

Slovak Republic

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1. Summary

Slovakia did not prepare its own official national strategy to stimulate renewable electricity yet. Several studies on benefits and potentials of RE have been produced by different governmental and non-governmental organisations here but their impact on official policy is not visible. Targets and timetables are also not mentioned in national Energy Plan nor there is any political or public discussion to change the present status. Nevertheless a set of policy instruments like tax breaks or investment subsidies for renewables has been adopted quite recently. On the other hand these instruments seems to have no positive impact in the situation where low feed-in tariffs and hardly accessible bank loans for renewable energy projects are discouraging all potential investors. There is no doubt that country needs to commit more efforts and allocate more resources to promote and develop the utilisation of renewable energy sources. Despite the fact that few legislative incentives did not proved to stimulate the development of the renewables yet there is a hope that applying of the EU

laws and regulations in this field will change the situation soon.

Targets

Electricity in Slovakia is mainly produced from nuclear, gas and coal power plants. The share of renewable energy sources was 16 % in 2001 where large hydropower plants produced almost all of the green power (see Table 1). The installed capacity of other renewable sources is negligible (biomass) or zero for wind and solar. It is a pity that Slovak Energy Policy

produced by the ministry of economy does not send any message towards specific renewable electricity targets. In general it says that under good financial conditions it could be possible to double the share of renewables (total heat + electricity) until the year 2010. Nevertheless a clear targets and timetables are missing. Biomass is considered as the most promising source of energy for heating. Regarding the electricity Energy Policy only defines the technical potential of power production from renewables. These estimates should be seen as the guideline of what is possible under present financial conditions (see Table 2).

Table 1. Power production in 2001 (TWh, %)

Power sources	TWh	%
Hydropower	5,117 TWh	16%
out of which pumped hydro	0,119 TWh	0,37%
Solid biomass	0,153 TWh	0,5 %
Biogas	0,001	0,003 %
Total power production from all sources	31,9 TWh	100%

Source: IEA Country Submissions (2002)

Table 2. Potential of annual power production from renewables in 2010.

Source	Production (TWh)
Biomass	1, 3 TWh
Hydro	6,6 TWh
Geothermal	0,06 TWh
Solar	1,5 TWh
Wind	0,6 TWh

Despite quite considerable potential the governmental estimates did not mention biogas or co-firing of biomass with coal specifically. The potential for biomass is not specified at all. Benefits like job creation and emission reductions related to increased utilisation of renewables and especially biomass are mentioned very briefly in the governmental energy policy. It is estimated that almost 5000 new jobs can be created in the construction and operation of all sources of renewables (including heat sector). Another 5000 new jobs can be created in research, development and other supporting services.

3. Definition of renewables

Renewables are defined indirectly through the Act on Taxes (tax breaks for renewables) or state support scheme for energy savings and renewables. Renewables include solar, wind, biomass, hydro and geothermal energy. In general terms the definition is in compliance with the EU directive. Nevertheless there is a small discrepancy on definition of small hydropower. Under the law on taxation hydropower eligible for tax breaks is defined as the facility rated up to 1 MW of installed capacity. Financial support schemes set the upper limit for small hydro at 10 MW. Renewables do not include industrial waste and non-renewable municipal solid waste. Until now there have been no attempts to re-direct support from renewable sources

to the incineration of industrial or municipal wastes. In the official documents biomass is not specified with regards to biogas or co-firing of biomass and coal.

4. Support mechanisms

There are two types of support mechanisms applied in Slovakia. First there is a tax break for renewables (The law on taxation) under which tax exemptions are available to the electricity producers that produce electricity from:

- small hydropower plants (up to 1 MW),
- wind power plants,
- heat pumps,
- solar installations,
- biogas facilities and
- geothermal installations.

Tax break is applied for the income in calendar year in which facility has been put into operation and than for other 5 consecutive years of operation. Tax breaks can be applied also for the reconstruction of renewable energy facility. Second, there is a new support scheme (de-minimis) for energy savings and renewable energy sources adopted by the ministry of economy in April 2003. According to this program eligible subject could receive financial support for construction or reconstruction of renewable energy facility up to 100.000 EUR. Support can cover up to 100 % of bank interest rates, up to 75 % of investment costs or up to 25 % not-investment costs of the facility.

The amount of support depends on the site where the renewable energy facility is placed. Projects in regions with the lower GDP per capita receive higher support. Administration of this scheme, which is scheduled to be in force until Dec. 31, 2006, is done by the Slovak Energy Agency. This support mechanism seems to be quite attractive but it is not clear yet what is the total budget allocated for this program and if all eligible applicants will receive the support. On the other side two discouraging aspects should be mentioned here. First the feed-in tariffs set by the distributing companies are extremely low – recently at the level of 3 EUR cents/kWh for all kinds of renewables. As the result of this most of the potential projects will have long payback times what is usually not acceptable for the domestic banks to finance such a project. This seems to be the crucial issue in future development of renewables in Slovakia. Having this burden any development is highly improbable. There have been several attempts by the NGOs or renewable energy lobby groups to change the policy, but without any success yet.

Another issue is the value-added tax which can be set at a lower level to stimulate the purchase of renewable energy technologies. In Slovakia we have experienced just the opposite direction – towards higher taxation. VAT for solar collectors was increased from 5 % to 20 % and there was no willingness to change it even despite the fact that due to permanently low sales of renewable technologies the VAT revenues for the state budget from these items were practically negligible. On other side the price increase for the

buyers was quite important. Under the new law on taxation, which will come into force in January 1, 2004, Slovakia will introduce equal tax for VAT (all items) and income at 19 % and there are no exclusions or lower rates for renewables.

