



Sustainable energy action plan [SEAP] SEAP Summary report

MUNICIPALITY
Espluga de Francolí, L'

COUNTY
Conca de Barberà, La

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800433-2014-164-1200-001451

PROJECT
Coordination: Tarragona Province City Council. Covenant of mayors coordinators.
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**Sustainable energy action plan [SEAP]
SEAP Summary report**

Municipality: **Espluga de Francolí, L'**

Adhesion date 2014/10/02

Inhabitants (Inh.)	3.814
Seasonal population (inh.)	-
Municipality total surface (Km2)	57,0
Urban land (km2)	0,7
Urban waste production (kg/inh·day)	1,20
Type of municipality (1)	commerce, industry and tourism

Data from 2005; emission inventory baseline year

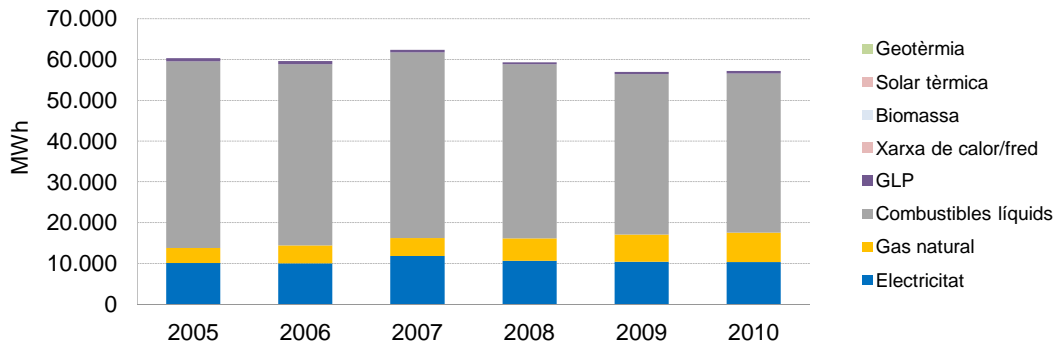
(1) Industrial, rural, touristic...

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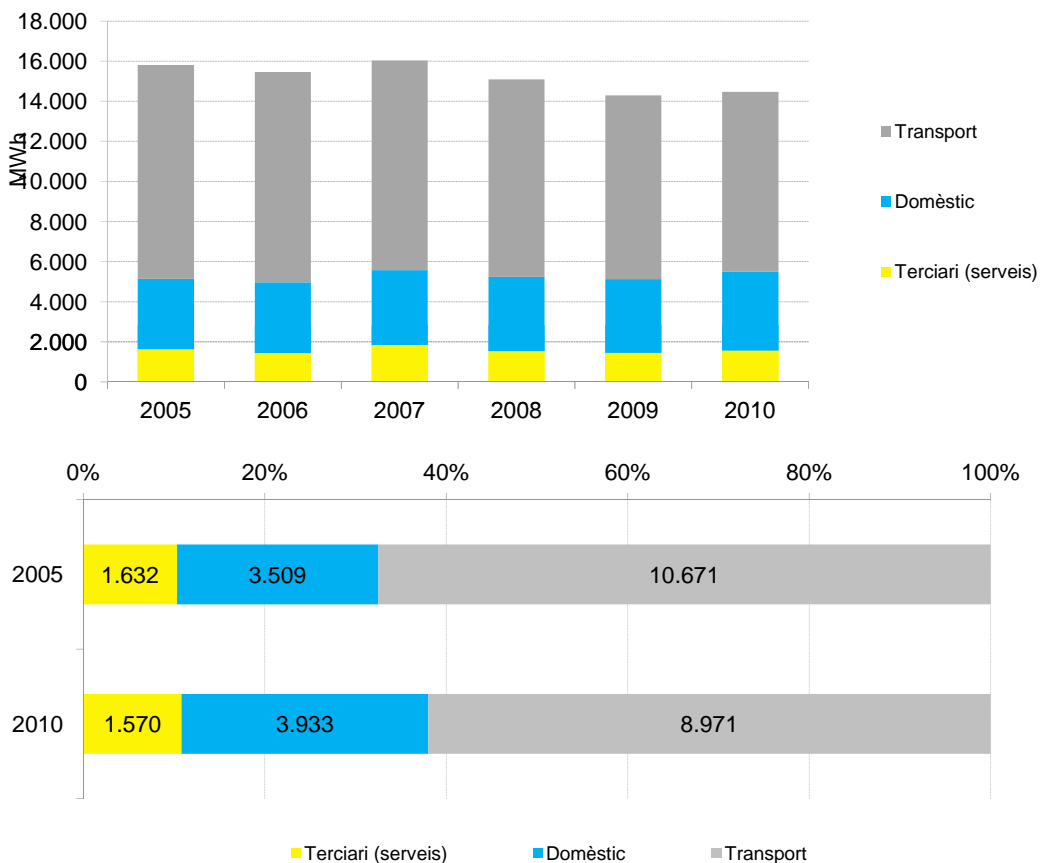
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1. SEAP scope: final energy consumption (MWh)

