysis of success in meeting the national indicative targets taking account, in particular, of climatic factors likely to affect the achievement of those targets and which indicates to what extent the measures taken are consistent with the national climate change commitment."

The use of renewable energy sources in the production of electricity is regulated in Estonia by the Electricity Market Act, which entered into force in 2003 and was last amended in 2007 (RT I 2003, 25, 153; 2007, 23, 120), when substantial changes were also made to the system of aid for renewable energy sources. The version of the Act applying until 30 April 2007, which had come into force on 1 January 2005, required network operators to purchase in a trading period (at a price of EEK 0.81/kWh) all the electricity generated by a producer of renewable energy to the extent of the operator's network losses. The main problem with this scheme was that a network operator who did not have a licence to sell electricity could not buy more electricity than the amount equivalent to his network losses in the trading period. This kind of support scheme was above all a source of uncertainty for wind farms connected to the grid, since at times of low electricity consumption (for example summer nights) network losses are small and so the purchase obligation was also small.

Despite the shortcomings of the support scheme in operation, the production of electricity from renewable sources increased in the period 2005 -2006, as shown in the following table:

Energy source:	**Production, GWh 2005**	**Production, GWh 2006**
Wind energy	53.9	76.3
Hydropower	21.5	13.5
Other	33	38
Total	108.4	127.8

At the same time consumption also increased (6 022 GWh in 2005 and 7 904 GWh in 2006), and therefore the share of renewable energy sources in total consumption even fell, from 1.8% in 2005 to 1.6% in 2006. For this reason a start was made back in 2005 on amending the Energy Market Act to introduce a new aid scheme, and this process was concluded on 15 February 2007, when Parliament passed the Act that came into force on 1 May 2007.

The new aid scheme for producers of renewable energy allows them to use the purchase obligation as before, but adds the possibility for a producer to sell the electricity produced itself and be given aid for the electricity sent to the grid and sold. The mandatory purchase price for electricity produced from renewable energy sources has been raised by 42% (to EEK 1.15/kWh), and the possibility of using the purchase obligation is no longer restricted to the network losses.

In addition to making use of the purchase obligation, producers of renewable energy can now receive aid of EEK 0.84/kWh for electricity sent to the grid and sold, which offers the possibility if sales are good of earning considerably more than from the purchase obligation.

The duration of the aid scheme has also been extended: 12 years from the start of production (the previous Act allowed the aid scheme to be used for between 7 and 12 years, but no longer than until the end of 2015).

The general aid scheme also includes one restriction on producers using wind as a source of energy from 2009, in that aid will be paid to them or they will be able to use the purchase obligation until such time as the production in Estonia in a calendar year reaches limits of 400 GWh and 200 GWh respectively (producers must sell electricity produced above these limits at market price without using the purchase obligation or aid). Separate records will be kept for each calendar year. The linking of the obligation to purchase electricity generated from wind power or the payment of aid to the annual production quantity is a result of the technical particularities of the Estonian grid — there are no power stations in the grid that can be rapidly regulated. Most of the generating capacity in the electricity grid (more than 90 %) has been developed in the Narva area (North-Eastern Estonia), but the centres of consumption have evolved in other parts of the country (the main load centres are in Tallinn, Tartu and Pärnu and the surrounding areas).

The diversity of energy sources is essential for security of supply in any electricity system, but in the Estonian system, where there is a lack of suitable power stations to balance out the use of wind power (for regulation purposes use is made of generator units in Narva power stations burning oil shale, which means that instead of saving fossil fuel it is burnt simply to keep generating plant in the spinning reserve), it is particularly important to promote also the other renewable sources of energy (e.g. biomass or landfill gas).

Although for the time being the total production share of power generated from renewable energy sources is small, this share is expected to increase significantly in the near future. The baseline studies carried out for drawing up the development plan for the Estonian electricity sector show that in order to achieve the objective Estonia has set itself for the share of electricity generated from renewable sources in 2010 (5.1% of gross domestic consumption), 430–450 GWh of power will have to be produced from such sources. For 2015 the power output from renewable sources is estimated at 742–806 GWh. In order to cover peak loads and extend the use of wind power, it will be necessary to construct reserve capacity that can be rapidly regulated (mainly gas turbines) and modernise the grid along the west coast of Estonia and in the islands. The investment requirement for new power generation units up to 2015 is estimated at a total of EEK 10–15 billion, of which EEK 2–3 billion for generation from renewable energy sources.

Viive Šavel
Senior Specialist, Energy Department,
Ministry of Economic Affairs and Communications
+372 625 6448
viive.savel@mkm.ee