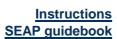


SEAP Template

The Sustainable Energy Action Plan (SEAP) Template and its Monitoring section constitute the reporting framework of the Covenant of Mayors initiative. The template has been developed by the Covenant of Mayors Office and the Joint Research Centre of the European Commission with the collaboration of a group of practitioners from local and regional authorities. It has been designed to assist signatories in summarising the key results of their SEAPs and in tracking their implementation progress.





| Signatory information: | |
|------------------------|--|
| Name: | |
| Country: | |
| | |
| Contact person: | |
| | |

| Template | caption: |
|-------------------|--|
| | Mandatory input cells |
| | Optional input cells |
| | Output cells |
| | Pre-filled cells |
| <u>Definition</u> | Definition boxes (visible when clicking) |
| | |

Template structure:

- ✓ Part I My Overall Strategy
- ✓ Part II My Emission Inventories
- ✓ Part III My Sustainable Energy Action Plan



Follow the steps below (part I > II > III in this order):

- ✓ Step 1 Fill in the form.
- ✓ Step 2 Click on "Go to the next part".
- ✓ Step 3 If any error is reported, please correct it.
- ✓ Step 4 Click on "See report" and submit the SEAP online.



Fill in the SEAP template Fill in the Monitoring template

See SEAP report

Submit online

3 17 1

Submit online



European

Developed by: Covenant of Mayors Office & Joint Research Centre of the European Commission | Last update: May 2014

Disclaimer: The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible for any use that may be made of the information contained therein.



Part I - My Overall Strategy

| My Overall Strategy | |
|---|--------------------------------------|
| 1) Overall CO ₂ reduction target | 2020 target |
| 2) <u>Vision</u> | |
| Coordination and organisational structures created/assigned | |
| 4) Staff capacity allocated | SEAP preparation: Cocal authority |
| 5) Involvement of stakeholders and citizens | |

Part I - My Overall Strategy 6) Overall estimated budget for the <u>Investment</u> Local authority implementation of your SEAP Non-investment ☐ Other actors **Investment** Non-investment Total implementation cost 31 years Time period 1990 2020 More specific fields on the 'budget allocated to SEAP implementation' 1) Estimated investment & noninvestment costs for the whole SEAP implementation, 2) Foreseen financing sources. 7) Foreseen financing sources for the Please specify the %: implementation of your SEAP ☐ Public ☐ Local Auhtority's own resources ☐ National Funds & Programmes ☐ EU Funds & Programmes ☐ Private

8) Monitoring process

Integrated preliminary checks, allowing a quicker detection of (completeness or consistency) errors

| 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 the Emission Inventory | | | | |
| A. Final energy consumption | | | | |
| 7.1. ma. o.io.gy co.ioam.piio.i | | | | |
| Please select the sectors included in your emission | | | | |
| ☐ Buildings, equipment facilities and industries | • | | | |
| ☐ Municipal buildings, equipment/facilities < | | | | |
| ☐ Tertiary (non municipal) buildings, equipment/fac | cilities 🔧 | | | |
| ☐ Residential buildings 🥄 | | | | |
| ☐ Public lighting | | Display optimisation & user-specific content | | |
| ☐ Industry | | | | |
| ☐Industry Non-ETS | _ | The content of the tables below will be automatically adapted according to the sectors specified by the user (e.g. not applicable rows / tables will be hidden). | | |
| ☐Industry ETS (not recommended) | | not applicable rows / tables will be hidden). | | |
| ☐ Transport <a> Transport | | | | |
| ☐ Municipal fleet | | | | |
| ☐ Public transport | | | | |
| ☐ Private and commercial transport | | | | |

Please note that for separating decimals dot [.] is used. No thousand separators are allowed. FINAL ENERGY CONSUMPTION [MWh] Fossil fuels Renewable energies Sector Electricity Total Heat/cold Other fossil Other **Biofuel** Lignite Coal Plant oil Natural gas | Liquid gas | Heating oil | Diesel Gasoline Solar thermal Geothermal biomass **BUILDINGS, EQUIPMENT/FACILITIES AND INDUSTRIES** Municipal buildings, equipment/facilities **Greater emphasis on the Covenant Key Sectors** Tertiary (non municipal) buildings, equipment/facilities More automated data computation in all tables Reporting the total energy consumption Residential buildings in those sectors becomes mandatory Public lighting (zero accepted). Non-ETS 0__ More specific fields on ETS (not recommended) 0 <u>Industry</u> 'industry' sector Total Subtotal **TRANSPORT** Municipal fleet 0 Public transport 0 Private and commercial transport 0 OTHER Agriculture, Forestry, Fisheries 0 New sector proposed 0 0 0 0 B. Energy supply Please select when applicable: ☐ Municipal purchases of certified green electricity Local/distributed electricity production: ☐ Wind ☐ Hydroelectric Display optimisation & user-specific content ☐ Photovoltaics The content of the tables below will be automatically ☐ Geothermal adapted according to the energy carriers specified by the user (e.g. not applicable rows / tables will be hidden) . ☐ 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] CO₂ 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

