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Romania

MINISTRY OF ENERGY

REPORT ON INVESTMENTS MADE IN UPGRADING ENERGY INFRASTRUCTURE AND CLEAN TECHNOLOGIES FOR 2016 pursuant to article 10c (1) of the Directive 2003/87/EC



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1. INTRODUCTION

The Romanian Government Report on Investments made in upgrading energy infrastructure and clean technologies for 2016 pursuant to article 10c (1) of the Directive 2003/87/EC has been prepared in accordance with the provisions of the following legal acts and documents:

- ✓ Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community, and the derogation for free allocation of greenhouse gas emissions allowances for the modernization of the electricity production sector;
- ✓ Article 6.3. of the Communication from the Commission "Guidance document on the optional application of Article 10c of Directive 2003/87/EC (2011/C 99/03);
- ✓ Romania's Application for free allocation of allowances to the power sector for the period 2013 – 2020, pursuant to article 10c of Directive 2003/87/EC;
- ✓ **Governmental Emergency Ordinance no. 30/2015** regarding some measures for implementing of the mechanism to transitionally allocate greenhouse gas emission allowances free of charge to electricity producers for the period 2013-2020, including the National Investments Plan thereof (*Governmental Emergency Ordinance no. 30/2015*);
- ✓ **Governmental Decision no. 1096/2013** for the approval of the mechanism to transitionally allocate greenhouse gas emission allowances free of charge to electricity producers for the period 2013-2020, including the National Investments Plan thereof, as amended (*Governmental Decision (GD) no. 1096/2013*);
- ✓ **Ministerial Order no. 1277/2015** for the approval of the Procedures on the management of the counter value of the greenhouse gas emissions allowances transitionally allocated free of charge, for financing the investments in the National Investment Plan, monitoring, verification and reporting on investments, and eligible expenses (*The Procedures*).

The Report is based on individual evidence documents submitted by operators included in National Investments Plan, as included in Romania's Application for free allocation of allowances to the power sector for the period 2013 – 2020, pursuant to article 10c of Directive 2003/87/EC, amended.



2. STATUS OF THE IMPLEMENTATION OF THE DEROGATION PROVIDED BY ART. 10c (1)

2.1. Payment of the yearly allocations 2013, 2014, 2015 and 2016

The Application submitted by Romania based on art. 10c (6) of Directive 2003/87/EC of the European Parliament and of the Council to obtain the derogation for free allocation of greenhouse gas emissions allowances for the modernization of the electricity production sector, was approved through Commission Decision C(2012) 4564 final of 06.07.2012 and Commission Decision C(2012) 8776 final of 05.12.2012 on the state aid SA.34753 (2012/N).

As important step towards implementation, Governmental Decision (GD) no 1096/2013 has been issued approving the mechanism to transitionally free allocate greenhouse gas emission allowances to electricity producers for the period 2013-2020, including the National Investments Plan. This Governmental Decision represents the legal framework on the basis of which the derogation under art. 10c of the Directive 2003/87/CE is implemented in Romania.

The Ministry of Energy is the authority in charge with the implementation of Article 10c of the Directive ETS in Romania, including the activity regarding monitoring and implementation of the investments in the National Investment Plan.

In order to set up the institutional circuits for NIP implementation, several additional acts have been issued and approved, as follows:

- a) Government Decision no. 151, published on March 2015 (amending GD 1096/2013), is presenting clarifications regarding the NIP implementation mechanism.
- b) Government Emergency Ordinance no. 30/2015 (primary legal framework), published on June 2015, is setting up and approve a dedicated necessary budget for activities related to the monitoring and implementation of NIP approved projects.
- c) Government Decision no. 770/2015, published on September 2015 amending the Government Decision no. 1096/2013, as a secondary legal framework adopted to ensure the implementation of the Government Emergency Ordinance no. 30/2015;
- d) Government Decision no. 550/2016, published on August 2016, is approving the Framework Financing Contracts as per types of investments, as follows:
 - (i) Approving the Framework Financing Contract for investments finalized as of the date the Financing Contract is concluded;
 - (ii) Approving the Framework Financing Contract for investments under implementation as of the date the Financing Contract is concluded;
 - (iii) Approving the Framework Financing Contract for new investments;

All these new successive legislative have been adopted to make possible the implementation of the National Investment Plan pursuant to Article 10c of the ETS Directive.

