

## **THE INCREASE EFFICIENCY OF THE HEAT SUPPLY PUBLIC SERVICE BY IMPLEMENTING AN INTEGRATED CENTRALIZED HEATING SUPPLY SYSTEM (SACET) IN THE MUNICIPALITY OF BUCHAREST**

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### **ABSTRACT**

*Under the new European regulations, it becomes a necessity and a priority for Romania to take adequate political, legislative and administrative measures to stop the decline of the centralized heat supply systems.*

*The energy efficiency is the most cost-effective and fastest growing method to improve security of energy supply, reduce energy loss and costs, and greenhouse gas emissions which are responsible for global warming. Cogeneration, notably high efficiency cogeneration and the improved performance of the centralized heat supply systems have a key contribution to the improvement of energy efficiency.*

*In this regard, at the Municipality of Bucharest, steps have been taken to achieve the Heat Supply Public Service in Bucharest - production, transport, distribution and supply through an integrated centralized heating supply system (S.A.C.E.T.) (S.A.C.E.T. - C.T.E.S.S. - Centralised Thermal Energy Supply System), aiming to improve the performance of the Public Service in terms of energy and respectively economic efficiency, at the same time creating the basis for the settlement of debts accrued by the Public Service Operator - Bucharest District Heating Company (RADET Bucuresti S.A.), to its heat supplier - S.C. Electrocentrale Bucuresti S.A. (ELCEN) through its subsidiary Electrocentrale Bucuresti.*

**KEYWORDS:** *energy efficiency, performance indicators, public service, sustainable development, technological chain..*

**JEL CLASSIFICATION:** *D73, F36, H83, L32, L95, Q01, Q42, Q56.*

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### **1. INTRODUCTION**

The main purpose of the entire legislative approach that will be presented in detail in the following aim is to achieve an integrated service supply heat in the Municipality of Bucharest.

The main benefits envisaged are the following:

- a).the service management and operation responsibility for the whole thermal energy chain (production, transport, distribution and supply), leading to positive consequences in the area of systematic and coherent implementation of the efficiency measures starting from the end user to the energy source (having the the advantage of total control over thermal energy market);
- b).ensuring the public service continuity by implementing improvement measures for equipment and technological systems, improving the operation and maintenance performance as well as the skill level of the personnel;
- c).ensuring the public service quality through following the quality standards for thermal energy, pressure, temperature, capacity, so thermal confort requirements are met;
- d).promoting a stand-alone system to produce, transport and distribute the thermal energy, managed by a single operator, able to control the production costs fluctuations and achieve reductions in the

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local energy cost;

- e).providing the public service with long term resources, by refurbishing and upgrading SACET throughout its whole process;
- f).ensuring the operation safety of the public service.

## **2. BRIEF HISTORY**

In the Municipality of Bucharest steps have been taken in order to achieve the heat supply public service in Bucharest – production, transport, distribution and supply through an integrated centralized heating supply system (in July 2012, the Municipality of Bucharest represented by the General Mayor, submitted to the Romanian Government through the Ministry of Economy, Commerce and Business Environment (MECMA) a Memorandum which proposed a set of measures to achieve the Heat Supply Public Service in Bucharest – production, transport, distribution and supply through an integrated centralized heating supply system (SACET), at the same time creating the basis for the settlement of debts accrued by the Public Service Operator – Bucharest District Heating Company (S.C.RADET Bucuresti S.A.), to its heat supplier – ELCEN through its subsidiary Electrocentrale Bucuresti. According to the Memorandum, the most important measure is the transfer of the 5 combined heat and power plants (CHPs) – CHP Vest, CHP Sud, CHP Progresul, CHP Titan and exploited CHP Grozavesti owned and by ELCEN through its subsidiary Electrocentrale Bucuresti into the public domain of the Municipality of Bucharest.

## **3. THE CONCEPT OF PUBLIC SERVICE**

### **3.1. The national legal framework**

The public service is part of the community services of public utilities regulated by the Law on Public utilities community services no. 51/2006, as the general law, and the Law on public service for heat supply no. 325/2006, as the special law.

According to these laws “the public service consists of all the activities related to heat production, transport, distribution and supply, carried out at the level of territorial - administrative units to ensure the required thermal energy for heating and domestic hot water for population, public institutions, social and cultural establishments and economic operators”.