a) By energy sources



b) By sectors



c) Total energy consumption (kWh/inh.)

	2005	2010	Tendency (% difference respect baseline year)
Espluga de Francolí, L'	15.812	14.474	-8%
Average of the consumption of the province of Tarragona <i>b 1.000 a 5.000 hab.</i>	18.876	15.401	-18%

d) Assessment

L'Espluga de Francolí final energy consumption was 60.308 MWh in 2005, equivalent to 15,81 MWh/inhab. This level of consumption is lower than the average consumption per capita among the municipalities of the province of Tarragona with a population between 1.000 - 5.000 inhabitants in 2005.

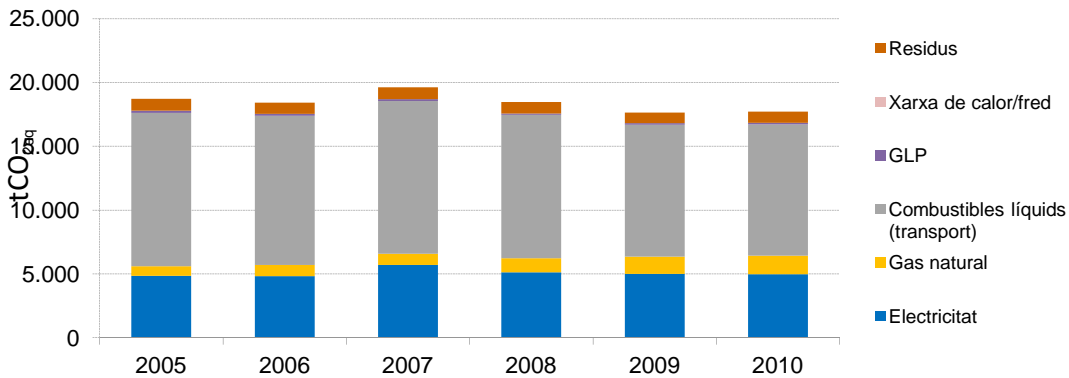
In the period 2005-2010 the consumption of the municipality has decreased by 5%. Looking at the evolution throughout the period, it is noted that energy consumption has an upward trend until 2007 and from this year the trend is downward. In general terms, the evolution of consumption per capita continues a downward trend, (reduced by 8%) in accordance to the overall energy consumption.

The sector that consumed more energy in 2005 was the transport sector, which accounts for 68% of total consumed energy in the SEAP scope. The following sector that has higher energy consumption within the municipality is the household sector with 29%, followed by the tertiary sector (9%).

