

UTILIZATION OF RENEWABLE ENERGY SURCES IN SLOVAKIA



Slovak Investment and Trade Development Agency

Introduction to Slovakia's renewable energy sources

Slovakia's energetic sector and utilisation of renewable energy sources (RES) itself must be seen in context of recent trends and development in this field in Europe and world. We can say that renewable energy is energy generated from natural resources such as sunlight, wind, water, biomass and geothermal heat which are unlike conventional energies such as oil, natural gas, coal and uranium naturally replenished on regular base. At the same time more extensive use of domestic renewable energy sources improves the security and diversification of energy supply and mitigates the impacts of unstable fossil fuel prices on the economy. RES utilisation is based on advanced, environment-friendly technologies and considerably contributes to the reduction in emissions of greenhouse gas emissions and other pollutants. That is the reason why more intensive utilisation of RES is one of the priorities of the Slovak Republic. Increasing the share of RES is a significant component in the package of measures aimed at achieving the targets of the Kyoto Protocol. Rational management of domestic renewable energy sources complies with the principles of sustainable development, which makes it one of the pillars of the healthy economic development of the whole society. On the other hand RES contribute to the strengthening and diversification of the structure of industry and agriculture. An active support policy creates room for investments ranging from the manufacture and assembly of components and whole systems to the establishment of research capacities with links to universities. RES support innovation and development in information technologies, offer new directions and are one of the pillars in building up a knowledge-based economy.

In this terms and in accordance with European Commision Directive 2009/28/ES on the promotion of electricity produced from renewable energy sources in the internal electricity market , Slovakia has to achieve the target for share of energy from renewable sources in final gross consumption of energy in amount 14 % by the year 2020. In year 2010 it was only 12,4 %.

Key Slovak legal regulations for RES promotion:

- Act No. 656/2004 Coll. on Energy Sectors and on amendments to certain acts, as amended
- Act No. 657/ 2004 Coll. on Heat Energy Sector and on amendments to certain acts, as amended
- Act No. 276/2001 Coll. on Regulation in Network Industries and on amendments to certain acts, as amended
- Government Regulation No. 317/2007 Coll., laying down the electricity market rules
- Decree No.2/2008 on feed-in tariffs in energy sector issued by Regulatory office for Network Industries (URSO)
- Act No.309/2009 Coll. on Supporting renewable sources of energy and highly effective combined production (to be effective from 1st September, 2009)
- Act no. 24/2006 Coll. on Environmental Impact Assessment and on amendments to certain acts, as amended
- Act no. 50/1979 on Master planning and building order and on amendments to certain acts, as amended
- The Strategy of Higher Utilization of renewable energy sources in the Slovak Republic
- Regulation No.221/2013 Coll. issued by Regulatory office for Network Industries (URSO) on determination of price regulation in electroenergy sector

Important European regulations

- European Commision Directive 2001/77/ES on the promotion of electricity produced from renewable energy sources in the internal electricity market
- European Commision Directive 2009/28/ES on the promotion of electricity produced from renewable energy sources

Potential of reneable energy sources in Slovakia

Slovakia has relatively big potential in RES. The diverse of Slovakia and its complex geological structure create opportunities for wide RES utilisation. 98 % of electricity currently generated from renewable sources comes from hydro electric generation, mostly contributed by the major hydro generation stations. It is estimated that 55 % of the hydro generation potential of Slovakia is in use, although only 25% of the potential of smaller hydro electric stations is exploited. The Slovak government plans to continue to support and effectively use this energy source and refers to the future construction of four new major hydro electric stations and approximately 100 smaller hydro electric stations. High forestation levels (44,3

