



**ROMANIAN ENERGY REGULATORY AUTHORITY**



**REPORT**

**ON THE STATUS OF THE PUBLIC SERVICE OF THERMAL ENERGY  
SUPPLY IN CENTRALIZED SYSTEM FOR THE YEAR 2019**

**JUNE 2020**

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This Report was issued according to art. 14, paragraph (2) of the ANRE Order no. 193/2019 approving the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*.

In accordance with the provisions of the *Law on community services of public utilities no. 51/2006, republished, with subsequent amendments and completions*, the activities of production, transport, distribution and supply of thermal energy are subject to licensing, regulation and control of ANRE from the date of entry into force of *Law no. 225/2016 for the amendment and completion of the Law on community services of public utilities no. 51/2006*.

In October 2019, by **Order of the President of ANRE no. 193/2019** was approved the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and /or cooling systems*.

The *Methodology* establishes the parameters used in the monitoring process of SPAET and of the urban heating and/or cooling systems as well as the obligations of the economic operators from the thermal energy sector regarding the reporting of monitoring data, being presented in the same time, in principle, the analyzes and reports performed by ANRE based on the monitoring data received from the economic operators.

Through the monitoring activity of SPAET, ANRE aims to achieve the following objectives:

- to analyze the evolution of SACET at local, regional and national level;
- to evaluate the results obtained by the operators of the public service of thermal energy supply in centralized system and the way of fulfilling the specific obligations/attribution;
- to develop the database specific to the public service of thermal energy supply in centralized system;
- to perform reports on the state of the public service of thermal energy supply in centralized system.

## 2. LEGISLATION APPLICABLE IN THE THERMAL ENERGY SECTOR

### 2.1 – Primary legislation

- **Law no. 51/2006 on community services of public utilities**, republished, with subsequent amendments and completions
- **Law no. 325/2006 on the public service of thermal energy supply**, with subsequent amendments
- **Ordinance no. 36/2006 on certain measures for the operation of the centralized systems of thermal energy supply for the population**, with subsequent amendments and completions
- **Law no. 196/2018 on the establishment, organization and operation of the owners' associations and the administration of condominiums**
- **Energy efficiency law no. 121/2014** with subsequent amendments and completions, transposing the provisions of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing of Directives 2004/8/EC and 2006/32/EC
- **Law on electricity and natural gas no. 123/2012** with subsequent amendments and completions
- **O.U.G. no. 33/2007** regarding the organization and functioning of the National Authority for Regulation in Energy, approved with modifications and completions by Law no. 160/2012
- **O.U.G. no. 53/2019** on the approval of the Multiannual Program for financing investments for the modernization, rehabilitation, refurbishment and extension or establishment of centralized systems of thermal energy supply for localities and for amending and supplementing the Law on community services of public utilities no. 51/2006
- **Law no. 215/2001** of the local public administration

### 2.2- Secondary legislation

- **ANRE Order no. 193/2019** for the approval of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems* (hereinafter referred to as the *Methodology*)
- **ANRSC Order no. 66/2007** on the approval of the *Methodology for establishing, adjusting or modifying the local prices and tariffs for public services of thermal energy produced in centralized system, exclusively the thermal energy produced in cogeneration*
- **ANRSC Order no. 91/2007** for the approval of the *Framework Regulation of the public service for thermal energy supply*

- **ANRE Order no. 188/2019** for the approval of the Regulation for issuing technical approvals on energy efficiency within the Multiannual Program for financing investments for the modernization, rehabilitation, refurbishment and extension or establishment of centralized systems of thermal energy supply for localities
- **ANRE Order no. 28/2017** on the approval of the Regulation for granting licenses in the field of centralized service of thermal energy supply
- **ANRE Order no. 53/2017** on the approval of the Regulation for the authorization of legal entities carrying out activities of installation and operation of cost allocation systems for heating and hot water consumption in condominium buildings
- **ANRSC Order no. 343/2010** for the approval of the Technical Norm regarding the distribution of thermal energy consumption among consumers in condominium buildings, in case of using the distribution systems of costs for heating and hot water for consumption
- **ANRSC Order no. 483/2008** regarding the approval of the Framework Contract for thermal energy supply
- **ANRSC Order no. 92/2007** for the approval of the Framework Specifications of the public service for thermal energy supply service

### 3. THERMAL ENERGY SUPPLY IN CENTRALIZED SYSTEM

#### 3.1 The public service of thermal energy supply in centralized system SPAET

According to the provisions of **art. 1 para. 4 of the Law on community services of public utilities no. 51/2006, republished, with subsequent amendments and completions**, the heat supply service is defined as a public service in order to ensure a high level of safety and accessibility, equal treatment, promotion of universal access and user rights, having the following features:

- has an economic and social character;
- responds to requirements and needs of public interest and utility;
- has a technical-urban character;
- has a permanent character and a continuous operation regime;
- the operating regime may have monopoly-type characteristics;
- implies the existence of an adequate technical-municipal infrastructure;
- the coverage area has local dimensions: communal, urban, municipal or county;
- it is the responsibility of the local public administration authorities;
- it is organized on economic and efficiency principles in conditions that allow them to fulfill their specific public service missions and obligations;
- the management method is established by decisions of the deliberative authorities of the local public administration;
- it is provided based on the "beneficiary pays" principle;
- the recovery of operating and investment costs it is made through prices and tariffs or taxes and, as the case may be, from budgetary allocations. The measure may involve elements of *state aid* type, in which case the local public administration authorities request the approval of the Competition Council.

Thus, the public service of thermal energy supply in centralized system is subject to the legal regime of economic services of general interest and it must meet the following fundamental requirements:

- continuity in terms of quality and quantity;
- adaptability to consumer requirements;
- non-discriminatory accessibility;
- decisional transparency and consumer protection.

#### 3.2 The centralized system of thermal energy supply SACET

**The public service of thermal energy in centralized system** includes all the activities regarding the production, transport, distribution and supply of thermal energy, carried out at the level of

administrative-territorial units (UAT) under the leadership, coordination and responsibility of local public administration authorities or associations for community development, as appropriate, in order to ensure the thermal energy necessary for heating and preparation of hot water for consumption for the population, public institutions, social - cultural objectives and economic operators.

According to the regulations in force, the public service is performed through specific technical-municipal infrastructure, usually belonging to the public or to the private domain of the local public administration authority or association for community development, which forms the centralized system of thermal energy supply.

**The centralized system of thermal energy supply (SACET)** represents a unitary technological and functional set consisting of constructions, installations, equipment, specific endowments and measuring means for the production, transport, distribution and supply of thermal energy in the locality and is made of:

- Thermal power plant;
- District heating power plants;
- Transport networks;
- Distribution networks;
- Thermal points;
- Thermal stations/modules;
- Connections, up to the delimitation/separation points of the installations;
- Auxiliary constructions and installations;
- Measurement, control and automation systems.

**The thermal power plant** represents the set of installations, constructions and equipments necessary for the conversion of a form of energy into thermal energy. Thermal power plants produce only the thermal energy which is suitable for the centralized supply, over long distances, using as thermal agent the hot water (with a temperature higher than 115°C) or steam with average parameters (pressure between 6 -16 bar).

**The district heating power plant (CET)** or cogeneration plant represents the set of installations, constructions and equipment necessary for the production of electricity and thermal energy in cogeneration.

**The transport network** represents the set of pipes which facilitates the continuous transport of thermal energy, from the producer or the transport network to the users.

**The distribution network** represents the set of pipes for the continuous transport of thermal energy, from the distribution installations or the transport network to the users.

**Thermal point (PT)/Thermal station** represents the set of installations through which the transformation and/or adaptation of the thermal agent parameters to the consumption needs of one or

more users is performed.

**Thermal connection** represents the connection between a thermal network and a user's own installations.

**The thermal energy user** represents one or more thermal energy consumers, beneficiary of the public service of thermal energy supply; In the case of condominiums, the user is represented by all consumers in that condominium.

**Community services of public utilities** are defined as the sum of activities regulated by special laws, which ensure the satisfaction of the essential needs of utility and general public interest of social character of the local communities.

### 3.3 Presentation of the monitored economic operators in 2019

SACET operators and the related independent thermal energy producers, which submitted to ANRE the data regarding the activity carried out at the level of 2019, according to the provisions of the *Methodology* are presented by regions in *Table no. 1*.

*Table no. 1 - SACET operators with related independent heat producers*

Region	County	Locality	SACET operators	Independent producers
North-East Region	Suceava	Suceava	Thermonet SRL	Bioenergy Suceava SA
		Rădăuți	Servicii Comunale SA	
		Vatra Dornei	Municipiul Vatra Dornei	
	Bacău	Bacău	Thermoenergy Group SA	
	Botoșani	Botoșani	Modern Calor SA	
	Iași	Iași	Veolia Energie Iași SA	
			RAGCL Pașcani	
Vaslui	Vaslui	Termprod Vaslui SA Goscom Vaslui SA – la finalul anului 2019 a preluat serviciul de alimentare centralizată cu energie termică din Municipiul Vaslui		
		Bârlad	CUP BÂRLAD	
North-West Region	Bihor	Oradea	Termoficare Oradea SA	Transgex SA Oradea
		Beiuș	Transgex SA Oradea Beiuș	
	Cluj	Cluj-Napoca	Termoficare Napoca SA	Colonia Cluj-Napoca Energie
		Huedin	Paulownia GreenE International SRL	
South-West Region	Dolj	Craiova	Termo Craiova SRL	Societatea Complexul Energetic Oltenia SA CET Craiova II
	Mehedinți	Drobeta Turnu Severin	SPAET Drobeta Turnu Severin	
	Gorj	Motru	UATAA Motru SA	
	Vâlcea	Râmnicu Vâlcea	CET Govora SA	
		Olănești		
		Călimănești		
	Horezu	Reimar Construct București –		

			Horezu	
<b>South-East Region</b>	Buzău	Buzău	Regia Autonomă Municipală RAM Buzău	Ecogen Energy SA Ecogen Therm SRL
		Nehoiu	Termo Prest Pon Nehoiu	
	Constanța	Constanța	R.A.D.E.T. Constanța	Societatea Electrocentrale Constanța SA
		Mangalia	Goldterm Mangalia SA	
		Cernavodă	Utilități Publice Cernavodă	Nuclearelectrica SA București
		Năvodari	Termica Distribuție Năvodari	UT MIDIA SA Năvodari
	Galați	Galați	Calorgal SA	
		Tulcea	Energoterm SA	
	Vrancea	Focșani	ENET SA	
		Panciu	D.U.S.P.I. SERV	
<b>South Region</b>	Prahova	Ploiești	Veolia Energie Prahova SRL	
	Giurgiu	Giurgiu	Global Energy Production Giurgiu SA Uzina Termoelectrica Production Giurgiu SA – din sem II 2019 a preluat serviciul de alimentare centralizată cu energie termică din Municipiul Giurgiu	SC Electro Energy Sud SRL București - Giurgiu
	Călărași	Călărași	SPCTAFL. Călărași	
		Lehliu Gară	D.G.C.L. Lehliu Gară	
	Argeș	Pitești	Termo Calor Confort SA	
Mărăcineni				
	Teleorman	Alexandria	Termic Calor Serv	
<b>West Region</b>	Hunedoara	Brad	Termica Brad SA	
		Deva	Societatea Complexul Energetic Hunedoara S.A. - Sucursala Electrocentrale Deva	
		Petroșani	Termoficare SA Petroșani	Complexul Energetic Hunedoara S.A -Sucursala Electrocentrale Paroșeni
	Arad	Arad	CET Hidrocarburi SA	S.C. CET ARAD SA
		Nădlac	Apoterm SA	
	Timiș	Timișoara	Colterm SA	
<b>Center Region</b>	Brașov	Brașov	SPLT Brașov	Bepco SRL Brașov
		Făgăraș	Ecoterm SA	
	Sibiu	Sibiu	Urbana SA Sibiu	
	Covasna	Întorsura Buzăului	Termo - Întorsura SRL	
		Sfântu-Gheorghe	Urban-Locato	
	Harghita	Odorheiu Secuiesc	Urbana SA Odorheiu Secuiesc	
Miercurea Ciuc		Goscom SA Miercurea Ciuc	Poligen Power Energy	

				S.R.L. Miercurea Ciuc
		Gheorgheni	SPLT Gheorgheni	
<b>Bucharest-Ilfov Region</b>	București	București	R.A.D.E.T. București	CET Grivița SRL București
				Vest - Energo SA București
				Electrocentrale București S.A
	Ilfov	Otopeni	Veolia Energie România SA	

**Source:** ANRE

At the end of 2019, 46 operators of centralized systems of thermal energy supply from 51 localities, located in 29 counties, were active. During 2019, 4 operators ceased their activity, respectively: RAGCL Pașcani, S.C. Thermal Heat Serv. SRL Alexandria, S.C. Termoficare SA Petroșani, SC Termo-Întorsura Întorsura Buzăului.

The evolution of the number of SACET operators in the period 2017-2019 is presented in Table no. 2, the detailed situation regarding the identification of the operators being presented in Table no. 2 of Annex 6 of the current Report.

*Table no. 2 – The evolution of the number of SACET operators in the period 2017-2019*

Region	Year 2017		Year 2018		Year 2019	
	Sem. I	Sem. II	Sem. I	Sem. II	Sem.I	Sem. II
North-East Region	9	9	9	9	9	8
South-East Region	8	8	10	10	10	10
South Region	7	7	7	7	6	5
South-West Region	4	4	4	4	5	5
West Region	5	5	5	5	6	5
North-West Region	4	4	4	4	4	4
Center Region	6	8	8	8	8	7
Bucharest/Ilfov Region	2	2	2	2	2	2
<b>Total</b>	<b>45</b>	<b>47</b>	<b>49</b>	<b>49</b>	<b>50</b>	<b>46</b>

**Source:** ANRE – collected data from monitored operators

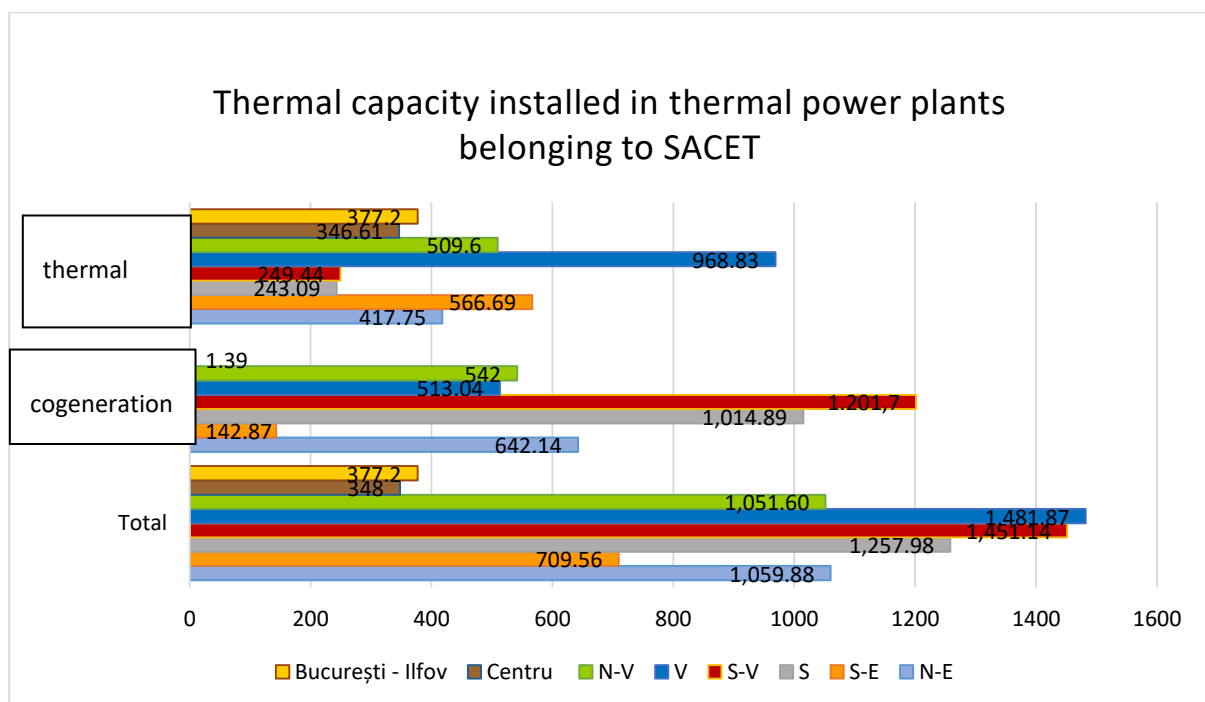
## 4. THE MAIN CHARACTERISTICS OF SACET

### 4.1. Thermal capacity installed in thermal power plants belonging to SACET

At the level of year 2019, based on the data reported by the SACET operators resulted a total thermal installed capacity in thermal power plants belonging to SACET of 7,737.22 MW, from which 4,058.02 MW represent the cogeneration production capacity and 3,679.20 MW represent the thermal capacity of separate production of thermal energy. These data do not include the thermal energy production capacities of the independent producers from which the SACET operators bought thermal energy in 2019.

