

Ministry of Energy  
of the Republic of Lithuania

**Report on investments  
in modernising electricity generation  
pursuant to article 10c(1) of directive 2003/87/EC**

January 2019

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# 1 INTRODUCTION

The Report on investments made in modernisation of electricity generation sector pursuant to article 10c (1) of Directive 2003/87/EC has been prepared in accordance to the provisions of the following legal acts and documents:

- › Article 6.3. of the Communication from the Commission "Guidance document on the optional application of Article 10c of Directive 2003/87/EC";
- › Item 2.4 of the Order of the Minister of Environment and Minister of Energy No. D1-559/1-179 "On transitional free allocation of emission allowances for the electricity producers in 2013-2020", 14 July 2011 (hereinafter - Joint Order);
- › Application of the Republic of Lithuania for transitional free allocation of emission allowances under Article 10c of Directive 2003/87/EC, approved by the COMMISSION DECISION of 23.5.2012 concerning the application pursuant to Article 10c (5) of Directive 2003/87/EC of the European Parliament and of the Council to give transitional free allocation for the modernisation of electricity generation notified by Lithuania (hereinafter – Application).

The Report is based on individual reports and evidence documents submitted by the operators from electricity sector on investments made in 2017 and 2018.

## 2 Investments implemented in electricity sector in 2018

### 2.1 List of participants

During the reporting period, neither (out of 8) operator has reported on implementation of modernization investments in installation of electricity sector.

### 2.2 List of investments

The rest of planned investments in 2019-2020 are shown in Table 1 below:

Table 1: Investment schedule for 2019-2020

0	Value		Invested amount in 2013		Investments in 2014		Investments in 2015	Investments in 2016	Investments in 2017	Investments in 2018	Investments in 2019	Investment in 2020
	LT	EUR	LTL	EUR	LTL	EUR	EUR	EUR	EUR	EUR	EUR	EUR
	3 235 127 272	936 957 620	1 545 056 354	447 479 250	64 819 316	18 772 972	8 051 679	129 356	261 489	0	97 312 326	2 639 901
LT-\$-0001	86 900 000	25 167 980	87 149 205	25 240 154								
LT-\$-0002	42 300 000	12 250 927				0	0	0	0			
LT-\$-0003	12 700 000	3 678 174					Postponed to 2017					
LT-\$-0004	12 000 000	3 475 440										
LT-\$-0005	900 000	260 658										
LT-\$-0006	900 000	260 658		0	893 200	258 689						
LT-\$-0007	500 000	144 810	698 169	202 204								
LT-\$-0008	17 166 000	4 971 617	16 345 623	4 734 020								
LT-\$-0009	45 000 000	13 032 901										
LT-\$-0010	95 000 000	27 513 902										
LT-\$-0011	530 000 000	153 498 610										
LT-\$-0012	600 000	173 772		0		0	0	0	0	0	0	173 772
LT-\$-0013	2 000 000	579 240		0		0	0	0	0	0	0	579 240
LT-\$-0014	500 000	144 810		0		0	0	0	0	0	0	144 810
LT-\$-0015	118 720 000	34 383 689										
LT-\$-0016	50 000 000	14 481 001										
LT-\$-0017	15 500 000	4 489 110	15 701 130	4 547 362								
LT-\$-0018	50 470 000	14 617 122	47 901 755	13 873 307								
LT-\$-0020	98 885	28 639	98 885	28 639								
LT-\$-0021	700 000	202 734										
LT-\$-0022	150 000 000	43 443 003					Postponed to 2017					
LT-\$-0023	259 000 000	75 011 585										
LT-\$-0024	7 200 000	2 085 264		0		0	0	81 696	261 489	0	0	1 742 079
LT-\$-0025	336 000 000	97 312 326		0		0	0	0	0	0	97 312 326	0
LT-\$-0026	2 400 000	695 088										
LT-\$-0027	40 942 000	11 857 623	43 251 838	12 526 598								
LT-\$-0028	2 721 000	788 056	2 757 961	798 761								
LT-\$-0029	57 000	16 508	75 628	21 903								
LT-\$-0030	20 314 000	5 883 341	20 313 813	5 883 287								
LT-\$-0031	1 226 008 000	355 076 460	1 305 009 902	377 956 992								
LT-\$-0033	5 269 387	1 526 120	4 132 313	1 196 801	1 137 074	329 319						
LT-\$-0034	3 000 000	868 860										
LT-\$-0035	2 350 000	680 607	46 700	13 525	1 699 760	492 285	80 280	47 660				
LT-\$-0036	250 000	72 405	75 000	21 722								
LT-\$-0037	800 000	231 696										
LT-\$-0038	900 000	260 658										
LT-\$-0039	95 961 000	27 792 227	1 498 432	433 976	61 089 282	17 692 679	7 971 399					

### 2.3 Evidence documents

According to item 2.4 of the Joint Order, all operators must submit their annual reports together with the Statement of an independent certified auditor or audit company on investments made in improvement of infrastructure, on implementation of environment-friendly technologies that reduce GHG emissions and investment amount in energy sector to the Ministry of Energy.

