



Covenant of Mayors
for Climate & Energy
EUROPE



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Defining and measuring energy poverty

The energy poverty approach the Covenant of Mayors

Covenant of Mayors - Europe | 23 November 2021



Previous steps

- 2017: **Definition of energy poverty** for the CoM EU
- 2018: Collaboration with the **Energy Poverty Observatory** and exchange with cities and regions
- 2019: Organisation of the **first expert workshop**
- 2019-2021: Participation in the **energy poverty subcommittee of the GCoM**
- 2021: Exchanges with the **Energy Poverty Advisory Hub and the Joint Research Centre** (EU Commission) on the development of a set on indicators and an assessment tool



Integration of Energy Poverty in the SECAP template

The integration of Energy Poverty in the SECAP template is defined in 4 elements:

Reduction goal

Assessment tool

List of indicators

Actions



List of indicators (a flexible approach!)

➤ A list of around **60 indicators** divided in six categories:

- Climate
- Socio economic
- Facilities/housing
- Mobility
- Policy and Regulatory Framework
- Participation/awareness raising

➤ These indicators offer options to define, quantify and work with energy poverty topics at the local level, thanks to the variety and diversity of the indicators, municipalities can choose the most tailored indicators to their context and possibilities



List of indicators

ANNEX - Indicators for Energy Poverty

① This annex serves as a source of inspiration only. None of these indicators are compulsory, but rather illustrative examples.

Area	Priority level	Related indicators	Unit	Description
Climate	Monitoring indicator	Frequency of heat waves	Average per monthly/year	Frequency of heat waves per month in a year
	Monitoring indicator	Frequency of cold waves	Average per monthly/year	Frequency of cold waves per month in a year
	Monitoring indicator	Number of heating degree days per year	Number of HDD and CDD /year	Heating degree day is a measurement designed to quantify the demand for energy needed to heat a building, it is based on the outside temperature where heating is needed
	Monitoring indicator	Number of cooling degree days per year	Number of HDD and CDD /year	Cooling degree day is a measurement designed to quantify the demand for energy needed to cool a building, it is based on the outside temperature where cooling is needed
Socio-economic	Monitoring indicator	Percentage of populaton or housholds spending up to XX % their income on energy services	[%]	Share of population / households spending more than a specific percentange of their incomes on energy services putting them in an situation of energy poverty
	Monitoring indicator	Vulnerable households	[%]	Households with lonely parents, parents with more than 3 childrens, families with low incomes, households reciving social soport, families with low level of education households out total number of hausholds
	Monitoring indicator	Arrears on utility bills	[%]	Share of (sub-) population having arrears on utility bills, based on question "In the last twelve months, has the household been in arrears, i.e. has been unable to pay on time due to financial difficulties for utility bills (heating, electricity, gas, water, etc.) for the main dwelling?"
	Related indicator	Average price of electricity	[€]	Average price in [€] of the consumed electricity kwh in the municipal housholds
	Related indicator	Average price of gas	[€]	Average price in [€] of the consumed gas kwh in the municipal housholds
	Related indicator	Energy related expenditure / local GDP	[%]	Relationship between the yearly energy cost the housholds and the local GDP, percentual average of the local GDP destined to the energy cost
	Monitoring indicator	High share of energy expenditure in income (2M)	[%]	The 2M indicator presents the proportion of households whose share of energy expenditure in income is more than twice the national median share. Note: where income distributions are more equal, variance in energy expenditure translates to higher 2M shares. High variance in energy/income shares can occur due to structural differences in energy expenditure between household groups, as well as in situations where energy is often, but not exclusively, included in rent.
	Related indicator	Citizens under poverty threshold / number of citizens	[%]	Percentage of the local population suffering from poverty, persons and families under the limit of incomes considering the family size
	Related indicator	At-risk-of-poverty rate	[%]	People at risk of poverty or social exclusion (% of population). The at-risk-of-poverty rate is the share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers.
	Related indicator	Citizens with social support	[%]	Number of citizens reciving financial assistance from administrative insitutions



Assessment and monitoring tool

Energy Poverty Assessment

① Self-assessment at planning year

② Anticipated self-assessment at target year. Appears only for the indicators selected for monitoring

Macro-areas	Elements	Used indicator(s)	Unit	Households /Persons	Base Year	Current level	Use for monitoring	Target level
Climate	Heat and cold	Frequency of heat waves	Days per year		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Frequency of cold waves	Days per year		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Number of heating degree days per year	HDD + CDD / year		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Number of cooling degree days per year	HDD + CDD / year		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
Macro-areas	Elements	Used indicator(s)	Unit			Current level		Target level change
Facilities	Housing	F+G+H band (EPC) dwelling/total number of dwelling	[%]		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Energy consumption (electricity + heating) per capita / national energy consumption (electricity + heating) per capita	[%]		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Share of buildings renovated per year / Buildings renovations / Share of buildings with renovations older than 30 years	[%]		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Share of households or persons with presence of leak, damp, rot in their dwelling / total households or persons	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Percentage of households or persons within the municipality experiencing heating discomfort / total households or population	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Percentage of households or persons within the municipality experiencing cooling discomfort / total households or population	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
	Public transport	Households or persons connected to the electricity and gas grid / total households or persons	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Population or households not having access to essential services within 1 h by walking, cycling or public transport / total population or households	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Persons or households living more than one km from nearest public transport station / number of persons or households	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
Socio - economic		Percentage of population or households spending up to XX % their income on energy services	[%]		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Vulnerable households or persons / total households or persons	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Arrears on utility bills / total population or households	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Inability to keep home adequately warm	[%]	[Drop-down]	[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		High share of energy expenditure in income (2M)	[%]		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
Framework elements		Existence of energy poverty strategy / specific measures related energy poverty	Yes / No		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Existing rent regulation	Yes / No		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Awareness-raising campaigns targeting vulnerable households	Yes / No		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]
		Engagement and cooperation with stakeholders	Yes / No		[Drop-down]	[Drop-down]	<input type="checkbox"/>	[Drop-down]



Assessment and monitoring tool

- Using the **monitoring indicators** municipalities can track the development of specific energy poverty related aspects
- The **monitoring indicators** can be used as local targets to monitor the reduction of energy poverty at the local level
- A **flexible approach**: municipalities can decide with which indicators to work



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