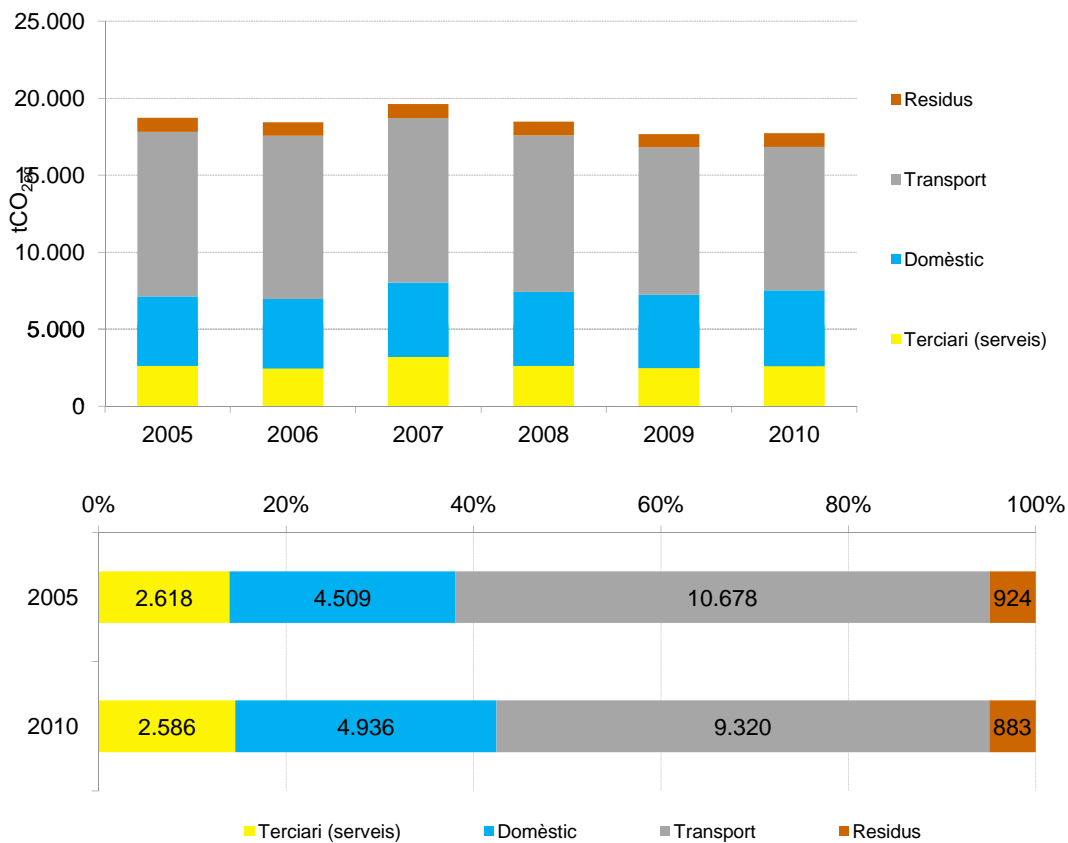
In the period 2005-2010, energy consumption has decreased in transport sector (13%), the tertiary sector has remained constant and the household sector has increased its energy consumption by 16%.

2. SEAP scope: GHG emissions (tCO₂eq)

a) By energy sources



b) By sectors



c) Total emissions (tCO₂eq/inh.)

	2005	2010	Tendency (% difference respect baseline year)
Espluga de Francolí, L'	4,91	4,49	-9%
GHG emission average in the province of Tarragona	6,09	4,93	-19%

b 1.000 a 5.000 hab.

d) Assessment

In 2005, Espluga de Francolí's greenhouse gas emissions (GHG) were 18.329 tones of CO₂, equivalent to 9,91 tCO₂eq/inhab. This ratio is lower than the average value among municipalities of the province of Tarragona with a population between 1.000 - 5.000 inhabitants in 2005.

The evolution of GHG emissions for the period 2005-2010 has no clear trend. However, the total GHG emissions decrease 5% between 2010 and 2005.

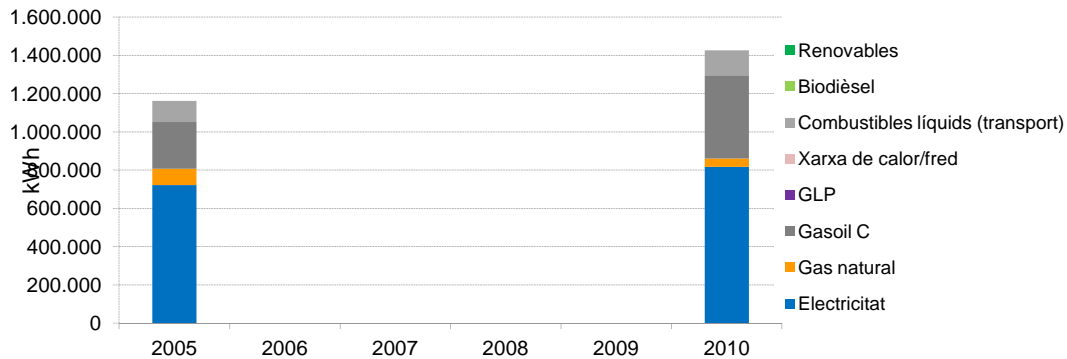
The energy source that has a greater weight are liquid fuels (LF) accounting for 64% of total GHG emissions. In the period 2005-2010, emissions associated with electric energy consumption and gas natural increased while emissions from liquid fuels and LPG decreased. Emissions associated with waste management are also included in the emissions study, which have decreased by 5% in the period 2005-2010.