Also, at the Ministry of Energy level, there have been approved the *Procedures on the management of the counter value of the greenhouse gas emissions allowances transitionally*



allocated free of charge, for financing the investments in the National Investment Plan, monitoring, verification and reporting on investments, and eligible expenses (hereinafter called "the NIP Procedures") by the Minister's Order no. 1277/30.10.2015, which have been published on the 12th of November 2015, in the Official Gazette.

The total amount collected in the account of The National Investments Plan, based on the payments made relating to article 10c (years 2013, 2014, 2015 and 2016), is of 1,012,819,352.92 Lei (around. 225,070,967.31 EUR, at an exchange rate of 4.50 Lei/EUR).

2.2. THE IMPLEMENTATION OF THE NATIONAL INVESTMENT PLAN (NIP)

2.2.1. Approved Financing Requests

With regard to the investments that will be financed from the NIP fund based on the payments made relating to article 10c, the status is the following:

According to art. 17 para. (2) of *The Procedures*, related to the guidelines for financing requests, these could have been submitted by the beneficiaries of the NIP Fund starting with May 5th, 2014.

As concerns the Financing Requests submitted by NIP beneficiaries, so far, there have been received 7 (seven) Financing Requests, out of which 4 (four) Financing Requests were approved for the following investments:

- 1. Rehabilitation and modernization of 330 MW power unit no. 4 on lignite – CE Rovinari with Societatea Complexul Energetic Oltenia SA as beneficiary;**
- 2. New combined cycle with gas turbine – CCCC Brazi, with Societatea OMV Petrom SA as beneficiary ;**
- 3. Rehabilitation and modernization of power unit no 7 on lignite – SE Isalnita, with Societatea Complexul Energetic Oltenia SA as beneficiary;**
- 4. New combined cycle with gas turbine (CCGT), with Societatea Nationala de Gaze Naturale Romgaz SA as beneficiary.**

The rest of 3 (three) Financing Requests, submitted by the NIP beneficiaries that have not been approved, referred to the following investments:

- 1. RO-Ş-029 – New cogeneration with gas turbine and heat recovery boiler with CET Arad SA as beneficiary**

The Financing Request submitted and not approved three times was not complete according to the requirements provided in the NIP Procedures, such as, inter alia, not including the



documents proving the financing capacity of the beneficiary to realize the investment and the Environmental Permit for the investment.

2. RO-Ş-12 – Waste to energy with International Recycling Energy SA as beneficiary

The submitted Financing Request was not complete according to the requirements provided in the NIP Procedures, such as, inter alia, not including the documents proving the financing capacity of the beneficiary to realize this investment and the Environmental Permit for the investment.

3. RO-Ş-026 – Rehabilitation and modernization of 330 MW power unit no 5 on lignite – CE Rovinari with Complexul Energetic Oltenia as beneficiary

The submitted Financing Request was not complete according to the requirements provided in the NIP Procedures, such as, inter alia, not including the documents proving the financing capacity of the beneficiary to realize this investment.

Therefore, the 3 Financing Requests submitted but not approved, failed to provide the full package of documents as requested by the NIP Procedures.

The details regarding the investment's values and eligible costs included in the submitted and approved Financing Requests are presented in Table no. 1, below.

Table no. 1 - Details regarding the costs included in the approved Financing Requests

Crt. no.	Investment	Total investment value (VAT included)		Eligible cost included in Financing Request (VAT excluded)		The percentage of eligible costs to be financed from NIP fund
		Lei	Eur	Lei	Eur	
RO-Ş-025	Rehabilitation and modernization of 330 MW power unit no, 4 on lignite - CE Rovinari	511,279,700	113,617,711.12	369,164,860.00	82,036,635.56	25%, respectively 92,291,215 lei (approx. 20.5 mil euro)
RO-Ş-015	New combined cycle with gas turbine - CCCC Brazi	2,757,034,185.67	612,674,263.49	1,634,381,302.70	363,195,845.05	25%, respectively 408,595,325, 69 lei (approx. 90.8 mil, Euro)
RO-Ş-	Rehabilitation	171,284,500	38,063,222.23	134,226,700.00	29,828,155.56	25%



