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THE ECONOMIC CONDITIONS OF ENTERPRISE FUNCTIONING

Influence of Power Supply Reliability to the Balanced Growth of Economics

Anicetas Ignotas

Lietuvos Respublikos Ūkio ministerija
Gedimino pr. 38/2, LT-01104, Vilnius

Lithuanian sector of energetics is one of the most important in the country according to its significance, the number of employees (approximately 14 % of industrial workers), the total value of the lasting property of energy enterprises (about 25% of all the profit of the country) and the expenditures allocated for the purchase of the energy resources. Energetics embraces the closely related energy sectors (electric power, centralized heat supply, oil, natural gas, coal and local fuel, and renewable energy sources), that comprises the whole of enterprises and facilities for the production, transformation, transfer, distribution and utilization of various energy resources. The extensive energy sector oriented to the great, ineffective use of electric power and oil products, and rather significant export has been inherited from the past. It does not comply with the modern requirements with its main characteristics (effectiveness, management principles, structure, etc.). Thus the primary attention of the state policy recently has been given to the reorganization and privatization of the energy sector and the implementation of the directives of the European Union (the EU).

The reliability of the electric power supply (safety), one of the most important factors stipulating the balanced growth of Lithuanian economics, is understood as the formation of the foreseeable and competitive market; the integration of the gas and electricity network; the improvement of physical protection of the infrastructure of energetics (from the terrorist attacks, catastrophes, and the risks of political character); preparation of the mechanism of the state solidarity of the Baltic region and the introduction of common standards of the infrastructure protection standards and means; the variety of the energy sources and reduction of the dependence on the import of the energy resources;

Lithuanian national system of energetics cannot be developed separately from the energetic systems of other two Baltic states (Latvia and Estonia). Logically the approach to this issue should be discussed in all Baltic countries, the contentious points should be solved, the principal strategic solutions should be accepted and the common document (The Energetic Strategy of the Baltic States) should be prepared.

Elucidation of the abbreviations used in the text: *$\sum$ – sum, mln. – million, bln. – billion, tne – ton of the Standard equivalent of the oil fuel, MW – million of watts (megawatts), kWh – one thousand of kilowatt-hours, TWh – trillion of tetra watt-hours, Gm^3 – billion of cubic metres, UCTE – Union for the Co-ordination of Transmission of Electricity, kgne – one thousand tons of conventional fuel (oil equivalent), BVP – Gross domestic product, ECU – European Currency Unit, AE – atomic power station.*

Keywords: *energy resources, united energetic system, energetic reliability, the utilization of the energy resources.*

Introduction

In the present stage of the integration into the European Union space **the peculiar topicality has the problem of the reliability of Lithuanian supply with the energetic resources.** The reliability of the energy supply has the decisive impact on the balanced growth of Lithuanian economics.

Lithuania occupies the specific position from the point of view of energetics: the import of the primary energetic sources from Russia dominates, the system of gas supply and electrical energy closely depends on the electric power system of Russia, with no connections to the power networks of the Western Europe.

The limited local and renewable resources of Lithuanian energy can satisfy only 8.6% of the need for the primary energy. More than 90% of the primary energetic resources Lithuania imports from Russia which is the single supplier. Such a situation determines the vulnerability of the provision and storage of energy resources for Lithuania and the significant dependability of economic development on the external economic and political factors.

On the other hand the solution of the problems of energetic security solely within the frames of Lithuanian state becomes ineffective in the present stage. The issues of the lasting reliability of the energy supply should be solved in close collaboration with other Baltic states – Latvia and Estonia. This conditions the necessity to protect the independence of the Baltic States (Estonia, Latvia and Lithuania) from the primary energy imported from the third countries and to create the united safe and economically significant energetic system.

The **work** aim is to overview the issues and presumptions of the reliability of the provision of energy resources in the context of the integration of Lithuania into the common energy system of the Baltic States, and to formulate the most important trends of this process development.

The investigation **objective** is the structure of the provision of Lithuania and other Baltic States with the primary energy resources, and the problems of the increase of the energy utilization efficiency.