The sector that most GHG emissions emitted in 2005 was the transport sector, with 57% of the total emissions in the SEAP scope. It is followed by the household and the services sector with 24% and 14% respectively.

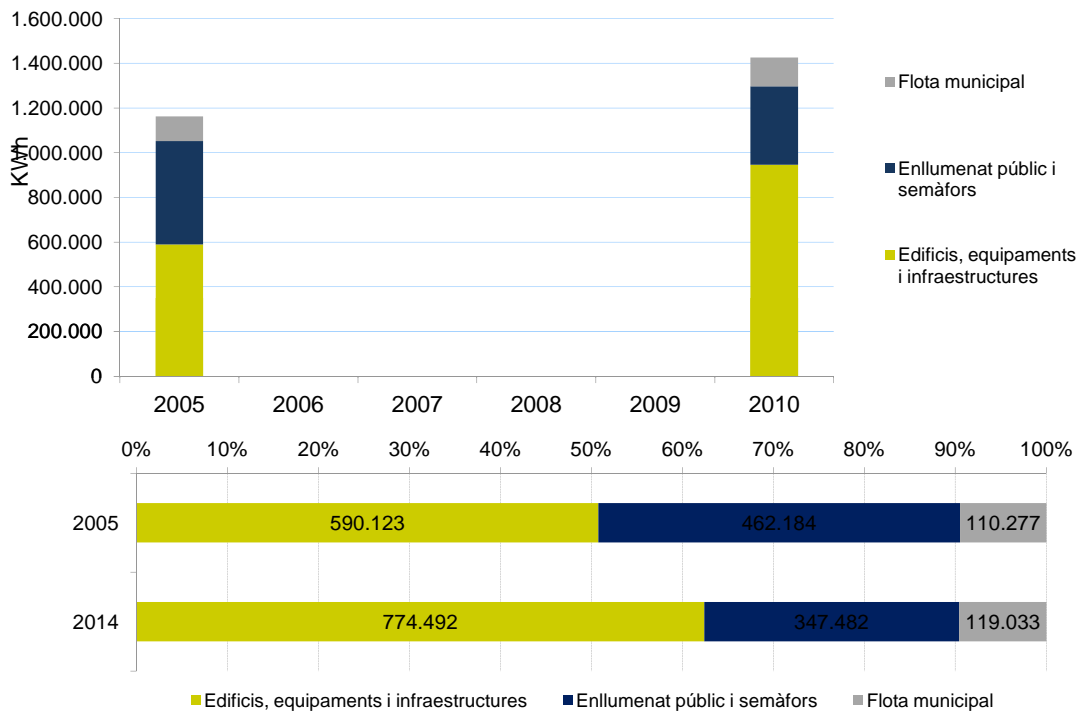
When analyzing the evolution of the emissions for these sectors, it is noted that emissions associated with household have increased, while transport and tertiary sectors and waste management associated GHG emissions have decreased. The GHG emissions that have decreased to a greater extent are associated with transport sector, which have increased by 13%.

3. Town Council final energy consumption (MWh)

a) By energy sources



b) By sectors



Energy consumption (kWh)

	2005	2014	Tendency (% difference respect baseline year)
Buildings, facilities and infrastructures	590.123	774.492	31%
Public lighting and traffic lights	462.184	347.482	-25%
Municipal fleet	110.277	119.033	8%
Total	1.162.584	1.241.008	7%