028	and modernization of power unit no 7 on lignite - SE Isalnita					respectively 33,556,675 lei (approx. 7.5 mil euro)
RO-\$-027	New combined cycle with gas turbine (CCGT) - CTE Iernut	1,539,542,560	342,120,568.89	1,284,581,900	285,462,644.44	25%, respectively 321,145,475 lei (approx. 71.4 mil. euro)

The used exchange rate: 1Euro =4.5 Lei

2.2.2. Concluded Financing Contracts

Based on the approved Financing Requests, 3 (three) Financing Contracts have been concluded to date, as presented in the Table no. 2, below.

Table no. 2 - Details regarding the costs included in the concluded Financing Contracts

Crt. no.	Investment	Total investment value (VAT included)		Eligible cost included in Financing Contract (VAT excluded)		The percentage of eligible costs to be financed from NIP fund
		Lei	Eur*	Lei	Eur*	
RO-\$-025	Rehabilitation and modernization of 330 MW power unit no, 4 on lignite - CE Rovinari	381,549,625.21	85,549,243.32	245,300,000.00	55,000,000.00	25%, respectively 61,325,000 lei equivalent of 13,750,000 euro at the exchange rate of 4.46 lei/euro
RO-\$-015	New combined cycle with gas turbine - CCCC Brazi	2,756,819,146.77	618,120,884.93	1,633,700,192.31	366,300,491.55	25%, respectively 408,425,048.10 lei equivalent of 91,575,122.89 euro at the exchange rate of 4.46 Lei/euro



RO- $\text{\$}$ -028	Rehabilitation and modernization of power unit no 7 on lignite - SE Isalnita	171,284,500	38,404,596.42	134,226,700	30,095,672.65	25%, respectively 33,556,675 lei equivalent of 7,523,918.16 euro at the exchange rate of 4.46 Lei/euro
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**The used exchange rate: 1Euro =4.46 Lei*

For the fourth approved Financing Request, it is expected in the next period to start negotiations with the beneficiary SNGN Romgaz for concluded the Financing Contract.

For all the 3 concluded Financing Contracts, the beneficiaries have already submitted the first Reimbursing Requests, which are under analysis. Therefore, no investment has been financed so far from the NIP fund based on the payments made relating to article 10c.

The submitted Reimbursing Requests are presented together with the respective independent audit reports and include the data presented in in the Table no. 3-5 below.

For the investment RO- $\text{\$}$ -025 - *Rehabilitation and modernization of 330 MW power unit no, 4 on lignite - CE Rovinari, which is a finalized investment and for which the Beneficiary has presented the final audit report:*

Table no. 3

According to:	Total Investment Value VAT Included	Eligible expenses	Non-reimbursable financing from NIP Fund
Financing Contract (Lei)	381,549,625.21	245,300,000	61,325,000
(EUR)	85,549,243.32	55,000,000	13,750,000
Audit report (Lei)	381,549,625.21	245,300,000	61,325,000

For the investment RO- $\text{\$}$ -015 - *New combined cycle with gas turbine - CCCC Brazi, which is a finalized investment and for which the Beneficiary has presented the final audit report:*

Table no. 4

According to:	Total Investment Value VAT Included	Eligible expenses	Non-reimbursable financing from NIP Fund
Financing Contract	2,756,819,146.77	1,633,700,192.31	408,425,048.10



(Lei)			
(EUR)	618,120,884.93	366,300,491.55	91,575,122.89
Audit report (Lei)	2,756,484,347.00	1,633,430,192.00	408,357,548.00

For the investment RO-Ş-028 - *Rehabilitation and modernization of power unit no 7 on lignite - SE Isalnita, which is an investment under implementation and for which it is presented the audit report for the first Reimbursing Request:*

Table no. 5

According to:	Total Investment Value VAT included	Eligible expenses	Non-reimbursable financing from NIP Fund
Financing Contract (Lei)	171,284,500.00	134,226,700.00	33,556,675.00
(EUR)	38,404,596.42	30,095,672.65	7,523,918.16
Audit report for the First Reimbursing Request (Lei)	10,461,645.26	10,252,235.40	2,563,058.85

2.2.3. Status of the investments included in the National Investment Plan

Table no. 6 details the status of the investments included in the National Investment Plan including the stage of development, delay or cancellation at 31 December 2016. The status is based on the evidence documents received upon request from the beneficiaries of the investments from the National Investment Plan.