The investigation **methods** used is the analysis of the

literature resources and official publications, statistical data and its generalization.

Premises of Lithuanian integration into the European provision system with energy resources

The production and consumption of electric energy in the Baltic States, i.e. Lithuania, Latvia and Estonia is illustrated in the following two tables that show the predicted data for 2007 and 2010.

If compared with other countries of the European Union (hereinafter – the EU), Lithuania is in specific situation from the point of view of energetics: the import of the primary energetic sources from Russia dominates, the system of gas supply and electrical energy closely depends on the electric power system of Russia, and there are no connections with energetic systems of the Western Europe.

The limited local and renewable resources of Lithuanian energy can satisfy only 8.6% of the need for the primary energy. More than 90% of the primary energetic resources Lithuania imports from Russia which is the single supplier. From the point of view of energetic safety it is completely unacceptable. But it is rather difficult to quickly and radically change the situation.

The rapid development of economics creates the preconditions for the significant growth of the energy consumption. In 2007 – 2010 the annual growth of the energy consumption is anticipated to be 3.5 – 4% if compared with the average global energy consumption growth of 1.8%. Lithuanian energetics has sufficient potential and capacities to produce the required energy and to supply it to the users. Effective energy production and effective energy consumption have significant value in this process.

Table 1

The forecast of electrical power consumption in the Baltic States (TWh)

2007	Production	Consumption	(+) Export (-) Import
LT	11.72	11.00	+0.72
LV	4.12	6.57	-2.45
EE	8.44	7.12	+1.32
∑	**24.28**	**24.69**	**-0.41**

Table 2

The forecast of electrical power consumption in the Baltic States (TWh)

2010	Production	Consumption	(+) Export (-) Import
LT	10.79	12.20	-1.41
LV	4.67	7.47	-2.80
EE	8.48	8.03	+0.45
∑	**23.94**	**27.70**	**-3.76**

In 2006 the European Commission in the Green Book titled "The European Union strategy of economical, competitive, and safe energetics" certified that Lithuania at present is the energetic island that is not connected with power network with the Western Europe's countries that belong to the European Union, and this means not only the creation of common market but the problem of creation of energetic security in the European Union. The further actions of the European Commission and the Council of the EU trying to reduce the vulnerability of the energy supply, to integrate the regional and isolated markets into the internal market, diversify the energy supply, to solve the problems of the crisis management or control, and to increase the effectiveness of the energy consumption are very significant not only for Lithuania but other member countries as well.

Lithuania cannot solve the problems of energetic security separately from the rest member states. The issues of lasting reliability of energy supply can be more easily solved closely collaborating with the other Baltic States – Latvia and Estonia. Paying attention to the fact that it is essential to secure the independence of the Baltic States from the imported primary energy of the third countries, the Baltic States (Estonia, Latvia and Lithuania) will try to prepare the lasting energetic strategy for this region, striving to facilitate and forward the linkage and integration of the energetic systems of the mentioned countries to the joined energetic system of the EU.

The mutual energetic strategy of the Baltic States will become the example of the best practice. The EU should pay special attention to those regions that are actually separated from the internal market of the EU. The efforts of Lithuania to join UCTE system were not adequately supported neither in regional level nor in the EU level. The actions of the European Union are obligatory while accelerating the development of the missing connections and operatively solving the question of the energy supply into the regions separated from the internal market of the EU.

The year 2007 is determined as the beginning of the functioning of the internal energy market of the EU and the implementation of the inside market principles paying particular attention to the situation of some energetically isolated member countries and other areas. In regional scale the solution of energetic problems should be implemented in complex as the reliable security and guarantor of the unanimous energetic system of the EU. The term *supply security* consists of two parts: sufficient capacities for the production of proper energy and the sufficient supply of this energy for the consumers. The EU began to create the biggest market of electricity and gas that is worldwide competitive. But historically the electrical energy systems of Lithuania, Latvia and Estonia belong to the part of electric power system of the northwest part of Russia. These systems are closely related with each other and the connections into Russia and Byelorussia. At present there are no connections with other member states of the EU, thus in the territory of the European Community the producers of the electric energy of the Baltic States can compete only with each other.

