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REPUBLIC OF SLOVENIA
MINISTRY OF THE ECONOMY
DIRECTORATE FOR ENERGY

Report of the Republic of Slovenia to the European Commission on Implementation of Directive 2001/77/EC of the European Parliament and of the Council on the Promotion of Electricity Produced from Renewable Energy Sources

(pursuant to Article 3(3) of Directive 2001/77/EC)

Ljubljana, December 2007

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1 INTRODUCTION

Article 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. Those reports should take account, in particular, of climatic factors likely to affect the achievement of those targets, and indicate to what extent the measures taken are consistent with the national climate change commitments.

In Article 5 the Directive goes on to provide that in this report, Member States shall outline the measures taken to ensure the reliability of the system designed to guarantee the origin of electricity.

The report shall also contain an evaluation of the existing legislative and regulatory framework with regard to authorisation procedures or the other procedures laid down in Article 4 of Directive 96/92/EC and which are applicable to production plants for electricity produced from renewable sources, with a view to:
– reducing the regulatory and non-regulatory barriers to the increase in electricity production from renewable energy sources,
– streamlining and expediting procedures at the appropriate administrative level, and
– ensuring that the rules are objective, transparent and non-discriminatory, and take fully into account the particularities of the various renewable energy source technologies.

Furthermore, in the report referred to in Article 6(2), the Member States shall also consider the measures to be taken to facilitate access to the grid system of electricity produced from renewable sources. The report shall examine, *inter alia*, the feasibility of introducing two-way metering.

This is the second report and contains assessments for 2005 and 2006.

2 NATIONAL INDICATIVE TARGETS FOR ELECTRICITY PRODUCED FROM RENEWABLE SOURCES

Energy policy targets in the Republic of Slovenia are set out in the Resolution on the National Energy Programme, or ReNEP (OGRS, 57/04) and aligned with Slovenia's international obligations:

• The Treaty Concerning the Accession of the Republic of Slovenia to the European Union defines the target under Directive 2001/77/EC as **increasing the share of electricity produced from renewable energy sources to 33.6% of gross electricity consumption by 2010**. This target is also contained in the ReNEP.

• **The share of biofuels** in the total energy value of engine fuels: 2% by 2005 (ReNEP target) and 5% with the adoption of the Rules on the Content of Biofuels in Motor Vehicle Fuels[1]. Directive 2003/30/EC sets the minimum obligation of Member States at 5.75% by 2010 and, as an exception, allows the setting of national targets, an option which Slovenia has decided to exercise.

• An increase in the share of RES in the supply of heat from 22% in 2002 to 25% by 2010.

• All the above targets must be achieved to **increase the share of RES in the primary balance** from 8.8% (2001) to 12% by 2010, which is the target set in the ReNEP.

3 ELECTRICITY FROM RENEWABLE ENERGY SOURCES IN 2005 AND 2006

3.1. Survey of electricity produced from renewable sources

In Slovenia the percentage of electricity produced from renewable energy sources is falling. Despite this, renewable sources made an important contribution to the production of electricity in Slovenia in 2005 and 2006, and thus to covering the country's electricity needs. [2] Slovenia is naturally endowed with sources of water and biomass, which are also the main sources of energy. The considerable fluctuation in the supply of electricity using renewable energy sources between individual years in the 2000–2005 period was due largely to hydroelectric energy. In 2005 the figure was down by 5.9% in comparison with 2004. Over the entire period in question (2000–2005) it declined at an average annual negative growth rate of -0.4%. In 2005 electricity production from hydroelectric plants fell by 15.5% in comparison with 2004, while the average annual negative growth rate in the 2000–2005 period was -2%. Consumption of other RES (i.e. RES excluding hydroelectric energy)

[1] The Rules on the Content of Biofuels in Motor Vehicle Fuels (OGRS, 83/2005) lay down that the average annual content of biofuels in all motor vehicle fuels placed on the market in the territory of the Republic of Slovenia must be at least 5% by 2010.

[2] Production of electricity from RES in Slovenia is monitored by the SORS using the EUROSTAT methodology. Source: SORS. Database: SI-STAT.

increased by 1.3% in 2005 in comparison with the year before, with the average annual growth rate standing at 0.8%.

A share of 24.4% was achieved in 2006, which means that Slovenia is only 9.2% percentage points away from the set target of 33.6% by 2010. The share increased by 0.2 percentage points on the share recorded in 2005, and fell by 7.3 percentage points on the share recorded in 2000. The two main reasons for the fall in share and the move away from the target figures are: production from hydroelectric plants, which accounts for a large bulk of the electricity produced from renewable energy sources, is highly dependent on hydrological conditions/rainfall; and the growth in electricity consumption in the last six years, on av erage 3.8%, greatly exceeds the growth in the production of electricity from RES.