In figure no. 1 it can be observed the fact that the highest installed thermal capacity in thermal power plants belonging to SACET is in the Western region - 1,481.87 MW, followed by the South-West region - 1,451.14 MW. At the opposite pole are the Central regions with 348 MW and Bucharest - Ilfov with 377.20 MW.

Figure nr. 1 - Thermal capacity installed in thermal power plants belonging to SACET, by regions (MW)



**Source:** data collected from the monitored operators (Annex 1 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

### 4.2 The number of thermal power plants belonging to SACET

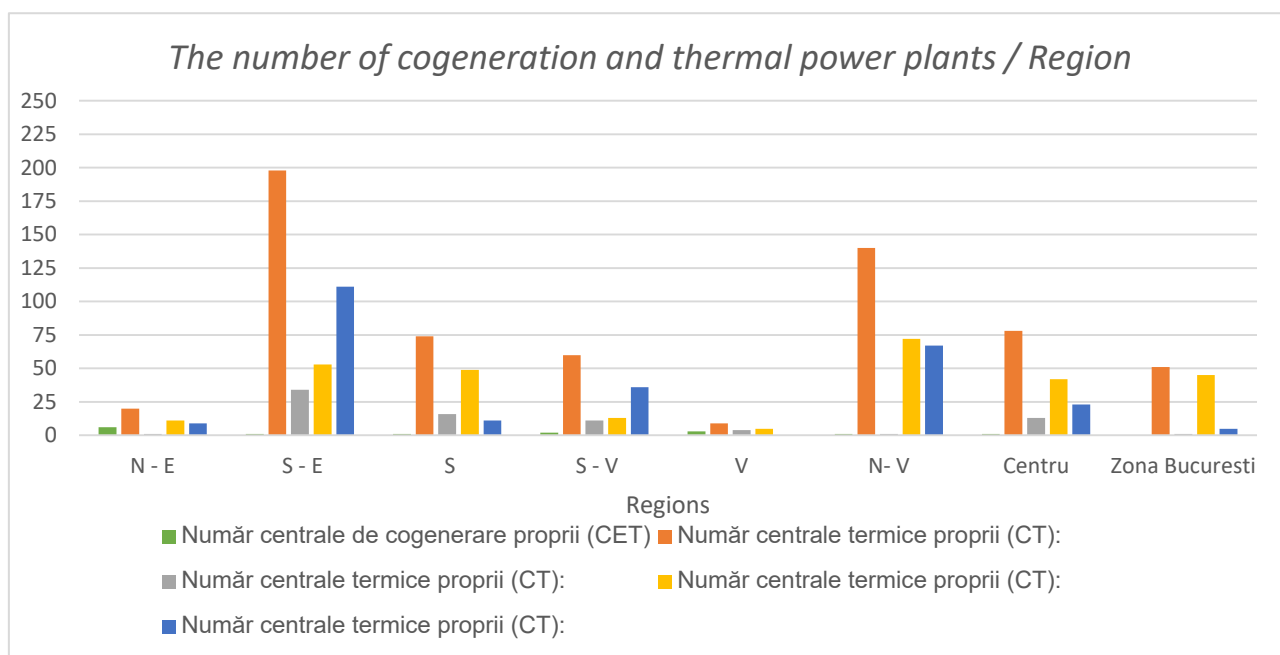
The SACET system includes 15 cogeneration plants (CET) and 633 thermal power plants (CT), of which 81 area thermal power plants, 290 neighbourhood thermal power plants and 262 block thermal power plants. The distribution of these plants, by regions, is presented in Figure no. 2.

Table no. 3 - The evidence of the number of cogeneration plants (CET) and of the number of thermal power plants (CT) belonging to SACET, by regions

Region	The number of cogeneration plants (CET)	The number of thermal power plants (CT)		
		Area	neighbourhood	Block
North – East	6	1	11	9
South – East	1	34	53	111
South	1	16	49	11
South – West	2	11	13	36
West	3	4	5	0
North - West	1	1	72	67
Center	1	13	42	23
Bucharest-Ilfov	0	1	45	5

**Source:** data collected from the monitored operators (Annex 1 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure nr. 2 – The number of cogeneration and thermal power plants / Region



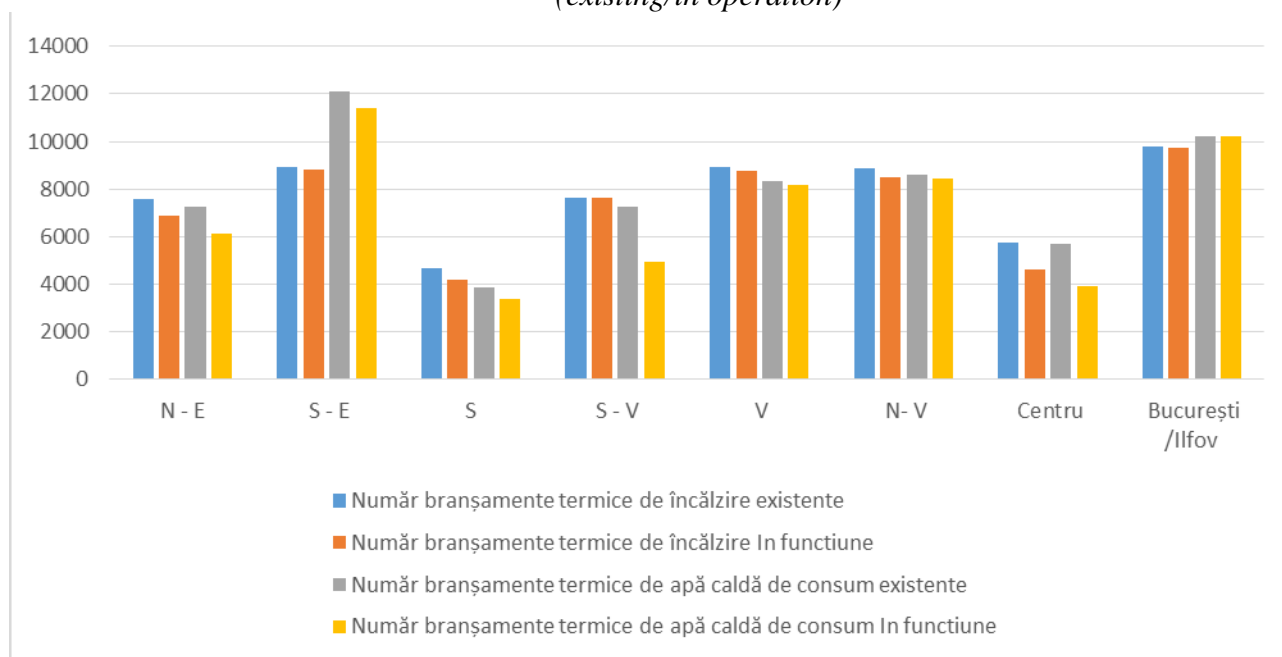
**Source:** data collected from the monitored operators (Annex 1 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

### 4.3 Thermal connections

At national level, from the reported data resulted that at the end of 2019, the public service of thermal energy supply in centralized system amounted to a total of 110,069 existing thermal connections (thermal connections of hot water from the transport system, thermal heating connections, hot water and steam) of which 100,326 in operation, according to Annex no. 2.

In figure no. 3 it is presented the situation of the number of thermal heating and hot water connections, both existing and in operation, for each of the 8 geographical regions.

*Figure no. 3 - the situation of the number of thermal heating and hot water connections (existing/in operation)*

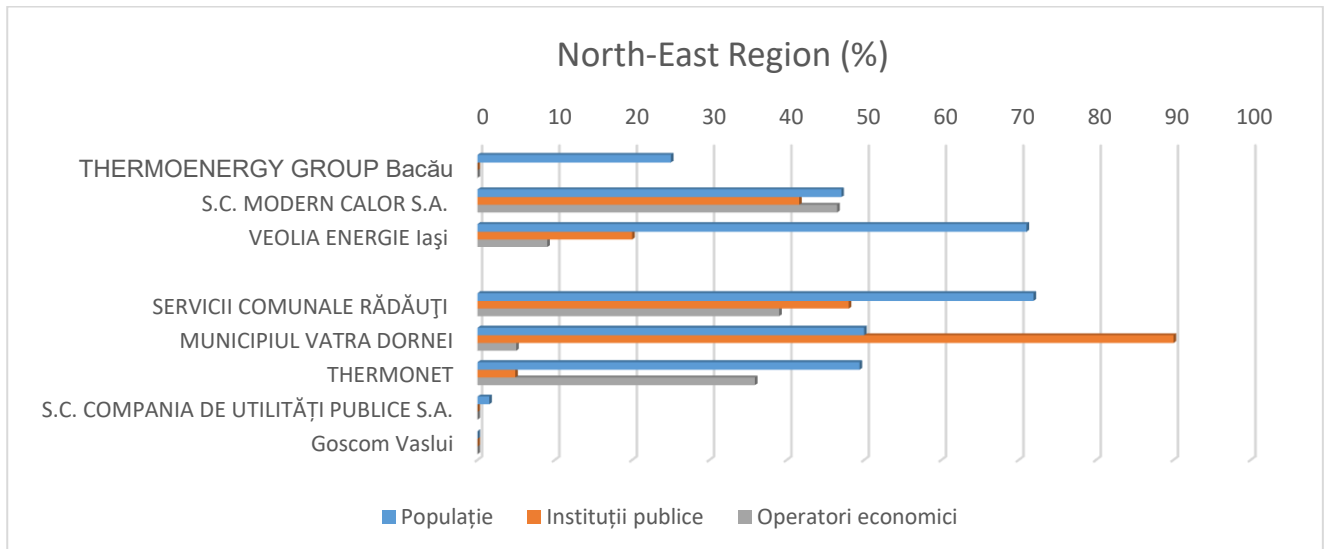


**Source:** data collected from the monitored operators (Annex 1 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

#### 4.4 The SACET connection rate of thermal energy consumers

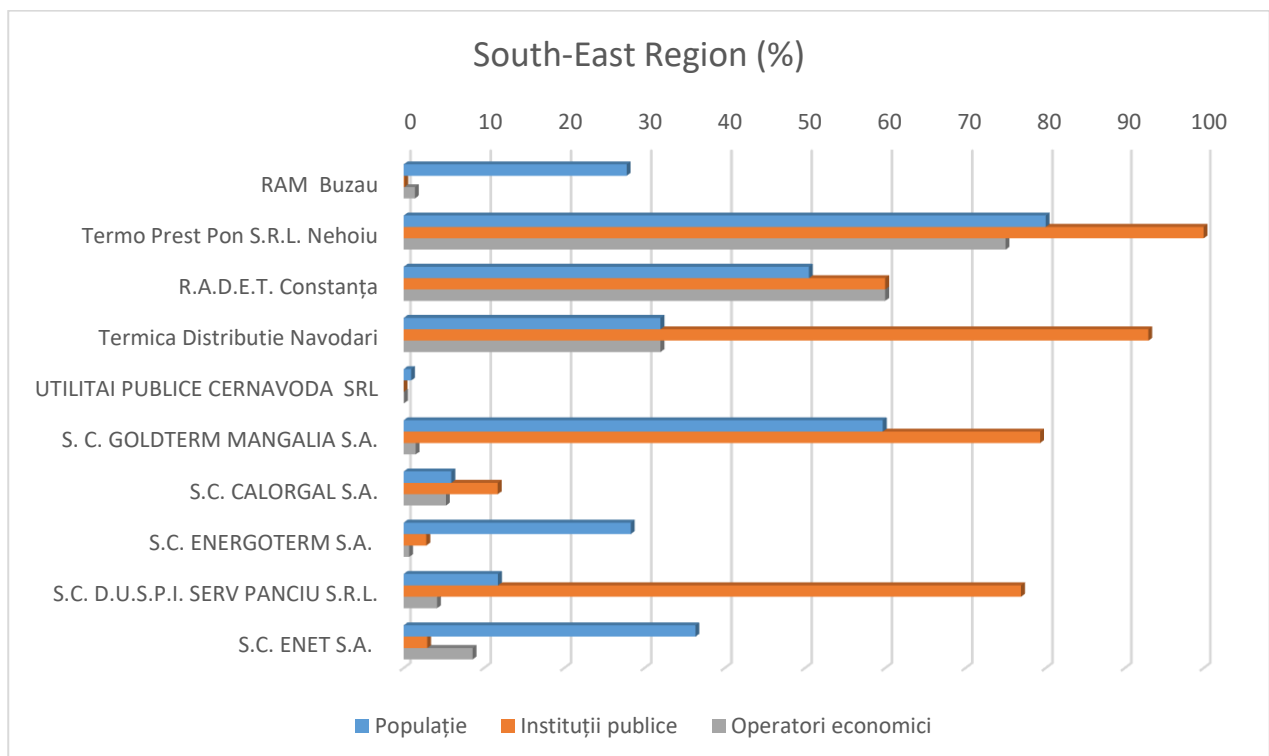
According to the data reported by the monitored operators for 2019, the situation of the connection rate to SACET of the thermal energy consumers is presented below, by regions.