Table no. 6: Status of the investments included in the National Investment Plan

No	Operator	Company group	Investment description	Year of starting	Status of the investment
RO-Ş-001	SEB – CET Bucuresti Sud	ELCEN	New cogeneration with combined cycle with gas turbine (CCGT)	2014	Investment cancelled
RO-Ş-002	SEB – CET Grozavesti	ELCEN	New cogeneration with combined cycle with gas turbine (CCGT)	2014	Investment cancelled
RO-Ş-003	Titan Ecopower	Titan Ecopower	New cogeneration with gas engines units	2014	Investment cancelled
RO-Ş-004	CE Turceni	CE Turceni	Rehabilitation and modernisation of 330 MW power unit no 6 on lignite	2015	Investment cancelled
RO-Ş-005	CE Rovinari	CE Rovinari	New 500 MW power unit on local lignite, supercritical parameters	2013	Investment cancelled
RO-Ş-006	SE Galati	SE Galati	New cogeneration with gas turbine and heat recovery boiler	2015	Investment cancelled
RO-Ş-007	Power Plant Fagaras	PP Fagaras	New combined cycle	2013	Investment cancelled



No	Operator	Company group	Investment description	Year of starting	Status of the investment
RO-008	ELCEN	ELCEN	New peak units with gas turbines at Fantanele	2015	This investment is under assessment by a joint venture company "Fantanele Gas Power" (a consortium consisting of Marubeni Corporation and Electrocentrale Gup SA – the legal successor of ELCEN following reorganisation process).
RO-009	CET Govora	CJ Valcea	New cogeneration on biomass	2013	Investment cancelled
RO-010	CTE Deva	SC Deva	New combined cycle with gas turbine	2013	Investment cancelled
RO-011	ADREM	ADREM	New cogeneration with gas turbine and heat recovery boiler	2013	Investment cancelled
RO-012	International Recycling	CL Timisoara	Waste to energy	2013	Investment cancelled
RO-013	Energy Cogen -Fagaras	Energy Cogen	New cogeneration with gas turbine and heat recovery boiler	2013	Investment cancelled



No	Operator	Company group	Investment description	Year of starting	Status of the Investment
RO-Ş-014	Energy Cogen -Savinessi	Energy Cogen	New cogeneration with gas turbine and heat recovery boiler	2013	Investment cancelled
RO-Ş-015	CCCC Brazi	PETROM	New combined cycle with gas turbine	2009	<ul style="list-style-type: none"> Investment finalized in August 2012; Financing Contract concluded on September 14, 2016; First Reimbursing Request submitted and under analysis
RO-Ş-016	Braila Power	Braila Power	New 800 MW power unit on imported hard coal, supercritical parameters	2014	Investment cancelled
RO-Ş-017	Ecogen	Ecogen	New cogeneration with thermal engines	2013	Investment cancelled
RO-Ş-018	Amonil	Amonil	New cogeneration with gas turbine and heat recovery boiler	2014	Investment cancelled
RO-Ş-019	SC CET SA Braila	CL Braila	New cogeneration with gas turbine and heat recovery boiler (simple cycle)	2013	Investment cancelled