The production of electricity from RES amounted to 3,701 GWh in 2006, with a continuous unit power of 1,032 MWe. Electricity production increased by 3.5% in comparison with 2005, and unit power by 3.3%.[3] This discrepancy is the result of slightly better hydrological conditions in 2006. There is a major discrepancy between the growth in electricity production and growth in power over the 2000–2006 period: electricity production fell by an average of 0.9% a year while actual unit power increased by an average of 2.8% a year.

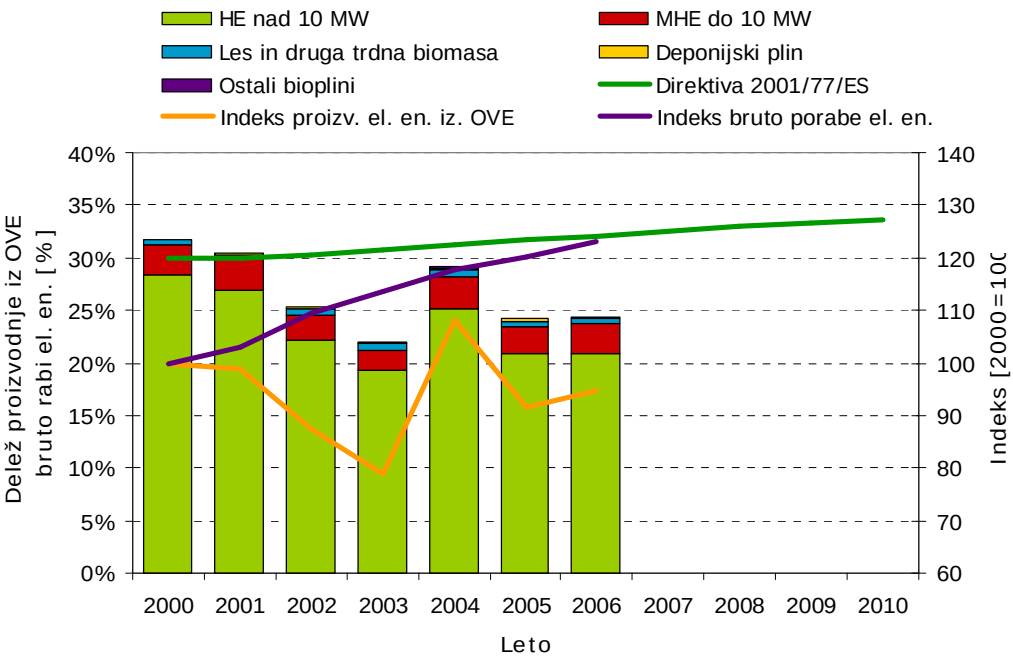

Figure 1: Share of electricity produced from renewable energy sources in gross energy consumption, divided by source (bars) with regard to the linear approximation to the 2010 target (green line) (right axis) and the index of electricity produced from RES (orange line) and the gross consumption of electricity (purple line) (right axis) (Source: IJS, SORS data)

Fig. 1:
Share of production from renewable energy sources, gross electricity consumption [%]
Year
Index [2000=100]
Hydroelectric power plants over 10 MW
Wood and other solid biomass

[3] The increase in unit power for the production of electricity from RES is the result of the new hydroelectric power plant at Boštanj (30 MWe), new small hydroelectric power plants (< 1MW) with a total power of around 1 MWe, new wood biomass units with a total power of 600 kWe (steam engine in the district heating system at Železniki) and new biogas units with a total power of around 1MWe (Source: Joint EUROSTAT Questionnaire 2007).

Other biogases
Index of electricity produced from RES
Small hydroelectric power plants up to 10 MW
Landfill gas
Directive 2001/77/EC
Index of gross electricity consumption

The key instrument for promoting the production of electricity from renewable energy sources in Slovenia is the system of guaranteed purchase prices. The level of the purchase prices for qualified producers was amended in July 2006 (Fig. 2 shows the valid purchase prices for electricity produced from RES).