Under the legal provisions of the Law on public service for heat supply no. 325/2006 and Law on Public utilities community services no. 51/2006, the public service is governed by the following principles:

- a).efficient use of primary energy resources in terms of accessibility, availability and affordability;
- b).sustainable development, protection and capitalization of the public and private domain of the territorial-administrative units, environmental protection and conservation, quality of life improvement;
- c).environmental impact mitigation through coordination of design and execution of the urban technical works in order to achieve them under a common vision, correlated with the community socio-economic development programs, land use and urban planning and environment;
- d).promotion and development of high efficiency cogeneration of heat and power based on the useful heat demand as well as on primary energy saving on the energy market in order to improve energy efficiency and security of supply;
- e).use of new, renewable sources considering the specific climate and energy conditions in Romania enable non-discriminatory access to the public service for all users;
- f).transparency and regulation of the heat price and tariffs; establish non-discriminatory pricing under objective criteria and in a transparent manner in order to ensure a reasonable rate of return on the invested capital;
- g).enable non-discriminatory access to the public service for all users.

Under the legal provisions of the Law on public service for heat supply no. 325/2006 and Law on Public utilities community services no. 51/2006, the objectives of the public service are:

- a).ensure continuity of the public service through measures aiming to increase reliability of equipment and technological schemes, improve operation, maintenance and repair activity and increase staff training and discipline;
- b).ensure quality of the public service by meeting the quality parameters established for heat, pressure, temperature, flow so as to satisfy the thermal comfort requirements;
- c).price accessibility for consumers; promote a unitary system consisting of production, transport and distribution of heat, efficiently managed by a sole operator, able to manage effectively the real evolution of costs considering the possibility for significant local heating price reductions;
- d).ensure long-term resources for the achievement of the public service through the rehabilitation and upgrading of SACET, throughout the technological chain;
- e).ensure safe operation of the public service;
- f).show transparency of costs in setting up the local heating price.

### **3.2. EU regulations and policies**

Since 2007, the European Union has fundamentally changed the policy and legislation in the field of energy, adopting development directions such as: security of energy supply, minimum impact of the energy sector on the environment and growth of competitiveness, firmly committing to this action as the world leader.

Therefore, a number of documents defining energy and environmental policies have been drawn up:

- a). "An integrated strategy for energy and climate change" (2007);
- b). The EU climate and energy package (2009) with the so called "20-20-20" objectives (to limit global warming below 2°C compared to 1900), respectively the reduction by 20% in greenhouse gas emissions (of which the dioxide carbon accounts for 80%) as a strategic objective, accompanied by two related objectives: reduce the final energy consumption by increasing energy efficiency by 20% and increase the use of renewable energy by 20% as a share of the total primary energy mix;
- c). Directive 2010/31/EU on energy performance of buildings, which provides stringent measures to reduce energy consumption in existing buildings and especially new buildings; heating buildings should be achieved through renewable energy sources or, if any, by cogeneration.

Against the global economic crisis and signals of failure of the objective to increase energy efficiency by 20% by 2020, the European Commission issued in 2010 the New European Energy Strategy, and in 2011 the 2020 Europe Strategy (which replaces the old Lisbon Strategy) and EU Energy Efficiency Plan 2011-2020, according to which the efforts made by the Member States should double in order to reduce energy losses. After long debates, the Energy Efficiency Directive is about to be approved; it shall promote efficient cogeneration, energy saving in buildings as priority measures and a new generation of energy services.

The Directive 2012/27/EU on energy efficiency (DEE) turns certain requirements of the Energy Efficiency Plan into obligatory measures. The main goal is to bring a significant contribution to meeting the EU target of 20% increase in energy efficiency by 2020. To be successful, DEE must be implemented by Member States immediately after its adoption (after October 2012).

DEE has proposed the repeal of both Cogeneration Directive (2004/8/EC) and Energy Services Directive (2006/32/EC), which failed to fully capitalize the energy saving potential. In terms of end-users' sectors, DEE focuses on measures which establish the requirements for energy consumption reduction in both existing and future buildings.

