Report of the Republic of Lithuania on the progress of implementation of Directive 2004/8/EC on the promotion of cogeneration

1. Report on the first assessment of the progress towards increasing the share of high–efficiency cogeneration

Article 10 of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market, amending Directive 92/42/EEC, (hereinafter – the "Directive") established an obligation for the Member States to submit reports. Following a request by the Commission set in item 2 of Article 10 of the Directive, the Ministry of Economy of the Republic of Lithuania (hereinafter – the "Ministry") prepared a report of the Republic of Lithuania on the first assessment of the progress towards increasing the share of high–efficiency cogeneration (hereinafter – the Report). On 21 February 2007, the above–mentioned Report was sent to the Lithuanian Permanent Representation in the European Union with enclosed request to forward it to the Secretary–General of the European Commission.

The said Report, prepared according to Articles 6 and 9 of the Directive, contains a review of the national energy and heat sectors, results of the analysis of high–efficiency cogeneration potential, and possible obstacles for cogeneration development, as well as a survey of the legal regulation of cogeneration in the Republic of Lithuania, cogeneration development directions.

2. Guarantees of origin

Item 1 of Article 5 of the Directive sets the following obligation: on the basis of the harmonised efficiency reference values (hereinafter – the "reference values"), the Member States shall, not later than six months after the adoption of these values, ensure that the origin of electricity produced from high–efficiency cogeneration can be guaranteed according to objective, transparent and non–discriminatory criteria laid down by each Member State. In order to implement this request, the European Commission had to approve the reference values and submit thorough and exhaustive guidelines on calculation methods of electricity produced in a cogeneration process. After long discussions in the meetings of the Committee "Directive 2004/8/EC on cogeneration" established by the European Commission's Directorate–General for Energy and Transport, the draft reference values prepared by the energy consulting companies were approved, a proposal to adopt these values was submitted to the European Commission. On 21 December 2006, the European Commission passed a decision, establishing the efficiency reference values for separate production of heat and electricity, by applying Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 (OJ 2007 L 32, p. 183). Discussions on calculation methods of electricity produced in a cogeneration process continued, and only on 19 November 2008 the European Commission passed a decision, establishing exhaustive and thorough recommendations for the implementation and application of Annex II of Directive 2004/8/EC of the European Parliament and of the Council (OJ 2008 L 338, p. 55).

With regard to the draft calculation methodology of energy produced in a cogeneration process, discussed in the Committee "Directive 2004/8/EC on cogeneration", under the 19 May 2008 Order No. 4–206 of the Minister of Economy of the Republic of Lithuania (*Official Gazette*, 2008, No. 59–2254), "On the approval of The rules for issuing guarantee

of origin certificates of electricity produced from high efficiency cogeneration process" (hereinafter – the Rules) were approved. The Rules establish that SC "Lietuvos energija" (hereinafter – TSO), which carries out the functions of the electricity transmission system operator, is an institution responsible for issuing and annulment (withdrawal) of guarantee of origin certificates of electricity produced from high efficiency cogeneration process. TSO already has experience in issuing guarantee of origin certificates of electricity produced by using renewable energy sources in Lithuania since 1 January 2006. The said Rules establish that guarantee of origin certificates of electricity produced from high efficiency cogeneration process (hereinafter – guarantee of origin certificates) shall be issued in compliance with objective, transparent and non–discriminatory criteria. At the request of TSO or during planned checks, data submitted by combined heat and power plants (hereinafter – CHP plants) are inspected by the State Energy Inspectorate under the Ministry of Energy, which also solves disputes that have arisen with regard to guarantee of origin certificates. Information on the issued guarantee of origin certificates is public and shall be announced on the following TSO internet website: http://www.lpc.lt

Taking into account the Resolution of the European Commission, which contains exhaustive recommendations for the implementation and application of Annex II of Directive 2004/8/EC of the European Parliament and of the Council (OJ 2008 L 338, p. 55), the Rules were revised and approved by the 8 April 2009 Order No. 1–26 of the Minister of Energy of the Republic of Lithuania "Regarding Amendment of the 19 May 2008 Order No. 4–206 "On the approval of the rules for issuing guarantee of origin certificates of electricity produced from high efficiency cogeneration process" (*Official Gazette*, 2009, No. 42–1636).