| | Electricity produced [MWh] | | Energy carrier input [MWh] | | | | | | | | | | CO ₂ / CO ₂ eq. emissions [t] | |
|--|----------------------------|------------------------|----------------------------|--------------|-------------|---------|------|-------|-----------|------------------|-----------------|-------|---|-------------------|
| Local electricity production plants | | | | Fossil fuels | | | | | | | | | CO21 CO2 CQL CHILDOLOTIC [1] | |
| (ETS and large-scale plants > 20 MW not recommended) | Total | from renewable sources | Natural gas | Liquid gas | Heating oil | Lignite | Coal | Waste | Plant oil | Other biomass | Other renewable | Other | 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

| | Heat/cold pro | duced [MWh] | Energy carrier input [MWh] | | | | | | | | CO ₂ / CO ₂ eq. emissions [t] | | | |
|-----------------------------------|----------------|------------------------------|----------------------------|------------|-------------|---------|------|-------|-----------|---------------|---|-------|---|-------------------|
| | Tieat/cold pro | ducea [IVIVVII] | Fossil fuels | | | | | | | | | | CO ₂ 7 CO ₂ eq. emissions [t] | |
| Local heat/cold production plants | Total | from renewable sources | Natural gas | Liquid gas | Heating oil | Lignite | Coal | Waste | Plant oil | Other biomass | Other renewable | Other | 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 |

C. CO₂ emissions

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

Default emission factors provided for each fuel type

| | | | Click here to | visualise fuel | emission factor | <u>ors</u> | provi | ded for ea | ch fuel type | | | | | | |
|-----------------|--------------|-----------|---------------|----------------|-----------------|------------|----------|------------|--------------|--------------------|---------|-----------|---------------|---------------|------------|
| Electricit | у | , | | | | Foss | il fuels | | | | | Re | newable ener | gies | |
| <u>National</u> | <u>Local</u> | Heat/cold | Natural gas | Liquid gas | Heating oil | Diesel | Gasoline | Lignite | Coal | Other fossil fuels | Biofuel | Plant oil | Other biomass | Solar thermal | Geothermal |
| | | | | | | | | | | | | | | | |

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 | |

Automatic calculation of CO2 emissions

Your Baseline Emission Inventory

| | | | | | | | | CO2 en | nissions [t] |]/ CO2 equival | ent emissions | [t] | | | | | |
|---------------------------------------|-----------------------|---|-----------|-------------|------------|-------------|--------|----------|--------------|----------------|--------------------|---------|-----------|------------------|---------------|------------|-------|
| | | | | | | | Foss | il fuels | | | | | Rei | newable ener | gies | | |
| Sector | Sector | | 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/FACILITIE | S AND INDUSTRIES | | | | | | | | | | | | | | | | |
| Municipal buildings, equipment/faci | lities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tertiary (non municipal) buildings, e | quipment/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 |
| | Total | 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 | | |
|---------------------|--|--|
| | | |
| | | |

Part III - My Sustainable Energy Action Plan

| Sustainable Energy Action Plan | |
|--|--|
| 1) Title | |
| 2) Date of formal approval | |
| 3) Decision body approving the plan | |
| 4) SEAP webpage | |
| 5) Business-as-Usual projections by 2020 (if applicable) | CO ₂ emissions Final energy consumption t CO2 (eq.)/a MWh/a Mew possibility for signatories developing a Business-as-Usual scenario to report their BaU projections by 2020 |
| 6) Methodological notes | |
| 7) Estimates of the impacts of actions in 2020 in relation to: | BEI (option 1) |

Part III - My Sustainable Energy Action Plan

Ergonomic optimisation of the table Actions are added via intermediate forms.

