ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Παιδείας,
Έρευνας και Θρησκευμάτων

Co-funded by the
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2nd Junior High School of Amaliada,

Greece

ERASMUS+ PROGRAMME KA 2
STRATEGIC PARTNERSHIP

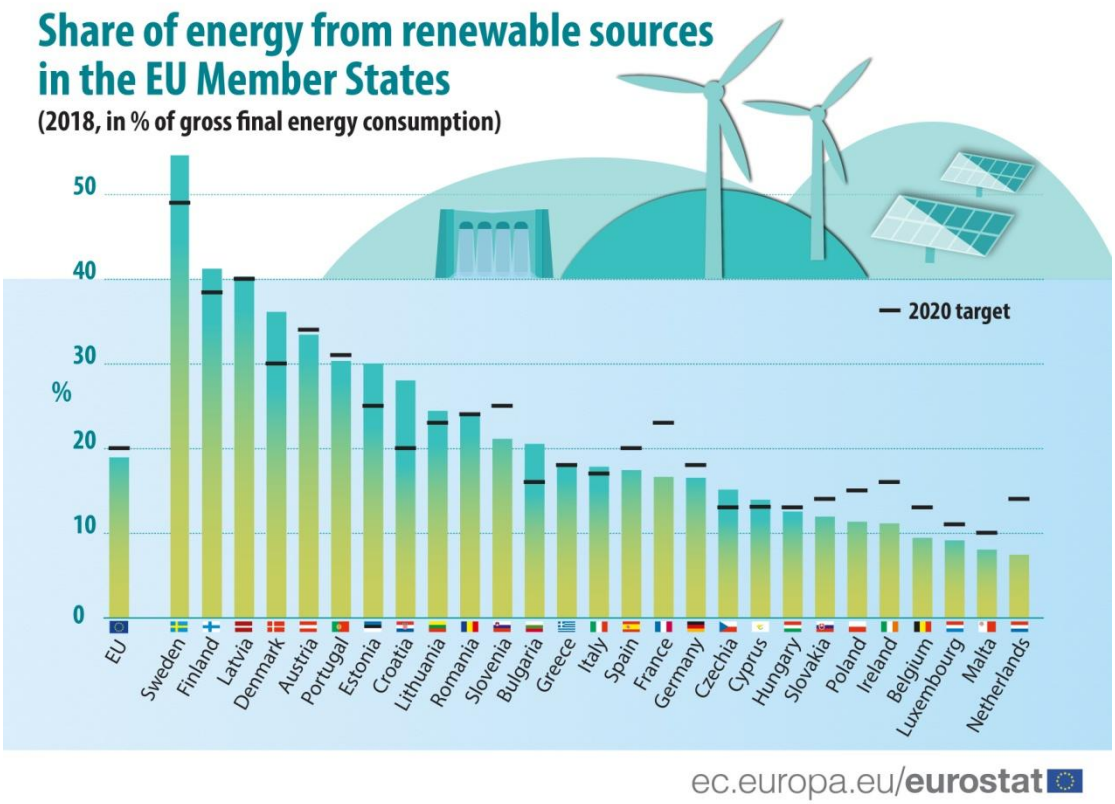
"European Schools Go Green"

2017 – 2020

Information on the European Union's

renewable energy policies- 17 sustainable goals -
EU countries profiles examples and comparisons