3. Cogeneration Development Plan and cogeneration support

Key energy development directions for the future 20 year–period are set in the National Energy Strategy which is reviewed and re–evaluated every five years (hereinafter – NES), as approved by the 18 January 2007 Resolution No. X–1046 of the Seimas of the Republic of Lithuania "On the approval of the National Energy Strategy" (*Official Gazette*, 2007, No. 11–430). NES sets the following objective: to achieve that the share of the electricity generated in the CHP plants would account for at least 35% in the electricity generation balance by 2025, and the amount of heat produced in CHP plants would account for at least 75% of the total heat demand from district heating systems. With the view of implementation of the key targets set in NES, the Plan for Implementation of the National Energy Strategy in 2008–2012 was approved by the 27 December 2007 Resolution No. 1442 of the Government of the Republic of Lithuania (*Official Gazette*, 2008, No. 4–131). The foregoing Plan provides for the development of the CHP plants in 2008–2012: by constructing combined cycle gas turbine power units of 326 MW electrical capacity in Kaunas, 35 MW electrical capacity and 33 MW heat capacity in Panevėžys; 20 MW electrical capacity and 30 MW heat capacity CHP plant in Alytus, 20 MW electrical capacity and 30 MW heat capacity CHP plant in Marijampolė, as well as CHP plants which use domestic waste – 20 MW electrical capacity and 50 MW heat capacity in Vilnius, 15 MW electrical capacity and 50 MW heat capacity in Kaunas, 25 MW electrical capacity and 50 MW heat capacity in Klaipėda; by constructing the following CHP plants using biofuel: 9 MW electrical capacity and 20 MW heat capacity in Šiauliai, and 2 MW electrical capacity and 8.5 MW heat capacity CHP plants in Utena; by constructing CHP plants of the total 100 MW electrical capacity in appropriate localities with expanded district heating systems (hereinafter – DHS); by planning and applying the joint 100 MW electrical capacity CHP plants building program for industrial undertakings.

On 1 January 2008, new wording of the Law on Heat No. X–1329 (*Official Gazette*, 2007, No. 130–5259), which was adopted by the Seimas of the Republic of Lithuania on 20 November 2007, came into force. With the view of the implementation of the provisions of the foregoing Law and in compliance with the provisions set in NES on the development of CHP plants, by the 9 July 2008 Resolution No. 665 "On the amendment of the 22 March 2004 Resolution No. 307 of the Government of the Republic of Lithuania "On the approval of the directions of the heat sector development" (*Official Gazette*, 2004, No. 44–1446; 2005, No. 139–5020; 2008, No. 82–3244) new Directions for Heat Development were approved, in which the Ministry was commissioned to prepare and approve the Cogeneration Development Plan. While preparing the foresaid Plan, in 2007–2008 the energy consulting companies performed three feasibility studies on the topical issues of cogeneration development.

The first feasibility study "Analysis of the influence of cogeneration development provided for in the National Energy Strategy on increasing efficiency of district heat supply companies and on reducing heat and electricity costs, and preparation of recommendations for the implementation of expedient and purposeful development" contains studies of the Lithuanian heat market, which is a necessary condition for cogeneration existence and development. The said study made an assumption that the heat demand for DHS would remain stable, i.e. the occurrence of new consumers would be compensated by heat energy saving due to energy efficiency increasing measures installed in the buildings. Recommendations on the construction of CHP plants were submitted to the heat supply companies given the condition of equipment used for heat energy production in the heat supply companies and their functioning duration before capital repairs, annual heat energy production volumes (output), possibilities to use different fuel types. The analysed variants have encompassed a base case, when electric power and heat energy are produced separately, and cogeneration (when electric power generation is based on heat energy demand) technology alternatives: internal combustion engines (hereinafter – ICE), steam turbines (hereinafter – ST), gas turbines (hereinafter – GT) and combined cycle gas turbine (hereinafter – CCGT).

