

Streamlining the Pact of Islands into the Covenant of Mayors for Climate & Energy

Guidelines on how to convert an iSEAP
into a SECAP

Prepared by the Aegean Energy Agency

Contents

Introduction.....	3
iSEAP and SECAP templates	3
Absence of Climate Adaptation Actions in Pol.....	3
Energy Flows Analysis.....	3
Matching the Demand Sectors.....	4
Matching the Energy Demand Carriers	Erreur ! Signet non défini.
Conversion Process.....	8
Conversion Requirements	8
Conversion Steps.....	8

Introduction

The purpose of these guidelines is to describe the steps in order to transform a Pact of Islands (PoI) islands Sustainable Energy Action Plan (iSEAP) template into a Covenant of Mayors (CoM) Sustainable Energy and Climate Action Plan (SECAP) template. This is essential in order to enable the JRC to proceed with the evaluation of the iSEAP and for PoI signatories to be considered equivalent to CoM signatories.

For this purpose a special CoM SECAP template is developed, which can be found on the [CoM online library](#), including an incorporated converter which automatically transfers the information from the PoI iSEAP to the CoM SECAP template.

Taking into account that the new CoM SECAP template is rather elaborated in comparison to the old CoM SEAP template, on which the PoI iSEAP development was based, the additional information, besides the one to be transferred from the iSEAP to the SECAP, should be manually filled in by the PoI-CoM signatories.

The following guidelines, explains step by step the conversion process that each PoI signatory should follow.

iSEAP and SECAP templates

Absence of Climate Adaptation Actions in PoI

A basic difference between PoI and the new CoM is the current absence of climate adaptation actions under the PoI. For this reason, the SECAP sheets related to adaptation measures i.e. “Mitigation Actions”, “Adaptation Scoreboard”, “Climate Change Risks” and “Vulnerabilities and Adaptation Actions” are not automatically filled in through the conversion process. If the PoI signatory in addition to the actions foreseen in the iSEAP has also developed a strategy and actions for climate change adaptation they will have to manually complete the information in the SECAP template.

Energy Flows Analysis

One of the main differences between PoI and CoM has to do with the calculation and reporting of energy flows. In the CoM SECAP template the final energy consumption and the local energy (electricity and heat/cold) production are reported. On the other hand, under the PoI the final energy demand (energy produced by the consumer) together with the secondary energy production (energy delivered to the consumer through networks) are summed up and transformed into primary energy demand to depict the overall energy consumed per energy carrier. The iSEAP primary energy demand values are not transferred to the SECAP template.

Furthermore, in the field of “Secondary Energy Production and Energy Fluxes” of the PoI iSEAP template, the energy values presented under the categories “Secondary Energy Conversion”, “Energy Fluxes” and “Distribution Losses and self-consumption” are not taken into account while transforming the iSEAP to a SECAP.

Matching Energy Demand

Another important difference between PoI and CoM has to do with the level of analysis of the Demand Sectors. In the PoI iSEAP template the mandatory demand sector fields are defined based on the economic activity of each sector. The mandatory fields are the ones related to the Residential, Primary, Secondary, Tertiary and Transports sector. Each sector is divided into subsectors for which the filling in of the respective energy flows is optional. In PoI an extensive list of 26 subsectors is defined following the NACE economic activity categorisation.

On the other hand in the CoM SECAP template the mandatory fields are grouped under three main categories, “Buildings, Equipment / Facilities and Industries”, “Transport” and “Other”. Again, each main category is divided into subcategories resulting to 9 subcategories in total.

In order to ensure the accurate transferring of data from the iSEAP to the SECAP template the different PoI energy demand and local energy production subsectors, and also the fields of action are linked to specific CoM subsectors and fields of action. In several cases, more than one iSEAP subsector is linked to a SECAP subsector; in those cases, the sum of the iSEAP subsectors make up the SECAP subsector. However, for the “Transport” sector the fact that the iSEAP subsectors are defined based on the type of use while the SECAP ones on the type of ownership (municipal, public and private) poses the need during transferring to break down the energy amounts of each iSEAP subsector to more than one SECAP sector. For this reason, the converter while executing the conversion requests some real time data from the user. This will be further analysed in the Conversion Steps of the present guidelines.