To provide the effective and competitive functioning of the integrated electric energy market the great investments in the power supply system (network) are necessary. The market of the Baltic States is still in the primary

stage of its creation. The first connection is being developed between Estonia and Finland. It will make possible the integration of the market of the Baltic States into the energetic market of the Northern States. But as far as now there are no power llinkages with the western neighbours, i.e. Poland, Germany etc. Table 3 shows the necessary investments into the power network connections between the states.

Table 3

The investment demand of the states into the electric bindings

Connection between Lithuania and Poland Cooperation Supply capacity	434 mln. Euros 267 mln. Euros 1000 MW
SWINDLIT (except the windmills) Supply capacity	400 mln. Euros 700 MW
NORDLINK Share of Lithuania Supply capacity	110 mln. Euros 27 mln. Euros 350 MW

Trying to secure the sufficient capacity of the power production in the country and in the region, the specialists of energetics of Lithuania have proposed to discuss with the colleagues from Latvia and Estonia the possibility to construct a new nuclear power plant. The Prime Ministers of three countries approved this opinion and on 27th of February 2006 signed the communiqué in Trakai. At present the study of the possibilities is being prepared that discusses the technical, economic and legal aspects of the building of a new nuclear power plant. Poland, Germany, Sweden and other countries are also involved and show interest in this project.

The environmental factor is very important while choosing the type of the new power plant. The operation of Ignalina nuclear power plant in Lithuania satisfies the requirements of the Kioto protocol but the problems of such character may arise after its shutdown. Thus the nuclear power has advantage in this case.

The prepared common energetic strategy of the three Baltic States will discuss the potential variants of the natural gas supply except the new possibilities to expand the power generation capacities.

Table 4 shows the present and predicted data of the natural gas consumption in the Baltic States.

Table 4

Consumption of natural gas in the Baltic States (Gm^3, 20°C)

	2005	2010
ESTONIA AS "Eesti Gaas"	**0.99** 0.78	**1.1**
LATVIA AB "Latvijas Gaze"	**1.66** 1.66	**2.2**
LITHUANIA AB "Lietuvos dujos"	**3.05** 1.43	**4.9**
Σ (EE, LV, LT)	**5.7**	**8.2**

The increase of the natural gas demand enhances the dependence from the sole supplier. On purpose to stimulate and keep up the diversification of the gas supply in the EU and the production of the more stable energy in the region of the Baltic States the Lithuania is ready to proceed the development of the gas storage in this region and the construction of the liquid gas terminal in the eastern part of the Baltic sea coast. Preliminary estimation of the price of such terminal would be approximately 260 mln. Euros and its capacity would be about 1.5 billion cubic metres annually. But the gas will be supplied by other supplier or suppliers. The level of the supply reliability will increase. And the price of the liquid gas will be competitive with that of the natural gas, especially after the anticipated maximization of the natural gas price up to the price level of the EU.

Other variants of the natural gas diversification are also possible, for example, by investing into the building of the underground gas storage in Syderiai (Lithuania) or the expansion of the underground gas storage in Inčiukalnis (Latvia). Lithuania could store there some part of its natural gas and to use it when necessary. In this way the seasonal gas demand fluctuations could be compensated and the stored reserves could be used during unexpected cutoffs of the gas supply.

Table 5 shows the necessary investment and the planned capacity of the storages.

Table 5

Planned investment demand for the construction of the gas storage

	INČUKALNIS	**SYDERIAI**
Capacity	3.2 billion m^3	1.5 billion m^3
Investment	65 mln. Euros	203 mln. Euros

The reliability of the oil supply for Lithuania and other Baltic States is as important as the supply of the natural gas and electric energy.

Table 6 shows the demand and manufacture of the oil and oil products in Lithuania.

Table 6

Demand of oil products in Lithuania

2005	**Thousand t.**
Oil production	9323
Oil demand	2600
Petrol	325
Diesel fuel	829
Liquid gas	274
Fuel oil	280

Table 7 shows the demand of oil products in the Baltic region.