The second study "Analysis of the impact of cogeneration development on the investment volumes into the electricity system and preparation of recommendations for development of cogeneration and arrangement of electricity transmission and distribution networks" contains the assessment of investments for modernization of the electricity sector in order to connect CHP plants to be constructed in the future; a plan of investments into the energy sector has been set and analysis of the impact of the foresaid investments on the costs of electric power generation in CHP plants has been performed.

The third study "Preparation of feasibility and costs study for installation of different cogeneration technologies and recommendations for introduction of such technologies" contains the examination of tendencies for cogeneration technologies development, provides advantages and shortages of each technology, principal technical and economic targets/indices of different cogeneration technologies, it also indicates objective market segments for installation of these technologies.

In 2005, an analysis of the high–efficiency cogeneration potential in the country was performed, the results of which were announced in the report submitted to the European Commission in 2007, and on the basis of the information produced in the above–mentioned studies, the Cogeneration Development Plan (hereinafter – the Plan) was

prepared, which was later approved by the 28 October 2008 Order No. 4–516 of the Minister of Economy of the Republic of Lithuania "On the approval of the Cogeneration Development Plan" (*Official Gazette*, 2008, No. 130–5002).

The Plan sets recommendations for high–efficiency cogeneration development, which encompass economically justifiable heat and electrical capacities to be installed in CHP plants, the recommended type of technologies, contains appropriate fuel types for specific DHS and offers a schedule for implementation of the cogeneration development given investments intended for renovation of the equipment used in the heat and electrical energy production. The analysis of the demand of heat capacity showed that after the construction of a CHP plant, capable to satisfy 30 percent of the maximum heat capacity demand in DHS, it could produce almost 65 percent of the annual heat amount needed for DHS, therefore, while performing technical assessment of the cogeneration development, the following assumption was made: heat capacity in the CHP plant should not exceed 60 percent of the maximum hydraulically uniform DHS capacity demand. Given the foregoing condition, the annual amount of heat produced in CHP plants would equal to 90–95 percent.

Choice of cogeneration technology and recommended electrical capacity of the CHP plant was determined by a number of various factors: directions in variation of electrical and heat energy demand of a specific object, environmental requirements, possible to use fuel types. The Plan set the following minimal and maximum electrical capacities in CHP plants: CHP plants with a minimum electrical capacity would be able to fully satisfy DHS demands for preparation of hot water and would operate all year round (that would make up about 30 percent of the maximum heat capacity demand in DHS during the heating season), and CHP plants with a maximum electrical capacity would be able to satisfy about 60 percent of the maximum heat capacity demand in DHS.

The foregoing Plan contains recommendations for heat supply companies on the construction of CHP plants in 79 hydraulically uniform DHS as well as recommendations for industrial and agricultural undertakings, public institutions on the construction of CHP plants in 23 energy supply systems, by indicating minimum and maximum electrical capacities of CHP plants. The recommended development process of cogeneration has been divided into three stages: 2008–2010, 2011–2015, 2016–2020.

Electrical capacities in CHP plants recommended for heat supply companies in DHS:

- in 2008–2010 – from 52.4 MW to 103.9 MW;
- in 2011–2015 – from 760.8 MW to 1694 MW;
- in 2016–2020 – from 8.7 MW to 17.8 MW.

Largest development of cogeneration is forecasted in 2011–2015, particularly, in the major cities and towns of Lithuania: Vilnius, Kaunas, Klaipėda, Šiauliai and Panevėžys with developed DHS and utmost heat demand, by constructing high–efficiency CCGT.

Electrical capacities in CHP plants recommended for industrial undertakings:

- in the period of 2008–2010 – from 101.9 MW to 155.6 MW;
- in the period of 2011–2015 – from 209 MW to 359.4 MW.

Total electrical capacities in CHP plants development recommended amount to:

- in 2008–2010 – make up from 154.3 MW to 259.5 MW;
- in 2011–2015 – from 969.8 MW to 2053.4 MW;

- in 2016–2020 – from 8.7 MW to 17.8 MW.