George Papachristodoulou

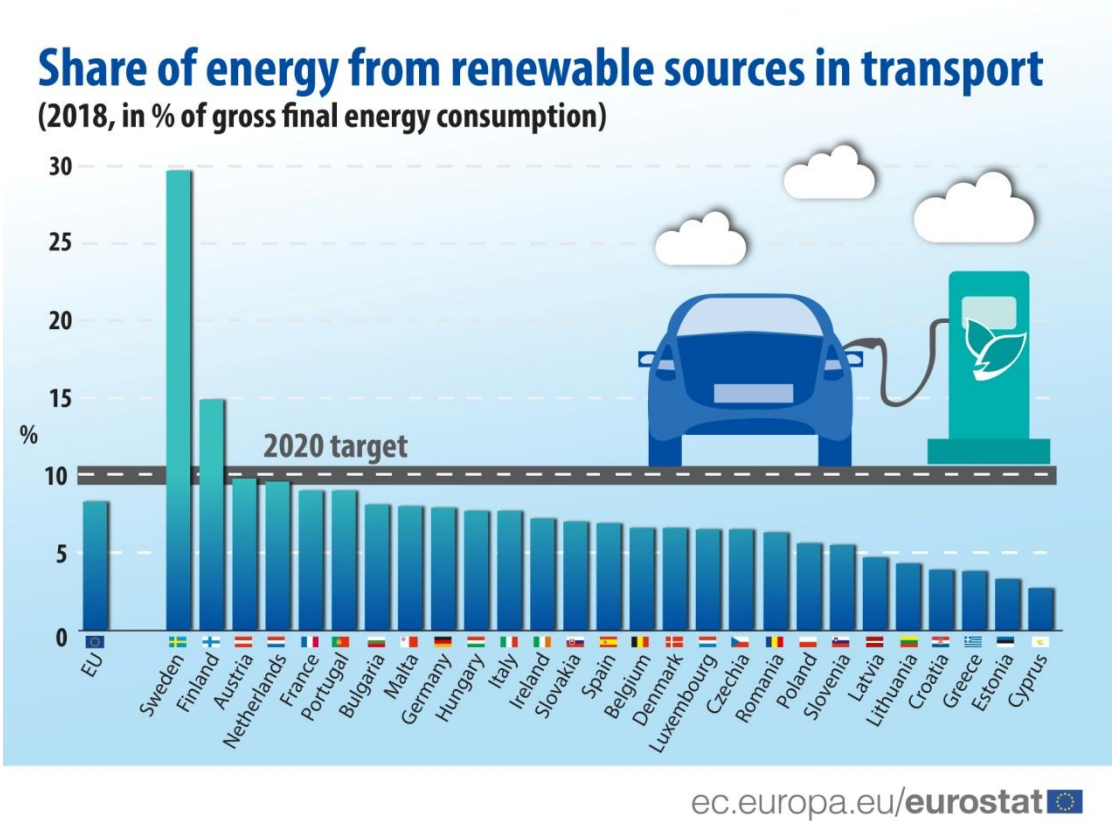


Share of energy from renewable sources, 2018
(% of gross final energy consumption)
Source: **Eurostat (nrg_ind_ren)**

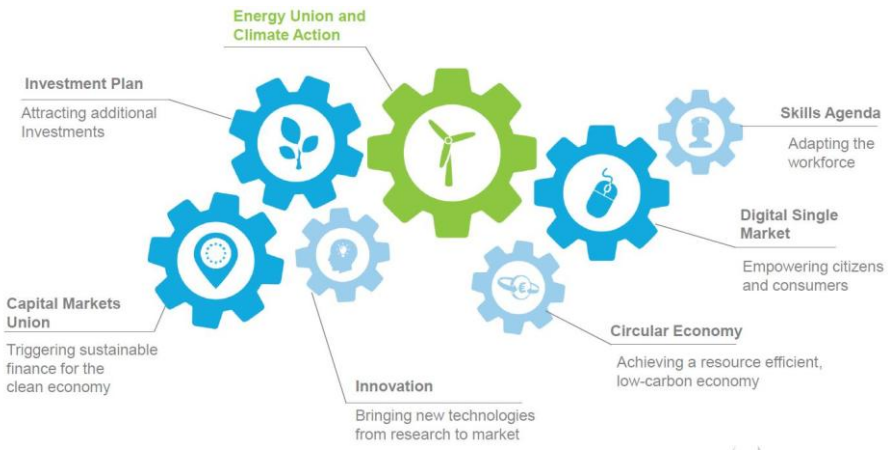
The EU is actively promoting Europe's transition to a low-carbon society and is updating its rules to facilitate the private and public investment required for the transition to clean energy. This should be beneficial not only for the planet, but also for the economy and consumers.

The transition to low carbon levels aims to create a sustainable energy sector that fosters growth, innovation and employment while improving quality of life, expanding options, enhancing consumer rights, and ultimately lowering bills. of the households.

Thanks to a streamlined and coordinated approach at EU level, combating climate change has implications for the whole of the European continent. Measures to promote renewable energies and improve energy efficiency are crucial to reducing greenhouse gas emissions in Europe and meeting the commitments of the Paris Agreement.



