Covenant of Mayors
Committed to local sustainable energy

Grad Zagreb
Gradski ured za energetiku, zaštitu okoliša i održivi razvoj

Izvještavanje u okviru SEAP-a

Covenant of Mayors
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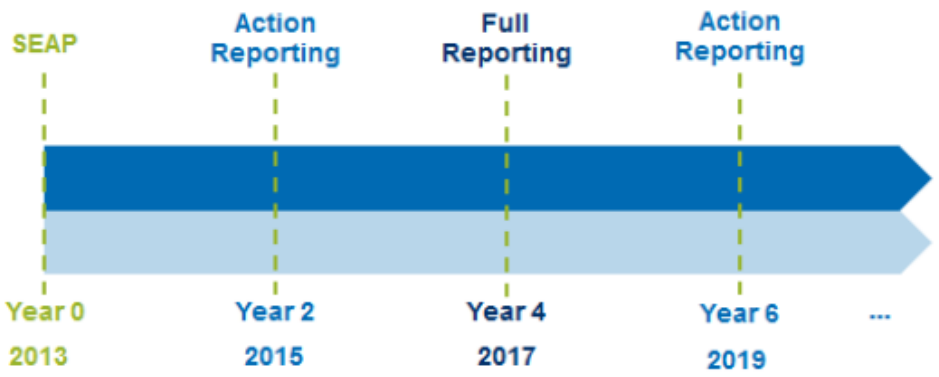
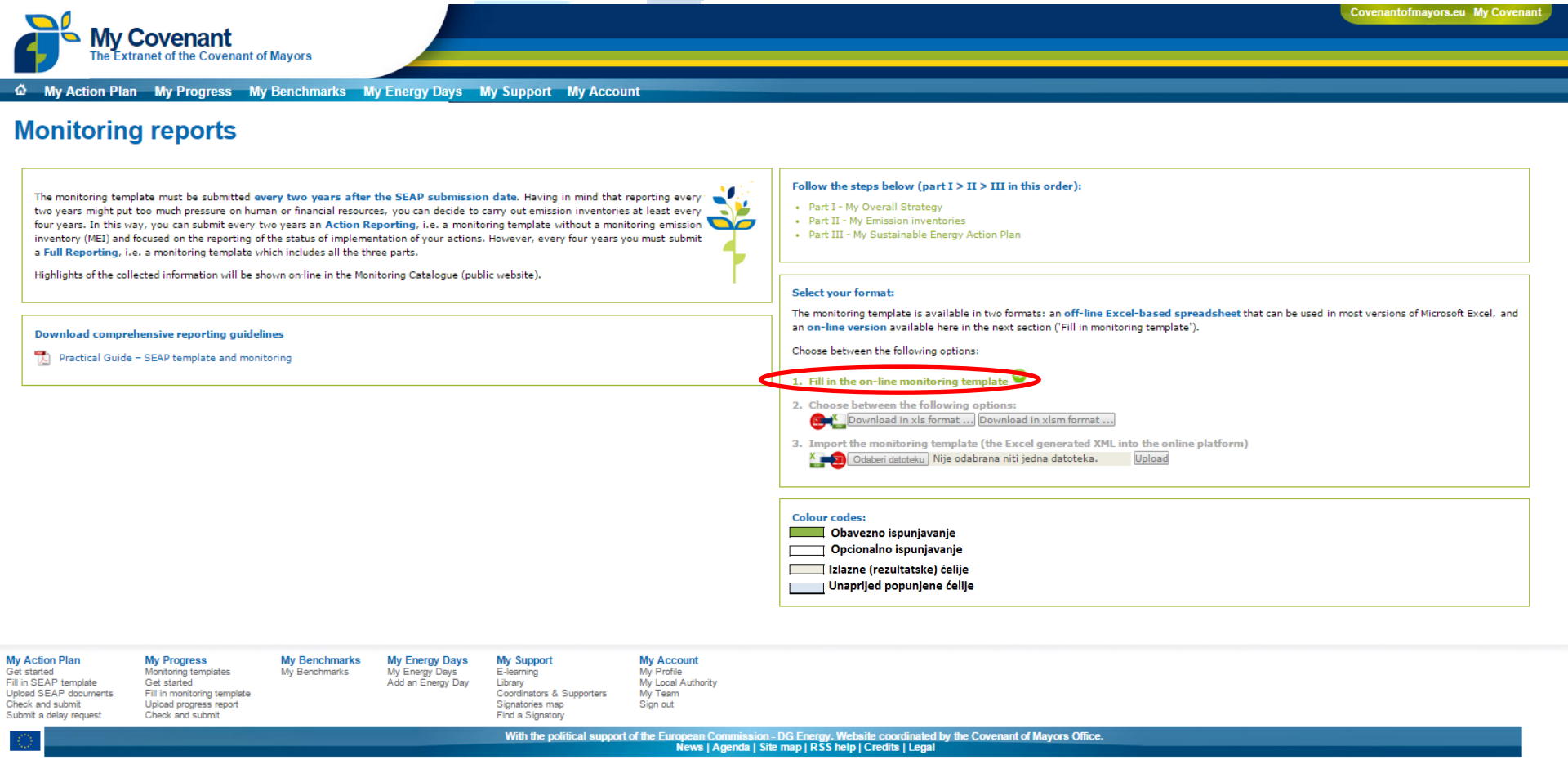
Gradski ured za energetiku, zaštitu okoliša i održivi razvoj

Vrste izvještaja

	Kada?	Sadrži	Što?
Action reporting	Svake 2 godine	Part I. Overall Strategy	Promjene u sveukupnoj strategiji
		Part III. Sustainable Energy Action Plan	Status implementacije pojedine mjere
Full reporting	Svake 4 godine	Part I. Overall Strategy	Promjene u sveukupnoj strategiji
		Part II. Emission Inventories	Inventar emsisije stakleničkih plinova.
		Part III. Sustainable Energy Action Plan	Status implementacije pojedine mjere



Full reporting – Četverogodišnje izvještavanje



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Part I – My overall strategy

Monitoring reports

Introduction | Overall Strategy | Emission Inventory | Action Plan | Synthesis report | Upload document | Submission

agreb
i ured za energetiku,
okoliša i održivi razvoj

1) Overall CO_2 reduction target

2020 target: 21 %
Baseline year: 2008
Reduction target type: absolute
Population estimates by 2020: 0
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Target year: Please choose!

2) Vision

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(Max. 700 characters)

3) Coordination and organisational structures created/assigned

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(Max. 700 characters)

4) Staff capacity allocated

SEAP preparation:

- ☐ Local authority
- ☐ Local/regional energy agency
- ☐ External consultant
- ☐ Covenant Territorial Coordinator
- ☐ Other

SEAP implementation*:

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Up to 100 in total for implementation of all measures

(Max. 700 characters)

* : at least one checkbox is mandatory

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	Budget spent so far (€)		Overall budget foreseen for SEAP implementation (€)	
☑ Local Authority*	68297000	Investment	232310000	Investment
	1440000	Non-investment		Non-investment
☐ Other Actors*				
	69737000	Total	232310000	Total implementation cost

Time period: 2010 – 2013, 4 years | 2010 – 2020, 11 years

(Max. 700 characters)

* : at least one checkbox is mandatory

7) Foreseen financing sources for the implementation of your SEAP

- ☐ **public**
  - ☐ Local Authority's own resources
  - ☐ National Funds and Programmes
  - ☐ EU Funds and Programmes
- ☐ **private**
  - ☐ Private

City budget, Private investors, ESCO model, HBOR (Croatian Bank for Reconstruction and Development), IEE Programme, IPA Programme, FZOEU (Fund for Energy Efficiency and Environmental Protection), CONCERTO programme, EU structural funds, EU cohesion funds, regional funds (EIB, KfW), State budget, Zagreb Holding, Croatian Automobile Club, HEP – Toplinarstvo (Croatian Electric power industry – heat production and supply company), revolving fund

(Max. 700 characters)

8) Monitoring process

Report on the implementation of the SEAP every two years. Measures for monitoring in accordance to the official guidebook for monitoring and control of implementation of SEAP.