No	Operator	Company group	Investment description	Year of starting	Status of the Investment
RO-Ş-020	SE Isalnita	CE Craiova	New power unit on local lignite, ultra-supercritical parameters	2015	Investment cancelled
RO-Ş-021	SE Craiova II	CE Craiova	New cogeneration with combined cycle with gas turbine (CCGT)	2016	<ul style="list-style-type: none"> Project preparation under development
RO-Ş-022	SC Paroseni	SC Paroseni	New 200 MW power unit on local hard coal, supercritical parameters	2014	Investment cancelled
RO-Ş-023	Vlăceet	Vlăceet	New cogeneration with gas turbine and heat recovery boiler	2013	Investment cancelled
RO-Ş-024	CE Turceni	CE Turceni	Rehabilitation and modernisation of power unit no. 3 on lignite	2015	<ul style="list-style-type: none"> investment proposed to start in Q2, 2017 Beneficiary intends to apply for PNI financing in Q3, 2017
RO-Ş-025	CE Rovinari	CE Rovinari	Rehabilitation and modernisation of 330 MW power unit no 4 on lignite	2013	<ul style="list-style-type: none"> investment effectively started in March 2012 and entered commercial operation in January 2015 Financing Contract concluded on August 29, 2016; First Reimbursing Request submitted and under analysis



No	Operator	Company group	Investment description	Year of starting	Status of the investment
RO-Ş-026	CE Rovinari	CE Rovinari	Rehabilitation and modernisation of 330 MW power unit no 5 on lignite	2014	<ul style="list-style-type: none"> Investment cancelled
RO-Ş-027	SE Mures-CTE Iernut	Romgaz	New combined cycle with gas turbine (CCGT)	2014	<ul style="list-style-type: none"> Project under implementations; Financing Request has been submitted in December 2016 and was approved in January 2017; To start negotiation for concluding the Financing Contract
RO-Ş-028	SE Isalnita	CE Craiova	Rehabilitation and modernisation of power unit no 7 on lignite	2013	<ul style="list-style-type: none"> investment started in Q2, 2010 Project under implementation with final execution by the end of 2018 Financing Contract concluded on August 29, 2016; First Reimbursing Request submitted and under analysis
RO-Ş-029	GET Arad	CL Arad	New cogeneration with gas turbine and heat recovery boiler	2013	Investment cancelled



Conclusions:

Out of 29 investments initially proposed to be financed through the National Investment Plan, there are:

- ✓ 2 investments (RO- $\text{\$}$ -015, RO- $\text{\$}$ -25)- finalized;
- ✓ 1 investment (RO- $\text{\$}$ -028)- under implementation with final execution in 2018;
- ✓ 1 investment (RO- $\text{\$}$ -027)- under implementation with final execution in Q1, 2020;
- ✓ 2 investments (RO- $\text{\$}$ -008, RO- $\text{\$}$ -024,) are in different development phases, postponed in relation to the starting year mentioned by the Application for NIP financing, but feasible to reach the deadline;
- ✓ 1 investment (RO- $\text{\$}$ -021)-project preparation under development;
- ✓ 22 investments (RO- $\text{\$}$ -001, RO- $\text{\$}$ -002, RO- $\text{\$}$ -003, RO- $\text{\$}$ -004, RO- $\text{\$}$ -005, RO- $\text{\$}$ -006, RO- $\text{\$}$ -007, RO- $\text{\$}$ -009, RO- $\text{\$}$ -010, RO- $\text{\$}$ -011, RO- $\text{\$}$ -012, RO- $\text{\$}$ -013, RO- $\text{\$}$ -014, RO- $\text{\$}$ -016, RO- $\text{\$}$ -017, RO- $\text{\$}$ -018, RO- $\text{\$}$ -019, RO- $\text{\$}$ -020, RO- $\text{\$}$ -022, RO- $\text{\$}$ -023, RO- $\text{\$}$ -026, RO- $\text{\$}$ -029) have been cancelled.

3. INVESTMENTS FINISHED IN THE ENERGY GENERATION SECTOR IN 2009 - 2016

From the investments included in the National Investments Plan, two investments have been completely finalized in 2009-2016, respectively:

1. **RO- $\text{\$}$ -015 – Combined Cycle with Gas Turbines– CCCC Brazil with OMV Petrom S.A. as beneficiary.** This power unit started commercial operations in 2012, August 8th. This power unit was operational during 2016 and accounted an electricity production of 2,920,180 MWh.
2. **RO- $\text{\$}$ -25 - Rehabilitation and modernization of the 330 MW power unit no, 4 on lignite - CE Rovinari with Societatea COMPLEXUL ENERGETIC OLTENIA SA - SE Rovinari as beneficiary.** This project was finalized and has started commercial operations in 2015. This power unit was operational during 2016 and accounted an electricity production of 2,096,890 MWh.

