



Working Group on Environment, RES and Energy Efficiency

Benchmarking Assessment

2014 data

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Data and comments were provided by the members of the RES WG

The information contained in this document is based on the following sources:

<u>MEMBERS</u>	Information based on responses to a questionnaire	Information based on other sources	Last update
Algeria (DZ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Albania (AL)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Bosnia-Herz. (BA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Croatia (HR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Cyprus (CY)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2009
Egypt (EG)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
France (FR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Greece (GR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Israel (IL)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Italy (IT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Jordan (JO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Malta (MT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2012
Montenegro (ME)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Morocco (MA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2011
Palestine (PS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Portugal (PT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Spain (ES)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014
Slovenia (SI)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2006
Tunisia (TN)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2007
Turkey (TR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2014

1. Basic Information

1.1. General trends

The participation of members in MEDREG questionnaire response has been quite high. In total, 13 MEDREG members replied to the questionnaire.

Analyzing the data, tables and graphs available, and making comparison with previous benchmarking exercises, some general trends can be observed:

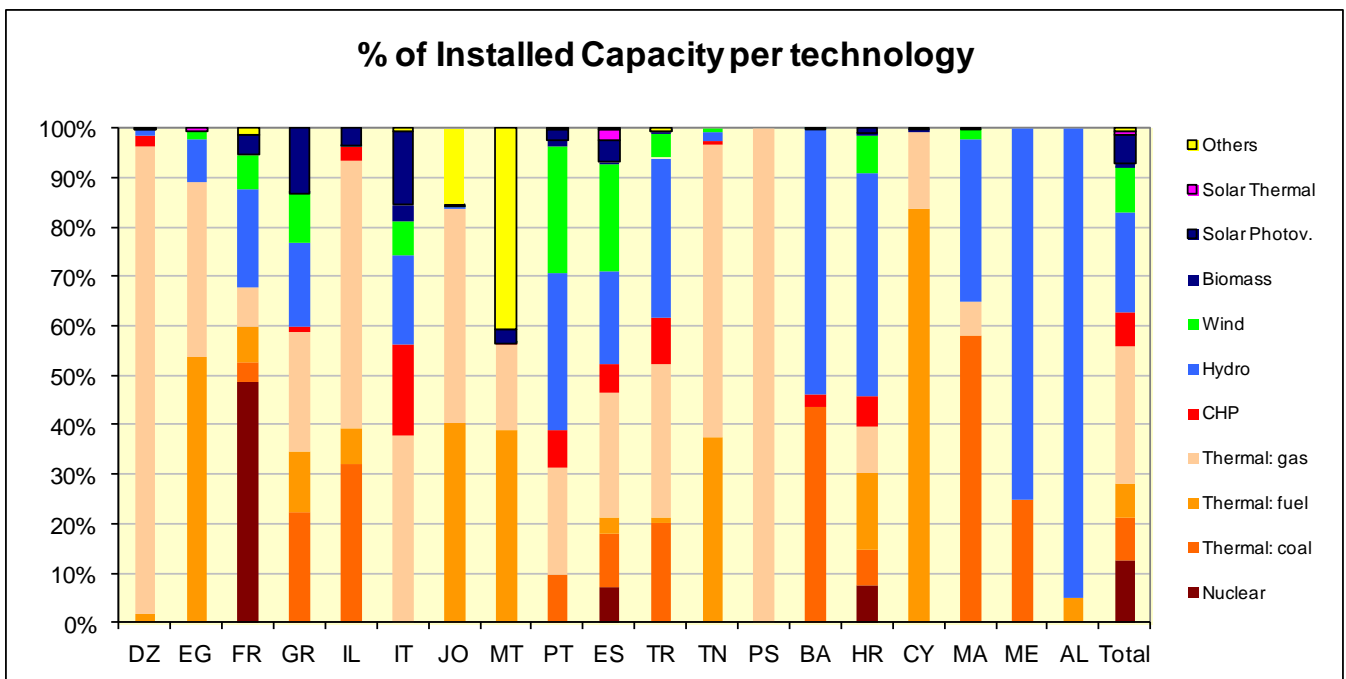
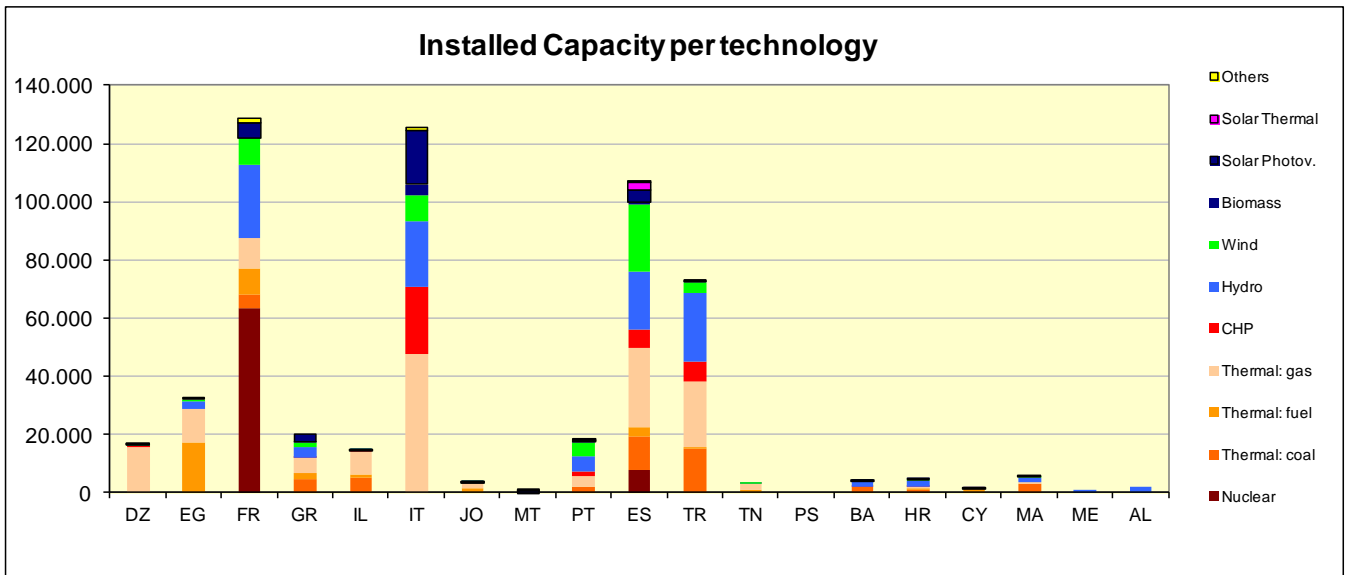
1. Electricity demand steady or decreasing from 2007 in EU countries, and continuous increasing of this parameter in non-EU countries.
2. Increasing of capacity installed and generation of Renewable Energy Sources (RES) electricity in almost all members, even there is a high variability between years, mainly because of weather conditions and its influence on hydro and wind technologies. For instance, in 2014 there was a slight decrease in RES generation, because of a reduction on electricity from hydro technology in some countries.
3. Hydro is currently the most deployment RES technology, but wind and overall, PV solar are on the top of new capacity installed.
4. Increasing of RES share in electric systems, as a consequence of previous trends, and as consequence of the contraction of the power demand in the EU countries by the economic crisis.
5. Analyzing the CO₂ emission data in electric generation plants, there are two different trends. European countries are reducing the CO₂ emission from the beginning of the economic crisis, overall because of the increment on RES share. By the other hand, countries of the south shore of the Mediterranean sea, with best Gross domestic product evolution and less RES share, are slightly increasing these emissions,

1.2. Last data available

The objective of this chapter is to get a general overview of the current situation of each member of the MEDREG RES WG (Environment, Renewable Energy Sources and Energy Efficiency Working Group) in terms of power generation structure, total demand, and share of renewable generation over demand.

The information received shows that all examined countries have a varied mix of technologies to cover their electrical needs. In general, thermal installed capacity (consuming coal, natural gas or, to a lesser extent, fuel) is the most extended technology, followed by hydro. The percentage of total installed capacity covered by renewable technologies (mainly hydro, wind and biomass) widely varies across members.

The next charts show installed capacity (MW and percentage) per technology for members, according to the last data received.