d) Assessment

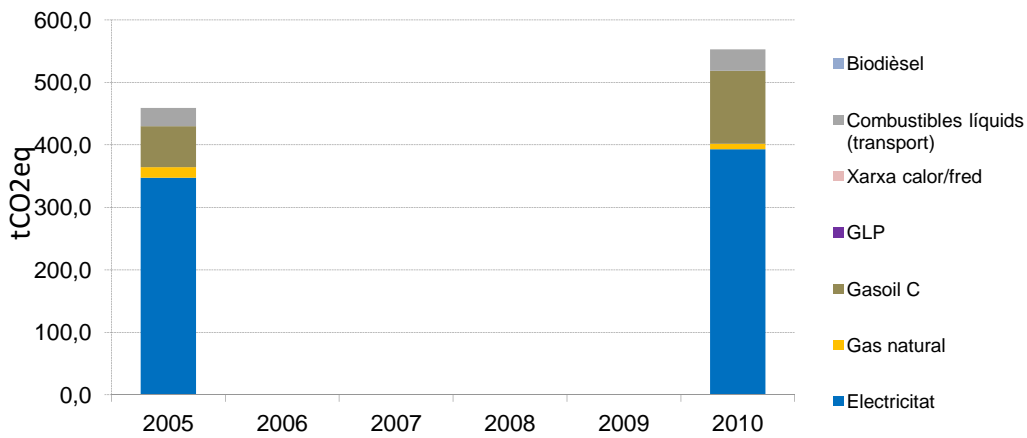
In the period 2005-2014, there was an increase of energy consumption by 7% in the town council scope. This increase is due to an increase in consumption of all energy sources except for diesel C and gasoline that have decreased.

In 2005, the source that had a greater weight in the Town Council consumption was electricity, 62% of consumption, followed by diesel C, diesel A, natural gas and gasoline. In 2014, distribution within different sources changed, with a slight increase in the contribution of electricity and a decline in the contribution of diesel C despite the total consumption.

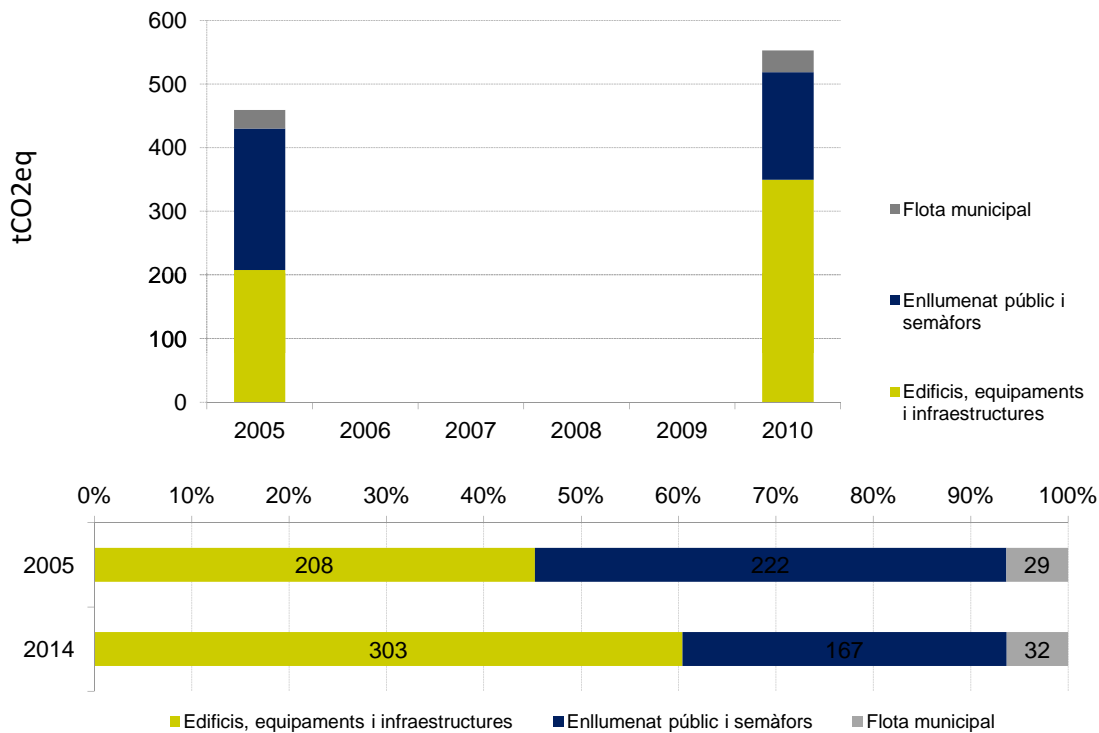
During the period 2005-2014 it is noted that municipal equipments and facilities and the vehicle fleet have increased their consumption, (by 31% and 8%), while the consumption of street lighting has decreased by 25%. During 2005, the sector that has higher energy consumption are municipal buildings and facilities, with 51% of energy consumption, followed by street lighting which account for 40% of consumption and vehicle fleet with the remaining 9%.