The user should provide some additional information regarding the “*Passenger road transport (public transports, taxi, tourism, school buses, etc.)*” and “*Other fleet for public and private services*” fields of the ISEAP template. The data of these sectors correspond to the “*Municipal fleet*”, “*Public transport*” and “*Private and commercial transport*” sectors of the SECAP template with a specific percentage provided by the user.

Specifically, the correspondence among the subsectors and the fields of action relating the two templates are presented in the following tables.

Energy Demand Subsectors	
PoI iSEAP template	CoM SECAP template
RESIDENTIAL	
Hot water	Residential buildings
Heating and cooling	
Lighting	
Cooking	
Refrigerator and freezers	
Laundry machines and dryers	
Dish washing	
TV sets	
Other electric appliances	

PRIMARY SECTOR	
Agriculture, forestry and fishing	Agriculture, Forestry, Fisheries
Mining and quarrying	Industries
SECONDARY SECTOR	
Manufacturing	Industries
Water supply, sewerage, waste management and remediation activities	Municipal buildings, equipment/facilities
Construction	Industries
TERTIARY SECTOR	
Wholesale and retail trade; repair of motor vehicles and motorcycles	Tertiary (non-municipal) buildings, equipment/facilities
Accommodation and food service activities	
General public administration and social security	Municipal buildings, equipment/facilities
Defence, justice, police and fire departments	
Education	
Human health and social work activities	
Other services	Tertiary (non-municipal) buildings, equipment/facilities
Public lighting	Public lighting
TRANSPORTS	
Passenger road transport (public transports, taxi, tourism, school buses, etc.)	Municipal fleet
	Public transport
	Private and commercial transport
Freight transport by road and removal services	Private and commercial transport
Other fleet for public and private services	Municipal fleet
	Public transport
	Private and commercial transport
Private transports	Private and commercial transport

Another difference between Pact of Islands and Covenant of Mayors is the type of energy carriers included in the “Final Energy Demand/Consumption” tables in the Emission Inventory sheets. Taking into account the usual available fossil fuels and renewable energy sources on the islands under PoI a selection of energy carriers has been made which slightly differs from the ones used under CoM. In the following table the correspondence between the PoI and CoM energy carriers is presented taking also into account that the list of energy carriers under CoM cannot be customised.

Energy Demand Carriers	
PoI iSEAP template	CoM SECAP template
Electricity from public grid	Electricity
Heat from district heating	Heat/cold
Cold from district cooling	
Fueloil	Other fossil fuels

Diesel	Diesel
Gasoline	Gasoline
LPG	Liquid gas
Natural gas	Natural gas
Coal	Coal
Hydro	Plant oil
Wind	Other biomass
Solar	Solar thermal
Geothermal	Geothermal
Ocean	-
Biomass	Biofuel

Matching Local Energy Production

In general, the values of electricity, heat and cold production under Secondary Energy Production and Energy Fluxes are transferred to the respective available subsectors of the “Local/distributed electricity production (Renewable energy only)”, “Local/distributed electricity production” and “Local Heat/Cold Production” tables. The correspondence between subsectors and energy carriers are presented in the table below. When it comes to “Local generated electricity” from renewable energy carriers, in order to overcome the barrier posed by the fact that the SEAP template provides a smaller number of subsectors compared to the iSEAP, the converter inserts the values of the additional iSEAP subsectors under the subsector “Combined Heat and Power”. Furthermore, it should be noted that the iSEAP template does not separate the non-renewable electricity production between thermal plants and CHPs. For this reason, the converter while executing the conversion requests some real time data from the user in order to split the produced non-renewable electricity between those plants. This will be further analysed in the Conversion Steps of the present guidelines.