Table 7

Structure of the oil product demand in the Baltic States

Country	Petrol, thousand tons	Diesel fuel, thousand tons	Fuel oil, thousand tons	Biggest enterprises	Share in the local market
Lithuania (2005)	343	902	363	"Lukoil Baltija" "Lietuva Statoil" "Neste Lietuva"	23% 16% 9%
Latvia (2005)	342	735	78	"Statoil LV" "Neste LV" "Lukoil LV"	24% 14% 10%
Estonia (2004)	287	587	8	"Statoil Esti As" "Neste Esti As" "Uno-x-Aleksola"	30% 20% 10%
Total:	**972**	**2224**	**449**		

All the oil has been imported from the sole supplier – Russia thus it is very important to make this supply very reliable. Table 8 shows the scope of the oil export via the harbours of the Baltic Sea.

Table 8

Scope of Russian oil export via the harbours of the Baltic Sea

2005	Mln. t.
Total oil production in Russia	**469**
Total oil export of Russia	**253**
Total oil export from Russia via the harbours of the Baltic Sea:	**62.2***
Primorsk	55.0
Būtingė	6.1
Kaliningrad	1.1
Total oil export via the harbours of the Baltic Sea:	**22.4**
Tallinn	11.1
Ventspils	5.5
Klaipėda	5.8

** 93% is exported to the EU*

The possibility to choose the sources of oil products for the import from various countries ensures the greater stability of the oil sector. The optimum oil processing in the enterprise "Mažeikių nafta" secures the sufficient oil product supply in the Baltic States' region. The state reserve of the oil products ensures the supply security in the power sector of the states during emergencies and force majeure. The free-market price of the oil products guarantees the stable and uninterrupted operation of the electrical power sector and the competition in the market of the oil products.

Preconditions of the effective increase of the power resource consumption

The increase of the power consumption effectiveness is one of the most important factors in developing the future energetics. With this objective in mind Lithuania successfully implements the aims defined in the national program of the efficiency increase in energy consumption.

In 1990-2004 Lithuanian economics underwent structural changes and renovation of technologies and this enabled the reduction of the intensity of the primary energy consumption, i.e., the energy consumption for the production of a unit of GNP (Gross national product) decreased by 1.7 times, and the intensity of the final energy minimized by 2.1 times. But the further magnification of the effectiveness of the energy consumption remains one of the most important strategic aims of the energetics policy. The pursued state potential of the economically viable energy saving is about 1.0 mln. tne.

In the national program of the increase of energy consumption effectiveness in 2006-2010 the effectiveness of the energy and power resources, and renewable energy resources should be augmented in all the spheres of the economics, primarily in the buildings and their engineer systems, technological processes of the enterprises, in the structures of the plants, companies and houses, in the sectors of centralized heat supply and transport.

But the energy intensity indices remain the greatest in our country among all the EU states. This is related with methodological peculiarities of the calculation of this index.

Energy intensity indices of Lithuania presented in Eurostat website are the greatest among the EU states – they are 1204.4kgne/1000 Euro95, accordingly. But similar indices also have other member countries of EU, e.g., Slovakia – 937, Czeck republic – 889.6, and this exceeds the average of 25 states of the EU, and is equal to 209.8 kgne/1000 Euro95. These indices are given in the "Eurostat newcronos" data basis where the abbreviation of the calculation technique of these indices is also given.