4. Town Council GHG emissions (tCO₂eq)

a) By energy sources



b) By sectors



GHG emissions (tCO₂)

	2005	2014	Tendency (% difference respect baseline year)
Buildings, facilities and infrastructures	208	303	46%
Public lighting and traffic lights	222	167	-25%
Municipal fleet	29	32	8%
Total	459	502	9%

d) Assessment

In 2005, the Town Council scope of Espluga de Francolí emitted 459 tCO₂eq into the atmosphere, which represents 2% of total emissions in the SEAP scope. CO₂eq emissions per capita for the Town Council are 0,12 tCO₂eq/inhab.

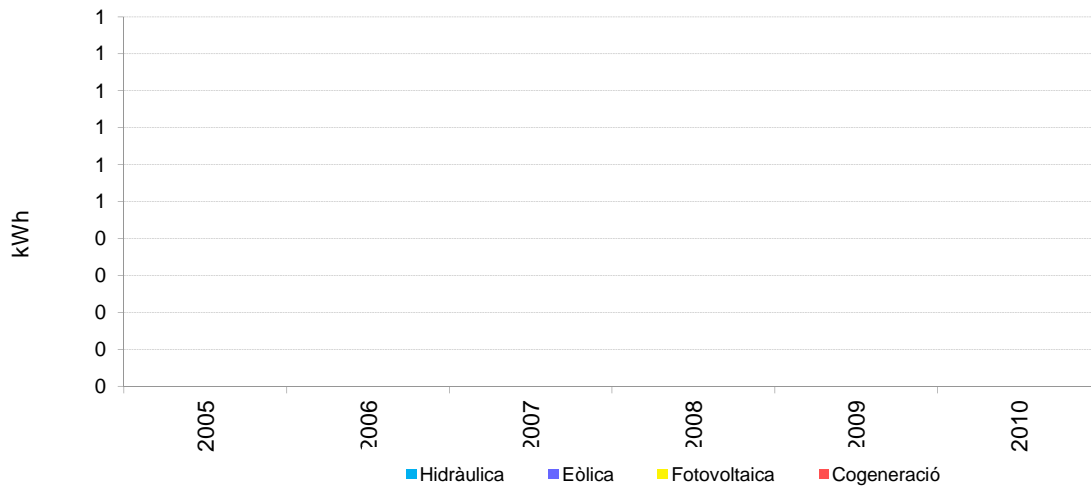
In the period 2005-2014 emissions follow the same trend as energy consumption and increase by 9% over the analyzed period. This increase is mainly due to the increase of all energy sources except diesel C and gasoline that have decreased. Municipal buildings have increased their GHG emissions by 46%, the vehicle fleet has also increased its emissions by 8% and street lighting has decreased its emissions by 25%.

In 2005, the energy source that had a greater weight in the municipality was electricity with 76% in 2005 and 82% in 2014. Diesel C, diesel A, natural gas and gasoline are responsible for the remaining emissions within the Town Council scope.

In 2005, the sector that has more GHG emissions is street lighting (48%), followed by equipments and facilities (45%) and vehicle fleet (6%).