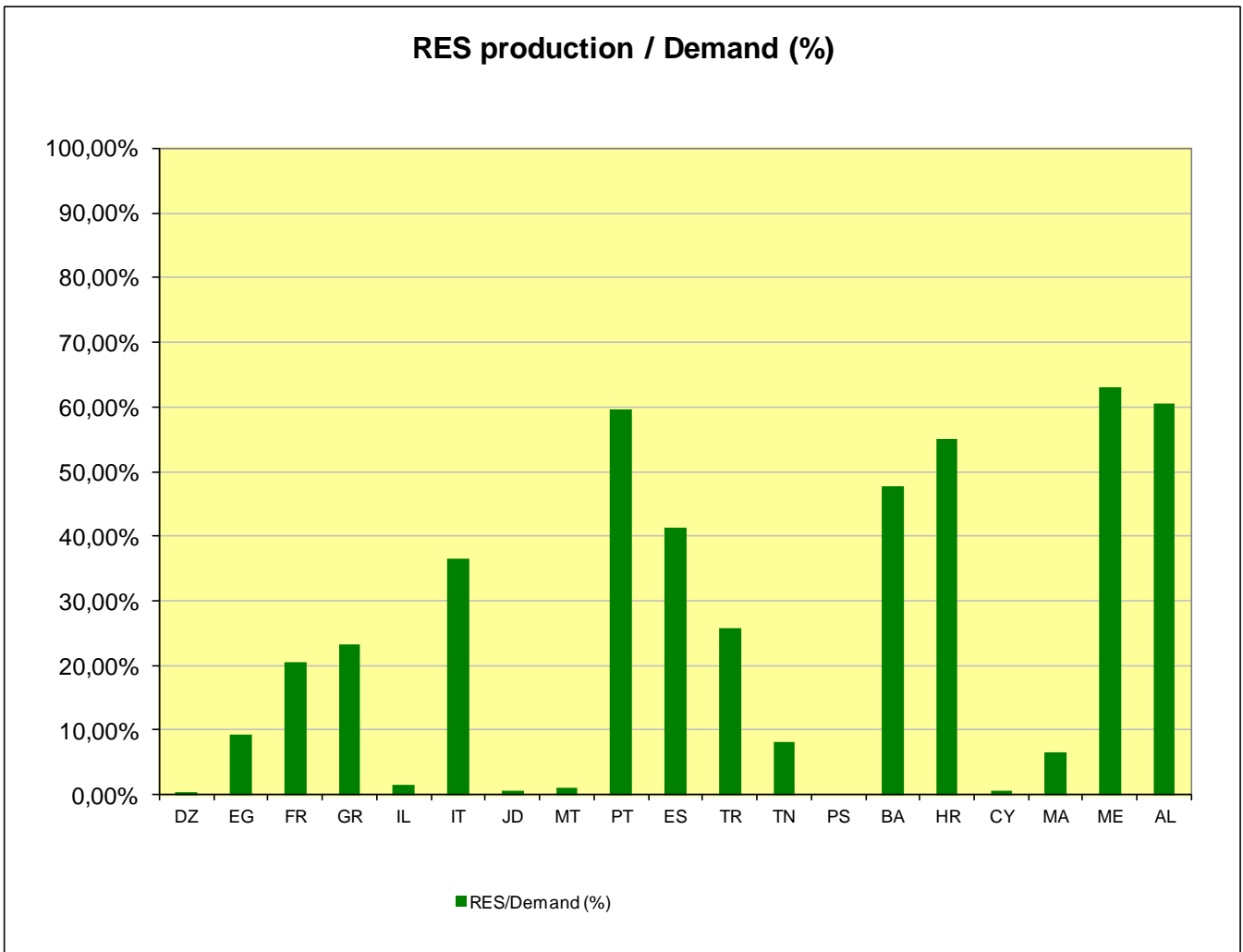
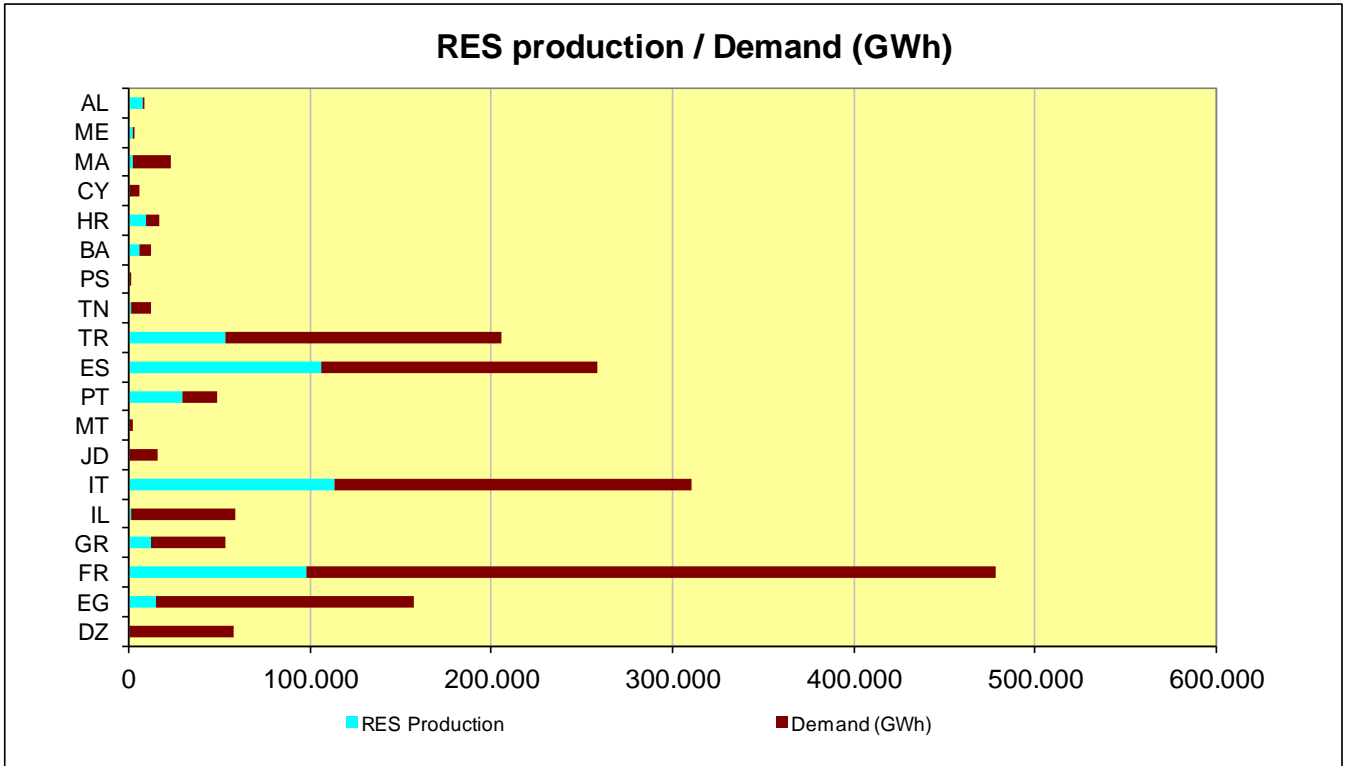


The classification of the technologies is according:

- Conventional thermoelectric generators, than burn fossil fuels: natural gas, fuel oil and coal
- Nuclear plants
- RES technologies are defined in the Directive 2009/28/EC on the promotion of electricity produced from renewable energy sources. It includes renewable non-fossil energy sources: wind, solar (PV and CSP), geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases).
- Combined heat and power (CHP) according the Directive 2012/27/EU on energy efficiency.

The next charts show the contribution of Renewable Energy Sources generation in final energy demand, in GWh and also in percentage¹.