The technique of the calculation of energy intensity index is mostly predetermined by such great differences among the countries. The energy intensity is the ratio of thee total energy consumption and the state Gross national product (GNP). The states' GNP are calculated according to comparable prices of 1995 in Euros, i.e., 1995 are chosen as the base year. Lithuanian GNP is transferred into Euros in accordance with the mean Euro (ECU at that time) and Litas ratio, i.e., 5.18 Litas for 1 Euro. The values of the index given from 1996 to 2003 enabled us to decide that GNP was adjusted paying attention only to GNP change rates with fixed prices in mind but without changing the ratio of Litas and Euro stated in 1995. This is unfavourable factor both for Lithuania and

other new member states of the EU. Besides Eurostat does not correct the states' GNP in accordance with the parity of the purchasing capacity or buying power though the level of the prices of goods and services is rather different in various countries of the EU. Thus the Green book approved by the European Commission about the effectiveness of the energy consumption presents the parity of the energy intensity specified according to the purchasing capacity. The data of the EU states precisely reflect the situation – the Lithuanian index exceeds the average of the EU only by 1.6 times, and it is similar to that of Finland, Belgium, but is less that that of Czech republic, Slovakia and Estonia.

The other reason having significant impact on the energy intensity in Lithuania is the peculiarities of the electric energy generation, because more than 80% of the electric energy is produced using the nuclear fuel in Ignalina nuclear power plant and the technology used in this power plant allows to reach only 33% efficiency coefficient, i.e., in order to generate 1 kWh of electric energy 3 kWh of the nuclear fuel value must be used. Besides this, the significant part of the electric energy is exported, and the estimation of thee total energy expenditure is made by subtracting the quantity of the electric energy for export from the total energy expenditure of the country exporting the electricity and the transformation cost of this energy is included into the total energy expenditures of this country. This shows that it is impossible to use the energy intensity index implicitly and without reservation while comparing various countries because the countries that export electric energy occur in the statistically unfavourable situation. Besides the comparison of various countries should be done with respect to the climate zone of a specific country, as the energy expenditure rates greatly depend on the climate of the individual country, and the energy losses occur when generating and distributing the thermal energy.

In the future the energy intensity in Lithuania should decrease because of the growing GNP, the developing energetic economics and the efficiency of the energy consumption, and due to the reduced export of the electric energy.

On March 2006 the European Parliament and the Board approved the directive about the final usage efficiency of the energy and the energetic services that revoked the Board directive 93/76/EEC. The aim stated by the new directive is to reduce the final consumption of the energy by 9% during 9 years beginning from 2008. In two years time this directive will have to be transferred into the Lithuanian law. The first draft of the maximizing of energy consumption efficiency should be given to the European Commission on 30th of June, 2007, revealing the measures to reach the aims of defined energy saving. Lithuania will have to obey and fulfill the requirements of this directive as well.

In the accession treaty Lithuania obliged to strive for 7% of the whole electric energy consumption amount to be generated from the renewable energy sources in 2010. In 2005 the quantity of the electric energy generated from renewable sources equaled to 4% of the total electric energy consumption.

The implementation of this program will allow in the nearest future during 20-25 years to save 25-30% of the imported energy resources consumed at present, and approximately 8-9% of these resources will be changed by local and renewable energy resources.

The noxious emissions into the atmosphere will be reduced to:

CO_2 – 3,9 mln. tons,
SO_2 – 1.1 thousand tons,
NO_x – 9.7 thousand tons

The total average energy consumption in 2001-2004 in all the spheres of the state economics was 57.3 TWh. The saving potential in all the mentioned fields is equal to 18.1 TWh. The greatest part of the energy is used in the dwelling houses – 23.4 TWh, transport – 14.3 TWh, and industry – 10.5 TWh.

The greatest energy saving potential in the dwelling houses is 8.2 TWh, public institutions – 4.6 TWh, and industry – 4.2 TWh. The state renewable potential of the total energy resources is estimated to be 21.29 TWh of energy per year. In 2005 8.84 TWh of energy were generated using the renewable energy sources. There are still significant possibilities to use and further increase the renewable energy sources. The rest potential of the renewable energy resources would enable us to generate 12.45 TWh of energy.