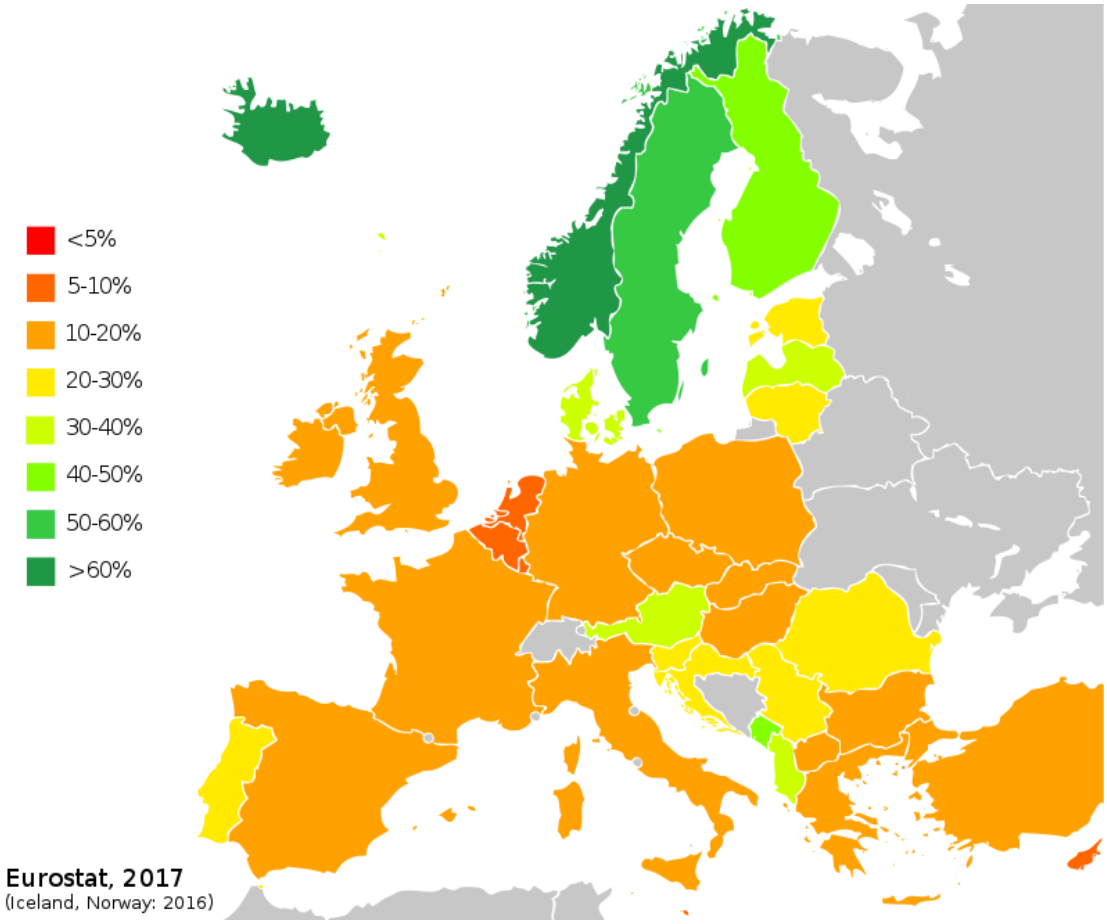
Thanks to the European Energy Union, the EU ensures greater coherence in all policy areas to achieve the overall objectives of creating a credible, affordable and sustainable energy system.