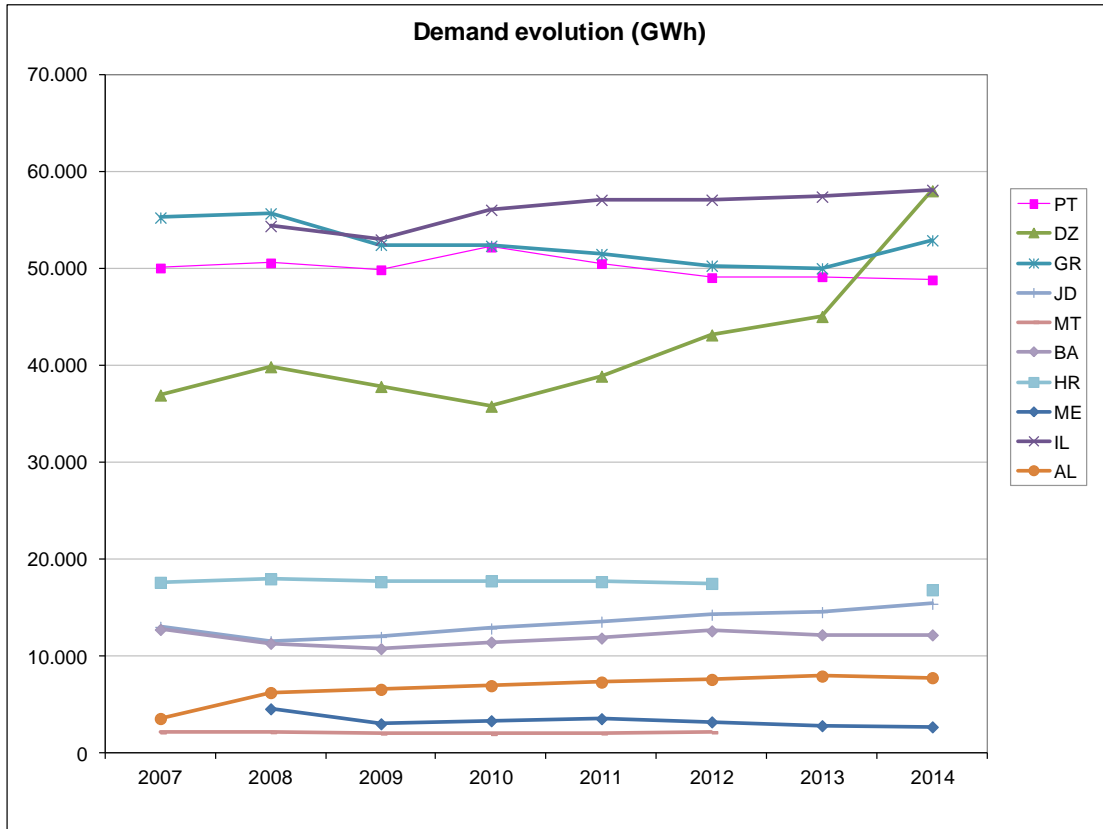
¹ According to the data received, RES production over demand in Albania is 87,4%.

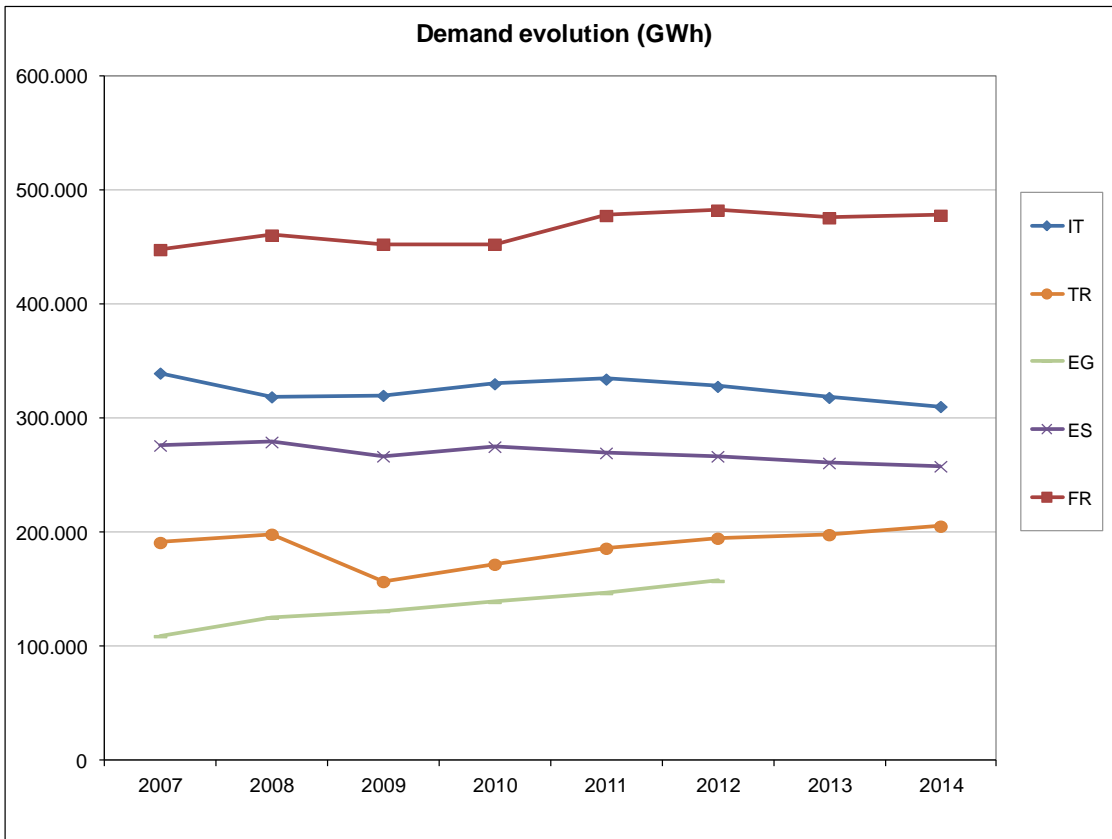


1.3. Evolution over the years

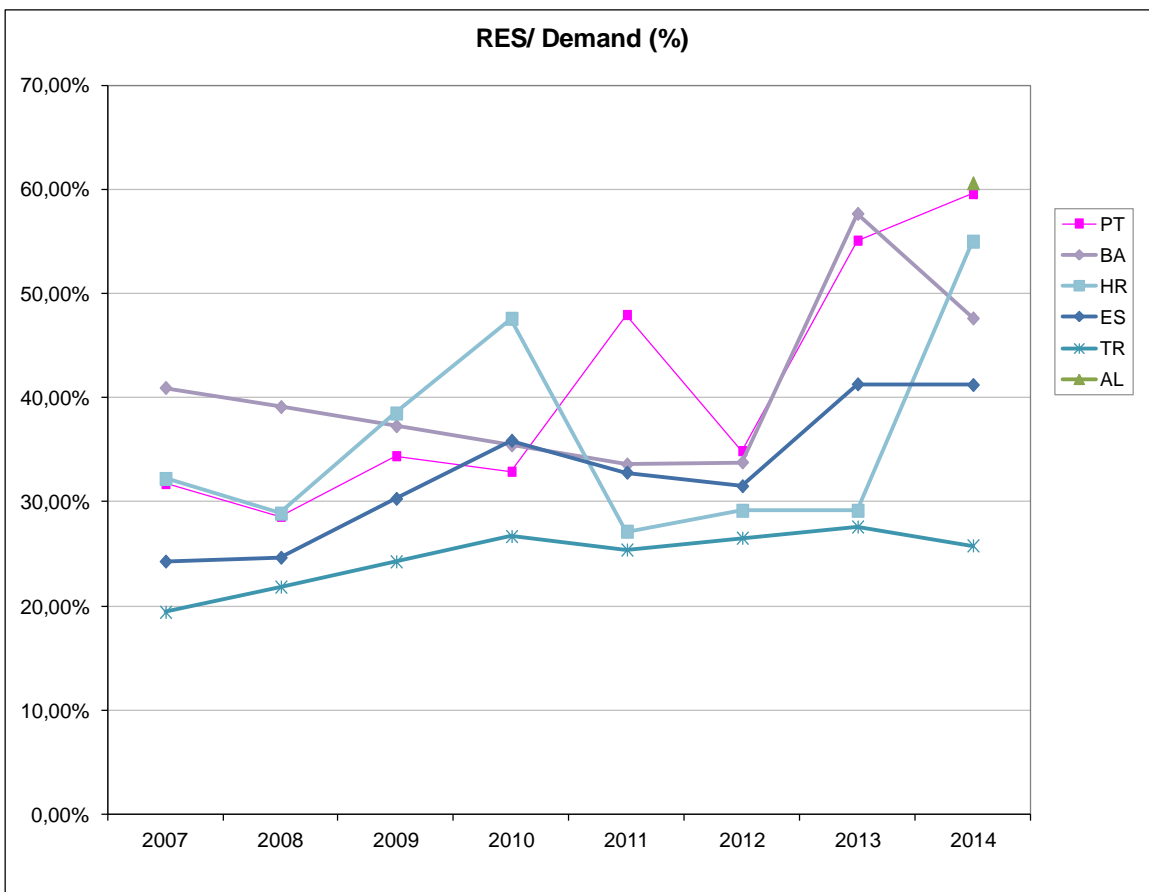
This chapter analyzes the parametric changes in the electric sector, according to data available from 2006 to 2014, period of time where RES WG has been making this yearly benchmarking.

