

# *Energy Cooperatives*

How can they be promoted in the  
Greek islands

Sifnos, 6 September 2014

## **Local energy planning for Sifnos**

Where we stand? What are we aiming for?

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DAFNI – Network of Sustainable Aegean Islands

# The DAFNI network

- ❖ Network of Sustainable Aegean Islands:  
Not for profit organization
- ❖ 33 island-members and 2 Regions
- ❖ Aim: To promote sustainable development to Aegean islands through integrated actions
- ❖ Covenant of Mayors supporter
  - ❑ 10 signatories
- ❖ Pact of Islands founding member
  - ❑ 16 signatories
- ❖ Sustainable Islands Network founding member



# The Pact of Islands



64 signatories from:

- ✓ Cyprus
- ✓ Denmark
- ✓ Estonia
- ✓ Greece
- ✓ Italy
- ✓ Malta
- ✓ Spain
- ✓ Sweden
- ✓ Portugal
- ✓ United Kingdom

- ❖ Initiative launched in 2011 under the ISLE-PACT project co-funded by DG-ENERGY
- ❖ Local sustainable energy planning focusing on the islands' special characteristics
- ❖ Island Sustainable Energy Action Plans (ISEAPs) produced for the signatories
- ❖ Methodologies for planning and monitoring the ISEAPs provided to the signatories
- ❖ ISEAPs have to be monitored and updated at least every 2 years

# Island Sustainable Energy Action Plan

## What is an ISEAP?

- ❖ The ISEAP is a useful tool for the local authority and the community to define their energy and environmental policy and demonstrate the way and the actions to accomplish their vision towards sustainability at local level.

## Why to have an ISEAP?

- ❖ Because the local authority by developing a well defined sustainable energy strategy gains the knowledge and advantage to master its own energy development and resources and plan its own projects.

Also by participating to European initiatives like PoI and CoM the island:

- ❖ becomes a member of a family of regions that share similar visions and can exchange knowledge and experience
- ❖ gets access to financing mechanisms directed especially to authorities committed to sustainability with developed SEAPs
- ❖ gains publicity by being promoted through the dissemination mechanisms of the initiatives

# ISEAP of Sifnos

- ❖ Submitted 30/4/2012
- ❖ Minor involvement of the municipality during the ISEAP development process
- ❖ The year 2005 was selected as the base year of the energy planning process
- ❖ The plan covers the period till 2020
- ❖ An implementation report demonstrating the progress of the ISEAP should be delivered every 2 years (30/4/2014...!)
- ❖ The ISEAP is dynamic and should be frequently updated.
- ❖ The ISEAP was a good start now we need to move it steps forward.

# ISEAP – Development

## 1. Initiation

- ❖ Wide political support
- ❖ Preparation of administrative structure
- ❖ Gain support from the local community and the stakeholders

## 2. Planning

- ❖ Description of the current island profile – Baseline energy and emission inventory
- ❖ Define - study and organize the possible actions
- ❖ Define the local vision and the goals of the SEAP
- ❖ Communicate the SEAP to the local community and the stakeholders