RENEWABLE ENERGY SOURCES IN SLOVAKIA

%) and advanced forestry and agricultural sector allow mainly for extensive utilization of biomass. While in the past, the use of biomass did not receive adequate attention, it is considered today to have the greatest potential for increase among the renewal energy sources. The proportion of biomass in energy generation in Slovakia is small at approximately 2 % of energy consumption (the EU average is approximately 4 %). The use of biomass has shown a relatively stable rate of increase in recent years. This tendency is illustrated in some government documents, for example in the Strategy of Higher Utilization of Renewable Energy Sources in the Slovak Republic adopted in April 2007 and in the Action plan for the use of biomass for the years 2008 to 2013 ("Akčný plán využívania biomasy na roky 2008 -2013"), which is based on a similar document of the EU Commission, namely The Biomass Action Plan of December 2005. It is expected that the potential for the use of biomass could expand to approximately 18 % of the entire energy generated in Slovakia. Biomass has therefore the greatest growth potential of all renewable energy sources in the coming 5 to 10 years. The high potential for the use of biomass arises in particular in heat generation, biogas production or manufacture in the form of methylester as an addition to fuels and in the form of bio-alcohol as an additive to petrol also. Investment in rape seed oil is also under discussion. In this connection, it should be noted that the Slovak government, as the first of the CEE states, implemented the obligation to add biofuels to diesel and petrol. Regarding the solar and wind energy, it is necessary to point out that National Grid Operator considers and defines it like" nonpredictable RES" and that is the reason why more serious and difficult administrative procedures are applied when starting with those RES projects in Slovakia. In spite of the small proportion of solar and wind energy in use at the present, it is seen to have solid potential for growth. As already mentioned above, thanks to the geographical conditions in Slovakia, there is a relatively high potential for the use of geothermal energy. The characteristics of the geothermal sources in Slovakia are particularly suitable for heating.

Approval procedures for RES Power Plants for entering the Slovak Energy Market

In the middle of June 2009 the Draft of the Act on Supproting Renewable Sources of Energy and Highly Effective Combined Production has been approved by the parliament. This act was signed by the president and under No.309/2009 issued in Collection of Laws. It is effective from 1st of September, 2009. Part of this act regulating tools for support are effective from 1st of January 2010. Through this law is also implemented respective European law on RES into Slovak legal system.

In context of respective approval procedures are decisive mainly following legal acts:

- Act no. 24/2006 Coll.on Environmental impact assessment
- Act No.309/2009 Coll. on Supporting renewable sources of energy and highly effective combined production
- Act no. 251/2012 Coll. on Energy sector
- Decree No.7/2009 on amendment of decree No.2/2008 issued by Regulatory office for Network Industries (URSO) on determination of price regulation in energy sector
- Act no. 50/1976 Coll. on Master planning and building order
- Regulation No.221/2013 Coll. issued by Regulatory office for Network Industries (URSO) on determination of price regulation in electroenergy sector
- Regulation No.189/2014 Coll. Which amend Regulation No.221/2013 Coll. issued by Regulatory office for Network Industries (URSO) on determination of price regulation in electroenergy sector

Regulation **No.221/2013** on determination of price regulation in electroenergy sector stipulates several basic principles which will be applied from the 30th of July 2013, especially prices (see the next table).

<u>Prices of electricity generated from RES (determined like fix prices in EUR/MWh) in</u> <u>accordance with Regulation No.221/2013 for all energy production facilities put into operation</u> <u>from 1st of January 2014:</u>

