

STATUS QUO REPORT: **ERRA Customer Protection Working Group**

June 2021



Energy Regulators Regional Association

44/B Logodi Street, 1012 Budapest, Hungary

Tel.: +36 1 477 0456 | Mobile: +36 70 392 5986

E-mail: secretariat@erranet.org | Web: <https://erranet.org>

Status Quo Report

ERRA CUSTOMER PROTECTION WORKING GROUP

Author:

dr. Viktor SZILÁGY, Vice-Chairman of the ERRA Customer Protection Working Group,
International Expert for Energy, Hungarian Energy and Public Utility Regulatory Authority (HEA)

Co-Author:

Ms. Tata PIRASHVILI, Chief Specialist of the Consumers' Complaints Department,
Georgian National Energy and Water Supply Regulatory Commission (GNERC)

The Status quo report was prepared based on information collected through an internal survey filled by 22 ERRA Customer Protection Working Group Members in 2021.

The Energy Regulators Regional Association assumes no responsibility for the use that may be made of the information contained in this publication or any errors that may remain in the texts, despite the care taken in preparing them. All views, positions, and conclusions expressed in this publication are those of the authors and do not necessarily reflect the views of ERRA and its members. This text may be used only for personal research purposes. Any additional reproduction for any other purposes, whether in hard copies or electronically, requires the consent of ERRA. If cited or quoted, reference should be made to the full name of the author(s), the title, the year and the publisher.

ACKNOWLEDGEMENTS

The Energy Regulators Regional Association (ERRA) would like to acknowledge those Customer Protection Working Group Members who contributed their time and provided input for the development of this report:

- Julia GUGA, Albanian Energy Regulatory Authority (ERE)
- Karima SADOU, Commission for Electricity and Gas Regulation (CREG), *Algeria*
- Julija CILIMKOVIC, State Electricity Regulatory Commission (SERC), *Bosnia and Herzegovina*
- Aida MULIĆ-HADŽIOSMANOVIĆ, Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK), *Bosnia and Herzegovina*
- Milan Kovacina, Regulatory Commission for Energy of Republic of Srpska (RERS), *Bosnia and Herzegovina*
- Zuzana LEBEDOVÁ, Energy Regulatory Office (ERO), *Czech Republic*
- Margus KASEPALU, *Estonian* Competition Authority (ECA)
- Tata PIRASHVILI, *Georgian* National Energy and Water Supply Regulatory Commission (GNERC)
- Viktor SZILÁGY, *Hungarian* Energy and Public Utility Regulatory Authority (HEA)
- Petrit HAZIRI, Energy Regulatory Office (ERO), *Kosovo*^{*}
- Elza BERGMANE, Public Utilities Commission (PUC), *Latvia*
- Sandra GRABAUSKAITĖ, National Energy Regulatory Council (NERC), *Lithuania*
- Iulian GUZUN, National Energy Regulatory Agency (ANRE), *Moldova*
- Martin MARTINOSKI, Energy and Water Services Regulatory Commission (ERC), *North Macedonia*
- Ahmed AL-ARAFATI, Authority for Public Services Regulation (APSR), *Oman*
- Ruben COLLANTES, *Peru's* Regulatory Agency for Investment in Energy and Mining (Osinerghmin)
- Zofia JANISZEWSKA, Energy Regulatory Office (URE), *Poland*
- Diana POPESCU, *Romanian* Energy Regulatory Authority (ANRE)
- Fahad ALAJLAN, Water & Electricity Regulatory Authority (WERA), *Saudi Arabia*
- Tevfik Okan SAYGILI, Energy Market Regulatory Authority (EMRA), *Turkey*
- Anton USENKO, National Energy and Utilities Regulatory Commission (NEURC), *Ukraine*
- James GRINNELL, Regulatory and Supervisory Bureau for Electricity and Water of *Dubai* (RSB), *UAE*

¹ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

TABLE OF CONTENT

ACKNOWLEDGEMENTS	3
TABLE OF CONTENT	4
EXECUTIVE SUMMARY	6
LIST OF ERRA MEMBERS INVOLVED IN THE DEVELOPMENT OF THE SURVEY	7
LIST OF ABBREVIATIONS.....	9
SECTION I. – GENERAL QUESTIONS ABOUT THE NRAS AND THEIR JURISDICTION.....	10
1.1. Status of the regulator	10
1.2. The level the regulator is organized on.....	10
1.3. Legislative powers of the regulators.....	11
1.4. Jurisdiction of the regulators to issue binding individual decision	12
1.5. The right to seek legal remedy against the binding decisions of the regulators	12
1.6. The measures that can be taken by the regulator	12
SECTION II. – RETAIL MARKETS OF ELECTRICITY AND NATURAL GAS	14
2.1. The structure of the retail markets of electricity and natural gas	14
2.1.1. The structure of the retail markets of electricity.....	14
2.1.2. The structure of the retail markets of natural gas.....	17
2.2. Types of price regulation/ price intervention in effect in electricity and natural gas	19
2.2.1. Types of price regulation/ price intervention in effect in electricity	19
2.2.2. Who has the right to put price interventions into effect in electricity.....	20
2.2.3. Types of price regulation/ price intervention in effect in natural gas.....	21
2.2.4. Who has the right to put price interventions into effect in natural gas.....	22
2.3. Switching suppliers on the retail energy markets	22
2.3.1. Possibility of switching suppliers on the retail market of electricity and switching data for 2019.....	23
2.3.2. Possibility of switching suppliers on the retail market of natural gas and switching data for 2019 ..	24
2.4. Distinct consumer groups besides the household and non-household consumers.....	26
2.4.1. Distinct group of consumers in electricity	27
2.4.2. Distinct group of consumers in natural gas	29
2.5. Smart metering	30
2.5.1. Market penetration and plans for massive roll-out of smart meters in electricity	31
2.5.2. Market penetration and plans for massive roll-out of smart meters in natural gas	33
2.6. Comparison tools	34
2.6.1. Comparison tools on retail markets of electricity	35
2.6.2. Comparison tools on retail markets of natural gas	36
2.6.3. Who operates the comparison tool(s)?	37

SECTION III. – CONSUMER PROTECTION	37
3.1. What sectors are regulated by the NRA in regard to consumer protection.....	37
3.2. The antimonopoly bodies in the regulated sectors.....	39
3.3. Jurisdiction of the NRAs for complaint handling.....	40
3.4. Dispute resolution.....	41
3.5. Complaint handling.....	43
3.5.1. Ways of complaint handling.....	43
3.5.2. The rules for service providers for complaint handling.....	44
3.5.3. The legal deadlines of complaint handling for the NRAs.....	46
3.5.4. Insights into numbers of complaints received by the NRAs between 2015 – 2019.....	47
3.6. Other institutions responsible for consumer protection.....	48
3.7. Consumer groups in the regulated sectors that are granted special protection – vulnerable consumers	49
3.8. Energy poverty.....	51
3.9. The share of the vulnerable or energy poor consumers.....	54
3.10. Disconnection procedure.....	54
3.10.1. Notification of the consumer prior disconnection.....	55
3.10.2. Alternatives to disconnection.....	56
3.10.3. Performing the disconnection.....	57
3.10.4. Legal timeframe for disconnection.....	59
3.11. Guaranteed services or standards.....	60

EXECUTIVE SUMMARY

The Energy Regulators Regional Association (ERRA) is an inter-institutional non-profit organisation unified by the shared goal to improve energy regulation by sharing experiences, best practices and knowledge among its members. In November 2020 ERRA reformed its internal structure by establishing the Electricity Markets and Economic Regulation Committee, the Renewable Energy Committee, the Natural Gas Markets and Economic Regulation Committee and the Customer Protection Working Group (ERRA CP WG).

The ERRA CP WG on carries as the successor of the ERRA Customers and Retail Markets Working Group with the same aim to provide a useful and direct platform to share knowledge, experiences and best practices. During the years many new members joined ERRA, so it was deemed timely to create a report about the long standing and recently joined national regulatory authorities to map their duties and powers, with emphasis on consumer protection, and to offer a quick glimpse into their retail markets of electricity and natural gas.

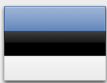
In order to be complete this, a survey was created with the aim to map out:

1. the status and jurisdiction of the regulators,
2. the basic structure of the retail markets of electricity and natural gas of the participating ERRA Members,
3. the state of play of consumer protection and the duties related to it respectively in each Member States.

The goal of this report is to offer a brief overview in the above mentioned topics and facilitate cooperation between ERRA Members by showing these data, and the similarities and differences among them.

The 22 regulators collaborated in the creation of this report, reflecting a very diverse regulatory and geographical landscape, but unified by the resolution to learn and to improve.

LIST OF ERRA MEMBERS INVOLVED IN THE DEVELOPMENT OF THE SURVEY

Country	Flag	Organization Name	Country Code used in the report
Albania		Albanian Energy Regulatory Authority (ERE)	AL
Algeria		Commission for Electricity and Gas Regulation (CREG)	DZ
Bosnia and Herzegovina		State Electricity Regulatory Commission (SERC)	BA1
Bosnia and Herzegovina		Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK)	BA2
Bosnia and Herzegovina		Regulatory Commission for Energy of Republic of Srpska (RERS)	BA3
Czech Republic		Energy Regulatory Office (ERO)	CZ
Estonia		Estonian Competition Authority (ECA)	EE
Georgia		Georgian National Energy and Water Supply Regulatory Commission (GNERC)	GE
Hungary		Hungarian Energy and Public Utility Regulatory Authority (HEA)	HU
Kosovo*		Energy Regulatory Office (ERO)	XK
Latvia		Public Utilities Commission (PUC)	LV
Lithuania		National Energy Regulatory Council (NERC)	LT
Moldova		National Energy Regulatory Agency (ANRE)	MD

¹ This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

North Macedonia		Energy and Water Services Regulatory Commission (ERC)	MK
Oman		Authority for Public Services Regulation (APSR)	OM
Peru		Peru's Regulatory Agency for Investment in Energy and Mining (Osinerghmin)	PE
Poland		Energy Regulatory Office (URE)	PL
Romania		Romanian Energy Regulatory Authority (ANRE)	RO
Saudi Arabia		Water & Electricity Regulatory Authority (WERA)	SA
Turkey		Energy Market Regulatory Authority (EMRA)	TR
Ukraine		National Energy and Utilities Regulatory Commission (NEURC)	UA
United Arab Emirates		Regulatory and Supervisory Bureau for Electricity and Water of Dubai (RSB)	AE

LIST OF ABBREVIATIONS

ELECTRICITY DIRECTIVE: DIRECTIVE (EU) 2019/944 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast).

ENERGY COMMUNITY CONTRACTING PARTY: Parties of the Treaty Establishing the Energy Community are on one side the European, on the other side currently nine Contracting Parties – Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia, Georgia, Moldova, Montenegro, Serbia and Ukraine.

ERRA CP WG: ERRA Consumer Protection Working Group

GAS DIRECTIVE: DIRECTIVE 2009/73/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC.

GOVERNANCE REGULATION OF THE ENERGY UNION: REGULATION (EU) 2018/1999 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council

NRA: National regulatory authority

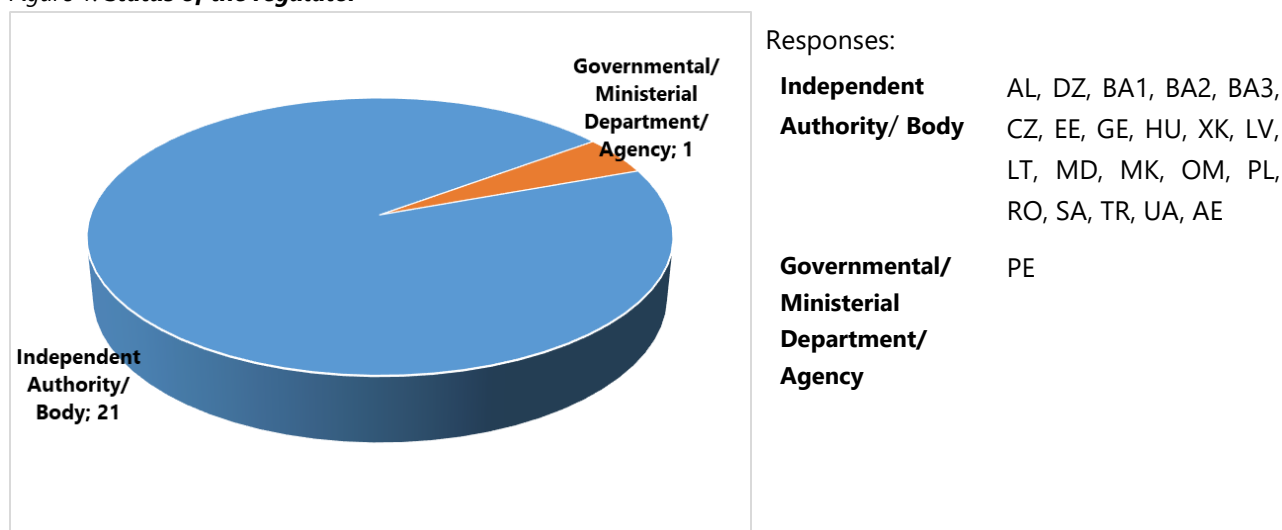
SECTION I. – GENERAL QUESTIONS ABOUT THE NRAS AND THEIR JURISDICTION

1.1. Status of the regulator

Almost everyone (21) of the participating ERRA Members answered in the survey that the regulation of the energy sector lies in the jurisdiction of an independent regulatory authority. Only 1 ERRA Member (Peru) answered that the regulation of the energy sector is in the ultimate jurisdiction of the government, via governmental or ministerial agency or department.

Those ERRA Members that are members of the European Union, or are Contracting parties of the Energy Community Treaty are obliged to maintain an independent regulatory authority according to Article 57(4) of the Electricity Directive 2019/944/EU and to Article 39(4) of the Gas Directive 2009/73/EU. Hence, the governments of those states do not have free choice to decide how to set up the regulators, as the law of the European Union requires the NRAs to be independent legally, functionally and financially.

Figure 1: **Status of the regulator**



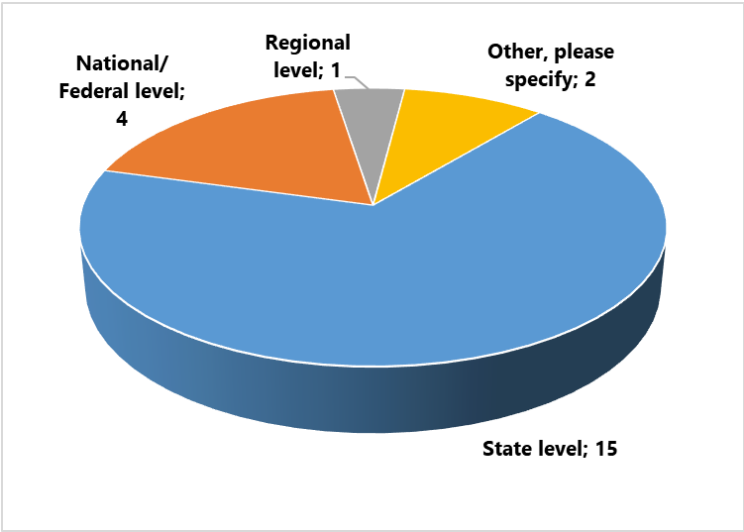
1.2. The level the regulator is organized on

According to the answers, the majority of the NRAs are organized on state level. Regulators organized on federal level are in federal states, where the state contains multiple federal states or entities.

Energy regulation in Bosnia and Herzegovina is organized on two levels. There is a national regulator, namely the State Electricity Regulatory Commission (SERC), having jurisdiction over and responsibility for transmission of electricity, transmission system operations and foreign trade in electricity for the whole country, as well as for generation, electricity distribution and supply of customers in the Brčko District of Bosnia and Herzegovina (administrative unit of local self-government). There are also regulators on entities' level, the Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK) that is responsible for the Federation of Bosnia and Herzegovina, and the Regulatory Commission for Energy of Republic of Srpska (RERS), responsible for Republic of Srpska. This setup is the result of the large decentralization of the country that comprises two entities, the Federation of Bosnia and Herzegovina and Republic of Srpska and administrative unit - the Brčko District of Bosnia and Herzegovina, governed under local government.

The regulator in the United Arab Emirates is organized on regional level because the country is a federation of seven emirates.

Figure 2: **The level the regulator is organized on**



Responses:

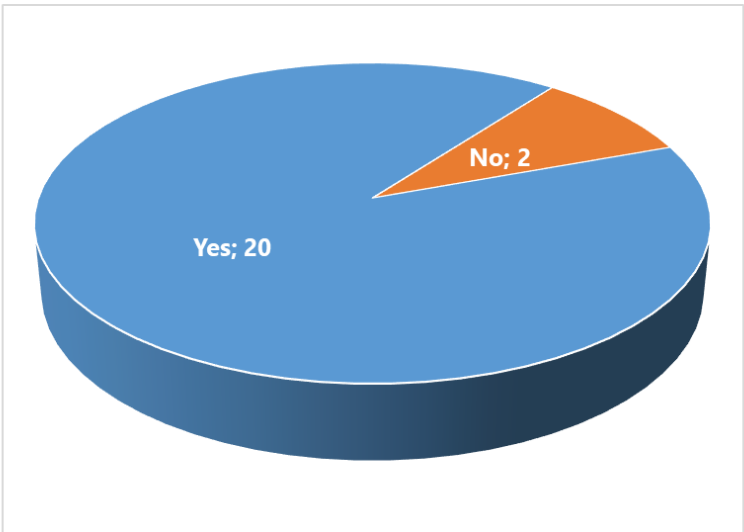
State level	AL, DZ, BA1, CZ, EE, HU, XK, LV, LT, MD, MK, PL, RO, TR, UA
National/ Federal level	GE, OM, PE, SA
Regional level	AE
Other, please specify	BA2 and BA3: Entity level

1.3. Legislative powers of the regulators

In the majority of the ERRA Member States, the NRA has some kind of legislative power. Generally, this legislative power is below the level of act passed by highest legislator (parliament/ head of state), and cannot be in contradiction with an act, and is connected to the regulated activities. Typically, this means the network related charges (usage and connection), the detailed rules of data submission and exchange, the rules for regulatory sandboxes and pilot projects, the rules for support of renewable energy sources and such. Having legislative powers enables the NRAs to act quickly, if a change of the regulations is required.

Having said that, a number (2 – Estonia and Peru) of regulators does not have any legislative powers.

Figure 3: **Legislative powers of the regulator**



Responses:

Yes	AL, DZ, BA1, BA2, BA3, CZ, GE, HU, XK, LV, LT, MD, MK, OM, PL, RO, SA, TR, UA, AE
No	EE, PE,

1.4. Jurisdiction of the regulators to issue binding individual decision

Sometimes the regulators have to oblige their licensees (if they have a regulatory regime based on licence), or the market players (consumers excluded). In order to achieve this, the legislators usually granted the regulatory authorities power to issue binding individual decisions, which must be fulfilled and comply with by the addressees of those decisions. Naturally, regulators can only issue such decisions within their jurisdiction.

All the responding regulators confirmed that they have the right to issue binding decisions.

1.5. The right to seek legal remedy against the binding decisions of the regulators

As a very important guarantee regarding the rights of the addressees of the binding individual decisions, it is a fundamental right to be able to seek legal remedy against the decisions of the regulators. This ensures the rule of law principle.

All regulators participating in the survey reported that there is a possibility to seek remedy against their decisions before court or another body.

1.6. The measures that can be taken by the regulator

To ensure that regulators are able to fulfill their duties, they must be given the necessary powers and authorization. These powers can vary in degree of gravity.

As it can be seen from the answers, all the participating regulators have a licensing regime or an equivalent of that, meaning the regulated activities can only be carried out having the necessary licence or being registered by the regulator. All regulators issuing a licence have the power to modify or revoke a licence, or remove someone from the registry if circumstances require. This is a very powerful tool for both ensuring the stability of the market and to act on changes.

In the case of Latvia, licences are issued only to electricity and natural gas transmission and distribution system operators and natural gas storage system operators. Energy producers and traders are registered in a simplified procedure in the relevant register, they are not issued a registration certificate (licence), but the regulations regarding general authorisation and registration in the energy sector must be observed. Regarding energy producers and traders, the regulator may also take a decision in the event of an infringement, including the imposition of a fine, a warning or removal from the register.

All participating regulators answered that they have the right to issue a decision, by which they can compel their licensees to act accordingly to the regulations and conditions set in the issued licences.

Almost all regulators (19) have the right to issue a decision coupled with a fine, if they sense a breach of law. This is also a powerful tool to enforce compliance, since the financial consequences can compel the licensees to restore the compliance with the law.

The same number of regulators (19) can issue warnings as well, which is done when the breach of law is not as severe and no more serious measures are required, thus the principle of proportionality is ensured.