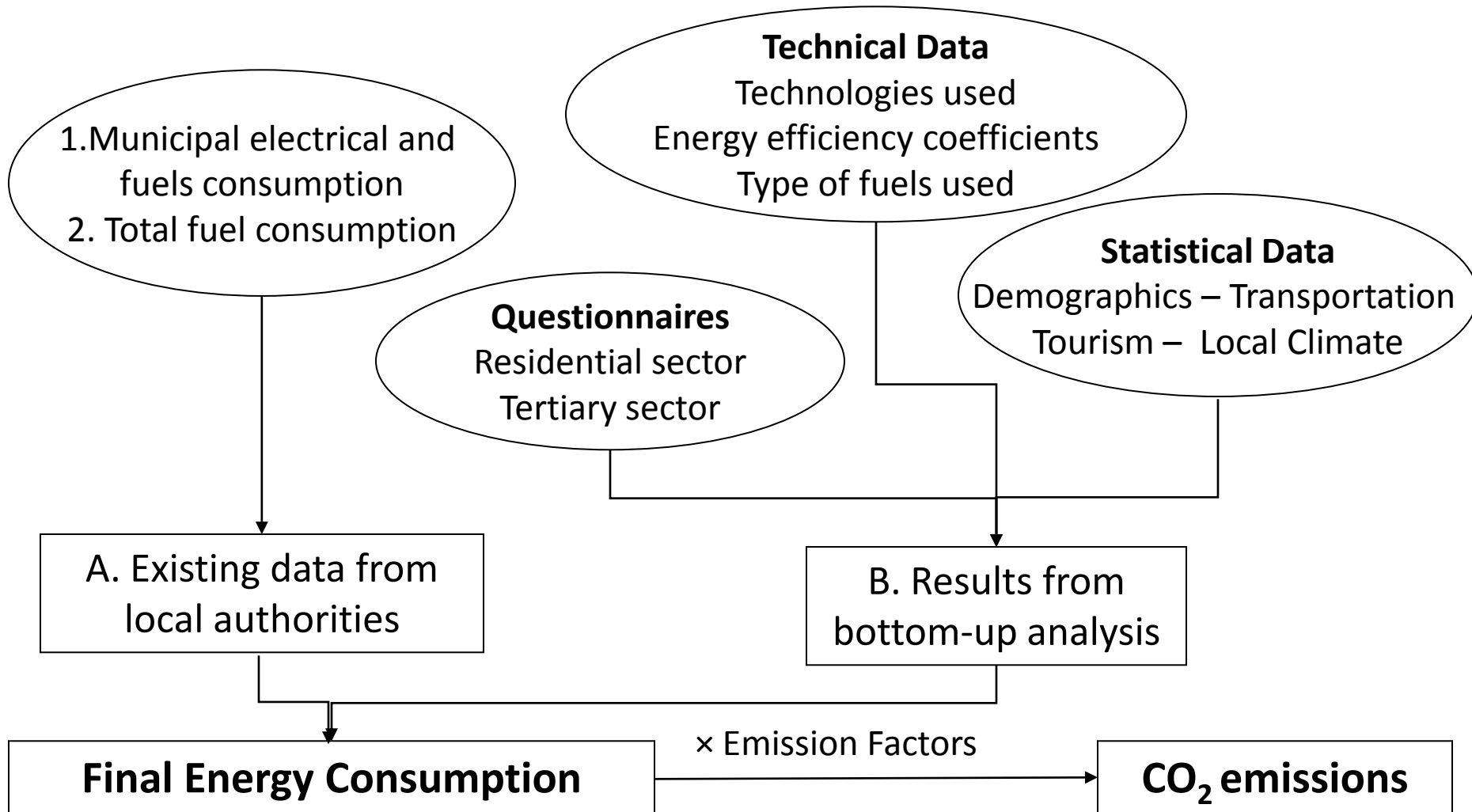
## 3. Implementation

- ❖ Reassure the political and financial support from the local authorities
- ❖ Retain the interest of the local community and the stakeholders

## 4. Monitoring

- ❖ Monitor periodically the energy demand and the CO2 emissions
- ❖ Monitor the progress of the actions, reporting possible delays and inaccuracies

# ISEAP – The base year



# ISEAP of Sifnos

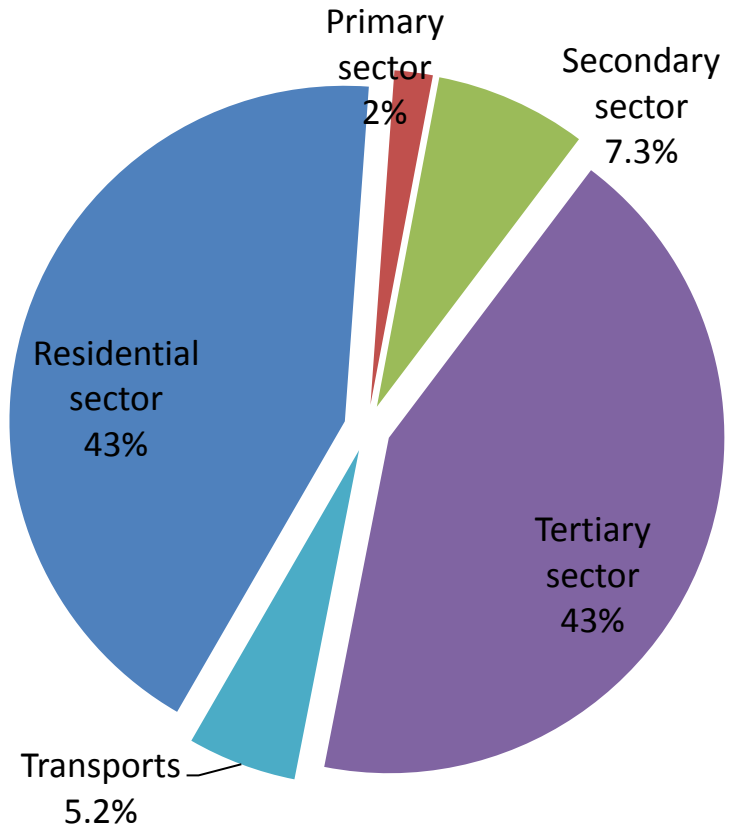
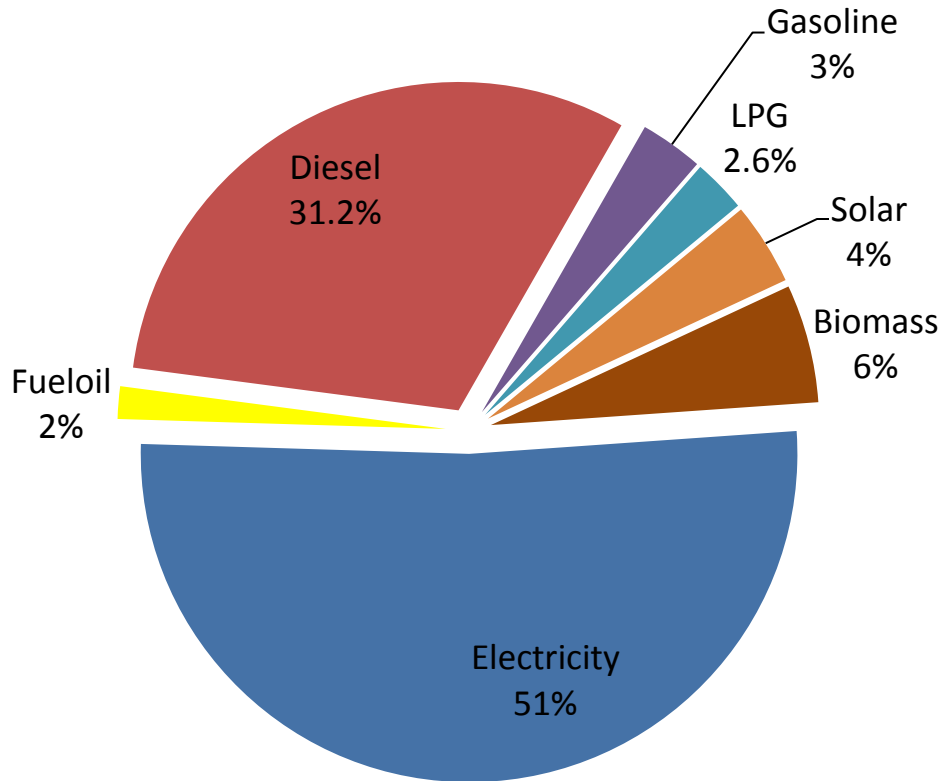
## Objectives and Targets

