

Sustainable Energy Challenges for Rural Mountainous Communities

Applications for Sustainable Rural Areas

Anthi Charalambous
Head of Energy & Environment Division
Cyprus Employers & Industrialists Federation of
Cyprus

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Energy & Environment Division, Cyprus Employers & Industrialists Federation

Member of:  International Organisation of Employers
Organisation Internationale des Employeurs
Organización Internacional de Empleadores



The Cyprus Employers & Industrialists Federation (OEB) at a glance



The Cyprus Employers & Industrialist Federation is located in Nicosia and has 28 permanent staff members.

The following Departments Divisions are functioning under OEB:

- Industrial Relations & Social Policy
- Business Development and Economic Affairs
- Market Research, Training, European Programmes and HR advisory Services
- Energy & Environmental Policies
- International Entrepreneurship Affairs and Event Management



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The Cyprus Employers & Industrialist Federation at a glance



- **The Cyprus Federation of Employers & Industrialist (OEB)** is the most representative national employer organization, politically independent, with a mission to promote and support the benefits of Cypriot businesses in Cyprus, in the European Union (EU) and internationally.
- OEB is recognized by all official bodies, committees, councils, forums and institutions, as the leading institution and voice of Cypriot businesses.
- OEB was founded in 1960 by 19 pioneering entrepreneurs. Today, its members are active in all sectors of the economy and employ more than 60% of the private sector's workforce.
- OEB is a pan-cyprian independent organisation comprising of **41 of the main professional/ sectoral Associations** as well as hundreds of companies from the **Manufacturing, Services, Commercial, Construction and Agricultural Sectors**. In total, **OEB has more than 4.500 Member/Enterprises**.



General goals and objectives of the Energy and Environment division

Provide information and update of OEB members on the developments in the field of energy and environment at national, European, and international level.

Technical and administrative support to the Energy Working Group of OEB, its members and joined Professional Associations.

Collection, processing and publication of statistical data in the field.

Organizing training seminars, events, lectures, thematic days related to energy and the environment.

Provision of technical advisory support to the sector related issues.

Develop national and other European co-funded projects on the fields of energy and the environment.

Promotion of the cooperation of academia and the industry in the field of energy and environment and the development of research and innovation. Cooperation with liaison offices of public and private academic institutions.

Promotion of the development of new standards and their implementation.



Activities of the Energy & Environment Division of OEB

Improve the competitiveness of renewable energy sources and remove administrative or other barriers

Supporting to maintain the global position in the installation of domestic solar thermal systems and ensuring the competitiveness of Cypriot manufacturers

Promoting clean technologies for environmental protection and the 2030 targets for circular economy and climate change

Provide education and training to ensure the high level of knowledge of OEB members dealing with energy issues

Organization of conferences, informative lectures, B2B and B2G meetings and informs Members about new technological or other developments

Actions that ensure safe, undisturbed and affordable energy for consumers

Participation in programs that promote research and development in energy and environmental issues

Provide services, technical assistance and support to OEB members on energy and environment issues

Promoting energy-saving and efficient use of energy

Provide timely information to Members on all new legislative initiatives

Facilitating access to information, opportunities to participate in working groups, dialogue, consultation, etc.

Develop new private initiatives for energy and the environment



Professional Associations under the responsibility of Energy & Environment Division of OEB

The **professional Associations** related with energy and environmental activities that receive support by the Energy & Environment Division of OEB, thus they function under the umbrella, the technical and administrative support of OEB, are the following:

[Association of Biofuels production](#)

[Union of Solar Water Heaters manufacturers \(EBHEK\)](#)

[Cyprus Association of Renewable Energy Enterprises \(SEAPEK\)](#)

[Cyprus Association of ESCOs and Energy Efficiency companies \(PASEEXE\)](#)

[Association of Energy Intensive Industries](#)

[Cyprus Association of Biogas producers](#)

[Cyprus Wind Association](#)

[Cyprus Association of Energy Consultants Engineers](#)



The Energy and Environment Division Team

Head of the Division



Anthi Charalambous is a Chemical Engineer, graduated of the National Technical University of Athens (NTUA), with specialization in Environmental Engineering (MSc), holds a Masters in Business Administration (MBA) and P.Dip. in Renewable Energy and Energy Management. More than 20 years of experience on energy and environmental issues, European projects, development of new ideas, invited speaker in more than 60 conferences.

[acharalambous\[at\]oeb.org.cy](mailto:acharalambous[at]oeb.org.cy)

Energy & Environment Division, Cyprus Employers & Industrialists Federation

Energy & Environment
Officer



Panayiotis Kastanias is a Mechanical Engineer, graduated of the University of Cyprus and holds a Master's degree in Environmental and Energy Engineering from the University of Sheffield. More than 4 years of experience on energy and environmental issues. He is qualified energy auditor, energy manager, and energy assessor.

[pkastanias\[at\]oeb.org.cy](mailto:pkastanias[at]oeb.org.cy)