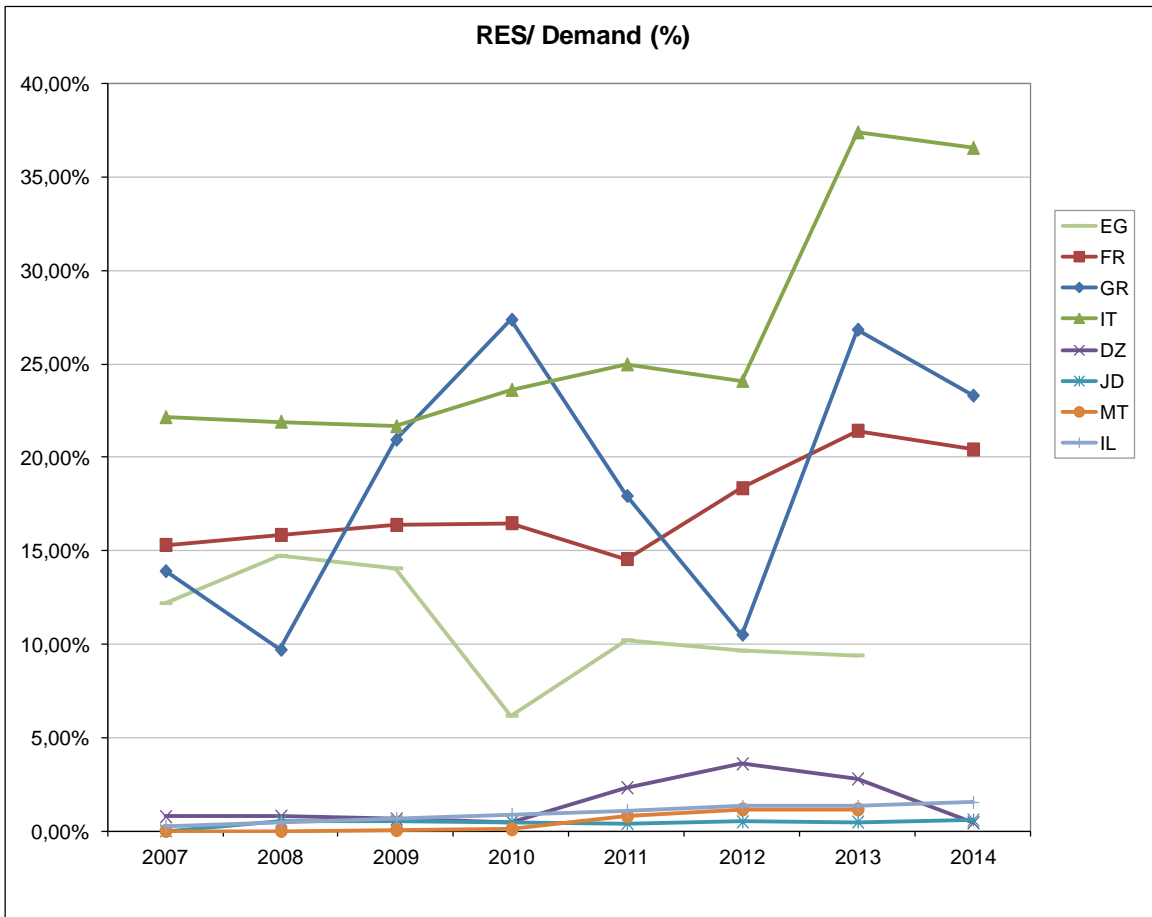
The next charts give us information about the evolution in the demand of electricity within the MEDREG area. The economic crisis has displayed a strong influence on demand in some of the countries after the year 2007.



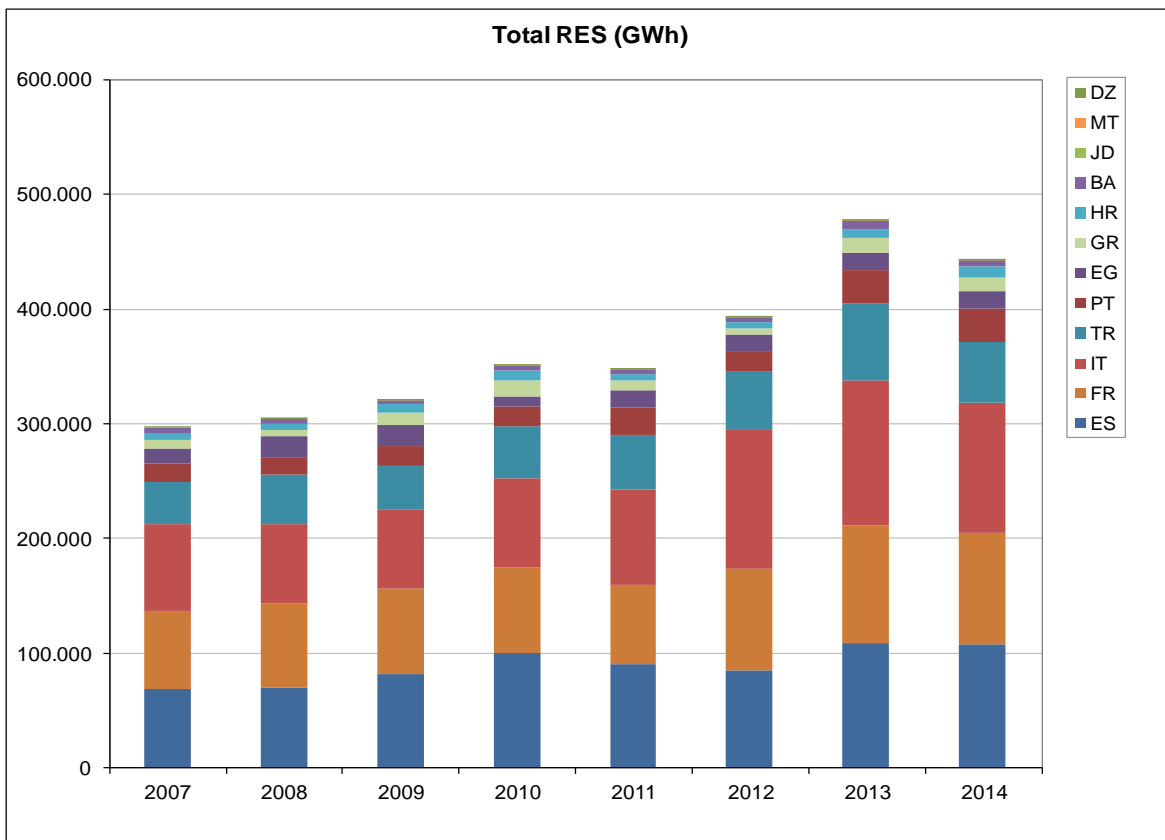


It is also important to analyze the evolution of electricity coming from RES over the total demand during the last years. As we know from previous information, hydro technology is the most used renewable source in the MEDREG area, and noticeable variations are perceived between dry and rainy years.