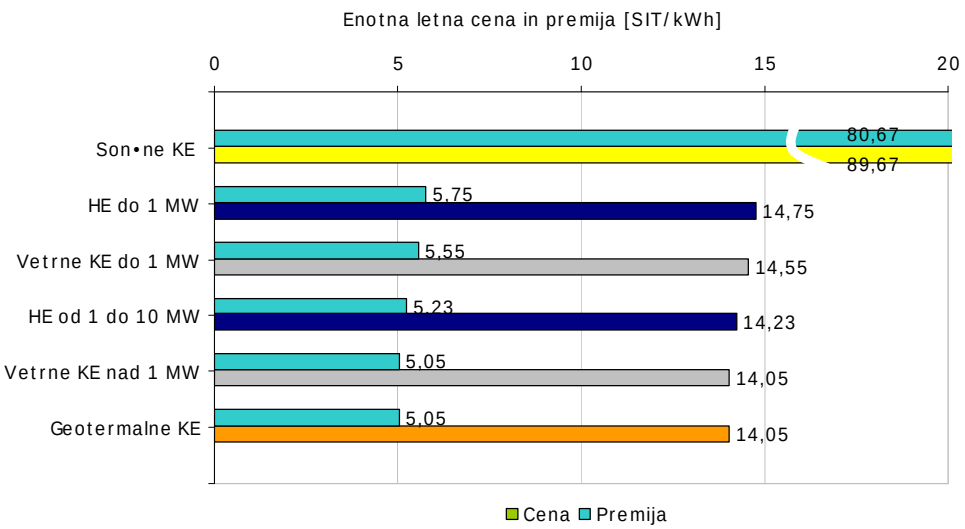

Fig. 2: Prices for the purchase of electricity from qualified producers – RES

Uniform annual price and premium [SIT/kWh]
Qualified solar power plants
Hydroelectric power plants up to 1 MW
Wind power plants up to 1 MW
Hydroelectric power plants 1–10 MW
Wind power plants up to 1 MW
Qualified geothermal power plants
Price
Premium

When the price was amended, the purchase price for the production of el ectricity from wood biomass increased by 35%, and the division of solar power plants by size was abolished, whereby the purchase price for units over 36 kWe increased substantially. The amendments have had a large impact on the development of solar power p lants, with installed power increasing dramatically in 2006 (Fig. 3). There has also been a noticeable tendency to increase the size of these units. Owing to the rise in electricity prices and greater market demand, the position has also improved for other producers of electricity from RES, where the share of independent sales on the market has increased considerably.

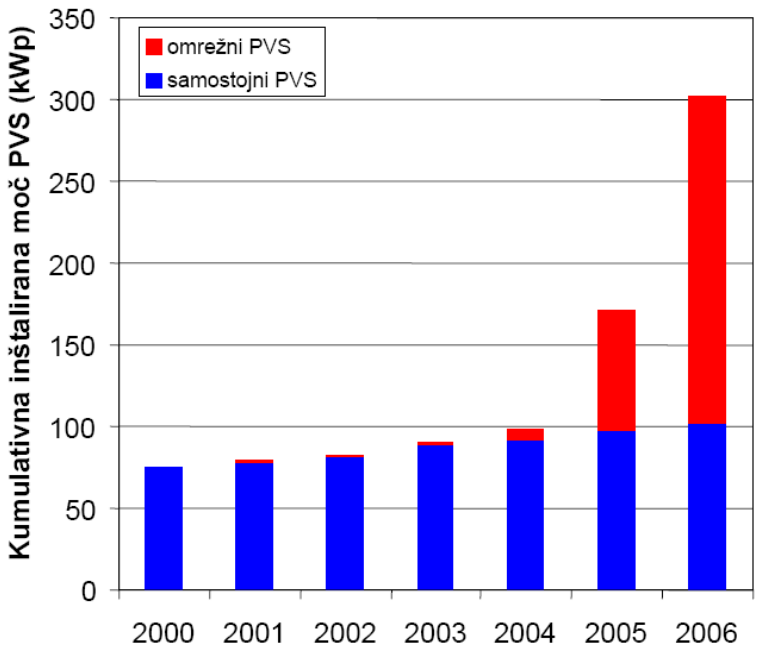

Fig. 3: Development of solar power plants in Slovenia (Source: Photovoltaic technological platform, www.pv-platforma.si/)

Cumulative installed power PVS (kWp)
Network PVS
Independent PVS

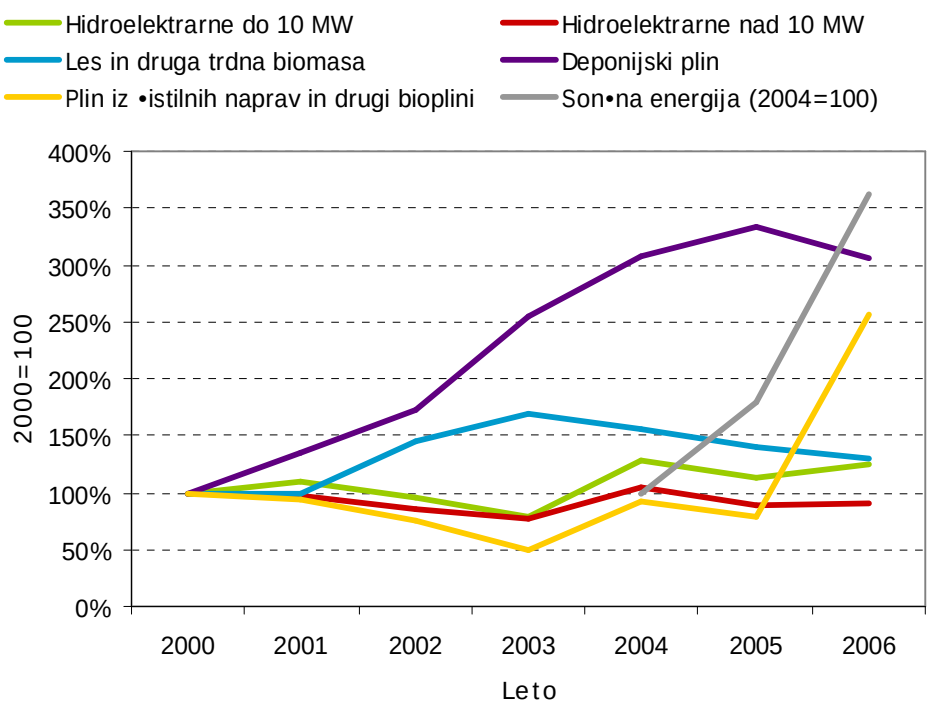

Fig. 4: Index of electricity production by renewable energy source 2000–2006 (Source: IJS, data: SORS, EurObserver)