Modernisation of the economy – Role of the Energy Union and Climate Action

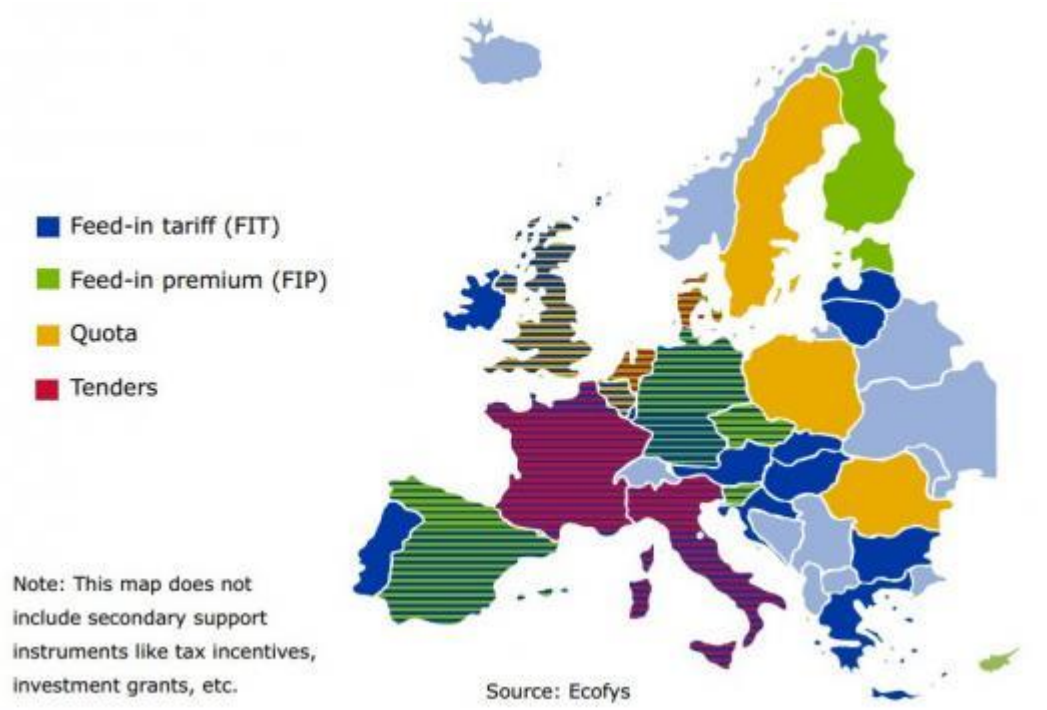
https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016DC0860&from=EN

Share of renewable energies in gross final energy consumption in selected European countries. n.a. <5% 5–10% 10–20% 20–30% 30–40% 40–50% 50–60% >60%



By Murraybuckley,Jklamo,Elekhh - based on File:European-union-renewables-fr.svgData source for EU-member states and NorwayEurostat – Share of renewable energy in gross final energy consumption (2004–2013, as of April 2015)Data source for other countries:Iceland (2010, source needed)Turkey (2010, source needed)Switzerland (2013, 21.1%), SFOE, renewable energy statistics 2013, page 5, Public Domain, https://commons.wikimedia.org/w/index.php?curid=8398789

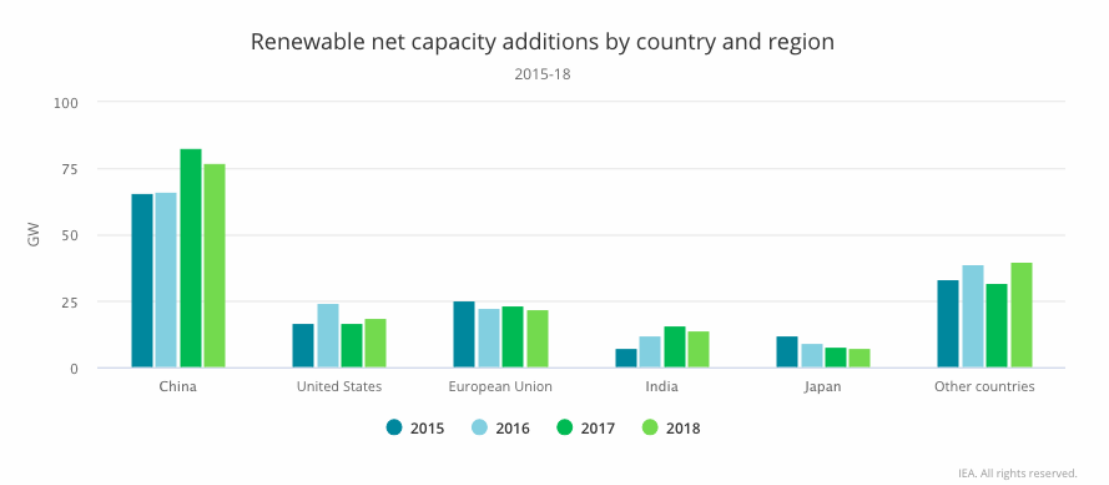
The EU also provides various financing options and lending systems that help businesses and regions successfully implement energy projects.



There is a large diversity regarding support schemes in the EU-28. Some countries such as France, German or Spain have different types of support schemes operating in parallel in combination (for example for different types of renew able technology).

Source: Klessmann C. 2014: Experience with renewable electricity (RES-E) support schemes in Europe. Current status and recent trends

At the international level, the EU plays an important role, working with third countries, regions and international organizations to tackle energy problems and ensure a credible and competitive energy market in Europe.