a) electricity produced from hydro energy in a facility with a total installed capacity	
1. up to 100 kW	111,27 EUR/MWh
2. from 100 kW to 200 kW	109,17 EUR/MWh
3. from 200 kW to 500 kW	106,84 EUR/MWh
4. from 500 kW to 1 MW	105,15 EUR/MWh
5. from 1 MW to 5 MW	97,98 EUR/MWh
b) electricity produced from solar energy in a facility with a total installed capacity up to 30 kW, placed on the roof or external cladding of one building, connected with soil by its footing and registered in respective real estate register (cadastre)	98,94 EUR/MWh
c) from wind energy	70,30 EUR/MWh
d) from geothermal energy	155,13 EUR/MWh
e) from combustion or co -firing using by combined energy production	
1. purposely grown biomass excl. cereal straw	92,09 EUR/MWh
2. other waste biomass excl. cereal straw	100,63 EUR/MWh
3. cereal straw	126,10 EUR/MWh
4. bioliquids	94,36 EUR/MWh
f) co-firing of biologically decomposable fragments of municipal waste with fossil fuels	100,49 EUR/MWh
g) from combustion of	
1. gas from sewage tank or waste dump	70,34 EUR/MWh
2 biogas obtained by anaerobic fermentation technology with capacity up to 1 MW	107,53 EUR/MWh
3. biogas obtained by anaerobic fermentation technology with capacity up to 250 kW	125,29 EUR/MWh,
4. biogas obtained by anaerobic fermentation technology with capacity from 250 kW to 500 kW	119,41 EUR/MWh
5. biogas obtained by anaerobic fermentation technology with capacity from 500 kW to 750 kW	110,62 EUR/MWh
6. biogas obtained by anaerobic fermentation technology with capacity over 750 kW	107,26 EUR/MWh
7. gas obtained by termochemical gasifying in generator	122,62 EUR/MWh
8. fermented mixture obtained by anaerobic fermentation technology produced from biologically decomposable fragments of municipal waste	118,88 EUR/MWh

<u>Prices of electricity generated from highly effective combined production (determined like</u> <u>fix prices in EUR/MWh) in accordance with Regulation No.221/2013 for all energy production</u> <u>facilities put into operation from 1st of January 2014 :</u>

a) in combustion turbine with combined cycle	74,75 EUR/MWh
b) in combustion turbine with heat regeneration	72,89 EUR/MWh
c) in combustion engine with fuel	
1. natural gas	82,53 EUR/MWh
2. fuel oil	78,89 EUR/MWh
3. mixture of air and methane	74,39 EUR/MWh
4. from catalitycaly processed waste	120,69 EUR/MWh
5. from thermic fissure of waste and its products	113,40 EUR/MWh
d) in back-pressure turbine or in condensation turbine with heat take –off with fuel	
1. natural gas	80,97 EUR/MWh
2. fuel oil	78,96 EUR/MWh
3. brown coal	80,37 EUR/MWh
 black coal with a total installed capacity up to 50 MW including 	74,84 EUR/MWh
5. black coal with a total installed capacity above 50 MW	71,83 EUR/MWh
6. municipal waste	77,60 EUR/MWh
7. gas obtained by termochemical gasifying of waste in generator or thermic fissure	103,24 EUR/MWh
e) from combustion of usable gases arising in steel production process	80,02 EUR/MWh
f) in Rankins organic cycle	118,31 EUR/MWh

<u>Prices of electricity generated from RES (determined like fix prices in EUR/MWh) in</u> accordance with amendment No.189/2014 of the Regulation No.221/2013 for all energy production facilities put into operation from 1st of January 2015:

a) electricity produced from hydro energy in a facility with a total installed capacity	
1. up to 100 kW	111,27 EUR/MWh
2. from 100 kW to 200 kW	109,17 EUR/MWh
3. from 200 kW to 500 kW	106,84 EUR/MWh
4. from 500 kW to 1 MW	105,15 EUR/MWh
5. from 1 MW to 5 MW	97,98 EUR/MWh
b) electricity produced from solar energy in a facility with a total installed capacity up to 30 kW, placed on the roof or external cladding of one building, connected with soil by its footing and registered in respective real estate register (cadastre)	88,89 EUR/MWh
c) from wind energy	62,49 EUR/MWh
d) from geothermal energy	155,13 EUR/MWł
e) from combustion or co –firing using by combined energy production	
1. purposely grown biomass excl. cereal straw	92,09 EUR/MWł
2. other waste biomass excl. cereal straw	96,90 EUR/MWI
3. cereal straw	107,21 EUR/MWł
4. bioliquids	91,79 EUR/MWł
f) co-firing of biologically decomposable fragments of municipal waste with fossil fuels	100,49 EUR/MWh
g) from combustion of	
1. gas from sewage tank or waste dump	70,34 EUR/MWh
2 biogas obtained by anaerobic fermentation technology with capacity up to 1 MW	107,53 EUR/MWh
 biogas obtained by anaerobic fermentation technology with capacity up to 250 kW 	120,49 EUR/MWh
 biogas obtained by anaerobic fermentation technology with capacity from 250 kW to 500 kW 	110,00 EUR/MWF
5. biogas obtained by anaerobic fermentation technology with capacity from 500 kW to 750 kW	102,95 EUR/MWh
 biogas obtained by anaerobic fermentation technology with capacity over 750 kW 	100,23 EUR/MWh
7. gas obtained by termochemical gasifying in generator	99,21 EUR/MW
 fermented mixture obtained by anaerobic fermentation technology produced from biologically decomposable fragments of municipal waste 	95,50 EUR/MWł

<u>Prices of electricity generated from highly effective combined production (determined like</u> <u>fix prices in EUR/MWh) in accordance with amendment No.189/2014 of the Regulation</u> <u>No.221/2013 for all energy production facilities put into operation from 1st of January 2015 :</u>

a) in combustion turbine with combined cycle	74,75 EUR/MWh
b) in combustion turbine with heat regeneration	72,89 EUR/MWh
c) in combustion engine with fuel	
1. natural gas	82,53 EUR/MWh
2. fuel oil	78,89 EUR/MWh
3. mixture of air and methane	74,39 EUR/MWh
4. from catalitycaly processed waste	99,82 EUR/MWh
5. from thermic fissure of waste and its products	98,40 EUR/MWh
d) in back-pressure turbine or in condensation turbine with heat take -off with fuel	
1. natural gas	80,97 EUR/MWh
2. fuel oil	78,96 EUR/MWh
3. brown coal	80,37 EUR/MWh
4. black coal with a total installed capacity up to 50 MW including	74,84 EUR/MWh
5. black coal with a total installed capacity above 50 MW	71,83 EUR/MWh
6. municipal waste	77,60 EUR/MWh
7. gas obtained by termochemical gasifying of waste in generator or thermic fissure	89,05 EUR/MWh
e) from combustion of usable gases arising in steel production process	80,02 EUR/MWh
f) in Rankins organic cycle	98,31 EUR/MWh

SOLAR POWER PLANTS

Potential investor has to gona through the following procedures.

1.) Act no. 24/2006 Coll.on Environmental impact assessment

Solar power plants up to 5 MW of installed capacity are not subjected to Environment Impact Assessment.

2.) Act No.309/2009 Coll. on Supporting renewable sources of energy and highly effective combined production (last amendment effective from 1^{st} of July 2013)

The support for production from renewable sources pursuant this act is granted by:

- a. preferred connection to the regional distribution grid
- **b.** access to national distribution grid
- c. transport, distribution, and supply of electricity
- **d.** purchase of electricity by an operator of regional distribution grid for the price of electricity for covering the losses
- e. surcharge difference between the purchase price of electricity and purchase price of electricity for covering the losses, which is reimbursed to producer of renewable energy by an operator of regional distribution grid
- **f.** responsibility, which is put on an operator of regional distribution grid for deviations
- The support stated in **a**), **b**) and **c**) is granted to energy production facilities without any limits to the installed capacity.
- The support pursuant to **d**) refers to the renevable production facilities with the total installed power of **up to 125 MW**.
- The support pursuant to **e**) is granted to:

- whole amount of produced energy by the renewable energy production facilities placed on the roof or external cladding of one building registered in respective real estate register (cadastre) with the total installed power of **up to 30 kW including**

The support pursuant to **f** (responsibility for deviations) refers to production facilities with the total installed power of **up to 30 kW including**.