(Max. 700 characters)

Please rate (little/fair/strong/not applicable) the main problems encountered during SEAP implementation, either overall or by key Covenant sector:

	All sectors	Transport	Municipal	Tertiary	Residential
Limited financial sources	Strong				
Absence of / weak regulatory framework	Little				
Lack of technical expertise	Not applicable				
Lack of support from stakeholders	Little				
Lack of political support at other admin. levels	Not applicable				
Changes in the local political priorities	Not applicable				
Incompatibility with national policy orientations	Not applicable				
Immature or high cost technologies	Strong				

Additional comments

(Max. 700 characters)

Home | Save | Go to emission inventory

Monitoring reports

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- [ ] Other

SEAP implementation*:

- [x] Local authority
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Up to 100 in total for implementation of all measures

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Budget spent so far (€)

- [x] Local Authority*: 68297000 Investment; 1440000 Non-investment
- [ ] Other Actors*

68737000 Total

Overall budget foreseen for SEAP implementation (€): 232310000 Investment; Non-investment

232310000 Total implementation cost

Time period: 2010 – 2013, 4 years | 2010 – 2020, 11 years

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Immature or high cost technologies	Strong				

Additional comments

(Max. 700 characters)

Home | Save | Go to emission inventory

Covenant of Mayors
Committed to local sustainable energy

Grad Zagreb
Gradski ured za energetiku, zaštitu okoliša i održivi razvoj

My Overall Strategy

1) Overall CO_2 reduction target (%)

2020 target | Long-term target

Baseline year | Target year

☐ Absolute reduction
☐ Per capita reduction

Population estimates by 2020

2) Vision

3) Coordination and organisational structures created/assigned

4) Staff capacity allocated

SEAP preparation:

Full-time equivalent job(s)

- ☐ Local authority
- ☐ Local/regional energy agency
- ☐ External consultant
- ☐ Covenant Territorial Coordinator
- ☐ Other

SEAP implementation:

- ☐ Local authority
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- ☐ Other

Nature of the staff allocated to SEAP implementation

5) Involvement of stakeholders and citizens

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Additional comments

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Home | Save | Go to emission inventory

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Grad Zagreb
Gradski ured za energetiku, zaštitu okoliša i održivi razvoj

6) Overall budget for your SEAP implementation

Budget spent so far for SEAP implementation

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☐ Other actors	Investment / Non-investment	Investment / Non-investment
	Total	Total

Time period 1990 2020 31 years

Time period 1990 2020 31 years

7) Financing sources used so far for SEAP implementation

Please specify the %:

- ☐ Public
  - ☐ Local Auhtority's own resources
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Home | Save | Go to Emission Inventory

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Changes in the local political priorities					
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Immature or high cost technologies					

Main barriers to SEAP implementation

Additional comments

Monitoring reports

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Home | Save | Go to emission inventory

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Part II – My emission inventar

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Monitoring reports

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Year	Type	Template	Year of submission	Inhabitants	CO2 emissions	Updated	Edit
2008	BEI	SEAP	2011	788850	3793871	2011-03-01	
2009	MEI	SEAP	2011	0	0	2012-09-17	
2013	MEI	Monitoring 1	2015	792000	2547583	2015-03-24	

Home | Go to strategy | Fill in MEI | Go to SEAP

Emission inventory

1) Inventory year: 2013
2) Number of inhabitants in the inventory year: 792000
3) Emission factor: IPCC
4) Reporting unit: CO2
5) Methodological notes

A. Final energy consumption

- Buildings, equipment facilities and industries
  - Municipal buildings, equipment/facilities
  - Tertiary (non municipal) buildings, equipment/facilities
  - Residential buildings
  - Public lighting
  - Industry
    - Industry Non-ETS
    - Industry ETS
- Transport
  - Municipal fleet
  - Public transport
  - Private and commercial transport
- Other
  - Agriculture, Forestry, Fisheries
- Covenant Key Sectors

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

Sector	Final energy consumption [MWh]															
	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	168720	176724	18291	0	39435	0	0	0	0	0	0	0	0	288	12898	562886
Tertiary (non municipal) buildings, equipment/facilities	663672	68892	341205	62502	189446	0	0	0	0	0	0	0	13000	7444	0	1746277
Residential buildings	691200	1134720	2226095	37770	53385	0	0	1611	2444	2442	0	0	1116250	11167	0	5277033
Public lighting	85800	0	360	0	0	0	0	0	0	0	0	0	0	0	0	86160
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	2109192	1402336	2785951	100292	282267	0	0	1611	2444	2442	0	0	1129250	18899	12898	7941796
Transport																
Municipal fleet	0	0	886	276	0	82676	4964	0	0	0	0	1338	0	0	0	89791
Public transport	79488	0	11111	886	0	145411	2205	0	0	0	0	4810	0	0	0	237259
Private and commercial transport	0	0	1687	100833	0	1872248	1074124	0	0	0	0	51576	0	0	0	3100468
Subtotal	79488	0	13334	101995	0	2073333	1081293	0	0	0	0	57724	0	0	0	3397527
Total	2179680	1402336	2799911	201960	282267	2073333	1081293	1611	2444	2442	0	57724	1129250	18899	12898	11339323

B. Energy supply

Municipal purchases
- Certified green electricity purchased

Local renewable electricity plants
- Wind
- Hydroelectric
- Photovoltaics
- Geothermal

Local electricity production
- Combined heat and power
- Other

Local heat/cold production
- Combined heat and power
- District heating (heat only)
- Other

Generate tables

B2. Local renewable electricity production

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

Local renewable electricity plants (ETS and large-scale plants > 20 MWe not recommended)	Renewable electricity [MWh]	CO2 emission factor [t/MWh produced]	Tonnes CO2
Photovoltaics	754	0	0
Total	754		0

B4. Local heat/cold production

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

Local heat/cold production plants	Heat/Cold produced [MWh]		Energy carrier input [MWh]												CO2 emissions [t]	
	Heat/Cold from renewable sources	Heat/Cold from non renewable sources	Fossil fuel					Renewable energy				Waste	Other		Fossil fuel	Renewable energy
			Natural gas	Liquid gas	Heating oil	Lignite	Coal	Plant oil	Other biomass	Solar thermal	Geo thermal	Other renewable	Waste	Other		
Combined heat and power	0	1402336	1591252		81804										342168	
Other	12898										12898					0
Total	12898	1402336	1591252	0	81804	0	0	0	0	0	12898	0	0	0	342168	0

C. CO2 emissions

C1. Please insert the CO2 emission factors adopted [t/MWh]:

If you would like to use default emission factors, please select them from the drop-down menus.
Please note that for separating decimals dot [.] is used. No thousand separators are allowed.

	Electricity	Heat/Cold	Fossil fuel								Renewable energy				
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal
			Select	Select	Select	Select	Select	Lignite 0.3k	Select	Select	Select	Select	Select	Solar thermal	Geothermal
MEI	0.333	0.249	0.204	0.267	0.264	0.249	0.346	0.396	0.396	0.335	0.238				
MEI	0.333	0.249	0.204	0.267	0.264	0.249	0.346	0.396	0.396	0.335	0.238				

C2. Please tick the box in case non-energy related sectors are included:

Generate emission table

Your Emission Inventory:

Sector	Tonnes CO2															
	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	34499.1	43809.9	3734.6	0	10899.2	0	0	0	0	0	0	0	0	0	0	141743
Tertiary (non municipal) buildings, equipment/facilities	311286.1	21957.2	78641.3	14067	52297.4	0	0	0	0	0	0	0	0	0	0	477949.0
Residential buildings	297557.8	279872.2	447427.7	9408.8	14735.1	0	0	556.4	923.6	625.2	0	0	0	0	0	1237441.2
Public lighting	27616.5	0	72.4	0	0	0	0	0	0	0	0	0	0	0	0	27688.9
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	681129.3	345639.3	529948.0	23475.8	77931.7	0	0	556.4	923.6	625.2	0	0	0	0	0	1884834.1
Transport																
Municipal fleet	0	0	177.2	62.8	0	13908.8	1223.9	0	0	0	0	321.1	0	0	0	15693.8
Public transport	22767.9	0	2233.1	198.4	0	39182.1	544.6	0	0	0	0	1154.4	0	0	0	66080.5
Private and commercial transport	0	0	339.1	22957.4	0	494271.4	265305.6	0	0	0	0	12378.2	0	0	0	795252.7
Subtotal	22767.9	0	2689.2	23218.5	0	547360	267076.6	0	0	0	0	13853.7	0	0	0	877026
Total	704007.2	345639.3	532637.2	46694.3	77931.7	547360	267076.6	556.4	923.6	625.2	0	13853.7	0	0	0	2761860.1

Covenant of Mayors
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Monitoring reports

Introduction › Overall Strategy › Emission Inventory › Action Plan › Synthesis report › Upload document › Submission

Year	Type	Template	Year of submission	Inhabitants	CO2 emissions	Updated	Edit
2008	BEI	SEAP	2011	788850	3793871	2011-03-01	
2009	MEI	SEAP	2011		0	2012-09-17	
2013	MEI	Monitoring 1	2015	792000	2547583	2015-03-24	

Home | Go to strategy | Fill in MEI | Go to SEAP

Emission Inventory

1) Inventory year: 2013
2) Number of inhabitants in the inventory year: 792000
3) Emission factor: IPCC
4) Reporting unit: CO2
5) Methodological notes

A. Final energy consumption

- Buildings, equipment facilities and industries
  - Municipal buildings, equipment/facilities
  - Tertiary (non municipal) buildings, equipment/facilities
  - Residential buildings
  - Public lighting
  - Industry
    - Industry Non-ETS
    - Industry ETS
- Transport
  - Municipal fleet
  - Public transport
  - Private and commercial transport
- Other
  - Agriculture, Forestry, Fisheries
- Covenant Key Sectors