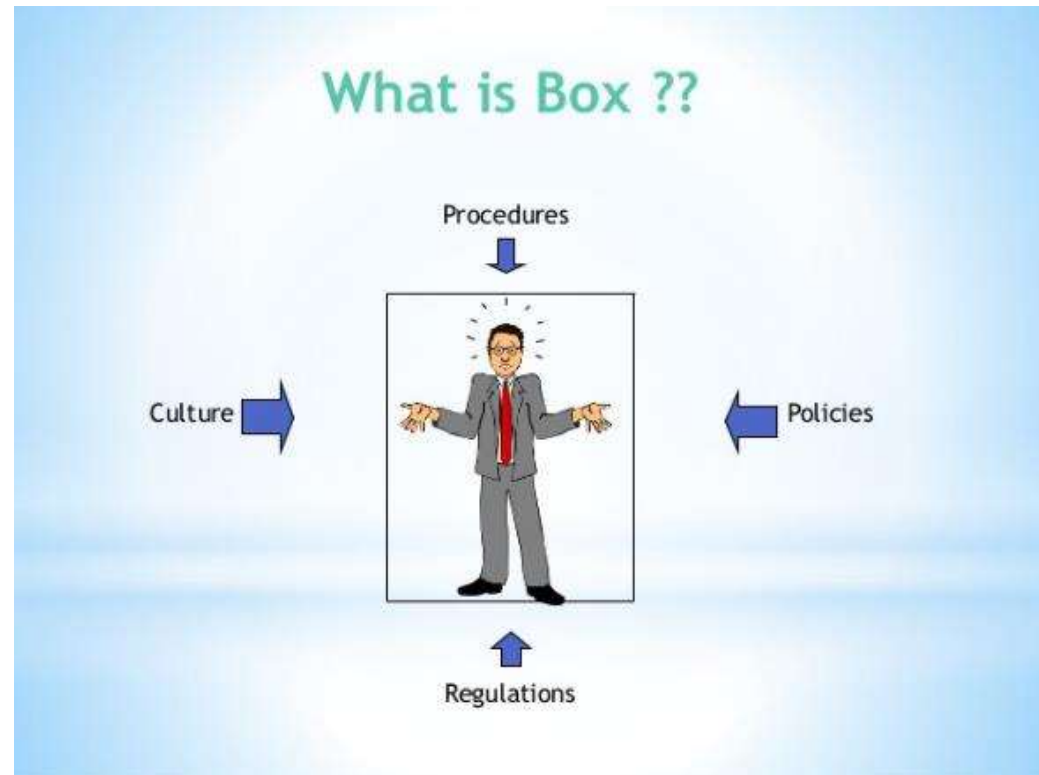
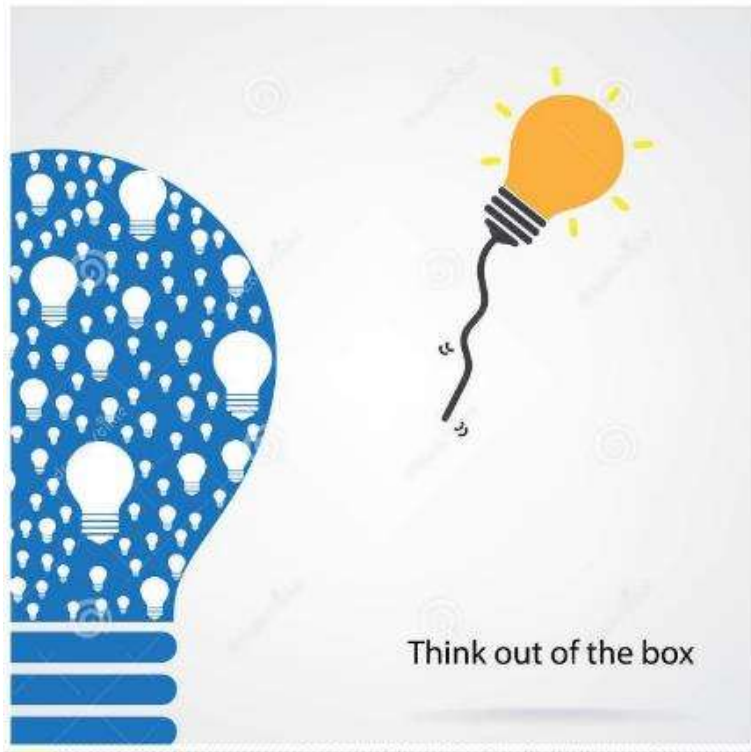
Energy & Environment
Ass. Officer



Christia Alexandrou holds a bachelor degree in Classical Studies from the University of Cyprus and top graduate and a Master's degree in Environmental Education/Education for Sustainable Development from Frederick University. More than 3 years of experience on training and education on environmental topics. She is the person in charge with EMAS implementation at OEB

[calexandrou\[at\]oeb.org.cy](mailto:calexandrou[at]oeb.org.cy)

Sustainable energy rural communities?