Figure nr. 4 - The SACET connection rate of thermal energy consumers from the North-East Region (%)



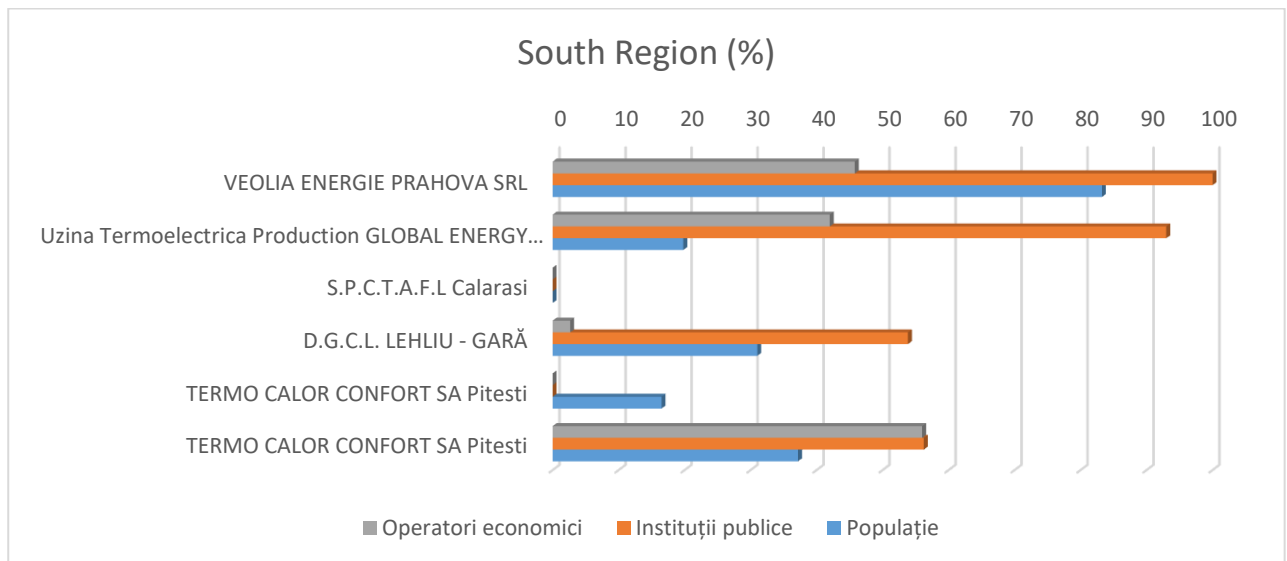
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 5 - The SACET connection rate of thermal energy consumers from the South-East Region (%)



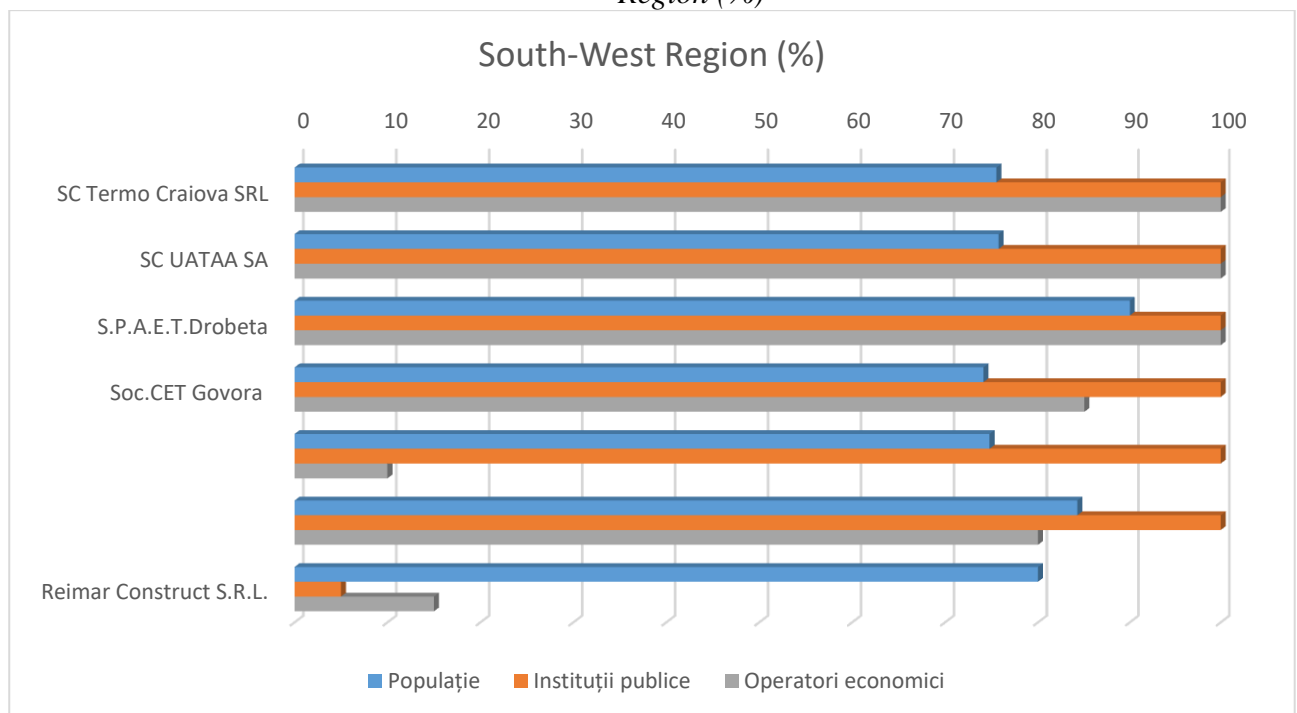
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 6 - The SACET connection rate of thermal energy consumers from the South Region (%)



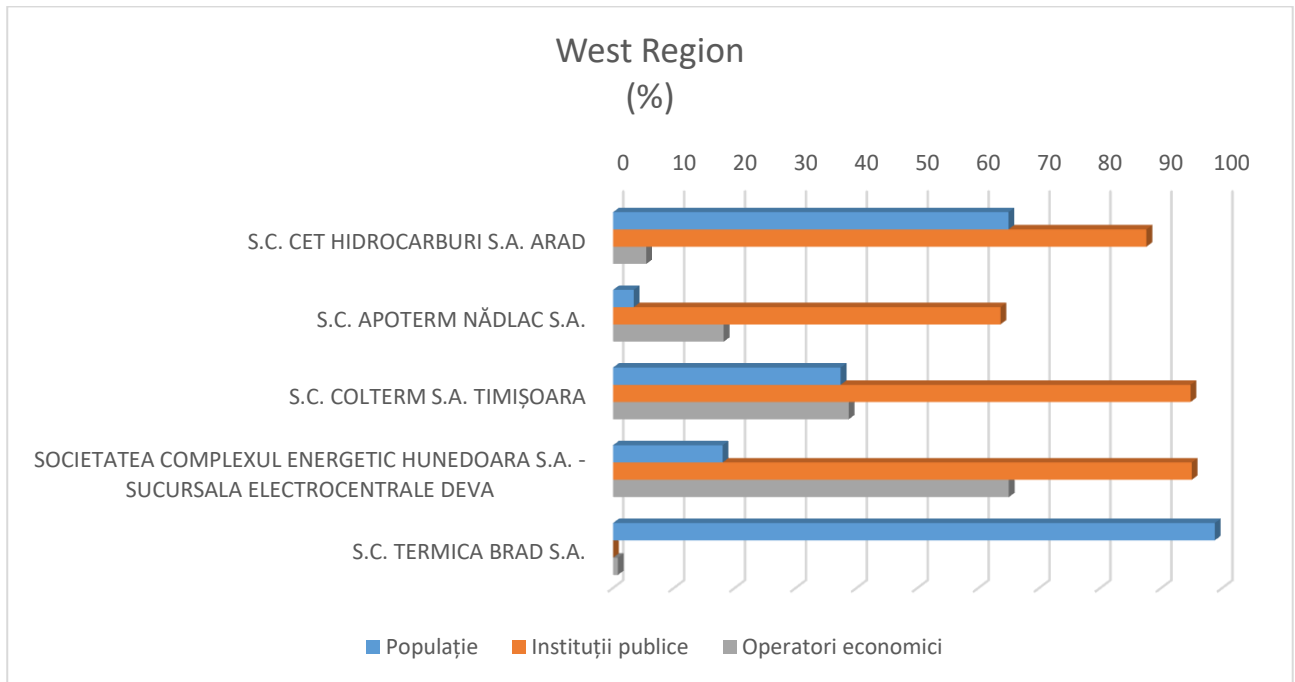
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 7 - The SACET connection rate of thermal energy consumers from the South –West Region (%)



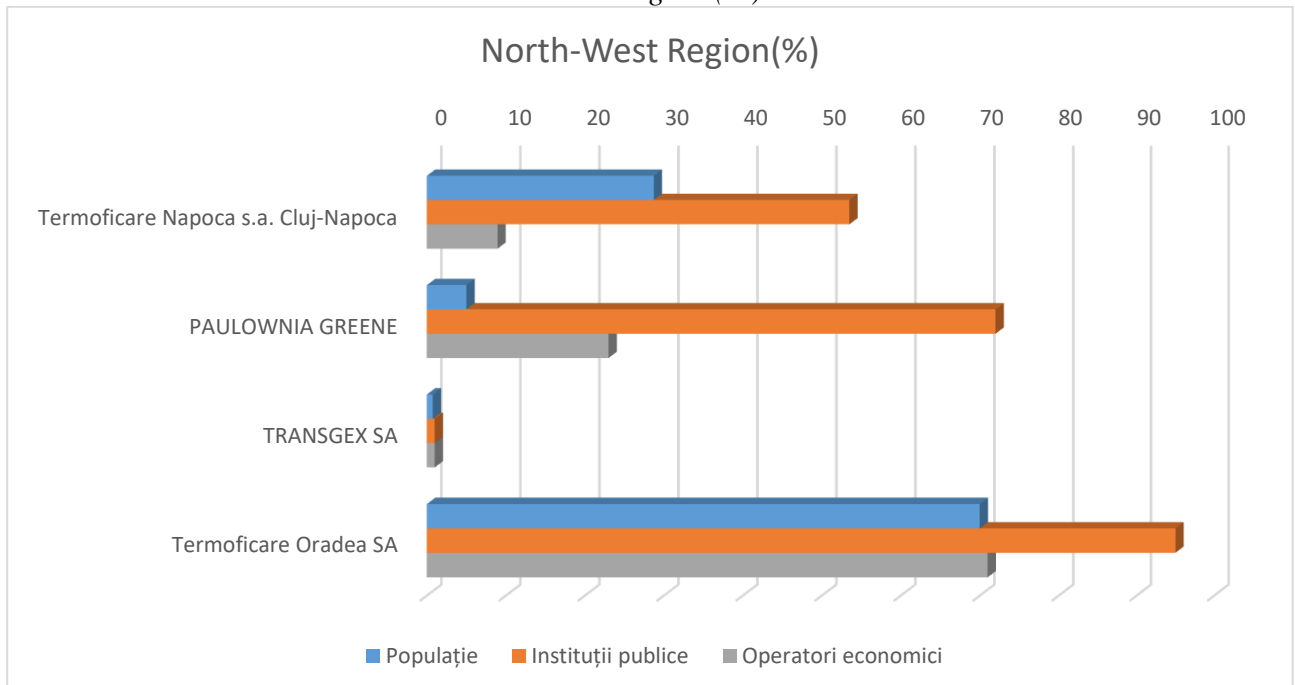
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 8 - The SACET connection rate of thermal energy consumers from the West Region (%)



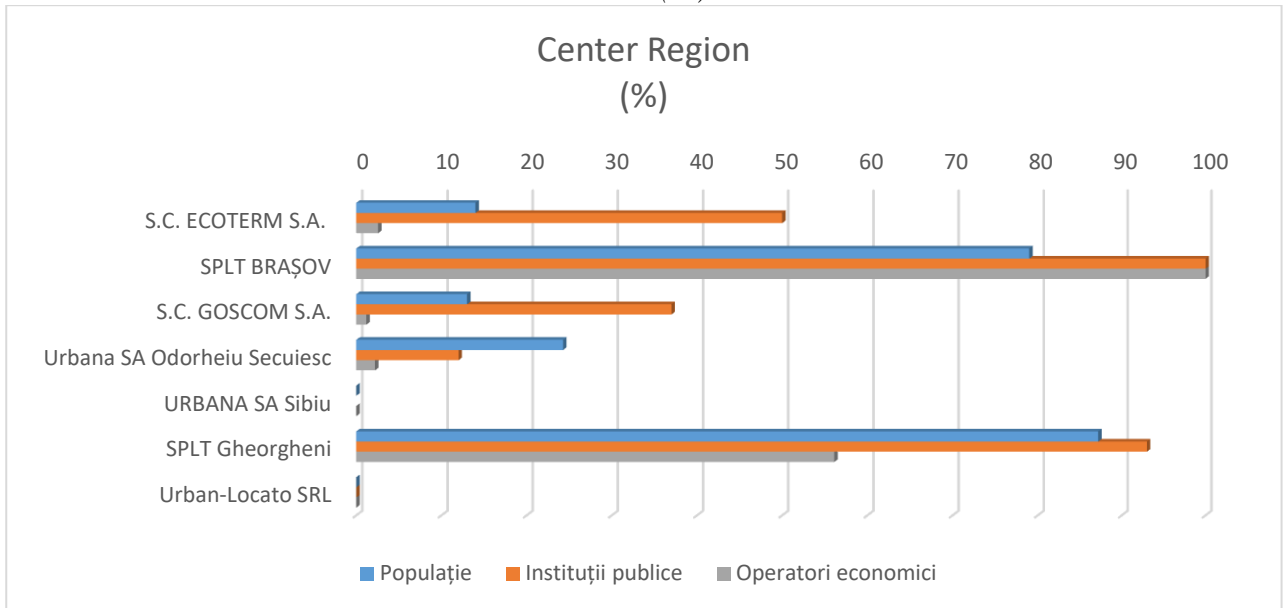
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 9 - The SACET connection rate of thermal energy consumers from the North –West Region (%)



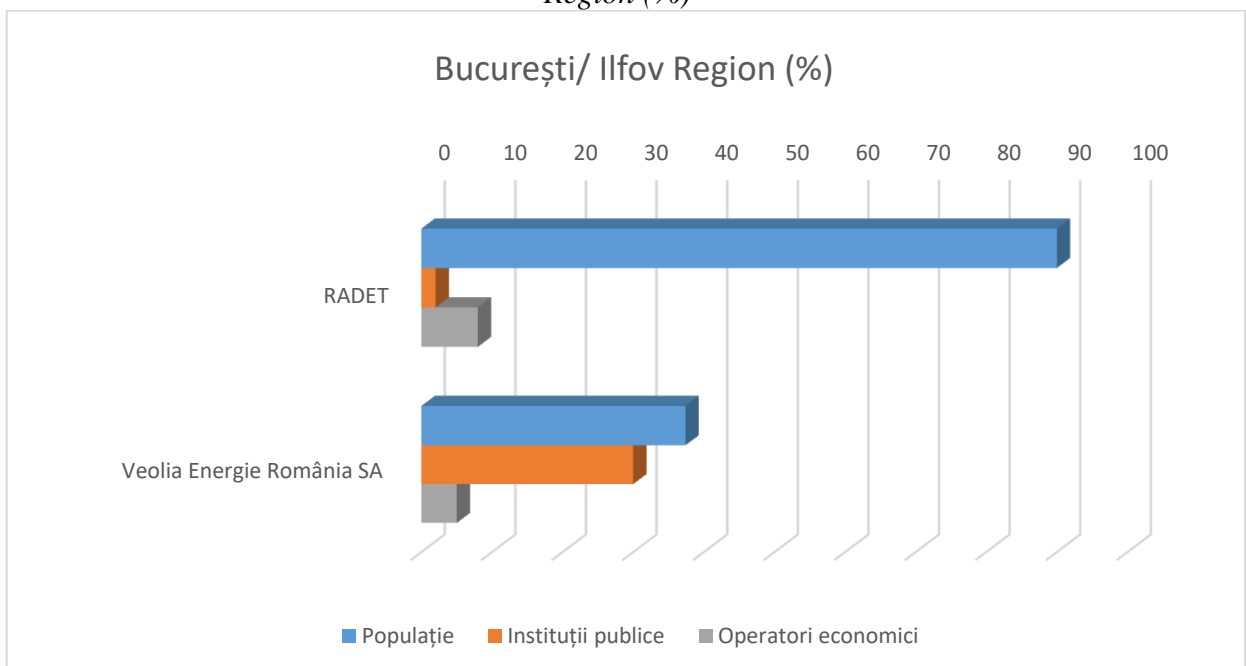
**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 10 - The SACET connection rate of thermal energy consumers from the Center Region (%)