Hydroelectric power plants up to 10 MW
Wood and other solid biomass

Gases from treatment plants, and other biogases
Hydroelectric power plants over 10 MW
Landfill gases
Solar energy (2004=100)
Year

In 2006 large hydroelectric power plants (those over 10 MW) produced 86% of all electricity from RES. They were followed by hydroelectric powe r plants up to 10 MW (11%), production from biomass (2%), production from landfill gas (0.7%), production from other biogases (0.2%) and production from solar power (0.01%) [4]. Over the last seven years, the greatest growth in the production of electricity h as come from landfill gas, followed by production from other biogases, particularly on account of significant growth in 2006, which was the result of investments in agriculture. There has also been a noticeable growth in production from small hydroelectric power plants (Fig. 4). Production from wood biomass increased up to 2003; since that year production has gradually fallen. The reason for this is most likely the adjustment in operations of existing industrial units to conditions on the market. In 2006 production from large hydroelectric power plants was down by 9% on the figure for 2000, although 2004 saw a record level of production. The actual power of large hydroelectric power plants increased by 18% in the 2000 –2006 period. Between 2004 and 2006, production from solar energy increased by more than 350%.

Figure 5 shows the share of electricity produced from individual renewable energy sources in 2006:

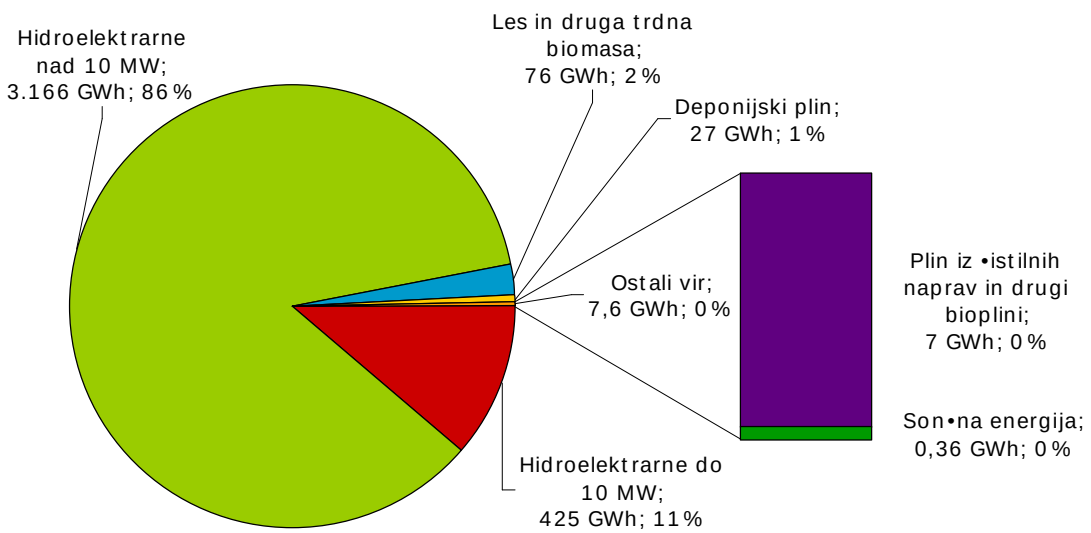

Fig. 5: Share of electricity production by renewable energy source, 2006 (Source: IJS, data: SORS, EurObserver)

[4] For the production of electricity from solar energy, data acquired as part of the EurObserver project is used; http://www.rcp.ijs.si/ceu/sl/node/58.

Hydroelectric power plants over 10 MW; 3,116 GWh; 86%
Wood and other solid biomass: 76 GWh; 2%
Landfill gases; 27 GWh; 1%
Other sources; 7.6 GWh; 0%
Hydroelectric power plants up to 10 MW; 425 GWh; 11%
Gases from treatment plants, and other biogases; 7 GWh; 0%
Solar energy; 0.36 GWh; 0%

3.2. Meeting the targets

Development of the production of electricity from renewable energy sources is going in the right direction; this has been helped in the last year by guaranteed electricity purchase pri ces as well as the higher market price of electricity.

The main problems in achieving the target of share of gross energy consumption of electricity produced from RES are: the large share of production from large hydroelectric power plants, which fluctua tes considerably from year to year (and which requires the urgent introduction of a methodology for calculating production using reference hydrological conditions); and, in particular, the very rapid growth in end -use of electricity, owing to which measures to calm growth urgently need to be implemented more thoroughly.