In connection with the supply of energy, the proposal requires Member States to adopt national heating and cooling plans to harness the potential of highly efficient generation of energy and of a sound district heating and cooling system. Member States shall adopt authorization criteria to ensure that all the new and existing - substantially upgraded - facilities shall be equipped with highly efficient cogeneration units. Other proposed measures include efficiency requirements for the

national energy regulators, public information and awareness, promotion and development of energy services and obligation to eliminate obstacles to energy efficiency.

It is well known that energy efficiency is the most profitable and fastest method to increase security in energy supply, to reduce energy losses and costs and emissions of greenhouse gases, responsible for global warming. Cogeneration and especially high efficiency cogeneration largely contribute to the increase of energy efficiency, as well as the improvement of district heat supply systems' performance. Under the new European regulations, Romania's priority need is to prevent/suppress the decline of district heat supply systems, by means of political, legislative and administrative measures.

#### **4. BRIEF DESCRIPTION OF THE CENTRALIZED THERMAL ENERGY SUPPLY SYSTEM ORGANIZED AT THE LEVEL OF BUCHAREST MUNICIPALITY**

Thermal energy supply public service is part of the community service for public utilities and includes all the activities regarding production, transport, distribution and supply of thermal energy, performed by the territorial government departments, under the management, co-ordination and responsibility of the local public administration authorities for the purpose of providing thermal energy required for private or commercial heating and hot water.

S.A.C.E.T. (C.T.E.S.S. - Centralized Thermal Energy Supply System) – is defined as an assembly system of technological units, equipments and constructions, located within a designated area and linked through a common technological and functional process, for the purpose of transporting and distributing thermal energy using the pipeline thermal networks, for minimum 2 users.

According to the Decision of the General Council of the Municipality of Bucharest no. 202/29.11.2012 on the approval of the Memorandum regarding the achievement of the public heat supply Service in Bucharest – production, transport, distribution and supply through an integrated System of district heat supply, the SACET through which is achieved the public service in Bucharest, although technically and financially unitary, is not entirely owned by the Municipality of Bucharest and is operated by two operating companies: S.C.RADET Bucuresti S.A. – the operator of the transport and distribution networks, and of the other public assets owned by the Municipality of Bucharest through which the public service is achieved and ELCEN (branch Electrocentrale Bucuresti) - the operator of the 5 combined heat and power plants (CHPs) – CHP West, CHP South, CHP Progresul, CHP Titan and CHP Grozavesti owned by ELCEN which, although with a key role in the production of power in the national energy system, covers 90% of the heat demand for the consumers of the Public Service which is in the responsibility of the Municipality of Bucharest. In terms of technical and functional aspects, SACET - the central/district heat supply system serving the inhabitants of Bucharest - is a complex system consisting of:

- a).heat production sources - heat production performed through eight heat & power plants (with the capacity to supply the entire city), a heating plant (capable to cover a designated area around the plant) and 49 block heating plants (capable to supply restricted areas immediately adjacent to them);
- b).heat transport networks (primary heat networks) - are represented by the pipeline system designated for the continuous transport of thermal energy from the production plants to the distribution networks or to the directly linked customer networks;
- c).heat sub-stations (including facilities that provide heat transfer from primary to secondary heat carrier);
- d).heat distribution networks (secondary heat networks) - are represented by the pipeline system designated for the continuous transport of thermal energy from the transport network or distribution plants to the customers.

In terms of ownership, energy sources belong to:

- a).ELCEN - a company whose shares are owned entirely (directly and indirectly) by the Romanian State, through the Ministry of Economy, Commerce and Business Environment.

Through its subsidiary Electrocentrale Bucuresti, ELCEN is the operator and the owner of the 5 combined heat and power plants (CHPs) – CHP West, CHP South, CHP Progresul, CHP Titan and CHP Grozavesti. ELCEN is the biggest thermal energy producer in Bucharest -cca. 90% of the demand. Installed capacity: 5 plants = 5162 Gcal/h.