**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 11 - The SACET connection rate of thermal energy consumers from the București/Ilfov Region (%)



**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

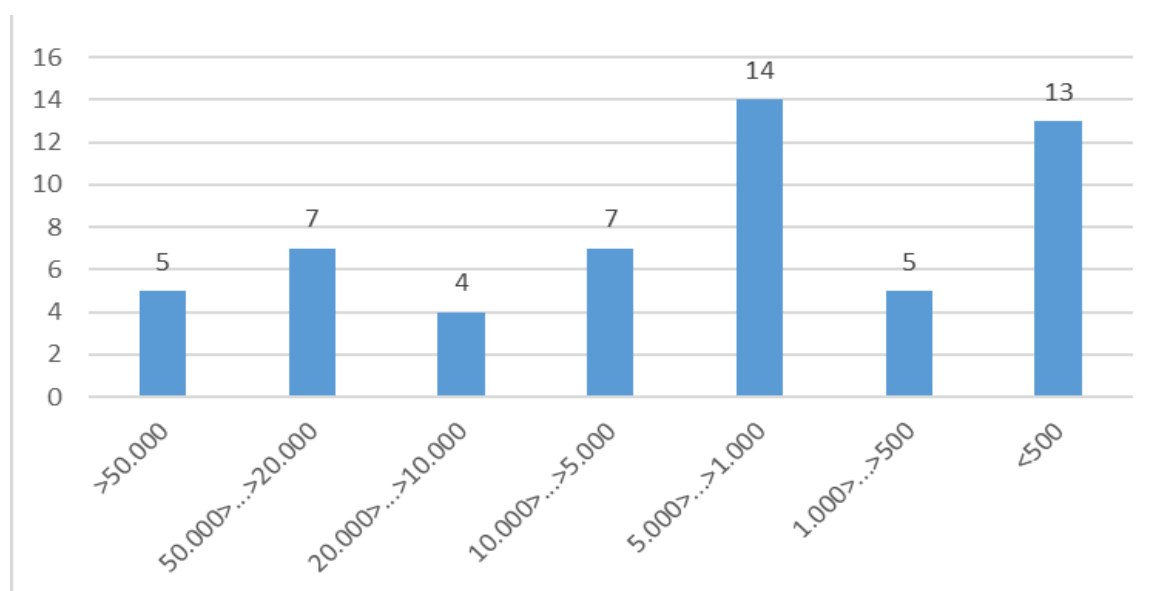
## 5. GENERAL SITUATION OF SPAET

### 5.1 The number of thermal energy consumers in SACET

Following the process of data centralization collected from the reports submitted by operators, at national level there is a total number of 1,156,202 consumers supplied from SACET, of which 13,520 are economic operators, 2,361 public institutions and 1,140,321 consumers representing the housing sector (apartments and/or houses).

Of the 55 centralized systems of thermal energy supply, 16 are of large dimension, with over 10,000 consumers, 21 of them are medium-sized, representing from 1,000 to 10,000 consumers, and 13 of them are small, with up to 1,000 consumers. A more detailed situation is presented in the following graph:

Figure no. 12 The number of thermal energy consumers in SACET

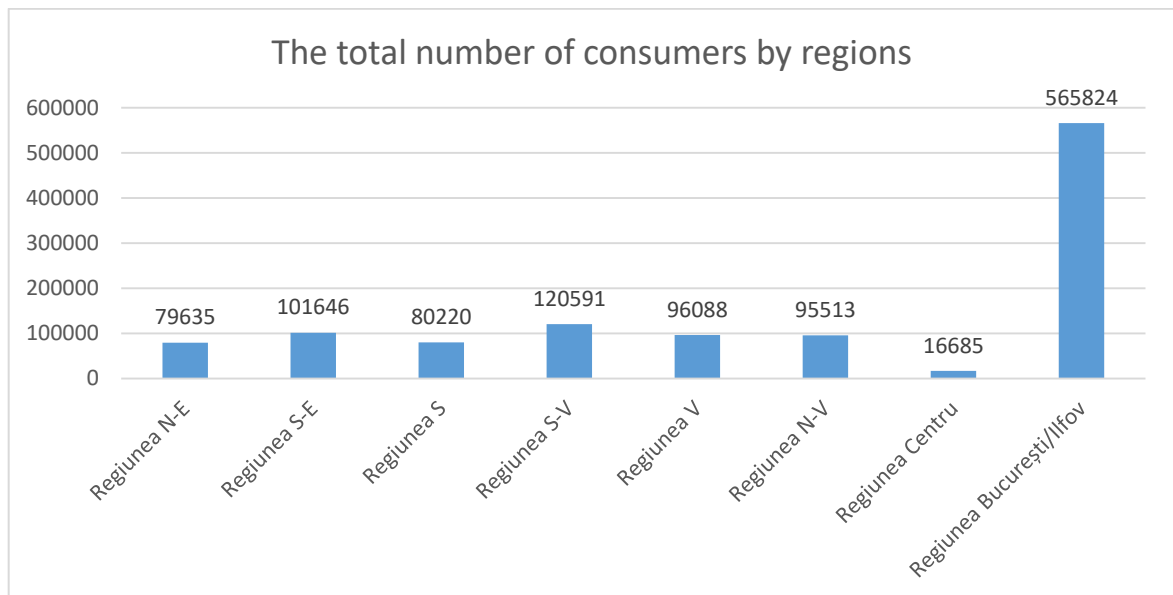


**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Most consumers supplied from SACET are in Bucharest (565,108), Oradea and Sânmartin Commune (68,832), Craiova (60,157), Timișoara (57,498), Ploiesti (54,871), Constanța (49,450), Arad (29,832) and Iași (28.155).

Compared to the regions, the highest number of consumers connected to SACET is in the Bucharest - Ilfov region (565,824), followed by the South-West region (120,591), the lowest number of consumers connected to SACET being registered in the Center region (16,685) (according to the following graph).

Figure no. 13 - The total number of thermal energy consumers in SACET by regions



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

The situations of consumers by regions and by categories are presented in table no. 4.

Table no. 4 – The number of consumers supplied from SACET /regions

Region	The number of economic operators supplied from SACET, at the end of 2019	The number public institutions supplied from SACET, at the end of 2019	Number of housing (apartments and/or houses) supplied from SACET, at the end of 2019
North - East	1.102	272	78.261
South - East	2.329	238	99.079
South	837	163	79.220
South -West	1.269	304	119.018
West	1.453	548	94.087
North-West	2.024	217	93.272
Center	266	93	16.326
Bucharest - Ilfov	4.240	526	561.058

**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

The highest number of housing supplied from SACET is in the Bucharest/Ilfov region - 561,058, and the lowest is in the Center region, with 16,326 housing supplied.

The same situation it is maintained in the case of the number of economic operators supplied from SACET, for which the Bucharest/Ilfov region reported a total of 4.240 and for the Center region a total of 266.

The highest number of public institutions supplied from SACET was reported in the West region, and the lowest number was registered as well in the Center region.

In 35 localities, the number of housing supplied from SACET decreased in 2019 compared to 2018, the largest decrease being registered in the city of Galați (9,656), followed by Buzău (3,222), Constanța (1,972), Arad (1,806), Cluj-Napoca (1,505), Năvodari (1,303), Iași (965). As it can be seen, there are significant decreases in the number of consumers also in the large cities, either as a result of an intentional local public policy (see the case of Galați), or as a consequence of how SACET has managed to provide heat in adequate conditions of quality, price and continuity of supply.

Table no. 5 presents the data on the evolution of the number of houses and apartments connected to SACET in each region, in the period 2017-2019 noting the decreasing trend of the number of houses and apartments supplied from SACET.

*Table no. 5 – The number of houses and apartments connected to SACET, in the period 2017-2019*

<b>Region</b>	<b>Indicator</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>North-East Region</b>	Total number of houses and apartments connected to SACET	90.078	81.073	78.261
	Number of disconnected houses and apartments	3.164	9.243	2.484
	Number of reconnected houses and apartments	263	238	195
<b>South-East Region</b>	Total number of houses and apartments connected to SACET	121.393	105.005	99.079
	Number of disconnected houses and apartments	24.779	21.738	18.086
	Number of reconnected houses and apartments	783	213	157
<b>South Region</b>	Total number of houses and apartments connected to SACET	82.248	79.703	79.220

	Number of disconnected houses and apartments	998	2.562	892
	Number of reconnected houses and apartments	167	17	79
<b>South-West Region</b>	Total number of houses and apartments connected to SACET	123.147	119.726	119.018
	Number of disconnected houses and apartments	2.302	3.583	1.464
	Number of reconnected houses and apartments	714	162	39
<b>West Region</b>	Total number of houses and apartments connected to SACET	96.740	95.577	94.087
	Number of disconnected houses and apartments	2.195	1.268	3.073
	Number of reconnected houses and apartments	136	105	96
<b>North-West Region</b>	Total number of houses and apartments connected to SACET	95.527	94.128	93.272
	Number of disconnected houses and apartments	1.609	1.965	1.515
	Number of reconnected houses and apartments	563	566	9
<b>Center Region</b>	Total number of houses and apartments	12.279	11.271	16.326

	connected to SACET			
	Number of disconnected houses and apartments	1.444	1.080	544
	Number of reconnected houses and apartments	44	72	12
<b>Bucharest/Ilfov Region</b>	Total number of houses and apartments connected to SACET	562.027	561.213	561.058
	Number of disconnected houses and apartments	306	893	960
	Number of reconnected houses and apartments	141	79	90

**Source:** data collected from the monitored operators (Annex 2 of the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

**NOTE:**

*Between the data related to 2017 and 2018, which was collected by ANRE, until the issuance of the Methodology, based on the models published on the website and on some ad-hoc requests and the data for 2019, reported by SACET operators according to the provisions of the Methodology, there may exist differences due to different interpretations of SACET operators, in the absence of some methodological clarifications which were established once with the issuance of the above mentioned Methodology. In 2017 and 2018, the reporting was made for the number of apartments connected to SACET, and in 2019, the Methodology approved by ANRE's Order no. 193/2019, stipulates that the reporting will be made for the number of housing (apartments and/or houses) supplied from SACET at the end of the reporting period.*

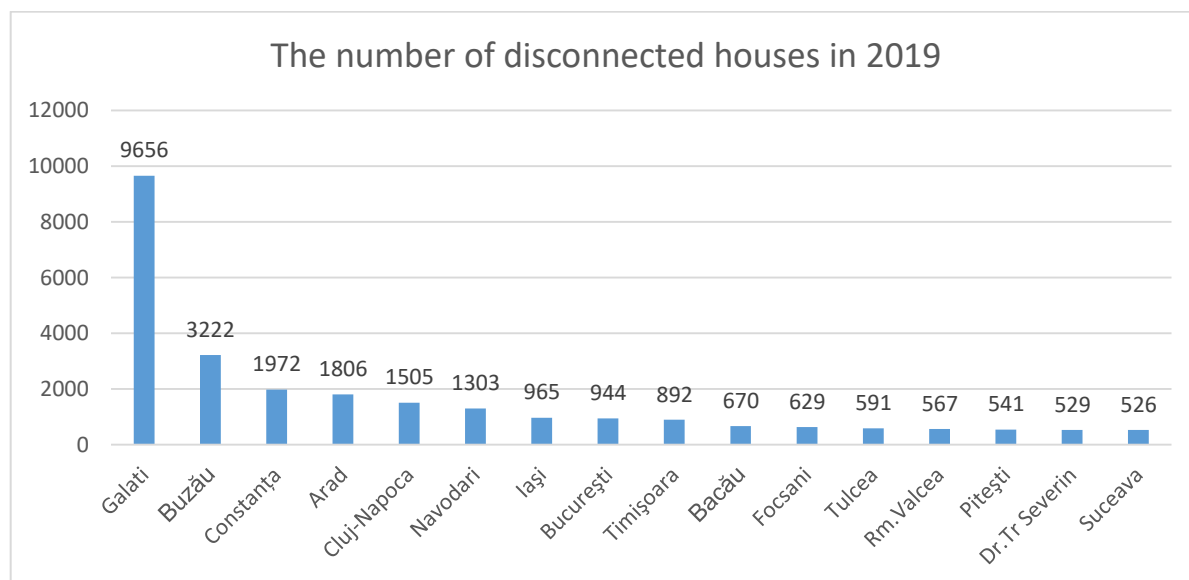
According to the data presented in table no. 5, the Bucharest-Ilfov Region registered the highest number of houses and apartments connected to SACET in 2019 (561.058 houses and apartments served by the centralized system of thermal energy supply), followed by the South-West Region (with 119.018 houses and apartments served by the centralized system of thermal energy supply) and the South-East Region which reported 99.079 houses and apartments served by the centralized system of thermal energy supply.

According to the data provided to ANRE by the operators, at 2019 level, the highest number of housing (apartments and/or houses) supplied from SACET was covered by Radet Bucharest (with a number of 560.359 houses and apartments served by the centralized system of thermal energy supply), followed by Termoficare Oradea (with a number of 66.806 houses and apartments served by the centralized system of thermal energy supply), Termo Craiova (with a number of 59.690 houses and apartments served by the centralized system of thermal energy supply), Colterm SA Timișoara (with a number of 56.634 houses and apartments served by the centralized system of thermal energy supply), Veolia Energie Prahova (with a number of 54.317 houses and apartments served by the centralized system of thermal energy supply), Radet Constanța (with a number of 48.292 houses and apartments served by the centralized system of thermal energy supply).

## 5.2. The number of disconnected and reconnected houses and apartments

In 2019, in 13 out of 55 localities there were significant disconnections (over 5%) of the houses and apartments from SACET. The highest rate of disconnections was registered in Galati (61.87%), where the local authority financially supported the transition of thermal energy consumers, from SACET to the use of individual thermal power plants.

