

Sustainable Energy Action Plan (SEAP) template

This is a working version for Covenant signatories to help in data collection. However the on-line SEAP template available in the Signatories' Corner (password restricted area) at: <http://members.eumayors.eu/> is the only **REQUIRED** template that all the signatories have to fill in at the same time when submitting the SEAP in their own (national) language.

OVERALL STRATEGY

1) Overall CO2 emission reduction target

23.98 (%) by 2020

[? Instructions](#)

Please tick the corresponding box:

- ☒ Absolute reduction
☐ Per capita reduction

2) Long-term vision of your local authority (please include priority areas of action, main trends and challenges)

The long-term vision of the municipality of Bocenago is based on the energy and environmental sustainability of the municipal territory. The aim of the local authority is indeed the promotion of the renewable energy, with particular attention on the facilities and funding for their use.

3) Organisational and financial aspects

Coordination and organisational structures created/assigned	The municipal structure is composed by: the mayor ; the Energy and Environmental Department
Staff capacity allocated	The SEAP was developed by two external consulting firms. For the monitoring phases the local authority would like to do it, when it is possible, with their own internal resources
Involvement of stakeholders and citizens	In order to involve the stakeholders and the citizens the local authority has decided to organize public meeting and debates, and website
Overall estimated budget	€ 7 889 940.00
Foreseen financing sources for the investments within your action plan	Internal resources; european, national, regional funding; private funding
Planned measures for monitoring and follow up	The first monitoring it is planned in 2014 and it will analyze what it was done and what it has still to be done. The monitoring process will allow to adjust the actions that were thought in the case that

Go to the [second part of the SEAP template ->](#) dedicated to your Baseline Emission Inventory!

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BASELINE EMISSION INVENTORY

1) Inventory year

For Covenant signatories who calculate their CO2 emissions per capita, please precise here the number of inhabitants during the inventory year:

 [Instructions](#)

2) Emission factors

Please tick the corresponding box:

☒ Standard emission factors in line with the IPCC principles

☐ LCA (Life Cycle Assessment) factors

Emission reporting unit

Please tick the corresponding box:

☒ CO2 emissions

☐ CO2 equivalent emissions

3) Key results of the Baseline Emission Inventory

Green cells are compulsory fields

Grey fields are non editable

A. Final energy consumption

Please note that for separating decimals dot [.] is used. No thousand separators are allowed.

Category	FINAL ENERGY CONSUMPTION [MWh]															
	Electricity	Heat/cold	Fossil fuels								Renewable energies					Total
			Natural gas	Liquid gas	Heating Oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuels	Plant oil	Biofuel	Other biomass	Solar thermal	Geothermal	
BUILDINGS, EQUIPMENT/FACILITIES AND INDUSTRIES:																
Municipal buildings, equipment/facilities	37.29					128										165.29
Tertiary (non municipal) buildings, equipment/facilities	477.18			32.68		2910.99							72.42			3493.27
Residential buildings	664.43			294.15		2819.94							651.75			4430.27
Municipal public lighting	124.04															124.04
Industries (excluding industries involved in the EU Emission trading scheme - ETS)																0
Subtotal buildings, equipments/facilities and industries	1302.94	0	0	326.83	0	5858.93	0	0	0	0	0	0	724.17	0	0	8212.87
TRANSPORT:																
Municipal fleet						13.89	5.56									19.45
Public transport						10.78										10.78
Private and commercial transport				45.66		1409.9	1046.92									2502.48
Subtotal transport	0	0	0	45.66	0	1434.57	1052.48	0	0	0	0	0	0	0	0	2532.71
Total	1302.94	0	0	372.49	0	7293.5	1052.48	0	0	0	0	0	724.17	0	0	10745.58

Municipal purchases of certified green electricity (if any) [MWh]:

CO2 emission factor for certified green electricity purchases (for LCA approach):

B. CO2 or CO2 equivalent emissions

Please note that for separating decimals dot [.] is used. No thousand separators are allowed.