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Energy



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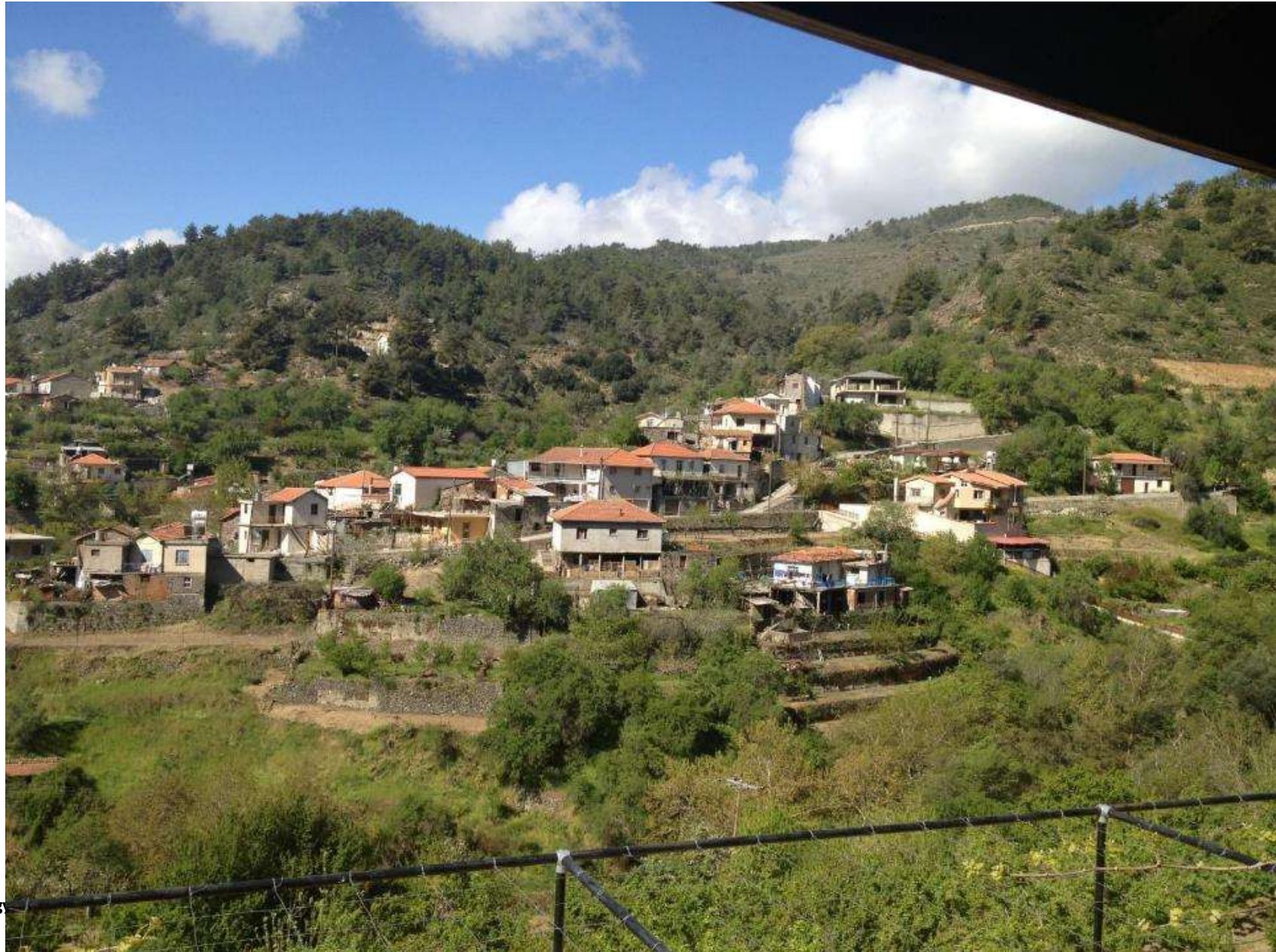




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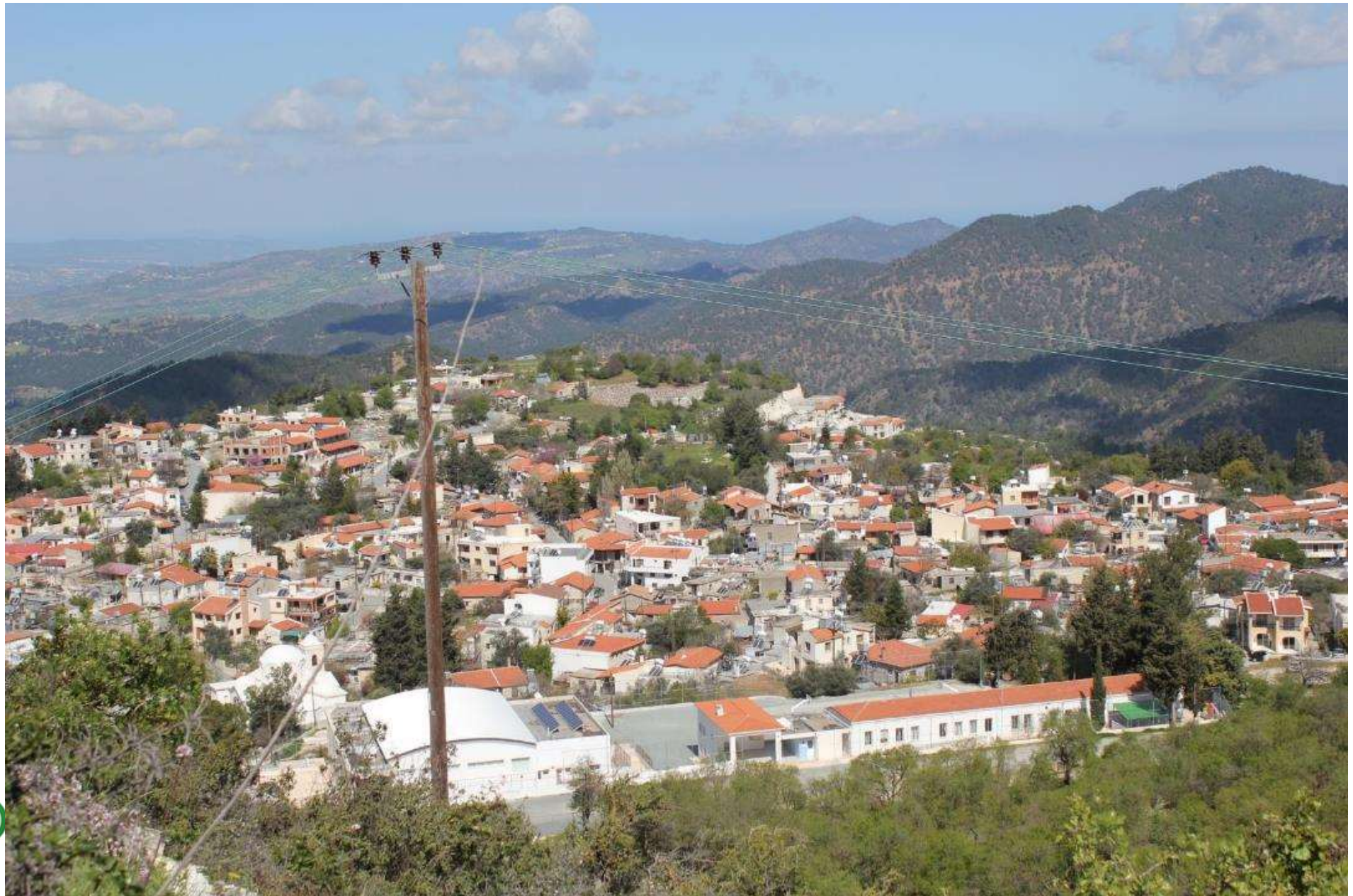