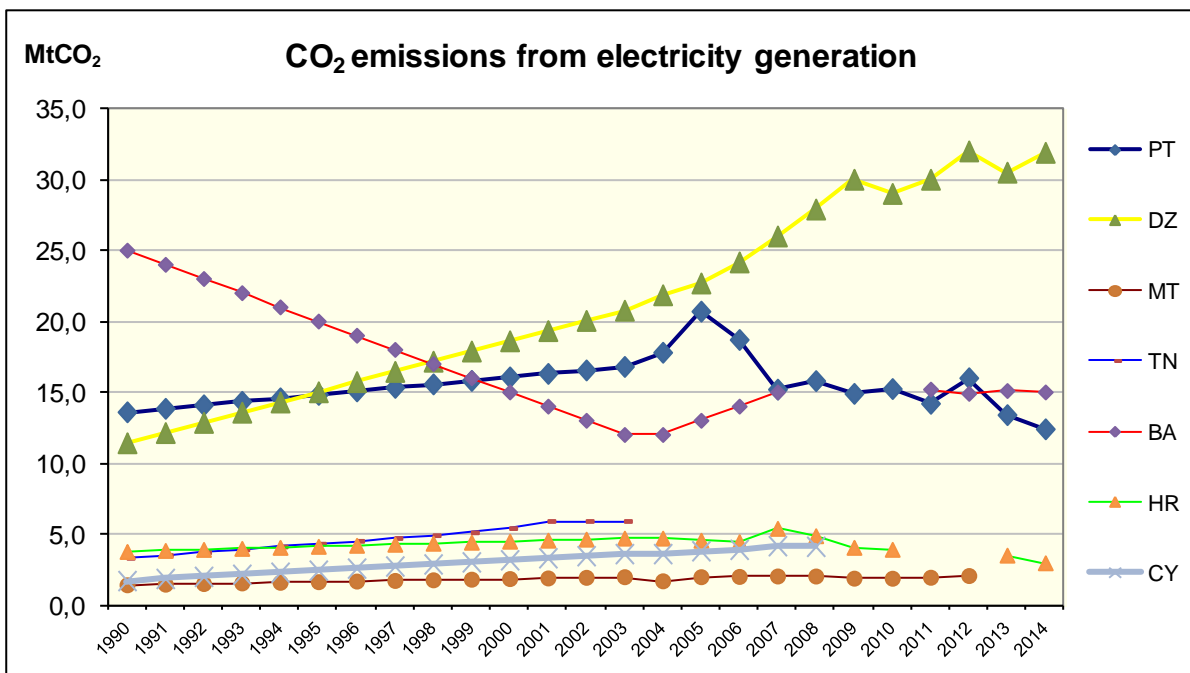
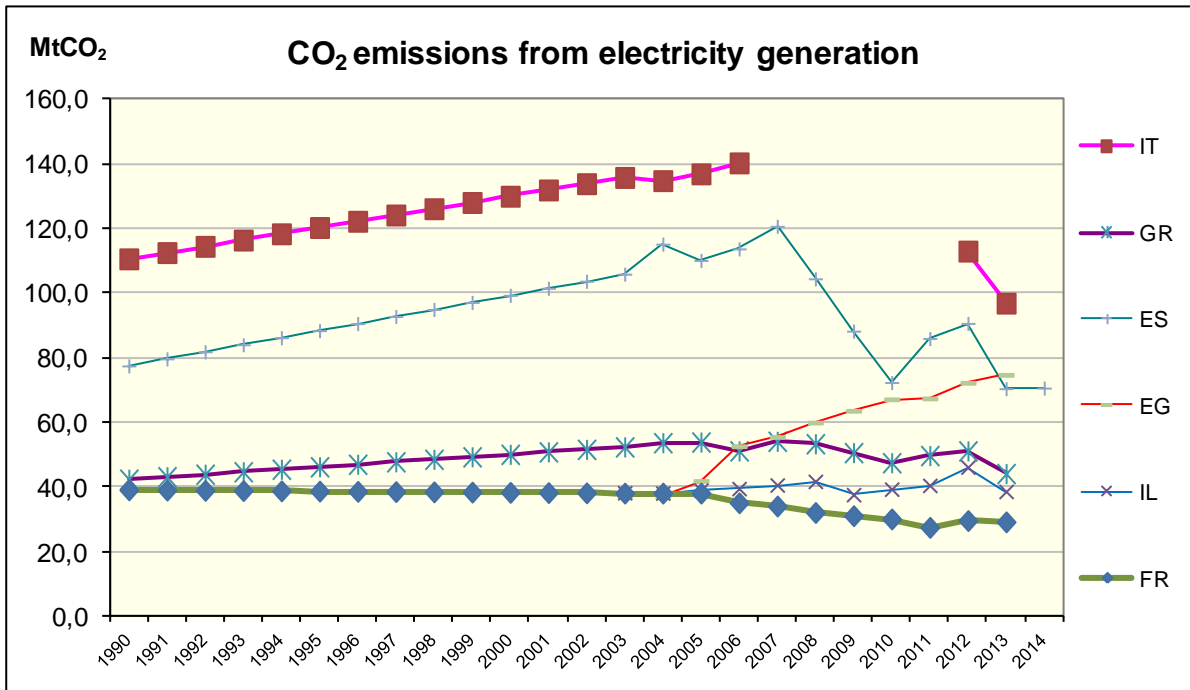




Electric energy generation from RES increased in the last 8 years, except in 2014, by a reduction in hydro generation. The next chart shows the evolution of accumulated energy produced from RES in BA, DZ, EG, ES, FR, GR, HR, IT, JD, MT, PT and TR.



Finally, through the obtained data about national emissions from electric generation plants in different countries, it is possible to show the evolution of CO₂ emissions in the MEDREG area.



2. Legislative and regulatory framework

This part is related to the legislative and regulatory framework for RES² and CHP³ electricity generation. As this section represents a general overview over the implementation of international policies, it also contains information about the adoption of environmental impact assessment, emissions limits, measures to fulfil Kyoto Protocol commitments, energy taxation, and others.

From the received information, it is possible to assure that RES WG participating members have adopted environmental impact assessment policies and legislation about emissions limits on thermal plants, except in PS and TN.

All of them have as well developed a specific legislation about RES, with the exception of TN.

In terms of specific legislation about CHP, according to the information received, DZ, GR, HR, IL, IT, MT, PT, ES, TN, CY, BA, ME and MA have developed a national regulation on the matter.

Some of the aforementioned countries are working on the implementation of the EU Directives 2012/27/EU and 2009/28 EC⁴.

On the other hand, all responses to the questionnaire show that members are concerned about energy efficiency, and most of them have established specific legislation or plans to increase the energy efficiency in consumption (except PS, and EG, where proposed electricity law includes specific provisions for energy efficiency) such as DSM (Demand Side Management) programs, enhanced metering procedures, time-of-use tariffs, etc. In this point is important to underline the recently adopted Directive 2012/27/EU of the European Parliament and of the Council of 25th October 2012 on energy efficiency. For instance, in PT, in 2012, regulation for the funding of the National Action Plan for Energy Efficiency was approved and a program was launched to promote the implementation of energy efficiency in the public administration (20% energy savings until 2020).

Moreover, all the RES WG members have a position in the Kyoto Protocol list of status ratification. The responses to the questionnaire show that there are regulatory measures to fulfil the set targets in Kyoto Protocol for the Annex I countries.

Regarding energy taxation, the responses to the questionnaire confirm that there is special energy taxation in PT, GR, JO, IL, IT, FR, MT, BA, AL, ME and ES. In the case of EU members, this has also the target to fulfil the requirements set in the regulatory framework of energy products, according to the Council Directive 2003/96/EC of 27 October 2003 for restructuring the Community framework for the taxation of energy products, including electricity.

² RES: Renewable Energy Sources, according the Directive 2009/28/EC.

³ CHP: Combined Heat and Power, according Directive 2012/27/EU.

⁴ Directive 2012/27/EU of the European Parliament and of the Council of 25 of October 2012 on energy efficiency.

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

3. Regulator

The questionnaire includes a specific part related to the role and competencies of the energy regulator in each country.

From the responses received, it is possible to determine that there is an independent regulator (i.e., different than the corresponding Ministry) with its own budget and appropriate appointment procedures, in most of RES WG members. Responses also confirm that the regulator works under the definition of regulatory principles, which involve operating within a clearly defined framework of duties and responsibilities, including supervision of the market and reporting and proposal of new rules. General regulatory capacities⁵, in terms of having sufficient staff with appropriate skills to cover the assigned duties, are available for responding regulators. Some of them, particularly those who have been recently created, claim for training activities.

The scope of responsibilities assigned to each regulator is very varied. Some regulators have any kind of responsibility in environmental assessment, emissions from LCP⁶ and emission trading CO₂. Others regulators are involved specifically on proposals of new legislation, amendments to current legislation, and reports on some subjects.

Regulators from DZ, EG, GR, IL, IT, MT, PT, ES, TK, BA, ME AND HR have some responsibility in RES, CHP and DSM⁷ programs. The questionnaires show that all countries, except Tunisia, have regulators with responsibilities in power and access tariffs.

⁵ Regulatory capacities: having sufficient staff with appropriate skills, and the ability to formulate, monitor and enforce a set of domestic market rules.

⁶ LCP: Large Combustion Plants.

⁷ DSM programs: Demand Side of Demand programs, mandatory or/and based on economic incentives, to increase the energy efficiency in the consumption (as promotion of low consumption lights, efficient appliances, heat pumps, heat accumulators, information about measures to adopt by large or small consumers, etc).