| | , | | / | | | E | Estimates in 2020 |) |
|--|---|---------------------------|---------------------------------------|-----------------------------|-------------------------------|--------------------------------------|-----------------------------|---------------------------|
| Key Actions | Area of intervention | Policy instrument | Origin of the action Responsible body | Implementation timeframe | Estimated implementation cost | Energy savings | Renewable energy production | CO ₂ reduction |
| | \ | / | | Start End | € | MWh/a | MWh/a | t CO₂/a |
| UNICIPAL BUILDINGS, EQUIPMENT/FACILITIES | Now fields for the extensions | on of the cotions. | 7 5 11 | | | | | |
| lame of the action] | New fields for the categorisati | | New field to specify the origin of | | | | | |
| stimated reduction not associated with any reported actions | 1) 'Area of intervention' – to spec | cify the main field/scope | the actions | | | | | |
| ERTIARY BUILDINGS, EQUIPMENT/FACILITIES | (ÉE, RES, etc.) targeted by the a 2) 'Policy Instrument' – to specify | y the type of policy | (i.e. local or other). | | | | | |
| Name of the action] | instrument foreseen (awareness regulation, financial). | s raising/education, | | | | ļl | | |
| stimated reduction not associated with any reported actions | regulation, financiar). | | | | | | | |
| ESIDENTIAL BUILDINGS | | | | | | | | |
| Name of the action] | | | | | Introduc | tion of Total breakdo | own | |
| stimated reduction not associated with any reported actions | | | | | (previous | by sector ly only for the BUILDII | NGS | |
| PUBLIC LIGHTING | | | | | | macro-sector). | | |
| Name of the action] | | | | | | | | |
| Estimated reduction not associated with any reported actions | | | | | | | | |
| NDUSTRY <u>E</u> | | | | | | | | |
| Name of the action] | | | | | | | | |
| stimated reduction not associated with any reported actions | | | | | | | | |
| RANSPORT | | | | | | | | |
| Name of the action] | | | | | | | | |
| Estimated reduction not associated with any reported actions | | | | | | | | |
| OCAL ELECTRICITY PRODUCTION | | | | | | | | |
| Name of the action] | | | | | | | | |
| stimated reduction not associated with any reported actions | | | | | | | | |
| OCAL HEAT/COLD PRODUCTION | | | | | | | | |
| Name of the action] | | | | | | | | |
| stimated reduction not associated with any reported actions | | | | | | | | |
| OTHERS <u>III</u> | | | | | | | | |
| Name of the action] | | | | | | | | |

Add/Update a Key Action Sector * mandatory fields Pre-filled and non-editable name of sector Name * Area of intervention * Policy instrument * Origin of the action * Responsible body * Start time * End time * Estimated implementation cost [€] Estimates in 2020 Energy savings [MWh/a] Renewable energy production [MWh/a] CO₂ reduction [t/a]

Benchmark of Excellence

| Key action | | | |
|--|--|---|--------|
| Title of the benchmark | | | |
| Language | English (EN) [drop-down menu] | | |
| Sector | | | |
| Area of intervention | |] | |
| Policy instrument | |] | |
| Responsible body | |] | |
| Description | [text field - max. 900 characters] | | |
| Implementation timeframe | [start time] | [end time] | |
| Financing sources | Local authority's own resources National Funds & Programmes EU Funds & Programmes Public-Private Partnerships Other | | |
| Website | | | |
| Picture | [Browse] | | |
| Document | [Browse] | | |
| Video link | | | |
| | | | |
| Key energy and financial figures | CO ₂ reduction Energy savings Renewable energy produced Implementation cost <u>Jobs created</u> Other figures | MWh/a MWh/a € number | Unit |
| better demon cor An output data so by the system ba | Life expectancy of the action Discount rate applied Eirst Year of investment Eirst Year of investment Discount rate applied Eirst Year of investment Eirst Year of investment PV of Financial savings NPV of investment Discounted Payback period Return on Investment (ROI) | [drop-down menu] % [drop-down menu] € equation equ | months |

SEAP report

Key Results of the Baseline Emission Inventory

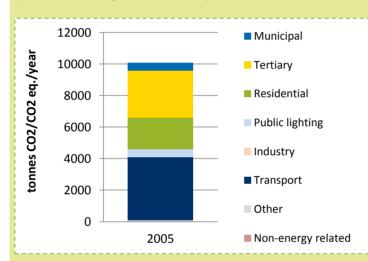
Baseline year: 2005

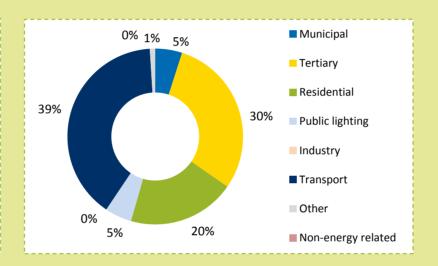
1) Greenhouse gas emissions and final energy consumption per capita

| Emission factor | tonnes CO ₂ eq./capita | MWh/capita |
|-----------------|-----------------------------------|------------|
| IPCC | 5,0 | 20,0 |

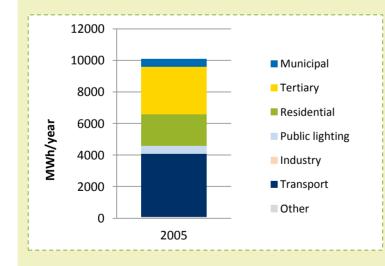
Automatic generation of a printable Synthesis Report, presenting the first results in a visual and concise manner