The vast majority of regulators (15) has the right either to initiate a legislative process, or to adopt legislation regarding their regulated area. These acts are lower in the legal hierarchy of the given country (usually they are regulations or decrees), nevertheless mandatory on their subjects.

Figure 4: **Measures that can be taken by the regulator**

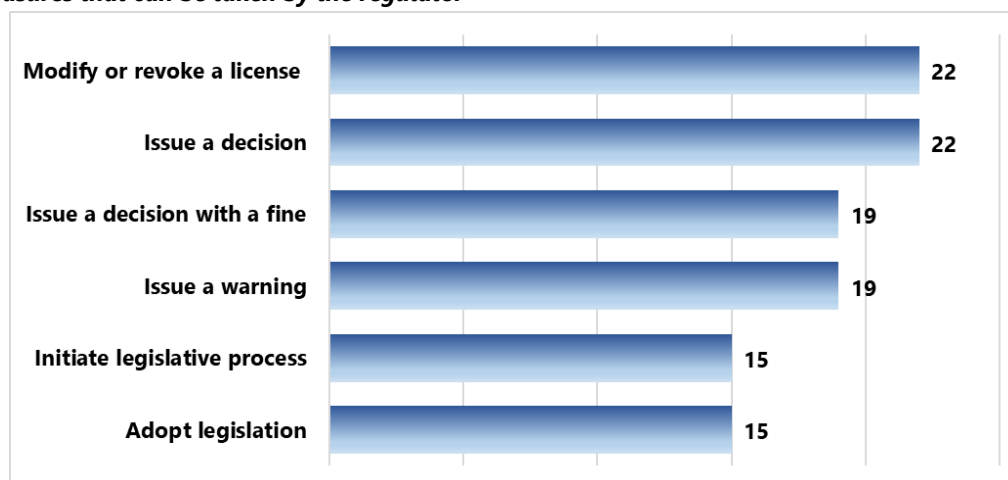


Figure 5: **Measures that can be taken by the regulator (in detail)**

	Modify or revoke a license	Issue a decision	Issue a decision with a fine	Issue a warning	Initiate legislative process	Adopt legislation
AL	■	■	■	■		■
DZ	■	■		■	■	■
BA1	■	■			■	■
BA2	■	■	■	■	■	■
BA3	■	■	■	■	■	■
CZ	■	■	■			
EE	■	■	■	■	■	
GE	■	■	■	■	■	
HU	■	■	■	■	■	■
XK	■	■	■	■	■	■
LV	■	■	■	■	■	■
LT	■	■	■	■	■	■
MD	■	■	■	■		
MK	■	■		■	■	■
OM	■	■	■	■	■	■
PE	■	■	■	■		■
PL	■	■	■			
RO	■	■	■	■		■
SA	■	■	■	■	■	
TR	■	■	■	■	■	■
UA	■	■	■	■	■	■
AE	■	■	■	■		
Σ	22	22	19	19	15	15

SECTION II. – RETAIL MARKETS OF ELECTRICITY AND NATURAL GAS

2.1. The structure of the retail markets of electricity and natural gas

In terms of this report it is important to note that this report aims to offer only an overview of the retail markets of electricity and natural gas. It does not aim to identify market barriers or to analyze the well-functioning of the retail markets. Therefore, in this report a *regulated market* means a retail market of electricity and/ or natural gas where there is price regulation for the energy component in the final price of electricity or natural gas. A *free market* means there is no regulation for the energy component of the final price of electricity or natural gas. A *mixed retail market* means a market where regulated and unregulated final prices coexist. By a fully or partially regulated retail market we do not mean a market where market players cannot enter or leave the market, or a market where consumers are not eligible to choose their suppliers.

Regarding the data supplied for the report, it must be noted that due to the data collection periods of the participating NRAs are different. While the classification of the markets (free, regulated or mixed of both) are based on the national legislation in force at the date of creating this report, the statistical data may be for an earlier period, depending for what period the data could be supplied for. If not stated otherwise, the statistical data is for 2019.

2.1.1. The structure of the retail markets of electricity

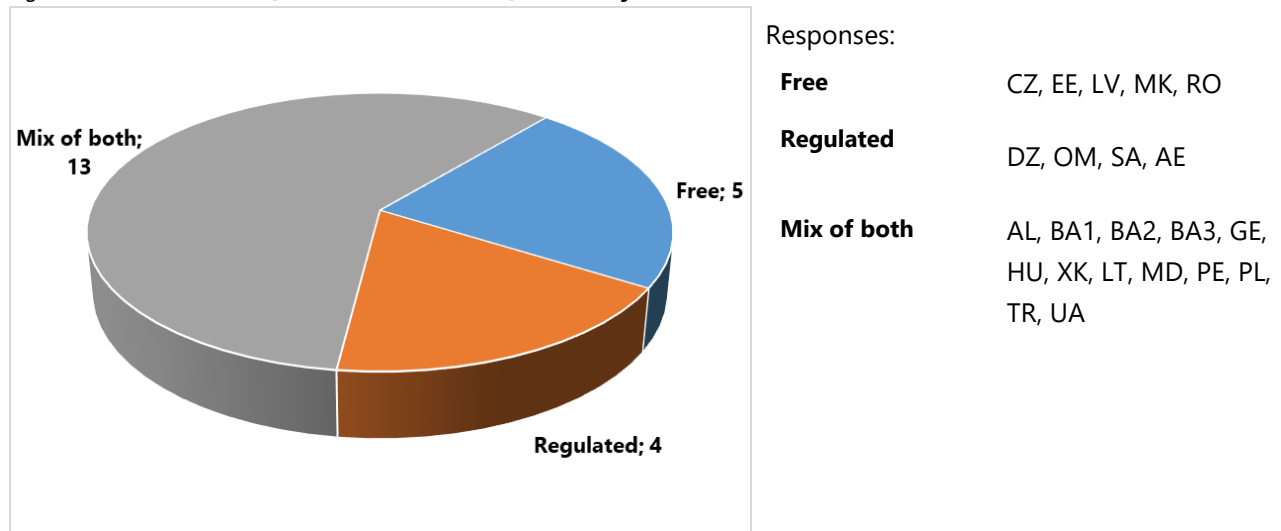
As we learnt from the answers of the participants of the survey, the retail electricity markets of the respondents are on the full spectrum, from fully regulated to entirely free.

5 (Czech Republic, Estonia, Latvia, North Macedonia and Romania) respondents from 22 regulators reported that their electricity retail markets are free of price regulation in relation to the energy component.

4 respondents (Algeria, Oman, Saudi Arabia and the United Arab Emirates – Dubai) answered that their retail electricity markets have regulated prices entirety.

13 (Albania, Bosnia and Herzegovina – SERC, FERK, RERS; Georgia, Hungary, Kosovo*, Lithuania, Moldova, Peru, Poland, Turkey and Ukraine) respondents – making up the majority of the responding countries – answered their retail markets of electricity are of mixed structure, having both regulated and unregulated prices.

Figure 6: **The structure of the retail markets of electricity**

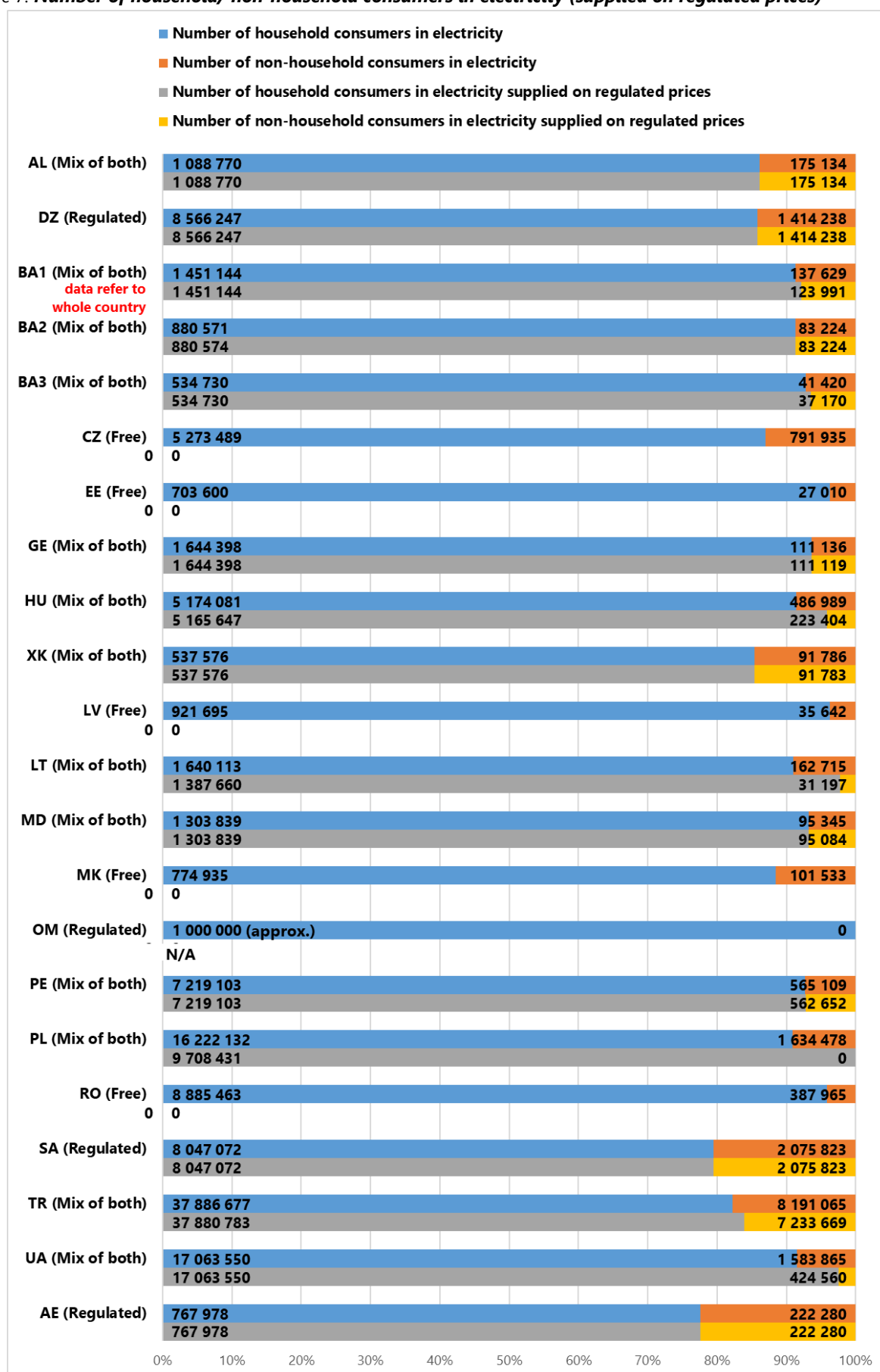


One of the aims of this report was to provide data on the dimensions of each answering country or entity by surveying the number of household and non-household consumers of their retail markets of electricity.

As probably household consumers constitute numerically – and not consumption-wise – the biggest part of each retail market, it is a very interesting data to compare the number of household consumers supplied on the free market and on regulated prices. Price regulation is usually present in the household segment, as it is often seen as a tool to protect household consumers from price-shocks, but it is not necessarily limited only to the household segment.

Following charts illustrates those data.

Figure 7: **Number of household/ non-household consumers in electricity (supplied on regulated prices)¹**



¹ Data for BA1 (whole Bosnia and Herzegovina), Hungary and the United Arab Emirates – Dubai are for 2020.

2.1.2. The structure of the retail markets of natural gas

7 (Albania, Bosnia and Herzegovina – SERC and FERK, Kosovo*, Oman, Saudi Arabia and the United Arab Emirates – Dubai) regulators responded that either they do not have natural gas markets, or they do not regulate it.

Similarly to the retail market of electricity, those regulators who have retail markets of natural gas, show the whole spectrum, from a total free market to a mixed market and to an entirely regulated one.

4 (Czech Republic, Estonia, North Macedonia and Romania) respondents from 15 regulators reported that their retail markets of natural gas are free of price regulation regarding the energy component.

4 respondents (Algeria, Lithuania, Peru and Turkey) answered that their retail natural gas markets have regulated prices entirely.

7 (Bosnia and Herzegovina – RERS, Georgia, Hungary, Latvia, Moldova, Poland, and Ukraine) respondents – the majority of the responding countries – answered that their retail markets of natural gas are of mixed structure, having both regulated and unregulated prices.

Figure 8: **The structure of the retail markets of natural gas**

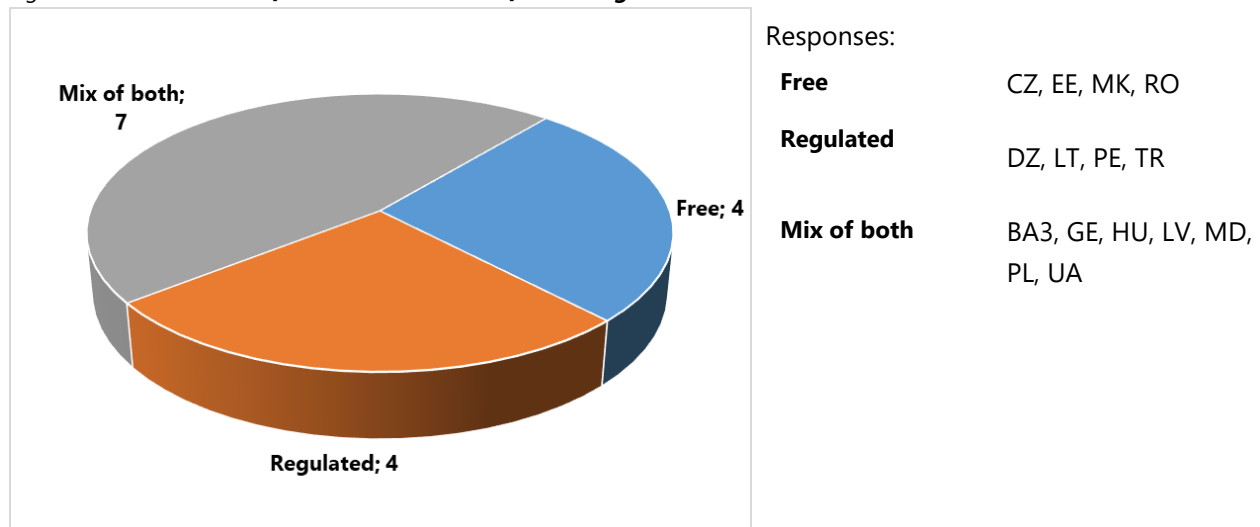
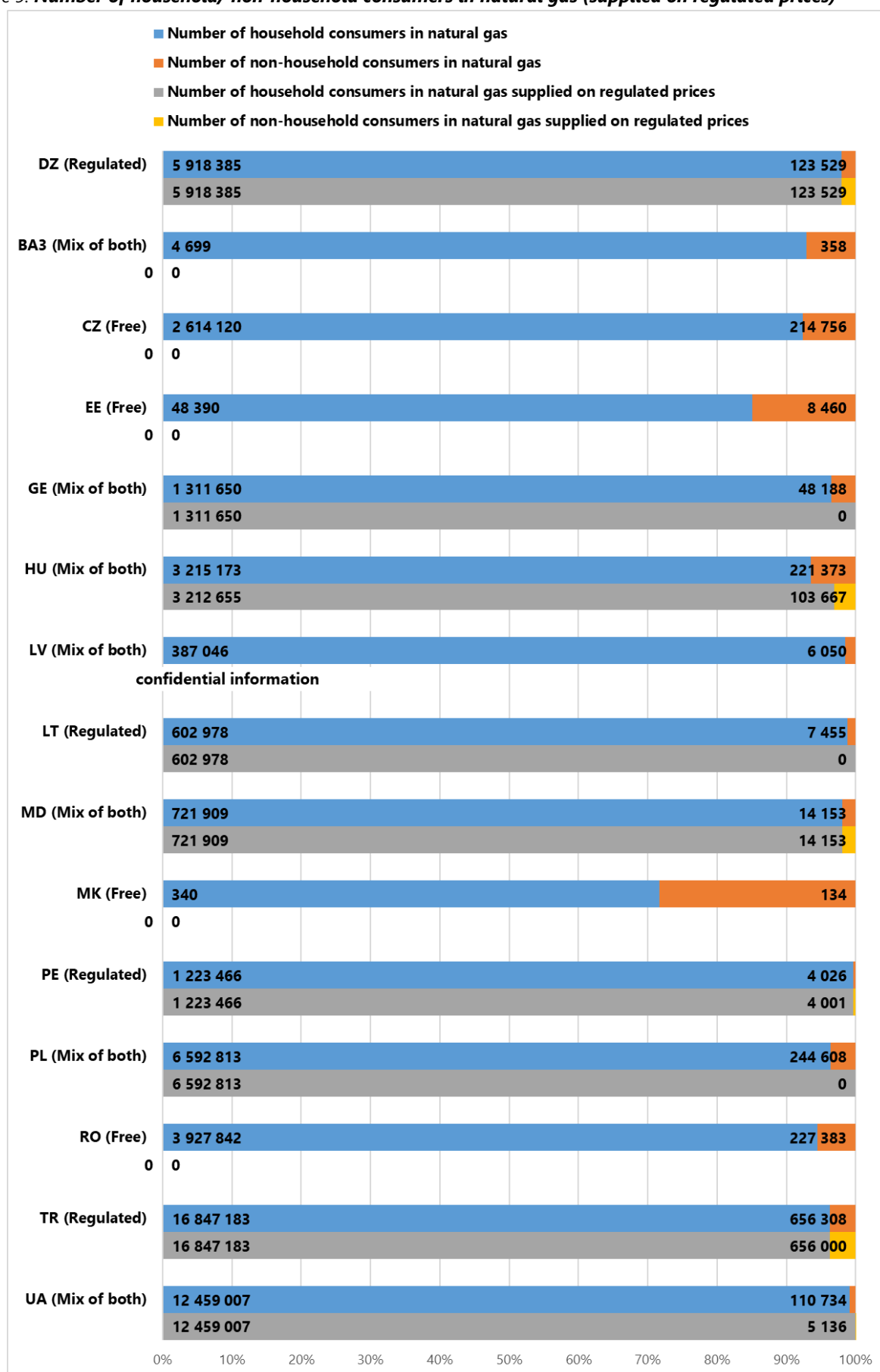


Figure 9: **Number of household/ non-household consumers in natural gas (supplied on regulated prices)**²



² Data for Hungary are for 2020.

2.2. Types of price regulation/ price intervention in effect in electricity and natural gas

2.2.1. Types of price regulation/ price intervention in effect in electricity

As we have seen it in point 2.1.1., out of 22 responses 17 – meaning 17 states or entities – indicated that there is some kind of price regulation on their retail electricity markets.

5 NRAs answered that their retail markets prices are fully unregulated (Czech Republic, Estonia, Latvia, North Macedonia and Romania).

The remaining NRAs reported that either there is a coexistence of regulated and unregulated electricity prices (Albania, Bosnia and Herzegovina – SERC, FERK, RERS, Georgia, Hungary, Kosovo*, Lithuania, Moldova, Peru, Poland, Turkey, Ukraine), or there are only regulated prices (Algeria, Oman, Saudi Arabia, and the United Arab Emirates – Dubai).

As to have a brief look into what kind of price regulation is applied on those markets:

- Albania: Price cap regulation.
- Algeria: Price cap regulation (as a tariff decision set by the regulator).
- Bosnia and Herzegovina – SERC: Cost based method is in place for household consumers (for household consumers and other consumers connected to 0,4 kV voltage, supplied within universal service).
- Bosnia and Herzegovina – FERK: Cost based method in case of the universal service. Universal Service Providers offer a price proposal for universal service to the Regulator. The price proposal should contain the data on energy procurement costs and public service costs in the total amount not higher but 10% of the procurement costs.
- Bosnia and Herzegovina – RERS: Cost plus method.
- Georgia: Cost plus method with ex-post corrections.
- Hungary: Price cap regulation.
- Kosovo*: Revenue cap is used.
- Lithuania: The regulator uses a price cap method for calculating the price caps for electricity transmission, distribution and public supply services and the price of the guaranteed supply service to vulnerable customers, sets the price caps for state regulated services and electricity prices and the price of the guaranteed supply service to vulnerable customers; approves price of services of public interest in the electricity sector calculation methodology, sets the prices of services of public interest, establishes the procedure for differentiation of prices for electricity transmission, distribution and public supply services.
- Moldova: Revenue regulation.
- Oman: Electricity and water tariff must be approved by the government. The price regulation is based on a revenue cap method.
- Peru: Price cap regulation, based on the consumption (free price for consumers with demand greater than 2 500 kW, free or regulated price for consumers with demand greater than 200 kW up to 2 500 kW based on consumer choice, and. regulated price for consumers with below up to 200 kW).