- ❖ The objectives set for the target year 2020 focus on:
  - ❑ increasing the island's energy supply security,
  - ❑ reducing its dependence on fuel imports and
  - ❑ reducing the island's energy and CO<sub>2</sub> emissions footprint.
  
- ❖ Specifically, the targets set for 2020 focus on:
  - ❑ reducing by 6% the primary energy demand
  - ❑ and by 20% the CO<sub>2</sub> emissions in comparison to the projections of the business as usual scenario,
  - ❑ meeting the 21% of the primary energy demand and the 39% of the electricity demand by the use of local renewable energy sources.



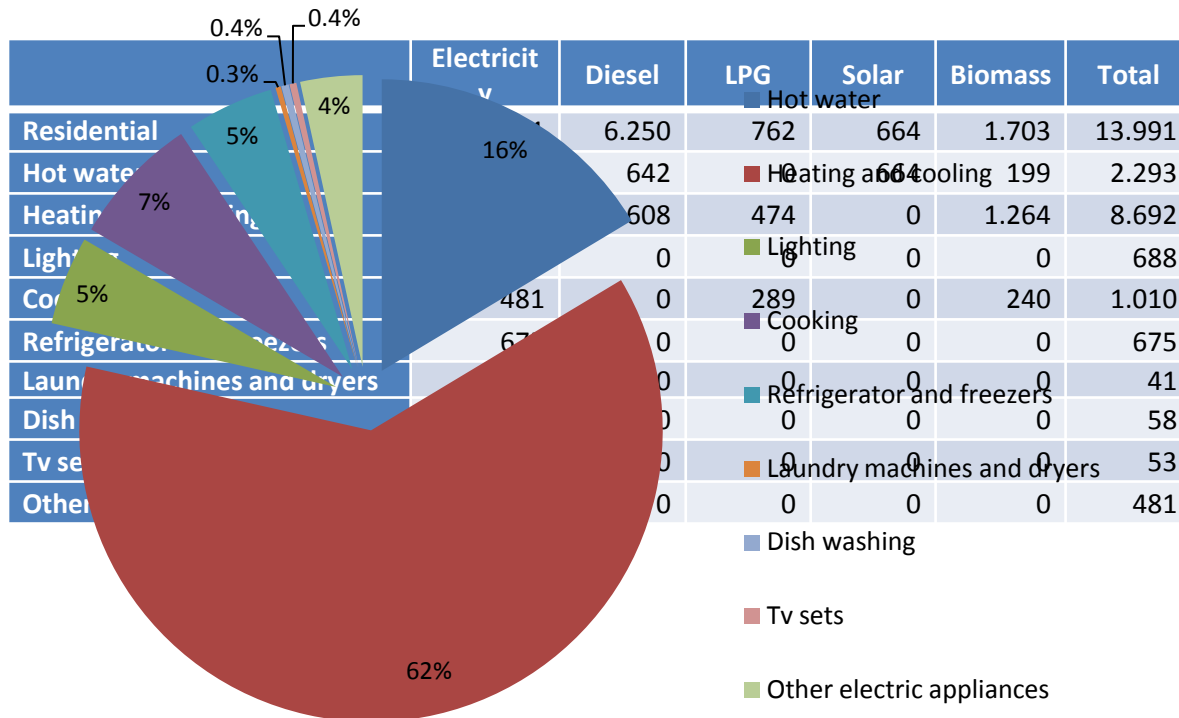
# ISEAP of Sifnos - Results

## Final Energy Demand per carrier and sector in the base year



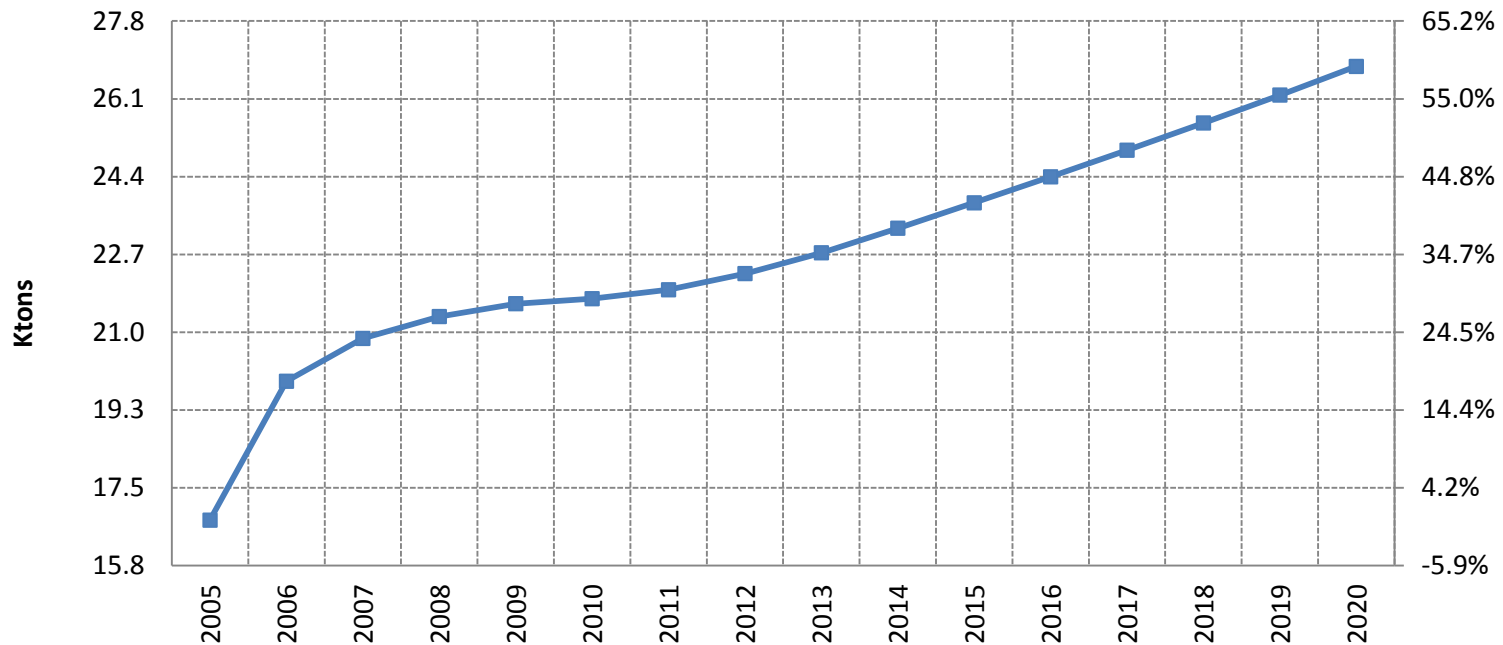
# ISEAP of Sifnos – Results

## Final Energy Demand – Residential sector Baseline year 2005



# ISEAP of Sifnos – Results

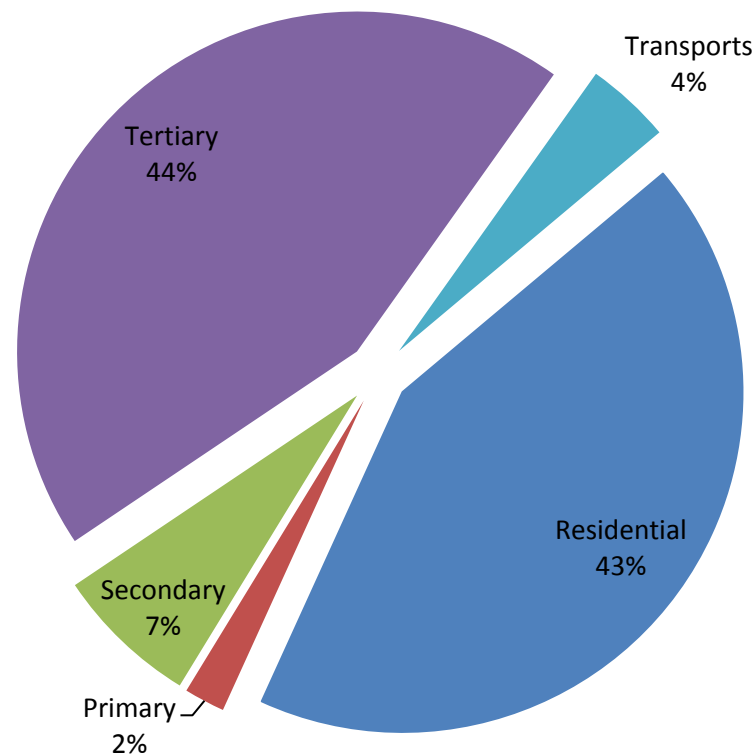
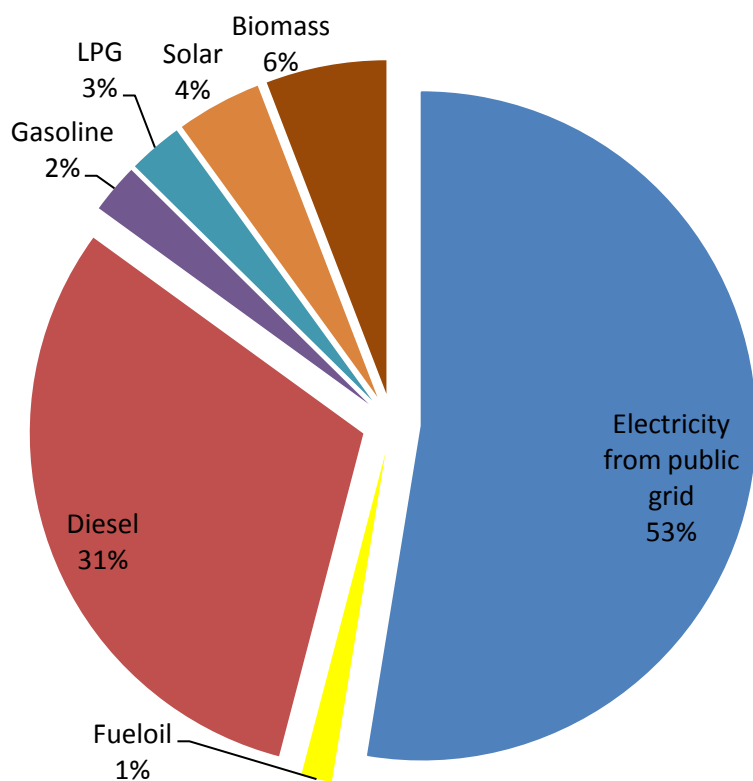
## Business As Usual – CO2 emissions from final use