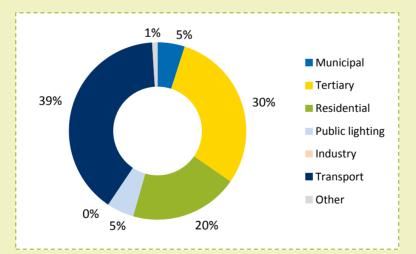
2) Greenhouse gas emissions per sector





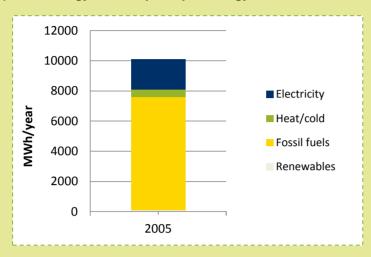
3) Final energy consumption per sector





SEAP report

4) Final energy consumption per energy carrier



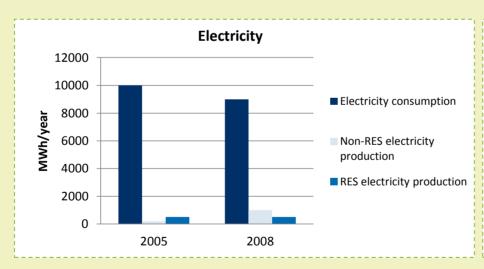
* Renewables - for non-electricity uses.

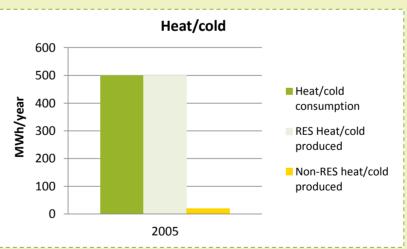
** The energy mix of heat/cold and electricity is not identified.

5) Local energy production

Share of local energy production to overall final energy consumption

7%





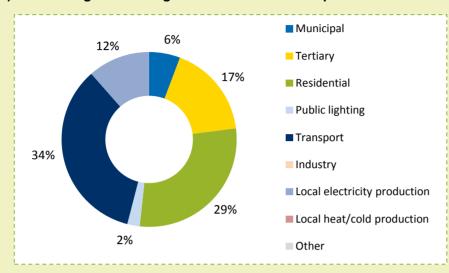
Key elements of the SEAP

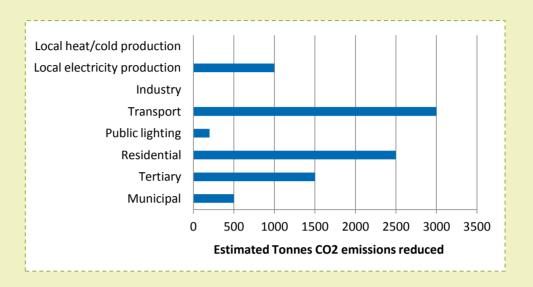
6) Greenhouse gas emissions reduction target

| % reduction | tonnes CO ₂ eq./capita |
|-------------|-----------------------------------|
| 25% | 8.98 |

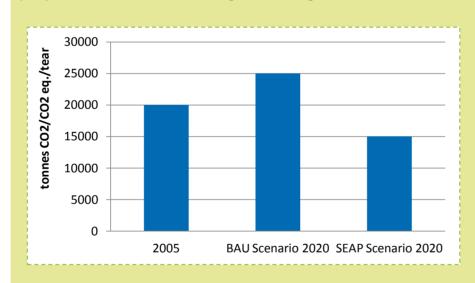
SEAP report

7) Estimated greenhouse gas emissions reduction per sector in 2020





8) Expected evolution in terms of greenhouse gas emissions



Comments:



Categories

| A A | REA OF INTERVENTION | В Р | OLICY INSTRUMENT |
|-------------|--|-------------|--|
| A1 N | Municipal - Residential - Tertiary Buildings | B1 B | uildings |
| A11 | Building envelope | B11 | Awareness raising / training |
| A12 | Renewable energy for space heating and hot water | B12 | Energy management |
| A13 | Energy efficiency in space heating and hot water | B13 | Energy certification / labelling |
| 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 P | Public Lighting | B2 P | ublic 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 Ir | ndustry | B3 In | ndustry |
| 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 |
| | | | |
| | flunicipal - Public - Private Transport | | ransport |
| 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 | | |
| | | | |

C Origin of the action

- C1 Local authority
 C2 Covenant Territorial Coordiantor
 C3 Other (national, regional,...)
 C4 Not possible to say

Categories

| A5 L | ocal Electricity Production | B5 L c | ocal 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 L | ocal heat/cold Production | B6 L c | ocal 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 C | other | B7 O | ther |
| 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 | | |