- Poland: Price regulation for household consumers who do not use the right to choose a supplier and remain clients of a default supplier (public service obligation) is based on cost-based method. Electricity prices are approved on the basis of the costs incurred by the company (analyzed and verified by the President of URE).
- Saudi Arabia: No data was available for the survey.
- Turkey is split up to 21 distribution areas, in which beside the local DSOs there are incumbent suppliers. These incumbent suppliers act – beside as normal suppliers – as the suppliers of last resort. When the incumbent suppliers supply non eligible consumer (those consumers who cannot switch suppliers) or supplies consumers as a supplier of last resort, then price is determined by the regulator via a revenue cap method.
- Ukraine: Regarding the energy component there is a price cap regulation for the public service obligation. When the regulator sets the in the price of universal services and the price of the supply of last resort, it uses day ahead electricity prices. The government sets fixed final price for households on level 1,68 UAH per kW/hour (0,05 €).
- United Arab Emirates – Dubai: DEWA is the sole supplier of electricity in Dubai and its prices are ratified by the Supreme Council of Energy. The price is set by the Supreme Council of Energy such way to enable the sustainability of the service provider.

2.2.2. Who has the right to put price interventions into effect in electricity

Figure 10: **Authority for price interventions in electricity**

	Parliament/ legislator	Ministry/ government	Regulator	Other, please specify
AL			■	
DZ		■	■	
BA1			■	
BA2			■	
BA3			■	
GE			■	
HU		■		
XK			■	
LT			■	
MD			■	
OM		■	■	
PE	■	■		
PL	■		■	
RO	■	■		
SA		■		
TR			■	
UA		■	■	
AE				Supreme Council of Energy

In Romania, there is currently no price regulation in force, but in situations of major imbalances between supply and demand and obvious failures of the electricity market, the Government – on a proposal from the Romanian Energy Regulatory Authority (ANRE) and with the opinion of the Competition Council – may limit the excessive increase in prices/ tariffs or block them for a fixed period of not more than 6 months, which may be extended successively for periods of not more than 3 months, as long as the circumstances leading to the adoption of that decision persist.

2.2.3. Types of price regulation/ price intervention in effect in natural gas

As we have seen it in point 2.1.2., out of 15 members that have natural gas markets, or regulate such, 11 (Algeria, Bosnia and Herzegovina – RERS, Georgia, Hungary, Latvia, Lithuania, Moldavia, Peru, Poland, Turkey and Ukraine) indicated that there is some kind of price regulation on their retail markets.

4 NRAs (Czech Republic, Estonia, North Macedonia and Romania) answered that there is no price regulation on their retail markets of natural gas.

4 NRAs (Algeria, Lithuania, Peru and Turkey) reported that their retail markets of natural gas is fully regulated.

7 NRAs (Bosnia and Herzegovina – RERS, Georgia, Hungary, Latvia, Moldova, Poland and Ukraine) reported that there is a coexistence of free market and price regulation on their retail markets of natural gas.

As to have a brief look into what kind of price regulation is applied on those markets:

- Algeria: Price cap regulation, as a tariff decision set by the regulator.
- Bosnia and Herzegovina – RERS: Cost plus method.
- Georgia: Cost plus method with ex-post corrections
- Hungary: Price cap regulation.
- Latvia: Price for captive consumers (households, which has not chosen offer in free market) is approved by the regulator based on a cost-plus method.
- Lithuania: In the natural gas sector, the NERC regulates the prices of transmission, distribution, storage and liquefied natural gas (LNG) regasification services by setting price caps and/ or revenue ceilings. When setting specific prices for services in the natural gas sector, the NERC shall regulate the prices of connection of household customers to the natural gas system, LNG reloading services and the amount of the additional security of supply component to the natural gas transmission price.
- Moldavia: Revenue regulation.
- Peru: Regulated prices are based on price cap method for the whole chain of value.
- Poland: Price regulation is based on a price cap method for household consumers.
- Turkey has a special system, as it has no retail market of natural gas, only wholesale. Mostly, the distribution companies serve as suppliers, and they use a price cap method (prices are defined as: wholesale natural gas price + system usage cost + taxes). But also some wholesale companies supply natural gas to eligible consumers. Their prices are defined on the free market.
- Ukraine:
 - Price interventions: PSO is set by the Government.
 - Price regulations: the tariff DSO, the tariff TSO, the price of universal services, the price of last resort are set by the Regulator.

2.2.4. Who has the right to put price interventions into effect in natural gas

Figure 11: **Authority for price interventions in natural gas**

	Parliament/ legislator	Ministry/ government	Regulator	Other, please specify
DZ		■	■	
BA3			■	
CZ			■	The price of the energy component is unregulated.
GE		■	■	
HU		■		
LV			■	
LT			■	
MD			■	
PE	■	■		
PL	■		■	
RO	■	■		
TR		■ taxes	■ System usage cost	Wholesale natural gas price is determined in the free market
UA		■	■	

In Romania, there is currently no price regulation in force. but in situations of major imbalances between supply and demand and obvious failures of the electricity market, the Government – on a proposal from the Romanian Energy Regulatory Authority (ANRE) and with the opinion of the Competition Council – may limit the excessive increase in prices/ tariffs or block them for a fixed period of not more than 6 months, which may be extended successively for periods of not more than 3 months, as long as the circumstances leading to the adoption of that decision persist.

2.3. Switching suppliers on the retail energy markets

Regarding the consumers' choice, switching supplier is the consumers' decision with the highest impact on suppliers, and strengthens competition. If the consumer has the ability to choose his/ her supplier, the suppliers are inclined to offer better services in order to keep their customers.

2.3.1. Possibility of switching suppliers on the retail market of electricity and switching data for 2019

17 (Albania, Bosnia and Herzegovina – SERC, FERK RERS; Czech Republic, Estonia, Hungary, Kosovo*, Latvia, Lithuania, Moldova, North Macedonia, Peru, Poland, Romania, Turkey and Ukraine) of 22 respondents answered that switching is possible for consumers, and 5 respondents (Algeria, Georgia, Oman, Saudi Arabia and the United Arab Emirates – Dubai) answered that switching for consumers is not possible.

In Algeria, switching is not possible, because the incumbent supplier has a monopoly, and supply prices are very low, and these factors are a barrier for new market entrants, making the incumbent supplier almost exclusive market player.

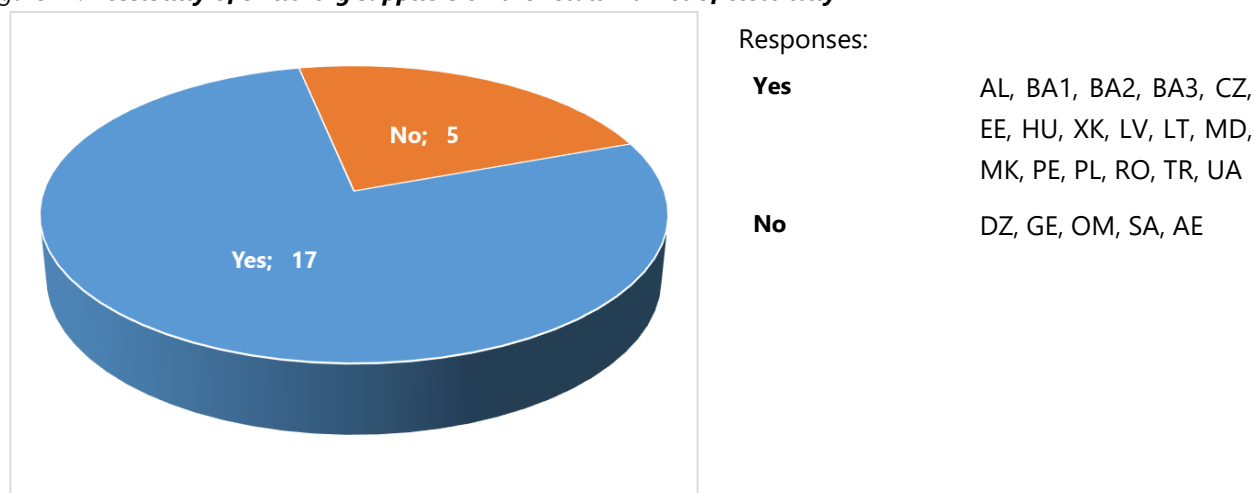
In Georgia, there are currently 2 DSOs which have territorial monopolies and act as suppliers. However, there are plans, that starting from 1st of July 2021 the electricity market will be restructured and activities and companies will be unbundled.

In Oman there is a statutory monopoly of electricity supply, established by sectorial legislation.

In Saudi Arabia the situation is similar, currently there is only one supplier, however, there are plans of restructuring of the electricity sector.

In the United Arab Emirates – Dubai, there is a statutory monopoly of electricity supply established by law.

Figure 12: **Possibility of switching suppliers on the retail market of electricity**



The number of supplier switching is an important sign of how active the given retail electricity market is.

From the answers where data was available, we can see that the highest rates of switching among household consumers were in the Czech Republic (6.1%), in Latvia (5.3%), and in Estonia (2%).

In the non-household segment of the retail electricity market the percentage of switching shows increase, probably because in this segment the price regulation is less present. The highest rates of switching among non-household consumers are in Latvia (14.66%), the Czech Republic (13.4%), North Macedonia (7.1%) and Estonia (6%).

The legal deadline for supplier switching in electricity shows quite a similarity, with 21 days in most answering countries. In Europe this is probably due to transposition of the Electricity Directive in the EU Member States in the Contracting Parties of the Energy Community. The shortest legal duration for switching are in the Czech Republic with 10 working days and in Estonia with a maximum of 14 calendar days, which are the same.

The longest time for switching a supplier is in Peru with 1 year. The reason behind this is the legal regulation of supply contracts, which prescribes a minimum time period of 1 year, allowing a supplier switch once a year.

Figure 13: **Switching data for 2019 on the retail market of electricity**

	Number of supplier switching of household consumers in electricity in 2019:	Number of supplier switching of non-household consumers in electricity in 2019:	What is the legal duration of the switching process in your country in electricity?
AL	N/A	7 (0.004%)	15 days
BA1³	0	0	21 days
BA2	N/A	13	21 days
BA3	0	1 250 (3%)	21 days
CZ	320 901 (6.1%)	106 306 (13.4%)	10 working days
EE	14 000 (2%)	1 620 (6%)	max 14 days
HU	N/A	N/A	21 days
XK	0	0	21 days
LV	5.30% (only 2020 data is available)	14.66% (only 2020 data is available)	14 days
LT	15 (0.0009%)	3 497 (2.2%)	21 days
MD	0	261 (0.3%)	20 days
MK	59 (0.0076%)	7 172 (7.1%)	21 days
PE	0	N/A	1 year
PL	52 962 more TPA household consumers (not identical with number of switching)	7 580 more TPA non-household consumers (not identical with number of switching)	21 days
RO	N/A	N/A	no more than 21 days
TR	1 220 (0.0031%)	184 891 (2.3%)	min 25, max 55 days
UA	0	6 562 (0.4%)	21 days

2.3.2. Possibility of switching suppliers on the retail market of natural gas and switching data for 2019

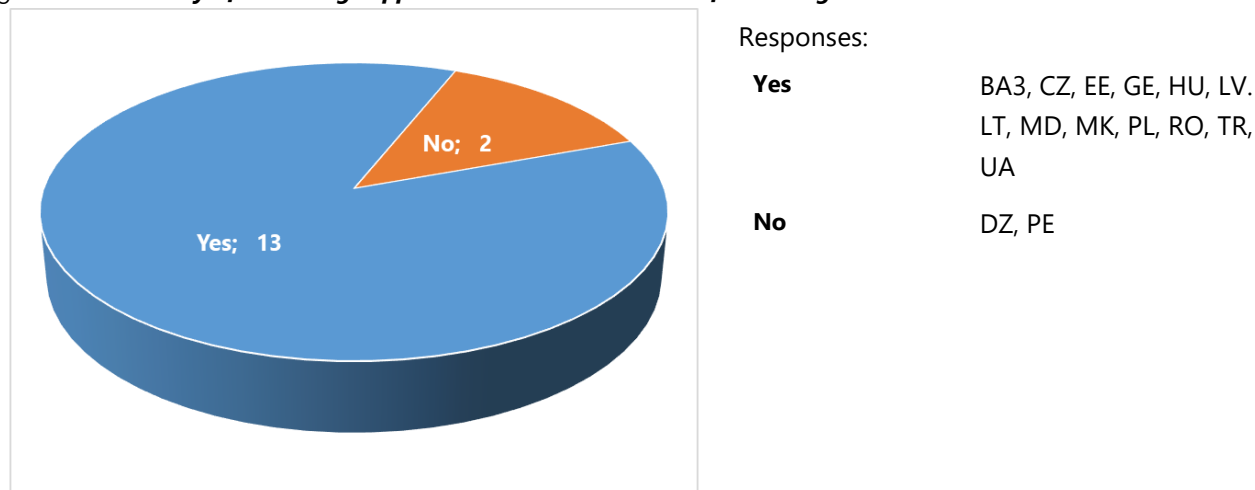
13 (Bosnia and Herzegovina – RERS, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Moldova, North Macedonia, Poland, Romania, Turkey and Ukraine) out of 15 respondents answered that switching is possible for consumers, and 2 respondents (Algeria and Peru) answered that switching for consumers is not possible.

Similar to the retail market of electricity, switching a natural gas supplier in Algeria is not possible, because the incumbent supplier has a monopoly, and supply prices are very low, and these factors are a barrier for new market entrants, making the incumbent supplier almost exclusive market player.

In Peru the reason why switching a supplier is not possible is that there is a monopoly of natural gas suppliers.

³ Data refers to Brčko District of Bosnia and Herzegovina.

Figure 14: **Possibility of switching suppliers on the retail market of natural gas**



Similarly to the electricity retail markets, the number of supplier switching indicates how active the retail markets of natural gas are.

Comparing the rates of households switching suppliers in electricity and natural gas, the switching rates of the two leading countries are higher in natural gas than in electricity. The highest switching rate for household consumers are in the Czech Republic with 7.3%, and Estonia follows as second with 6.9%.

In the non-household segment of the retail market of natural gas Latvia has the highest percentage with 27.34%, the second is the Czech Republic with 11.2%, and the third is Estonia with 3.1%.

The deadline for supplier switching in natural gas set by law shows quite a similarity, with in most answering countries being 21 days. In Europe this – similarly to electricity – is probably due to transposition of the Gas Directive in the EU Member States and in the Contracting Parties of the Energy Community. The shortest legal duration for switching is Georgia with a maximum of 24 hours. The Czech Republic with 10 working days and Estonia with a maximum of 14 calendar days follow.

Figure 15: **Switching data for 2019 on the retail market of natural gas**

	Number of supplier switching of household consumers in natural gas in 2019:	Number of supplier switching of non-household consumers in natural gas in 2019:	What is the legal duration of the switching process in your country in natural gas?
BA3	0	0	21 days
CZ	190 446 (7.3%)	23 982 (11.2%)	10 working days
EE	3 360 (6.9%)	265 (3.1%)	max 14 days
GE	0	N/A	max 24 hours
HU	N/A	N/A	21 days
LV	1.78%	27.34%	15 days
LT	0	151 (2.0254%)	21 days
MD	0	0	20 days
MK	N/A	N/A	21 days
PL	53 926 (0.8%) (total for households and non-households)		21 days
RO	N/A	N/A	no more than 21 days
TR	0	over 300 (0.0457%)	30-60 days
UA	N/A	N/A	21 days

2.4. Distinct consumer groups besides the household and non-household consumers

The traditional division of consumers on the retail market is the household and the non-household consumer, which division is usually based on the activity of the consumer. A household consumer buys energy for his/ her own consumption that is not related to any economic or business purposes, whereas a non-household consumer usually pursues commercial activities and economic interests.

Besides, even this division can be divided into more categories or subgroups, if we consider the voltage level and consumption of different consumers, which may have different aspects, if we compare for instance the consumption and purposes of the consumers. Larger than typical non-household consumers can be industrial consumers, with large consumption, much larger than small or medium enterprises. In order to categorize these kinds of consumers, many states differentiate on the voltage level.

Another type of division of consumer groups in Europe is for example those consumers eligible for universal service. Universal service means according to Article 27 of Electricity Directive that all household customers, and, where Member States deem it to be appropriate, small enterprises, enjoy universal service, namely the right to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices. The concept of universal service existed in the predecessor of the Electricity Directive, in Article 3 of 2009/72/EC Directive of the 3rd Energy Package adapted in 2009 as well. In practice, the consumers supplied within universal service enjoy all the heightened consumer protection measures that usually apply only to household consumers. This category is usually linked to price regulation.

The Gas Directive – part of the 3rd Energy Package as well – does not use the wording of universal service, but in Article 2 (2) it is stipulated that Member States may impose on undertakings operating in the gas sector, in the general economic interest, public service obligations which may relate to security, including security of supply, regularity, quality and price of supplies, and environmental protection, including energy efficiency, energy from renewable sources and climate protection. Such obligations shall be clearly defined, transparent, non-discriminatory, verifiable and shall guarantee equality of access for natural gas undertakings of the Community to national consumers.

Another aspect can be the purpose or services provided to the consumer. These are typically non-household consumers providing social benefits, e. g. public institutions, schools, hospitals, religious institutions, etc. These kind of consumers may enjoy different benefits, for example they may be supplied on special prices or cannot be disconnected.

Further distinction can be made by the financial, societal (like energy poor consumers), or medical status of the consumers, but this distinction is only attributed to natural persons, so they constitute a subgroup of the household consumers. This subgroup of household consumers is referred to as energy poor and vulnerable consumers in the Electricity Directive, which has certain provision for the EU Member States regarding them, even a link to smart metering and price regulation according to Article 5 of the Electricity Directive.

Article 28 of the Electricity Directive obliges the EU Members to take appropriate measures to protect customers and shall ensure, in particular, that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. Member States shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect customers in remote areas. They shall ensure high

levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms.

However, the concept of vulnerable consumers was not introduced by the Electricity Directive. Its predecessor, the 2009/72/EC Directive concerning common rules for the internal market in electricity already stipulated in Article 3 (7). The change was compared to this was the introduction of the criteria that may be included when defining the concept of vulnerable consumers by the Electricity directive.

Article 3 (7) of the Gas Directive uses a similar approach, when is stipulated that Member States shall take appropriate measures to protect final customers, and shall, in particular, ensure that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of gas to such customers in critical times. Member States shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take appropriate measures to protect final customers in remote areas who are connected to the gas system.

This report only presents the main groups of consumers of the respondents, as a part of the effort to illustrate their retail markets. When it was asked what kind of the consumer groups exist – if they do at all – beside the household and non-household, the responses were diverse, depending on from which was the main or most common perspective of the respondents. As this report does not aim to demonstrate all subgroups of the consumers, and the vulnerable and the energy poor consumers will be shortly presented in Section III, the following distinctions could be ascertained based on the answers received.

2.4.1. Distinct group of consumers in electricity

In 5 countries (Estonia, Georgia, Kosovo*, Latvia and Ukraine) there are no other categories of consumers aside from household and non-household consumers.

In Algeria, North Macedonia, Saudi Arabia, Turkey and in the United Arab Emirates – Dubai the major distinction beyond the household and non-household consumers is based on the type and (consumption) level of business activity of non-household consumers.

- Algeria differentiates the industrial consumers.
- In North Macedonia the non-household consumers are divided into two groups: the large and small consumers (a small consumer has less than 50 employees and less than 2 Mil Euro annual turnover).
- In Saudi Arabia the consumers are categorized as residential, commercial, industrial, agricultural, government, medical & educational consumers, and the consumers in water desalination sectors.
- In Turkey the non-household consumers are distinguished as commercial, agricultural irrigation, industrial and lighting consumer groups.
- In the United Arab Emirates (Dubai) non-household consumers are further split into commercial industrial, and other category.

In Albania, Bosnia and Herzegovina and in the Czech Republic the main distinction is made based on the voltage level.

- Albania responded that small non-household consumers are distinguished. These consumers are natural or legal persons, connected to a voltage level of 0.4 kV, who buy energy for use in the premises where they carry out their activity and not for the purpose of resale.