Total capacity within the entire period (2008–2020) would make up from 1132.9 MW to 2330.7 MW. Full implementation of the Cogeneration Development Plan projects requires the amount ranging from 2.9 to 6.3 billion Litas.

The Cogeneration Development Plan will be revised in 2009, and more attention will be focused on the development of CHP plants that use renewable energy sources.

In order to implement the Plan and speed up cogeneration development, a support in the amount of 222 million Litas has been assigned in the Lithuanian 2007–2013 EU Structural Funds Support Strategy and Operational Programme for Cohesion Promotion, designed for installation of cogeneration according to the following two measures:

- under the measure "Increase of energy production efficiency", a support is granted for such projects, which provide for modernization of CHP plants that use fossil fuel and construction of new high–efficiency CHP plants. 50 percent of the project value will be from the EU funds , however maximum support for implementation of the project is 15 mln. Lt.
- under the measure "Use of renewable energy sources for energy production", a support is granted for such projects, which provide for modernization of CHP plants that use biomass and construction of new CHP plants. 50 percent of the project value will be from the EU funds, however maximum support for implementation of the project is 18 million Litas.

4. Report on the progress of implementation of Directive

On 26 May 2009, Note No. (7.1–09)–3–547 of the Ministry of Economy of the Republic of Lithuania sent out a report of the transposition of Directive into the Lithuanian Law system to the Lithuanian Permanent Representation in the European Union with the enclosed request to forward it to the Secretary–General of the European Commission.

ENCLOSED. The Cogeneration Development Plan, approved by the 28 October 2008 Order No. 4–516 of the Minister of Economy of the Republic of Lithuania (*Official Gazette*, 2008, No. 130–5002), 3 pages.

Vice–Minister of Energy of the Republic of Lithuania Henrikas Bernatavičius

APPROVED
By the Order No. 4-516
of theMinister of Economy of the Republic of Lithuania
of 28 October 2008

COGENERATION DEVELOPMENT PLAN

No.	Name of Region	Name of Residential area	Name of the district heating or energy supply system	Cogeneration technology (ST – steam turbine, ICE – internal combustion engine, GT – gas turbine, CC – combined cycle)	Recommendations on cogeneration power plant electrical capacity to be installed, MW (recommendations can be corrected depending of the using of local or renewable energy sources)					
					2008–2010		2011–2015		2016–2020	
					from	to	from	to	from	to
1. District heating companies										
1.1.	Alytus	Alytus	Alytus city district heating system	CC	-	-	22,44	59,69	-	-
1.2.	Alytus	Druskininkai	Druskininkai city district heating system	ICE/GT	4,30	9,30	-	-	-	-
1.3.	Alytus	Varėna	Varėna city district heating system	ST	0,80	1,50	-	-	-	-
1.4.	Kaunas	Kaunas	Antanava area district heating system	ICE	-	-	0,29	0,63	-	-
1.5.	Kaunas	Kaunas	Plento area district heating system	ICE	-	-	0,27	0,59	-	-
1.6.	Kaunas	Kaunas	Smetonos area district heating system	ICE	-	-	0,38	0,82	-	-
1.7.	Kaunas	Kaunas	Kaunas city district heating system	CC	-	-	149,31	307,66	-	-
				ST	3,00	5,00	8,00	20,00	-	-
				ICE	7,50	15,20	-	-	-	-
1.8.	Kaunas	Domeikava	Domeikava village district heating system	ICE	-	-	0,24	0,52	-	-
1.9.	Kaunas	Garliava	Garliava city district heating system	ICE	0,89	1,93	-	-	-	-
1.10.	Kaunas	Neveronys	Neveronys village district heating system	ICE	0,19	0,41	-	-	-	-
1.11.	Kaunas	Noreikiškės	Noreikiškės village district heating system	ICE	-	-	0,90	1,95	-	-
1.12.	Kaunas	Raudondvaris	Raudondvaris village district heating system	ICE	0,30	0,65	-	-	-	-
1.13.	Kaunas	Birštonas	Birštonas city district heating system	ICE	-	-	0,79	1,71	-	-
1.14.	Kaunas	Jonava	Jonava city district heating system	ICE/GT	3,83	8,28	-	-	-	-
1.15.	Kaunas	Rukla	Rukla village district heating system	ICE	-		0,33	0,71	-	-
1.16.	Kaunas	Kaišiadorys	Kaišiadorys city district heating system	ICE	-	-	3,17	6,86	-	-
1.17.	Kaunas	Vilainiai	Vilainiai village district heating system	ICE	0,34	0,74	-	-	-	-
1.18.	Kaunas	Prienai	First Prienai city district heating system	ICE	-	-	0,86	1,86	-	-
1.19.	Kaunas	Prienai	Third Prienai city district heating system	ICE	0,86	1,86	-	-	-	-