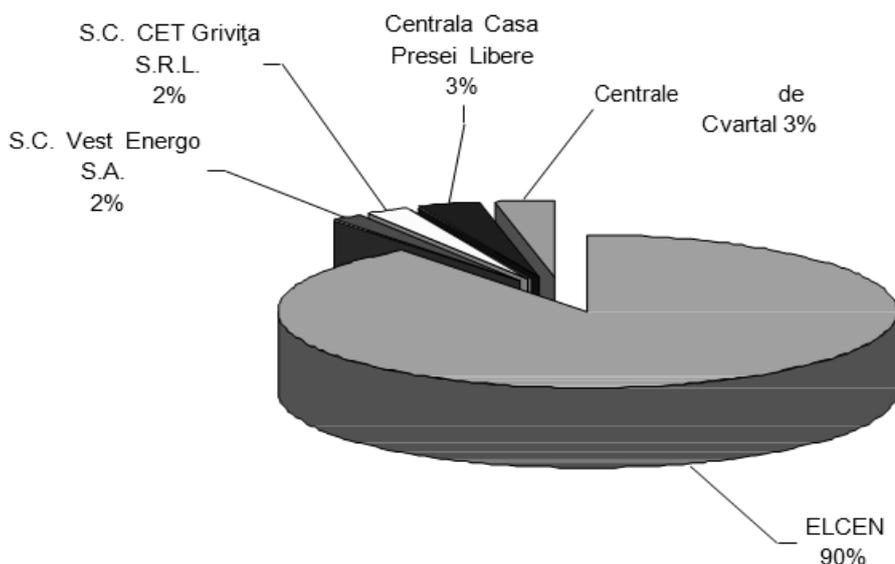
b).some commercial companies - S.C. CET Grivita S.R.L. (CET Griro) si S.C.Vest Energo S.A.

c).City of Bucharest - the remaining assets making SACET belong to the City of Bucharest, being transferred under the administration of RADET, an autonomous body under the coordination of the General Council of Bucharest Municipality.

#### 4.1. Presentation of the local operator of the heat transport and distribution networks – S.C.RADET Bucuresti S.A.

According to the Decision of the General Council of the Municipality of Bucharest no. 202/29.11.2012, RADET, as the sole operator of the public service, has as its main objective the production, transport, distribution and supply of heat, on the basis of licenses, according to the law. Heat production is achieved in the Heating Plant (HP) Casa Presei (regional supply) and in other 49 heating plants (group of blocks supply), all owned by the Municipality of Bucharest and transferred under the administration of the autonomous body/regia.

Centralized Thermal Energy Supply System (S.A.C.E.T. – C.T.E.S.S.) is covering 72% of Bucharest City demand for heating and hot water through R.A.D.E.T. only, (68% cogen produced energy and 4% through block heating plants). and serves about 1,3 million inhabitants.



**Chart 1. Thermal energy production structures-sources**

*Source:* adapted from the Decision of the General Council of the Municipality of Bucharest no. 202/29.11.2012

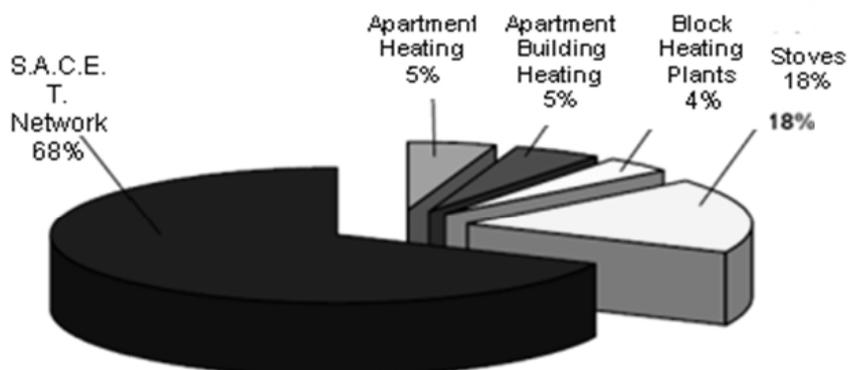
The difference of 28% in demand is represented by apartment heating units, apartment building heating systems and stoves.

About 95% of end users are household consumers, the remaining are social and industrial consumers (public establishments and businesses).

SACET supplies heat and hot water for a significant number of customers grouped as follows:

a).households (housing blocks organized under Owners Associations according to Law no. 230 of 6 July 2007 (\*updated\*) on the establishment, organization and operation of homeowners associations, individual houses) - over 10.000 Owners Associations gathering over 1.300.000 people;

b).non-domestic consumers (economic agents, government institutions, public institutions of education, health, culture, homes, greenhouses - facility for agriculture) - over 3.300 institutions and businesses.