- Bosnia and Herzegovina – SERC answered that in Brčko District of Bosnia and Herzegovina there are three categories of consumers:
 - consumers at voltage level 35 kV,
 - consumers at voltage level 10 kV
 - and consumers at voltage level 0.4 kV (households, public lighting and other consumers excluding households and public lighting).
- Bosnia and Herzegovina – FERK responded that the customers are divided by the voltage level as follows:
 - Customers at 110 kV
 - Customers at 35 kV
 - Customers at 10 kV
 - Customers at 0.4 kV (households, commercials, public lighting)

The customers connected at 0.4 kV, households and commercials, are divided into different groups depending on their technical characteristics. Households are divided into two, and commercials into five groups. Besides that, there is also a differentiation on how the customers are supplied, are they supplied within the universal service (all households and some of the commercials) or on the free market (110 kV, 35 kV, 10 kV, public lighting and some of the commercials).
- Bosnia and Herzegovina – RERS responded that consumers are split into 5 major groups:
 - customers which receive electricity at the voltage level of 110 kV,
 - customers that receive electricity at the voltage level of 35 kV,
 - customers which receive electricity at the voltage level of 10 kV,
 - other customers at low voltage,
 - and household consumers.
- In the Czech Republic the main division of consumers is into household and non-household consumers, the latter being split further by low/ medium/ high voltage level.

In Hungary the main distinction is that the consumers are eligible for universal service with regulated prices and stricter consumer protection conditions (consumers eligible for universal service: consumers receiving low voltage electricity not higher than 3*63A of connection capacity in total for all service locations and public institutions) or not.

Lithuania highlighted the consumers producing electricity from renewable sources.

In Moldova distinction is made by the consumer is whether wholesale or a final consumer. This is used in Albania as well additionally to the distinction by voltage level.

In Peru consumers are divided by their suppliers, as the consumers are supplied on regulated prices or not.

In Poland consumers are categorized into tariff groups. Tariff groups are defined as a group of customers supplied with electricity, or using services related to electricity supply, to whom a single set of prices or charges and terms are applied. The division into tariff groups in electricity is made on the basis of the following criteria:

- the voltage level of the network at the point of supply of electricity;
- contracted capacity value;
- settlement system;
- number of accounting time zones;
- electricity consumption for household needs.

In Romania, three kind of distinction can be made. There is a distinction of non-household consumers based on voltage (low/ medium/ high voltage), as in many other countries or entities. The second distinction is based on the consumption level of the non-household consumers: low consumption if the approved power is less

than or equal to 100 kW, high-consumption if the approved power exceeds 100 kW. The third distinction is based on the eligibility for universal service: all households and the non-household with a number of employees less than 50 and an annual turnover or a total amount of assets on the balance sheet according to annual tax reports not exceeding EUR 10 million are eligible for universal service.

2.4.2. Distinct group of consumers in natural gas

In 4 countries (Estonia, Georgia, Turkey and Ukraine) are no distinct groups of consumers.

11 regulators answered that they have certain consumer groups differentiated by their respective characteristics.

- Algeria distinguishes industrial consumers.
- In Bosnia and Herzegovina – RERS the customers are divided into households, commercial customers, industrial customers and district heating systems.
- In the Czech Republic compressed natural gas customers make up a special group.
- In Hungary there are consumers eligible for universal service (service with regulated prices and stricter consumer protection conditions). These are consumers are all household consumers regardless of their purchased capacities (technical capacity of the gas meter at the site of consumption), non-household consumers with purchased capacity not exceeding 20 m³/h, and local municipalities to the extent of supplying the tenants living in residential property owned by the municipality.
- In Latvia the distinction is made by how the consumer is supplied. Household consumers can choose either to be captive users (with regulated tariff) or to become free market participant (price is set according to bilateral agreement with trader).
- Lithuania distinguishes wholesale natural gas consumers.
- Moldova distinguishes industrial consumers and wholesale and final consumers.
- In North Macedonia the regulator monitors closely district heating producers and Combined Cooling Heating and Power (CCHP) Producers as separate natural gas consumers from other non-households.
- In Peru non-residential customers are divided into regulated and independent customers. Independent customers can purchase transportation and natural gas molecule with the carrier and producer directly.
- In Poland consumers are categorized into tariff groups. Tariff groups are defined as a group of customers supplied with natural gas, or using services related to natural gas supply, to whom a single set of prices or charges and terms are applied. The division into tariff groups in natural gas is made on the basis of the following criteria:
 - type of gas fuel delivered;
 - technical and functional characteristics of entry points or exit points;
 - size and characteristics of the supply or receipt of gas fuels at the places of their delivery or receipt;
 - scope of services provided;
 - places of gas delivery;
 - settlement system;

- gas consumption for household needs;
 - amount of energy contained in gas fuel purchased at the virtual point.
- In Romania the main division of consumers is dividing them into households and non-household consumers, the latter being split further by low/ high consumption level (low consumption if the annual consumption is less than or equal to 28.000 MWh, high consumption if the annual consumption exceeds 28.000 MWh). The non-household consumers are divided into two groups: industrial customers and the rest. Depending on how the place of consumption is connected to a natural gas objective, the final natural gas customer may be: a) connected to the transmission system; b) connected to the distribution system/ closed distribution system; c) connected to the upstream supply line related to the production of natural gas.

2.5. Smart metering

Smart meters have been often discussed about in the recent years, as means of multiple goals. They are the means to transform the landscape of the electricity retail market, on many levels. They include the consumers, who obtaining precise and almost real time data (be it 15 minutes or 1-hour intervals of smart meter readings) can receive accurate and frequent consumption data, thus they can better manage their consumption and are able to quickly respond to price signals. The consumers can participate in demand side response and can receive their bills more frequently based on their actual consumption. This raises awareness of energy efficiency as well, as the cheapest and cleanest energy is the energy not consumed.

The access to easy and actual data is important to DSOs and suppliers as well, because it enables a quick and easy supplier switching. Thus raises the awareness of the consumers to both of their energy consumption and the benefits of switching. This leads to an active retail energy market, with a wider variety for consumer choice.

With new the legal constructs of the Electricity Directive, consumers are given the right to be active consumers, participate in aggregation or in energy communities. To be able to unlock the possibilities of those, they need a smart meter. But a smart meter in itself is not enough, the whole grid system must be modernized. For example, neutral data platforms (data hubs) and interoperability are needed in order to offer accessibility to all involved parties to the necessary data. When switching a supplier, aside from the consumer at least three other parties are involved: the old supplier, the new supplier, and the DSO.

All these data, electronic and digital equipment must be protected, not just physically, but digitally as well. Cybersecurity gains more and more importance both from legal aspect, as data protection becomes increasingly vital, and from the aspect of cybernetic threats as well.

Currently, there is another benefit of smart meters that got more recognition during the COVID19 pandemic: smart meters reduce human contacts, as they transfer data remotely, and there is no need for human interaction for reading.

All these aspects must be taken into consideration, when a state decides to deploy smart meters in large numbers and decides to upgrade its grids into smart grids, and making a significant investment decision.

2.5.1. Market penetration and plans for massive roll-out of smart meters in electricity

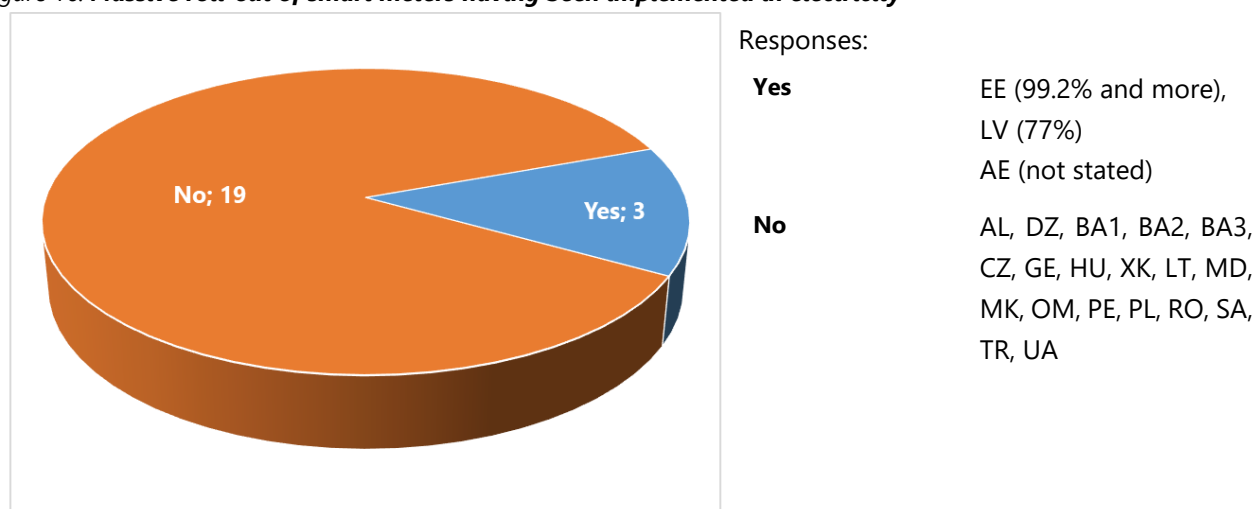
Regarding the EU, Article 19 of the Electricity Directive obliges the Member States of the EU to deploy smart metering systems, subjected to a cost-benefit assessment. Where the deployment of smart metering systems has been negatively assessed as a result of the cost-benefit assessment, Member States shall ensure that this assessment is revised at least every four years, or more frequently, in response to significant changes in the underlying assumptions and in response to technological and market developments. Member States shall notify to the Commission the outcome of their updated cost-benefit assessment as it becomes available. According to Article 21, where the deployment of smart metering systems has been negatively assessed as a result of the cost-benefit assessment and where smart metering systems are not systematically deployed, Member States shall ensure that every final customer is entitled on request, while bearing the associated costs, to have installed or, where applicable, to have upgraded, under fair, reasonable and cost-effective conditions. The application of price regulation is interlinked with smart meters as well, as Article 5 (6)-(7) obliges the EU Member States that intend to upkeep price regulation for a transitional period to ensure that all beneficiaries of price regulation are entitled to, and are offered to, have smart meters installed at no extra upfront cost to the customer, are directly informed of the possibility of installing smart meters and are provided with necessary assistance.

Clearly, EU Member States are nudged to deploy smart metering systems and to a massive roll-out of smart meters.

Since this report does not intend to dive deeply into the topic of smart meters and smart grids, it only offers a brief overview of the current state of play of the prevalence of smart meters among ERRA Member States, and their plans for the foreseeable future.

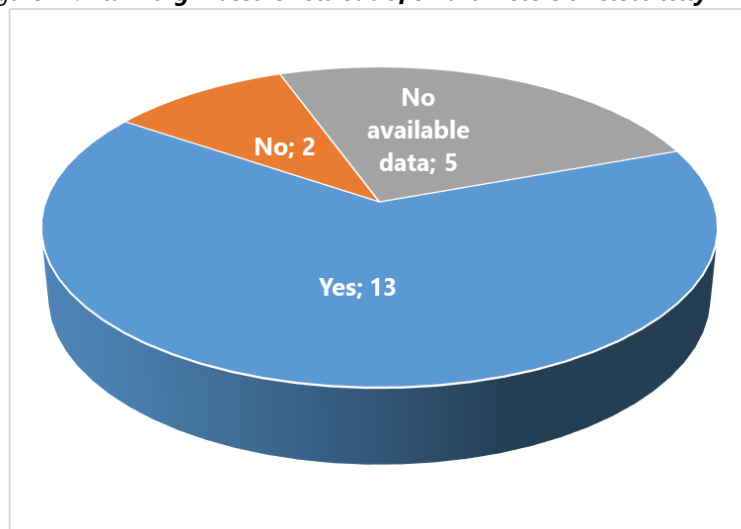
Based on the responses, only in 3 ERRA Member States (Estonia, Latvia and the United Arab Emirates – Dubai) was a massive roll-out of smart meters underway or complete. In Latvia the vast majority of consumers (78%) are equipped with smart meters, and in Estonia practically the massive roll-out is complete, with the smart meter coverage of 99.2%. The Dubai Electricity and Water Authority (DEWA) installed 200,000 smart meters by 2016 and aimed to complete the remainder of the programme by 2020, covering all of Dubai.

Figure 16: **Massive roll-out of smart meters having been implemented in electricity**



Regarding the plans for the foreseeable future, 13 ERRA Members responded with a positive answer about intending massive roll-out of smart meters.

Figure 17: **Planning massive roll-out of smart meters in electricity**



Responses:

Yes	BA1, BA2, BA3, CZ, HU, LV, LT, MK, OM, PL, SA, TR
No	XK, PE, UA
No available data	AL, DZ, GE, MD, RO

The ERRA Members responding with a positive answer about the massive roll-out of smart meters gave the following details:

- Bosnia and Herzegovina – SERC: The deployment of smart meters started in 2018 in Brčko District, but not fully implemented. Currently 20% of consumers have smart meters installed.
- Bosnia and Herzegovina – FERK: Currently 191.500 smart meters have been installed. The process of installing smart meters continues.
- Bosnia and Herzegovina – RERS: Smart meters are currently being installed at large customers.
- Czech Republic: the massive roll-out is planned in 2024 – 2027, with the goal of equipping 80 % of the consumers till 2024.
- Hungary: the government plans a massive roll-out of up to 1 000 000 smart meters between 2021 – 2027.
- Latvia: the massive roll-out is set between 2016 – 2023. The current coverage of smart meters is around 77%, and 99% is to be reached in 2022.
- Lithuania: the massive roll-out is planned between the first quarter of 2021 – 2023 with the goal to install smart meters for all electricity customers consuming more than 1000 kWh/year until 2023.
- North Macedonia: DSO started installing smart meters, although there still is no approved roll-out plan as envisaged in EU legislation.
- Oman: There is a national plan for the roll-out of smart meters, which aims the replace all existing meters (around 1.2 million) with smart meters between 2020 – 2025.
- Poland: 80% of all electricity consumers shall be equipped with smart meters until 2028.
- Saudi Arabia: The roll-out of smart meters is almost complete, meaning all conventional meters have been replaced with smart meters, and the additional infrastructure will be ready at the end of 2021.
- Turkey: There is an ongoing project named as national smart meter systems. It will be implemented presumable in the beginning of 2023. The details are yet to be determined.

2.5.2. Market penetration and plans for massive roll-out of smart meters in natural gas

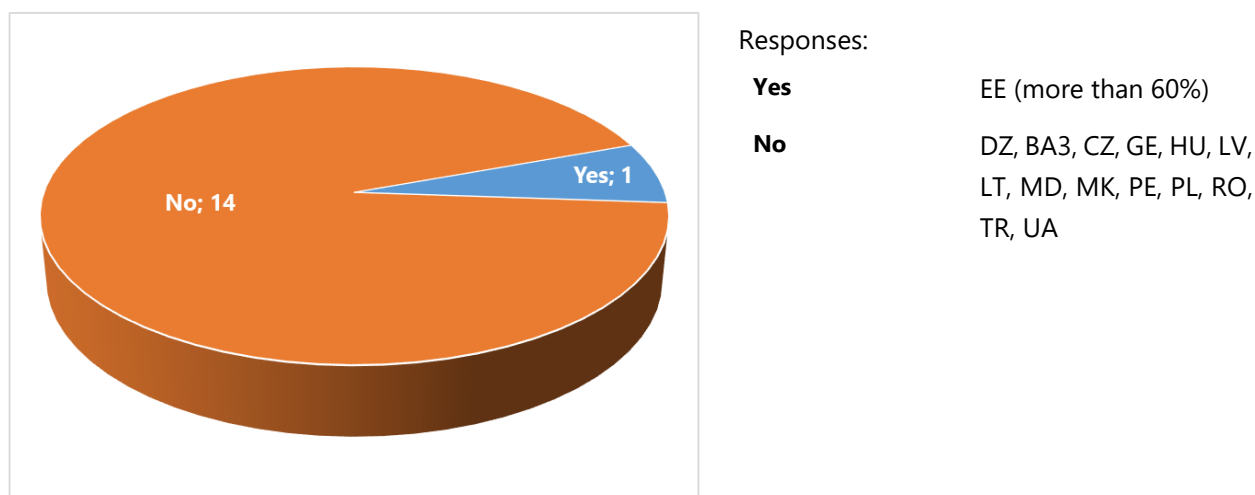
As we can see, the prevalence of smart meters in the natural gas sector is much lower than in electricity. This may be caused by the fact that the renewable energy sources and small-scale power plants have seen a huge increase in the electricity sector. This kind of increase and application of these cannot be mirrored in natural gas.

However, other advantages of smart meters and smart metering system still apply, e.g. access to accurate and actual consumption data, more frequent billing based on actual consumption and quicker and easier switching of suppliers, and less human interaction.

The leader in the use of smart meters in natural gas is – just like in electricity – Estonia with more 60% of consumers equipped with smart meters.

All other respondents (Algeria, Bosnia and Herzegovina – RERS, Czech Republic, Georgia, Hungary, Latvia, Lithuania, Moldova, North Macedonia, Peru, Poland, Romania, Turkey and Ukraine) answered that there are not smart meters operating in large numbers on their retail markets of natural gas.

Figure 18: **Massive roll-out of smart meters having been implemented in natural gas**

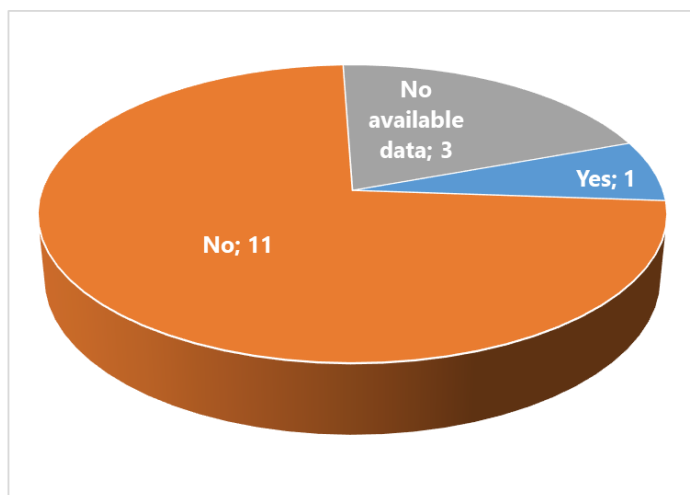


For the question about planning a massive roll-out smart meters on their retail markets of natural gas, 1 respondent out of 15 gave a positive answer. Estonia plans a massive rollout of smart meters in 2021 with the plan to equip every consumer with an annual consumption of at least 750 cubic metres above with smart meters. This will cover every consumer, except those with a very small consumption.

11 respondents (Bosnia-Herzegovina – RERS, Georgia, Hungary, Latvia, Lithuania, Moldova, North Macedonia, Peru, Poland, Turkey and Ukraine) gave a negative answer.

3 respondents (Algeria, Czech Republic and Romania) did not have data on this question.

Figure 19: **Planning massive roll-out of smart meters in natural gas**



Responses:

Yes	EE (in 2021)
No	BA3, GE, HU, LV, LT, MD, MK, PE, PL, TR, UA
No available data	DZ, CZ, RO

2.6. Comparison tools

Where there are multiple suppliers and offers, it is important that consumers can differentiate between the offers, based on their needs, consumption habits and other considerations. As many consumers do not have the time or inclination to search and compare the offers of all suppliers on their own, they may not be aware of the existence of different offers that may be better suited to their respective needs. This is where a comparison tool offers help to the consumers, as it facilitates the consumers' choice.

As the consumers' perspective is gradually changing, for certain consumers the price of energy becomes not the first priority, as they want to act against the climate change and ensure that their energy consumption is, or is more sustainable. This type of consumers looks for energy offers that deliver energy from renewable energy sources (green offers).

Another phenomenon is the emergence of bundled offers in the energy sector that contain not only energy, but different service (e. g. energy efficiency services, maintenance services, appliances, etc.).

All these kind of energy offers become more and more difficult to be compared to each other. In order to help the consumers in their choice, NRAs, consumer organizations or other bodies started to operate digital comparison tools on their websites.

As these digital comparison tools appeared and became more numerous, simultaneously arose the question of their trustworthiness and independence. Who operates those comparison tools and how are the offers compared and categorized?

Two main answers have been given for the question of trustworthiness and independence: one solution is that the public authority responsible for consumer protection and/ or the energy sectors operates a comparison tool as a neutral actor, or as for the second solution the tool operated by someone else is certified by such an authority.

2.6.1. Comparison tools on retail markets of electricity

In the EU, according to Article 14 of the Electricity Directive each Member States shall ensure that at least household customers, and microenterprises with an expected yearly consumption of below 100 000 kWh, have access, free of charge, to at least one tool comparing the offers of suppliers, including offers for dynamic electricity price contracts. Customers shall be informed of the availability of such tools in or together with their bills or by other means. The tools shall meet at least the following requirements:

- a) they shall be independent from market participants and ensure that electricity undertakings are given equal treatment in search results;
- b) they shall clearly disclose their owners and the natural or legal person operating and controlling the tools, as well as information on how the tools are financed;
- c) they shall set out clear and objective criteria on which the comparison is to be based, including services, and disclose them; (d) they shall use plain and unambiguous language;
- d) they shall provide accurate and up-to-date information and state the time of the last update;
- e) they shall be accessible to persons with disabilities, by being perceivable, operable, understandable and robust;
- f) they shall provide an effective procedure for reporting incorrect information on published offers; and
- g) they shall perform comparisons, while limiting the personal data requested to that strictly necessary for the comparison.