5. Access to the grid

Grid access is one of few positive aspects related to renewables. The distribution power system operators are obliged by the law to buy renewable electricity offered by the independent power producers and to pay minimum feed-in tariffs, which are defined by them. There are following priorities set by the buyer 1) type of power plant (RE, cogeneration); 2) type of power delivered (sources aimed at delivering of at least 90 % of its production to the grid, sources delivering only excess power, sources delivering only peak or base power etc.).

The following conditions apply. For the site with installed capacity of more than 400 kW the independent power producer is obliged to permanently deliver at least 50 % of its installed power capacity into the grid. Planned outages have to be submitted to the grid operator at least 15 days in head. Feed in tariffs are set at 1,35 Sk/kWh for the low voltage grid and 1,45 Sk/kWh for high voltage grid (1 EUR = 40 Sk). The coefficient bonus of up to 1,3 can be granted to the operator with power plant sited in areas, which are of great importance for the grid operator. Thus the maximal purchase price can be

up to 1,885 Sk/kWh. These prices have been set by the grid operator for wind and hydropower installations.

Slovak legislation does not send any message about the priorities regarding the preferences for green power. All potential independent power producers are treated in the same way. Key issue is to meet the technical requirements for the connection of power plant to the grid (quality and amount of delivered power). Power producers are also responsible for covering the cost of extension lines. Three regional power-distributing companies are competent for all technical details and agreements including feed-in tariffs for the purchase of electricity. As a matter of fact they can easily eliminate the benefits of access to the grid by setting of low tariffs what is the reality in Slovakia. There has been no effort yet to change the rules by the government and to push these companies to higher feed-in tariffs.

6. Administrative procedures

It is definitively not easy to realise a renewable energy project in Slovakia. Situation is more complicated due to the lack of special agency providing the help in this business. As for all industrial installations there are several documents needed by the potential independent operator of renewable energy power plant. The district authorities issue construction permits for the installation. In the case of

hydropower, also the state company dealing with the river has the power to refuse the proposal for building power plant in their region. Permits for the delivery of power to the grid are issued according to the agreement between power producer and regional power distributing company.

Technical documentation for RE installation like small hydropower plants or wind-mills (as for all other industrial installations) has to include environmental impact assessment. The district environmental authorities review this documentation. The process of approving the project is quite complicated for the newcomer without any legislative background. Clear guidelines prepared by the state authorities are lacking and there are only very few consultant companies who can provide the help. The best situation is in the construction of small hydropower plants. Due to its long lifetime (some facilities are in operation over 70 years in Slovakia) and low operating costs small hydro is considered to be the most profitable renewable energy technology here. Moreover hydro potential is not used and there are also several plants, which could be quite cheaply reconstructed. Few companies are offering help in the process of planning, construction and permitting the power plant.

Unfortunately there is one important missing link - banks. Usually they are not interesting in financing of projects with long payback times. They are also asking for guarantees which independent producers are not able to meet. The most promising RE technology from the financial point of

view – small hydropower – was effectively stopped by the lack of funds here. The situation is changing slowly – the result is the same – no development at all. Companies offering some kind of help related to power production from wind or solar energy (PV) simply do not exist here.

7. Disclosure of power sources

Despite the fact that the EU Directive calls for electricity retailers to provide information to the final customers of the contribution of the various energy sources in the fuel mix and its environmental impacts, nothing has been done with respect to this issue in Slovakia yet. In case of interest the customers are advised to get the information from the internet or asking for it directly from the electricity retailer. Disclosure of information on environmental impacts of power production is not considered to be a problem in Slovakia. There is a law on public access to information related to state authorities in Slovakia. In situation when almost all power plants (99 % of capacity) are owned by the company controlled by the state there exist a possibility to get the information for any member of population. Nevertheless this is far from the aim of EU Directive and it is clear that urgent effort must be taken by the government to change this situation.

8. Conclusions and policy recommendations

Development of renewables in Slovakia is seriously slowed down due to the financial and administrative barriers. Financial barriers are mostly related to the costs of renewable energy technologies which are simply too high for domestic investors. Moreover bank credits are still hardly available for such kind of projects. Long payback times for small hydro up to 15 years due to low feed-in tariffs seems to be here the main obstacle and the biggest challenge for the government. Hopefully examples from neighbouring countries (Austria, Czech republic) or Germany will have an influence on situation in Slovakia. Furthermore it is not clear yet how the upcoming liberalization of electricity market will affect the whole development (electricity prices). In the situation when green electricity is not the priority and when external costs are not included in the final price of electricity from fossil fuels it does not seem that renewables will be the winners.

There is also a lack of special state or regional agencies dealing with renewables in Slovakia. Potential investors or general public do not have access to vital information on renewables and how they can be utilised. This is of great importance especially on regional level and in rural areas where the renewable energy potential could be exploited and where new jobs can be created.

Decentralisation of state administration, which is aimed at the transfer of

competencies to regional or local authorities, will require more involvement of these authorities in implementation of renewable energy projects. Traditionally regional or municipal authorities are least informed about the benefits of renewable energy projects for their region. Moreover they are flooded with other pressing problems (health, education) and energy issues are simply left by them on the market forces.