Πηγές: https://europa.eu/european-union/topics/energy_el

https://ec.europa.eu/competition/state_aid/modernisation/ragwitz_en.pdf

https://www.thegwpf.com/green-stagnation-the-world-cools-on-renewable-energy/

https://climatepolicyinfohub.eu/renewable-energy-support-policies-europe

The Climate Policy Info Hub has been created within the POLIMP project which has received funding from the European Union's Seventh Framework Programme for Research, Technological Development and Demonstration under Grant Agreement Number 603847.

Sustainable Development report 2019

Sustainable Development Report 2019Transformations to Achieve the Sustainable Development Goals

The Sustainable Development Report 2019 presents the SDG Index and Dashboards for all UN member states and frames the implementation of the Sustainable Development Goals (SDGs) in terms of six broad transformations. It was prepared by teams of independent experts at the Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung.

https://sdgindex.org/reports/sustainable-development-report-2019/

The 17 Sustainable Goals :

http://17goals.org/us_main_page_section/the-goals/

Sustainable Development Report 2020

The Sustainable Development Goals and Covid-19

We are pleased to launch the Sustainable Development Report 2020 including the SDG Index and Dashboards, an annual review of countries' performance on the 17 Sustainable Development Goals. All data presented on this website are based on the publication Sachs et al. (2020): The Sustainable Development Goals and Covid-19. Sustainable Development Report 2020. Cambridge: Cambridge University Press.The Report covers all 193 UN member states. Next to analyses of current issues in sustainable development, it contains data on changes over time in SDG indicators, the future of the SDGs amidst Covid-19, as well as calculations for trajectories until 2030.

https://dashboards.sdgindex.org/

Country Profiles

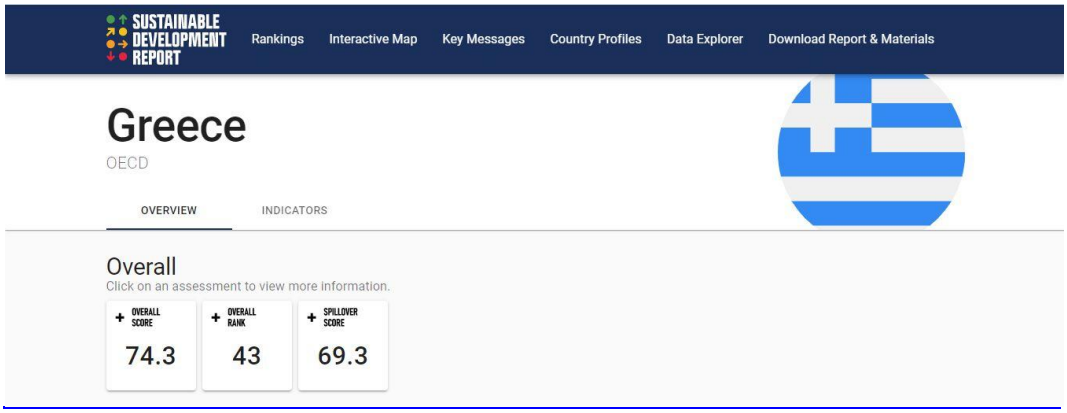
Track progress and trends on achieving the Sustainable Development Goals for all 193 UN Member States:

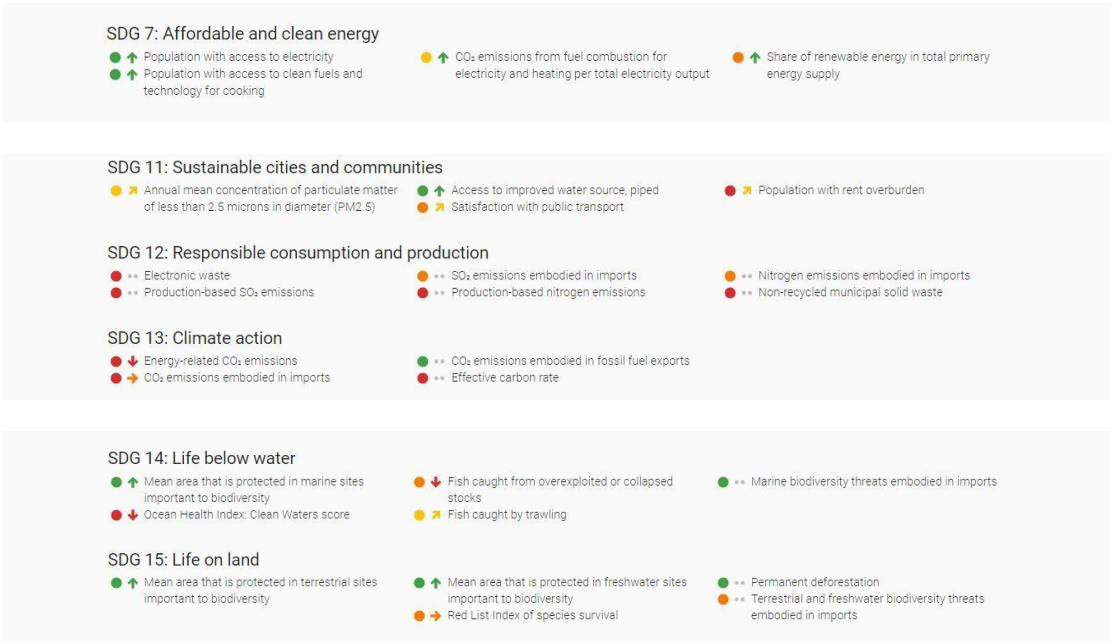
https://dashboards.sdgindex.org/profiles

Ratings provide a visual representation of a country's performance on the SDG:

Greece's profile does not look so good… It Has a lot of room for improvement. Most goals have red and orange color, which means "major and significant challenges remain" : See charts screenshots next page!

https://dashboards.sdgindex.org/profiles/GRC





RES LEGAL Europe, the website on regulations on renewable energy generation :
http://www.res-legal.eu/

Information on the important legislation on the support schemes, grid issues and policies for energy from renewable sources covering all three energy sectors: electricity, heating & cooling and transport. The scope of this database covers all the EU 28 Member States, the EFTA Countries and the Members of the Energy Community. RES LEGAL Europe will help you gather, analyse and compare information on renewable energy policies. The website offers links to all relevant original legislation, is free of charge and is updated on a regular basis.

Greece: Overall summary

From 2017 electricity from renewable sources in Greece is promoted through a feed-in premium granted by participation in tenders. In December 2016, a pilot tender for PV only took place. In 2018, two tenders for PV and wind energy took place. In addition, a new tax regulation mechanism and subsidies are available under the 2016 Development Law along

with a net metering scheme. Renewable energy sources for heating purposes profit from a new tax regulation mechanism and subsidies foreseen in the Development Law, as well as an income tax relief. The main incentive for renewable energy use in transport is a quota system. In addition, there are a new tax regulation mechanism and subsidies available under the Development Law.

Access of electricity from renewable energy sources to the grid shall be granted according to the principle of non-discrimination. With regard to the use of the grid renewable energy shall be given priority. Grid development in Greece follows a central planning procedure through the issue of Development Study of the Greek Transmission Grid 2017-2026 (DAP).

There is number of policies aiming at promoting the development, installation and use of RES installations.

Source http://www.res-legal.eu/search-by-country/greece/

Examples of comparisons : Greece and Italy by http://www.res-legal.eu/compare-policies/

Results for comparison of:

- Countries - Greece,Italy
- Subject - Policy
- Category - Training
- Content - Description

Country		Description
GR	RD&D Policy	"Ai Stratis - the first green island" is a project aiming at covering the total electricity consumption of Ai Stratis, a non-interconnected small island in the Aegean Sea, using RES technologies. At first, 85% of the electricity consumption will be covered by RES; later, the the target is for the island to become completely self-sufficient. Further plans include the installation of wind farms (500 kW), a PV farm (100 kW) and geothermal heat pumps as well as the introduction of hydrogen-fuelled cars. The project was initiated in 2011 but was not fully implemented.