**Chart 2. Heat supply in Bucharest**

*Source:* adapted from the Decision of the General Council of the Municipality of Bucharest no. 202/29.11.2012

To achieve the activity object, S.C.RADET Bucuresti SA buys primary heat carrier from thermal power producers. Of the total of primary heat carrier supply purchased S.C.RADET Bucuresti S.A., over 90% comes from the branch ELCEN - Electrocentrale Bucuresti, which owns major cogeneration power plant in Bucharest, namely the 5 combined heat and power plants (CHPs) - CHP West, CHP South, CHP Progresul, CHP Titan and CHP Grozavesti.

Each of renewable energy in the SACET Bucharest delivers heat to a number of customers in the area allotted to the plant. The energy sources within the system can operate interconnected by using a median ring which, in case of power station damage, allows supply consumers from another source of the system complying with certain operating restrictions. Both in terms of quantity and quality, heat carrier debits can be handled only within certain limits, in areas clearly determined by analysis of hydraulic regime.

#### **4.2 ELCEN**

Through its subsidiary Electrocentrale Bucuresti, ELCEN is the operator and the owner of the 5 combined heat and power plants (CHPs) - CHP West, CHP South, CHP Progresul, CHP Titan and CHP Grozavesti, which, although having an important role in the production of electricity in the national energy system, provides 90% of heat production of thermal energy that is required by the users of the Public Service under the responsibility of the Municipality of Bucharest.

#### **5. THE CONTRACTUAL RELATIONSHIP BETWEEN S.C.RADET BUCURESTI S.A. - ELCEN**

The relationship between the thermal energy producer (ELCEN) and the centralized thermal energy supply - public service operator (RADET) is a contractual relationship, observed by the National Authority for Energy Regulation (ANRE) through the framework agreement for thermal energy supply approved by Order no. 50 / 30.06.2009.

Within this contractual relationship several financial problems have been recorded ELCEN and RADET which were mainly determined by the ANRE imposed regulations and tariffs, especially through "The Fixed Framework Agreement for Thermal Energy Supply", the method of establishing the tariffs, as well as the pricing for thermal energy supplied from the cogeneration plants. Also another factor is the difference between production cost of the thermal energy and the supply price to the customer is covered by the government in the form of a subsidy but is always late and not always paid in full.

Finally, RADET has to cover the costs of ELCEN issued bills - for the supply of primary heat carrier, according to "The Fixed Framework Agreement for Thermal Energy Supply", - before the legal timeframe established for RADET to collect from its customers, hence penalties will occur to be covered by RADET from its own resources. The "chronic" issues between ELCEN and RADET are not only of financial nature but operational too.

The operational problems are triggered by the fact that SACET (the system that enables this public service in Bucharest), whilst functionally and technically compact and integer, does not entirely belong to Bucharest City and is operated by ELCEN and RADET.

As a consequence, the City of Bucharest can neither control the production cost of thermal energy (which represents an essential component of the thermal energy that RADET is billing the customers for) nor can they establish an efficiency improvement strategy for the entire process.

The payment of bills issued by ELCEN for the heat supplied RADET Bucuresti under the terms of the above mentioned Framework Contract (which require that the payment should be made at a time that is prior to the legal deadline for payment of bills issued by RADET Bucuresti to consumers, and that the penalties should be charged first and the main debit after), and in terms of the Escrow account procedures (required by Government Emergency Decision OUG no. 115/2001 on the regulation of certain measures to ensure the required funds for heat and natural gas supply to the population) led to late-payment additions (penalties) to the historical debts accumulated by RADET Bucuresti since 2005.

Thus, according to the Memorandum with the topic „Achievement of thermal energy supply public services through an integrated centralized thermal energy supply system (SACET) in the City of Bucharest and City of Constanta" approved by the Romanian Government in the session on 27.03.2013, on 31.01.2013, RADET Bucuresti had a total debt to ELCEN of 2.798.382.666,55 lei, of which: 1.849.984.144,95 lei - debts for the heat supplied; 948.398.521,60 lei - late-payment penalties.