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

Final energy consumption [MWh]

Sector	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	168720	176724	162917	0	39435	0	0	0	0	0	0	0	0	288	12898	562982
Tertiary (non municipal) buildings, equipment/facilities	663672	56852	341205	62532	189446	0	0	0	0	0	0	0	13000	7444	0	1754217
Residential buildings	691200	1134720	2226059	37710	53385	0	0	1611	2444	2442	0	0	1116250	111487	0	5477303
Public lighting	85500	0	360	0	0	0	0	0	0	0	0	0	0	0	0	85860
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	2109192	1402233	2730541	100242	282267	0	0	1611	2444	2442	0	0	1129250	119219	12898	7941760
Transport																
Municipal fleet	0	0	886	276	0	82676	4964	0	0	0	0	1338	0	0	0	89791
Public transport	79488	0	11111	886	0	145411	2205	0	0	0	0	4810	0	0	0	237259
Private and commercial transport	0	0	1687	100833	0	1872248	1074124	0	0	0	0	51576	0	0	0	3100468
Subtotal	79488	0	13334	101995	0	2073333	1081293	0	0	0	0	57724	0	0	0	3397527
Total	2179680	1402233	2743911	201960	282267	2073333	1081293	1611	2444	2442	0	57724	1129250	119219	12898	11339287

B. Energy supply

Municipal purchases
- Certified green electricity purchased

Local renewable electricity plants
- Wind
- Hydroelectric
- Photovoltaics
- Geothermal

Local electricity production
- Combined heat and power
- Other

Local heat/cold production
- Combined heat and power
- District heating (heat only)
- Other

Generate tables

B2. Local renewable electricity production

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

Local renewable electricity plants (ETS and large-scale plants > 20 MWe not recommended)	Renewable electricity [MWh]	CO2 emission factor [t/MWh produced]	Tonnes CO2
Photovoltaics	754	0	0
Total	754		0

B4. Local heat/cold production

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

Local heat/cold production plants	Heat/Cold produced [MWh]		Energy carrier input [MWh]												CO2 emissions [t]	
	Heat/Cold from renewable sources	Heat/Cold from non renewable sources	Fossil fuel					Renewable energy				Waste	Other		Fossil fuel	Renewable energy
			Natural gas	Liquid gas	Heating oil	Lignite	Coal	Plant oil	Other biomass	Solar thermal	Geo thermal	Other renewable	Waste	Other		
Combined heat and power	0	1402333	1591252		51804										342168	
Other	12898										12898					0
Total	12898	1402333	1591252	0	51804	0	0	0	0	0	12898	0	0	0	342168	0

C. CO2 emissions

C1. Please insert the CO2 emission factors adopted [t/MWh]:

If you would like to use default emission factors, please select them from the drop-down menus.

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

	Electricity	Heat/Cold	Fossil fuel								Renewable energy				
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal
MEI	0.335	0.324	0.204	0.267	0.264	0.267	0.249	0.364	0.338	0.267					
MEI	0.335	0.324	0.204	0.267	0.264	0.267	0.249	0.364	0.338	0.267	0	0	0	0	0

C2. Please tick the box in case non-energy related sectors are included:

Generate emission table

Your Emission Inventory:

Tonnes CO2

Sector	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	56499.1	43809.9	32748.2	0	10899.2	0	0	0	0	0	0	0	0	0	0	141743.4
Tertiary (non municipal) buildings, equipment/facilities	311286.1	21957.2	78641.3	14057	52297.4	0	0	0	0	0	0	0	0	0	0	477948.8
Residential buildings	257557.8	276917.2	447427.7	9408.8	14735.1	0	0	556.4	828.6	828.2	0	0	0	0	0	1237441.2
Public lighting	27616.5	0	72.4	0	0	0	0	0	0	0	0	0	0	0	0	27688.9
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	681129.3	342683.3	558897.3	22965.8	77931.7	0	0	556.4	828.6	828.2	0	0	0	0	0	1884833.3
Transport																
Municipal fleet	0	0	111.4	62.8	0	13906.8	1223.9	0	0	0	0	357.8	0	0	0	15662.6
Public transport	21767.9	0	2233.1	105.1	0	39182.1	544.6	0	0	0	0	1286.1	0	0	0	64683.3
Private and commercial transport	0	0	339.1	23977.4	0	494271.4	265305.6	0	0	0	0	13787.2	0	0	0	797680.7
Subtotal	21767.9	0	2683.6	24078.1	0	547360	267076.8	0	0	0	0	15430.9	0	0	0	877976.3
Total	702897.2	342683.3	561577.3	47044	77931.7	547360	267076.8	556.4	828.6	828.2	0	15430.9	0	0	0	2762809.6

Monitoring Emission Inventory

Results of your latest Monitoring Emission Inventory (same reporting form as for the Baseline Emission Inventory)

1) Inventory year

2) Number of inhabitants in the inventory year

3) Emission factors
- ☐ IPCC
- ☐ LCA (Life Cycle Assessment)

4) Emission reporting unit
- ☐ tonnes CO_2
- ☐ tonnes CO_2 equivalent

5) Methodological notes and data sources

Results of theEmission Inventory

A. Final energy consumption

Please select the sectors included in your emission inventory:

- ☐ Buildings, equipment facilities and industries
  - ☐ Municipal buildings, equipment/facilities
  - ☐ Tertiary (non municipal) buildings, equipment/facilities
  - ☐ Residential buildings
  - ☐ Public lighting
  - ☐ Industry
    - ☐ Industry Non-ETS
    - ☐ Industry ETS (not recommended)
- ☐ Transport
  - ☐ Municipal fleet
  - ☐ Public transport
  - ☐ Private and commercial transport
- ☐ Agriculture, Forestry, Fisheries

Final energy consumption [MWh]

Sector		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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tertiary (non municipal) buildings, equipment/facilities		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential buildings		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal public lighting		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industries	Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ETS (not recommended)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRANSPORT																	
Municipal fleet		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public transport		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private and commercial transport		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER																	
Agriculture, Forestry, Fisheries		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER NON-ENERGY RELATED																	
Waste management																	0
Waste water management																	0
Other non-energy related																	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Additional comments

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Monitoring reports

Introduction · Overall Strategy · Emission Inventory · Action Plan · Synthesis report · Upload document · Submission

Year	Type	Template	Year of submission	Inhabitants	CO2 emissions	Updated	Edit
2008	BEI	SEAP	2011	788850	3793871	2011-03-01	
2009	MEI	SEAP	2011		0	2012-09-17	
2013	MEI	Monitoring 1	2015	792000	3547583	2015-03-24	

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Emission inventory

1) Inventory year: 2013
2) Number of inhabitants in the inventory year: 792000
3) Emission factor: IPCC
4) Reporting unit: CO2
5) Methodological notes

A. Final energy consumption

- Buildings, equipment facilities and industries
  - Municipal buildings, equipment/facilities
  - Tertiary (non municipal) buildings, equipment/facilities
  - Residential buildings
  - Public lighting
  - Industry
    - Industry Non-ETS
    - Industry ETS
- Transport
  - Municipal fleet
  - Public transport
  - Private and commercial transport
- Other
  - Agriculture, Forestry, Fisheries
- Covenant Key Sectors

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

Sector	Final energy consumption [MWh]															
	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	165726	176724	162917	0	39435	0	0	0	0	0	0	0	0	288	12856	562866
Tertiary (non municipal) buildings, equipment/facilities	663672	56852	341255	62532	189446	0	0	0	0	0	0	0	13000	7444	0	1754277
Residential buildings	691200	1134722	2226059	37710	53385	0	0	1611	2444	2442	0	0	1116250	111671	0	5477053
Public lighting	85500	0	360	0	0	0	0	0	0	0	0	0	0	0	0	85860
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	2109198	1402233	2730591	100242	282267	0	0	1611	2444	2442	0	0	1129250	119559	12856	7941796
Transport																
Municipal fleet	0	0	686	276	0	52676	4954	0	0	0	0	1338	0	0	0	59730
Public transport	79488	0	11111	556	0	145411	2205	0	0	0	0	4810	0	0	0	237569
Private and commercial transport	0	0	1687	100833	0	1872248	1074124	0	0	0	0	51576	0	0	0	3100468
Subtotal	79488	0	13334	101665	0	2073333	1081283	0	0	0	0	57724	0	0	0	3397767
Total	2179686	1402233	2743911	201908	282267	2073333	1081283	1611	2444	2442	0	57724	1129250	119559	12856	11339563

B. Energy supply

Municipal purchases
- Certified green electricity purchased

Local renewable electricity plants
- Wind
- Hydroelectric
- Photovoltaics
- Geothermal

Local electricity production
- Combined heat and power
- Other

Local heat/cold production
- Combined heat and power
- District heating (heat only)
- Other

Generate tables

B2. Local renewable electricity production

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

Local renewable electricity plants (ETS and large-scale plants > 20 MWe not recommended)	Renewable electricity [MWh]	CO2 emission factor [t/MWh produced]	Tonnes CO2
Photovoltaics	754	0	0
Total	754		0

B4. Local heat/cold production

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

Local heat/cold production plants	Heat/Cold produced [MWh]		Energy carrier input [MWh]												CO2 emissions [t]	
	Heat/Cold from renewable sources	Heat/Cold from non renewable sources	Fossil fuel					Renewable energy				Waste	Other		Fossil fuel	Renewable energy
			Natural gas	Liquid gas	Heating oil	Lignite	Coal	Plant oil	Other biomass	Solar thermal	Geo thermal	Other renewable	Waste	Other		
Combined heat and power	0	1402333	1591252		51654						12856				342169	0
Other	12856															0
Total	12856	1402333	1591252	0	51654	0	0	0	0	0	12856	0	0	0	342169	0

C. CO2 emissions

C1. Please insert the CO2 emission factors adopted [t/MWh]:

If you would like to use default emission factors, please select them from the drop-down menus.