		In 2017, the project is expected to re-initiate as it will secure funds from the National Reference Strategic Framework (NRSF) 2014-2020.
IT	Training programmes for Installers	Art. 15 of DL 28/11, in connection with DM 37/08, indicates that training programmes for obtaining the professional qualification of installer will have to be set up by regional authorities. Specific indications on the courses, such as mandatory examination and training period, are given in Annex 4 DL 28/11. Taking courses is one of the possible ways of obtaining a professional qualification, the other are as follows: • a university diploma, • a senior technician diploma provided according to the guidelines set out in the Presidential Decree of the Council of Ministers of 25 January 2008, • a technical institute diploma with two years of experience afterwards, • a period of four years' experience in a related company with a title validating the acquired skills, • a period of three years as specialized installer working for a qualified company (Art. 4, c. 1, ll. a-d DM 37/08 as amended by art. 1, c. 50 L 107/2015)

Results for comparison of:

- Countries - Greece,Italy
- Subject - Policy
- Category - Certification
- Content - Description

Country		Description
GR	Certification programmes for RES installations	Up to now, no organisation has been assigned the task to certify installers. Although there is no established certification scheme, the CRES keeps an updated database of PV facility installers who have agreed to implement the good practice guidelines specified in the "Guidebook for Installing PV Systems on Roofs". The Guidebook was developed by CRES in cooperation with the Public Power Corporation and the National Technical University of Athens. In addition, CRES maintains an updated database of all professionals in the RES sector (including RES installers).
IT	Certification Programmes for RES installations (Certification of RES installations)	Installers must provide the owner of the building a declaration certifying compliance with the legislation in force related to the realisation and the installation of a specific plant and with the standards of the Italian National Unification Body (UNI) and of the Italian

Results for comparison of:

- Countries - Greece,Italy
- Subject - Policy
- Category - Exemplary role
- Content - Description

Country		Description
GR	Exemplary role of public authorities in accordance with art. 13 par. 5 RES Directive	From 2019 onwards, all public buildings should be almost zero-energy buildings (art.9 Law No. 4122/2013). In addition, three percent of the total surface area of public buildings should be renovated yearly in order to meet at least the energy efficiency minimum requirements (art. 7 Law No.4342/2015 in conjunction with art.9 Law No. 4122/2013). Apart from that, administrative regions and municipalities should compose an energy efficiency plan that contains specific objectives and actions concerning energy efficiency. This plan should be updated every two years (art. 7 Law No.4322/2015). Furthermore, public administration bodies should purchase products, services and buildings with high energy performance that is consistent with the economic efficiency, economic feasibility, sustainability, technical suitability, and sufficient competition (art.8 Law No. 4322/2015). Finally, a "Green Public Procurement" Committee is established (art.24 Law No. 4342/2015). The Committee is in charge of designing a National Action for "Green Public Procurement" within eighteen (18) months after its establishment (art.24 Law No. 4342/2015). In September 2018, MEE published its "National Plan for the increase of Near Zero Energy Buildings (NZEB)" that was open for

		public consultation. The Plan includes the definition of NZEB along with the description of the current situation of buildings in Greece. Furthermore, policies and measures concerning the increase of NZEB's percentage are also included.
IT	Exemplary role of public authorities in accordance with Art. 13 Abs, 5 RES Directive	In general, all new buildings and buildings undergoing major refurbishment must take the use of integrated RES into consideration (Art. 11, c. 1 DL 28/11). The values below apply to all buildings, for public buildings, such obligations are increased by 10% (Art. 6, Annex 3, DL 28/11). RES-H plants must guarantee: • 50% coverage of the foreseen consumption of warm sanitary water; and • Coverage of the following percentages of the cumulative foreseen consumption of warm sanitary water, heating and cooling. ○ 20 % if the request of the relevant building permit occurs between 31/05/2012 and 31/12/2013; ○ 35 % if the request of the relevant building permit occurs between 01/01/2014 and 31/12/2017; ○ 50 % if the request of the relevant building permit occurs from 01/01/2018 (Art. 1, Annex 3, DL 28/11) RES-E plants must be integrated and installed with a capacity (P) calculated with the following formula: P = (1/k)*S

		• P being the plant's capacity; • S being the surface, in terms of terrain covered, of the concerned building; and • k being a coefficient (m2/kW) with the following values: ○ 80 if the request of the relevant building permit occurs between 31/05/2012 and 31/12/2013; ○ 65 if the request of the relevant building permit occurs between 01/01/2014 and 31/12/2016; ○ 50 if the request of the relevant building permit occurs after 01/01/2017 (Art. 3, Annex 3, DL 28/11) These obligations do not apply: • To certain buildings with historical value (Art. 11, c. 2 DL 28/11); • To buildings connected to district heating networks that cover their entire need for heating and warm sanitary water (Art. 5, Annex 3, DL 28/11)