	DZ	AL	EG	GR	IL	IT	JO
Independence of the regulator	Yes	Yes. The board of commissioners is appointed by the parliament and reports to the parliament.	Yes	Yes	Yes	Yes	Yes
Definition of regulatory principles	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sufficient staff with appropriate skills	Yes	No. We have applied to the parliament for increasing the staff	Yes	Yes, but the regulator is understaffed.	The Israeli PUA professional staff is around 50-60 people. Electricity market scale is estimated at 4.7 Billion Euros a year.	No. Understaffed	Yes
Responsibility in:							
Environmental assessment		No.	No, environmental data for renewing license.	Yes. Under Law 3851/2010 the regulatory Authority for Energy issues the production licences for RES projects	Responsibility spread in the PUA, MOEP, MOE not by the PUA - by the Ministry of Environmental Protection	No. Ministry for environment	
Emissions from LCP	No. Responsibility of the ministry in charge of environment.		NO, Calculating CO2 emissions for benchmarking the generation units			Yes	No
Emission CO₂ trading						Yes	
Responsibility in:							
CHP & RES	Yes	Yes. (only RES)	Yes.	Yes	PUA determines tariffs and regulations, Ministry of Energy determines national targets and technologies	Yes	No
DSM programs	No. Responsibility of the DSM national Agency	Yes. Under preparation by the Ministry				Yes	No
Responsibility in:							
Power/ energy tariffs	Yes, (in the context of a free power market)	Yes	No	Yes	Yes	Yes	Yes
Access tariffs	Yes	Yes	Yes.	Yes	Yes	Yes	Yes

	MT	PT	ES	TN	TR	ME	FR
Independence of the regulator	Yes	Yes	Yes	No	Yes	Yes. The budget is adopted by The Parliament	Yes
Definition of regulatory principles	Yes	Yes	Yes	No	Yes	Yes	Yes
Sufficient staff with appropriate skills	No. Still building human resources capacity	Yes	Yes	No	Yes	No. Still building human resources capacity	Yes
Responsibility in: Environmental assessment Emissions from LCP Emission CO₂ trading	No. Responsibility for Malta Environment and Planning Authority	No. The responsibility is in the Ministry	No. The responsibility is in the Ministry	No	No No No No	No No No No	No No No No
Responsibility in: CHP & RES	Yes	Yes: the regulator includes the costs supported with the CHP & RES incentives in the tariffs	Yes, drafting reports on the incentives and monitoring billing	No	Yes: Joint responsibility with the Ministry of Energy and Natural Resources.	Yes: Joint responsibility with the Ministry of Energy and Natural Resources.	Yes. CRE gives an opinion on support schemes proposed by the government
DSM programs	Yes	Yes, in charge of the program to promote efficiency in electricity consumption	Yes, monitoring distribution companies investments Promotion of DSM by hourly tariffs	No	Yes	Yes	No
Responsibility in: Power/ energy tariffs	Yes	Yes	Yes	No	Yes: Only for captives consumers	Yes.	Yes
Access tariffs	Yes	Yes	Yes	No	Yes	Yes.	Yes

	PS	BA	HR	CY	AL	MA
Independence of the regulator	Yes	Yes	Yes	Yes	Yes. Foreseen in the law on power sector	No
Definition of regulatory principles	Yes	Yes	Yes	Yes	Yes	*
Sufficient staff with appropriate skills	Yes	Yes	No	Yes	No. No changes since 2008	*
Responsibility in:	No	Yes	No. The responsibility is in the Ministry	No. The responsibility is in the Ministry		*
Environmental assessment	No	Yes				
Emissions from LCP	No	Yes				
Emission CO₂ trading	No	Yes				
Responsibility in:				The Regulator issues licences for RES & CHP, provides regulatory incentives for the promotion of RES and CHP, monitors the GOs issuing procedure, monitors & approves the transmissions' and distributions' development plan as well as the energy end-use efficiency and energy services. The Regulator is responsible for the adequacy and the quality of energy Supply taking into account the system stability.		*In a process started in 2010, the Ministry launched a reform of the electricity sector. In 2014, a new regulator and new regulatory schemes for electricity system will be created. Currently, regulation is in charge of Energy Ministry. Tariff process is responsibility of an inter-Ministerial committee.
CHP & RES	Yes	Yes	Yes (eligibility)			
DSM programs	No	Yes	No			
Responsibility in:						
Power/ energy tariffs	Yes	Yes	Yes (for methodologies)	Yes	Yes	Yes
Access tariffs	Yes	Yes		Yes	Yes	Yes

4. National Targets/Plans/Objectives in RES, CHP, other forms of energy efficiency, Kyoto Protocol

The increasing importance that States give to the promotion of RES and energy efficiency is usually reflected in the regulation in terms of objectives or targets. To achieve those targets, some countries have developed plans or specific legislation, in which the way to promote RES and energy efficiency is defined.

From the information obtained from the questionnaire, many countries have established some objectives for RES in terms of installed capacity, namely: DZ, EG, IT, ES, TN, MA and BA. Objectives in terms of coverage of gross electricity demand/production/consumption have been established in GR, IL, IT, JO, MT, PT, ES, FR, HR, MA and CY.

Energy efficiency measures have also been established in several countries. Even though CHP regulation is sometimes not included in these energy efficiency measures, several countries have developed a specific regulation and objectives on it.

Demand Side Management Programs have also been established by some countries. Details are available for each member.

In regard to Kyoto Protocol, several countries have set up a Plan/Program related to the reduction of CO₂ emissions, to achieve the objectives agreed in the Protocol.

From the responses obtained, the aforementioned situation could be summarized as follows:

	DZ	AL	EG	GR	IL	IT
Current Capacity installed of RES and CHP(MW)	584 MW	1726 MW	3487 MW	8239,49 MW	947 MW	78076 MW
RES (MW) except Hydro	11,0	0	287	4.621	541	32.177
Hydro (MW)	228	1726		3.389	6	22.435
CHP (MW)	345	0		229	400	23.464
RES Targets	40% by 2030	It is the responsibility of government	6640 MW	20% of gross final energy consumption and 40% of gross energy consumption from RES under L. 3851/2010	10 % of generation by 2020	17% by 2020
Targets CHP	450 MW by 2015				No specific target	No
DSM programs	18% energy savings by 2025	Under preparation by the Ministry		Energy efficiency for buildings	several DSM subsidized programs (EE) in all sectors: municipal, domestic, commercial and industrial, specific DSM (large consumers and consumer aggregators) regulations by the PUA	No
Other mechanisms					EE standards, subsidised programs to reduce CO2 emissions	
Kyoto Protocol				Ratification. Program for GHG emissions reduction	Voluntary target of 20% reduction of Carbon Emissions from BAU scenario until 2020	Provisions ended in 2012

	JO	MT	PT	ES	TN	TR
Current Capacity installed of RES and CHP(MW)	144 MW	19,66	12235 MW	56960 MW	144 MW	25.595
RES (MW) except Hydro	3	19,66	5.195	30.975	55	3.306
Hydro (MW)	11	0	5.684	19.896	62	22.289
CHP (MW)	130	1,7	1.356	6.089	27	
RES Targets	10%	10% by 2020	60% of RES-E in 2020	20 % of gross energy total demand from renewables by 2020	255 MW by 2011	20000 MW installed wind capacity until 2023.
Targets CHP					135 MW by 2011	
DSM programs	20%		9% reduction in energy consumption by 2016	Each year. Related with information and efficient equipment for small firms and domestic sector.	20% energy savings until 2011	
Other mechanisms				Efficiency and Saving Strategy Plan for Emissions reductions		
Kyoto Protocol	C.D.M.		GHG emissions in 2008-2012 limited to a 27% increase (1990 baseline).	UE 2020 targets		

	FR	BA	HR	CY	AL	ME	MA
Current Capacity installed of RES and CHP(MW)	39823 MW	165,16 MW	2.715	8,9 MW	1726 MW	657,96 MW	1842 MW
RES (MW) except Hydro	14.412	4	403	8,9	23	0	114
Hydro (MW)	25.411	70	2.035	0	1726	657,96	1.728
CHP (MW)		91,23	277	0	0	0	0
RES Targets	23% of final gross energy consumption	500MW until 2020	in 2020 - RES including large Hydro - 35% in total electricity consumption (additionally there is a goal to use RES for 20% in end-use)	Indicative: 6% electricity consumption from RES by 2010. Mandatory: 13 % total energy consumption from RES by 2020	NO	33% by 2020	10% in total energy consumption by 2012. 18 % in electricity consumption by 2012
Targets CHP	Increase of 50%		At least 300 MW by 2020		NO		
DSM programs				Subsidy and financial support for investments in energy conservation	DSM programs exist, which are financed by the Donors Community (KFW, USAID, UNDP, etc.)		Energy efficiency programs in health, social centres, building, industry, transport, etc.
Other mechanisms		Incentive prices			Programs financed by Donors Community		
Kyoto Protocol	Kyoto targets	Approved		No obligation, but National Allocation Plan implemented	As described above		No obligation, but programs (Promasol) implemented

5. RES & CHP Market Access

All countries who answered the questionnaire have developed connection procedures for RES and CHP. Some of them have even defined simplified procedures for small plants.