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Energy





Sustainable Energy Communities

- Lower energy bills for rural population
- More comfortable local buildings
- Improve public well-being/health
- Boost local employment/develop local businesses
- Build energy knowledge and skills/awareness campaigns
- Contribute to national emissions targets
- Prevention and management of waste





SUSTAINABLE DEVELOPMENT GOALS



Goal 7: Affordable and clean energy

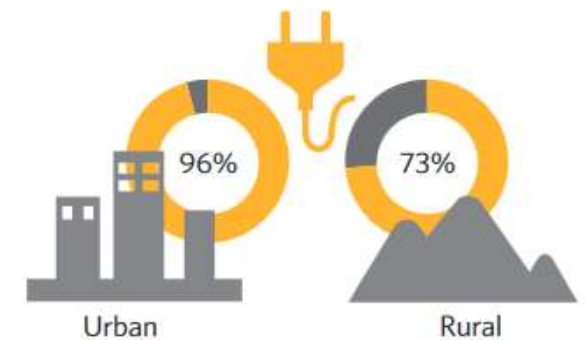


Ensure access to affordable, reliable, sustainable and modern energy for all

Scope of SDG 7

- Ensure universal access to energy services.
- Increase the share of renewable energy.
- Double the rate of improvement in energy efficiency.
- Facilitate access to clean energy research and technology and promote investment in energy infrastructure and clean energy technology.
- Expand infrastructure and upgrade technology for energy services in developing countries.

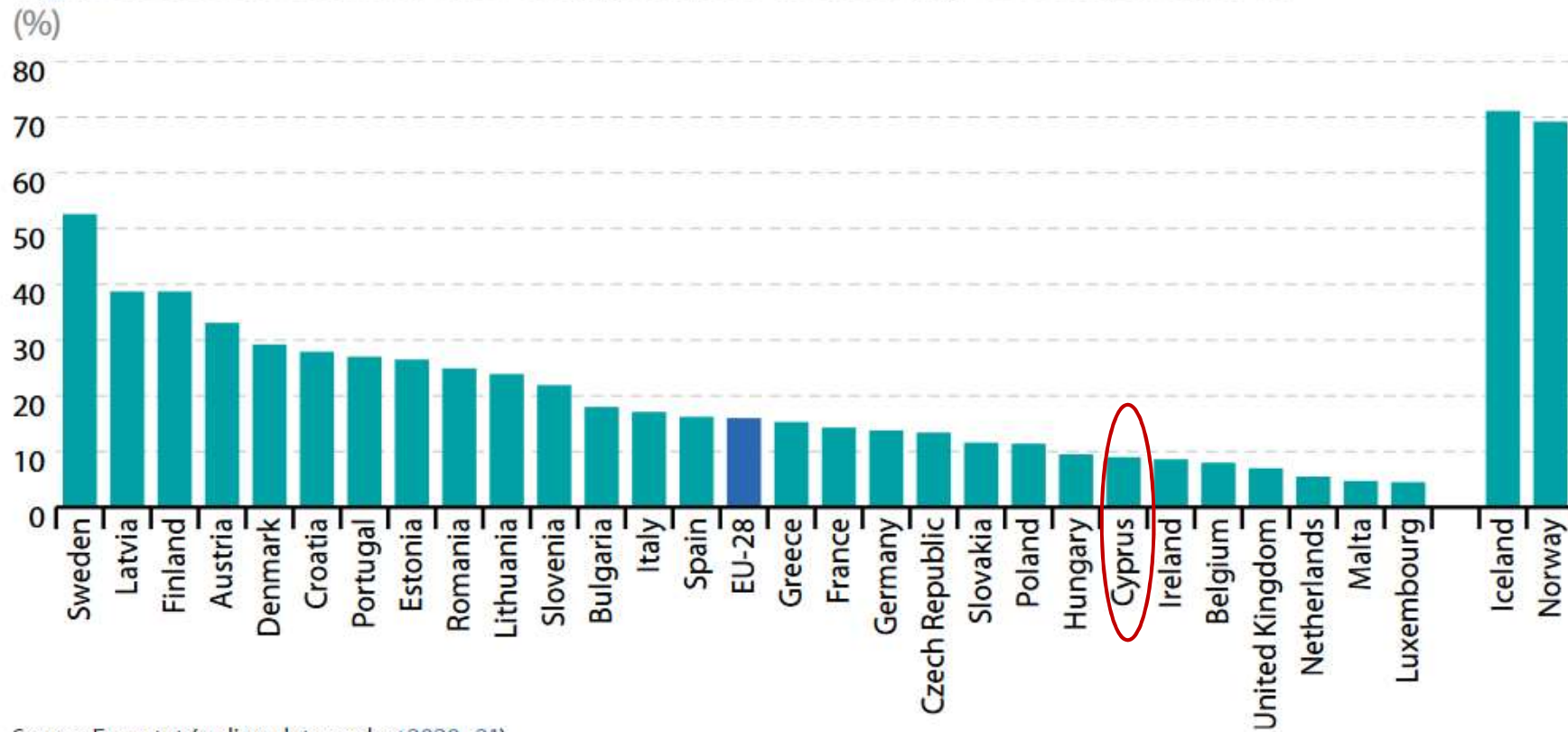
Electricity access in **rural areas** is **lower** than in urban areas



More than 3 billion people still lack access to clean cooking fuels and technologies