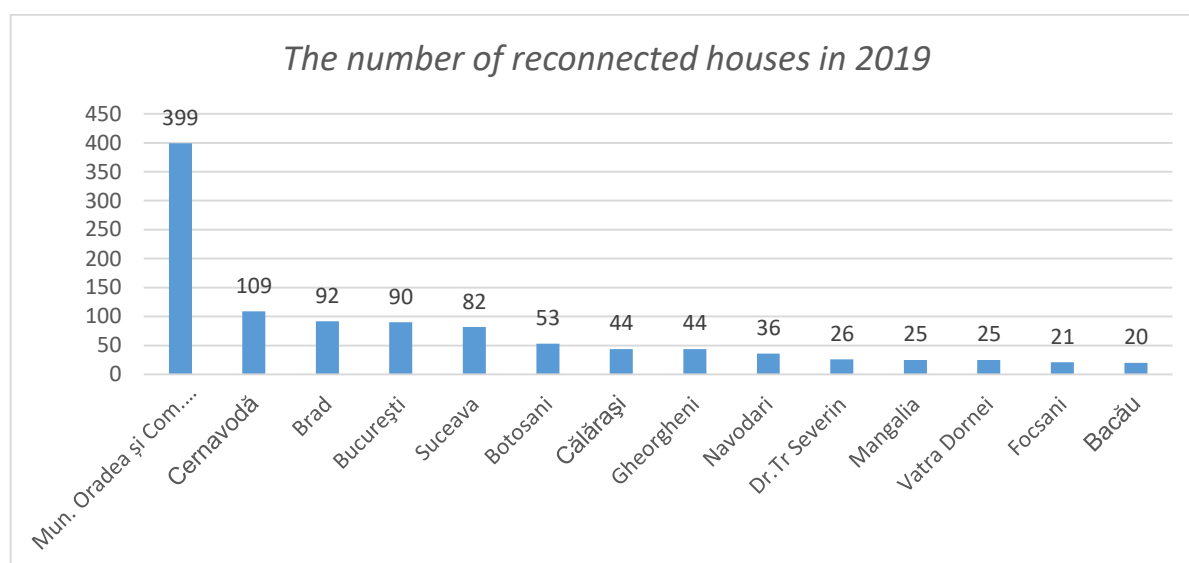
Figure no. 14 – The number of disconnected houses



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

At the same time, in 28 out of 55 localities with SACET, there were reconnections of the houses and apartments to the heat centralized system, mostly of low values, as it results from the following graph.

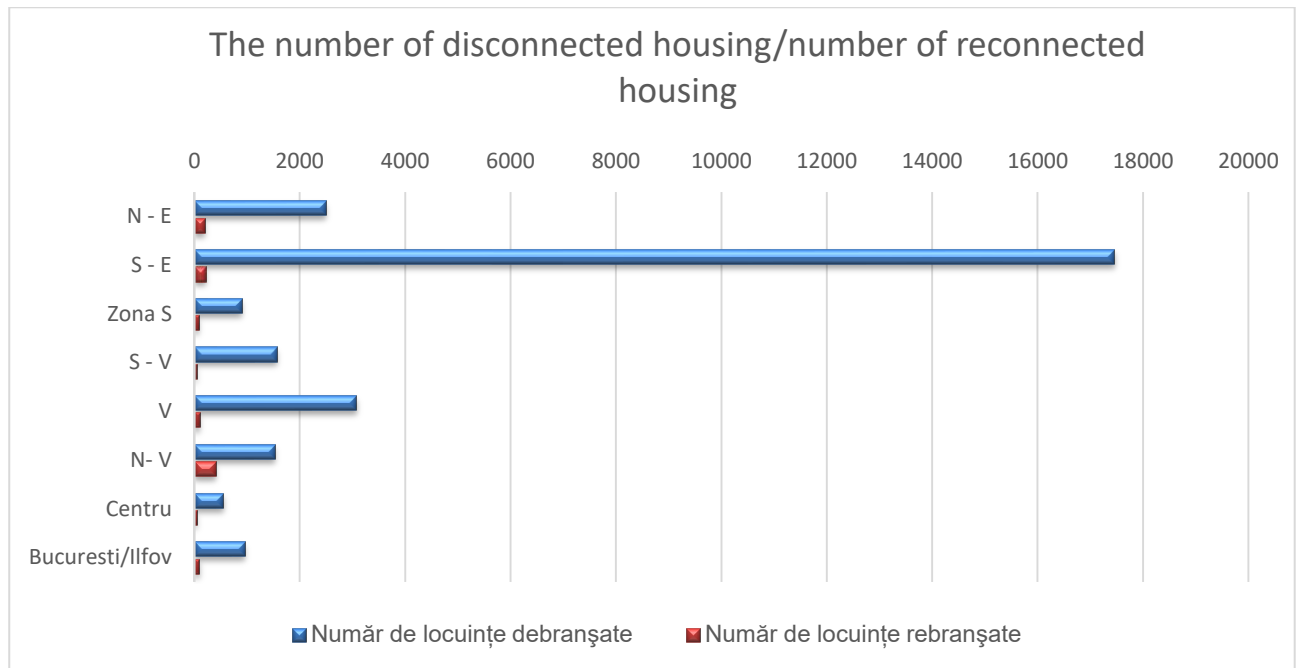
Figure no. 15 – The number of reconnected houses



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

In terms of regions, it is observed that the region with the highest rate of disconnections is represented by the South-East, the main reason being the large number of disconnections reported in Galați – 9.656, in Buzău – 3.222, in Constanța – 1.972 and in Năvodari – 1.303. The region with the highest rate of reconnections is the Western Region, where 92 reconnections were reported in Brad and 4 in Deva.

Figure no. 16 – The number of disconnected housing/number of reconnected housing/regions in 2019



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

### 5.3 The value of revisions and reparations

In 2019, according to the data reported by the operators, revisions and reparations works were carried out in a total amount of 75,386.23 thousand lei, representing about 55% of the planned value, the aggregated data being presented by regions in table no. 6.

Table no. 6 - The value of planned and performed revisions and reparations

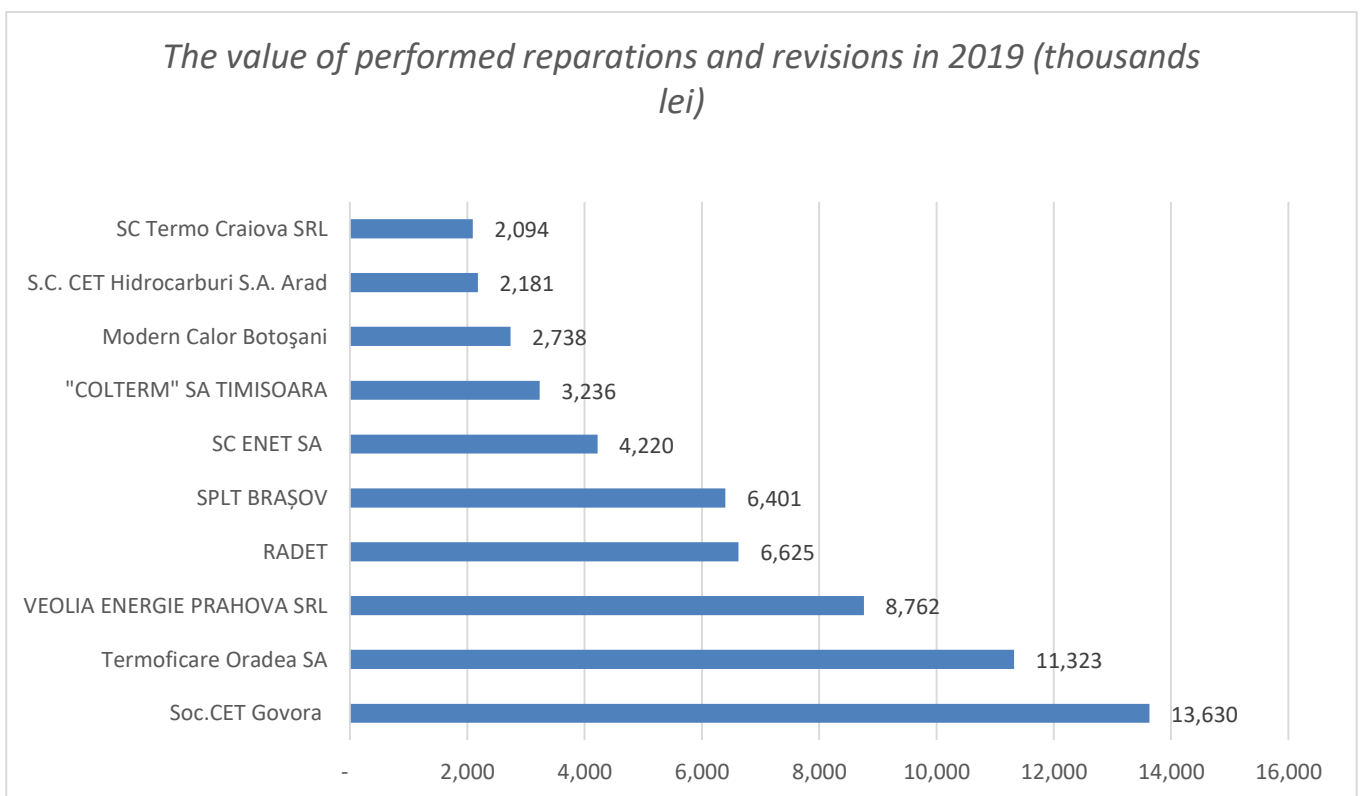
Region	The value of planned and performed revisions and reparations for 2019 (thousand lei)	The value of planned and performed revisions and reparations at the end of 2019 (thousand lei)
North-East	9.383,70	7.743,90
South-East	9.055,13	7.175,66
South	11.865,69	9.613,79
South-West	27.377,23	17.145,16
West	6.804,50	6.172,09

North-West	17.496,30	12.883,07
Center	8.106	7.623
Bucharest-Ilfov	47.746,83	7.030,03

**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

According to the data reported by the operators, the most relevant reparations works were carried out by CET Govora, in the amount of about 13.630 thousand lei. Five operators (Vatra Dornei Municipality, GLOBAL ENERGY PRODUCTION Giurgiu, Uzina Termoelectrica Production Giurgiu, S.C.DUSPI SERV Panciu, TERMIC CALOR SERV S.R.L. Alexandria) did not registered reparations/revisions in 2019.

*Figure no. 17 – The value of performed reparations and revisions in 2019 (thousands lei)*



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

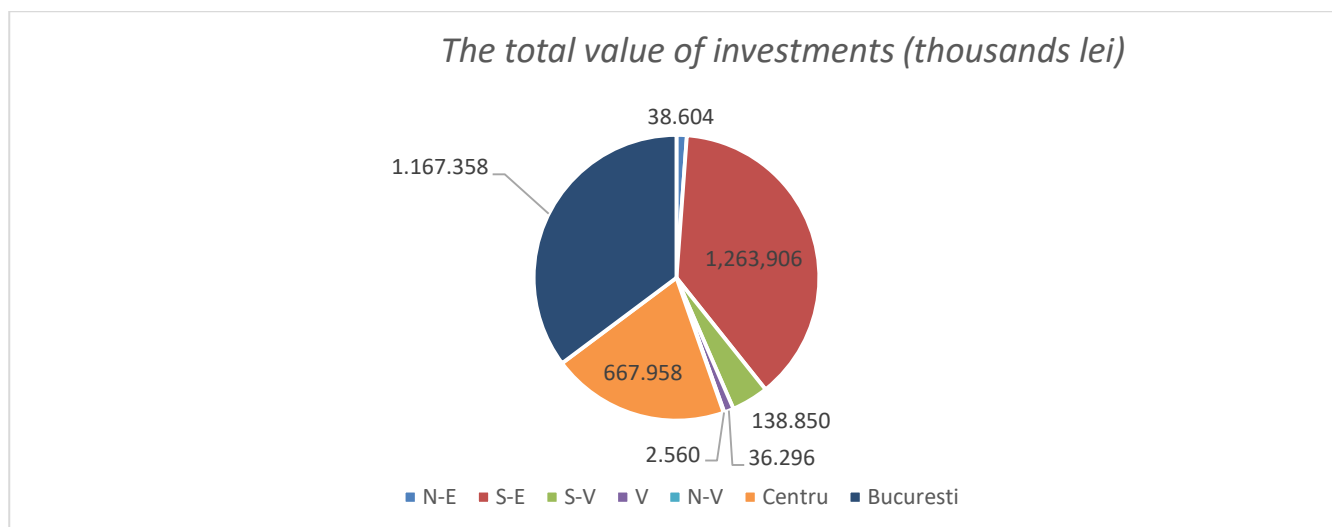
## 6. THE STATUS OF INVESTMENTS MADE IN SACET INFRASTRUCTURE IN 2019

At the level of 2019, the SACET operators reported both the value of the planned investments and the one related to the realized investments, the aggregated data by regions being presented in table no. 7.

### 6.1 The total value of investments

The figure below shows the total value of investments reported by SACET operators, value which is distributed by regions as follows:

Figure no. 18 – The total value of investments (thousands lei)



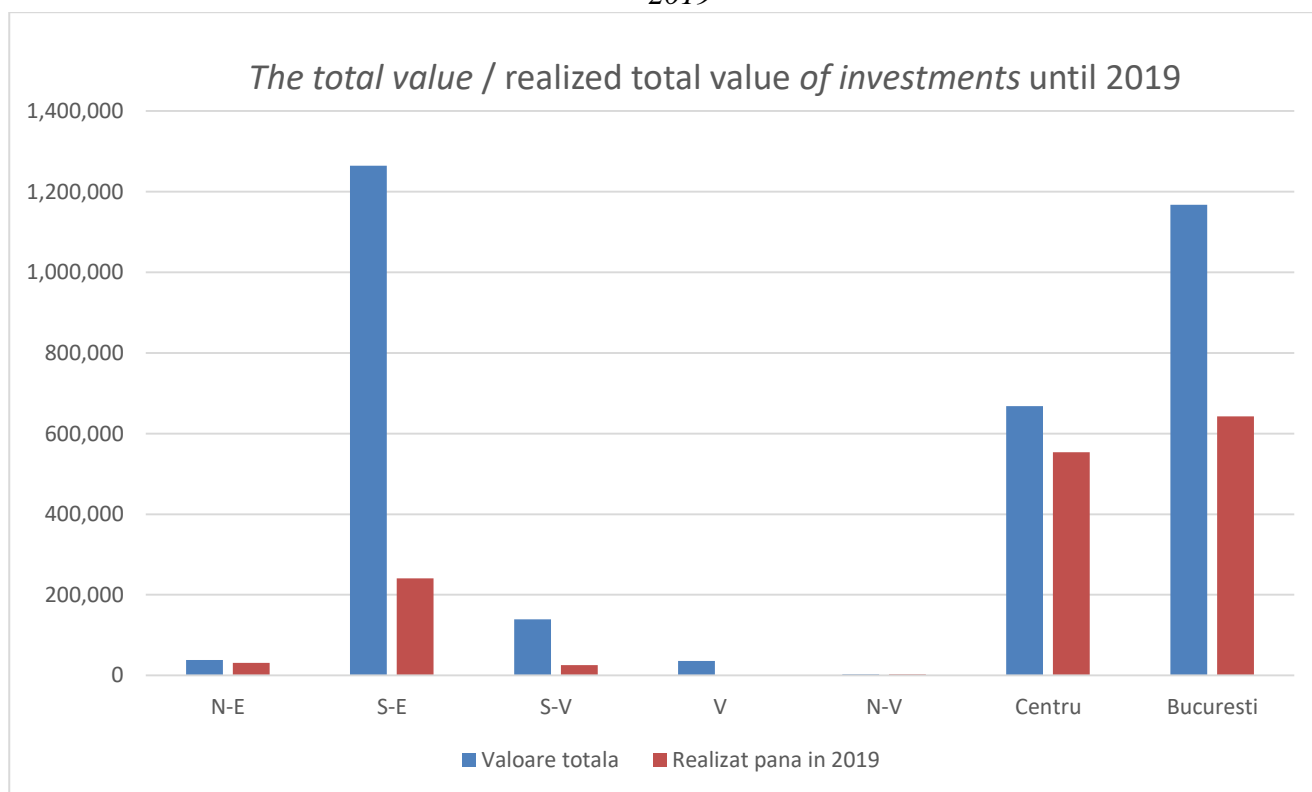
**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

As it can be observed, in the South - East region was reported the highest total value of planned investments, of which, by the end of 2019, was achieved a percentage of 19%. Among the operators in this region, Cernavoda Public Utilities has rehabilitated the thermal networks, and RADET Constanța succeeded to make some thermal points more efficient.