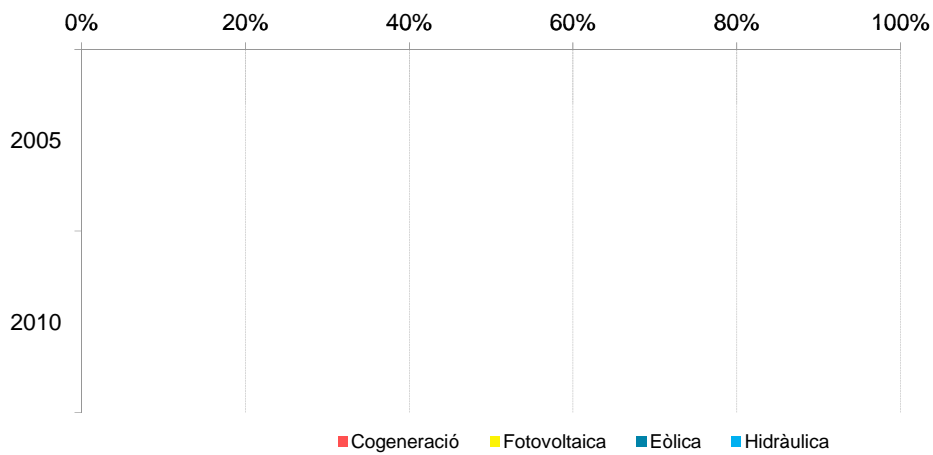
5. Local energy production

Under 20MW



Estimated from power when no specific data on production exist

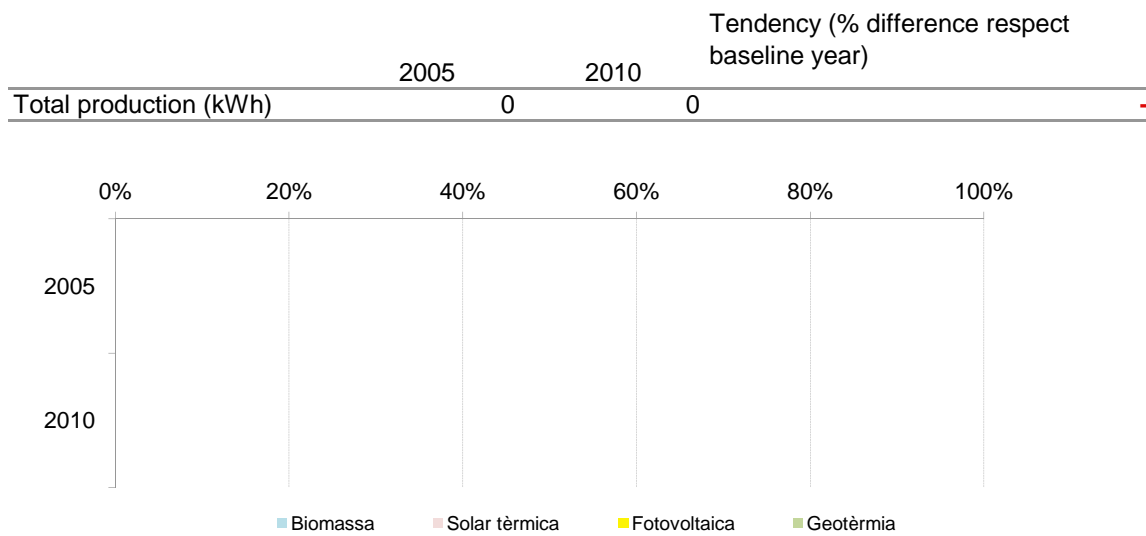
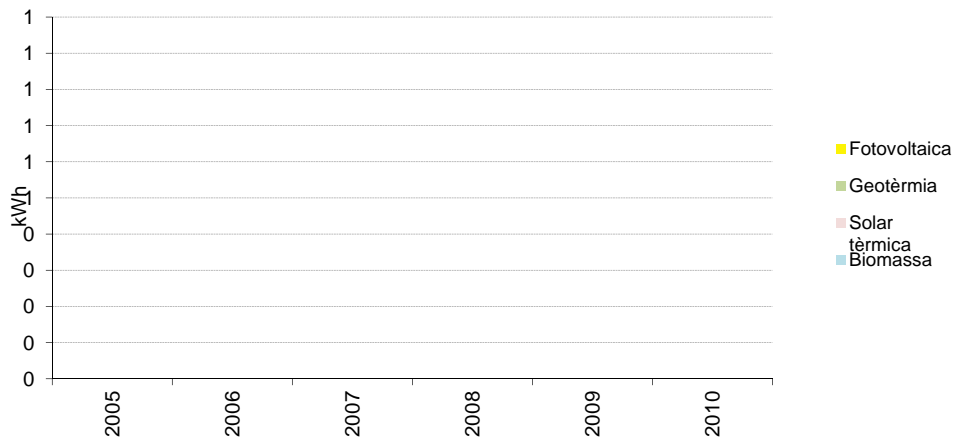
	2005	2010	Tendency (% difference respect baseline year)
Total production (kWh)	0	0	-



d) Assessment

The Municipality currently has no production facilities of renewable energy.