Share of renewable energy in the EU

Figure 7.1: Share of renewable energy in gross final energy consumption, 2014



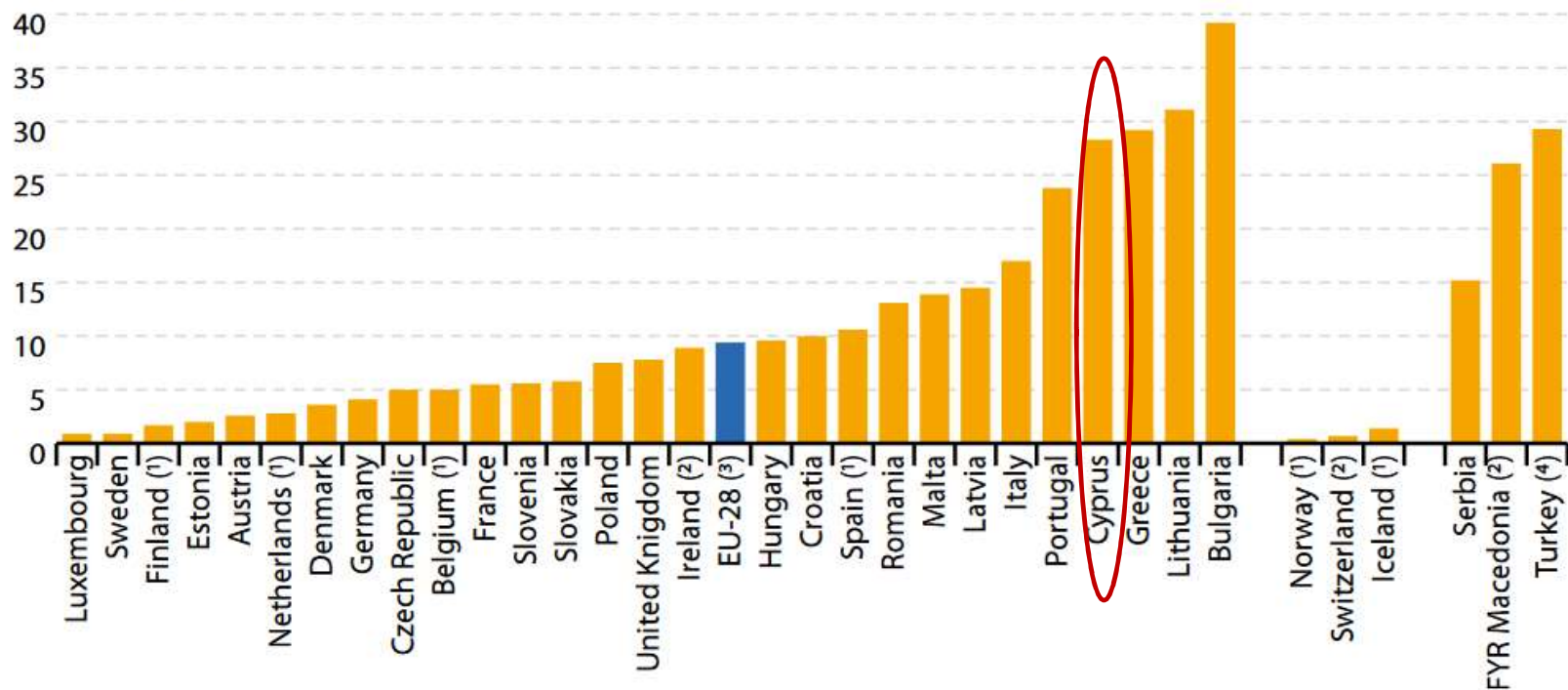
Source: Eurostat (online data code: t2020_31)



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Inability to keep home adequately warm in the EU

Figure 7.3: Share of population that cannot afford to keep home adequately warm, by country, 2015
(% of total population)



- The inability to keep homes adequately warm affects 9.4 % of the EU population

Inadequate space heating and cooling in Cyprus



Photos: Cyprus Energy Agency – ELIH MED



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Possible RES applications for domestic heating/cooling and cooking

- Wood Pellet/Briquette Boilers



Possible RES applications for domestic heating/cooling and cooking

- Wood burning cooking equipment

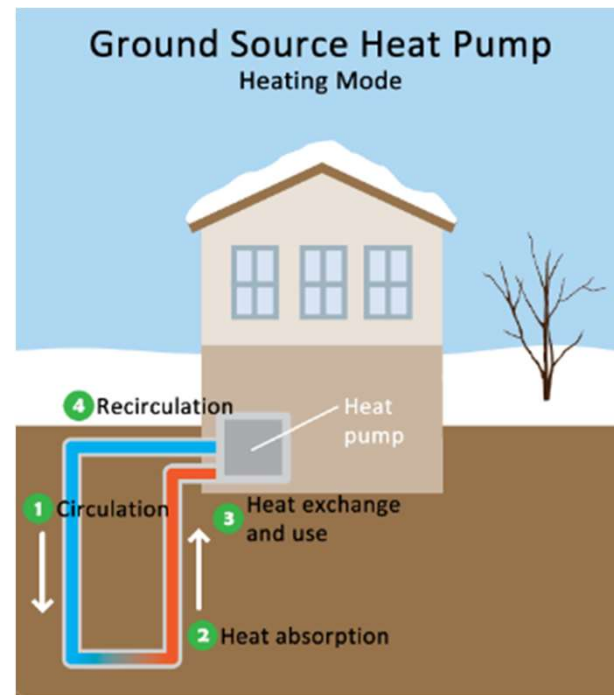
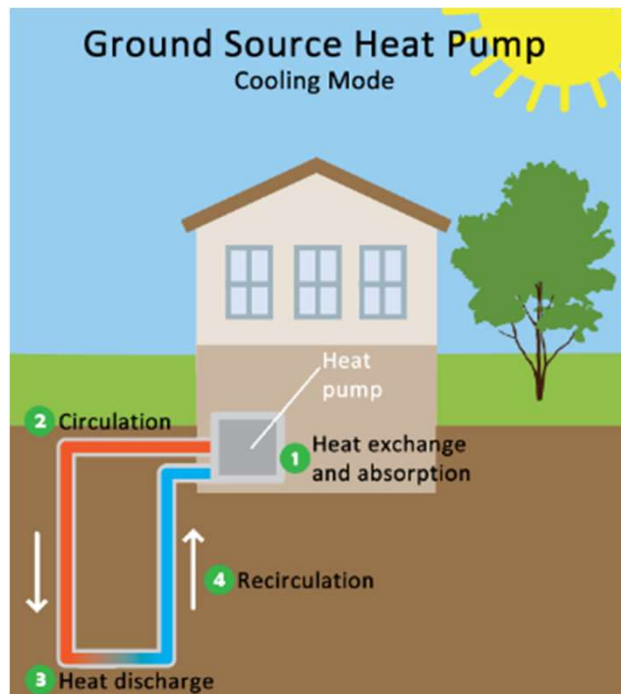


