GPP 2020 | procurement for a low-carbon economy

GPP 2020 Future Tender Implementation Plan

Partner name (Country): ICAEN (Catalunya)

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Signed by authorised representative (location, date, name, function, signature):

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Task 2.6 Future planning

On 30th August 2011 the Catalan Government approved the *Catalan Government buildings energy efficiency plan 2011-2014.* On 16th June 2015 the Catalan Government approved an extension and update of the previous Plan for the period 2015-2017 (find attached a copy of the agreement act).

The goals for the period 2015-2017 are:

- Reduction of the energetic expenditure in 2017 by 16% in relation with 2014.
- Reduction of energy consumption in 2017 by 14.3% in relation with 2014.

In terms of CO_2, the optimization of the energy consumption during the period 2015-2017 will allow the reduction of 70.412 tones, meaning a reduction by 22.6% in relation with the emissions in the year 2007.

The energy efficiency investments will be done mainly under energy services contracts, through two different models:

- High investment refurbishment projects: the investment program will be implemented in those buildings with high energy use where the investment is economically feasible under modality of guaranteed savings (Energy Performance Contracting): buildings around an energy cost of 100.000 Euros per year.
- Low investment projects: those buildings with a medium level of energy use and lower potential savings, where significant investments wouldn't be recovered by those savings, fall outside the investment program requirements, and will be implemented. In these buildings, control and management projects (low investment ESCo), aligned with the investment program, will be implemented.

Over a total building pool of 4.000 buildings owned by the Catalan Government, 1.220 potential buildings have been identified as suitable target for implementing energy efficiency measures under energy services contracts: 191 buildings through high investment projects model and 1.029 through low investment projects model.

To this day, ICAEN is in negotiation with the European Investment Bank to obtain funding for technical assistance under the ELENA facility, in order to implement the *Catalan Government buildings energy efficiency plan* in the following three years.

In the framework of the *Catalan Government buildings energy efficiency plan* we are currently working in some tenders that is expected to be published in the coming months:

Subject matter (be specific)	**Publishing date of tender**	**Contract details**	**Ambition level/potential low carbon criteria – please specify in detail!**	**Planned market research/engagement activities**	**Planned methodology for calculating CO_2 savings**
Energy Performance Contract in an office building (*Catalan Housing Agency. Ministry of Territory and Sustainability*)	3T 2016	**Contract type** (supply, framework, service, etc.)**:** Maintenance and energy efficiency service. ESCO – EPC (Energy Performance Contracting) model **Contract length and timing** (if relevant)**:** 10 years **Contract value/volume** (if	**Potential energy savings** (preferably toe)**:** Annual energy consumption base line (2013): – Electricity: 713.944 kWh (61,39 toe) – Natural gas: 97.959 kWh (8,42 toe) Minimum annual guaranteed saving: – Electricity (20%):	See note (*) at the end of the table.	

Subject matter (be specific)	Publishing date of tender	Contract details	Ambition level/potential low carbon criteria – please specify in detail!	Planned market research/engagement activities	Planned methodology for calculating CO_2 savings
		known): Estimated contract value: 971.814,42 €, VAT excluded **Procurement procedure to be followed** (open, restricted, competitive dialogue etc.): Open	142.789 kWh (12,28 toe) – Natural gas (5%): 4.898 kWh (0,42 toe) **Possible measures to achieve energy savings:** Energy saving measures in lighting, energy management and cooling and heating distribution systems. Estimated investment: 70.000 – 120.000 € **Ambition level/potential low carbon criteria:** Around 15-25% energy savings in electricity and 5% in natural gas. CO2 savings are proportional to energy savings.		
Energy Performance Contract in an office building (*Ministry of Agriculture, Livestock, Fisheries and Food)*	3T 2016	**Contract type** (supply, framework, service, etc.): Maintenance and energy efficiency service. ESCO – EPC (Energy Performance Contracting) model	**Potential energy savings** (preferably toe): Annual energy consumption base line (2015): – Electricity: 390.048 kWh (33,53 toe) – Natural gas: 156.499	See note (*) at the end of the table.	See note (**) at the end of the table.