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

	Electricity	Heat/Cold	Fossil fuel								Renewable energy				
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal
			Select	Select	Select	Select	Select	Lignite 0.3k	Select	Select	Select	Select	Select	Solar thermal	Geothermal
MEI	0.312	0.252	0.204	0.267	0.267	0.249	0.249	0.364	0.346	0.346		0	0	0	0
BEI	0.312	0.252	0.204	0.267	0.267	0.249	0.249	0.364	0.346	0.346		0	0	0	0

C2. Please tick the box in case non-energy related sectors are included:

Generate emission table

Your Emission Inventory:

Sector	Tonnes CO2															
	Electricity	Heat/Cold	Fossil fuel								Renewable energy					Total
			Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	51699.1	43809.9	32748.3	0	10899.2	0	0	0	0	0	0	0	0	0	0	141743.4
Tertiary (non municipal) buildings, equipment/facilities	211266.1	21957.2	78641.1	14057	52297.4	0	0	0	0	0	0	0	0	0	0	477946.8
Residential buildings	257557.8	276972.2	447427.7	9408.8	14735.1	0	0	556.4	625.6	625.2	0	0	0	0	0	1237441.2
Public lighting	27616.5	0	72.4	0	0	0	0	0	0	0	0	0	0	0	0	27688.9
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	551139.3	342740.3	558897.5	22965.8	77931.7	0	0	556.4	625.6	625.2	0	0	0	0	0	1654832.3
Transport																
Municipal fleet	0	0	111.4	62.8	0	13906.8	1223.9	0	0	0	0	338.7	0	0	0	15643.6
Public transport	22767.9	0	2233.1	126.4	0	38182.1	544.8	0	0	0	0	1217.3	0	0	0	64603.6
Private and commercial transport	0	0	339.1	22957.4	0	494271.4	265305.6	0	0	0	0	13051.6	0	0	0	792925.2
Subtotal	22767.9	0	2683.6	23075.5	0	547360	267076.8	0	0	0	0	14607.6	0	0	0	873172.4
Total	704007.2	342169.3	561577.1	46041	77931.7	547360	267076.8	556.4	625.6	625.2	0	14607.6	0	0	0	2547583.

B. Energy supply

Please select when applicable:

- ☐ Municipal purchases of certified green electricity

Local/distributed electricity production:

- ☐ Wind
- ☐ Hydroelectric
- ☐ Photovoltaics
- ☐ Geothermal
- ☐ Combined Heat & Power
- ☐ Other

Local heat/cold production:

- ☐ Combined Heat & Power
- ☐ District heating (heat-only)
- ☐ Other

B1. Municipal purchases of certified green electricity

Certified green electricity purchased [MWh]	
CO_2 emission factor [t/MWh]	

B2. Local/distributed electricity production

Local renewable electricity plants (ETS and large-scale plants > 20 MWe not recommended)	Renewable electricity produced [MWh]	CO_2 emission factor [t/MWh produced]	CO_2 / CO_2 eq. emissions [t]
Wind			0
Hydroelectric			0
Photovoltaics			0
Geothermal			0
TOTAL	0		0

B3. Local/distributed electricity production

Local electricity production plants (ETS and large-scale plants > 20 MW not recommended)	Electricity produced [MWh]		Energy carrier input [MWh]										CO_2 / CO_2 eq. emissions [t]	
			Fossil fuels					Waste	Plant oil	Other biomass	Other renewable	Other		
	Total	from renewable sources	Natural gas	Liquid gas	Heating oil	Lignite	Coal						Fossil sources	Renewable sources
Combined Heat and Power														
Other														
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0

B4. Local heat/cold production

Local heat/cold production plants	Heat/cold produced [MWh]		Energy carrier input [MWh]										CO_2 / CO_2 eq. emissions [t]	
			Fossil fuels					Waste	Plant oil	Other biomass	Other renewable	Other		
	Total	from renewable sources	Natural gas	Liquid gas	Heating oil	Lignite	Coal						Fossil sources	Renewable sources
Combined Heat and Power														
District heating (heat-only)														
Other														
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Monitoring reports

Introduction · Overall Strategy · Emission Inventory · Action Plan · Synthesis report · Upload document · Submission

Year	Type	Template	Year of submission	Inhabitants	CO2 emissions	Updated	Edit
2008	BEI	SEAP	2011	788850	3793871	2011-03-01	
2009	MEI	SEAP	2011	0	0	2012-09-17	
2013	MEI	Monitoring 1	2015	792000	2547583	2015-03-24	

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Emission inventory

1) Inventory year: 2013
2) Number of inhabitants in the inventory year: 792000
3) Emission factor: IPCC
4) Reporting unit: CO2
5) Methodological notes

A. Final energy consumption

- Buildings, equipment facilities and industries
  - Municipal buildings, equipment/facilities
  - Tertiary (non municipal) buildings, equipment/facilities
  - Residential buildings
  - Public lighting
  - Industry
    - Industry Non-ETS
    - Industry ETS
- Transport
  - Municipal fleet
  - Public transport
  - Private and commercial transport
- Other
  - Agriculture, Forestry, Fisheries
- Covenant Key Sectors

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

Final energy consumption [MWh]

Sector	Electricity	Heat/Cold	Fossil fuel: Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Renewable energy: Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	Total
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	165726	176724	162917	0	39430	0	0	0	0	0	0	0	0	288	12886	562869
Tertiary (non municipal) buildings, equipment/facilities	663672	56862	341255	62502	189446	0	0	0	0	0	0	0	13000	7444	0	1754277
Residential buildings	691200	1134720	2226059	37710	53386	0	0	1611	2444	2442	0	0	1116250	111671	0	5477503
Public lighting	85800	0	360	0	0	0	0	0	0	0	0	0	0	0	0	85800
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	2109198	1402331	2730591	100212	282261	0	0	1611	2444	2442	0	0	1129250	119599	12886	7941749
Transport																
Municipal fleet	0	0	686	276	0	52676	4954	0	0	0	0	1338	0	0	0	59931
Public transport	79488	0	11111	886	0	14541	2256	0	0	0	0	4816	0	0	0	237256
Private and commercial transport	0	0	1687	150833	0	1872248	1074124	0	0	0	0	51576	0	0	0	3150468
Subtotal	79488	0	13334	151995	0	2073333	1081285	1611	2444	2442	0	57742	0	0	0	3397657
Total	2179686	1402331	2743911	251960	282261	2073333	1081285	1611	2444	2442	0	57742	1129250	119599	12886	11339331

B. Energy supply

Municipal purchases
- Certified green electricity purchased

Local renewable electricity plants
- Wind
- Hydroelectric
- Photovoltaics
- Geothermal

Local electricity production
- Combined heat and power
- Other

Local heat/cold production
- Combined heat and power
- District heating (heat only)
- Other

Generate tables

B2. Local renewable electricity production

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

Local renewable electricity plants (ETS and large-scale plants > 20 MWe not recommended)	Renewable electricity [MWh]	CO2 emission factor [t/MWh produced]	Tonnes CO2
Photovoltaics	754	0	0
Total	754		0

B4. Local heat/cold production

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

Local heat/cold production plants	Heat/Cold produced [MWh]: Heat/Cold from renewable sources	Heat/Cold from non renewable sources	Energy carrier input [MWh]: Fossil fuel: Natural gas	Liquid gas	Heating oil	Lignite	Coal	Renewable energy: Plant oil	Other biomass	Solar thermal	Geo thermal	Other renewable	Waste: Waste	Other: Other	CO2 emissions [t]: Fossil fuel	Renewable energy
Combined heat and power	0	1402330	1591252		81954										342166	
Other	12886										12886					0
Total	12886	1402330	1591252	0	81954	0	0	0	0	0	12886	0	0	0	342166	0

C. CO2 emissions

C1. Please insert the CO2 emission factors adopted [t/MWh]:

If you would like to use default emission factors, please select them from the drop-down menus.