Possible RES applications for domestic heating/cooling and cooking



Possible RES applications for domestic heating/cooling and cooking

- Geothermal heat pumps



Possible RES applications for domestic heating/cooling and cooking

- Heat pumps for heating /cooling



Possible RES applications for domestic heating/cooling and cooking

- Domestic solar water heaters



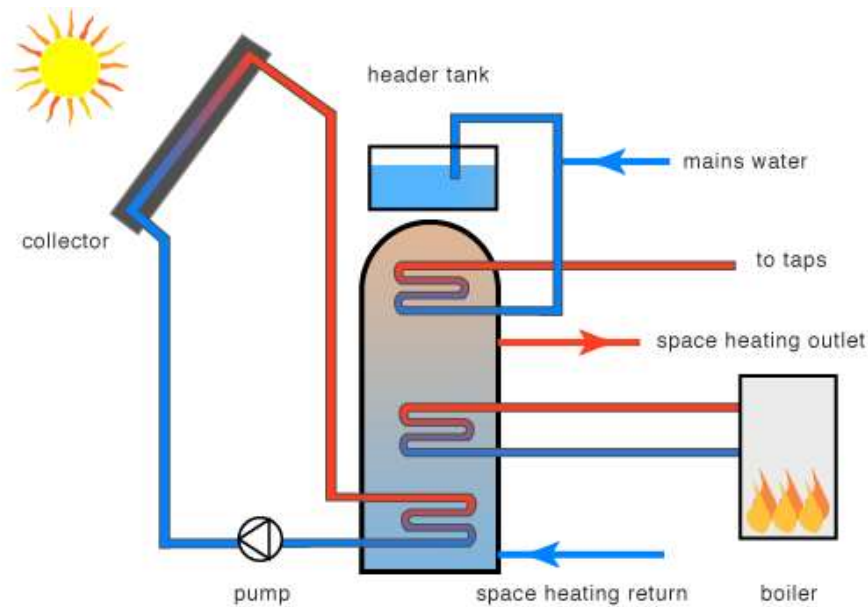
Installation of solar water heaters in Cyprus

- Cyprus is pioneer country in the installation of solar collectors per capita globally



Possible RES applications for domestic heating/cooling and cooking

- Solar water heaters for space heating



Making our homes more efficient

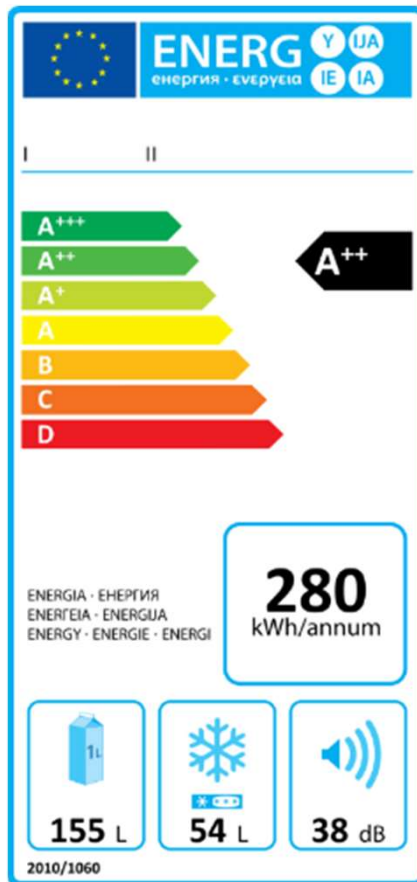


Making our homes more efficient



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Making our appliances more efficient



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We should increase public awareness

- Public opinion research in Cyprus show that 40% are not well aware of all RES technologies and energy efficiency measures
- Ways to increase public participation in awareness raising campaigns



RES applications for domestic RES electricity production

- Roof top photovoltaic



- Small wind turbines





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RES at community level

- Schools
- Social housing
- Sport centers
- District heating/cooling from RES
- RES electricity



PV applications at schools



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PV applications at street lighting



RES electricity at community level



District heating and cooling /and electricity for local communities



Goal 11: Sustainable Cities & Communities



Make cities and human settlements inclusive, safe, resilient and sustainable

Scope of SDG 11

- Ensure access to adequate, safe and affordable housing and basic services and upgrade slums.
- Provide access to safe, affordable, accessible and sustainable transport systems.
- Enhance inclusive and sustainable urbanisation.
- Protect and safeguard the world's cultural and natural heritage.
- Reduce the number of deaths and people affected and decrease economic losses caused by disasters.
- Reduce the adverse environmental impact of cities.
- Provide access to safe, inclusive and accessible, green and public spaces.
- Support positive economic, social and environmental links between urban, peri-urban and rural areas by development planning.
- Adopt and implement integrated sustainable development policies and plans and holistic disaster risk management.
- Support least developed countries in building sustainable and resilient buildings.