Given the nature of ownership of the 5 CHPs above, the Municipality of Bucharest has no power to impose any Public Service related obligations on this activity that ELCEN performs based on the license issued by the National Regulatory Authority for Energy (ANRE), without a contractual or legal relationship with the Municipality of Bucharest. Under the circumstances, the Municipality of Bucharest can neither control the heat production price which is an essential component of the heating price charged by RADET to the users of the public service (mainly population) nor can it establish a strategy to improve energy efficiency along the entire technological chain.

As shown in the Decision of the General Council of the Municipality of Bucharest no. 202/29.11.2012, an efficient management of the Public Service in Bucharest would not only be limited to the settlement of financial issues between RADET and ELCEN, but it would mainly focus on the delegation of the Public Service management to an experienced operator in the field, financially capable to make significant investments in SACET and able to provide the Public Service as required by the performance indicators aimed at increasing energy efficiency and at an accesible price for the population and with a reasonable contribution from the Municipal local budget.

This objective can only be achieved by creating an integrated SACET in terms of ownership of its constituent assets and operated by a single operator which, through advanced management and investment methods, will optimize costs along the entire technological chain and meet the public

service performance indicators required by the Municipality of Bucharest under the delegation of the public service management contract.

## **6. THE ACHIEVEMENT OF THE HEAT SUPPLY PUBLIC SERVICE BY IMPLEMENTING AN INTEGRATED CENTRALIZED THERMAL ENERGY SUPPLY SYSTEM (SACET) IN THE CITY OF BUCHAREST**

The Memorandum with the topic „Achievement of thermal energy supply public services through an integrated centralized thermal energy supply system (SACET) in the City of Bucharest and City of Constanta" has been approved by the Romanian Government in the session on 27.03.2013.

Thus, the implementation of the "Retained Solution" for the City of Bucharest has been approved by the Bucharest City Council through H.C.G.M.B. 108/27.04.2013, as described in the art. 4 of the Memorandum with the topic „Achievement of thermal energy supply public services through an integrated centralized thermal energy supply system (SACET) in the City of Bucharest and City of Constanta" - approved by the Romanian Government in the session on 27.03.2013, to implement a integrated centralized thermal energy supply system in order to achieve the public service of thermal energy supply in the City of Bucharest (production, transport, distribution and supply). A Memorandum has been approved by the Bucharest City Council through H.C.G.M.B. no. 202/2012 to implement a integrated centralized thermal energy supply system in order to achieve Through HCGMB no 178 / 31.10.2012, the General Mayor has been mandated by the Bucharest City Council to negotiate the terms and the conditions of a Memorandum with the topic regarding the achievement of thermal energy supply public services through an integrated centralized thermal energy supply system (SACET) in the City of Bucharest.

Achieving the public service through an integrated SACET - by acquisition into the public ownership of Bucharest City of the 5 CET (cogen plants) that cover 90% of the thermal energy requirements in the city (CET Vest, CET Sud, CET Progresul, CET Titan and CET Grozavesti) - enables RADET and ELCEN to settle their financial history. It also creates the premises for Bucharest City to delegate the public service management to an experienced operator/partner that has the financial capability to invest in the integrated SACET and to increase the public service quality at an acceptable cost for the population and with a reasonable reliance on the Bucharest City budget.

The Memorandum with the topic „Achievement of thermal energy supply public services through an integrated centralized thermal energy supply system (SACET) in the City of Bucharest and City of Constanta" has been approved by the Romanian Government in the session on 27.03.2013.

Although the "solution retained" by the Memorandum is similar both for the City of Bucharest and for the City of Constanta, in the following, it will be presented the "solution retained" only for the City of Bucharest:

- a).the public service in Bucharest will be achieve by means of an integrated SACET in terms of ownership of its constituent assets and operation;
- b).it will be created the optimal conditions for the settlement of financial issues between ELCEN and RADET Bucuresti;
- c).it will be created the premises for the delegation of the public service management by the Municipality of Bucharest to an experienced partner/operator, professionally and financially capable to invest in an integrated SACET in order to improve the quality of the Public Service at an affordable tariff for the population with a reasonable contribution from the local budget.