6. Town Council renewable energy



d) Assessment

The Town Council has the will to develop a network of biomass heat, to power various municipal facilities.

7. Strengths and weaknesses

Strengths

SEAP scope:

- The energy consumption has decreased by SEAP period.
- Emissions have decreased by the SEAP period.
- Increased consumption of natural gas at the expense of LPG.

Reduction of emissions related to the transport sector thanks to the presence of more efficient vehicles in the fleet of the municipality.

- The percentage of selective collection of municipal waste has increased considerably for the period considered, thus the emissions associated with waste treatment have decreased by 5% .
- There is an increase in biodiesel consumption by 14% by the considered period.

Town Council scope:

- Reduced consumption of street lighting by improving efficiency in the facilities and reduction of emissions generated.
- Replacement of the use of diesel C in municipal equipment and facilities by natural gas.

Weaknesses

SEAP scope:

- In the household sector is an increase in energy consumption and emissions.
- Increased consumption and emissions related to electricity consumption.

The Municipality currently has no production facilities of renewable energy.

Town Council scope:

- The energy consumption of Town Council has increased in the considered period
- Emissions of Town Council has increased in the considered period.

8. Conclusions

The analysis of the available data for the SEAP scope (2005-2010) found that energy consumption of the municipality has increased by 5% and emissions have decreased by 5% too.

The City Council scope shows an upward trend, with an increase in energy consumption and its related emissions by 7% and 9% respectively.

The decrease in emissions at the municipal level is due to decreased emissions associated to tertiary and transport sector and GHG emissions reduction related to waste management, that have decreased by 5%.

Therefore, actions must be taken to ensure that the 20% goal is achieved. In this regard, the defined plan provides actions to increase energy efficiency and renewable energy presence in the municipality. Specifically, 30 actions have been defined through which it is expected to reach a reduction of 20,8% compared to 2005.

9. Objectives

		20%
Total emissions under SEAP scope, 2005	18.729 tCO ₂ eq 4,91 tCO ₂ /inh.	3.745,79 0,98
Total energy consumption	60.308 MWh 15.812 kWh/inh.	12.061,65 3.162,47
Foreseen saved GHG emissions	3.903,55 tCO ₂ eq	
Estimated percentage of GHE emission reduction	20,8% %	
Number of actions	30,00 actions	

10. Actions

- 1 Municipal energy manager
- 2 Municipal energy accounting system
- 3 Maintenance program of the municipal facilities
- 4 Actions to improve energy efficiency in the Town Hall
- 5 Actions to improve energy efficiency in the Office of Tourism
- 6 Actions to improve energy efficiency in the "Casal"
- 7 Actions to improve energy efficiency in the School Martí Poch
- 8 Actions to improve energy efficiency in the "Antic Hospital"
- 9 Actions to improve energy efficiency in the building reception of the Cave
- 10 Actions to improve energy efficiency in the Nursery School
- 11 Actions to improve energy efficiency in the transport of water
- 12 Environmental concerning campaigns addressed to municipal staff to promote and consolidate good environmental practices

- 13 Green certified electricity purchase by the municipality

- 14 Implementation of Euronet 50/50 in schools and other municipal buildings

- 15 Public Lighting Master Plan development

- 16 Replacing public lighting lamps for more efficient ones (Sodium-vapor)
- 17 Installation of astronomical clocks in public lighting
- 18 Environmental campaigns to promote energy consumption reduction by replacing bulbs, energy appliances, boilers or insulation systems by more efficient ones.
- 19 Tax credits in building permits to implement energy efficiency measures
- 20 Promoting replacement of oil heating boilers by biomass ones.
- 21 Replacing municipal fleet vehicles with more efficient ones
- 22 Eco-driving courses for municipal staff
- 23 Use of electric bicycles by technical services and the police
- 24 Include electric or low-emitting vehicles criteria in technical specifications when making utilities procurement
- 25 Municipal fleet renewal with more efficient vehicles and diversification of the municipality's transport sector
- 26 Installation of electric charging points

- 27 Safe parking for bicycles

- 28 Tax credit for low-emission vehicles (electric, hybrid etc.)

- 29 Campaigns to increase the percentage of recycling rates

- 30 Biomass district heating network for municipal buildings and facilities