Category	CO2 emissions [t]/ CO2 equivalent emissions [t]															
	Electricity	Heat/cold	Fossil fuels								Renewable energies					Total
			Natural gas	Liquid gas	Heating Oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuels	Biofuel	Plant oil	Other biomass	Solar thermal	Geothermal	
BUILDINGS, EQUIPMENT/FACILITIES AND INDUSTRIES:																
Municipal buildings, equipment/facilities	18.01					34.176										52.18707
Tertiary (non municipal) buildings, equipement/facilities	230.48			7.42		777.23433										1015.13063
Residential buildings	320.92			66.77		752.92398										1140.61572
Municipal public lighting	59.91															59.91132
Industries (excluding industries involved in the EU Emission trading scheme - ETS)																0
Subtotal buildings, equipments/facilities and industries	629.32	0.00	0.00	74.19	0.00	1564.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2267.84
TRANSPORT:																
Municipal fleet						3.71	1.38									5.09307
Public transport						2.88										2.87826
Private and commercial transport				10.36		376.44	260.68									647.4912
Subtotal transport	0.00	0.00	0.00	10.36	0.00	383.03	262.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	655.46
OTHER:																
Waste management																
Waste water management																
Please specify here your other emissions																
Total	629.32	0.00	0.00	84.56	0.00	1947.36	262.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2923.31

Corresponding CO2-emission factors in [t/MWh]

0.483 0.202 0.227 0.267 0.249 0

CO2 emission factor for electricity not produced locally [t/MWh]

C. Local electricity production and corresponding CO2 emissions

Please note that for separating decimals dot [.] is used. No thousand separators are allowed.

Locally generated electricity (excluding ETS plants , and all plants/units > 20 MW)	Locally generated electricity [MWh]	Energy carrier input [MWh]											CO2 / CO2- eq emissions [t]	Corresponding CO2- emission factors for electricity production in [t/MWh]
		Fossil fuels					Steam	Waste	Plant oil	Other biomass	Other renewable	other		
		Natural gas	Liquid gas	Heating oil	Lignite	Coal								
Wind power														
Hydroelectric power														
Photovoltaic														
Combined Heat and Power														
Other														
<i>Please specify: _____</i>														
Total														

D. Local heat/cold production (district heating/cooling, CHPs...) and corresponding CO2 emissions

Please note that for separating decimals dot [.] is used. No thousand separators are allowed.

Locally generated heat/cold	Locally generated heat/cold [MWh]	Energy carrier input [MWh]										CO2 / CO2- eq emissions [t]	Corresponding CO2- emission factors for heat/cold production in [t/MWh]
		Fossil fuels					Waste	Plant oil	Other biomass	Other renewable	other		
		Natural gas	Liquid gas	Heating oil	Lignite	Coal							
Combined Heat and Power													
District Heating plant(s)													
Other													
<i>Please specify:</i> _____													
Total													

4) Other CO2 emission inventories

If other inventory(ies) have been carried out, please click [here ->](#)

Otherwise go to the [last part of the SEAP template ->](#) dedicated to your Sustainable Energy Action Plan

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SUSTAINABLE ENERGY ACTION PLAN