Member States shall ensure that at least one tool covers the entire market. Where multiple tools cover the market, those tools shall include, as complete as practicable, a range of electricity offers covering a significant part of the market and, where those tools do not completely cover the market, a clear statement to that effect, before displaying results.

The comparison tool may be operated by any entity, including private companies and public authorities or bodies. If the comparison tool is operated by private company, that comparison may be certified by being granted a trust mark issued by the competent authority (the NRA, or any other competent authority of the given Member State).

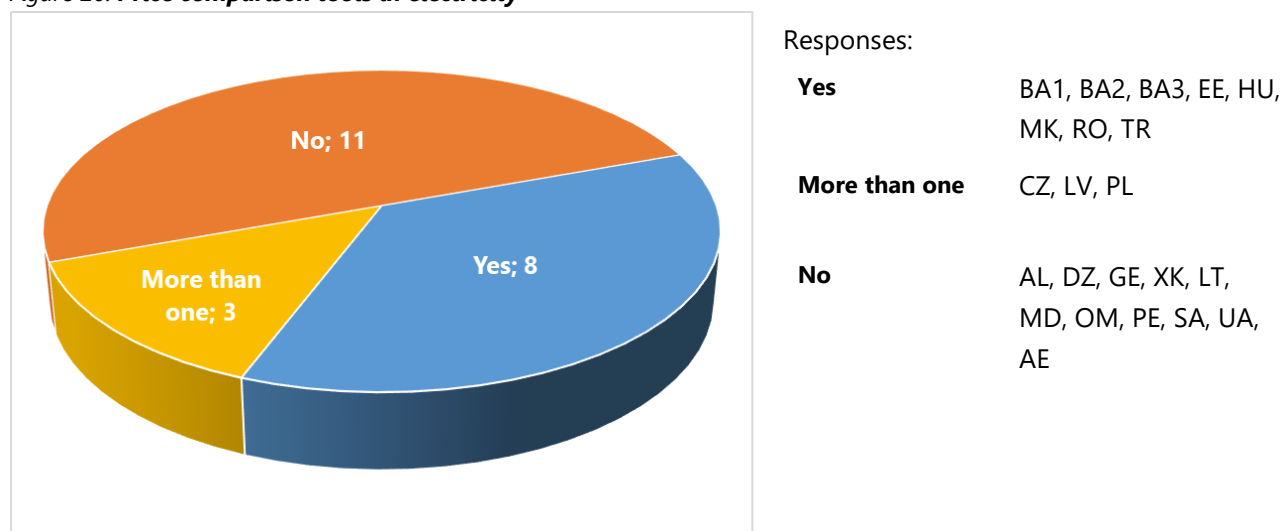
The ERRA members participating in this report answered as follows about the existence and number of available comparison tools on their retail electricity markets:

- there is one comparison tool in 8 countries or entities: Bosnia and Herzegovina – SERC, FERK, RERS; Estonia, Hungary, North Macedonia, Romania, Turkey;
- there are more than one comparison tools in 3 countries: Czech Republic, Latvia, Poland;
- there is currently no comparison tool in 11 countries: Albania, Algeria, Georgia, Kosovo*, Lithuania, Moldova, Oman, Peru, Saudi Arabia, Ukraine and the United Arab Emirates – Dubai;

As we can see, the 11 out the 22 respondents have a working comparison tool on their retail markets of electricity.

While in the United Arab Emirates – Dubai there is currently no comparison tool for electricity, but DEWA (the state utility provider) offers a consumption assessment in which households can compare their consumption against other properties of similar size and character.

Figure 20: **Price comparison tools in electricity**



2.6.2. Comparison tools on retail markets of natural gas

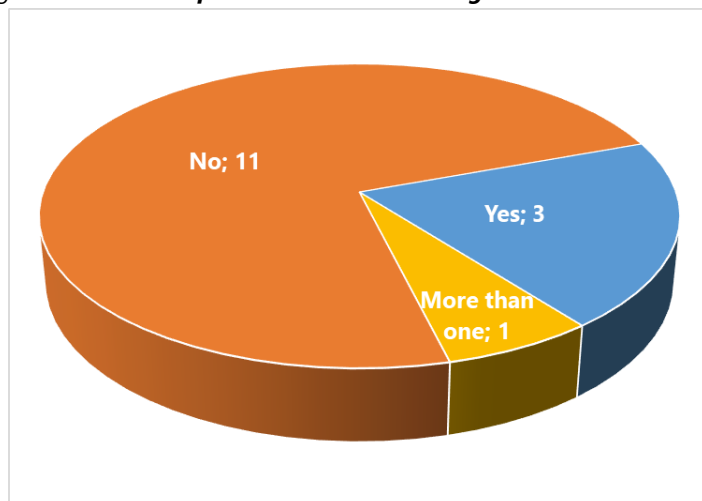
As we saw in chapter 2.1.2., 7 (Albania, Bosnia and Herzegovina – SERC and FERK, Kosovo*, Oman, Saudi Arabia and the United Arab Emirates – Dubai) out of 22 regulators responded that either they do not have natural gas markets, or they do not regulate it. This naturally affects the number of comparison tools on the retail markets of natural gas.

From the 15 regulators that regulate the markets of natural gas, and an overwhelming majority of 11 (Algeria, Bosnia and Herzegovina – RERS, Georgia, Hungary, Latvia, Lithuania, Moldova, North Macedonia, Peru, Turkey and Ukraine) answered that there are no comparison tools for the retail markets of natural gas.

The reason behind this may have multiple causes. The revolution of renewable energy sources appearing on the electricity markets are not compatible with the market of natural gas, leaving retail markets of natural gas mostly untouched by those phenomena. This means that there may be not as many variations of offers compared to the retail markets of electricity. Another reason behind this may root in legislation. The Electricity Directive obliges the Member States of the EU to have at least one independent comparison tool, but there is no such obligation in the Gas Directive, which was adopted as a part of the 3rd Energy Package in 2009, in contrast to the Electricity Directive, which was adopted as part of the Clean Energy for All Europeans Package in 2019. Clearly, legislation for natural gas is currently lagging behind compared to electricity.

Only 4 respondents (Czech Republic, Estonia, Poland and Romania) answered that they have an available comparison tool on the retail markets for natural gas.

Figure 21: **Price comparison tools in natural gas**



Responses:

Yes	EE, PL, RO
More than one	CZ
No	DZ, BA3, GE, HU, LV, LT, MD, MK, PE, TR, UA

2.6.3. Who operates the comparison tool(s)?

As for the question who operates the comparison tools the respondents answered as follows.

The comparison tool or one comparison tool among many is operated by the NRA in 7 countries and entities, namely in Bosnia and Herzegovina – SERC, FERK, RERS; Czech Republic, Hungary, North Macedonia, Romania.

The comparison tool or one comparison tool among many are operated by private company or entity in 5 countries, namely in the Czech Republic, Estonia, Latvia, Poland, and Turkey. The privately operated comparison tools are not certified by the regulators.

SECTION III. – CONSUMER PROTECTION

Consumer protection is one of the pivotal duties of the national regulatory authorities. At the end of day, all energy related activities are only required because someone consumes energy. Without the need for energy, there would not be generation, transmission, distribution and supply of energy.

This is of course valid for many other products and services, but if states and governments recognized the need for consumer protection for those other products and services, then the energy sector cannot be an exception either. Especially since the energy sector is a very special sector often with legal and natural monopolies, where the consumer has often no or limited choice. That is why the intervention of the state is needed in order to protect those consumers who individually do not have the chance to protect their interests. This is achieved by the establishment of regulatory authorities.

3.1. What sectors are regulated by the NRA in regard to consumer protection

The NRAs are national regulatory agencies responsible for a balance in the regulated sectors between the interests of the regulated companies and the customers, ensure constant development of the regulatory framework, as well as to promote competitive environment.

Figure 22 clearly shows that the mostly regulated sectors are electricity, natural gas, district heating/ cooling and water supply. Most countries regulate sewerage along with water supply. There are 7 countries which also regulate postal services, competition, telecommunication, railway, transport, petroleum, liquid fuels production, retail fuel price and transport.

Figure 22. **Sectors regulated by the NRA in regard to consumer protection**

	Electricity	Natural Gas	District Heating/ Cooling	Water	Sewage	Postal Services	Competition	Other
AL	■							
DZ	■	■						
BA1	■							
BA2	■							
BA3	■	■						Oil
CZ	■	■	■					
EE	■	■	■	■	■	■	■	
GE	■	■		■				
HU	■	■		■	■			
XK	■	■	■					
LV	■	■	■	■		■		Telecom, Waste Management
LT	■	■	■	■	■		■	Railway, Transport ⁴
MD	■	■	■	■	■			Petroleum Products
MK	■	■	■	■	■			Retail fuel prices
OM	■			■	■			
PE	■	■						
PL	■	■	■					Liquid fuels production, storage, transmission and domestic/ foreign trading
RO	■	■	■					
SA	■			■				
TR	■	■						Petroleum and LPG
UA	■		■	■				
AE	■		■	■				
Σ	22	15	11	11	6	2	2	

⁴ Lithuanian Transport Sector: The main tasks of the Council in the regulation of the transport sector are to implement the harmonization of maximum tariffs for passenger transport by local trains and passenger and vehicle transfer ferries across the Curonian Lagoon (through the Klaipėda State Seaport area) provided for in Article 34 of the Railway Transport Code and Article 30.

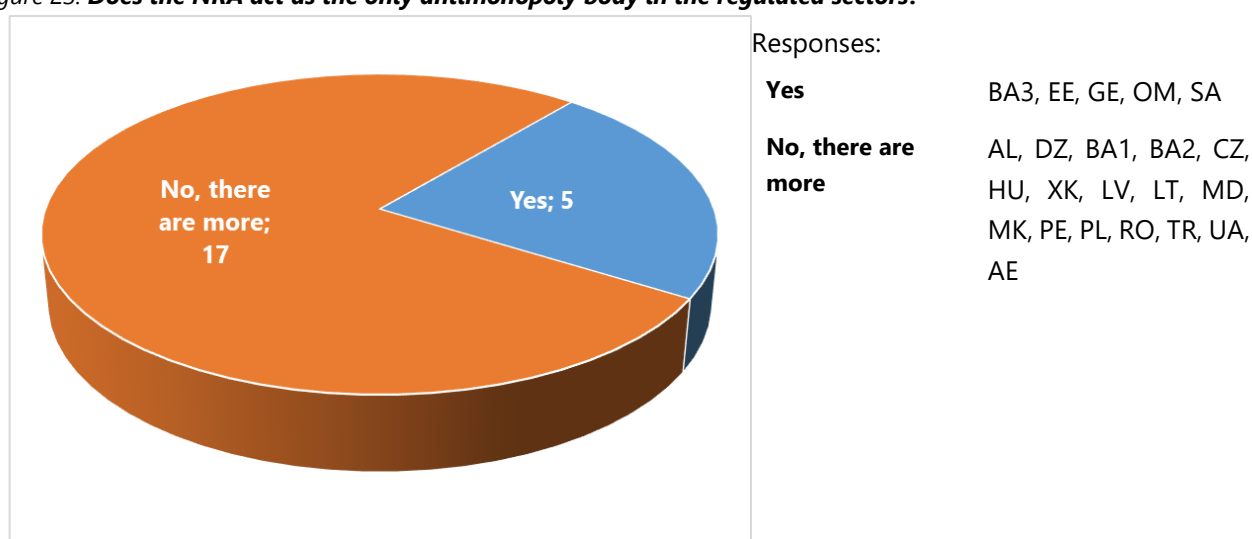
3.2. The antimonopoly bodies in the regulated sectors

The jurisdiction for antimonopoly in the regulated sectors can be organized in more ways. One way is, when the NRA acts as the solely antimonopoly body for the regulated sectors. The other way, when there is a different authority (usually a general antimonopoly/ competition authority), or there is shared jurisdiction between the regulatory authorities responsible for the energy sector and the competition authority.

According to the received answers, only 5 regulators (Bosnia and Herzegovina – RERS, Estonia, Georgia, Oman, Saudi Arabia) are solely responsible for antimonopoly duties in their regulated sectors.

All other respondents answered that there is another antimonopoly authority with which they share their respective jurisdiction or there is separate authority or body responsible for antimonopoly or competition. This means that in their countries they have to cooperate in antimonopoly cases.

Figure 23. **Does the NRA act as the only antimonopoly body in the regulated sectors?**



There is another antimonopoly body in the country:

AL	Competition Authority
DZ	Competition Council
BA1	Competition Council of Bosnia and Herzegovina
BA2	Competition Council of Bosnia and Herzegovina
CZ	Office for the Protection of Competition
HU	The Hungarian Competition Authority has certain jurisdiction, with which HEA has an agreement on cooperation.
XK	Kosovo Competition Agency
LV	Competition Council
LT	Competition Council of the Republic of Lithuania – implements state competition policy, as well as ensures the compliance with laws. More info in English: https://kt.gov.lt/en/
MD	Competition Council
MK	Commission for Protection of Competition has general competences over various sectors.

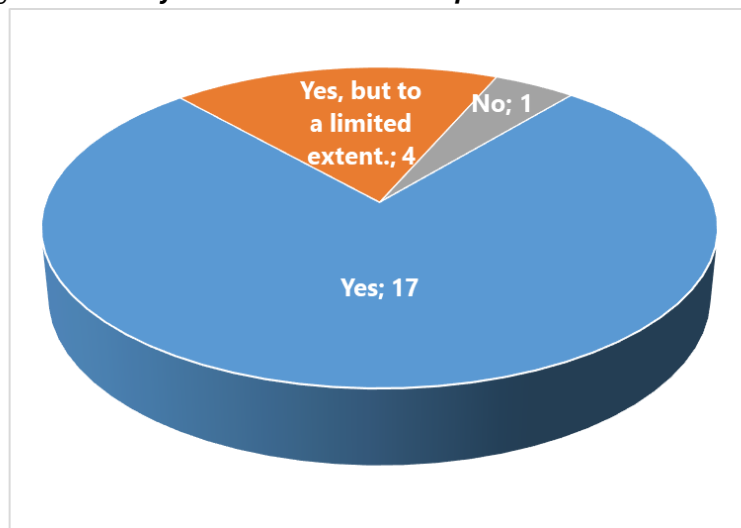
PE	According to the law, INDECOPI (National Competition Authority) is in charge of the antitrust evaluation in the electricity sector.
PL	UOKiK (Office of Competition and Consumer Protection) is a central state administration, responsible for shaping the antitrust policy and consumer protection policy in all sectors of the economy. URE and UOKiK cooperate in the field of competition and consumer protection in the energy sector.
RO	Competition Council
TR	There is also a Competition Authority working as the antimonopoly body. Two authorities are working coordinately for energy markets if necessary. According to their website, their mission as the Competition Authority is to prevent cartelization and monopolization, increase consumer welfare, contribute to the well-functioning of market mechanisms, contribute to the improvement of international competition power, and to ensure that investment environment functions in a healthy way by decreasing entry barriers.
UA	Antimonopoly Committee of Ukraine
AE	The antimonopoly activity is regulated in federal law, basically rendering this into the jurisdiction of the federal government (Federal Supreme Council).

3.3. Jurisdiction of the NRAs for complaint handling

One of the most common form of having direct contact between the regulator and the consumer when the consumer has a complaint against his/ her service provider, be that a supplier or a network operator. Complaint handling can take many different forms depending on each country's legal system. It can be an administrative procedure or an alternative dispute resolution. As mentioned just before, the legal system may be different, but one aspect to distinguish an administrative procedure from an alternative dispute resolution may be the strict formalities of the procedure and the room for the agreement of the parties. Usually, when a formal procedure is initiated, it is the authority that will decide in the case based on the legislation, while during an alternative dispute resolution the parties may agree on a broader extent.

17 regulators – Albania, Algeria, Bosnia and Herzegovina – RERS, Czech Republic, Estonia, Georgia, Kosovo*, Lithuania, Moldova, North Macedonia, Oman, Peru, Poland, Romania, Saudi Arabia, Turkey and Ukraine – answered that they have exclusive jurisdiction to solve complaints related to their regulated areas.

Figure 24: **NRA's jurisdiction to handle complaints**



Responses:

Yes	AL, BA3, DZ, CZ, EE, GE, XK, LT, MD, MK, OM, PE, RO, SA, TR, UA, AE
Yes, but to a limited extent	BA2, HU, LV, PL
No	BA1

Supplement to the answer "Yes, but to a limited extent":

BA2	According to the Law on Electricity in the Federation of Bosnia and Herzegovina FERK is authorised to resolve the complaints to the decision of DSO in the second-instance about refusal to access distribution network for the third party and conditions of access to the distribution network. Decisions are final. Party which is not satisfied with the decision may initiate the administrative dispute before the competent court but it does not prevent implementation of the FERK's decision.
HU	There is shared jurisdiction with the general consumer protection authority and the competition authority.
LV	Except for complaints about payment documents.
PL	URE has 100% competence but only in matters specified in the energy law. In other matters complaints handling belongs to the competence of the energy ombudsman, UOKiK or court.

There is a national regulator, namely the State Electricity Regulatory Commission (SERC), having jurisdiction over and responsibility for transmission of electricity, transmission system operations and foreign trade in electricity for the whole country, as well as for generation, electricity distribution and supply of customers in the Brčko District of Bosnia and Herzegovina (administrative unit of local self-government). SERC is not authorized to resolve the complaints. In Brčko District, the Appeal Commission of Brčko District has jurisdiction over complaint handling on the decisions of service providers. This is a second - instance authority empowered to resolve the complaints about refusal to access distribution network, electric power permit and connection contract.

3.4. Dispute resolution

One of the function of the NRA's are to settle disputes arising between licensees, the small power plants, importers, exporters, suppliers, consumers, market operators and others within their competences. This dispute resolution has the NRA as a mediator facilitating the settlement of the dispute among the arguing parties.

All responding NRAs answered that they have jurisdiction for dispute resolution, except for Hungary. This means that NRAs giving a positive answer can offer their expertise to settle disputes.

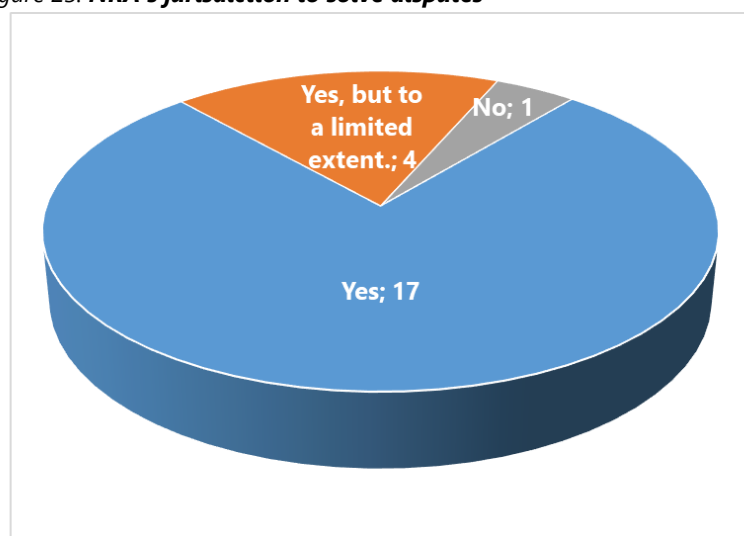
Among the 22 NRAs, 4 stated that while they jurisdiction for dispute resolution, they jurisdiction is limited.

- In Algeria, the regulator gives its opinion on the appeal. The regulator may, if it deems necessary, bring together the concerned parties in order to reach an amicable solution. In the event that one of the two parties isn't satisfied with the regulator's position in relation to the appeal submitted to it, it will always have the possibility of bringing the dispute in front of the competent judicial bodies.
- Bosnia and Herzegovina – FERK settles disputes between customers and licensees or between licensees regarding the right on the electricity supply, the obligation of electricity supply, tariffs/ prices at which the electricity is supplied, delay or refusal to supply electricity and quality of the electricity supply.
- In Latvia, the regulator has no jurisdiction about payment documents.
- In Poland the agreements that have already been concluded are excluded for the exclusive jurisdiction of the court and the Energy Act specifies the type of disputes in which the President of the URE has jurisdiction (e.g. refusal to conclude an agreement on connection to the network, supply or transmission/ distribution contracts, contracts, refusal to connect installation of a renewable energy source or micro-installations, exceeding the deadline for connection).

In Hungary the situation is somewhat different. There is a forum for alternative dispute resolution for consumers, if they do not want initiate an administrative procedure before the NRA, but this forum is a non-energy sector specific third party.