In Bucharest, RADET Bucharest reported that by the end of 2019, a percentage of 50% of the total value of the planned investment has been achieved. In the Center region, by the end of 2019, a percentage of 80% of the planned investment value was reported as achieved.

Comparatively, the total value of the planned investments and the value of the investments made by the end of 2019 are presented for each region in figure no.19.

Figure no. 19 – The total value of investments/planned and realized, by regions by the end of 2019



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Table no. 7 - Investments planned and realized by operators in 2019

Region	The value of the investment (thousands lei )		The value of the investment in 2019 (thousands lei)									
	TOTAL	of which achieved by the end of 2019	TOTAL		of which by funding sources:							
			Planned	Realized	State budget		Local budget		Credits		Own sources (development quota/ modernization)	
					Planned	Realized	Planned	Realized	Planned	Realized	Planned	Realized
North-East	38.604	30.876	26.980	24.025	15.967	15.321	7.703	6.336	3.071	2.328	240	40
South-East	1.263.906	240.738	184.790	172.567	0	0	180.030	169.947	0	0	4.760	2.620
South-West	138.850	25.355	50.216	12.966	27.955	1.890	11.981	810	0	0	10.280	10.266
West	36.296	238	36.295	238	0	0	33.624	0	0	0	2.671	238
North-West	2.560	2.701	2.557	2.698	0	0	557	557	0	0	2.000	2.140
Center	667.958	553.601	874.958	603.541	0	0	299.751	296.327	0	0	575.207	307.215
Bucharest- Ilfov	1.167.358	642.330	38.764	13.030	0	0	38.764	13.030	0	0	0	0

<b>Total</b>	<b>3.315.531</b>	<b>1.495.839</b>	<b>1.214.559</b>	<b>829.065</b>	<b>43.922</b>	<b>17.211</b>	<b>572.409</b>	<b>487.006</b>	<b>3.071</b>	<b>2.328</b>	<b>595.158</b>	<b>322.518</b>
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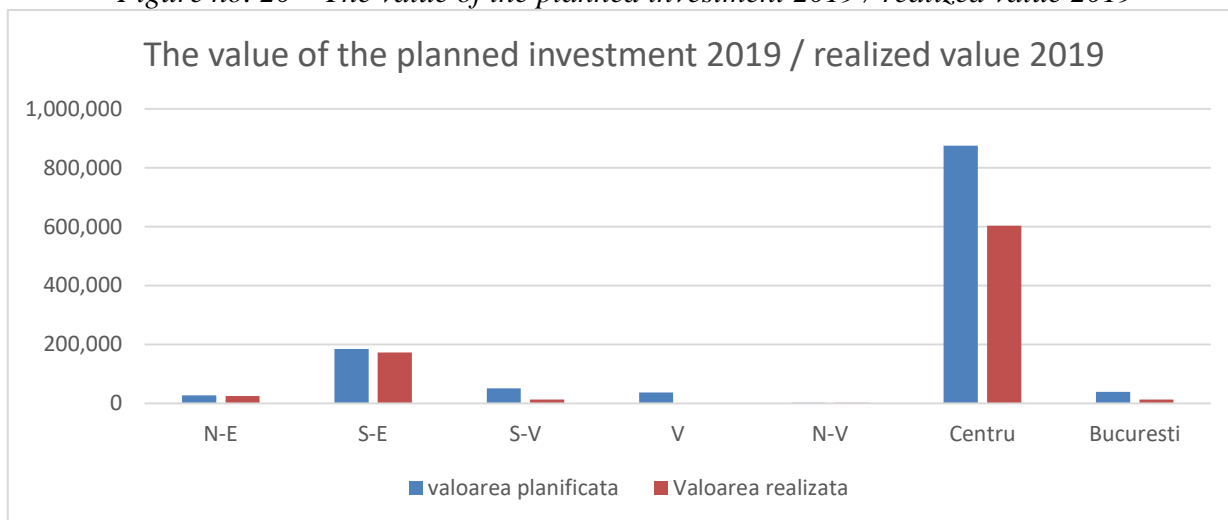
**Source:** ANRE – Data collected from the monitored operators

## 6.2 The value of the investments in 2019

Regarding the investments related to 2019, based on the reported data, in the Center region was registered the highest planned and achieved value, the aggregate data by regions being presented in figure no. 20.

Among the operators in this region, SPLT Braşov expanded its thermal network in order to connect the National College "Grigore Moisil" to SACET, SPLT Gheorgheni purchased new thermal modules to replace the existing ones and succeeded to connect the Municipal Nursery to SACET. The source of funding for these investments was from the local budget and from own sources.

Figure no. 20 – The value of the planned investment 2019 / realized value 2019



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

The source of funding for these investments comes in most cases from the local budget and from own sources.

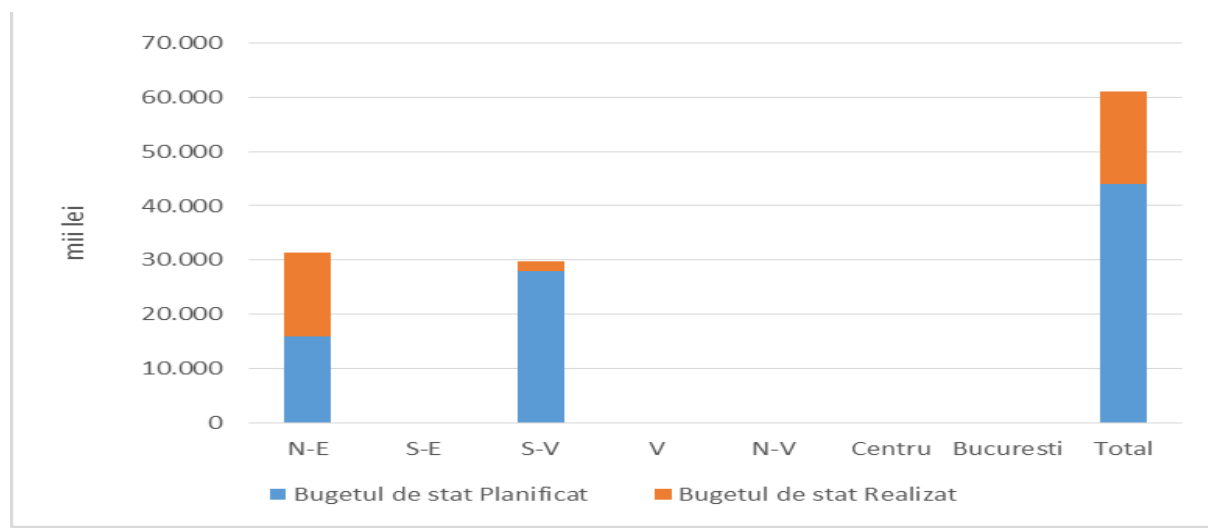
Some of the SACET operators from the North - West region, such as Vatra Dornei Municipality and Thermonet Suceava have accessed loans for the rehabilitation of the centralized system of thermal energy supply of Vatra Dornei municipality, respectively for the rehabilitation of the thermal energy transport and distribution system in Suceava PT Parc, PT Obcini 4, PT Zamca 4. The municipality of Vatra Dornei also used sources from the state budget.

SC Termo Craiova SRL, one of the operators in the South-West region, accessed sources from the state budget for the purchase of meters equipped with remote reading and data transmission systems.

In order to ensure a public service of thermal energy supply for the localities, as efficient and viable as possible, while respecting the legal requirements of continuity and quality, the sources of investment financing for the development/modernization of SACET must be ensured, considering that, apart from the social benefit on the accessibility of thermal energy for the low-income category of population, the international experience has highlighted the economic and environmental benefits of district heating systems (in terms of energy efficiency and pollution control) and the contribution of these systems to strengthening energy security and facilitating flexibility in the use of various categories of primary resources.

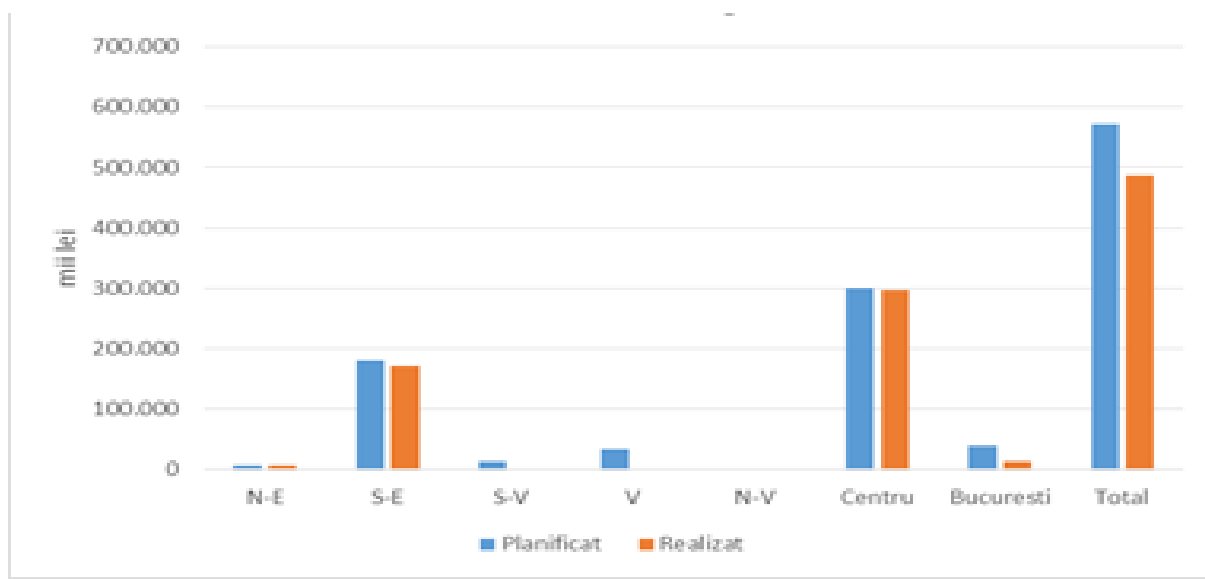
The collected amounts for investments in SACET in 2019 come from the state budget, local budgets and from the own sources of the operators (development/modernization quota). The planned and achieved values in each region are presented in the following graphs, for each category of funding source:

*Figure no. 21 – Funding source: state budget/ regions*



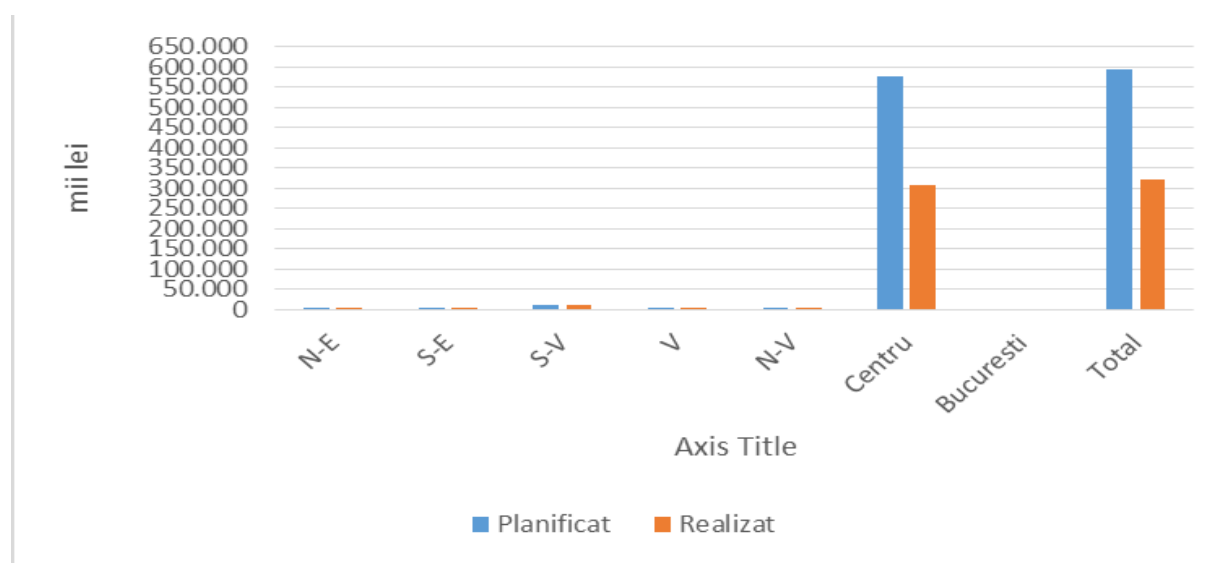
**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figure no. 22 – Funding source: local budget/regions



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

Figura nr. 23 - Funding source: own sources/regions



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

The "District Heating 2006-2020 heat and comfort" Program comes to financially support the need to make investments in the modernization/development of centralized heating systems, in order to meet the legal requirements for ensuring the quality and continuity of the public heating service and the desideratum regarding the technical efficiency and economic viability of SACET, by reducing the

losses in the transport/distribution networks, capitalizing on the potential of high efficiency cogeneration, using the renewable energy sources, reducing the impact on the environment.

During 2019, ANRE issued a number of 9 technical approvals on the efficiency of the investment projects for Oradea City Hall (6), Braşov City Hall (1), Giurgiu City Hall (1), Motru City Hall (1) and a number of 4 approvals for completing the technical approvals regarding the efficiency of the investment projects for the City Hall of Tulcea (1), the City Hall of Vatra Dornei (1), the City Hall of Braşov (1), the City Hall of Sibiu (1).