# ISEAP of Sifnos – Results

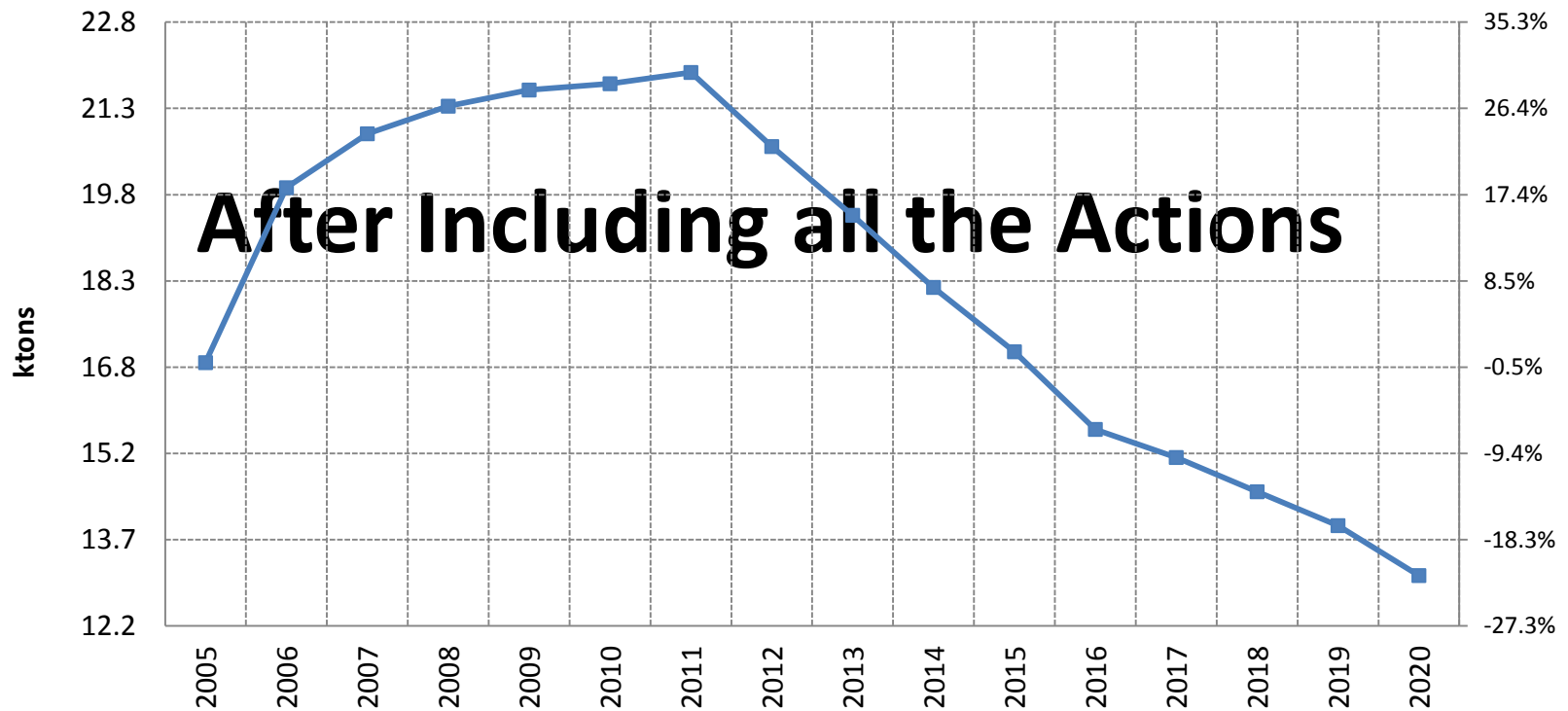
## Final Energy Demand per carrier and sector in 2020