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

	Electricity	Heat/Cold	Fossil fuel: Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Renewable energy: Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal
MEI	0.320	0.324	0.204	0.267	0.264	0.267	0.249	0.364	0.338	0.267		0	0	0	0

C2. Please tick the box in case non-energy related sectors are included:

Generate emission table

Your Emission Inventory:

Tonnes CO2

Sector	Electricity	Heat/Cold	Fossil fuel: Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuel	Renewable energy: Plant oil	Biofuel	Other biomass	Solar thermal	Geo thermal	Total
Buildings, equipment facilities and industries																
Municipal buildings, equipment/facilities	54499.1	43609.8	32748.4	0	10899.2	0	0	0	0	0	0	0	0	0	0	141743.4
Tertiary (non municipal) buildings, equipment/facilities	311286.1	21957.2	78641.3	14067	52287.4	0	0	0	0	0	0	0	0	0	0	477948.8
Residential buildings	297557.6	276917.2	447427.7	9408.8	14738.1	0	0	556.4	625.6	625.2	0	0	0	0	0	1237441.2
Public lighting	27616.5	0	72.4	0	0	0	0	0	0	0	0	0	0	0	0	27688.9
Industry Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	691129.3	342484.2	558897.7	22958.8	77911.2	0	0	556.4	625.6	625.2	0	0	0	0	0	1654824.2
Transport																
Municipal fleet	0	0	111.4	62.6	0	13906.8	1223.9	0	0	0	0	357.4	0	0	0	15530.4
Public transport	22767.9	0	2233.1	205.4	0	3819.2	544.6	0	0	0	0	1286.1	0	0	0	64853.3
Private and commercial transport	0	0	335.1	22957.4	0	494271.4	265305.6	0	0	0	0	13774.2	0	0	0	796643.7
Subtotal	22767.9	0	2680.2	23225.1	0	547360	267078.6	0	0	0	0	15417.7	0	0	0	857781
Total	713897.2	342484.2	561577.9	46184	77911.2	547360	267078.6	556.4	625.6	625.2	0	15417.7	0	0	0	2512605.2

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C. CO_2 emissions

C1. Please insert the CO_2 emission factors adopted [t/MWh]:

Click here to visualise fuel emission factors

	Electricity		Heat/cold	Fossil fuels								Renewable energies				
	National	Local		Natural gas	Liquid gas	Heating oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuels	Biofuel	Plant oil	Other biomass	Solar thermal	Geothermal
BEI year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEI year																

C2. Please tick the box in case non-energy related sectors are included: ☐

Non-energy related sectors	CO_2 eq. emissions
Waste management	
Waste water management	
Other non-energy related	

Generate emission tables

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Your Baseline Emission Inventory

Sector		CO2 emissions [t]/ CO2 equivalent emissions [t]															
				Fossil fuels								Renewable energies					
		Electricity	Heat/cold	Natural gas	Liquid gas	Heating Oil	Diesel	Gasoline	Lignite	Coal	Other fossil fuels	Biofuel	Plant oil	Other biomass	Solar thermal	Geothermal	Total
BUILDINGS, EQUIPMENT/FACILITIES AND INDUSTRIES																	
Municipal buildings, equipment/facilities		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tertiary (non municipal) buildings, equipment/facilities		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential buildings		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Municipal public lighting		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industries	Non-ETS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ETS (not recommended)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRANSPORT																	
Municipal fleet		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public transport		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private and commercial transport		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER																	
Agriculture, Forestry, Fisheries		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER NON-ENERGY RELATED																	
Waste management																	0
Waste water management																	0
Other non-energy related																	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Additional comments

Home | Save | Go to strategy | Fill in MEI | Go to SEAP

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Part III – My sustainable action plan

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Introduction | Overall Strategy | Emission Inventory | Action Plan | Synthesis report | Upload document | Submission

Sustainable Energy Action Plan

1) Title	Action plan for sustainable energy development of the City of Zagreb (Akcijski pla
2) Date of formal approval	2010-04-22
3) Decision body approving the plan	City Assembly
4) SEAP webpage	
5) Business-as-Usual projections by 2020 (if applicable)	CO_2 emissions (in t CO_2 (eq.)/a) Final energy consumption (in MWh/a)
6) Methodological notes	
7) Estimates of the impacts of actions in 2020 in relation to	BEI 2008 (Option 1)

Key Actions of the SEAP

Add action | Delete action | Edit action | Select / unselect action as Benchmark of Excellence

Minimum 3 Benchmarks of Excellences to be submitted at the monitoring stage

Implementation status of your actions (e.g. completed, ongoing...)

Expected impacts of the actions implemented so far (completed or ongoing)

Key Actions	Area of intervention	Policy instrument	Origin of the action	Responsible body	Implementation timeframe Start	Implementation timeframe End	Status of implementation	Implementation cost spent so far €	Estimates in 2020: Energy savings MWh/a	Estimates in 2020: Renewable energy production MWh/a	Estimates in 2020: CO_2 reduction t CO_2/a
MUNICIPAL BUILDINGS, EQUIPMENT/FACILITIES											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TERTIARY BUILDINGS, EQUIPMENT/FACILITIES											
[Name of the action]											
Estimated reduction not associated with any reported actions											
RESIDENTIAL BUILDINGS											
[Name of the action]											
Estimated reduction not associated with any reported actions											
PUBLIC LIGHTING											
[Name of the action]											
Estimated reduction not associated with any reported actions											
INDUSTRY											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TRANSPORT											
[Name of the action]											
Estimated reduction not associated with any reported actions											
LOCAL ELECTRICITY PRODUCTION											
[Name of the action]											
Estimated reduction not associated with any reported actions											
LOCAL HEAT/COLD PRODUCTION											
[Name of the action]											
Estimated reduction not associated with any reported actions											
OTHERS											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TOTAL								0	0	0	0
Sub-total Buildings, equipment/facilities and industries											

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6) Methodological notes	
7) Estimates of the impacts of actions in 2020 in relation to	BEI 2008 (Option 1)

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MUNICIPAL BUILDINGS, EQUIPMENT/FACILITIES											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TERTIARY BUILDINGS, EQUIPMENT/FACILITIES											
[Name of the action]											
Estimated reduction not associated with any reported actions											
RESIDENTIAL BUILDINGS											
[Name of the action]											
Estimated reduction not associated with any reported actions											
PUBLIC LIGHTING											
[Name of the action]											
Estimated reduction not associated with any reported actions											
INDUSTRY											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TRANSPORT											
[Name of the action]											
Estimated reduction not associated with any reported actions											
LOCAL ELECTRICITY PRODUCTION											
[Name of the action]											
Estimated reduction not associated with any reported actions											
LOCAL HEAT/COLD PRODUCTION											
[Name of the action]											
Estimated reduction not associated with any reported actions											
OTHERS											
[Name of the action]											
Estimated reduction not associated with any reported actions											
TOTAL								0	0	0	0
Sub-total Buildings, equipment/facilities and industries											