Table 1 shows that in 2005 and 2006, the following shares of electricity production from renewable sources in gross electricity production were recorded. It should be remembered that the 2010 target under Directive 2001/77/EC is 33.6%:

- 2005 …….. 24.2%
- 2006 …….. 24.4%

Table 1: Renewable energy sources for the production of electricity and in the primary energy balance

	2000	2001	2002	2003	2004	2005	2006	06/05	06/04	06/00
								AVERAGE ANNUAL GROWTH		
Electricity produced from RES [GWh]	3.904	3.868	3.414	3.080	4.215	3.575	3.701	3,5%	-6,3%	-0,9%
Hydroelectric power plants up to 10 MW	340	371	327	267	437	383	425	11,0%	-1,3%	3,8%
Hydroelectric power plants over 10 MW	3.495	3.425	2.986	2.690	3.658	3.078	3.166	2,9%	-7,0%	-1,6%
Wood and other solid biomass	58	57	84	98	90	82	76	-7,4%	-8,6%	4,5%
Landfill gas	9	12	16	23	28	30	27	-8,2%	-0,4%	20,5%
Gases from treatment plants, and other biogases	3	3	2	1	3	2	7	223,9%	67,1%	17,0%
Solar energy	0	0	0	0	0,100	0,180	0,363	101,8%		
Actual operating power [MWe]	875	924	977	1.000	994	999	1.032	3,3%		2,8%
Gross electricity consumption [GWh]	12.303	12.694	13.466	13.985	14.493	14.793	15.165	2,5%	2,3%	3,5%
Share of electricity produced from RES [%]	32%	30%	25%	22%	28,5%	24,2%	24,4%	1,0%	-8,4%	-4,3%
Domestic RES production [Mtoe]	0,760	0,776	0,750	0,722	0,832	0,785	0,787	0,3%	-2,7%	0,6%
Hydro and wind energy	0,330	0,326	0,285	0,254	0,352	0,298	0,309	3,7%	-6,3%	-1,1%
Other renewable sources	0,430	0,450	0,465	0,468	0,480	0,487	0,478	-1,8%	-0,2%	1,8%
Total primary energy consumption [Mtoe]	6,360	6,749	7,015	6,930	7,128	7,307	7,318	0,2%	1,3%	2,4%
Share of RES in total primary energy consumption [%]	12%	11%	11%	10%	12%	10,07%	10,08%	0,1%	-4,0%	-1,7%
Deviation from target	-1,9%	-3,1%	-8,2%	-11,6%	-4,5%	-9,4%	-9,2%			

Source: IJS, data: SORS, EurObserver (solar energy)

4 OVERVIEW OF LEGAL ACTS DETERMINING MEASURES TO PROMOTE THE PRODUCTION OF ELECTRICITY FROM RENEWABLE ENERGY SOURCES

4.1. Energy Act

The current Energy Act (official consolidated text, EZ -UPB2, OGRS, 27/2007) still determines qualified electricity producers and their rights in the same way as applied during the period of the drawing-up of the previous report, which was sent to the Commission in February 2006 for 2003 and 2004. In this period the Commission commenced a procedure against the Republic of Slovenia (C07/05) on the state aid scheme being implemented by Slovenia within the framework of its legislation on qualified electricity producers; Slovenia has therefore not been permitted to change the regulations in this area.

Decree on the Requirements to be Met for Obtaining the Status of Qualified Electricity Producer (OGRS, 29/01 and 99/01)

This Decree was not amended in 2005 and 2006 and the same conditions apply to acquisition of the status of qualified electricity producer as were outlined in the previous report submitted to the Commission.

4.3. Purchase price and premium

The rules and premises for contractual relations between qualified electricity producers and system operators were laid down in 2005 and 2006 in the same Decree on the Rules for Determining Prices for and Purchasing Electricity from Qualified Electricity Producers (OGRS, 25/02) as was in force for the period applying to the previous report. Qualified producers were able to choose between guaranteed purchase according to a uniform annual price, independent sale on the market or entitlement to a uniform annual premium; single - or dual-tariff settlement could also be chosen. For micro and small qualified power plants, qualified producers were not obliged to declare production or pay for unauthorised deviations. The costs that arose from this for the system operator were included in the costs of priority dispatch.

The uniform annual prices and uniform annual premiums for electricity from qualified producers were modified once during this period by the Slovenian Government.

The most recent uniform annual prices and premiums are laid down in the Government Resolution on Prices and Premiums for the Purchase of Electricity from Qualified Electricity Producers (OGRS, 75/2006). The prices and premiums, which do not include VAT, are shown in Table 2.