In the United Arab Emirates – Dubai it is required to settle disputes. However, as with other NRAs customers may appeal to the courts.

Figure 25: **NRA's jurisdiction to solve disputes**



Responses:

Yes	AL, BA1, BA3, CZ, EE, GE, XK, LT, MD, MK, OM, PE, RO, SA, TR, UA, AE
Yes, but to a limited extent	DZ, BA2, LV, PL
No	HU

If an NRA has jurisdiction for dispute resolution, the important question that derives from this jurisdiction is, that does the decision of NRA have a binding power?

Out of the 17 NRAs that have jurisdiction for dispute resolution, 13 answered that their decisions are binding for the addresses.

3.5. Complaint handling

3.5.1. Ways of complaint handling

Traditionally, there are two ways of the complaint handling procedure among the NRAs:

- One way is that consumers must try to settle their complaints with their service providers (suppliers, DSOs) beforehand they may choose to file a complaint to the NRA.
- The other way is when the consumer can turn directly to the NRA with his/ her complaints.

Both ways have advantages and disadvantages. The first way takes more time for the consumer if the complaint cannot be settled with the service provider, but this way provides more opportunity to settle the complaint peacefully and thus relieves the NRA from a significant number of complaints to be investigated.

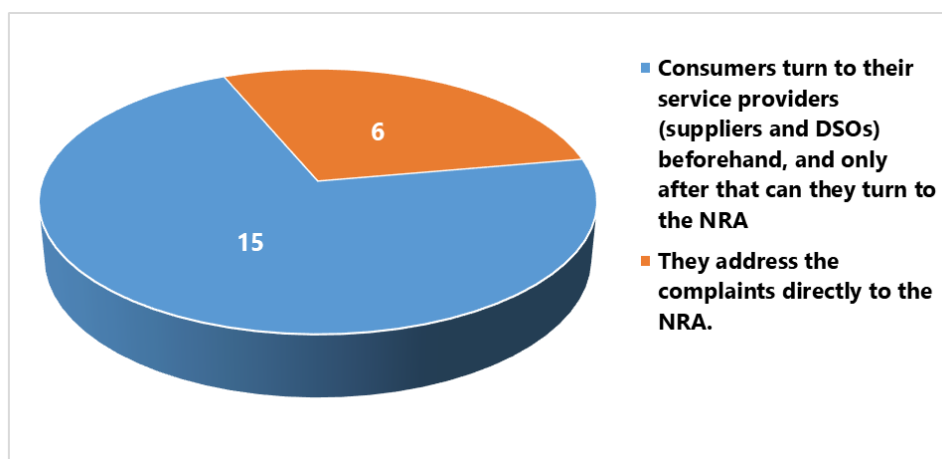
The second way is faster as it lacks the compulsory step to try to solve the complaint with the service provider, and from the perspective of the consumer is more direct and neutral, as the NRA is an independent body, while the service providers are not. But this way requires more resources from the NRA as it probably must face a greater number of complaints, including those complaints which could have been relatively easily solved by the service providers.

15 NRAs (Albania, Algeria, Bosnia and Herzegovina – FERK, RERS; Georgia, Hungary, Kosovo*, Lithuania, Moldova, North Macedonia, Oman, Peru, Romania, Saudi Arabia, Turkey and the United Arab Emirates - Dubai) answered that their consumers must turn to their service providers before they can file a complaint against them at the NRA. Albania has mixed form though, that will be explained shortly.

5 NRAs (Czech Republic, Estonia, Latvia, Poland and Ukraine) answered that complaints of the consumers can be directly addressed to them.

The State Electricity Regulatory Commission (SERC) of Bosnia and Herzegovina has no jurisdiction for complaint handling.

Figure 26: **Do consumers have to turn to their service providers with their complaints before they can turn to the NRA?**



Responses:

Consumers turn to their service providers (suppliers and DSOs) beforehand, and only after that can they turn to the NRA AL, DZ, BA2, BA3, GE, HU, XK, LT, MD, MK, OM, PE, RO, SA, TR, AE

They address the complaints directly to the NRA. CZ, EE, LV, PL, UA

3.5.2. The rules for service providers for complaint handling

As we have seen it in point 3.5.1., in the majority of the NRAs answered that the consumers must turn to their service providers to try to solve their complaints amicable, and only after that can they file a complaint to the NRA.

For the question about the main rules of this procedure, the responding NRAs gave the following answers:

- In Albania as mentioned above there is a mixed form. The consumers must turn first to their service providers, and after this may they register a complaint to the NRA, but not later than 12 months after the answer of the service providers.
- In Algeria if the complainant is not satisfied with the treatment of his request (after exhaustion of all internal remedies) by the service provider, or if she/ he has not obtained a response from the service provider after a maximum period of three months, then can the consumer lodge an appeal to the NRA with the necessary supporting documents (copies of all letters sent to the distributor and the possibly corresponding answers).
- Bosnia and Herzegovina – FERK: The procedure is set by the Law on administrative procedure. An appeal shall be submitted directly to the first-instance authority (in this case to DSO). If an appeal was submitted or sent directly to the second-instance authority (in this case to FERK), it shall immediately send it to the first-instance authority. The first-instance authority shall verify whether an appeal is allowed, whether it is a timely one and lodged by an authorised person. The first-instance authority shall, by its decision, refute a non-allowed and untimely appeal, that is, the one which was lodged by an unauthorised person. If the first-instance authority which issued a decision finds that an appeal is justified and it is not necessary to carry out a new examination procedure, it may resolve the matter differently and replace the decision challenged by the appeal with a new decision. If in respect of the appeal the authority which issued a decision finds that the performed procedure was incomplete and that this could have influence on the resolution of the matter, it shall be required to complete the procedure in compliance with the provisions of this law. The authority which issued a decision shall complete the procedure even where the applicant provided such facts and evidence in the appeal which could result in the different resolution of the matter, if the applicant had to be given an opportunity to participate in the procedure which preceded the issuance of the decision and this possibility was not given to him, or it was given to him, but he failed to use it and in his application he justified this failure. According to the results of the completed procedure the authority which issued a decision may, within the limits of the party's request, take a different decision and replace the decision challenged by the appeal with a new decision. Where the authority which issued a decision (in this case DSO) finds that a lodged appeal is allowed, a timely one and presented by the authorised person, but that it failed to replace the decision challenged by the appeal, it shall be required to send an appeal to the authority authorised for taking a decision as per an appeal (in this case to FERK), without delay and within eight days from the date of receiving the appeal. In addition to the appeal, it shall be required to attach all the files that pertain to the case.
- Bosnia and Herzegovina – RERS: The service providers must to register the complaints and answer within a given time (no further data available), and if this is unsuccessful, only then may the consumers go to NRA,
- In Georgia, the consumers must register the complaints to the service providers. The service providers have 1 month to respond. In case the service provider fails to respond in deadline, or the

consumer does not accept the answer, then may the consumer go to the NRA or Energy Ombudsman.

- In Hungary, service providers must register and try to solve the complaints and answers within 15 days. In case the complaint affects more service providers, then there are additional 15 days to clear responsibility for the complaint among the service providers.
- In Kosovo*, service providers must register the complaints and answer within 30 calendar days (which can be extended up 3 months from the day of receipt and registration of the complaint in total in complicated cases). If this is unsuccessful, only then may consumers turn to the NRA with their complaints.
- In Lithuania, the consumers need not turn to their service provider in case of the request or complaint, consumers must turn to their service providers only in the case of the dispute: a consumer who considers that the seller or supplier has infringed his/ her rights or legitimate interests in a consumer contract must first contact the seller or supplier in writing and state his/ her claims, unless the consumer goes directly to court. The consumer must contact the seller or service provider no later than three months from the day on which the consumer became aware or should have become aware of the infringement of his rights or legitimate interests. The seller or service provider must examine the consumer's request free of charge and, if he does not agree with the consumer's requirements, must provide the consumer with a detailed reasoned written response no later than 30 days from receipt of the consumer's request.
- In Moldova, the consumer may address the service provider with a complaint. In case if the service provider refuses to solve the case within 30 days, the consumer has the possibility to address the NRA.
- In North Macedonia, service providers must register the complaints and answer within a maximum of 60 days, and if this is unsuccessful, only then may the consumers go to the NRA.
- In Oman, service providers must examine and respond to customer complaints within 10 days, which in complex cases can be extended with additional 30 days, so the service providers have altogether 40 days. After having received the final response from the service provider may the customer file a complaint to the NRA.
- In Peru, service providers must register complaints and respond within 30 business days. If the consumer does not agree with the resolution of her/ his claim, then she/ he can appeal to the NRA by presenting new evidence. The stages of the claim are regulated in a procedure established by the NRA.
- In Romania, service providers must register the complaints and answer within 30 days from the date of registration (unless otherwise provided by law or other regulation), and if this is unsuccessful, only then can the consumers go to the NRA.
- In Saudi Arabia, service providers must register the complaints and answer within 10 days for billing complaints, and 30 working days for other complaints, and if this is unsuccessful or if consumers are unhappy with their complaint resolution, only then can the consumers go to the NRA.
- In Turkey, consumers can send their complaints to the service providers, or directly to the NRA. Service providers have to register the complaints and answer within 15 working days. However, complaints addressed directly to the NRA are sent to service providers and similar procedure is applied.

3.5.3 The legal deadlines of complaint handling for the NRAs

If and when a complaint has reached an NRA, one of the most important guarantees for the consumers is to know the duration within which the NRA must bring a resolution in their cases, regardless from the outcome of the complaint.

Most NRAs – except for Algeria, Poland and the United Arab Emirates (Dubai) – have some kind of obligation to finish the cases within reasonable time, and vast the majority of them have deadlines set by law.

These are the deadlines set by law for the NRAs:

- Albania: 30 days, which can be extended with additional 30 days, up to the maximum of total 60 days.
- Bosnia and Herzegovina – FERK: 30 days.
- Bosnia and Herzegovina – RERS: 30 days.
- Czech Republic: 90 days, in complicated cases 120 days.
- Estonia: There are different durations set by law. In natural gas sector - 30 days (can be prolonged with additional 30 days). In electricity – 30 days (can be prolonged with additional 30 days). If complaints are against network companies, then 60 days (can be prolonged with additional 60 days).
- Georgia: 1 month, which can be extended to maximal 3 months.
- Hungary: 55 days.
- Kosovo*: 30 days.
- Latvia: 30 days (which may be extended in complex cases).
- Lithuania: In case of a request: 20 working days with possibility to extend for 20 working days. In case of a complaint: 20 working days with possibility to extend for 10 working days. In case of a dispute: 90 calendar days with possibility to extend for 30 calendar days.
- Moldova: 30 days.
- North Macedonia: 60 days.
- Oman: 10 days in initial stage and additional 30 days for complicated complaints.
- Peru: 10 or 30 business days, depending on the matter.
- Poland: For complaints handling by NRA the time limit is not set by law, but usually it takes up to 30 days. For ADR procedure: 90 days.
- Romania: 30 days.
- Saudi Arabia: For complaints handled by NRA there is no fixed duration by law, but the duration for service providers is 10 working days for billing complaints and 30 working days for other complaints according to regulation approved by WERA.
- Turkey: There is not a limit for solving, but there is a 15 days limit for 1st answer. Solution duration varies according to the situation.
- Ukraine: 30 days.

The complaint handling is free of charge in every country or entity.

3.5.4. Insights into numbers of complaints received by the NRAs between 2015 – 2019

As this report offers only a quick glimpse into the topics it tackles, there was no intention to create a study about the numbers and types of complaints NRAs receive. Although this topic could be very interesting as it could be a very good indicator about what the consumers perceive as problematic areas for them regarding the retail energy markets, especially, when one would compare the average number of complaints per consumer, and the exact types of complaints.

On the other hand, mere numbers do not and cannot reflect the complexity of each case and the peculiarities of the respective markets.

But as a basis, the following data was supplied by the participants of the survey about the number of the received complaints.

Figure 27: **Number of complaints received by the NRA.**

	2015	2016	2017	2018	2019
AL	5 851	957	567	274	183
DZ	33	17	20	42	62
BA1	N/A	N/A	N/A	N/A	N/A
BA2	41	17	24	22	38
BA3	151	173	157	108	112
CZ	57	176	146	140	72
EE	82 (66 – EL; 16 – NG)	63 (51 – EL; 12 – NG)	80 (72 – EL; 8 – NG)	76 (70 – EL; 6 – NG)	65 (57 – EL; 8 – NG)
GE	1 759	2 368	2 688	3 186	1 928
HU	1 423	1 414	835	642	625
XK	235	281	233	106	75
LV	72	139	90	73	50
LT	498	540	486	369	473
MD	2 344	1 137	987	907	825
MK	128	130	161	212	194
OM	87	75	75	87	91
PE	10 937	12 569	13 708	17 380	21 969
PL	4 370	3 510	3 875	5 431	3 192
RO	3 625	4 668	6 070	7 465	9 948
SA	1 038	1 740	4 239	10 625	12 253
TR	10 765 (7 962 – EL; 2 803 – NG)	30 448 (23 829 – EL; 6 619 – NG)	64 255 (54 319 – EL; 9 936 – NG)	66 575 (55 223 – EL; 11 352 – NG)	74 256 (60 296 – EL; 13 960 – NG)
UA	4 916	6 007	7 435	8 405	19 808
AE	5	3	3	6	20

3.6. Other institutions responsible for consumer protection

Each country has other responsible consumer protection institutions in the regulated sectors. Such as – the courts, the ombudsman offices, ADR bodies, the civil associations, other authorities (not the NRA or ombudsman), the consumer rights protection center.

Figure 28 shows how many and what kind of bodies are responsible for consumer protection in each country. A big majority among the sample group indicated that the most of countries have the courts and ADR bodies.

Figure 28: **Other institutions responsible for consumer protection**

	Courts	Ombudsman/ another independent body	ADR bodies	Civil associations	Authorities different than the NRA or ombudsman	Other
AL	■					
DZ				■		
BA1			■			
BA2	■		■			
BA3	■		■	■		
CZ	■					
EE	■				■	
GE			■			
HU	■	■		■	■	
XK	■	■	■	■		
LV						Consumer Rights Protection Centre
LT	■					
MD	■					
MK	■		■			
OM	■					
PE	■					
PL	■	■	■	■	■	
RO	■	■			■	
SA	■					
TR	■	■	■		■	
UA	■		■			
AE	■	■				
Σ	18	6	9	5	5	

3.7. Consumer groups in the regulated sectors that are granted special protection – vulnerable consumers

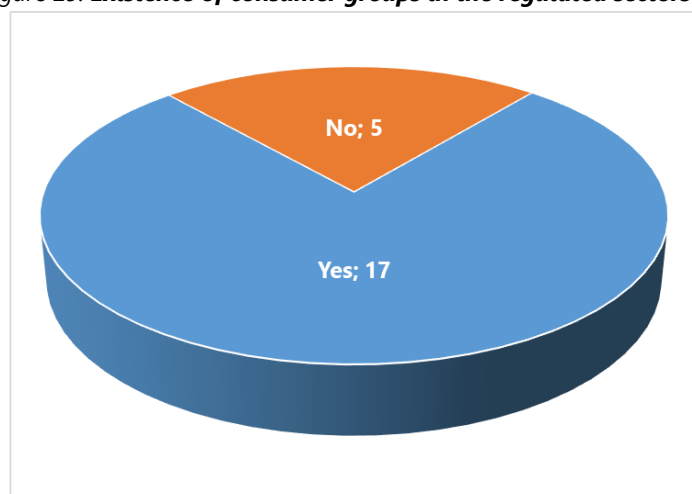
As mentioned in Section II, there are special consumer groups that require additional protection compared to others. This is usually due their financial, societal or health situation. Member States of the EU and Energy Community Contracting Parties were obliged to develop and transpose into legislation the definition of vulnerable consumers both in electricity and natural gas.

But as we can see, the definition of vulnerable consumers is not limited to the EU legislation, many other countries introduced the concept of vulnerable consumers. The vast majority of NRAs (17) answered that they have special consumer groups which are recognized as vulnerable consumers.

Only 5 NRAs (Albania, Algeria, Czech Republic, Estonia and the United Arab Emirates – Dubai) reported that they do not have a definition for vulnerable consumers in the energy sector. The reason for this may be that these states tackle this group not within their energy legislation, but within and by their social measures, like the Czech Republic.

Albania is currently in transition. According to the Albanian Law on Energy, vulnerable customer means a household customer which due to social reasons, is entitled of certain special rights regarding the electricity supply. But on the other hand, the Ministry responsible for social affairs – in cooperation with the Ministry responsible for energy, the Finance Ministry and in consultation with NRA and the stakeholders – is drafting the criteria of the social reasons mentioned in the Law on Energy, and of the procedures to obtain the vulnerable customers status and the way to handle them, which are approved by the Council of Ministers' decision. Such decision is not yet taken. Because of this, there is a legislative gap regarding the definition of vulnerable consumers, thus the definition is not complete and inapplicable.

Figure 29: **Existence of consumer groups in the regulated sectors that are granted special protection**



Responses:

Yes

BA1, BA2, BA3, GE, HU, XK, LV, LT, MD, MK, OM, PE, PL, RO, SA, TR, UA

No

AL, DZ, CZ, EE, AE

The definition of the vulnerable consumer may be different for each country. However, these special consumers usually mean elderly people, low-income families, people having critical dependency on electricity powered equipment, veterans, persons living with disabilities, number of family members, seasonal consumption, or similar criteria.

Those NRAs that replied that they have recognized de jure and/ or de facto vulnerable consumers described them and the criteria for qualifying as such as follows:

- Bosnia and Herzegovina – SERC: In Brčko District of Bosnia and Herzegovina the criteria of determination of vulnerable consumers are not regulated in law. The vulnerable consumers are protected through social protection policies (consumers with the lowest pensions, people with disabilities, etc.). Besides, General conditions for electricity supply in Brčko provide as follows:
 - In case of lack of electricity, hospitals, water supply objects, food factories, objects of district heating, public transport, police have priority for supply.
 - Customers whose disconnection could cause direct danger to lives and health of population (e.g. hospitals, water supply objects, public transport object), cannot be disconnected as a consequence of non-payment if they ensure guarantee instruments for repaying their debts.
- Bosnia and Herzegovina – FERK: There is no legal definition of vulnerable customers. FBiH criteria for obtaining the status: pensioner with the lowest pensions (160€) and beneficiaries of permanent social financial support; for both categories - monthly consumption below 268 kWh if supplied by JP Elektroprivreda BiH d.d. Sarajevo, and below 348 kWh if supplied by JP Elektroprivreda HZHB d.d. Mostar.
- Bosnia and Herzegovina – RERS: No available data.
- Georgia: The definition is given by "Energy and water supply law". Vulnerable energy consumer is a household consumer, who due to his/ her status or condition, has been granted the right to use the system and/ or receive electricity and/ or natural gas and/ or water supply or preferential terms on the basis of the relevant legislation of Georgia. Nowadays, Vulnerable consumers are socially vulnerable people. Their consumption is subsidized by the Government.
- Hungary:
 - Electricity: Basically people in financial difficulties (indigent persons) and people living with disabilities, and people having critical dependency on electricity powered equipment for health reasons, but there are determining factors (like income level, age, other).
 - Natural gas: Basically people in financial difficulties (indigent persons) and people living with disabilities, but there are determining factors (like income level, age, other).
- Kosovo*: 30 days: Ministry of Labour and Social Welfare sets the criteria for identifying consumers in need based on two criteria:
 - based on poverty status (recipients of the SAS scheme, defined by Law on the Social Assistance Scheme, and
 - based on merit/ recognition for service during the war, defined by Law on the Status and the Rights of the Martyrs, Invalids, Veterans, Members of Kosovo Liberation Army, Civilian Victims of War and their Families.
- Latvia: Protected (vulnerable) user in the electricity sector - a poor or low-income family (person), a family (person) caring for a child with a disability or a person with a first disability group and a large family (3 or more children).
- Lithuania: Vulnerable electricity consumer - a household electricity consumer who himself/ herself and/ or persons living with him/ her receives and (or) has the right to receive monetary social assistance in accordance with the Law of the Republic of Lithuania on Monetary Social Assistance to the Deprived has the right to use additional guarantees established for vulnerable consumers in accordance with the procedure established by law and its implementing legal acts.