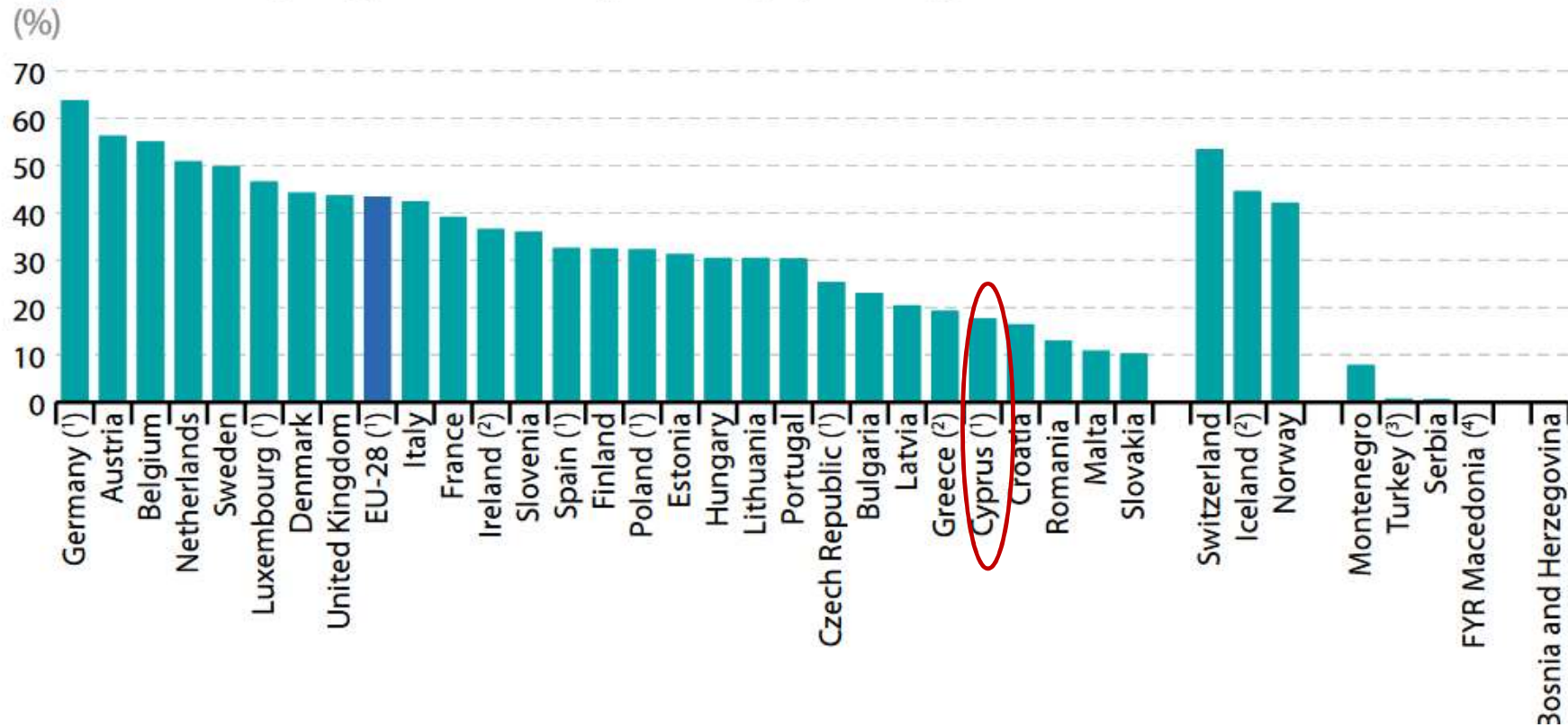
9 in 10 living in urban areas breathed air that did not meet WHO air quality guidelines in 2014



Coverage of municipal waste collection was 65 per cent in cities in 101 countries