Table 2: Uniform annual prices and uniform annual premiums for the purchase of electricity from QPs

UNIFORM ANNUAL PRICES AND PREMIUMS

Type of QPP with regard to primary energy source	No. of source	Size class	Uniform annual price		Uniform annual premium	
			€/kWh	SIT/kWh	€/kWh	SIT/kWh
Hydroelectric power plants	1	up to and incl. 1 MW	0,06155	14,75	0,02399	5,75
	2	1 MW to 10 MW	0,05938	14,23	0,02182	5,23
Biomass QPPs	3	up to and incl. 1 MW	0,09410	22,55	0,05654	13,55
	4	over 1 MW	0,09118	21,85	0,05362	12,85
Wind QPPs	5	up to and incl. 1 MW	0,06072	14,55	0,02316	5,55
	6	over 1 MW	0,05863	14,05	0,02107	5,05
Geothermal QPPs	7		0,05863	14,05	0,02107	5,05
Solar QPPs	8	up to and incl. 36 MW	0,37419	89,67	0,33663	80,67
	9	over 36 kW	0,37419	89,67	0,33663	80,67
Other QPPs[1]	10		0,12089	28,97	0,08333	19,97
Combined QPPs using RES[2]	11		0,06698	16,05	0,02942	7,05
QPPs or heating plants using	12	up to and incl. 1 MW	0,05316	12,74	0,01561	3,74
communal waste[3]	13	1 MW to 10 MW	0,04953	11,87	0,01198	2,87
District	14	up to and incl. 1 MW	0,07303	17,50	0,03547	8,50
heating plants	15	1 MW to 10 MW	0,06885	16,50	0,03130	7,50
Industrial heating plants[4]	16	up to and incl. 1 MW	0,07094	17,00	/	/

Prices do not include 20% VAT.

Euro prices valid since 1 January 2007 and calculated using an exchange rate of EUR 1 = SIT 239.640.

Resolution on Prices and premiums for the Purchase of Electricity from Qualified Electric ity Producers (OGRS, 75/06)

Footnotes:

[1] power plants that use as input energy any other form of renewable not of fossil or nuclear origin; this group includes QPPs using animal waste biogas

[2] combinations of listed power plants using renewable sources

[3] also include landfill gas QPPs and communal QPPs using gas from communal installations

[4] the average purchase price for industrial heating plants up to 1 MW applies to all surpluses over and above the consumption which the QPP delivers to a public netw ork

QPP: qualified power plant

RES: renewable energy sources

4.4. The network

The Energy Act provides that transmission network system operators and distribution network system operators must permit users to access networks in a transparent and impartial manner, according to the principle of regulated access by third parties.

The Energy Act further sets out the content of system operating instructions, which must also include technical and other conditions for connection to the network, and pro visions on the costs of the technical measures necessary for the connection of new electricity producers. In accordance with their public mandate, system operating directives for individual networks are issued by the systems operator who performs the activ ity of systems operator of a given network. Before their publication, the Energy Agency must give its consent thereto.

Despite the requirement of the act, system operators did not issue system operating instructions in 2005 and 2006.

4.5. Guarantees of origin of electricity

The 2005 Decree on the Issuing of Guarantees of the Origin of Electricity introduced a system for guaranteeing the origin of energy in accordance with Directives 2001/77/EC and 2004/08/EC.

Guarantees of the origin of electric ity from renewable energy sources and from efficient cogeneration facilities in the territory of the Republic of Slovenia are issued by the Energy Agency. The Decree on the Issuing of Guarantees of the Origin of Electricity was issued in December 2005. The refore, immediately after the entry into force of the Decree, the Agency began carrying out the activities required to get the database fully operational as soon as possible and, in cooperation with the electricity market organiser Borzen, also developed i t into a Register of Guarantees of Origin which provides holder of these guarantees within additional management functionality. In March 2006 the Agency issued the first Slovenian guarantee of the origin of electricity from renewable sources.

Because the market in guarantees of origin was not yet developed in 2006 in Slovenia, the Agency issued guarantees of origin merely to meet requirements to prove origin in electricity export. It issued guarantees of the origin of electricity from renewable sources for more than two billion kilowatt hours.

In Slovenia the Energy Agency also issues RECS certificates, since it is also a full member of the Brussels-based Association of Issuing Bodies (AIB). The Agency also observes the standards of this body when issuing guarantees of origin.

5 REQUIRED AMENDMENTS TO THE CURRENT REGULATIONS FOR FRESH IMPETUS AND REALISATION OF THE TARGETS

Slovenia will find it difficult to meet the set targets without radical changes in the area of investment in new production capacities for the exploitation of renewable energy sources.

Owing to the growth in electricity consumption, which has not been met by the increased construction of power plants using renewable sources, the indicative target contain ed in Directive 2001/77/EC is moving further away and we will not be able to achieve it by the deadline set. The obsolescence of existing production capacities and the delay in the construction of new electricity production capacities are reflected in the rapid growth in imports of electricity and the increase in dependency on imports, which threatens the reliability of electricity supply in Slovenia.

Changes are urgently required in order to meet the requirements of

the Commission Decision relating to c ase no. C7/05.