According to the article 4 from Government's Memorandum, the measures to be adopted to implement the "solutions retained" are to:

### **a). Splitting ELCEN**

According to the Memorandum, the current situation of ELCEN shares is: Ministry of Economy - 92,04% of the share capital (71.692.596 shares), company "TERMOELECTRICA" S.A. - 5,61% of the share capital (4.368.672 shares) and S.N.G.N. ROMGAZ S.A. Medias - 2,35% of the share

capital (1.830.931 shares). Also, in present, ELCEN owns and operates both the CHPs which serve the Municipality of Bucharest and CHP Palas which serves the Municipality of Constanta. The splitting of ELCEN is possible according to the provisions of Law no.51/2006 on public service management.

Thus, ELCEN will be divided into three commercial companies, as follows: "ELCEN București" - the company which will own the 4 CHPs which serve Bucharest - CHP West, CHP South, CHP Progresu and CHP Grozavesti covering 90% of the heat production for Bucharest; a company whose shares shall be entirely (100%) owned by the Romanian State; "ELCEN Constanța" - the company which will own both CHP Palas which accounts for 96% of the heat production for Constanta and the heat distribution grids which serve Constanta; a company whose shares shall be entirely (100%) owned by the Romanian State; S.C. Electrocentrale Bucuresti S.A. -the company which will own CHP Titan and CHP Fantanele (a 'Green/Brown Field' project is intended to be achieved in this location), whose shares shall be owned by the Romanian State, TERMOELECTRICA S.A. and S.N.G.N. ROMGAZ S.A. Medias, in the proportions to be decided as per the division project.

ELCEN splitting shall comply with the procedure described in the provisions of Law no. 31/1990 on companies and of other applicable regulations.

The responsibility lies with the Ministry of Economy.

**b. Reorganize RADET Bucuresti as commercial company and transfer the shares of ELCEN Bucuresti from the private property of the Romanian state to the private property of the Municipality of Bucharest**

The stages are:

**b.1). Reorganization of RADET Bucuresti:**

The Municipality of Bucharest (MoB) by Decision of the General Council (CGMB), shall proceed to the administrative reorganization of RADET as a company, with MoB as the sole shareholder, as per the Government Emergency Ordinance no. 30/1997 on the reorganization of autonomous bodies (regia) and shall conclude a Public Service management delegation contract with the company resulted from the reorganization of RADET.

The responsibility lies with the Municipality of Bucharest.

**b.2). Transfer the shares of ELCEN Bucuresti from the private property of the Romanian State into the private property of the Municipality of Bucharest**

To this purpose, the adoption of an emergency ordinance is needed for the transfer of 100% of the shares owned by ELCEN Bucuresti from the private property of the Romanian State into the private property of the Municipality of Bucharest.

The responsibility lies with the Ministry of Economy, Ministry of Public Finances, Municipality of Bucharest.

In order to transfer the respective shares, a Working Group will be set up and it will be made up of representatives of the Ministry of Economy, the Municipality of Bucharest.

**c. Merger of ELCEN Bucuresti and the company resulted from the reorganization of RADET Bucuresti**

The merger will be subject to the procedure provided by Law no. 31/1990 on companies and other applicable laws.

The company resulting from the merger of ELCEN Bucuresti and the company resulted from the reorganization of RADET Bucuresti will be 100% owned by the Municipality of Bucharest.

As a result of the merger, the receivables of ELCEN Bucuresti (taken over as a result of ELCEN's splitting) from RADET Bucuresti (principal and penalties) shall write off by merger of rights.

The responsibility lies with the Municipality of Bucharest.

**d. Achievement of an integrated SACET**

**d.1). Achievement of an integrated SACET Bucharest by transferring the 4 CHPs to the public domain of the Municipality of Bucharest**

Adoption by CGMB, in its double role as the General Assembly of the new company and deliberative authority of the Municipality of Bucharest, of a decision, based on an assessment report, that will enable the transfer on payment of the 4 CHPs from the patrimony of the new company to the public domain of the Municipality of Bucharest under the provisions of article 8, paragraph (3) of the Law no.213/1998 on public property assets, and their concessioning by the new company (modification/completion of the existing public service management delegation contract, taken over by the new company upon merger).