Local Energy Production			
SUBSECTORS MATCHING		ENERGY CARRIER MATCHING	
PoI iSEAP template	CoM SECAP template		
Secondary Energy Production and Energy Fluxes	Local/distributed electricity production Local Heat/Cold Production	PoI carriers	CoM carriers
Electricity	Thermal power plant Combined Heat and Power	Natural gas	Natural gas
		LPG	Liquid gas
		Fueloil	Heating oil
		Diesel	Lignite
		Coal	Coal
		Gasoline	-
	Wind	Wind	Renewable electricity produced
	Hydroelectric	Hydro	
	Photovoltaic	Solar	
	Geothermal	Geothermal	
	Combined Heat and Power	Combined Heat and Power	Ocean
Biomass			Other biomass

		Urban waste	Waste
		Output from Storage	Other
Heat	District heating plant Combined Heat and Power	Natural gas	Natural gas
		LPG	Liquid gas
		Fueloil	Heating oil
		Diesel	Lignite
		Coal	Coal
		Gasoline	-
		Geothermal	Other
		Ocean	Other renewable
		Biomass	Other biomass
		Urban waste	Waste
		Cold	District cooling plant
LPG	Liquid gas		
Fueloil	Heating oil		
Diesel	Lignite		
Coal	Coal		
Gasoline	-		
Geothermal	Other		
Ocean	Other renewable		
Biomass	Other biomass		
Urban waste	Waste		

Matching Fields of Action

While transferring data from the iSEAP to the SECAP template regarding planned sustainable energy actions each iSEAP field matches to a corresponding SECAP one. For those fields related to energy demand and local energy production the correspondence of subsectors already presented in the “Matching Energy Demand” and “Matching Local Energy Production” chapters applies for the respective fields of actions too except for the PoI “Agriculture, forestry and fishing” field of action which falls under the “Other” SECAP field of action and all the “Transports” iSEAP subsectors which fall under the general “Transports” SECAP sector.

For the additional fields of action (i.e. Land Use Planning, Public Procurement of Products and Services, Citizens and Stakeholders) the following correspondence applies during the conversion. In the case where fields of action appear in the iSEAP and not in the SECAP then the converter automatically inserts the missing sector in the SECAP template as a new line at the end of the respective table.

Fields of Action	
PoI iSEAP template	CoM SECAP template
PRIMARY SECTOR	OTHER
Agriculture, forestry and fishing	Other

TRANSPORTS	TRANSPORTS
Passenger road transport (public transports, taxi, tourism, school buses, etc.)	Transports
Freight transport by road and removal services	
Other fleet for public and private services	
Private transports	
LAND USE PLANNING	OTHER
Regional and local strategic planning	Other
Transports and mobility planning	
Energy infrastructures planning	
Renewable energy land use planning	
PUBLIC PROCUREMENT OF PRODUCTS AND SERVICES	OTHER
Energy efficiency requirements/standards	Other
Renewable energy requirements/standards	
CITIZENS AND STAKEHOLDERS	OTHER
Advisory services	Other
Financial support and grants	
Awareness raising and networking	
Training and education	
Monitoring	
Legislation	

Conversion Process

Conversion Requirements

The two main requirements are the following:

- The iSEAP template to be converted to SECAP template should be in English
- The iSEAP and SECAP template files should not have been modified in any way besides of the addition of extra lines regarding actions

Conversion Steps

The following steps should be followed to automatically to produce a CoM SECAP template from a Pol iSEAP template.

1. Open the “iSEAP form” file
2. Check that the language in tab “Start here” is set to English
3. Save and Close the file
4. Open the macro-enabled file “iSEAP to SECAP converter”
5. Press the RUN button located at the top of the “Home” spreadsheet

6. The following 5 prompt messages appear requesting input from the user. You should provide the requested percentage values by inserting only the absolute values based on the experience of the user and the availability of data.
 - a. Define the percentage of *Passenger road transport (public transports, taxi, tourism, school buses, etc.)* corresponding to *Public transport*
 - b. Define the percentage of *Passenger road transport (public transports, taxi, tourism, school buses, etc.)* corresponding to *Municipal fleet*
 - c. Define the percentage of *Other fleet for public and private services* corresponding to *Public transport*
 - d. Define the percentage of *Other fleet for public and private services* corresponding to *Municipal fleet*
 - e. Define the percentage of non-renewable electricity locally produced at the local Combined Heat and Power plant. Note! If there are no CHPs on the island, then this percentage should be 0.
 - f. Define the percentage of heat locally produced at the local Combined Heat and Power plant. Note! If there are no CHPs on the island, then this percentage should be 0.
7. Browse your computer and select the respective “iSEAP form” file.
8. After a few seconds the respective CoM SECAP template from the initial PoI iSEAP template is produced.
9. Continue filling in the rest of the SECAP template cells manually.