- Moldova: The vulnerable consumers are protected through social protection policies. The criteria of determination of vulnerable consumers are not determined in the law.
- North Macedonia: Socially vulnerable households which are in the register of the Ministry of Labor and Social Affairs and are entitled to receive financial support from the state budget.
- Oman: Consumers with special needs. For example, elderly and those who rely on medical equipment at home.
- Peru: Residential users who have an electricity consumption of up to 100 kWh per month are benefited with discounts on their electricity tariff.
- Poland: Vulnerable consumers can benefit from the financial support – the energy allowances by municipalities to customers who have been granted the housing allowance (electricity consumers) or the allowance for the purchase of fuel (gas consumers), who are parties of electricity or gas sales agreement. However, a new regulation on protection of vulnerable consumers and energy poverty (act modifying the existing energy law) is at the final stage of governmental work. The end of the works is expected by the end of 2021.
- Romania: Persons with low-income persons, persons with health problems, elderly persons.
- Saudi Arabia: Consumers with critical need for electricity. These are the kind of consumers who need electricity to operate a medical device at home which is necessary to maintain health. Or hospitals that need electricity to serve patients.
- Turkey: There are extra rights for disabled and elderly people in the disconnection process. (Only in electricity market).
- Ukraine: Vulnerable consumers are the households which acquire the right to state aid and special measures of protection against disconnection in certain periods according to the procedure established by the Cabinet of Ministers of Ukraine. The Cabinet of Ministers of Ukraine has not yet defined criteria for vulnerable consumers of electricity.

3.8. Energy poverty

Energy poverty is a relatively new concept and category. Even its name has not been steadily established yet, as in the English speaking countries energy poverty is known as fuel poverty as well. But the phenomenon was publicly recognized as an issue in the EU. According to estimations between 50 and 125 million people in the EU suffer from energy poverty⁵ and are unable to afford proper indoor thermal comfort. This number is estimated to be over 1 billion people worldwide⁶. Energy poverty is very much interlinked with vulnerable consumers, oftentimes creating an overlap.

The United Kingdom was the first country that gave energy poverty an official definition in the Warm Homes and Energy Conservation Act 2000, according to which a person is to be regarded as living “in fuel poverty” if he is a member of a household living on a lower income in a home which cannot be kept warm at reasonable cost.

The 3rd Energy Package of the EU (namely the 2009/72/EC and 2009/73/EC Directives) recognized the problem and emphasized: „Energy poverty is a growing problem in the Community. Member States which are affected and which have not yet done so should therefore develop national action plans or other appropriate

⁵ https://ec.europa.eu/energy/eu-buildings-factsheets-topics-tree/energy-poverty_en

⁶ <https://finca.org/blogs/rupert-scofield-energy-poverty/> and <https://unstats.un.org/sdgs/report/2019/goal-07/>

frameworks to tackle energy poverty, aiming at decreasing the number of people suffering such situation.” However, there was no definition in legislation for energy poverty.

In 2010, World Economic Forum defined energy poverty as the lack of access to sustainable modern energy services and products. Despite the fact energy is the engine of civilization, nowadays access to adequate and affordable sources is not equally distributed on the planet.

There are some common threads emerging across these definitions:

- the term energy poverty is closely linked to households' inability to pay their energy bills (which is in many cases based on the Low Income High Costs (LIHC) indicator);
- most definitions associate energy bills with domestic energy services such as heating, cooling, lighting, cooking and powering electrical appliances;
- the term affordable is used to refer to households receiving adequate energy services without getting into debt;
- the term adequate means the amount of energy needed to ensure basic comfort and health.

As most countries have no official definition for the term "energy poverty", it is often described as the "inability to keep homes adequately warm" (according to the WHO: adequate temperature for the living room is 21 °C and 18 °C for the other rooms).

In the EU, point (d) of Article 3 (3) of the Governance Regulation of the Energy Union – which is in force since December 2018 – obliges the Member States to assess the number of households in energy poverty taking into account the necessary domestic energy services needed to guarantee basic standards of living in the relevant national context, existing social policy and other relevant policies, as well as indicative Commission guidance on relevant indicators for energy poverty. In the event that a Member State finds, pursuant to point (d) of the first subparagraph, that it has a significant number of households in energy poverty, on the basis of its assessment of verifiable data, it shall include in its plan a national indicative objective to reduce energy poverty. The Member States concerned shall outline in their integrated national energy and climate plans, the policies and measures, which address energy poverty, if any, including social policy measures and other relevant national programmes.

Article 29 of the Electricity Directive states that when assessing the number of households in energy poverty pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999, Member States shall establish and publish a set of criteria, which may include low income, high expenditure of disposable income on energy and poor energy efficiency. The Commission shall provide guidance on the definition of 'significant number of households in energy poverty' in this context and in the context of Article 5(5), starting from the premise that any proportion of households in energy poverty can be considered to be significant.

The COMMISSION RECOMMENDATION (EU) 2020/1563 of 14 October 2020 on energy poverty recommends a group of indicator to assess national energy poverty levels. The indicators can be divided into four groups:

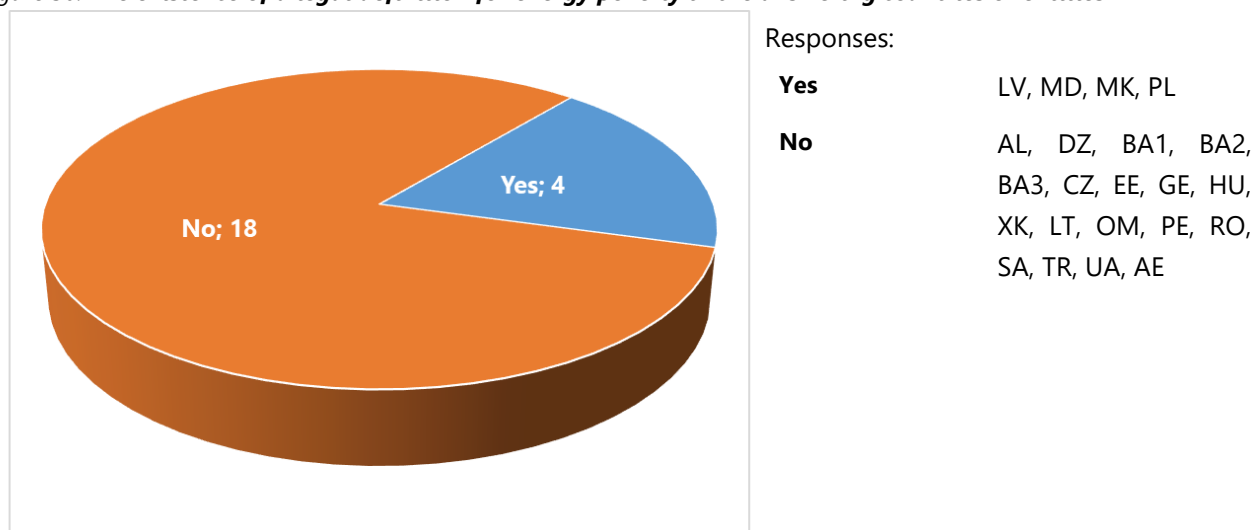
- (a) indicators comparing spending on energy with income: these quantify energy poverty by comparing the amount households spend on energy with an income measure (e.g. percentage or number of households spending more than a certain proportion of their disposable income on domestic energy services);
- (b) indicators based on self-assessment: households are asked directly to what extent they feel able to afford energy (e.g. ability to keep the home warm enough in winter and cool enough in summer);
- (c) indicators based on direct measurement: these indicators measure physical variables to determine the adequacy of energy services (e.g. room temperature);

- (d) indirect indicators: these measure energy poverty by through associated factors, such as arrears on utility bills, number of disconnections, and housing quality.

But as we can see, neither the Governance Regulation, nor the Electricity Directive, nor the Commission Recommendation has a definition of energy poverty, they just oblige the Member States to address the issue and create a national definition for energy poverty and recommend criteria for that definition.

Regarding ERRA Members, there are only 4 NRAs (Latvia, Moldova, North Macedonia and Poland) that reported that there is a legal definition for energy poverty.

Figure 30: **The existence of a legal definition for energy poverty in the answering countries or entities**



The definition of energy poverty in the ERRA Members States for energy poverty is as follows:

- Latvia: A household affected by energy poverty is a household within the meaning of the Social Services and Social Assistance Law that meets at least one of the following criteria:
 - 1) it is recognized as a poor or low-income household and receives material support to cover expenses related to the use of housing;
 - 2) it rents a dwelling or social apartment owned or leased by the local government in accordance with the Law on Assistance in Resolving Housing Issues or the Law on Social Apartments and Social Housing.
- Moldova: Energy poverty - a situation characterized by the lack of consumer access to modern energy sources and technologies and/ or by the reduced purchasing power of consumers in relation to energy resources, in particular fuels for the preparation of food, electricity and/ or thermal energy, and/ or by the lack of thermal comfort in the home or building.
- North Macedonia: There is no strict definition. The legal basis is set in the Energy Law and implemented through a Government program for protection of vulnerable energy consumers.
- Poland: The current definition used by public statistics based on LIHC methodology (but a new definition is in progress).

3.9. The share of the vulnerable or energy poor consumers

To establish the number and share of the vulnerable and/ or energy poor consumer can be very important to determine the situation of the consumers, and what measures can or should be taken to improve their situation. This is a border area, where social policies meet energy policies, and it may vary among countries which are responsible for data collection and to formulate and implement measures. In some countries this responsibility belongs to NRAs, in some other cases to the government or ministry.

Perhaps this is the reason why only 7 regulators reported that they have data on the numbers or share of the vulnerable consumers:

- Bosnia and Herzegovina – SERC: Officially, energy poverty does not exist in the legal system of Brčko District of Bosnia and Herzegovina, but the Government of Brčko District subsidizes costs of electricity for 30% consumers with almost 350.000 Euros.
- Georgia: Almost 380 000 consumers are subsidized by government in Energy sector.
- Hungary: In 2019, the share of vulnerable consumers among electricity household consumers was 0.38%, out of which 92.63% were indigent persons (customers with special social needs), 6.94% were people with disabilities, and 0.44% were both (indigent persons with disabilities). In 2019, the share of vulnerable consumers among natural gas household consumers was 0.24%, out of which 93% were indigent persons (customers with special social needs), 6.73% were people with disabilities, and 0.26% were both (indigent persons with disabilities).
- Kosovo*: 6.81%
- Latvia: 12,76% protected consumers in 2019.
- North Macedonia: Approx. 4%
- Poland: 9,3%

And while Bosnia and Herzegovina – FERK has no legal definition of vulnerable customer, it has data for the share of customers who are subsidized for electricity costs (7.66%), which may be an indication of number of consumers who require support.

The other 14 regulators (Albania, Algeria, Bosnia and Herzegovina – RERS, Czech Republic, Estonia, Lithuania, Moldova, Oman, Peru, Romania, Saudi Arabia, Turkey, Ukraine and the United Arab Emirates – Dubai) do not have data available.

3.10. Disconnection procedure

Disconnection – when it is not done per request of the consumer – is always a drastic measure, as it cuts off the consumer from energy, from an essential service. Today, modern life is almost impossible without energy, as household appliances require electricity, heating and cooking needs either electricity or natural gas, not to mention medical appliances which may require an uninterrupted supply of electricity. This is why the disconnection procedure is usually a very heavily regulated area, with more goals in mind.

There must be a balance between the justified economic interest of the service providers and the fragile situation of those who are not able to pay their energy bills and are scheduled to terminate services provided. That is why in most countries safeguards are built in the disconnection procedure in order to raise the awareness of the consumers to start seeking solution or help, and offer protection and alternatives to avoid disconnection.

This report focuses on the disconnection due to consumers' debts or financial difficulties, not on other cases.

3.10.1. Notification of the consumer prior disconnection

The first step of the disconnection procedure is to notify the consumer that a disconnection is imminent. This notification is a warning to the consumer that the contractual relationship between him/ her and the service provider is not fulfilled by one side and in case there is no remedy for that, the relationship will be terminated. Usually, this notification is sent out because of debts of the consumers, and within the notification there is an explanation how the disconnection can be avoided and the debts be settled.

A notification prior disconnection is necessary in every ERRA Member State. However, the time for notification is very different, as the following figure shows.

Figure 31: **Notification of the consumer prior disconnection**

	How many times should the consumer be notified?	Who sends the notification
AL	1 (at least)	Service provider (supplier)
DZ	1 (at least)	DSO
BA1	1	Service providers (DSO) in Brčko District
BA2	2	DSO or supplier
BA3	1	Service provider
CZ	2	DSO
EE	1	Service provider
GE	1	Service provider (supplier)
HU	2	Service provider (supplier)
XK	1	Supplier
LV	1	DSO
LT	1	Supplier or DSO
MD	1	The notification should be done by the DSO or Supplier, depending on the reason for disconnection.
MK	1	Universal supplier
OM	3	Service provider
PE	2	Service provider
PL	1	Supplier or DSO
RO	1	Supplier
SA	3	Service provider
TR	1	Service providers (in electricity the supplier, in natural gas the DSO)
UA	1 (at least)	If the disconnection is initiated by the DSO, then the DSO, if the disconnection is initiated by the supplier then both the DSO and the supplier.
AE	1 (at least)	Service provider

3.10.2. Alternatives to disconnection

It is an important goal to keep the consumers supplied and avoid disconnection, so that is the reason why in many countries the service providers are obliged to offer alternatives to disconnection. This is usually done in the notices sent to the consumers about late payment, or when the consumers contact the service provider and signal their difficulties to pay the bill. This way the consumer can remain supplied and can reach an agreement with the service provider about how to settle the debts.

The offered alternatives to disconnection are traditionally installment, deferred payment, or the option to equip the consumer with a prepaid meter which prevents the accumulation of debts. In some countries it is mandatory for the service provider to offer alternatives, in some cases it is up to discretion of the service providers.

These are the possible alternatives to disconnection:

- Albania: installment.
- Algeria: installment, deferred payment.
- Bosnia and Herzegovina – SERC: legally not mandatory, but in practice installment is commonly offered for consumers in debt.
- Bosnia and Herzegovina – FERK: no alternatives offered mandatorily.
- Bosnia and Herzegovina – RERS: installment, deferred payment.
- Czech Republic: no alternatives offered mandatorily.
- Estonia: installment, deferred payment.
- Georgia: installment.
- Hungary: Installment, deferred payment, possibility to switch to a prepaid meter, raising the attention to the application to become a vulnerable consumer.
- Kosovo*: deferred payment.
- Latvia: deferred payment.
- Lithuania: no alternatives offered mandatorily.
- Moldova: no alternatives offered mandatorily.
- North Macedonia: installment, deferred payment.
- Oman: installment, possibility to switch to a prepaid meter.
- Peru: possibility to switch to a prepaid meter.
- Poland: possibility to switch to a prepaid meter.
- Romania: installment.
- Saudi Arabia: installment.
- Turkey: In the natural gas market, prepaid gas meters are used in some distribution companies. But they are not preferred. In the electricity market, there are no alternatives for disconnection.
- Ukraine: deferred payment.
- United Arab Emirates – Dubai: no alternatives offered mandatorily (but service providers are at liberty to negotiate with individuals to avoid disconnection).

3.10.3. Performing the disconnection

Performing the disconnection results in cutting off the consumer of electricity and/ or natural gas supply, leaving the consumer in a precarious situation.

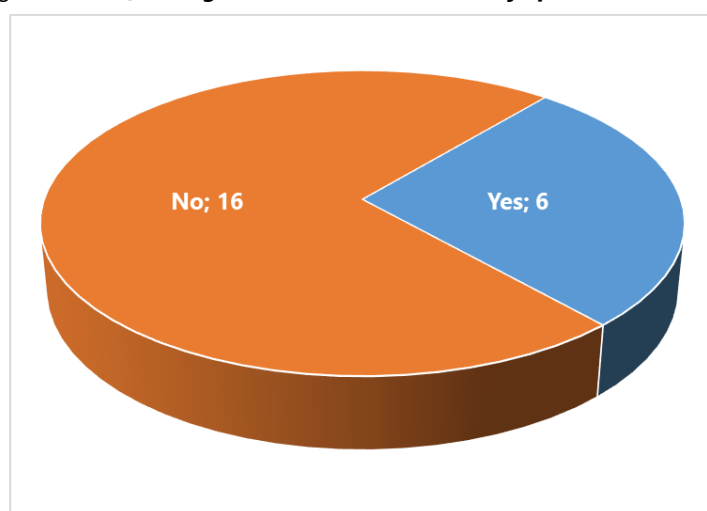
That is why some countries have regulations making the disconnection forbidden under certain circumstances, for a certain period.

This may be a moratorium, when the consumer is permitted to remain being supplied despite the fact that he/ she failed to fulfill her/ his contractual obligation and did not pay for the energy service. Usually moratoria are granted in certain seasons (for example in winters when the disconnection may lead to severe health harms) or under circumstances which affect the whole society (for example during economic crises, or pandemics). Generally, these moratoria last only for a certain period, like the winter or the pandemics are over, or the economy is stabilized.

Other moratoria are more permanent, like in case of reliance of medical equipment that need constant and uninterrupted power supply (e. g. lifeline service).

As we can see, in 6 countries (Albania, Algeria, Czech Republic, Estonia, Peru and the United Arab Emirates – Dubai) there is no such a legal institution forbidding disconnection under certain circumstances. Of course, this only means the mandatory legal provision, service providers still may grant reprieve for consumers based on their own decision.

Figure 32: **Performing the disconnection is always possible**



Responses:

Yes	AL, DZ, CZ, EE, PE, AE
No	BA1, BA2, BA3, GE, HU, XK, LV, LT, MD, MK, OM, PL, RO, SA, TR, UA

In the countries and entities where there are some legal restrictions for disconnections, the short description of those conditions is as follows:

- Bosnia and Herzegovina – SERC: Brčko District: Disconnection caused by non-payment is not possible for hospitals, special medical institutions, water supply objects, student residences, kindergartens etc., if they can offer guarantee instruments for repaying debts.
- Bosnia and Herzegovina – FERK: The disconnection shall not be performed in a facility that uses medical equipment necessary to preserve human lives and uses electricity supply from the distribution network. This will be regulated through the Contract on Use of the Distribution Network if it has been concluded in accordance with these General Conditions and the Contract on Supply and based on the necessary medical documentation submitted in the process of contract negotiations.

- Bosnia and Herzegovina – RERS: Disconnection cannot be performed if there is a critical dependence on medical devices, or during extreme winter conditions.
- Georgia: Disconnection cannot be performed in case that would harm the health of the consumer.
- Hungary: The consumer cannot be disconnected at all: In case of the consumer has critical dependency on electricity powered equipment for health reasons, or during a period of moratorium.

The consumer cannot be disconnected on specific days: a household customer may not be disconnected from service on non-working days, on legal holidays, on working days preceding directly non-working days or legal holidays; on rest days specified in specific other legislation.

- Kosovo*: The energy enterprise shall postpone the disconnection of service no more than 30 calendar days, if, prior to the disconnection date specified on the disconnection notice, the customer provides to the energy enterprise a medical statement from a licensed physician or public health official certifying that disconnection would be a serious and immediate threat to the health or safety of a designated person or to members of his/ her family in the household of the customer.
- Latvia: Disconnections for certain consumer groups cannot be performed in case of energy crisis.
- Lithuania: Except where regulation allows, disconnection is not possible. Vulnerable customers may not be restricted and/ or interrupted from the supply and/ or distribution/ transmission of electricity if they do not pay wholly or partially for the electricity supplied and network charges within deadline. if the debt does not reach a certain amount. Vulnerable consumers cannot be disconnected at all on Fridays, Saturdays, Sundays, public holidays, or in emergencies where the maximum daily air temperature is below minus 15 ° C or higher than plus 30 ° C). In such cases, the supply to the consumer may be terminated on the day following the end of the circumstances.
- Moldova: Disconnection is prohibited on Fridays, Saturdays and Sundays, on non-working holidays or one day before the non-working holiday, as well as on other days after 18.00.
- North Macedonia: There are specific groups of consumers, such as hospitals, kindergartens, airports, water utilities and similar, which cannot be disconnected due to unpaid bills. Additionally, vulnerable consumers are protected from disconnections in December, January and February. In the extraordinary situation such as COVID-19 pandemic, ERC issued a decision for postponing disconnections due to unpaid bills.
- Oman: Consumers with special needs cannot be disconnected. Furthermore, disconnection is prohibited on weekends and public holidays, during examination period. Disconnections can only be performed between 7 AM and 5 PM.
- Poland: Due to the Covid-19 pandemic the possibility to disconnect households was timely suspended. In addition, there is a good practice of the DSO (but not the law), in relation to people using life-support equipment - based on a declaration, confirmed by medical documentation such energy consumer would not be disconnected.
- Romania: In electricity market the vulnerable consumers cannot be disconnected.
- Saudi Arabia: Consumers with critical need for electricity. These are the kind of consumers who need electricity to operate a medical device at home which is necessary to maintain health. Or hospitals that need electricity to serve patients.
- Turkey: There is a prohibition of disconnection for those who has lifeline service due to a medical condition requiring medical equipment constantly powered.