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Key Actions	Area of intervention	Policy Instrument	Origin of the action	Responsible body	Implementation timeframe		Status of implementation	Estimated implementation cost (€)	Implementation cost spent so far (€)	Estimates in 2020			
					Start time	End time				Energy savings [MWh/a]	Renewable energy production [MWh/a]	CO_2 reduction [t CO_2 /a]	
MUNICIPAL BUILDINGS, EQUIPMENT/FACILITIES										204913	28014	54337.20	
Action 1: PVs and solar thermal collectors for health and social municipal institution	Renewable energy for space heating and hot water	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Health and War Veterans • City office for social protection and people with disabilities	2011	2018	Ongoing	5695000	1550000	0	9344	2077	
Action 2: Reconstruction of indoor lightning in 1000 primary schools classrooms	Energy efficient lighting systems	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports	2011	2017	Ongoing	1390000	500000	174	0	56.20	
Action 3: Reconstruction of heating systems in primary schools and kindergartens – replacement existing heating oil systems with pellets boilers	Renewable energy for space heating and hot water	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports	2011	2019	Postponed	1165000		0	18670	5147	
Action 4: Reconstruction of heating systems in primary schools and kindergartens – replacement existing heating oil systems with natural gas system	Energy efficiency in space heating and hot water	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports	2011	2016	Ongoing	475000	350000	1867	0	514	
Action 5: Reconstruction of thermal insulation for walls and roof for City of Zagreb municipal buildings	Building envelope	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports • City Office for Health and War Veterans • City office for social protection and people with disabilities • City Office for	2011	2020	Ongoing	38016000	4100000	109500	0	24346	
Action 6: Installation of energy efficient doors and windows on municipality buildings	Building envelope	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports • City Office for Health and War Veterans • City office for social protection and people with disabilities • City Office for	2011	2020	Ongoing	27945000	3500000	28740	0	6390	
Action 7: Thermostatic radiator sets installation in all municipality buildings	Energy efficiency in space heating and hot water	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports • City Office for Health and War Veterans• City office for social protection and people with disabilities • City Office for	2011	2018	Ongoing	6250000	150000	43792	0	9738	
Action 8: Energy saving lamps in municipality buildings	Energy efficient lighting systems	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • The Mayor's Office • Zagreb Holding	2010	2015	Ongoing	1390000	30000	14270	0	4609	
Action 9: Thermal insulation refurbishment for all buildings in Gornji Grad-city district	Building envelope	Third party financing, PPP	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Institute for the Conservation of Cultural and Natural Heritage • City Office for Physical Planning, Construction of the	2011	2017	Postponed	2290000		6570	0	1460	
TERTIARY BUILDINGS, EQUIPMENT/FACILITIES										203310	71706	67432	
Action 1: Incentives for thermal insulation reconstruction for buildings	Building envelope	Grants and subsidies	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Economy, labour and enterprises	2013	2020	Postponed	625000		136700	0	30400	
Action 2: Incentives for RES usage in existing tertiary buildings	Renewable energy for space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Economy, labour and enterprises	2013	2020	Ongoing	4167000	40000	0	68350	15200	
Action 3: Incentives for buying energy efficient electrical devices for existing tertiary buildings	Energy efficient electrical appliances	Grants and subsidies	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Economy, labour and enterprises	2014	2020	Not started	2085000		30155	0	9740	
Action 4: Energy savings lamps in all tertiary buildings	Energy efficient lighting systems	Other	Not possible to say	• City of Zagreb • City office for Energy, Environment and Sustainable Development • REGEA	2014	2020	Not started	0		30155	0	9740	
Action 5: Incentives scheme for new tertiary buildings with thermal characteristic better than prescribed in existing relevant regulations	Integrated action (all above)	Building standards	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2014	2020	Not started	416700		4200	0	930	
Action 6: Incentives scheme for RES usage in new tertiary buildings	Renewable energy for space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2014	2020	Not started	416700		0	3356	745	
Action 7: Incentives for buying energy efficient electrical devices for new tertiary buildings	Energy efficient electrical appliances	Grants and subsidies	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development	2014	2020	Not started	695000		2100	0	677	
RESIDENTIAL BUILDINGS										474253	195108	267182	
Action 1: Incentives for residential buildings thermal insulation reconstruction	Building envelope	Grants and subsidies	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding	2015	2020	Not started	30890000		44500	0	9891O	
Action 2: Subsidies for solar thermal collectors and PVs for residential houses/apartments in City of Zagreb	Renewable energy for space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • REGEA	2011	2020	Ongoing	2333000	300000	0	12114	2694	
Action 3: Subsidies for replacement of existing heating oil boiler systems with pellets boilers system, heat pumps and pyrolitic boilers in residential houses/apartments	Energy efficiency in space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • REGEA	2012	2020	Ongoing	2320000	100000	0	166020	45780	
Action 4: Subsidies for implementation of heat energy measurement in every residential houses/apartments connected to district heating	Energy efficiency in space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • HEP – Toplinarstvo • REGEA	2011	2015	Postponed	7680000		263060	0	64150	
Action 5: Solar thermal collectors and thermal envelop and roof insulation for building in city district Zaprude	Building envelope	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • Zagreb Holding • REGEA	2013	2018	Postponed	528000		4930	0	1095	
Action 6: ZG FACTOR 10 - Energy efficiency building refurbishments in Trnsko city district	Building envelope	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • Zagreb Holding • The Faculty of Architecture of the University of Zagreb	2013	2020	Postponed	792000		4200	0	843	
Action 7: Incentives for buying energy efficient electrical devices	Energy efficient electrical appliances	Grants and subsidies	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Economy, labour and enterprises • REGEA	2013	2020	Postponed	4860000		49340	0	15940	
Action 8: Energy savings lamps in all residential buildings	Energy efficient lighting systems	Other	Other (national, regional, ...)	• City of Zagreb • City office for Energy, Environment and Sustainable Development • Zagreb Holding	2011	2016	Ongoing	0		98683	0	31875	
Action 9: Incentives for solar thermal collectors in new residential buildings	Renewable energy for space heating and hot water	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Strategic Planning and Development of the City • REGEA	2011	2012	Postponed	2500000		0	16974	3774	
Action 10: Incentives for constructing energy and passive residential buildings	Integrated action (all above)	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • REGEA	2012	2020	Postponed	2780000		9540	0	2121	

A AREA OF INTERVENTION	B POLICY INSTRUMENT	C Origin of the action
A1 Municipal - Residential - Tertiary Buildings	**B1 Buildings**	C1 Local authority
A11 Building envelope	B11 Awareness raising / training	C2 Covenant Territorial Coordiantor
A12 Renewable energy for space heating and hot water	B12 Energy management	C3 Other (national, regional,...)
A13 Energy efficiency in space heating and hot water	B13 Energy certification / labelling	C4 Not possible to say
A14 Energy efficient lighting systems	B14 Energy suppliers obligations	
A15 Energy efficient electrical appliances	B15 Energy / carbon taxes	
A16 Integrated action (all above)	B16 Grants and subsidies	
A17 Information and Communication Technologies	B17 Third party financing, PPP	
A18 Behavioural changes	B18 Public procurement	
A19 Other	B19 Building standards	
	B110 Land use planning regulation	
	B111 Not applicable	
	B112 Other	
A2 Public Lighting	**B2 Public Lighting**	
A21 Energy efficiency	B21 Energy management	
A23 Integrated renewable power	B22 Energy suppliers obligations	
A24 Information and Communication Technologies	B23 Third party financing, PPP	
A25 Other	B24 Public procurement	
	B25 Not applicable	
	B26 Other	
A3 Industry	**B3 Industry**	
A31 Energy efficiency in industrial processes	B31 Awareness raising / training	
A32 Energy efficiency in buildings	B32 Energy management	
A33 Renewable energy	B33 Energy certification / labelling	
A34 Information and Communication Technologies	B34 Energy performance standards	
A35 Other	B35 Energy / carbon taxes	
	B36 Grants and subsidies	
	B37 Third party financing, PPP	
	B38 Not applicable	
	B39 Other	
A4 Municipal - Public - Private Transport	**B4 Transport**	
A41 Cleaner/efficient vehicles	B41 Awareness raising/training	
A42 Electric vehicles (incl. infrastructure)	B42 Integrated ticketing and charging	
A43 Modal shift to public transport	B43 Grants and subsidies	
A44 Modal shift to walking & cycling	B44 Road pricing	
A45 Car sharing/pooling	B45 Land use planning regulation	
A46 Improvement of logistics and urban freight transport	B46 Transport / mobility planning regulation	
A47 Road network optimisation	B47 Public procurement	
A48 Mixed use development and sprawl containment	B48 Voluntary agreements with stakeholders	
A49 Information and Communication Technologies	B49 Not applicable	
A410 Eco-driving	B410 Other	
A411 Other		
A5 Local Electricity Production	**B5 Local Electricity Production**	
A51 Hydroelectric power	B51 Awareness raising / training	
A52 Wind power	B52 Energy suppliers obligations	
A53 Photovoltaics	B53 Grants and subsidies	
A54 Biomass power plant	B54 Third party financing, PPP	
A55 Combined Heat and Power	B55 Building standards	
A56 Smart grids	B56 Land use planning	
A57 Other	B57 Not applicable	
	B58 Other	
A6 Local heat/cold Production	**B6 Local heat/cold Production**	
A61 Combined Heat and Power	B61 Awareness raising / training	
A62 District heating/cooling plant	B62 Energy suppliers obligations	
A63 District heating/cooling network (new, expansion, refurbishment)	B63 Grants and subsidies	
A64 Other	B64 Third party financing, PPP	
	B65 Building standards	
	B66 Land use planning regulation	
	B67 Not applicable	
	B68 Other	
A7 Other	**B7 Other**	
A71 Urban regeneration	B71 Awareness raising / training	
A72 Waste & wastewater management	B72 Land use planning	
A73 Tree planting in urban areas	B73 Not applicable	
A74 Agriculture and forestry related	B74 Other	
A75 Other		