1.20.	Klaipėda	Klaipėda	Klaipėda city district heating system	CC	-	-	85,31	285,94	-	-
				ST	-	-	20,00	30,00	-	-
1.21.	Klaipėda	Klaipėda	Gargždai city district heating system	ICE	1,30	2,82	-	-	-	-
1.22.	Klaipėda	Kretinga	First Kretinga city district heating system	ICE	0,40	0,87	-	-	-	-
1.23.	Klaipėda	Kretinga	Second Kretinga city district heating system	ICE	0,86	1,86	-	-	-	-
1.24.	Klaipėda	Palanga	Palanga city district heating system	ST	1,49	2,80	-	-	-	-
1.25.	Klaipėda	Šilutė	Šilutė city district heating system	ST	-	-	1,39	2,61	-	-
1.26.	Marijampolė	Marijampolė	Marijampolė city district heating system	ST	-	-	3,57	6,72	-	-
1.27.	Marijampolė	Vilkaviškis	Vilkaviškis city district heating system	ICE	0,97	2,10	-	-	-	
1.28.	Marijampolė	Šakiai	Šakiai city district heating system	ICE	0,86	1,86	-	-		-
1.29.	Panevėžys	Panevėžys	Panevėžys city district heating system	CC	-	-	45,24	99,12	-	-
1.30.	Panevėžys	Biržai	Rotušė area district heating system	ICE	1,89	4,09	-	-	-	-
1.31.	Panevėžys	Pasvalys	Pasvalys city district heating system	ICE	-	-	1,08	2,32	-	-
1.32.	Panevėžys	Rokiškis	Rokiškis city district heating system	ST	-	-	0,88	1,66	-	-
1.33.	Šiauliai	Šiauliai	Šiauliai city district heating system	CC	-	-	35,00	80,00	-	-
				ST	7,00	10,00	-	-	-	-
1.34.	Šiauliai	Šiauliai	Šiaurinė area district heating system	ICE	-	-	-	-	0,25	0,54
1.35.	Šiauliai	Zokniai	Zokniai village district heating system	ICE	-	-	-	-	0,37	0,80
1.36.	Šiauliai	Kuršėnai	Daugeliai village district heating system	ICE	-	-	-		0,31	0,67
1.37.	Šiauliai	Kuršėnai	Tilvyčiai area district heating system	ICE	0,49	1,06	-	-	-	-
1.38.	Šiauliai	Ginkūnai	Ginkūnai village district heating system	ICE	-	-	-	-	0,13	0,28
1.39.	Šiauliai	Rėkyva	Rėkyva village district heating system	ICE	-	-	0,30	0,65	-	-
1.40.	Šiauliai	Ramučiai	Ramučiai village district heating system	ICE	-	-	-	-	0,30	0,65
1.41.	Šiauliai	N. Akmenė	Žalgiris area district heating system	ICE	-	-	-	-	1,19	2,57
1.42.	Šiauliai	Akmenė	Stadionas area district heating system	ICE	-	-	0,21	0,45	-	-
1.43.	Šiauliai	Venta	Venta village district heating system	ICE	-	-	0,31	0,67	-	-
1.44.	Šiauliai	Joniškis	Joniškis city district heating system	ICE	-	-	-	-	1,08	2,32
1.45.	Šiauliai	Joniškis	Melioratoriai area district heating system	ICE	-	-		-	0,26	0,56
1.46.	Šiauliai	Kelmė	Kelmė city district heating system	ST	0,64	0,83	-	-	-	-
1.47.	Šiauliai	Pakruojis	Pakruojis city district heating system	ICE	-	-	-	-	1,01	2,18
1.48.	Šiauliai	Radviliškis	Radviliškis city district heating system	ICE	0,15	0,60	2,34	4,79	-	-
1.49.	Tauragė	Šilalė	Šilalė city district heating system	ICE	0,65	1,39	-	-	-	-
1.50.	Tauragė	Jurbarkas	Jurbarkas city district heating system	ICE	2,27	6,70	-	-	-	-
1.51.	Tauragė	Tauragė	Tauragė city district heating system	ST	-	-	1,45	2,72	-	-
1.52.	Telšiai	Mažeikiai	Mažeikiai city district heating system	ST	-	-	2,72	5,12	-	-
1.53.	Telšiai	Reivyčiai	Reivyčiai village district heating system	ICE	0,25	0,54	-	-		-
1.54.	Telšiai	Plungė	Mačerniai area district heating system	ST	1,15	2,16	-	-	-	-
1.55.	Telšiai	Plungė	Telšiai area district heating system	ICE	0,28	0,60	-	-	-	-

