

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**

April 2017

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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 2016.

2 Investments implemented in electricity sector in 2016

2.1 List of participants

During the reporting period, 1 (out of total 8) operator have reported on implementation of modernization investments in 1 (out of 12) installation of electricity sector. The list of operators that implemented investments in 2016 is presented in Table 1 below:

Table 1: List of operators that invested in modernization of electricity sector in 2016

Installation ID in the National Investment Plan	Installation name	Installation ID in the Union registry	Operator	Company group
LT-005	Lietuvos Power plant	LT087	Lietuvos energijos gamyba, AB	Lietuvos energijos gamyba

2.2 List of investments

A list of investments implemented in 2016 and the schedule of planned investments in 2017-2020 are presented in Table 2 and Table 3 accordingly:

Table 2: List of investments 2016

Investment number	Operator	Installation	Installation ID in the National Investment Plan	Installation ID in the Union registry	Description	Investment plan (total amount)		Invested amount in 2016	Comments
						LTL	EUR	EUR	
TOTAL:								129.356	
LT-\$-0024	Lietuvos energijos gamyba	Lietuvos Power plant	LT-005	LT087	Change of transformers	7.200.000	2.085.264	81.696	Ongoing investment. The company carries out 0,4 kV electrical network reconstruction and prepare to install 4 new transformers. The rest of investments should be done in the 2017-2019 period.
LT-\$-0035	Lietuvos energijos gamyba	Lietuvos Power plant	LT-005	LT087	Investment in reduction of energy consumption for electricity production	2.350.000	680.607	47.660	Finished investment. Company has changed electrolyser, heaters and has built new transformer oil storage site. The auditor's report is expected by the end of May 2017.

The rest of planned investments in 2017-2020 are shown in Table 3 below:

Table 3: Investment schedule for 2017-2020

Investment number	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	47 121 177	12 250 927	97 312 326	2 901 390
LT-\$-0001	86 900 000	25 167 980	87 149 205	25 240 154	Finished							
LT-\$-0002	42 300 000	12 250 927				0	0	0	0	12 250 927	0	0
LT-\$-0003	12 700 000	3 678 174		0		0	Postponed to 2017	0	3 678 174	0	0	0
LT-\$-0004	12 000 000	3 475 440	Investment cancelled due to changed needs.									
LT-\$-0005	900 000	260 658	Investment cancelled due to changed needs.									
LT-\$-0006	900 000	260 658		0	893 200	258 689	Finished					
LT-\$-0007	500 000	144 810	698 169	202 204	Finished							
LT-\$-0008	17 166 000	4 971 617	16 345 623	4 734 020	Finished							
LT-\$-0009	45 000 000	13 032 901	Investment cancelled due to changed needs.									
LT-\$-0010	95 000 000	27 513 902	Investment cancelled due to changed needs.									
LT-\$-0011	530 000 000	153 498 610	Investment cancelled due to changed needs.									
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	Investment cancelled due to changed needs.									
LT-\$-0016	50 000 000	14 481 001	Investment cancelled due to changed needs.									
LT-\$-0017	15 500 000	4 489 110	15 701 130	4 547 362	Finished							
LT-\$-0018	50 470 000	14 617 122	47 901 755	13 873 307	Finished							
LT-\$-0020	98 885	28 639	98 885	28 639	Finished							
LT-\$-0021	700 000	202 734	Investment cancelled due to changed needs.									
LT-\$-0022	150 000 000	43 443 003		0		0	Postponed to 2017	0	43 443 003	0	0	0
LT-\$-0023	259 000 000	75 011 585	Investment cancelled due to changed needs.									
LT-\$-0024	7 200 000	2 085 264		0		0	0	81 696	0	0	0	2 003 568
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	Investment cancelled due to changed needs.									
LT-\$-0027	40 942 000	11 857 623	43 251 838	12 526 598	Finished							
LT-\$-0028	2 721 000	788 056	2 757 961	798 761	Finished							
LT-\$-0029	57 000	16 508	75 628	21 903	Finished							
LT-\$-0030	20 314 000	5 883 341	20 313 813	5 883 287	Finished							
LT-\$-0031	1 226 008 000	355 076 460	1 305 009 902	377 956 992	Finished							
LT-\$-0033	5 269 387	1 526 120	4 132 313	1 196 801	1 137 074	329 319	Finished					
LT-\$-0034	3 000 000	868 860	Postponed to 2015		Investment cancelled due to changed needs.							
LT-\$-0035	2 350 000	680 607	46 700	13 525	1 699 760	492 285	80 280	47 660	Finished. The auditor's report is expected by the end of May 2017			
LT-\$-0036	250 000	72 405	75 000	21 722	Finished							
LT-\$-0037	800 000	231 696	Investment cancelled due to changed needs.									
LT-\$-0038	900 000	260 658	Investment cancelled due to changed needs.									
LT-\$-0039	95 961 000	27 792 227	1 498 432	433 976	61 089 282	17 692 679	7 971 399	Finished. The auditor's report is expected by the end of May 2017				