### Business As Usual scenario



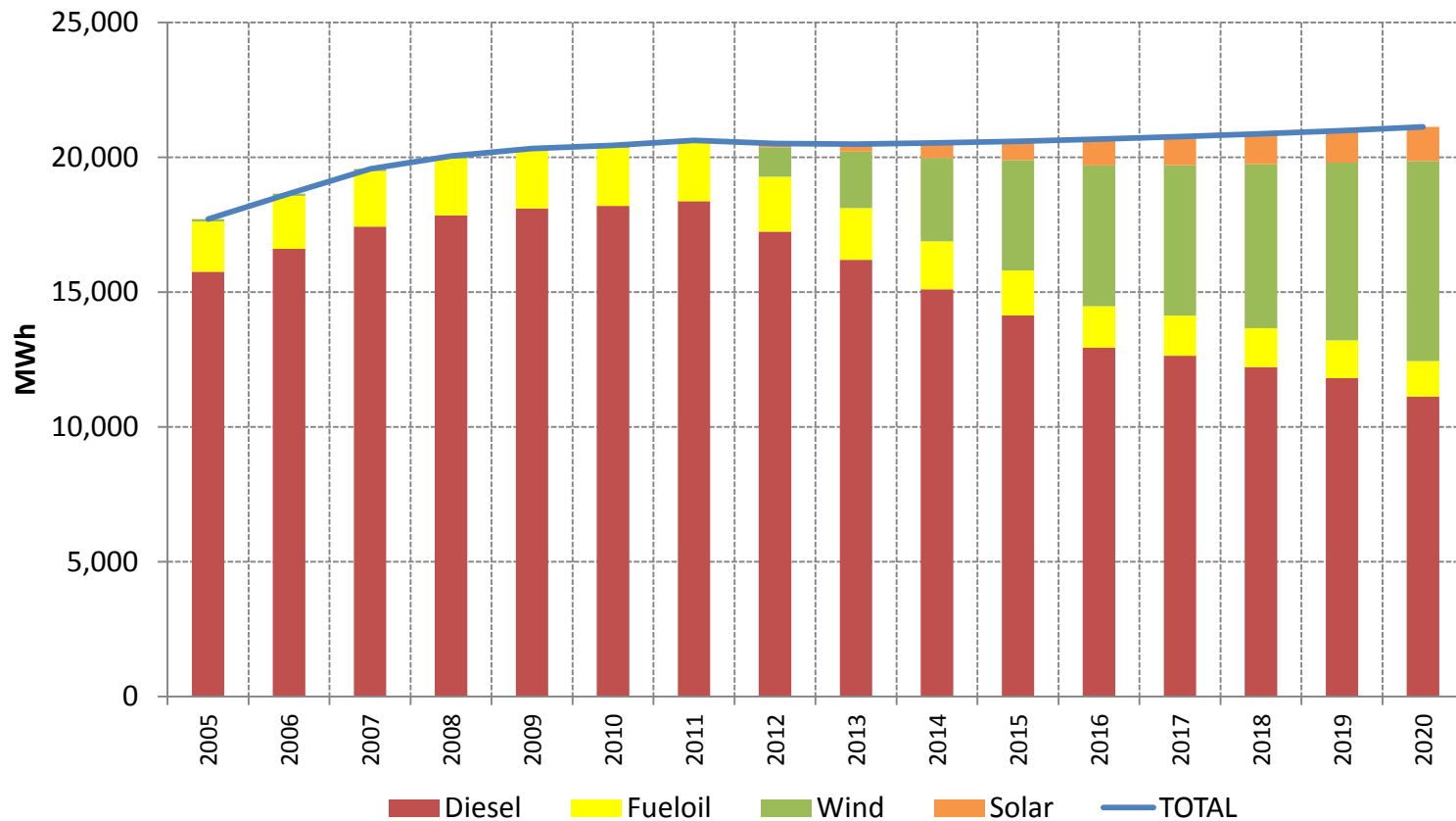
# ISEAP of Sifnos – Results

## ISEAP scenario – CO2 emissions from final use



# ISEAP of Sifnos – Results

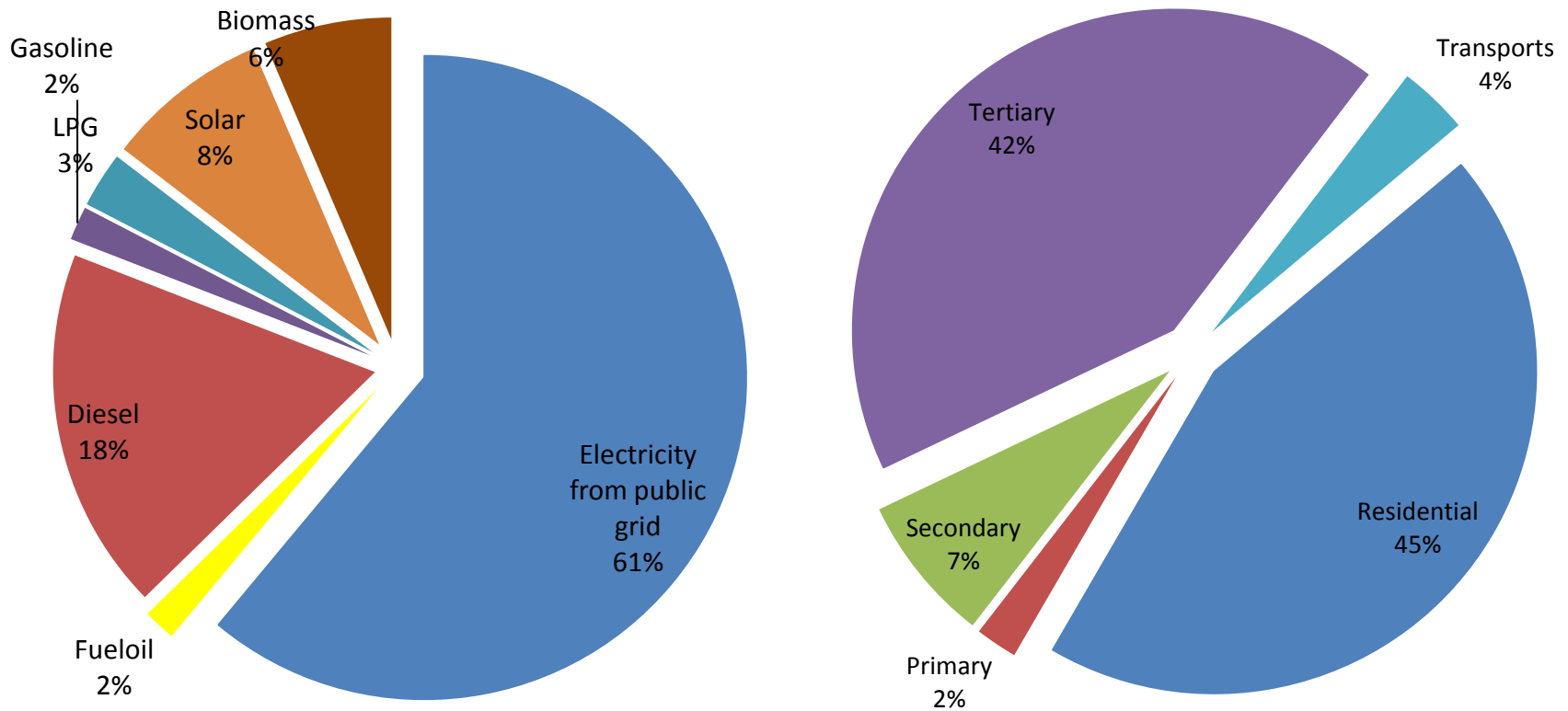
## ISEAP scenario – Electricity



# ISEAP of Sifnos – Results

## Final Energy Demand per sector and carrier in 2020

### ISEAP scenario



# ISEAP of Sifnos – Results

The following table summarizes the contribution of each sector in the reduction of CO<sub>2</sub> in comparison to the BAU scenario in the target year 2020.

Action Sectors	CO <sub>2</sub> emissions reduction
Residential	7,7%
Primary	0,8%
Secondary	2,4%
Tertiary	24,9%
Transports	0,4%
Electricity production	45,0%
<b>TOTAL</b>	<b>64,37%</b>



# ISEAP of Sifnos – Results

SECTORS AND FIELDS OF ACTION	ACTIONS	RESPONSIBLE FOR IMPLEMENTATION	EXPECTED ENERGY SAVINGS [MWh/year]	EXPECTED RENEWABLE ENERGY PRODUCTION [MWh/year]	EXPECTED CO2 REDUCTION [ton/year]
<b>RESIDENTIAL SECTOR</b>					
Hot water	Reduce the annual hot water energy demand growth rate by 10% by promoting every day energy saving measures from the consumers	Municipality of Sifnos	14		3