1.56.	Telšiai	Telšiai	Telšiai city district heating system	ST	1,36	2,56	-	-		-
1.57.	Telšiai	Telšiai	Dariaus ir Girėno area district heating system	ICE	0,50	1,08	-	-	-	-
1.58.	Utena	Anykščiai	Anykščiai city district heating system	ICE	-	-	0,38	0,82	-	-
1.59.	Utena	Ignalina	Ignalina city district heating system	ST	-	-	0,68	0,90	-	-
1.60.	Utena	Molėtai	Molėtai city district heating system	ST	0,67	0,88	-	-	-	-
1.61.	Utena	Utena	Utena city district heating system	ST	2,25	4,24	-	-	-	-
1.62.	Utena	Zarasai	Zarasai city district heating system	ST	0,86	1,12	-	-	-	-
1.63.	Vilnius	Dvarčionys	Dvarčionys area district heating system	ICE	-	-	-	-	0,16	0,35
1.64.	Vilnius	Naujoji Vilnia	Naujoji Vilnia area district heating system	ICE	-	-	2,57	5,57	-	-
1.65.	Vilnius	Salininkai	Salininkai area district heating system	ICE	-	-	-	-	0,37	0,79
1.66.	Vilnius	Trakų Vokė	Trakų Vokė village district heating system	ICE	0,18	0,39	-	-	-	-
1.67.	Vilnius	Vilnius	Vilnius city district heating system	CC	-	-	338,35	706,51	-	-
				ST	-	-	30,00	50,00	-	-
1.68.	Vilnius	Skaidiškės	Skaidiškės village district heating system	ICE	-	-	-	-	0,40	0,87
1.69.	Vilnius	Eišiškės	Eišiškės city district heating system	ICE	-	-	0,35	0,76	-	-
1.70.	Vilnius	Šalčininkai	Šalčininkai city district heating system	ICE	0,96	2,08	-	-	-	-
1.71.	Vilnius	Širvintai	Širvintai city district heating system	ICE	0,83	1,79	-	-	-	-
1.72.	Vilnius	Pabradė	Fifths Pabradė city district heating system	ICE	-	-	0,20	0,44	-	-
1.73.	Vilnius	Pabradė	Sevenths Pabradė city district heating system	ICE	-	-	0,16	0,35	-	-
1.74.	Vilnius	Trakai	Trakai city district heating system	ICE	-	-	0,75	1,62	-	-
1.75.	Vilnius	Lentvaris	Lentvaris village district heating system	ICE	-	-	0,58	1,26	-	-
1.76.	Vilnius	Ukmergė	First Ukmergė city district heating system	ICE	1,15	2,49	-	-	-	-
1.77.	Vilnius	Ukmergė	Second Ukmergė city district heating system	ICE	0,96	2,08	-	-	-	-
1.78.	Vilnius	Ukmergė	Third Ukmergė city district heating system	ICE	-	-	-	-	1,08	2,34
1.79.	Vilnius	Grigiškės	Grigiškės city district heating system	ICE	-	-	-	-	1,82	2,92
				Total:	52,38	103,86	760,8	1694	8,73	17,84
2. Industrial and public companies energy supply systems										
2.1.	Alytus	Alytus	SC „Alita“ energy supply system	ICE	0,60	0,90	-	-	-	-
2.2.	Kaunas	Jonalaukis	SC „Achema“ energy supply system	GT	51,20	76,80	-	-	-	-
2.3.	Kaunas	Kėdainiai	SC „Lifosa“ energy supply system	ST	24,80	37,20	-	-	-	-
2.4.	Kaunas	Kaunas	PC „Kauno medicinos universiteto klinikos” energy supply system	ICE	1,60	2,40	-	-	-	-
2.5.	Klaipėda	Gargždai	JSC „Minijos nafta“ energy supply system	ICE	0,10	0,14	-	-	-	-
2.6.	Klaipėda	Klaipėda	SC „Klaipėdos kartonas“ energy supply system	GT	-	-	9,60	14,40	-	-
2.7.	Marijampolė	Marijampolė	SC „Vernitas“ energy supply system	ICE	3,20	4,80	-	-	-	-
2.8.	Panevėžys	Pasvalys	JSC „Kurana“ energy supply system	ICE	3,20	4,80	-	-	-	-
2.9.	Panevėžys	Panevėžys	JSC „Bioenergija“ energy supply system	ICE	0,96	1,44	-	-	-	-