- The support pursuant to d), e), and f) refers to production facilities for the period of 15 years from the date of commissioning the facility into the operation or reconstruction or modernization of the technology.
- The operator of renewable energy production facility **is obliged to announce the operator of regional distribution grid** (who he has the contract for the supply of electricity with) presumed characteristics of the supplies of electricity. This obligation **does not apply** for renewable energy production facility of **up to 1 MW**.

3.) Act no. 251/2012 Coll.on Energy sector

Act no. 656/2004 defines the requirements, permits, and rules for undertaking in energy sector. There are two requirements described in the Act that refer to running solar power plants. Firstly, prior to building solar power plants, the subject must obtain a certificate that proves the compliance of the solar power plants with long-term conception of energy policy of Slovak Republic. Second, the subject must apply for a Permit for Undertaking in Energy Sector.

Certificate of Compliance with Long-Term Conception of Energy Policy of Slovak Republic

The application for the Certificate of Compliance with Long-Term Conception of Energy Policy **is not necessary** if renewable energy production facilities **aim to have up to 100 kW** of total installed power and installation is carried out on the roof or external cladding of a building.

Otherwise, following measurements apply:

The certificate is issued by Ministry of Economy and conditioned by submission of application . The applicant must submit an application in accordance with the prescribed termconditions in this law. In addition, the applicant must apply for the opinion of **A**. national transmission grid operator–*Slovenská elektrizačná prenosová sústava, a.s. (SEPS),* as well as opinion of **B**. distribution grid operator in determined area. These affirmative statements A. and B. are a pre-requisite and create an integral parts of the application for the above mentioned certificate of compliance. Applications for opinions in terms of A. and B. must contain description of main parameters of intended power plant ,mainly:

- total installed electric capacity (in MVA, MW)
- assumed yearly electric energy production (in MWh)
- definition of basic production technology of electric energy and kind of generator (coal,hydro,wind solar etc., in case of wind power plant definition of generator power regulation characteristics ,compensations tolls too)
- location of the intended power plant
- grid/feed system which is intended for connection of the power plant (distribution , transmission feed system ,i.e. voltage level 40 kV, 110 kV etc)
- assumed year of putting in operation
- assumed lifetime of power plant
- other important facts and parameters to be taken into account

After obtaining *Certificate of Compliance,* applicant have to submit to distribution grid operator in determined area *application for connection to distribution system*. Distribution grid operator in determined area is entitled to ask for connectivity study, when technical RES solution is non-standard and negative backward influence on distribution or transmission grid is expected.

Permit for Undertaking in Energy Sector

The subject must apply for obtaining the Permit for Undertaking in Energy Sector in order to operate solar power plants. The permit issues Office for Regulation of Network Industries.

The permit is not necessary if the solar power plants total installed power is up to 1 MW. However, the subject has the reporting/announcing obligation towards Office for Regulation of Network Industries.

When applying for the permit, the applicant must again submit an *application for the Permit for Undertaking in Energy Sector* in accordance with the prescribed conditions in this law. In application, the applicant must prove technical capabilities and appoint a responsible representative. The representative is defined as a person that can demonstrate technical experience and capability in energy sector.

The Certificate of Compliance with Long-Term Conception of Energy Policy of Slovak Republic from Ministry of Economy overlaps the act for obtaining the Permit for undertaking in Energy Sector.

4.) Act no. 50/1976 Coll. on Master planning and building order

The subject must obtain Zone Permit and Building Permit in order to build the solar power plants. The Zone Permit is subjected to submission of Certificate of Compliance with Long-Term Conception of Energy Policy. The building permit is subjected to submission of Certificate of Compliance with Long-Term Conception of Energy Policy as well as contract with the Operator of Distribution Grid in determined area, which is in fact conditioned by affirmative statement of National Transmission Grid Operator - SEPS.