1) Title of your Sustainable Energy Action Plan



SEAP: Sustainable Energy Action Plan of the municipality of Bocenago

Date of formal approval

Authority approving the plan

2) Key elements of your Sustainable Energy Action Plan

Green cells are compulsory fields

Grey fields are non editable

SECTORS & fields of action	KEY actions/measures <u>per field of action</u>	Responsible department, person or company (in case of involvement of 3rd parties)	Implementation [start & end time]	Estimated costs <u>per action/measure</u>	Expected energy saving <u>per measure</u> [MWh/a]	Expected renewable energy production <u>per measure</u> [MWh/a]	Expected CO2 reduction <u>per measure</u> [t/a]	Energy saving target <u>per sector</u> [MWh] in 2020	Local renewable energy production target <u>per sector</u> [MWh] in 2020	CO2 reduction target <u>per sector</u> [t] in 2020
BUILDINGS, EQUIPMENT / FACILITIES & INDUSTRIES:								512.47		161.13
Municipal buildings, equipment/facilities	Action 1: Installation of flow reducers (water saving) in all the municipal buildings Action 2: Adhesion to the Green light project in order to improve the lighting efficiency Action 3: Installation of thermostatic valves Action 4: Insulation of a residential building	1: Public Administration 2: Public Administration 3: Public Administration 4: Public Administration	1. 2013 - 2020 2. 2015 3. 2013 - 2016 4. 2012 - 2020	1. € 1000 2. Unquantifiable 3. € 1000 4. € 150000	1. 3.31 2. 1.86 3. 19.20 4. 20.00		1. 0.88 2. 0.90 3. 5.13 4. 5.34			
Tertiary (non municipal) buildings, equipment/facilities										
Residential buildings	Action 1: Installation of heat pump insulation residential buildings Action 2: Installation of thermostatic valves Action 3: replacement of lamps with high efficiency ones Action 4: replacement of antiquated appliances Action 5: installation of solar panels (2007-2012) Action 6: installation of solar panels (2012-2020)	1: Private sector 2: Private sector 3: Private sector 4: Private sector 5: Private sector 6: Private sector 7: Private sector	1. 2013 - 2020 2. 2013 - 2020 3. 2013 - 2020 4. 2013 - 2020 5. 2012 - 2020 6. 2007 - 2012 7. 2012 - 2020	1. Unquantifiable 2. € 400000 3. € 11000 4. Unquantifiable 5. Unquantifiable 6. investment already made 7. € 30000	1. 112.98 2. 85.44 3. 114.89 4. 23.12 5. 57.5 6. 28.42 7. 15.75		1. 30.16 2. 22.81 3. 30.68 4. 11.17 5. 27.77 6. 7.59 7. 4.21			
Municipal public lighting	Renewal of the municipal public lighting with high efficiency lighting	Public Administration	2013-2020	€ 471 297	30		14.49			
Industries (excluding industries involved in the EU Emission trading scheme - ETS) & Small and Medium Sized Enterprises (SMEs)										
Other - please specify: _____										
TRANSPORT:								634.16		164.47
Municipal fleet	Replacement of one municipal vehicle	Public Administration	2010	investment already made	1		0.27			
Public transport										
Private and commercial transport	Renewal of the private fleet	Private sector	2013 - 2020	Unquantifiable	633.16		164.2			
Other - please specify: _____										
LOCAL ELECTRICITY PRODUCTION:									512.02	247.32
Hydroelectric power	Action 1: Hydroelectric power plant on aqueduct	1: Public Administration	1. 2016 - 2020	1. € 455200		1. 466	1. 225.08			
Wind power										

Photovoltaic	Action 1: Installation of a photovoltaic plant on municipal building Action 2: Installation of photovoltaic plants on residential buildings (2007 - 2012) Action 3: Installation of photovoltaic plants on residential buildings (2012 - 2020)	1: Public Administration 2: Private sector 3: Private sector	1. 2012 - 2016 2. 2007 - 2012 3. 2012 - 2020	1. € 14000 2. investment already made 3. € 40000		1. 13.2 2. 9.72 3. 23.10	1. 6.38 2. 4.70 3. 11.16			
Combined Heat and Power										
Other - please specify: _____										
LOCAL DISTRICT HEATING / COOLING, CHPs:									480	128.16
Combined Heat and Power										
District heating plant	District heating of municipal buildings	Public Administration	2016 - 2020	€ 600 000		480	128.16			
Other - please specify: _____										

LAND USE PLANNING:										
Strategic urban planning	Strategic urban planning and Energy Policy	Public Administration	2013			Unquantifiable	Unquantifiable			
Transport / mobility planning										
Standards for refurbishment and new development										
Other - please specify: _____										
PUBLIC PROCUREMENT OF PRODUCTS AND SERVICES:										
Energy efficiency requirements/standards										
Renewable energy requirements/standards										
Other - please specify: _____										
WORKING WITH THE CITIZENS AND STAKEHOLDERS:										
Advisory services										
Financial support and grants										
Awareness raising and local networking	Action 1: Website and Newsletter Action 2: Flyers and Brochure Action 3: Newspaper articles Action 4: Deployment of an Energy meter (tools that allows to measure the electricity consumption in real time) to all the families of the municipality	1: Public Administration 2: Public Administration 3: Public Administration 4: Public Administration	1: 2013 2: 2013 - 2020 3: 2013 - 2020 4: 2013 - 2020	1. € 1000 2. € 1500 3. Unquantifiable 4. € 7500	1. Unquantifiable 2. Unquantifiable 3. Unquantifiable 4. Unquantifiable		1. Unquantifiable 2. Unquantifiable 3. Unquantifiable 4. Unquantifiable			
Training and education	Action 1: Educational activity in schools Action 2: Public meetings and technical workshops	1: Public Administration 2: Public Administration	1. 2013 - 2020 2. 2013 - 2020	2. 1. € 4000 2. Unquantifiable	1. Unquantifiable 2. Unquantifiable		1. Unquantifiable 2. Unquantifiable			
Other - please specify: _____										
OTHER SECTOR(S) - Please specify: _____										
Other - Please specify: _____										
TOTAL:								1146.63	992.02	701.08

3) Web address

Direct link to the webpage dedicated to your SEAP (if any)

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