Conclusions

The reliable supply of the energy resources will have the essential effect on the stable and balanced state development in the following most important fields:

1. The growth of economics is provided by:
   - the further transfer to the society that effectively uses the energy and much more "electrified" through the balanced and economically based energy generation in the power plants of various types, properly developed networks and electrical appliances, commerce and industry that are very effective and innovative;
   - the competitive energy market of the European level, ensuring the electric energy supply of high quality and the related services to the people, and commercial activities with competitive prices;
   - the objective to retain and strengthen reliable supply of the electric energy both from the point of view of the powers of sufficient generation and network infrastructure, and the reliable aspects of their work;
   - the sensitive aspects of the fuel supply management;
   - the environmental objectives using the solutions and mechanisms oriented to market and based on the effective expenditures.
2. The development of the social needs market is secured by:
   - providing the competitive produce and services of high quality that will promote the competitiveness of the European business, increase its entrenchment possibilities, employment and development, and the wellbeing of the European citizens;
   - securing the supply reliability and other public responsibilities corresponding the services in the

competitive markets;
- the investment into the permanent education, staff training as the inseparable part of the business planning process.

3. The process of the environmental quality is ensured by:
   - generating and supplying the electric energy in the power plants of various types that are based on the technologies that do not pollute the atmosphere with CO2 emissions and limiting their general impact on the environment;
   - expanding the utilization of the electric energy the impact on the environment of which is better if compared with the alternative solutions.
4. The progress of science and technologies is provided by:
   - the development of the further production infrastructure of the electric energy based on modern innovative technologies;
   - further development of the advanced network systems;
   - further employment of the electric energy of great effectiveness and high quality in the household, commerce and industry, and services related with them;
   - the support to the scientific investigation, innovation and creation processes, striving to improve the generation of electric energy and the technical, economic and environmental qualities of the networks and structures.

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Anicetas Ignotas

Energijos patikimumo įtaka subalansuotam ekonomikos augimui

Santrauka

Lietuvos energetikos sektorius savo svarba, darbuotojų skaičiumi (apie 14% pramonės darbuotojų), bendra ilgalaikio energetikos įmonių turto vertę (apie 25% viso šalies įmonių turto) ir išlaidų, skiriamų importuojamiems energijos ištekliams įsigyti, dydžiu yra vienas reikšmingiausių šalyje. Energetika apima tarpusavyje susijusius energetikos sektorius (elektros energetikos, centralizuoto šilumos tiekimo, naftos, gamtinių dujų, anglių ir vietinio kuro bei atsinaujinančių energijos išteklių), kuriuos sudaro visuma įmonių ir įrenginių, skirtų įvairių energijos išteklių gavybai, gamybai, transformavimui, perdavimui, skirstymui ir vartojimui. Iš praeities paveldėtas ekstensyvus energetikos sektorius, orientuotas į didelį, bet neefektyvų elektros energijos ir naftos produktų vartojimą bei nemažą eksportą, savo esminėmis savybėmis (efektyvumu, valdymo principais, struktūra ir kt.) neatitinka dabartinių reikalavimų. Todėl pastaraisiais metais valstybės politikos dėmesys pirmiausia skiriamas esminei energetikos ūkio pertvarkai, energetikos sektoriaus reorganizavimui ir privatizavimui bei Europos Sąjungos (ES) direktyvų įgyvendinimui.

Energijos tiekimo patikimumas (saugumas) – vienas svarbiausių veiksnių, sąlygojančių subalansuotą Lietuvos ekonomikos augimą, suprantamas kaip liberalizuotos, skaidrios, prognozuojamos ir konkurencingos rinkos sukūrimas; elektros ir dujų tinklų integracija; energetikos infrastruktūros fizinės apsaugos (nuo teroristų atakų, gamtos katastrofų, politinio pobūdžio rizikos) gerinimas; mechanizmo, skirto valstybių (Baltijos regiono) solidarumo veiksmams užtikrinti parengimas bei bendrų infrastruktūros apsaugos standartų ir priemonių įdiegimas; energijos šaltinių diversifikacija (įvairovė) ir priklausomybės nuo energijos išteklių importo mažinimas.

Lietuvos Nacionalinė energetikos sistema negali būti vystoma atsietai nuo kitų dviejų Baltijos valstybių (Latvijos ir Estijos) energetikos sistemų. Logika reikalauja pirmiausia suderinti šalių pozicijas, išspręsti ginčytinus klausimus, priimti principinius strateginius sprendimus ir parengti bendrąjį dokumentą (Baltijos šalių energetikos strategiją).