Non-discriminatory operation rules are established in the majority of the countries covered by this document.

The RES and CHP production usually have priority in dispatch in RES AG members. Some countries have set requirements for this kind of generation (certain installed capacity of the plants, feed-in obligation).

The next table summarizes current market access situation for RES and CHP plants, according to the information obtained from the questionnaire:

	DZ	AL	EG	GR	IL	IT	JO	MT	PT
Connection procedure	Yes	Yes	According to the Grid code and the connection agreement	Yes	Yes	Done	Yes	Yes	By law. Tendering process or administrative request to the competent government body to get connection.
Definition of Use of System charges	Yes	Yes	Calculated at the ERA website	Yes	Yes	Done	Yes	T.B.D	Access tariffs are set by ERSE
Non-discriminatory operation rules	Yes	Yes	According to the License conditions	Yes	Yes	Done	Yes		Yes
Procedures for congestion management	Yes	To be draft as part of the secondary legislation	Transmission company responsibility	Yes	Yes	Done	yes		CHP & RES are not considered for congestion management (these technologies have priority of dispatch).
Priority on dispatch for RES & CHP	Yes	Yes	Yes, the proposed electricity Law includes specific provision for Priority on dispatch for CHP	Yes	Yes	Done	Yes		Feed in obligation for RES and CHP

	ES	TR	TN	BA	HR	CY	ME	AL
Connection procedure	Yes	Connection procedures are specified in the regulation. The electricity market Law envisages a TPA secured by the system regulator. TSO and DSO have following obligations: Connect the consumers, and connect generators at desired point or offer an alternative point	Yes	Yes	Yes	Yes	Yes.	Yes
Definition of Use of System charges	0,5 Eur/MWh for generators using the grid. Producers pay connection and reinforcement costs.	Transmission system tariff with two components: one, depending on the location of the user in the grid. It reflects the cost of transmission of energy. The other: fixed term with the aim of reaching target level of transmission revenues.	Yes	Yes	Yes	Yes	Yes. Secondary legislation	Yes. Transmission and Distribution tariffs approved by the Regulator
Non-discriminatory operation rules	Yes	Yes	Yes	Yes	Yes	Yes	Yes. Secondary legislation	Yes
Procedures for congestion management	Yes	Counter dispatching between congested regions	No	Yes	No	No		Not yet applicable
Priority on dispatch for RES & CHP	Yes, at same economic conditions.	Yes	No	Yes	Yes	Yes	Yes. Secondary legislation	(In the draft Law on RES)

6. Promotion mechanisms

Promotion systems for electricity produced from RES and CHP plants are mainly divided into:

- **Fixed price system**: where the electricity prices (or premiums) are already set and the quantity is determined by the market.
- **Tradable Green Certificate (TGC) system**: where the quantity of renewable electricity is already set and the price is determined by the market.

From the available answers, it is possible to say that the majority of the RES WG members have established a fixed price mechanism. Only Italy has also established a TGC system.

The next table shows a brief outline of the obtained responses:

	DZ	AL	EG	GR	IL	IT
Fixed Price system	√	√	√	√	√	√
Detail mechanism	Feed in Tariff			Established in L. 3851/2010. Amended with L.4252/2014		The Decree 6 July 2012 establishes that the support shall be granted for the net electricity generated by the plant and injected into the grid. Therefore, self-consumed electricity is not eligible for incentives. The net electricity generated and injected into the grid is the lower value between the net electricity generated and the electricity actually injected into the grid by the plant.
Eligible technologies	Solar, Wind Geothermal, Hydro , CHP					No PV
Excluded technologies						PV
Imports						
New facilities	Fixed by Decree	Yes				
Additional information		Feed in Tariff system		Guarantees of Origin system for RES		No
Optional premium+ Market Price system				Feed-in tariffs no connected to electricity retail tariffs		(*)
Success of the system	Not yet operational					It's a new Mechanism introduced in 2013

***(IT):** The Ministerial Decree of 6 July 2012 identifies the value of the base feed-in tariffs (T_b) for each source, type of plant and capacity class for plants which will be commissioned in 2013 (Annex 1, Table 1.1., to the Decree). The tariffs will decrease by 2% in each of the subsequent years until 2015, except in case of failure to reach 80% of the yearly capacity quota required for the registries and the auctions (art. 7, para. 1 of the Decree). The value of the base feed-in tariff is the one applicable upon the date of commissioning of the plant. GSE (Gestore dei Servizi Energetici) will award the all-inclusive feed-in tariff or the incentive, calculated from the value of the base feed-in tariff, as of the date of entry into commercial operation of the plant. For plants commissioned prior to the closing of the period of submission of applications for participating in the Registries or Auctions and whose ranking position in the relevant Registries does not exceed the applicable cost limit, GSE will grant the base feed-in tariff applicable upon the date of closing of the same period. The Decree also provides for a number of premiums (Pr) on top of the base tariff for plants which meet specific operating requirements (articles 8, 26 and 27, Annex 1, Table 1.1, to the Decree). The new support period will be equal to the conventional useful life-time of the specific type of plant indicated in Annex 1 to the Decree.

	DZ		EG	GR	IL	IT
<u>Tradable Green Certificates (TGC) system</u>						√
Responsibility of the obligation				Controlling Body: RAE the GO system is voluntary	x	No RES producers plus importers
Timetable				Already in use	x	15 years
Eligible technologies				All RES and Cogeneration.	x	no PV
Excluded technologies					x	PV
Certification Body				Issuing bodies: TSO for Greece Mainland, Distribution Operator for non-interconnected islands, KAPE for non-connected to the grid producers.	x	GSE (Gestore dei Servizi Energetici)
Imports				Yes	x	Obligated to buy GC
Maximum (buy out price) price of the certificate (no including the price of energy)				Free price, agreed upon between producers and suppliers.	x	124,9 euros GC euro/MW
Life of certificates				12 months	x	3 years
New facilities				No provision	x	
Additional information				The system described refers to the guarantees of Origin System, only tracking system in use	x	
Success of the system				Yes	x	The system that will finished at the end of 2015 has implemented 30 TW and it will be substituted by a feed-in-premium system

	JO	MT	PT	ES	TN	TR
Fixed Price system	√	√	√	√	√	√
Detail mechanism	yes	Feed-in Tariff based on market price	Feed In tariff based on avoided costs	Feed in Tariff up to July 2013. After July 2013, a new retributive model with Investment return (Ri), for capacity unit plus Operation Return (Ro), for energy unit.	Fixed prices for RE, called Renewable Energy Supporting Mechanism and will be operated by OM. OM pays amounts calculated according to FIT to Renewable plants. Costs of these payments will be reflected to all suppliers depending on market share.	Fixed prices for RE, called Renewable Energy Supporting Mechanism and will be operated by OM. OM pays amounts calculated according to FIT to Renewable plants. Costs of these payments will be reflected to all suppliers depending on market share.
Eligible technologies	PV +solar thermal +wind +biomass +biogas		RES, waste, CHP	RES, waste and CHP under 50 MW	RE Law foresees an incentive mechanism based on resource type.	RE Law foresees an incentive mechanism based on resource type.
Excluded technologies					No	No
Imports				The system do not include imported energy	Imports are not included in the mechanism.	Imports are not included in the mechanism.
New facilities				In accordance to Royal Decree 413/2014, tendering system for new facilities	mechanism will be applied to existing and coming in operation until 2015, for 10 years. The Board of Ministers will determine the tariffs for the facilities built after 2015.	mechanism will be applied to existing and coming in operation until 2015, for 10 years. The Board of Ministers will determine the tariffs for the facilities built after 2015.