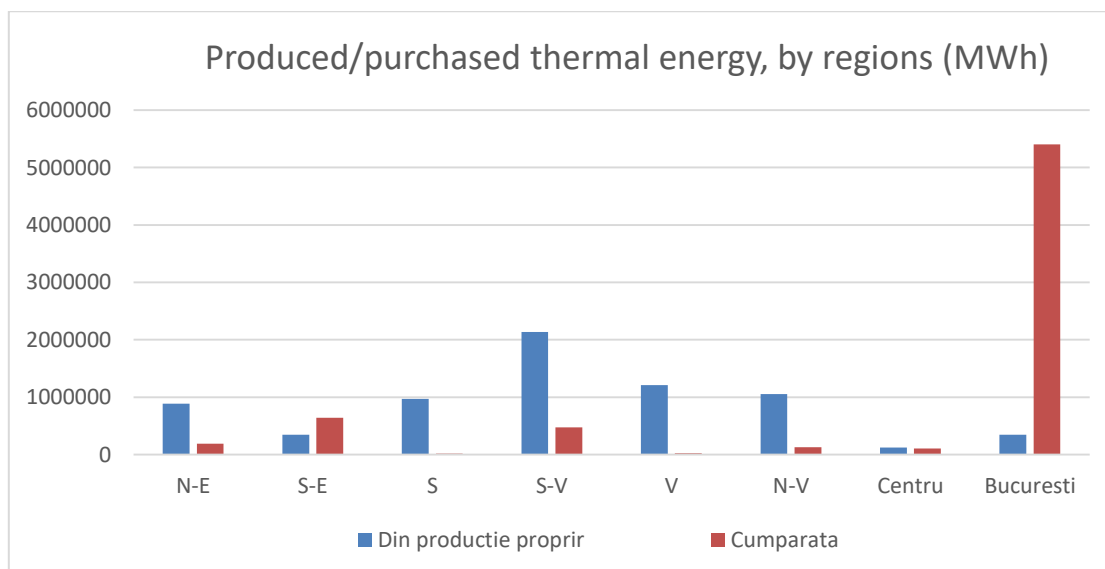
## 7. TECHNICAL-ECONOMIC RESULTS ACHIEVED BY SACET OPERATORS IN 2019

In 2019, the SACET operators have reported the amount of thermal energy delivered from their own production as well as that purchased from the independent producers and the amount of thermal energy sold to consumers, the aggregate data being presented, by regions, in table no. 8.

### 7.1 Amounts of thermal energy produced/purchased by regions

Figure no. 24 shows the distribution of the amount of thermal energy produced/purchased by regions, being observed that the highest amount was recorded in Bucharest.

Figure no. 24 – The distribution of the produced/purchased thermal energy amount, by regions



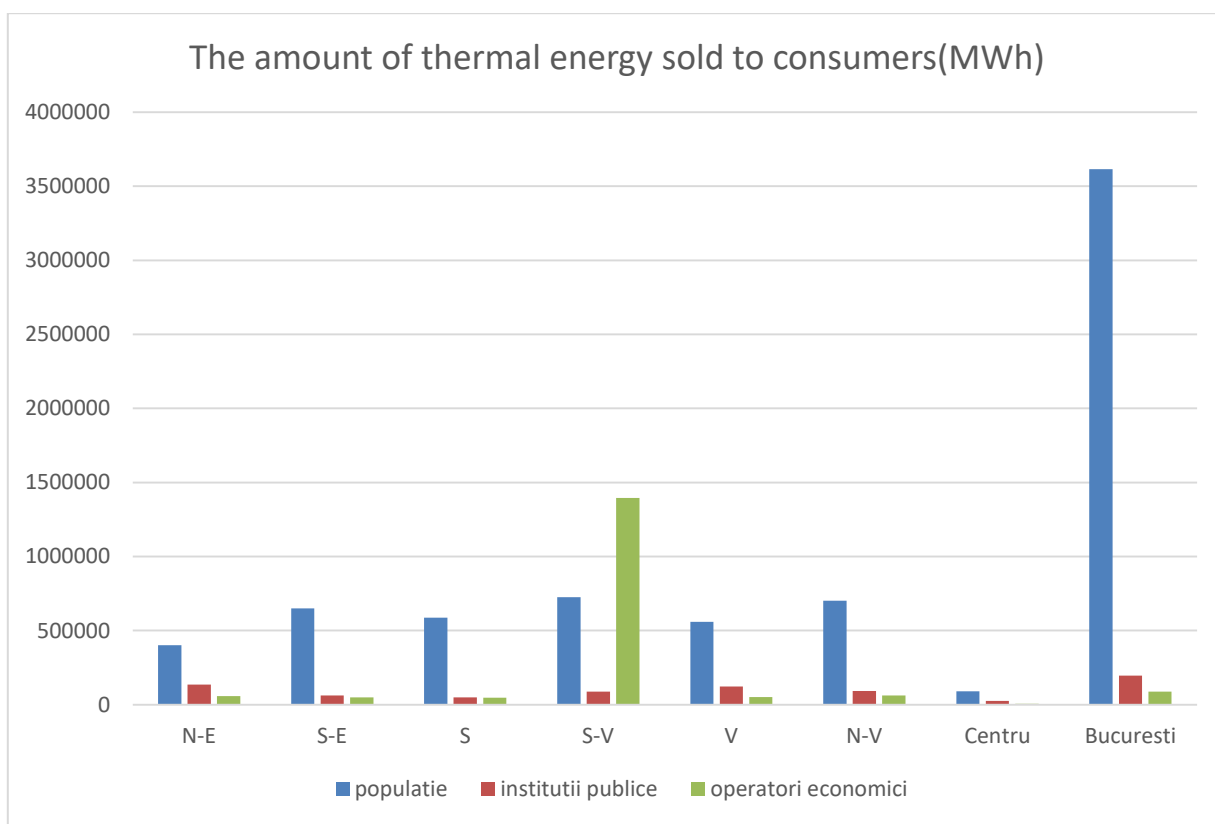
**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

## 7.2 The total amount of sold thermal energy

From the data presented by regions in figure no. 25 it can be observed that the highest amount of thermal energy sold to consumers was registered in Bucharest.

Regarding the amount of thermal energy sold to consumers, distributed by regions, it can be remarked the fact that in 2019 about 41% of the amount of thermal energy sold at national level was traded in the Bucharest region, the next region being the South - West, where there was a percentage of about 19% of the amount of heat traded at national level, in the Center region being highlighted the lowest percentage of only 2% of the amount of heat traded at national level.

Figure no. 25 - The amount of thermal energy sold to consumers (MWh), by types of consumers



**Source:** data collected from the monitored operators (according to the *Methodology for monitoring the public service of thermal energy supply in centralized system and of the urban heating and/or cooling systems*)

From the above presented data, it resulted that, in 2019, from the amount of thermal energy traded at national level, the quantity sold to the population represented 74% of the total amount of energy; to public institutions: 8%, and to economic operators: 18%.

Table no. 8 - Technical-economic results of SACET operators in 2019, by regions

Region	Thermal energy produced and/or purchased (MWh)			Thermal energy sold to consumers (MWh)				Number of employees by the end of the reporting period	SACET development/modernization expenses (thousand lei)
	Total	from own production	purchased	Total	Population	Public institutions	Economic operators		
North - East	1.077.396	888.483	188.913	596.597	402.208	135.665	58.724	903	27.261
South - East	986.975	344.857	642.118	762.576	65.1107	61.286	50.183	1.357	1.588
South	1.016.864	988.954	27.910	705.694	599.545	58.188	47.961	677	4.559
South -West	2.611.489	2.137.434	474.055	2.209.444	725.583	87.609	1.396.252	1.355	0
West	1.232.281	1.210.583	21.698	734.008	559.762	122.234	52.011	1.249	952
North - West	1.181.117	1.053.315	127.802	855.903	701.998	92.160	61.745	736	16.727
Center	225.087	119.462	105.624	122.154	89.755	26.419	5.980	208	3.581
Bucharest - Ilfov	5.749.008	343.025	5.405.983	3.901.139	3.616.475	197.165	87.499	754	13.984

Source: ANRE – data collected from the monitored operators

### 7.3 Local prices for thermal energy supply

In accordance with the *Law on community services of public utilities no. 51/2006, republished, with subsequent amendments and completions*, the local prices/tariffs related to the public service of thermal energy supply in centralized system are approved by the local public administration authorities, under the special law conditions and in compliance with the methodologies issued by the competent regulatory authority. According to the provisions of art. 5 of the **Law no. 325/2006 on the public service of thermal energy supply**, the local price and the local price for the population are defined as follows:

- **The local price** - price consisting of the price of thermal energy production and the tariffs for transport, distribution and supply, approved by the local public administration authority or by the association for community development, as the case may be, with the approval of the competent regulatory authority, for each operator which has also the quality of supplier;
- **The local price for population** - price for the thermal energy supplied and invoiced to the population through SACET, approved by decision of the local public administration authority or of the association for community development, as the case may be, in accordance with the legal provisions;

Also, in compliance with the provisions of art. 40 of the same Law:

- the local prices are established, adjusted or modified based on the methodologies approved by the competent regulatory authority. In their calculation, the justified costs of the activities of production, transport, distribution and supply of thermal energy will be taken into account, including the expenses related to the development and modernization of SACET, technological losses, expenses for environmental protection, as well as a profit share, which will not exceed 5%.
- the local prices for the population which are used when invoicing the thermal energy are approved by the local public administration authorities or by the associations for community development, as the case may be, according to the regulations in force. At the level of the same administrative-territorial unit (UAT), the local price for the population is unique, regardless of the technologies of the thermal energy production, transport and distribution system or of the type of fuels used. The difference between local heat prices and local prices for the population is allocated from the budgets of local public administration authorities or associations for community development, as appropriate. Following the processing of data and information reported by SACET operators, in the following figures is presented, by region, respectively by locality (SACET operator), the evolution of the local price for the population during 2017-2019, as follows:

Fig. 26 - The evolution of the local price for the population in the period 2017-2019 N-W region (lei/Gcal)

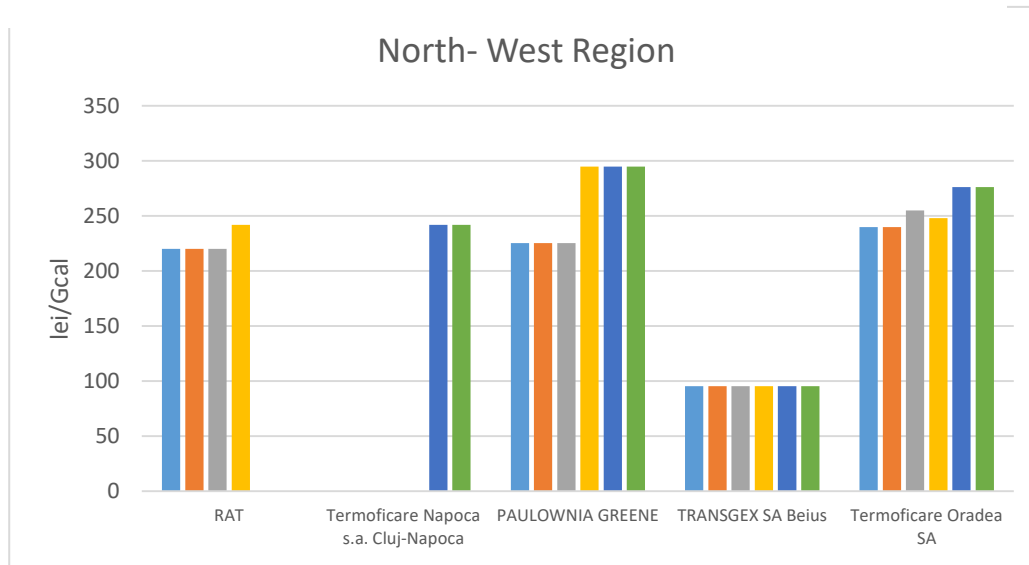
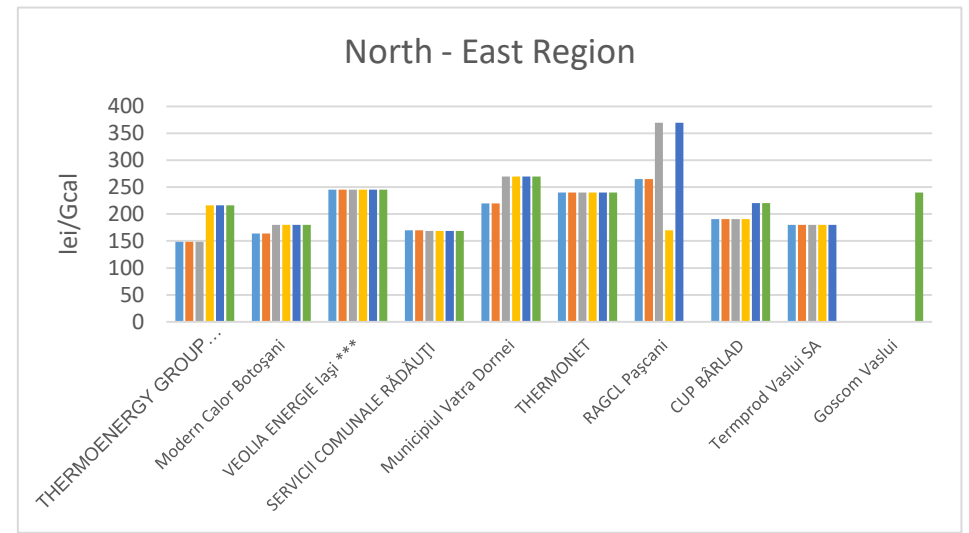


Fig. 27 - The evolution of the local price for the population in the period 2017-2019 N-E region (lei / Gcal)



- semestrul I 2017
- semestrul II 2017
- semestrul I 2018
- semestrul II 2018
- semestrul I 2019
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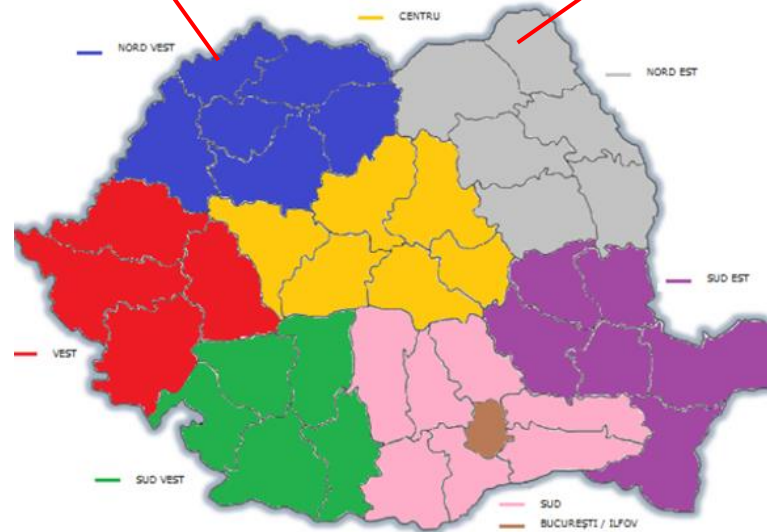


Fig. 28 - The evolution of the local price for the population in the period 2017-2019 W region (lei / Gcal)