WIND POWER PLANTS

Potential investor has to gona through the following procedures.

1.) Act no. 24/2006 Coll.on Environmental impact assessment

All projects, which aim to construct wind power plants on the territory of Slovak Republic, must undergo through Environmental Impact Assessment (EIA) process. The process is governed by the **Act no. 24/2006 on Environment impact assessment**. The act strictly sets obligation to conduct EIA regardless of wind power plants parameters such as the type, purpose, power, or height of the hub. The EIA process comprises of four consecutive stages;

- 1. Submission of the Plan/Intention,
- 2. Submission of the Report
- 3. Assessment of the Independent Expert
- 4. Final Statement of the Ministry of Environment

In total, the completion of EIA process usually takes a year and a half (includes all year round monitoring of birds and bats).

2.) Act no.309/2009 Coll. on Supporting renewable sources of energy and highly effective combined production

The support for production from renewable sources pursuant this act is granted by:

- a. preferred connection to the regional distribution grid
- b. access to national distribution grid
- c. transport, distribution, and supply of electricity
- d. purchase of electricity by an operator of regional distribution grid for the price of electricity for covering the losses
- e. surcharge difference between the purchase price of electricity and purchase price of electricity for covering the losses, which is reimbursed to producer of renewable energy by an operator of regional distribution grid
- f. responsibility, which is put on an operator of regional distribution grid for deviations
- The support stated in **a**), **b**) and **c**) is granted to energy production facilities without any limits to the installed capacity.
- The support pursuant to **d**) and **e**) refers to the renevable production facilities with the total installed power of **up to 125 MW**.
- The support pursuant to **e**) is granted to:

- whole amout of produced energy by the renewable energy production facilities with the total installed power of ${\bf up}\ to\ 10\ MW$

- to an amount of electricity that corresponds to the proportion amount of the total produced electricity by the renewable energy production facilities with the total installed power **above 10 MW**, whereas the proportion amount is calculated as division of 10MW to the total installed power;

- The support pursuant to **f** (responsibility for deviations) refers to production facilities with the total installed power of less than 1 MW.
- The support pursuant to **d**), **e**), and **f**) refers to production facilities for the **period of 15 years** from the date of commissioning the facility into the operation or reconstruction or modernization of the technology. The support pursuant to **d**) and **f**) is granted to the renewable energy

production facilities with total installed power **up to 1 MW for the lifetime of production facility**.

• The operator of renewable energy production facility **is obliged to announce the operator of regional distribution grid** (who he has the contract for the supply of electricity with) presumed characteristics of the supplies of electricity. This obligation **does not apply** for renewable energy production facility of **up to 1 MW**.

3.) Act no. 656/2004 Coll. on Energy Sector

Act no. 656/2004 defines the requirements, permits, and rules for undertaking in energy sector. There are two requirements described in the Act that refer to running wind power plants. Firstly, prior to building wind power plants, the subject must obtain a certificate that proves the compliance of the wind power plants with long-term conception of energy policy of Slovak Republic. Second, the subject must apply for a Permit for Undertaking in Energy Sector.

Certificate of Compliance with Long-Term Conception of Energy Policy of Slovak Republic

The application for the Certificate of Compliance with Long-Term Conception of Energy Policy **is not necessary** if renewable energy production facilities **aim to have less than 1 MW** of total installed power.