	JO	MT	PT	ES	TN	TR
Additional information		Net metering system for RES. Agreements for larger systems.			Licences fees exemptions	Licences fees exemptions
Optional premium+ Market Price system			Estab. by government based on avoided costs	Not since July 2013	Payment in the lay specifies fixed support payments and do not depend on the market prices.	Payment in the lay specifies fixed support payments and do not depend on the market prices.
Success of the system			Installed capacity increasing	High deployment of capacity, especially with CHP, wind and PV energy	installed capacity increasing	installed capacity increasing

	SI	FR	BA	HR	ME	CY
Fixed Price system	√	√	√	√	√	√
Detail mechanism	Feed-in system and Premium	Yes	Yes	Feed in system	Feed-in Tariff	RES: feed-in tariff or subsidisation of capital cost lower feed-in tariff CHP high efficiency: subsidisation capital cost+ feed-in tariff
Eligible technologies		Solar, Wind, Biomass, Biogas, Hydro, Geothermal, Waste gas , CHP	Wind, Hydro (up to 10 MW, PV, CHP	Solar, Wind, Biomass, Biogas, Biofuels, Small-hydro, Geothermal, Waste gas , CHP, other renewable	RES, CHP	RES & CHP high efficiency
Excluded technologies		Coal, Oil	Oil, coal	Facilities older than 12 y. Large Hydro over 10 MW		Technologies under R & D
Imports					No	
New facilities		in the various states of the development	In the various states of the development	Approval procedure is defined with secondary legislation.		
Additional information					New hydro plant	
Optional premium+ Market Price system	Yes	Tariffs are defined	Tariffs are defined			
Success of the system		Can be analysed in the next few years	Can be analysed in the next few years.	Successful. There is a substantial number of facilities in preparation and under construction for wind, solar, biogas and biomass.		PV & Biomass installed capacity is increasing

7. Eligibility for consumers

From the responses to the questionnaire, total eligibility for consumers has been or is being defined for the majority of the countries. The general objective is to reach that all consumers are eligible (consumers that may participate in a competitive market) in several steps, which usually depend on the amount of annual consumption.

	DZ	AL	EG	GR	IL	IT	JO	MT	PT
Definition of eligible consumers	Yes	There is no definition in the law 43/2015	According to the electricity law n° 87	All consumers by JUL 2007 (except in non-interconnected islands)	Yes	Done	yes	Various grants applicable only to specific sectors	All customers

	ES	TR	TN	BA	HR	CY	ME	AL	FR
Definition of eligible consumers	All consumers in gas and electricity markets	Consumers that have higher consumption than the limit which is currently 4500 kWh or those directly connected to the transmission system and organized industrial zones.	No	From January 1st 2015: all customers.	July-2008: All customers	From 1-1-2009, eligible consumers are all non-domestic consumers	Yes	From January 1, 2008 every non-residential consumer has the right to switch the supplier.	All consumers are eligible since July 1 st 2007

8. Tracking/disclosure of electricity

The next tables show the current situation about tracking/disclosure of information about the origin of renewable energy. AL, GR, IL, IT, JO, PT, ES, TR, FR, BA, ME, HR and EG have identified their Guarantee of Origin issuing systems as well as their issuing body. Tables only show information from members who answer “yes” to the first question.

	AL	GR	IL	IT
Is there any kind of tracking/disclosure system in your country for electricity from RES?	YES	YES	YES	Guarantee of Origin
a. Please specify the tracking certificate (Guarantee of Origin, Renewable Energy Certificate System, etc.)	Guarantee of Origin	Guarantee of Origin	see below	Gestore dei Servizi Energetici (GSE)
b. Please specify the competent body for issuance, transfer and cancellation of tracking certificates (Regulator, System Operator, etc.)	Regulator	LAGIE (Transmission System Operator) for installations connected to the grid of mainland and interconnected islands, PPC (Non-interconnected islands Grid Operator) for installations connected to the grid of non-interconnected islands, CRES (a state-owned company with the scope of promoting RES) for autonomous, not connected to the grid installations	see below	
c. Does your country recognise tracking certificates issued by other countries? If "yes", please specify countries	Yes. No procedure	All certificates from EU countries and third countries that meet the reliability standards provisioned in Directive 2009/28/EC are recognised by Greek Issuing Bodies.	see below	Yes but only if they choose to present offers of electricity produced by RES AEGGSI provisions
d. Is the disclosure /labelling of renewable electricity mandatory for all suppliers? If "yes", please specify information for consumers	No.	Suppliers are obliged to disclose reliable information about their energy mix (%). If their energy mix varies from the country energy mix, extra RES and High Efficiency CHP energy has to be documented with Guarantees of Origin.	see below	Yes but only if they choose to present offers of electricity produced by RES AEGGSI provisions

Remarks:			RES installation is implied through FIT regulations, in specific quotas and technologies, allocated by the Israeli Electric Corporation (for Residential and Commercial systems) and a Licensing procedure (for Utility Connected systems). Payments are made monthly through the measuring of specific meters for the RES systems - by IEC stuff.	

	JO	PT	ES	TR
Is there any kind of tracking/disclosure system in your country for electricity from RES?	Yes	Yes	Yes	Yes
a. Please specify the tracking certificate (Guarantee of Origin, Renewable Energy Certificate System, etc.)	Renewable Energy Certificate	Guarantee of Origin	Guarantee of Origin	Guarantee of Origin
b. Please specify the competent body for issuance, transfer and cancellation of tracking certificates (Regulator, System Operator, etc.)	Ministry of Energy	REN (TSO)	Issuance by Regulator	Issuance and cancellation by Regulator
c. Does your country recognise tracking certificates issued by other countries? If "yes", please specify countries	No	Yes, in the future	Yes, according to Directive 28/2009/EC	No
d. Is the disclosure /labelling of renewable electricity mandatory for all suppliers? If "yes", please specify information for consumers	No	Yes. ERSE (Regulator) issued a recommendation with best practices concerning labelling. It is a voluntary approach	Yes. Labelling in bills about origin of electricity in yearly basis	No
Remarks:				

	FR	BA
Is there any kind of tracking/disclosure system in your country for electricity from RES?	Yes	Yes
a. Please specify the tracking certificate (Guarantee of Origin, Renewable Energy Certificate System, etc.)	Guarantee of Origin	Guarantee of origin, RES Certificate
b. Please specify the competent body for issuance, transfer and cancellation of tracking certificates (Regulator, System Operator, etc.)	Décret n° 2006-1118 du 5 septembre 2006 (modifié par le Décret n° 2012-62 du 20 janvier 2012) relatif aux garanties d'origine de l'électricité produite à partir de sources renouvelables ou par cogénération + A ministerial order (January, 15th 2013) assigns to Powernext the mission of delivering, transferring, clearing the guarantees of origin of the electricity produced from renewable sources. This text has been effective since May, 1st. Up to this date it was the TSOs which were in charge of this task.	System Operator for Renewable Energy Systems is not yet established - at the moment three Power Utilities in Bosnia and Herzegovina - MH EPRS, JP EP BiH, JP EP HZHB are System operators for the RES
c. Does your country recognise tracking certificates issued by other countries? If "yes", please specify countries	Yes	
d. Is the disclosure /labelling of renewable electricity mandatory for all suppliers? If "yes", please specify information for consumers	Yes, information on the bill.	
Remarks:		

	ME	HR	EG
Is there any kind of tracking/disclosure system in your country for electricity from RES?	Yes	Yes	Yes
a. Please specify the tracking certificate (Guarantee of Origin, Renewable Energy Certificate System, etc.)	Guarantee of Origin	Guarantee of Origin	Guarantee of Origin
b. Please specify the competent body for issuance, transfer and cancellation of tracking certificates (Regulator, System Operator, etc.)	Regulator	Croatian market operator.	EGYPTERA
c. Does your country recognise tracking certificates issued by other countries? If "yes", please specify countries	Foreign guarantees of origin can be valid in Montenegro in line with reciprocity condition and in accordance with ratified international agreement. There are no ratified international agreement right now.	Yes, our issuing body is a member of AIB and accepts GoO under EECS rules.	NO
d. Is the disclosure /labelling of renewable electricity mandatory for all suppliers? If "yes", please specify information for consumers	At least once a year, supplier of electricity shall give on its bill or in promotion materials accompanying a bill, information to final customers about: 1) contribution of renewable and other sources of energy per types that was used to meet electricity demand of final customers; 2)indicate reference for sources of information about environmental impact of energy sources that were used to meet the customer's electricity demand.	Disclosure is mandatory for all suppliers - they are obligated to send an annual report to every consumer they supply detailing Croatian generation mix, their supply mix and energy mix for that specific customer, as well as some additional data.	
Remarks:			