In addition to securing legal bases for more radical interventions in the area of investment in new power plants, changes to the Energy Act are also required in order to bring Slovenian regulations into line with Commission requirements. The Commission's position is that Slovenia's encouragement of certain categories of producer, because of their organisation and ownership on the electricity market, constitutes a form of state aid. Despite the fact that these are permitted forms of state aid, they must be implemented in accordance with the rules and guidelines applying to the area.

Amendments will be proposed to the Energy Act, particularly those provisions relating to qualified electricity producers and to support for electricity producers from domestic fossil fuels, that will constitute the alignment of Slovenian energy regulations with the positions of the Commission expressed in Commission Decision 2007/580/EC of 24 April 2007 on the state aid scheme implemented by Slovenia in the framewo rk of its legislation on qualified energy producers – Case No. C7/2005.

In Slovenia's case, the costs resulting from a mandatory purchase price or premium are financed by a quasi-fiscal duty. Commission practice is for inflows from such charges to be rega rded as state resources. This practice follows judicial practice, where inflows from charges levied by the state, collected in funds determined by the state and intended to give priority to certain companies, are regarded as state resources.

Therefore, for the Commission, the implementation of support to 'qualified producers' of electricity in Slovenia is a form of state aid which, though its purpose complies with the EC Treaty, must fully comply with the Guidelines for State Aid for Environmental Protect ion. In addition to the general position on the Slovenian scheme, the Commission has also made a number of comments concerning parts of the existing scheme. Slovenia undertook, in the course

of the procedure, to take the comments into account during the next round of amendments to the regulations in this area and to amend or supplement them accordingly.

The method of collecting funds for support will be modified so that consumers will pay lump sums according to connection, independently of the quantity and origin of the electricity used. In setting the amount of the lump sum, the connection power (fuse power), the voltage level at which the consumer is connected, and the consumer group will all be taken into account.

Removal of non-compliance of the Energy Act with Directive 2003/54/EC and the introduction of additional possibilities enabled by Directives 2001/77/EC and 2004/8/EC

In addition to measures that will enable increased investment in power plants using renewable sources and in cogeneration, and to amendments pursuant to the Commission Decision, the proposed legal changes will also encompass alignment with Directive 2003/54/EC and supplements made pursuant to Directives 2001/77/EC and 2004/8/EC.

Alignment with Directive 2003/54/EC relates primarily to the obligations and activities of transmission and distribution network system operators in connection with incentives to individual categories of electricity producer.

Supplements made pursuant to Directives 2001/77/EC and 2004/8/EC will relate to the transposition, into Slovenian legislation, of those provisions of the Directives for which Member States may opt. In the opinion of the proposer, they could constitute an important relief in decision-making procedures and the construction of new power plants.

The following provisions of the current act require amendment:

Responsibility for the purchase of electricity from qualified plants, Articles 22a and 23 of the Energy Act.

The Energy Act sets out that transmission and distribution network system operators, which must sell on the purchased electricity on the organised electricity market, are responsible for purchase from qualified producers. This provision places upon system operators obligations that are in complete contravention of their basic activity as defined in Articles 9 to 12 of Directive 2003/54/EC. The same applies to distribution network system operators.

Issuing of guarantees of origin

In light of the fact that the Commission has decided to rely, in guarantees of origin, on the procedures and methods used by the Association of Issuing Bodies (AIB), this decision requires a series of additional authorisations for the issuer of guarantees of origin, the implementation of controls and the prosecution of misuse by recipients of guarantees of origin. It is for this reason that additional authorisations need to be given to the Energy Agency of the Republic of Slovenia to keep a register and issue declarations for production installations.

6 OBSTACLES

Table 3: Overview of general obstacles to an increase in the production of electricity from renewable energy sources mentioned by investors in the production of electricity from renewable sources in Slovenia:

Administrative obstacles	**Obstacles to connection to the network**
• involvement of a large number of offices, professionals, etc. • lack of coordination between the different offices, professionals and authorities • long periods required for acquisition of all the necessary permits (particularly environmental, then on qualified p roducers, then connection to the network) and over - complication • insufficient knowledge of procedures for the acquisition of permits • insufficient inclusion of RES in spatial planning • low level of awareness of benefits of RES among local and regional authorities • too-low purchase prices (FIT), in places even lower than the market prices for electricity from traditional sources • too-short contractual terms for purchase of electricity by feed-in tariffs	• insufficient network capacity available • procedure for connecting to the network not completely transparent • objectivity not fully guaranteed • costs of connecting to the network • long periods required for acquisition of permit for connection to the network
Social obstacles	**Financial obstacles**
• opposition from local residents and local authorities • low level of awareness of benefits of RES • failure to take account of overall social costs of electricity from conventional energy sources	• lack of trust between banks and investors • low predictability of capital subsidies and financial flows • more interest in investment in investors' basic activity than in the energy facility • lack of special loans • lack of 'contractors'
Technical obstacles	**Economic obstacles**
• under-consumption of heat or no possibility for selling heat in cogeneration • lack of experienced staff • lack of knowledge by investors of the equipment market, financial incentives and technological solutions • reserves in the event of malfunctions in electricity production • prices of emission coupons	• long repayment periods • high investments • low profitability • high fuel prices