2.1 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. The list of evidence documents submitted by the operators is provided in the Table 4 below:

Table 4: List of documents supporting the investments

Investment number	Operator	Installation	Installation ID in the National Investment Plan	Installation ID in the Union registry	Supporting documents
LT-\$-0024	Lietuvos energijos gamyba	Lietuvos Power plant	LT-005	LT087	1. Material assets write-off act No LEN983533 (1page); 2. VAT invoices No: PC160601, ŠFEKV084929, SS28183101052, EER003849, VAA60307, AUT55936, VAA60429, ET001040, AA0190545 (9 pages); 3. Other official documents (8 pages).
LT-\$-0035	Lietuvos energijos gamyba	Lietuvos Power plant	LT-005	LT087	1. Material assets write-off acts No LEN983533, LEN983305, LEN983341, LEN983375, LEN983530, LEN983518, (6 pages); 2. VAT invoices No: SS28302700191, EER03376, EER03378, EER03379, DAN0005872, SS32313103191, BOIN161282, SS7814700045, SS28190001512, TIE00399, EER004154, EER004155, SS28190001921, SS7814700049, SS28190001967, SS28190002021, SS78313300009, SS3267157123, SS28190002144, SS32178420833, EER004202, EER004203, EER004204, EER004205, LEN984207, EER004289, EER004291, EER004290; EER003589 (59 pages); 3. Other official documents (10 pages).

					It should be noted that other costs incurred also are attributable to the investment, such as a bank loan, capitalized earnings, insurance costs and other costs associated with the project. All these costs, including mentioned herein, will be proved and audited by the end of May 2017.
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Copies of the documents (in Lithuanian language) mentioned in the Table above are available in the Ministry of Energy of the Republic of Lithuania, Division of Renewable energy sources and shall be presented upon request, ref. Sergej Garbar, Sergej.Garbar@enmin.lt

2.1 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 CO₂/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 Table 5 below:

Table 5: Compliance indicators of the finished investments, 2016

Investment number	Description	Invested amount in 2016	Compliance indicators		
		EUR	Increase of efficiency in electricity production, %	Reduction of CO ₂ emissions in electricity production, t/year	Change in emission factor, t CO ₂ /TJ
LT-\$-0035	Investment in reduction of energy consumption for electricity production	47.660	29,2	574	-

3 Allocation for 2013-2019 based on investments

According to the provisions of the National investment plan, emission allowances allocated pursuant to Article 10c of the ETS Directive shall be transferred to an operator only after the investment eligible under the National Plan is undertaken. Pursuant to the Part C.2.1 of the Application, if the amount of investment undertaken by an operator is higher than the value of free emission allowances allocated under Article 10c of the ETS Directive, he/she receives the amount of allowances not higher than he/she was allocated in a given year according to the National Plan. The excess value of investments in a given year may be used for compliance with the next years allocation. Table 6 below shows allocation for 2013 – 2019 based on investments implemented in 2016. Grey cells illustrate the possible allocation in later years after the investments are undertaken by the rest of installations.