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PUBLIC LIGHTING											24327	0	7887
Action 1: Replacement of old and inefficient lighting with new energy more efficiently and environmentally acceptable lighting	Energy efficiency	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2010	2019	Ongoing	18360000	4135000	6307	0	2037
Action 2: Public lightning illumination intensity management	Energy efficiency	Energy management	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2010	2020	Ongoing	0		18020	0	5830
TRANSPORT										679551.37	0	174606.21	
Action 1: Sustainable energy management in municipal fleet	Information and Communication Technologies	Other	Local authority	• City of Zagreb • The Mayor's Office • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2010	2020	Postponed	452000		5600	0	1432.24	
Action 2: Sustainable energy management in public transport	Information and Communication Technologies	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding – branch Zagreb Electric Tram	2010	2016	Ongoing	0		18632	0	4799.23	
Action 3: Car sharing model for citizens to increase occupancy of vehicle	Car sharing/pooling	Voluntary agreements with stakeholders	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2012	2017	Postponed	6945000		16777.78	0	4292	
Action 4: Car sharing model for employee city owned companies or city administrative bodies	Car sharing/pooling	Voluntary agreements with stakeholders	Local authority	• City of Zagreb • The Mayor's Office • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding	2010	2020	Postponed	62500		1111.11	0	286.20	
Action 5: Constructing new fast city railway system (above and underground, light rail and metro)	Modal shift to public transport	Other	Other (national, regional, ...)	• City of Zagreb • City Office for Strategic Planning and Development of the City • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Hold	2014	2020	Not started	0		207388.89	0	53247.60	
Action 6: Development and improvement of city-suburban railways	Modal shift to public transport	Other	Other (national, regional, ...)	• City of Zagreb • City Office for Strategic Planning and Development of the City • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Government	2010	2020	Ongoing	0		207388.89	0	53247.60	
Action 7: Development and improvement of city public transport	Modal shift to public transport	Other	Local authority	• City of Zagreb • City Office for Strategic Planning and Development of the City • Zagreb Holding – branch Zagreb Electric Tram • City Office for Physical Planning, Construction of the City, Utility Services and Transport • City office for Energy, Enviro	2010	2020	Ongoing	0		82972.22	0	21299	
Action 8: Adopting priority traffic lane for public transport on corridors where also other vehicles run	Modal shift to public transport	Land use planning regulation	Local authority	• City of Zagreb • Republic of Croatia Ministry of Interior • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding – branch Zagreb Electric Tram	2010	2020	Ongoing	0		8055.56	0	2122.20	
Action 9: Green Public Procurement for public transport vehicle	Cleaner/efficient vehicles	Public procurement	Local authority	• Zagreb Holding • The Mayor's Office • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2010	2016	Postponed	490000		113.80	0	30	
Action 10: Replacement existing amortized busses with hybrid and alternative (ecologically acceptable) fuel	Cleaner/efficient vehicles	Public procurement	Local authority	• City of Zagreb • Zagreb Holding – branch Zagreb Electric Tram • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2010	2017	Ongoing	1542000	51600000	3944.44	0	1088.82	
Action 11: Biodiesel production from waste vegetable oil	Cleaner/efficient vehicles	Grants and subsidies	Local authority	• City of Zagreb • City Office for Strategic Planning and Development of the City • City Office for Economy, labour and enterprises • City office for Energy, Environment and Sustainable Development • Republic of Croatia Ministry of Enviromental Protection	2010	2020	Postponed	625000		2759.79	0	713.74	
Action 12: Setting up bicycle net for renting equipped with IT device protection from stealing	Modal shift to walking and cycling	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding – branch Zagreb Electric Tram and Zagrebparking	2010	2015	Ongoing	2778000	50000	5833.33	0	1540	
Action 13: Subsidies for alternative fuel vehicle purchasing	Cleaner/efficient vehicles	Grants and subsidies	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2012	2020	Postponed	625000		584.67	0	149.58	
Action 14: Implementation of congestion pricing – charging fee for driving private vehicle in Zagreb town center	Modal shift to public transport	Road pricing	Local authority	• City of Zagreb • City Office for Physical Planning, Construction of the City, Utility Services and Transport • City office for Energy, Environment and Sustainable Development	2014	2020	Not started	320000		35416.67	0	9060	
Action 15: Monitoring and traffic management system implementation (automatic traffic routing and regulation)	Road network optimisation	Transport / mobility planning regulation	Local authority	• City of Zagreb • City Office for Physical Planning, Construction of the City, Utility Services and Transport • City office for Energy, Environment and Sustainable Development • Zagreb Holding	2013	2020	Postponed	4167000		82972.22	0	21298	
Action 16: Bus Natural Gas Fueling station	Other	Other	Local authority	• City of Zagreb • Zagreb Holding – branch Zagreb Electric Tram • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport	2013	2013	Completed	1000000	1000000				
Action 17: CNG fuelled municipal fleet	Cleaner/efficient vehicles	Other	Local authority	Zagreb Holding	2012	2020	Ongoing		600000				
Estimated reduction not associated with any reported actions										0	0	0	
LOCAL ELECTRICITY PRODUCTION										0	0	0	
LOCAL HEAT/COLD PRODUCTION										0	0	0	
OTHERS										1043636.36	0	244011.37	
Action 1: Green Public Procurement for electrical equipment for municipality building	Other	Other	Local authority	• City of Zagreb • The Mayor's Office • City office for Energy, Environment and Sustainable Development • Zagreb Holding	2010	2020	Postponed	1040000		7135	0	2305	
Action 2 : Green public procurement for municipal fleet	Other	Other	Local authority	• City of Zagreb • The Mayor's Office • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • Zagreb Holding	2010	2020	Postponed	42000		500	0	130	
Action 3: One day without cars campaign	Other	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • REGEA	2010	2020	Ongoing	1667000	20000	27972.22	0	7154	
Action 4: Employees / users of municipality building education and behavior change	Other	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • REGEA (North-west Croatia Regional Energy Agency) • UNDP (United Nations Development Programme)	2010	2020	Ongoing	415000	15000	81490	0	18120	
Action 5: Education and promotion of energy efficiency for citizens	Other	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Education, Culture and Sports • REGEA (North-west Croatia Regional Energy Agency) • UNDP (United Nations Development Programme) • NGO (nongovernmental org	2010	2020	Ongoing	835000	235000	858143	0	198830	
Action 6: Promotion and training of ecological (economic) way of driving (driving schools)	Other	Other	Other (national, regional, ...)	• City of Zagreb • City Office for Physical Planning, Construction of the City, Utility Services and Transport • City office for Energy, Environment and Sustainable Development • HAK (Croatian automobile club) • Driving schools	2010	2020	Ongoing	487000	120000	39388.89	0	10050	
Action 7: Promotion of alternative fuel vehicle	Other	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • REGEA (North-west Croatia Regional Energy Agency)	2010	2020	Ongoing	451000	28000	18129.53	0	4638.98	
Action 8: Education and demonstration center for citizens about alternative fuel vehicles, technology and usage (electric vehicle, natural gas, biofuels,..)	Other	Other	Local authority	• City of Zagreb • City office for Energy, Environment and Sustainable Development • City Office for Physical Planning, Construction of the City, Utility Services and Transport • REGEA (North-west Croatia Regional Energy Agency) • HAK (Croatian automobile	2010	2020	Postponed	390000		10877.72	0	2783.39	
Estimated reduction not associated with any reported actions										0	0	0	
TOTAL								0	0	2629990.73	294828	815425.78	

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Synthesis report

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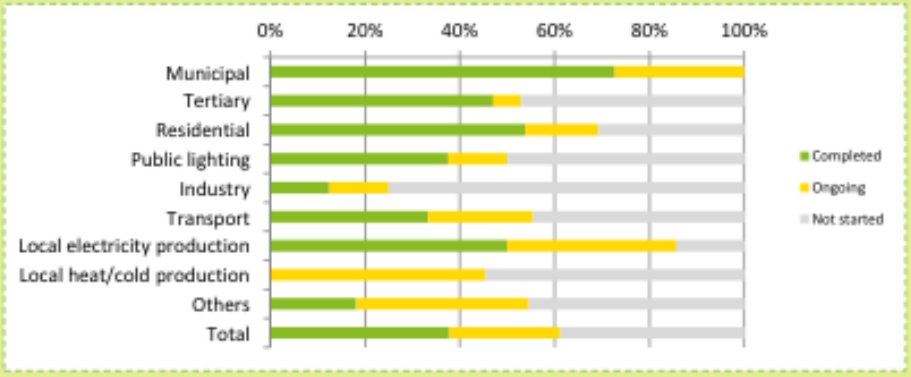
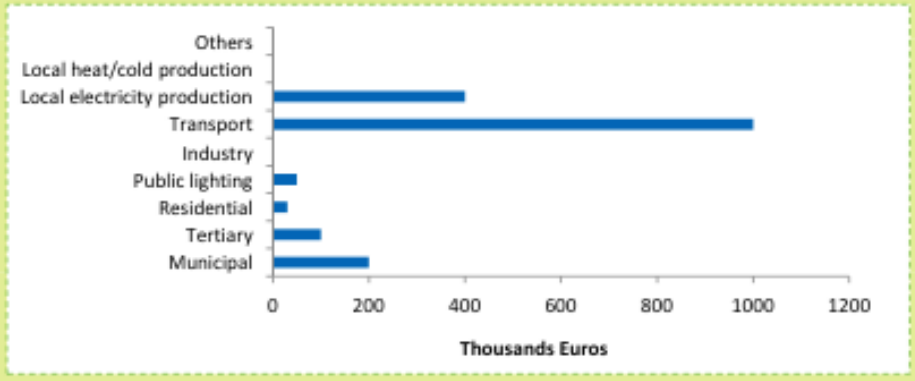
Your SEAP implementation progress