Specific conditions regarding the siting of facilities for the exploitation of renewable energy sources in Slovenia are clearly illustrated below :

- wind power plants

There are, as yet, no wind power plants in operation in Slovenia. The wind power plant closest to realisation is the one sited at Volovja Reber. The project investor, the Elektro Primorska company, will not commence construction of the wind power plant, which is to be sited on the Volovja Reber ridge above Ilirska Bistrica, for some time. Owing to the overhauling of the procedure for obtaining an environment-protection permit, which has been launched *ex officio* by the Environmental Agency of the Republic of Slovenia after the Ministry of the Environment and Spatial Planning granted the Slovenian Birdwatching and Bird Research Society (DOPPS) the status of party to proceedings, the project investor will wait until the end of legal proceedings before commencing. They are already drafting an appeal against the decision overhauling the permit award procedure.

The president of the board of administrators of Elektro Primorska, Julijan Fortunat, points out that while the valid construction permit does allow them to start construction of the power plant, they would be risking too much by operating this way. Since the procedure for the siting of the wind farm at Volovja Reber has been underway for a number of years, the wind-exploitation technology has in the meantime advanced somewhat. It would therefore make more sense to install more powerful turbines. They are now planning 29 turbines with a total power of 28 MW, which are expected to produce 55 GWh of electricity annually. One kilowatt hour of electricity from the power plant at Volovja Reber should cost EUR 0.058, making it one of the cheapest sources of renewable energy.

Nature conservationists and experts in the sustainable production of energy are proposing that central government draw up a strategy for the siting of wind power plants that would determine those areas with sufficient wind potential and in which the construction of wind turbines would not threaten the nature and landscape.

The Volovja Reber Coalition, which opposes the construction of the power plant, maintain that they are not against such plants *per se*. They point out that the energy profession wants to site wind turbines on ridges, which is dubious from the environmental protection point of view, since it is precisely in mountain areas that nature is best preserved in Slovenia. Some time ago, therefore, DOPPS, which is one of the main pillars of the Coalition, recommended to the Ministry of the Environment and Spatial Planning, that research be carried out to identify sensitive areas for birds that are not suitable for the siting of wind power plants. The research should be focused first in Primorska, as the region so far identified as having the greatest wind potential.

- large hydroelectric power plants

In recent years procedures for the siting of large hydroelectric plants in Slovenia have only taken place in the Spodnja Sava area, i.e. from the existing Vrhovo plant to the border with Croatia. The greatest barrier in these procedures are those sites within Natura 2000 areas, or potential sites

which meet the special protection area conditions for inclusion in Natura 2000. The same environmental impact assessment procedure applies to both types of site.

One additional problem is the amendment of planning legislation – the Spatial Planning Act (ZPNa•rt, OGRS, 33/2007) entered into force in May 2007, replacing the old Spatial Planning Act (ZUreP-1). All participants in procedures for the preparation and adoption of spatial plans are still adjusting themselves to the new act and new procedures so that, for the moment, the length of time from the commencement of a procedure (initiative) to the acquisition of a construction permit is no shorter for investors than it was before, even though this was one of the main reasons for the amendment of the act.

- small hydroelectric power plants

Since the majority of small hydroelectric power plants are economically viable only on condition that they are constructed as derivational plants, the issue of maintaining the part of the watercourse on which the plant is sited in an ecologically acceptable state is a problematic one. The siting of such facilities in the environment is a professionally demanding and complex procedure. Small hydroelectric power plants that use existing dams or water management reservoirs are less problematic to site.

One additional problem is presented by the still -unfinished cadastre of locations available and environmentally acceptable for small hydroelectric plants, which is being drawn up at the Ljubljana-based Institute for Water of the Republic of Slovenia.

7 CONCLUSION

In Slovenia in 2006, electricity produced from renewable sources accounted for 24.4% of gross electricity consumption. This means that Slovenia is 9.2% behind the target set in Directive 2001/77/EC.

If the set target of 33.6% is to be achieved, Slovenia will have to amend its RES regulations appropriately to improve the fixed purchase price system (FIT) to encourage the production of electricity from renewable sources of energy. The purchase price system, and above all the objective of encouraging RES, will have to accord with the Guidelines for State Aid for Environmental Protection. Investors will be prepared to invest in renewable energy source projects only when the field is properly regulated with a more long-term view and with the offering of incentives.

Slovenia has already undertaken to include renewable sources of energy in the production of electricity to a greater extent, and its efforts will have to be stepped up after the announcement of the new 2020 obligations. We believe that liberalisation of the electricity market alone will not help to realise the targets in the area of renewable sources. Every Member State will have to further engage in efforts in this direction in the next period; it is therefore important that they retain the possibility of implementing their measures. If the new Directive on renewable sources regulates trade in electricity produced from renewable sources substantially differently to the way

it is currently regulated in Directive 2001/77/EC, Slovenia will be unable to meet its 2020 obligations.

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