2.10.	Telšiai	Mažeikiai	SC „Mažeikių nafta“ energy supply system	ST	-	-	168,00	252,00	-	-
2.11.	Vilnius	Grigiškės	SC „Grigiškės“ energy supply system	ST	6,40	9,60	-	-	-	-
2.12.	Vilnius	Pagiriai	SC „Pagirių šiltnamiai“ energy supply system	GT/ST/CC	-	-	10,00	45,00	-	-
2.13.	Kaunas	Neveronys	JSC „AgroNeveronys“ energy supply system	ICE/GT/ST	-	-	8,00	20,00	-	-
2.14.	Vilnius	Kareivonys	JSC „BOEN Lietuva“ energy supply system	ICE/GT/ST	-	-	2,00	4,00	-	-
2.15.	Šiauliai	Pakruojis	SC „Dolomitas“ energy supply system	ICE/GT/ST	-	-	5,00	15,00	-	-
2.16.	Kaunas	Josvainiai	JSC „System“ energy supply system	ICE	0,44	0,82	-	-	-	-
2.17.	Marijampolė	Šakiai	SC „Agrowil Group“ energy supply systems	ICE	0,38	0,38	-	-	-	-
2.18.	Panevėžys	Pasvalys	SC „Agrowil Group“ energy supply systems	ICE	0,43	0,89	-	-	-	-
2.19.	Panevėžys	Balandiškiai	JSC „Agaras“ energy supply system	ICE	0,62	1,44	-	-	-	-
2.20.	Kaunas	Krakė	Krakė agricultural company energy supply system	ICE	-	-	0,42	1,02	-	-
2.21.	Kaunas	Kaišiadorys	SC „Kaišiadorių paukštynas“ energy supply system	ST	-	-	2,00	4,00	-	-
2.22.	Klaipėda	Klaipėdos	JSC „Geoterma“ energy supply system	ICE	8,00	14,00	-	-	-	-
2.23.	Šiauliai	Šiauliai	JSC „Putokšnis“ energy supply system	ICE	-	-	4,00	4,00	-	-
				Overall:	101,93	155,61	209,02	359,42	-	-
				Total:	154,31	259,47	969,82	2053,42	8,73	17,84