- Ukraine: Disconnection of households is prohibited before the weekend and holidays. Vulnerable consumers can only be disconnected in certain periods according to the procedure established by the Cabinet of Ministers of Ukraine.

3.10.4. Legal timeframe for disconnection

By the legal timeframe for disconnection we mean in this case the date when the disconnection can be the soonest performed since the bill has been due. The timeframe for disconnection in case of non-payment varies very much among the ERRA Members. In some countries it is very short, in other it is quite long, and in 3 countries or entities (Moldova, Peru and the United Arab Emirates – Dubai) there is no legally set timeframe for that.

- Albania: 48 hours.
- Algeria: in case of low voltage/ low pressure customers the disconnection can be performed only after 15 working of the receipt of the invoice by the customer (invoicing is quarterly).
- Bosnia and Herzegovina – SERC: 10 days after bill due date.
- Bosnia and Herzegovina – FERK: 16 days.
- Bosnia and Herzegovina – RERS: 15 days.
- Czech Republic: In case of not payment at least two months.
- Estonia: within 90 days after the notice was sent.
- Georgia: Disconnection can be performed immediately, except for when being overdue with the bill coincides with a public holiday or a day before a public holiday. In these latter cases the consumer can only be disconnected on the next working day.
- Hungary: 63 days after the bill was due.
- Kosovo*: 30 days.
- Latvia: In electricity a minimum of total 30 days (10 days after the expiration of the bill a notice is sent, and if after the notice the bill is still not settled, only then can the supplier request the system operator to disconnect the consumer, but not earlier than 20 days.) In natural gas a minimum of 5 days, after the consumer has received a notice about the expiry of the bill.
- Lithuania: In case of non-payment the supplier/ network operator has to inform household consumers about the disconnection before 15 calendar days, non-household consumers before 10 calendar days and only after this can the disconnection be implemented. The supplier makes a request to the DSO to disconnect the consumer and DSO has to implement the disconnection in 5 working days after the request of the supplier was received.
- Moldova: No legislation on the term.
- North Macedonia: 60 days after bill due date.
- Oman: 70 days in total.
- Peru: N/A
- Poland: 30 days after bill due date.
- Romania: 15 days for household consumers in electricity and gas and for non-household consumers 5 days in electricity sector and 3 days in gas sector.

- Saudi Arabia: 3 months.
- Turkey: approximately 20 – 22 days (The consumer has to be notified 3 days before disconnection in the natural gas market. And also has to be notified 5 working days before disconnection in the electricity market. Notification is sent 15 days after due date of invoice.)
- Ukraine: 10 days for electricity, 3 days for natural gas.
- United Arab Emirates – Dubai: No legislation on the term.

3.11. Guaranteed services or standards

Guaranteed standards are those services which are to ensure the minimum quality of service for each single consumer by protecting them through automatic compensation by the requirements of the law. Usually, these standards are not set in legislation, but rather in individual decisions issued by the NRA, or in the commercial codes of service providers, which are approved by NRA. Either way, the NRA has an important role in setting such standards. In case of breach of the guaranteed standard the compensation to the consumer shall be automatic without any action from the NRA.

The breaches and compensations should be registered by the service providers and reported to the NRA, which evaluates the data on the guaranteed services regularly, and based on the analysis the NRA may modify the standards. The system of guaranteed standard is an effective method of incentivizing the service providers to provide and maintain a robust and reliable service.

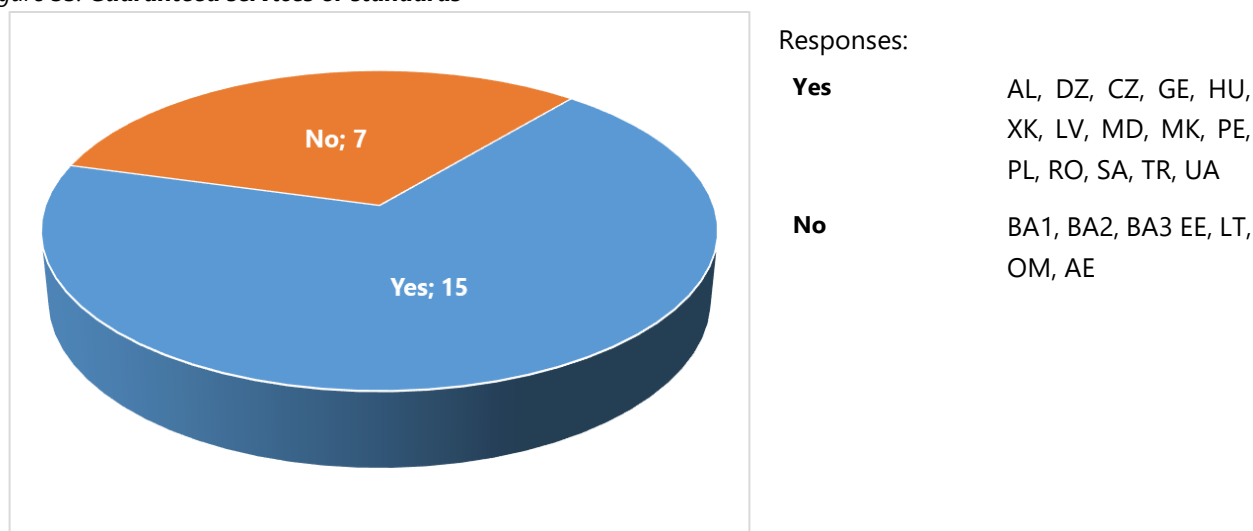
This report does not intend to offer an exhaustive view into the system and regulation of guaranteed services, just wants to show which ERRA Members have them and what are their pivots.

15 respondents answered that they have guaranteed services and 7 (Bosnia and Herzegovina – SERC, FERK, RERS; Estonia, Lithuania, Oman and the United Arab Emirates – Dubai) do not.

However, Bosnia and Herzegovina – RERS reported that the New Electricity law has anticipated them and will be regulated in the forthcoming period, and in Oman they are to be set in 2022.

Bosnia and Herzegovina – SERC reported that currently there are no guaranteed standards in Brčko District of Bosnia and Herzegovina. But there are standards established through the general conditions for electricity supply in Brčko District of Bosnia and Herzegovina, such as notice period for planned interruptions, voltage quality, time limit for settling complaint in a billing issue, response time to customer claims for connection to the network, SAIFI, SAIDI, quality of commercial service, last resort supply, etc. The breaches are reported to SERC and there is permanent process of monitoring relevant indicators in order to maintain efficient and sturdy service in this part of the country. However, there is no financial compensation to the consumers set by the regulator, neither legal grounds in primary legislation for the regulator to set recompense for breaching these standards.

Figure 33: **Guaranteed services or standards**



The NRAs that answered that they have guaranteed services sent the following short descriptions about their system of guaranteed standards:

- Albania: guaranteed standards of services, as approved by the NRA:
 - Energy not supplied (ENS)
 - Notice period for planned interruptions in the Distribution System
 - Percent of the customers with actual meter reads
 - Settling the voltage quality complaints
 - Response time to customer complaints related to metering
 - Response time to New Connection requests
 - System Average Interruption Duration Index (SAIDI)
 - System Average Interruption Frequency Index (SAIFI)
 - Time required to restore the service following a distribution system outage
 - Time to reconnect customers disconnected for nonpayment
 - Time to perform the control of the metering system with the request of the customer I.
 - Voltage Quality (VQ)
- Algeria: Electricity and gas loss on MV/LV & MP/LP networks:
 - Customer credit period time allowed to a customer to pay his invoice.
 - SAIDI related to distribution incidents.
 - SAIFI (MV) and SAIFI (LV) linked to distribution incidents.
 - AVERAGE CUT-OFF TIME related to distribution incidents.
- Czech Republic:
 - Guaranteed standards in electricity:
 1. Standard for terminating the interruption of electricity transmission or distribution
 2. Standard of compliance with the planned restriction or interruption of electricity distribution
 3. Standard of damaged fuse replacement
 4. Standard of voltage quality

5. Time limit for handling voltage quality complaints
 6. Time limit for eliminating the causes of reduced voltage quality
 7. Standard of sending of an opinion on a request for connection of the applicant's equipment to the transmission or distribution system
 8. Standard of enabling the transfer or distribution of electricity
 9. Standard of termination of electricity interruption in some cases
 10. Standard of replacement of measuring equipment and settlement of payments
 11. Standard for transmission of measured data
 12. time limit for settling complaint in a billing issue
 13. standard of meeting the deadline with the customer
- Guaranteed standards in natural gas:
 1. Standard of resumption of gas transmission or distribution after a failure
 2. Gas quality standard
 3. Time limit for settling gas quality complaints
 4. Time limit for eliminating the causes of reduced gas quality
 5. Standard of compliance with the planned restriction or interruption of gas transmission or distribution
 6. Time limit for the assessment of the application for connection of the customer's equipment to the transmission or distribution system
 7. Standard of provision of gas transmission or distribution
 8. Standard of resumption of gas transmission or distribution after interruption of transmission or distribution in some cases
 9. Time limit for settling gas supply metering complaints
 10. Time limit for handling complaints about billing for transmission, distribution or storage of gas
 11. The standard of resumption of gas supply after an interruption in some cases
 12. Time limit for settling gas supply billing complaints
 - Georgia: According "Service quality rules" Guaranteed standards are:
 1. Restoring supplies to disconnected customers for non-payment of debt
 2. Send and/ or respond to substantiated responses or text messages to customer requests
 3. Consumer registration procedure
 4. New consumer accession
 5. On-site inspection of the technical quality of the supply
 6. Technical condition of new consumer accession
 7. Arrange a metering and the system
 - Hungary:
 - Guaranteed standards in electricity:
 1. GS I. Time until the restoration of supply in case of a failure affecting one consumer
 2. GS II. Time until the restoration of supply in case of failures affecting more consumers

3. GS III. Response time to customer claims for connection to the network
 4. GS IV. Time for connecting new consumers to the network or extending the capacity
 5. GS V. Punctuality of appointments with customers
 6. GS VI. Response time to customer enquiries
 7. GS VII. Time for giving information in advance of a planned interruption
 8. GS VIII. Time for answering a voltage complaint
 9. GS IX. Voltage quality on a low voltage connection point
 10. GS X. Redemption in case of incorrect invoicing
 11. GS XI. Time for meter inspection in case of meter failure/ complaints on the accuracy of the meter
 12. GS XII. Time for restoration of supply following disconnection due to non-payment
 13. GS XIII. Unlawful disconnection
- Guaranteed standards in natural gas:
1. GS I. Preliminary information on or offer for a request for new or extra capacity (connection)
 2. GS II. Design review of connecting line and user equipment
 3. GSIII. Technical inspection of connecting line and user equipment
 4. GS IV. Activation of service location (place of consumption), commissioning
 5. GS. V. Punctuality of appointments with customers
 6. GS VI. Response time to customer enquiries
 7. GS VII. Redemption in case of incorrect invoicing
 8. GS VIII. Time for meter inspection in case of meter failure/ complaints on the accuracy of the meter
 9. GS IX. Time for restoration of supply following disconnection due to non-payment
 10. GS XI. Unlawful disconnection
 11. GS XI. Time for giving information in advance of a planned interruption
- Kosovo*: In 2019 ERO has approved RULE ON ELECTRICITY SERVICE QUALITY STANDARDS. Some of the guaranteed standards are:
1. Time until the restoration of supply in case of a failure affecting one consumer
 2. Time until the restoration of supply in case of failures affecting more consumers
 3. Response time to customer claims for connection to the network
 4. Time for connecting new consumers to the network or extending the capacity
 5. Punctuality of appointments with customers
 6. Response time to customer enquiries
 7. Time for giving information in advance of a planned interruption
 8. Time for answering a voltage complaint
 9. Voltage quality on a low voltage connection point
 10. Redemption in case of incorrect invoicing
 11. Time for meter inspection in case of meter failure/ complaints on the accuracy of the meter

12. Time for restoration of supply following disconnection due to non-payment etc.

- Latvia: There is not such a notion "guaranteed services", however there are set some service quality standards, e.g. response time to customer claims etc. There is also duration of an unplanned interruption of electricity set in legislation, in case it is exceeded, the legislation provides arrangements for system tariff compensation to customer.
- Moldova: Some of the guaranteed standards:
 1. Permissible duration of a scheduled interruption
 2. Permissible duration of an unscheduled interruption
 3. Exceeding the annual allowed number of unscheduled interruptions
 4. Delayed connection of the installation to the electricity distribution or transmission network
 5. Delayed reconnection of the installation to the electricity grid
 6. Failure to comply with the obligation to pay compensation for violation of quality indicators in more than 5% of registered cases
 7. Other cases
- North Macedonia: Guaranteed standards for voltage quality are set in the national standard MKC EN50160:2012. In the Grid Codes there are defined standards measured in time (days) regarding connection procedures. However, there is ongoing process for strengthening data monitoring of relevant indicators (SAIDI, SAIFI, interruptions per duration (including short interruptions)/ region/ causes, etc.) and based on that, setting a scope of standards in the mid-term which will be subject of penalties/ incentives.
- Peru: Guaranteed services are established in the technical standard for the quality of electrical services. Mainly, limits are established on product quality (voltage drop), supply quality (interruptions) and customer service (customer service times, time of attention for new supplies, reconnection time, claims service, measurement accuracy of energy power).
- Poland: Poland has an extensive system of guaranteed services:
 1. network access, rights to:
 - be connected to the distribution system if there are technical and economic conditions
 - receive electricity from chosen supplier – continuously and reliable
 - non-discriminatory treatment by DSO
 2. purchase of electricity, rights to:
 - free choice of a supplier
 - be supplied by default supplier and supplier of last resort (public service obligation)
 3. distribution service tariffs calculated on the basis of justified costs, approved by URE President
 4. choosing the type of contract - one (complex) agreement or two separate agreements - one with supplier and the other with DSO
 5. access to information – right to be informed on:
 - planned amendments to the contract concluded,
 - prices changes

- possibility to change supplier and on used procedure
 - electricity billing rules, as well as current tariffs
 - complaints and disputes handling procedures
 - fuel mix
 - amount of electricity consumed by the consumer in the previous year
 - amount of electricity consumption during the settlement period
 - meter reading method used (physical, remote or reported by the consumer)
 - method of amount of electricity consumption estimation – if used.
6. use of quality standards, as defined in the regulations of quality parameters, right to:
- present a complaint regarding electricity supply accepted 24 hours a day
 - receive information of the dates of planned interruptions in the supply of electricity (press releases, online announcements, radio or television stations or otherwise) - at least five days in advance,
 - require the distributor to immediately start removing disruptions of the supply in case of network malfunctions
 - be informed on the expected term of resumption of electricity supply
 - ask the DSO to check the compliance of energy supplies with quality parameters
 - require the distributor to verify the accuracy of the operation of the measuring and billing system
 - obtain free of charge information on the rules for settlement and current tariffs
 - receive written information from the DSO, of the need to adapt the equipment or installations at least one year in advance.

Similar guarantees for gas sector are in force.

- Romania: Some of the guaranteed standards regarding the supply activity are:
 - Response time to a request to submit a supply offer;
 - Response time to a request to conclude a supply contract;
 - Response time to a request to amend/ complete a supply contract;
 - Response time to a request for an invoice issued;
 - Response time to a request for interruption/ limitation of supply at the place of consumption, as appropriate, ordered by the supplier;
 - Response time to a request for restoring the supply to disconnected customers for non-payment of debt;
 - Response time to a request for the switching process.

Guaranteed services regarding the network access are established also in the technical standard for the distribution.

- Saudi Arabia: Guaranteed services exist and they govern a wide range of services. For example, the amount of time a service provider must restore power within, the amount of time to connect power to a new consumer, the amount of time to resolve complaints, etc.

- Turkey:
 - For electricity market: There are guaranteed services for both Distribution System Operators (DSO) and Last Resort Suppliers (LRS). Services are grouped under two headings as technical and commercial.

Technical: Numbers of notified and unnotified disconnections.

Commercial:

For DSO:

 - The times involved in the process of meeting the connection to system request
 - Informing time users before notified disconnections
 - Time of connection after notification of suppliers for new contracts
 - Compensation for user's equipment damage
 - Meeting the user's meter change request
 - Response time to customer inquiries
 - Time for meter inspection in case of meter failure/ complaints on the accuracy of the meter
 - Time for restoration of supply following disconnection due to non-payment

For LRS:

 - Response time to customer inquiries
 - Refund of the security deposit with inflation update
 - Redemption in case of incorrect invoicing
 - For Natural Gas Market:
 - Certification for internal installment companies (unlicensed or uncertified activities cannot be carried out in the market according to Natural Gas Market Law.)
 - Technical inspection of internal installment projects before installment.
 - Technical inspection of connecting line and user equipment,
 - Activation of service location (place of consumption), commissioning
 - Time for establishing connection from gas network
 - Response time to customer inquiries
 - Refund of the security deposit with inflation update.
 - Redemption in case of incorrect invoicing
 - Time for meter inspection in case of meter failure/ complaints on the accuracy of the meter
 - Time for restoration of supply following disconnection due to non-payment
 - Unlawful disconnection
 - Time for giving information in advance of a planned interruption

- Ukraine:
 - Guaranteed standards in Ukraine in electricity:
 1. compliance with the voltage change indicators established by the Distribution Network Code;
 2. elimination of reasons for non-compliance with the electricity quality indicators based on the results of processing the consumer's complaint (claim) regarding the quality of electricity from the day following the day the DSO has become aware of the non-compliance with the electricity quality indicators through the results of metering, or from the day following the day of receiving the consumer's complaint (claim) if the DSO has already been aware of the reasons for non-compliance with the electricity quality indicators:
 - within 30 days in case the DSO personnel is able to eliminate them through operating measures;
 - within 180 days in case construction works or replacement of network elements are required;
 3. processing of the consumer's complaint (claim) regarding the quality of electricity with the provision of information specified in paragraph 13.2.2 of Chapter 13.2 of the Section XIII of the Distribution Network Code from the date of receiving the complaint (claim):
 - within 15 days without metering the electricity quality parameters at the point of distribution to the consumer;
 - within 30 days in case of metering the electricity quality parameters at the point of distribution to the consumer;
 4. restoration of electricity supply within 24 hours after the beginning of the electricity interruption;
 5. issue of technical specifications for connection together with the draft connection contract from the date of registering the application for connection:
 - within 10 business days for standard connection;
 - within 10 business days for non-standard connection, if there is no need to agree technical specifications with the transmission system operator;
 - within 20 business days for non-standard connection, if there is a need to agree technical specifications with the transmission system operator;
 6. operating voltage supply for testing of customer's electrical equipment from the day of receiving the customer's application with a complete package of documents attached to the application in accordance with the requirements of the Distribution Network Code:
 - within 5 business days, if voltage supply does not require the interruption of electricity supply to other Users;
 - within 10 business days, if voltage supply requires the interruption of electricity supply to other Users;
 7. connection of customer's power facilities to the electrical network from the day of receiving the customer's application:
 - within 5 business days, if the connection does not require the interruption of electricity supply to other Users;
 - within 10 business days, if the connection requires the interruption of electricity supply to other Users;

8. issuing a paper copy of a signed distribution service contract within 3 business days from the date of receiving the corresponding consumer's request;
9. issuing a distribution point data sheet signed by the DSO within 10 business days from the date of receiving the corresponding consumer's request;
10. restoration of the electricity supply to the consumer's electrical facility, which was disconnected under the consumer's request, within 5 business days from the date the consumer applies documents confirming payment to the licensee of the electricity supply restoration service;
11. restoration of the electricity supply to the consumer's electrical facility, which was disconnected under the DSO initiative, from the date the consumer confirms the elimination of the revealed violations, the debt for the services delivered and/ or the unauthorized electricity consumption is paid, and also losses are compensated for (if any):
 - in urban areas – within 3 business days;
 - in rural areas – within 5 business days;
12. restoration of the electricity supply to the consumer's electrical facility, which was disconnected under the electricity supplier's request, from the date the information that the reasons for disconnection are eliminated is received from the electricity supplier:
 - in urban areas – within 3 business days;
 - in rural areas – within 5 business days;
13. counter verification within 20 days from the date the relevant application is received from the consumer;
14. processing of consumers' requests/ complaints/ claims from the day the consumer's requests/ complaint/ claim is received:
 - within 30 days;
 - within 45 days, if while processing the request it is necessary to carry out a technical inspection or to conduct an examination of the electricity meter;
15. processing of consumers' requests in respect of compensation for losses incurred due to non-compliance by the DSO with the electricity supply quality indicators within 30 days from the date the request is received;
16. processing of consumers' requests for verifying the correctness of the invoice for electricity distribution services, if the DSO is entitled to male out such invoice under the contract for electricity distribution services with the consumer, within 5 business days from the date the request is received

**We are looking
forward to your
feedback!**

secretariat@erranet.org



Please reach us through our social media channels!