Tekste vartojamų trumpinimų išaiškinimas: $\sum$ – suma, mln. – milijonas, mlrd. – milijardas, tne –standartinio kuro naftos ekvivalento tona, MW – milijonas vatų (megavatų), kWh – tūkstantis vatvalandžių (kilovatvalandžių), TWh – trilijonas vatvalandžių (teravatvalandžių), Gm^3 – milijardas kubinių metrų, UCTE – Union for the Co-ordination of Transmission of Electricity (Elektros perdavimo koordinavimo sąjunga), kgne – tūkstantis tonų sutartinio kuro (naftos ekvivalentas), BVP – bendras vidaus produktas, ECU – European Currency Unit (ekiu), AE – atominė elektrinė

Išvados

Stabiliam ir subalansuotam šalies vystymuisi patikimas apsirūpinimas energijos ištekliais turės esminį poveikį šiose svarbiau-

siose srityse:

1. Ekonomikos augimas užtikrinamas per:
   - tolesnį perėjimą prie efektyviai vartojančios energiją ir vis labiau „elektrifikuotos“ visuomenės per subalansuotą ir ekonomiškai pagrįstą energijos gamybą įvairaus tipo elektrinėse, tinkamai išvystytus tinklus ir elektros energijos įrenginius buičiai, komercijai ir pramonei, kurie būtų labai efektyvūs ir novatoriški;
   - per konkurencingą europinio lygio energijos rinką, užtikrinančią aukštos kokybės elektros energijos tiekimą ir su tuo susijusias paslaugas piliečiams ir komercinei veiklai konkurencingomis kainomis;
   - siekį išlaikyti ir sustiprinti patikimą elektros energijos tiekimą tiek pakankamos generavimo ir tinklų infrastruktūrų galių požiūriu, tiek patikimo jų darbo aspektais;
   - jautrius kuro tiekimo valdymo aspektus;
   - aplinkosauginius tikslus taikant efektyviomis išlaidomis pagrįstus ir į rinką orientuotus sprendimus bei mechanizmus;
2. Socialinių reikmių rinkos raida užtikrinama:
   - teikiant aukštos kokybės, konkurencingus produktus ir paslaugas, kurie prisidės prie Europos verslo konkurencingumo, didins jo įsitvirtinimo galimybes, užimtumą ir plėtrą bei prie Europos piliečių gerovės;
   - garantavus tiekimo patikimumą ir kitas viešuosius įsipareigojimus atitinkančias paslaugas konkurencingose rinkose;
   - investuojant į nuolatinį švietimą, darbuotojų rengimą ir tobulinimą kaip į neatskiriamą verslo planavimo proceso dalį.
3. Aplinkosaugos kokybės raida užtikrinama:
   - gaminant ir tiekiant elektros energiją įvairaus tipo elektrinėse, kurios pagrįstos CO2 taršos nekeliančiomis ar mažai CO2 išskiriančiomis technologijomis, ir apribojant bendrąjį jų poveikį aplinkai;
   - plečiant elektros energijos pritaikymą, kurio poveikis aplinkai, palyginti su alternatyviais sprendimais, yra geresnis.
4. Mokslo ir technologijų pažanga užtikrinama per:
   - tolesnį elektros energijos gamybos infrastruktūros, pagrįstos pažangiomis technologijomis, tobulinimą;
   - tolesnę pažangių tinklų sistemų plėtrą;
   - tolesnį didelio efektyvumo ir aukštos kokybės elektros energijos pritaikymą buičiai, komercijai ir pramonei ir su jomis susijusioms paslaugoms;
   - paramą moksliniams tyrimams, modernizavimo ir kūrimo procesams, siekiant pagerinti elektros energijos gamybos, tinklų ir įrenginių technines, ekonomines ir aplinkosaugines savybes.

Raktažodžiai: *energijos ištekliai, bendroji energetinė sistema, energetinis patikimumas, energijos išteklių panaudojimas.*

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