The payment for the 4 CHPs could be made through the taking over by the Municipality of Bucharest, upon the creditors' consent, the repayment of loans contracted by ELCEN for investments in these CHPs before the splitting of ELCEN and, respectively, before the transfer of the shares owned by ELCEN Bucuresti to the patrimony of the Municipality of Bucharest.

The current situation of ELCEN's sovereign guaranteed loans is as follows: total amount of the external loans contracted by ELCEN from B.R.D. - Groupe Societe Generale, Paris - France is 131.238.357,68 euros, 100% guaranteed by the Ministry of Public Finances ("MPF"), on behalf and on the account of the State, by the Letters of Guarantee no. 5324 and 5325/21.03.2005, of which: 122 million euros for investments funding based on the Government Decision H.G. no. 1312/2003 and 9.238.357,68 euros for a credit insurance bonus; deadline for payment of financial obligations (capital rates, interest) by ELCEN to the external financier above mentioned is August 25, 2014 corresponding to the guarantee no. 5324 and respectively 25 June 2019 corresponding to guarantee no. 5325; by the last due date mentioned above, the amount left for ELCEN to pay for guarantee no. 5324 is 5.228.571,14 Euros representing capital rates to which the related interest shall add up, and for guarantee no. 5325 the amount of 61.174.943,65 Euros representing capital rates to which the related interest shall add up. On 31.12.2012, the debit of SC Electrocentrale Bucharest S.A. to the equity gearing was 219.919.671,42 of which 150.739.363,96 was debit from capital rates, interest, fees and other charges paid by the Ministry of Finance as the Guarantor to internal/external and 69.180.307,46 lei accessories related to the debit from capital rates, interest, fees and other related charges.

The responsibility lies with the Municipality of Bucharest.

**e. Selection through competitive tendering procedures laid down by the legislation in force, of an experienced partner/operator with the professional and financial capability to invest in SACET in order to improve the quality of the Public Service at an affordable tariff for the population and a reasonable contribution from the Municipal budget.**

The Municipality of Bucharest will be able to choose, based on the findings and recommendations of an opportunity study carried out in compliance with the provisions of Law no. 51/2006, for one of the following solutions: privatization of the new company by selling a package of shares, or by increasing the share capital of the new company (as per the provisions of OUG no. 88/1997 regarding privatization of commercial companies and Law no. 137/2002 on certain measures to accelerate privatization), concurrently with the modification/completion of the existing Public Service management delegation contract (in the sense of adding investment obligations to SACET and performance indicators for the public service); privatization of the public service, respectively delegation through concession of the public service management - heat production, transport, distribution and supply (also including the concessioning of the constituent assets of SACET - public property of the Municipality of Bucharest to a new operator, as per Law no. 51/2006 and Law no. 325/2006 and other applicable regulations)

The responsibility lies with the Municipality of Bucharest.

## 7. CONCLUSIONS

Achievement of the Public Service by means of an integrated SACET, through the transfer into the public domain of Bucharest of the 5 CHPs which provide 90% of the heat needed by the customers of the public service (CHP West, CHP South, CHP Progresu, CHP Titan and CHP Grozăvești), will

create the conditions for the settlement of financial problems between ELCEN and RADET and the premises for the delegation of the public service management by the Municipality of Bucharest. High efficiency management of the Public Service will not be limited to the settlement of the financial problems between ELCEN and RADET, as its main objective will be the delegation of the Public Service management to an operator with experience in the field and the financial capacity to achieve significant investments within SACET, able to provide the public service based on performance standards oriented towards energy efficiency increase and at an affordable price for the population, with reasonable efforts from the local budget of the City of Bucharest. This objective can only be achieved by creating an integrated SACET in terms of ownership of the assets that compose it, operated by a single operator which, by means of effective management methods and investments, should optimize costs throughout the entire technological chain and fulfill the performance indicators for the Public Service imposed by the Municipality of Bucharest in the delegation contract of Public Service management.

## ACKNOWLEDGMENT

This article will be included in the analysis regarding the identification of the mechanisms for the streamline of the public service management, the privatization of the public service, respectively the delegation through concession of the public service management representing the real economic solutions for the actual situation of the public services in Bucharest, as we could see in this study case of the heat system, but also at the national level.

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