	Increase to 50% the total hot water energy demand supplied from solar thermal by 2020	Municipality of Sifnos	101	83	49
<b>SECONDARY ENERGY PRODUCTION AND ENERGY FLUXES</b>					
Wind	Promotion of wind turbines installation	Municipality of Sifnos		814	719
Solar	Promotion of PV installation on the ground and on the roofs	Municipality of Sifnos		140	124

# ISEAP of Sifnos – Results

SECTOR	ENERGY SAVINGS TARGET IN 2020 [MWh/year]	RENEWABLE ENERGY PRODUCTION TARGET IN 2020 [MWh/year]	CO2 REDUCTION TARGET IN 2020 [ton/year]
RESIDENTRIAL	520	24	144
PRIMARY	59	-	15
SECONDARY	170	-	45
TERTIARY	1.729	9	466
TRANSPORTS	35	-	8
SECONDARY ENERGY PRODUCTION	-	954	842
TOTAL	2.512	988	1.520

# Local Energy Planning – The perspectives

**Having an ISEAP is very good**

**Having a very good ISEAP is a privilege**

## **Next (baby?) steps**

1. Renew the political support
2. Involve society and stakeholders
3. Update the vision
4. Communicate to the world
5. Update figures – Start monitoring
6. Pass from actions to actual projects (prefeasibility studies, maturing, financing, etc.)
7. Do not stop monitoring