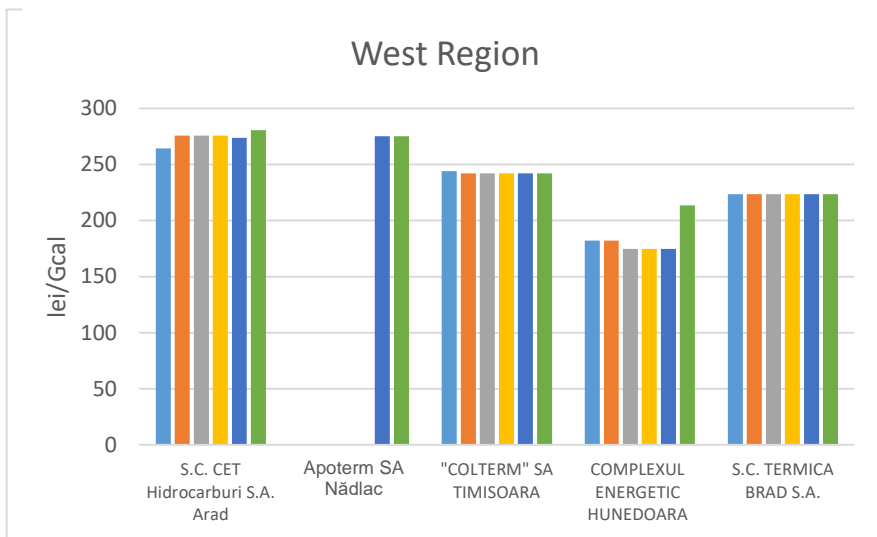


Fig. 29 - The evolution of the local price for the population in the period 2017-2019 Center region (lei / Gcal)

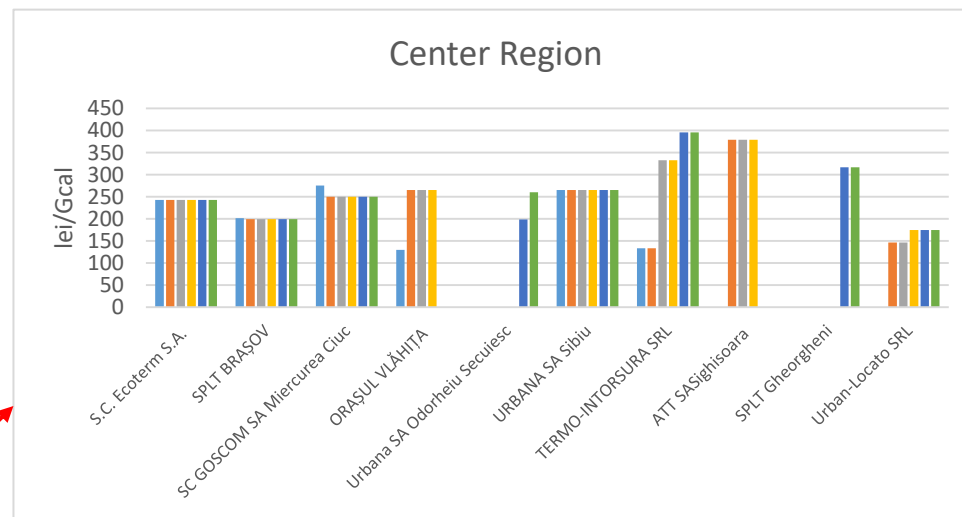
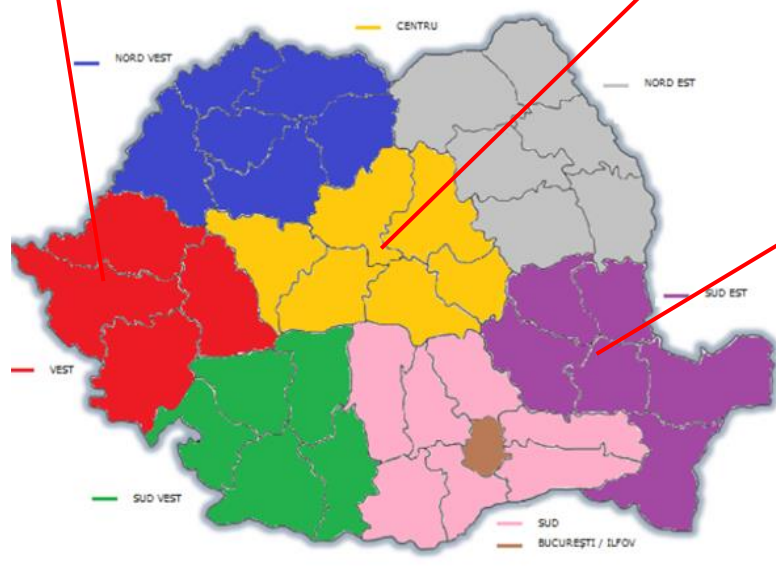
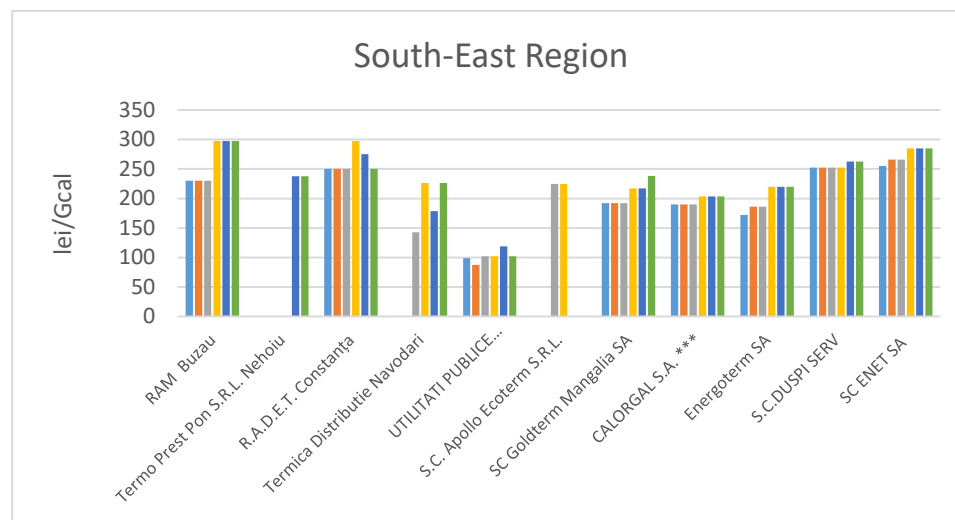


Fig. 30 - The evolution of the local price for the population in the period 2017-2019 S-E region (lei / Gcal)



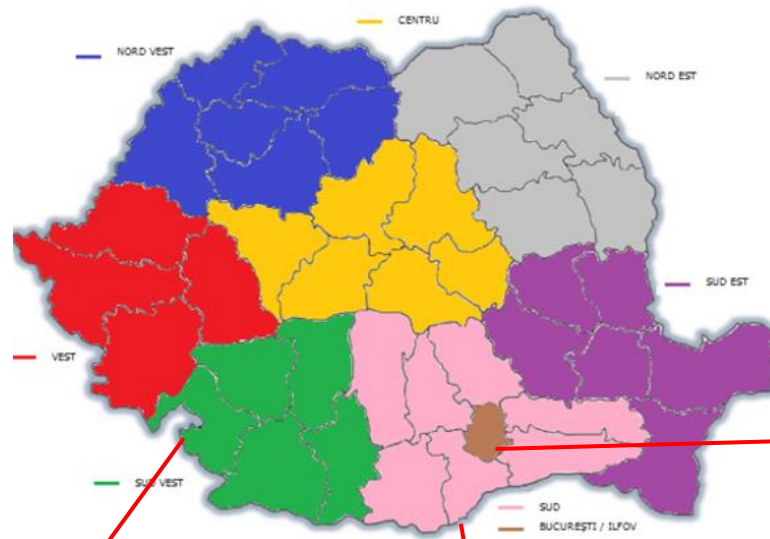


Fig. 31 - The evolution of the local price for the population in the period 2017-2019 Bucharest-Ilfov Region (lei / Gcal)

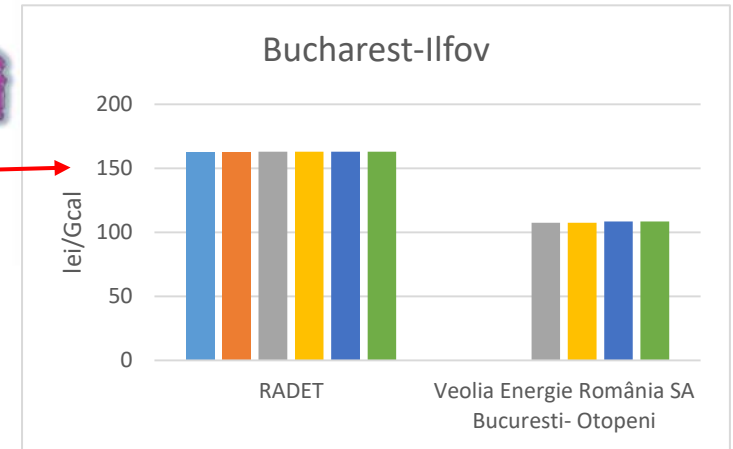


Fig. 32 - The evolution of the local price for the population in the period 2017-2019 S-W region (lei / Gcal)

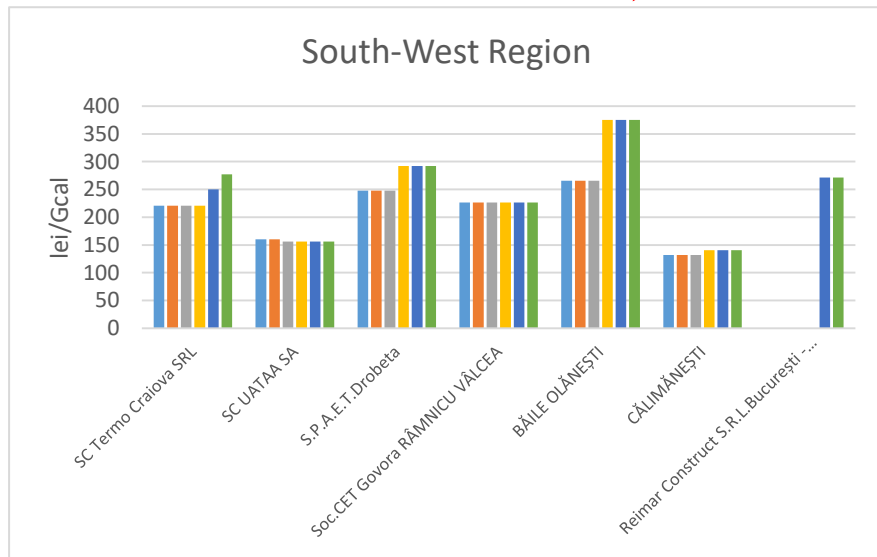
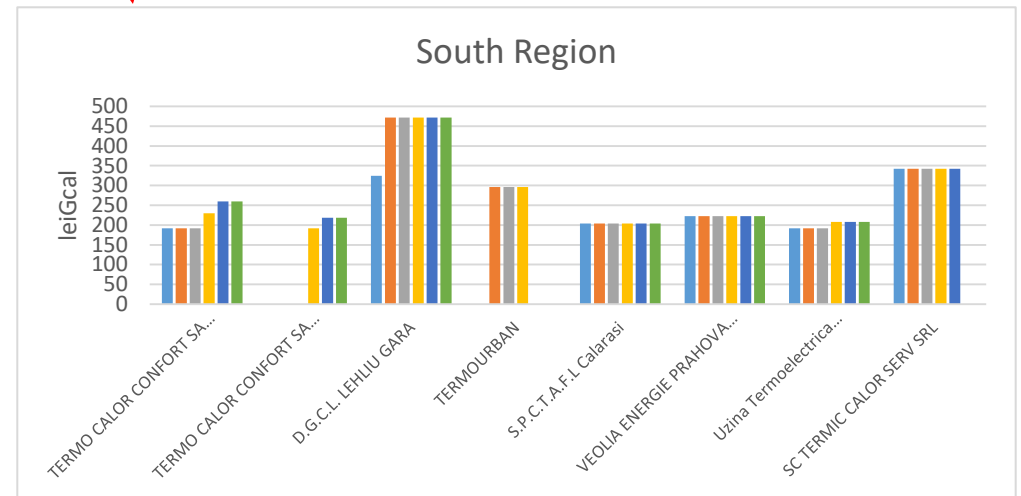


Fig. 33 - The evolution of the local price for the population in the period 2017-2019 S region (lei / Gcal)



- semestrul I 2017
- semestrul II 2017
- semestrul I 2018
- semestrul II 2018
- semestrul I 2019
- semestrul II 2019

## 8. FINAL CONSIDERATIONS

### Legislative aspects

Until the present moment, the **Law no. 325/2006 on the public service of thermal energy supply** (special law) was not amended/completed in accordance with Law no. 51/2006, so that, in the legislation, there are no express provisions regarding the attribution/competence of ANRE to approve the local prices/tariffs related to the public service of thermal energy supply in centralized system.

In compliance with the provisions of art. V, paragraph (4) of Law no. 225/2016, until the elaboration and approval by Order of the ANRE's President of the regulations provided by art. 14 of the *Law no. 325/2006 on the public service of thermal energy supply, with the subsequent modifications*, the provisions from the technical and commercial regulations issued by ANRSC in the field of the public service of thermal energy supply are applicable.

### Critical situations and general problems existing at the SPAET level

From the data and information provided to ANRE in the monitoring process, critical situations were highlighted in some localities, which reflect several non-conformities in the fulfillment of the legal attributions of ensuring the public service of thermal energy supply by the local public administration authorities. Some of these situations are as follows:

- Significant values of claims/debts related to the provision of the public service of thermal energy supply;
- Dissolution/disappearance of the public service of thermal energy supply;
- Failure to take over the database regarding the provided service, upon termination of the delegation contract.

Also, following the monitoring process carried out by ANRE, the following general problems of SPAET are noted:

- The declining number of consumers is reducing the efficiency of SACET. Due to the large number of disconnections, many district heating companies have simply ceased operations or gone bankrupt, which is the main cause of the dramatic decrease of the number of SACET operators.

- Substantial losses in transport and distribution networks (see the difference between the thermal energy produced and/or purchased 14,080,217 MWh and the thermal energy sold 9,887,516 MWh) entail high supply prices.
- The low volume of investments and repairs in the SACET infrastructure leads to the lack of continuity in the supply of thermal energy and to the non-compliance of the quality parameters of the supplied thermal agent. For example, heat/water losses and the number of technical failures are high compared to other SACETs similar in size, available in other European countries.
- The small number of existing cogeneration plants reveals the need for an adequate process of information at UAT level over the advantages of these plants and also over the use of the financial sources provided by the Government through the District Heating Program. The wider use of cogeneration technologies and centralized heat generation systems brings net environmental benefits, due to the increased energy conversion, to the use of waste heat and to the renewable energy sources. Cogeneration and centralized systems can also serve as flexible tools for building electrical and thermal systems that will play a key role in achieving sustainable integrated networks in the future. Thus, these technologies can be an important part of the strategy on reducing emissions and energy security. Hence the need for adequate information at the UAT level on the advantages of these plants and the use of the financial sources provided by the Government through the District Heating Program for this purpose.

## **ANNEXES**

**Annex 1** – SACET Characteristics (Part I)

**Annex 2** – SACET Characteristics (Part II)

**Annex 3** – General situation of SPAET – year 2019

**Annex 4** – Situation of investments in SACET infrastructure

**Annex 5** – SPAET specific technical-economic data – year 2019

**Annex 6** – The evolution of the monitored economic operators in the period 2017 - 2019