Recycling rates in the EU

Figure 11.2: Recycling rate of municipal waste, by country, 2014



Not in my back yard



Recycling of electrical and electronic equipment



Creating local business from wastes



Waste clothes



Creating local business from wastes

- Creating local wood pellet industry



Creating local business from waste



Creating local business from wastes



Creating local business from wastes



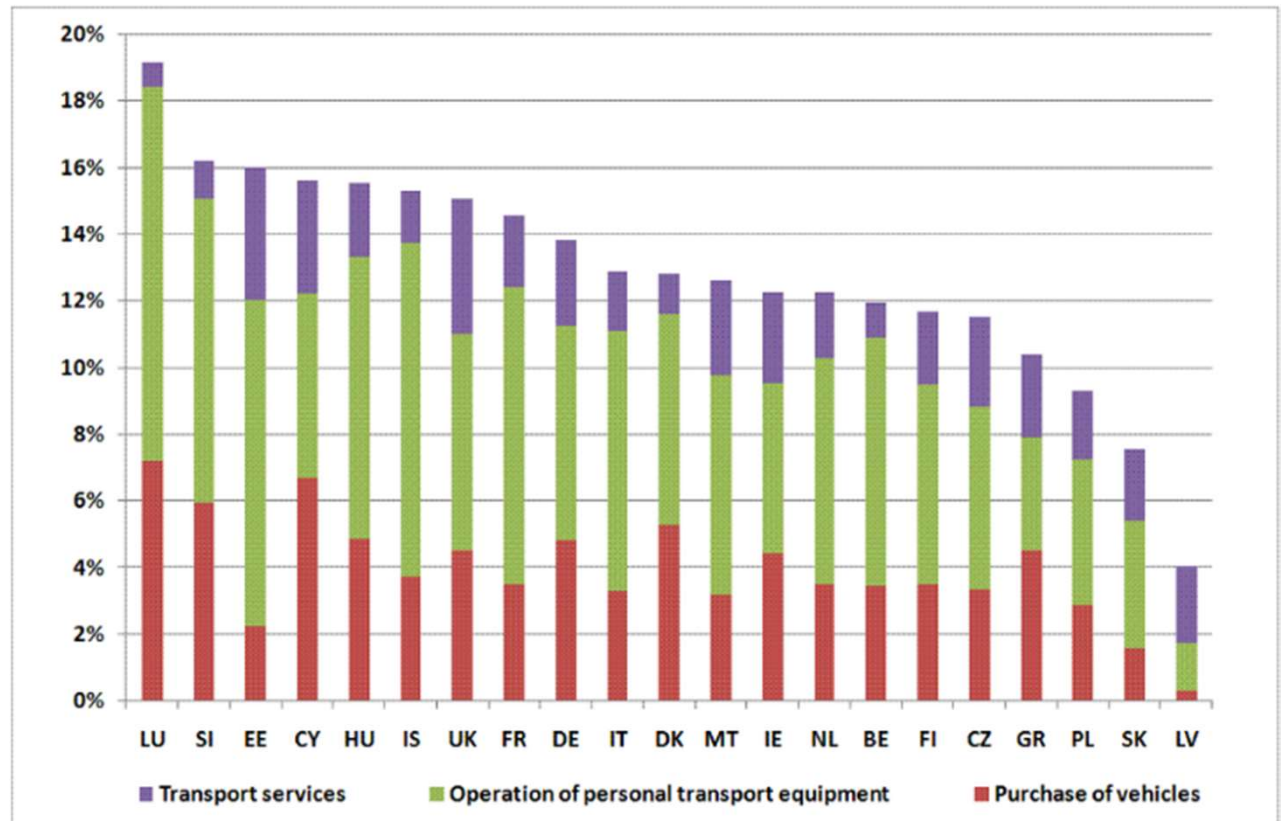
2014



83.4 %
of inland
passenger
transport
in the EU

was made by car

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Transport is the major challenge



Electrification of transport



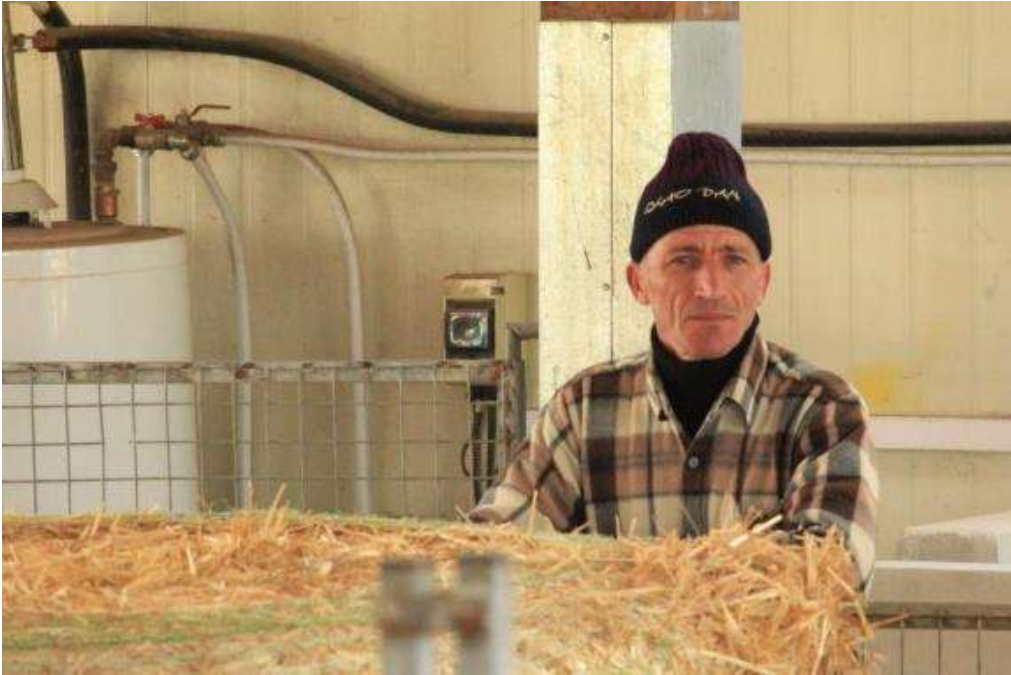
RES applications in agriculture



RES applications in agriculture



Sustainable farming



Financing

- Public support
- Common agricultural policy
- Preferential loans
- Cooperatives
- Crowd funding
- Other support



Strong Legal instruments – recast of the RES Directive

- Article 22 – renewable energy communities
- Local communities can create an SME non for profit, where they can have at least 51% of the shares.
- Can produce, sell, store, consume renewable energy
- In the SME can participate local authorities, natural persons, other SMEs etc

Article 22

Renewable energy communities

1. Member States shall ensure that renewable energy communities are entitled to generate, consume, store and sell renewable energy, including through power purchase agreements, without being subject to disproportionate procedures and charges that are not cost-reflective.

For the purposes of this Directive, a renewable energy community shall be [an SME or a not-for-profit organisation, the shareholders or members of which cooperate in the generation, distribution, storage or supply of energy from renewable sources, fulfilling at least four out of the following criteria:

- (a) shareholders or members are natural persons, local authorities, including municipalities, or SMEs operating in the fields of renewable energy;
- (b) at least 51% of the shareholders or members with voting rights of the entity are natural persons;
- (c) at least 51% of the shares or participation rights of the entity are owned by local members, i.e. representatives of local public and local private socio-economic interests or citizens having a direct interest in the community activity and its impacts;
- (d) at least 51% of the seats in the board of directors or managing bodies of the entity are reserved to local members, i.e. representatives of local public and local private socio-economic interests or citizens having a direct interest in the community activity and its impacts;
- (e) the community has not installed more than 18 MW of renewable capacity for electricity, heating and cooling and transport as a yearly average in the previous 5 year.

2. Without prejudice to State aid rules, when designing support schemes, Member States shall take into account the specificities of renewable energy communities.



Contact us

Cyprus Employers and Industrialists Federation

Acropoleos Avenue 2 & Glafkou Street,

Strovolos, 2000 Nicosia, Cyprus
P.O.Box 21657, 1511 Nicosia, Cyprus

Email: acharalambous@oeb.org.cy

Tel: +357 22 665 102, ext. 204 Fax:
+357 22 669 459

Web site: www.oeb.org.cy

Social media:



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