It should be noted that Statement of independent certified auditor about investments made by Lietuvos energijos gamyba, AB in 2017, has been added.

### 2.4 Compliance indicators

Compliance indicators for the investments set out in the National Plan are the following:

- Comparison of the emission factor of the technology adopted by each installation due to investments undertaken under Article 10c of Directive 2003/87/EC with the emission factor of the technology used before the retrofitting/ upgrading, t CO<sub>2</sub>/MWh;
- Expected and implemented decrease in total greenhouse gases emissions generated by electricity production due to investments undertaken under Article 10c (compared to business as usual scenario);
- Expected and implemented efficiency gains in electricity generation process is expressed as the ratio of the electricity produced (in TJ) with the energy input from fuels (in TJ). Efficiency increase is measured as rated difference before and after the investment;
- Efficiency gains in electricity distribution networks shall be determined as a reduction of network losses.

Compliance indicators achieved by the completely implemented investments in modernisation of electricity sector are provided in Annex.



## 4 CONCLUSIONS

Out of 37 investments approved in the National Investment Plan, 16 are implemented. During the reporting period of 2018 1 investment has been cancelled and 1 investment is ongoing.

According to the allocation plan, total amount of 287.027 EUAs is planned to be allocated in 2018. However, not all the installations were involved in the investment process until 2018 therefore the final allocation for 2018 amounts to 158.922 EUAs (55% of planned in 2018).

**It should be noted that emission allowances, allocated to 2017 was updated, according to Lietuvos energijos gamyba, AB audit report on the investment made in 2017. Report is correct and does not affect the allocation for 2017, provided to Lietuvos energijos gamyba, AB.**

**It should be noted that on March 29, 2017 the operator of installations (ID in the Union registry LT044 and LT045) has been changed, because the concession contract with UAB „Vilniaus energija" has expired.**

## Annex

**Table 3: Compliance indicators of the finished investments, 2015**

Investment number	Description	Invested amount in 2015		Compliance indicators	
		EUR	Increase of efficiency in electricity production, %	Reduction of CO <sub>2</sub> emissions in electricity production, t/year	Change in emission factor, t CO <sub>2</sub> /TJ
LT-S-0039	Construction of biofuel power plant	7.971.399	-	-	20,92

**Table 4: Compliance indicators of the finished investments, 2014**

Investment number	Description	Invested amount in 2014		Compliance indicators		
		LTL	EUR	Increase of efficiency in electricity production, %	Reduction of CO <sub>2</sub> emissions in electricity production, t/year	Change in emission factor, t CO <sub>2</sub> /TJ
LT-S-0006	Reconstruction of transformer station KTP-102 in Alytus RK	900.000	260.658	Compliance with UCTE reliability requirements		
LT-S-0033	Reconstruction of wastewater handling equipment reducing electricity consumption for managing of technological wastewater	4.132.313	1.196.801	62,3	14,78 CO <sub>2</sub>	

**Table 5: Compliance indicators of the finished investments, 2013**

Investment number	Description	Invested amount in 2013		Compliance indicators		
		LTL	EUR	Increase of efficiency in electricity production, %	Reduction of CO <sub>2</sub> emissions in electricity production, t/year	Change in emission factor, t CO <sub>2</sub> /TJ
LT-S-0001	Construction of 5,4 MWe biomass CHP in Alytus RK	87.149.205	25.240.154	4,1	6.357	
LT-S-0007	Reconstruction of 0,4 kV switchyard in Marijampole RK	698.169	202.204	Compliance with UCTE reliability requirements		
LT-S-0008	Reconstruction of 6 kV switchyard of CHP No.2	16.345.623	4.734.020	Compliance with UCTE reliability requirements		
LT-S-0017	Construction of biofuel CHP	15.701.130	4.547.362	14	15.482	
LT-S-0018	Installation of biofuel CHP	47.901.755	13.873.307		5.161	-108,5
LT-S-0020	Optimisation of burning process in steam boiler No. 3	98.885	28.639		240	
LT-S-0027	Plant reconstruction to increase efficiency: more electricity is produced with the same installed capacity in KHE	43.251.838	12.526.598	4		
LT-S-0028	Reconstruction of hydrounits regulation systems to increase efficiency: more electricity is produced with the same installed capacity in KHAE	2.757.961	798.761	Compliance with UCTE reliability requirements		
LT-S-0029	Installation of solar collectors for feeding water preparation. Conservation of electricity in KHAE	75.628	21.903	10		
LT-S-0030	Modernization of managing systems to increase efficiency	20.313.813	5.883.287	0,05		
LT-S-0031	Building of a new 455 MW capacity KCDT block (closing two blocks) to increase electricity production efficiency about 30%	1.305.009.902	377.956.992	93		
LT-S-0036	Reduction of energy consumption for preparation of chemically treated water used for electricity production	75.000	21.722	35,8		