Looking for local heroes to carry the message

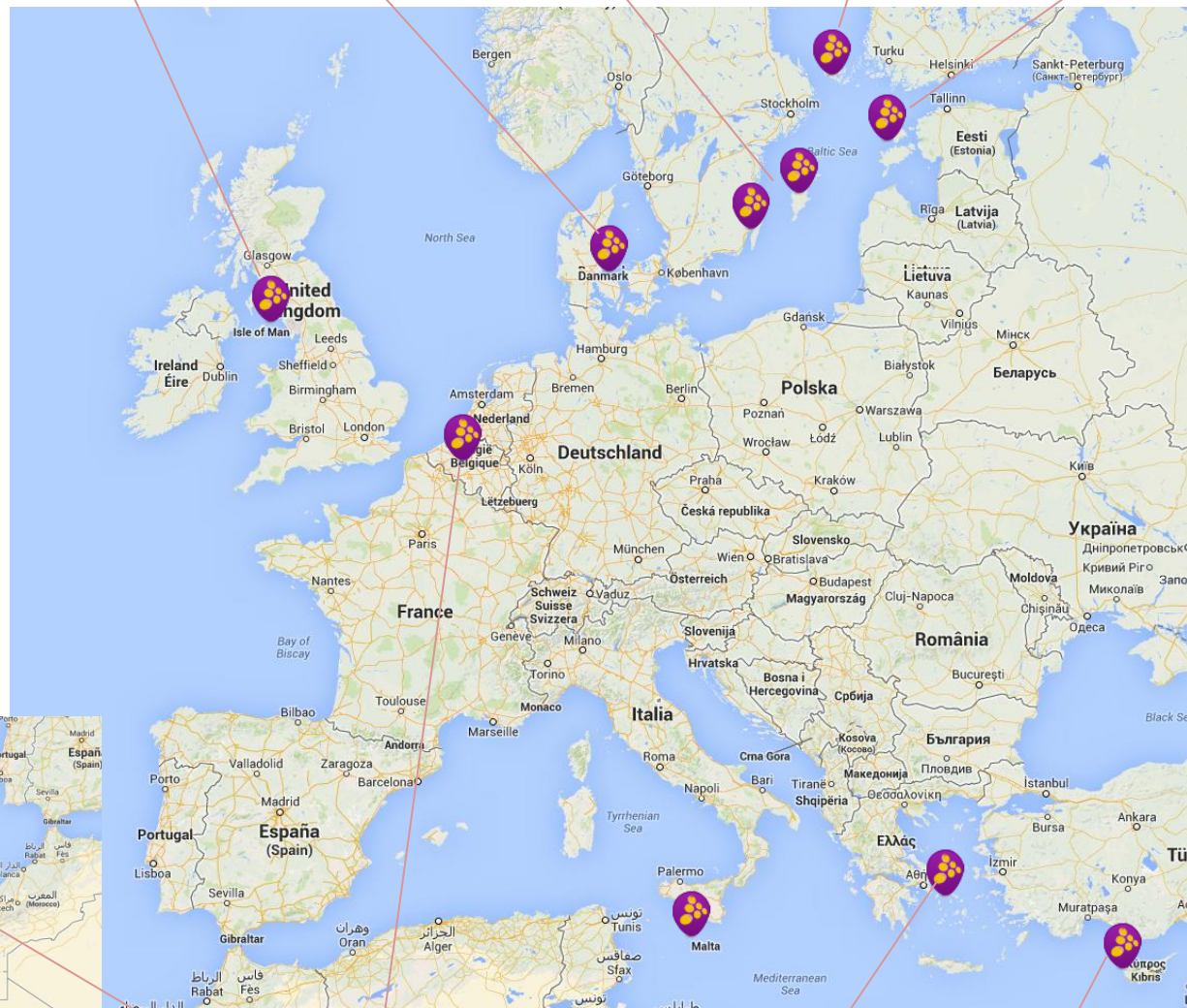
**Anyone interested?**





- Establishment of 10 island clusters
- Identification of 233 trainees to attend capacity building activities
- Organisation of more than 15 local workshops to identify the priority areas and barriers.
- Identification of 61 projects to mature during the project life.
- Preliminary identification of 15 new islands to join the Pol.
- Identification of good practices to transfer and bad practices to avoid.
- Development of strategic guidelines to improve Multi-Level Governance.

Cluster of Scotland	Cluster of Denmark	Cluster of Sweden	Cluster of ESIN	Cluster of Estonia
10 members 29 trainees 11 projects	5 members 2 trainees 3 projects	3 members 2 trainees 7 projects	21 members 33 trainees 3 projects	22 members 23 trainees 6 projects



<b>Cluster of Spain</b> 9 members 9 trainees 4 projects	<b>Cluster of Portugal</b> 17 members 51 trainees 7 projects	<b>Cluster of CPMR</b> 6 members 12 trainees 3 projects	<b>Cluster of Malta</b> 6 members 21 trainees 2 projects	<b>Cluster of Greece</b> 28 members 30 trainees 5 projects	<b>Cluster of Cyprus</b> 21 members 21 trainees 10 projects
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- About E-Learning
- Workshops
- E-Learning Platform



# THANK YOU

For more information please contact me at

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Visit the website of our new sustainable islands IEE project on multi-level governance



[www.sustainableislands.eu](http://www.sustainableislands.eu)