1) Status of implementation of actions

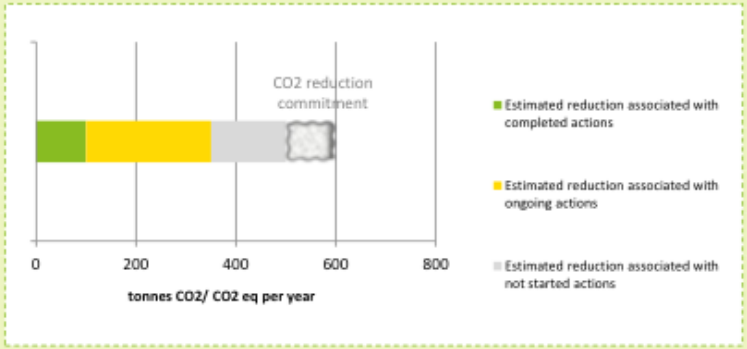


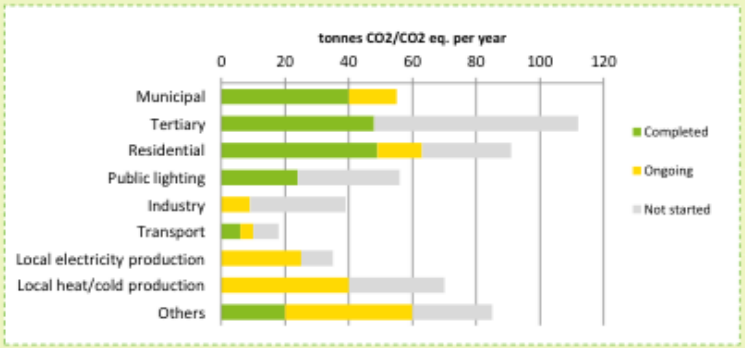
2) Overall budget spent

3) Money spent per sector



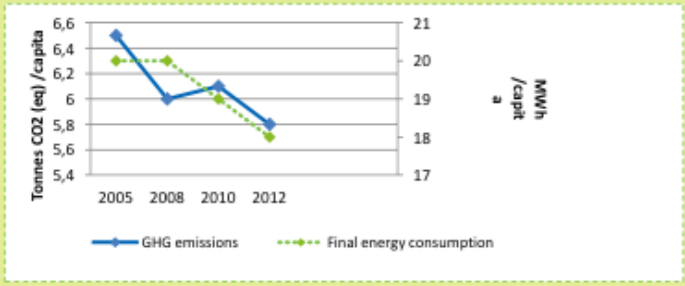
4) Estimated greenhouse gas emissions according to the implementation status of the actions



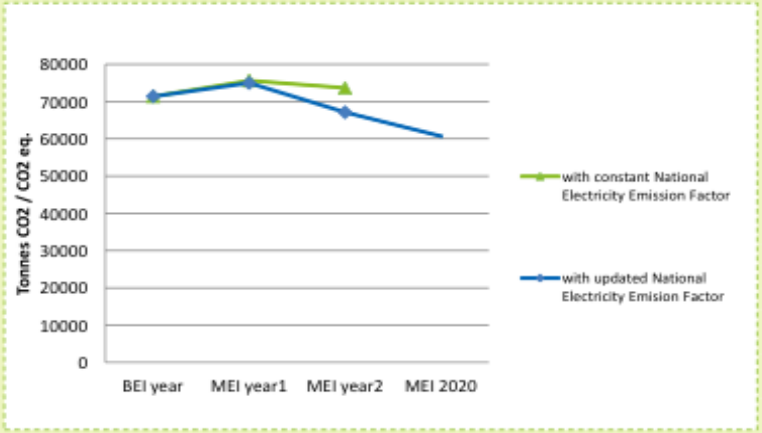


Your performance towards energy sustainability

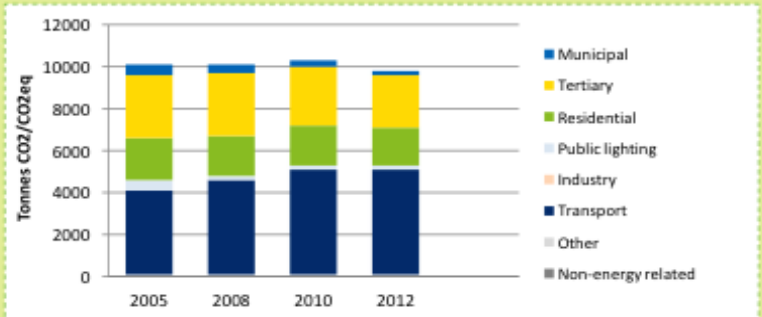
5) Greenhouse gas emissions and final energy consumption per capita



6) Greenhouse gas emissions (influence of the National Electricity Emission Factor)



7) Greenhouse gas emissions per sector



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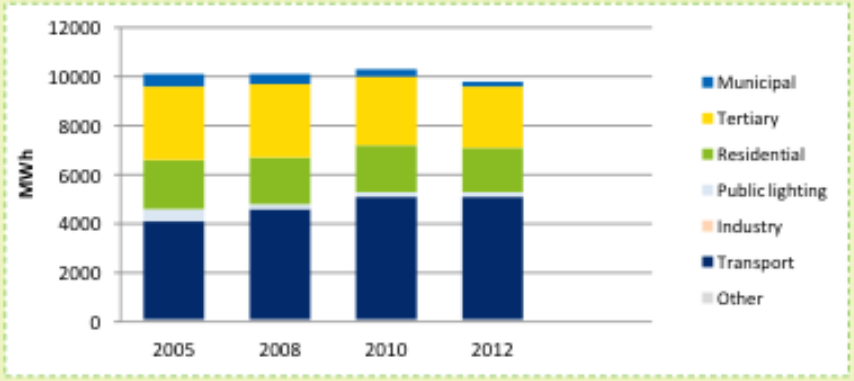
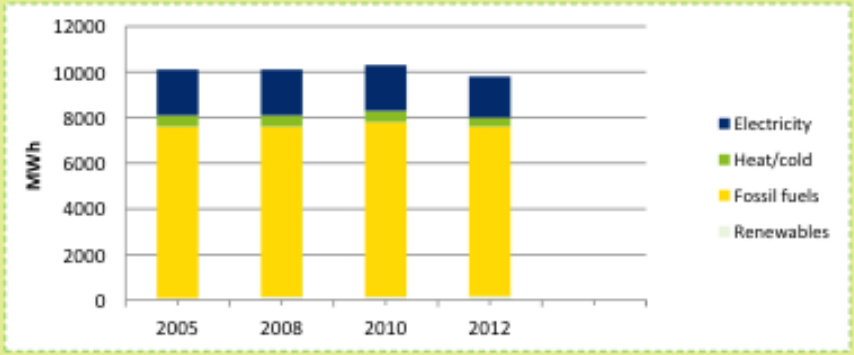
8) Final energy consumption per sector



9) Final energy consumption per energy carrier

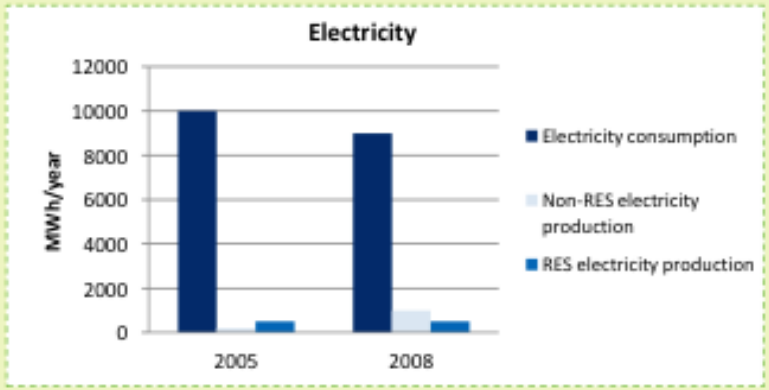


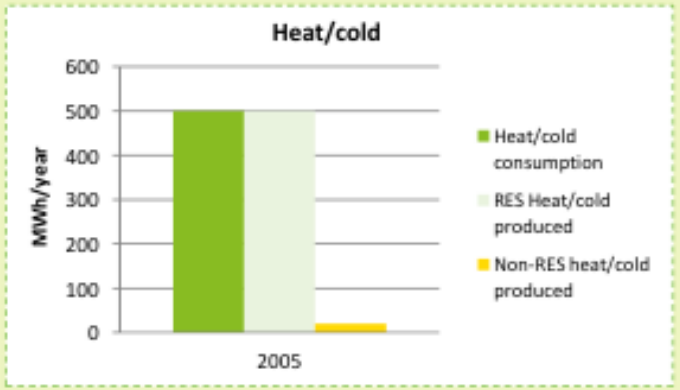
** Renewables - for non-electricity uses.*
*** The energy mix of heat/cold and electricity is not identified.*

10) Local energy production

Share of local energy production to overall final energy consumption

7%





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