Table 6: allocation for installations based on implemented investments in 2016

Operator	Actual transitional free allocation (plan)									Allocation equal to total investment value in 2013	Allocation equal to total investment value in 2014	Allocation equal to total investment value in 2015	Allocation equal to total investment value in 2016	Allocation based on investments (fact) and adjusted to ATF allocation (plan), EUA								Total surplus / shortage of generated EUA			
	TOTAL	2013	2014	2015	2016	2017	2018	2019	2020					2013	2014	2015	2016	2017	2018	2019	2020	2013	2014	2015	2016
		2 853 624	582 373	536 614	486 698	428 459	361 901	287 027	170 552					0	30 859 705	938 649	0	0	322 449	297 113	269 475	237 230	250 627	199 067	118 286
Kauno energija	4 078	832	767	696	612	517	410	244	0	0	0	0	0	0	0	0	0	0	0	0	0	-832	-1 599	-2 295	-2 907
Kauno energija	6 214	1 268	1 169	1 060	933	788	625	371	0	0	0	0	0	0	0	0	0	0	0	0	0	-1 268	-2 437	-3 497	-4 430
Klaipėdos energija	25 170	5 137	4 733	4 293	3 779	3 192	2 532	1 504	0	0	0	0	0	0	0	0	0	0	0	0	0	-5 137	-9 870	-14 163	-17 942
KTE	396 212	80 860	74 506	67 576	59 490	50 248	39 852	23 680	0	0	0	0	0	0	0	0	50 248	39 852	23 680	0	0	-80 860	-155 366	-222 942	-282 432
Lietuvos elektinė	1 398 395	285 387	262 963	238 502	209 963	177 347	140 655	83 578	0	27 507 142	925 714	0	0	285 387	262 963	238 502	209 963	177 347	140 655	83 578	0	27 221 755	20 398 524	20 160 022	19 950 059
Litesko	28 591	5 835	5 376	4 876	4 293	3 626	2 876	1 709	0	1 740 700	12 934	0	0	5 835	5 376	4 876	4 293	3 626	2 876	1 709	0	1 734 865	1 265 336	1 260 460	1 256 167
Litesko	2 913	595	548	497	437	369	293	174	0	0	0	0	0	0	0	0	0	293	174	0	-595	-1 143	-1 640	-2 077	
Litesko	7 767	1 585	1 461	1 325	1 166	985	781	464	0	13 945	0	0	0	1 585	1 461	1 325	1 166	985	781	464	0	12 360	7 500	6 175	5 009
Šiaulių energija	9 323	1 903	1 753	1 590	1 400	1 182	938	557	0	958 755	0	0	0	1 903	1 753	1 590	1 400	1 182	938	557	0	956 852	691 965	690 375	688 975
Utenos ŠT	746	152	140	127	112	95	75	45	0	313 611	0	0	0	152	140	127	112	95	75	45	0	313 459	227 118	226 991	226 879
Vilniaus energija	135 178	27 587	25 420	23 055	20 296	17 144	13 597	8 079	0	326 484	0	0	0	27 587	25 420	23 055	20 296	17 144	13 597	8 079	0	298 897	191 280	168 225	147 929
Vilniaus energija	839 037	171 232	157 778	143 101	125 978	106 408	84 393	50 147	0	0	0	0	0	0	0	0	0	0	0	0	0	-171 232	-329 010	-472 111	-598 089

4 CONCLUSIONS

Out of 37 investments approved in the National Investment Plan, 16 are implemented. Only 2 investments have been undertaken during the reporting period of 2016. From 2 investments that have taken place during the 2016 period, 1 investment has been finished and 1 investment is ongoing.

According to the allocation plan, total amount of 428.459 EUAs is planned to be allocated in 2016. However, not all the installations were involved in the investment process until 2016 therefore the final allocation for 2016 amounts to 237.230 EUAs (55% of planned in 2016).

It should be noted that emission allowances, allocated to 2016 does not include cost reported by Lietuvos energijos gamyba, AB in 2015 and 2016, because it was not audited. All costs reported by Lietuvos energijos gamyba, AB in 2015 and 2016 will be proved and audited by the end of May 2017.

Pursuant to the Part C.2.1 of the Application, it should not affect the allocation for 2016, provided to Lietuvos energijos gamyba, AB, because sufficient previous investments have been reported to justify the free allocation for 2015 and 2016.

When the audit report will be finalized the compliance indicators shall be updated and reflected in the next year report.

Annex I

Table 7: 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 ₂ emissions in electricity production, t/year	Change in emission factor, t CO ₂ /TJ
LT-S-0039	Construction of biofuelpower plant	7.971.399	-	-	20,92

Table 8: 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 ₂ emissions in electricity production, t/year	Change in emission factor, t CO ₂ /TJ
LT-S-0006	Reconstruction of transformer station KTP-102 in Alytus RK	900.000	260.658	Compliance with UCTE reliability requirements		
					14,78 CO ₂	
LT-S-0033	Reconstruction of wastewater handling equipment reducing electricity consumption for managing of technological wastewater	4.132.313	1.196.801	62,3		

Table 9: 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 ₂ emissions in electricity production, t/year	Change in emission factor, t CO ₂ /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		