Otherwise, following measurements apply:

The certificate is issued by Ministry of Economy and conditioned by submission of application . The applicant must submit an application in accordance with the prescribed termconditions in this law. In addition, the applicant must apply for the opinion of **A**. national transmission grid operator–*Slovenská elektrizačná prenosová sústava, a.s. (SEPS),* as well as opinion of **B**. distribution grid operator in determined area. These affirmative statements A. and B. are a pre-requisite and create an integral parts of the application for the above mentioned certificate of compliance. Applications for opinions in terms of A. and B. must contain description of main parameters of intended power plant ,mainly:

- total installed electric capacity (in MVA, MW)
- assumed yearly electric energy production (in MWh)
- definition of basic production technology of electric energy and kind of generator (coal,hydro,wind solar etc., in case of wind power plant definition of generator power regulation characteristics ,compensations tolls too)
- location of the intended power plant
- grid/feed system which is intended for connection of the power plant (distribution, transmission feed system, i.e. voltage level 40 kV, 110 kV etc)
- assumed year of putting in operation
- assumed lifetime of power plant
- other important facts and parameters to be taken into account

After obtaining *Certificate of Compliance,* applicant have to submit to distribution grid operator in determined area *application for connection to distribution system*. Distribution grid operator in determined area is entitled to ask for connectivity study, when intended installed capacity is more than 1 MW, technical RES solution is non-standard and negative backward influence on distribution or transmission grid is expected.

Permit for Undertaking in Energy Sector

The subject must apply for obtaining the Permit for Undertaking in Energy Sector in order to operate wind power plants. The permit issues Office for Regulation of Network Industries.

The permit is not necessary if the wind power plants total installed power is up to 1 MW. However, the subject has the reporting/announcing obligation towards Office for Regulation of Network Industries.

When applying for the permit, the applicant must again submit an application for the Permit for Undertaking in Energy Sector in accordance with the prescribed conditions in this law. In application, the applicant must prove technical capabilities and appoint a responsible representative. The representative is defined as a person that can demonstrate technical experience and capability in energy sector.

The Certificate of Compliance with Long-Term Conception of Energy Policy of Slovak Republic from Ministry of Economy overlaps the act for obtaining the Permit for undertaking in Energy Sector.

4.) Act no. 50/1976 oll. on Master planning and building order

The subject must obtain Zone Permit and Building Permit in order to build the wind power plants. The Zone Permit is subjected to submission of Certificate of Compliance with Long-Term Conception of Energy Policy. The building permit is subjected to submission of Certificate of Compliance with Long-Term Conception of Energy Policy as well as contract with the Operator of Distribution Grid in determined area, which is in fact conditioned by affirmative statement of National Transmission Grid Operator - SEPS.

Useful contacts and links

Slovenská elektrizačná prenosová sústava, a.s. (National Transmission Grid operator)

Mlynské nivy 59/A 824 84 Bratislava 26, Slovakia **Contact person :** Ing. Peter Adamec, PhD., General Director **phone:** +421 2 5069 2151 **e-mail:** Info@sepsas.sk **web:** http://www.sepsas.sk/seps/en_index.asp

Regulatory Office for Network Inustries

Bajkalská 27, P.O.BOX 12 820 07 Bratislava 27, Slovakia **phone:** +421-2-581 004 11 **e-mail:** urso@urso.gov.sk **web:** http://www.urso.gov.sk/en/about-us

Západoslovenská energetika, a.s. -

Čulenova 6 816 47 Bratislava, Slovakia **phone:** +421 2 50 61 11 11 **e-mail:** kontakt@zse.sk **web:** http://www.zse.sk Západoslovenská energetika, a.s. supplies electric power via its own distribution networks in the territories of four Western Slovakian regions and Bratislava.

Stredoslovenská energetika, a.s.

Ulica republiky 5 010 47 Žilina, Slovakia **phone: +**421 850 123 555 **e-mail:** podnikatelia@sse.sk **web:** http://www.sse.sk Stredoslovenská energetika, a.s. is a regional energy distribution company operating in the area of Central Slovakia.

Východoslovenská energetika, a.s.

Mlynská 31 042 91 Košice, Slovakia **phone:**+421 55 6786516 **e-mail:** info@vse.sk , **web:** http://www.vse.sk/wps/portal/b2c-vse/ Východoslovenská energetika, a.s. Košice is a regional energy distribution company operating in the territories of Košice region, Prešov region and the part of Banská Bystrica region.

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