According to *NIP Procedures*, the technical performance indicators have to be:

- For the Greenfield projects:
 - ✓ the CO₂ specific emission (tCO₂/MWh produced) has to be reduced and it is calculated as difference between the average CO₂ emissions of the power plants on fossil fuels from the National Power System and the CO₂ emissions of the new unit/plant reported to the same yearly quantity of energy. The reference value of the average CO₂ emission of the power plants on fossil fuels from the National Power System is provided by the National Regulatory Authority for Energy (ANRE) and is published annually, for the previous year, on its website.
- For modernization/retrofit projects:
 - ✓ the CO₂ specific emission (tCO₂/MWh produced) after the investment shall be lower than the CO₂ specific emission before the modernization/retrofit;



- ✓ reductions in the greenhouse gas emissions is calculated as a difference between the CO₂ emissions of the power units before and after the modernization for the same annual quantity of electricity generated.

The technical performance indicators reported for the finalized investments for 2016, are presented in Table no.7, below.

Table no. 7 – Compliance indicators of the finalized investments

Investment no,	Investment name	Year	Achieved technical performance indicators	
			CO ₂ specific emission (tCO ₂ /MWh)	CO ₂ emission reduction (tCO ₂ /year)
RO-Ş-015	Combined Cycle with Gas Turbines 860 MW Brazi	2016	0.36627	1,079,691.00
RO-Ş-025	Rehabilitation and modernisation of 330 MW power unit no 4 on lignite	2016	0.89086 compared to 0.9342 before modernization	90,881.28

Comparing to Romania's Application where a national emission factor of 0,905 tCO₂/MWh was used in calculating the emission reductions (as published by the National Regulatory Authority for Energy – ANRE for 2011), for the data presented above it was used the national emission factor of 0,736 tCO₂/MWh.

CONCLUSIONS

The National Investment Plan in upgrading Romanian energy infrastructure and clean technologies for 2016, under the derogation provided by the provisions of art. 10c (1) of the Directive 2003/87/EC is currently under implementation and complying with the Directive requirements.

Out of the 29 investments approved, 2 have been finalized during the reporting period, 2 investments are under different stages of implementation, 1 investment for which the project preparation is under development, 22 investments have been cancelled and 2 are in different development phases, delayed compared to the start year provided in the Application, but feasible to reach the NIP financing deadline.



The National Investment Plan was affected by the modification of the parameters valid at the date of the Application, mainly:

- lack of financing possibilities for some of the proposed projects, due to the worsening financial situation of some Beneficiaries (some NIP Beneficiaries entered under insolvency procedure in the period of 2012-2016);
- the modification of the electricity market structure and the market share more increased got by the renewable energy producers, with an impact on the price of electricity and which has led to give up some NIP projects, mainly in the case of green-field projects;
- disappear of major consumers, mainly in the chemical industry, which led to giving up for making the planned investments (mainly cogeneration projects);
- restructuring and reorganization of power producers based on coal, which led to prioritizing investments in progress and allocation of existing resources to the most profitable projects.

The implementation of the derogation under art. 10c of the Directive 2003/87/CE has been delayed due to the need to improve the existing legal frameworks in order to:

- clarify some aspects related to the mechanism implementation, by adopting the Government Decision no. 151, published in March 2015;
- create and approve a distinct budgetary line to cover the related costs of the monitoring and implementation of the NIP investments by adopting the Government Emergency Ordinance no. 30/2015, published in June 2015, and
- set up Framework Financing Contracts as per types of investments, respectively for investments finalized as of the date the Financing Contract is concluded, for investments under implementation as of the date the Financing Contract is concluded and for new investments, by adopting the Government Decision no. 550/2016, published in August 2016.

Furthermore, the successive political changes taking place within the Romanian Government in the last years created supplementary delaying reasons for the implementation of the derogation under article 10c.

Having the legal framework in place and Financing Contracts concluded, the implementation of the derogation under article 10c will continue.

In addition, in relation with the implementation of the National Investment Plan, the Romanian State has as strategic commitments to monitor the achievement of NIP investment as well as to finance of the NIP investments according to the Romanian Application.