Subject matter (be specific)	Publishing date of tender	Contract details	Ambition level/potential low carbon criteria – please specify in detail!	Planned market research/engagement activities	Planned methodology for calculating CO_2 savings
		Contract length and timing (if relevant)**:** 5 years **Contract value/volume** (if known)**:** Estimated contract value: 114.228 €, VAT excluded **Procurement procedure to be followed** (open, restricted, competitive dialogue etc.)**:** Open	kWh (13,45 toe) Minimum annual guaranteed saving: – Electricity (40% in lighting and 10% the rest): 91.588 kWh (7,86 toe) – Natural gas (10%): 15.650 kWh (1,35 toe) **Possible measures to achieve energy savings:** Energy saving measures in lighting and energy management. **Ambition level/potential low carbon criteria:** Around 40-50% energy savings in electricity and 10-15% in natural gas. CO2 savings are proportional to energy savings.		
Energy Performance Contract EPC in an old people's home (*Residència Creu de Palau – Ministry of Labour, Social*	4T 2016	**Contract type** (supply, framework, service, etc.)**:** Maintenance and energy	**Potential energy savings** (preferably toe)**:** Annual energy consumption	See note (*) at the end of the table.	See note (**) at the end of the table.

Subject matter (be specific)	Publishing date of tender	Contract details	Ambition level/potential low carbon criteria – please specify in detail!	Planned market research/engagement activities	Planned methodology for calculating CO_2 savings
Affaires an Family)		efficiency service. ESCO – EPC (Energy Performance Contracting) model **Contract length and timing** (if relevant)**:** 10 years **Contract value/volume** (if known)**:** Estimated contract value: 1.631.258 €, VAT excluded **Procurement procedure to be followed** (open, restricted, competitive dialogue etc.)**:** Open	base line (2013): – Electricity: 1.342.729 kWh (115,45 toe) – Natural gas: 2.380.035 kWh (204,65 toe) Minimum annual guaranteed saving: – Electricity (15%): 201.409 kWh (17,32 toe) – Natural gas (10%): 238.004 kWh (20,45 toe) **Possible measures to achieve energy savings:** Energy saving measures in lighting, energy management and cooling and heating distribution systems. **Ambition level/potential low carbon criteria:** Around 15-25% energy savings in electricity and 5-10% in natural gas. CO2 savings are		

Subject matter (be specific)	Publishing date of tender	Contract details	Ambition level/potential low carbon criteria – please specify in detail!	Planned market research/engagement activities	Planned methodology for calculating CO_2 savings
			proportional to energy savings.		
Construction, maintenance and energy management of 26 biomass boilers and implementation of energy efficiency measures with guaranteed savings (*different buildings of the Catalan Government*)	4T 2016	**Contract type** (supply, framework, service, etc.)**:** Construction and energy supply service with biomass, maintenance and energy efficiency service. ESCO model **Contract length and timing** (if relevant)**:** 15 years **Contract value/volume** (if known)**:** **Procurement procedure to be followed** (open, restricted, competitive dialogue etc.)**:** Open	**Potential energy savings** (preferably toe)**:** Annual energy consumption base line: – Electricity: 8.995.282 kWh (773,45 toe) – Thermal energy (natural gas, heating diesel or LPG): 11.717.850 kWh (1.007,55 toe) Minimum annual guaranteed saving: – Electricity (10%): 1.171.785 kWh (77,35 toe) Change of fuel: to natural gas heating diesel or LPG to biomass – 11.717.850 kWh (1.007,55 toe) **Possible measures to achieve energy savings:** Energy saving measures in		Energy production with biomass will be measured so it will be easy to calculate the amount of fossil fuels substituted and the CO2 emissions avoided. Used ratios: LPG: 2,96 kg CO2/kg Natural gas: 2,15 kg CO2/Nm³ Heating diesel: 2,79 kg CO2/ l Biomass: 0 kg CO2/kg. For electricity savings see note (**) at the end of the table.

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			lighting, energy management and change of heating fossil fuels into biomass. **Ambition level/potential low carbon criteria:** Around 10-15% energy savings in electricity. CO_2 savings are proportional to energy savings. 100% substituting of heating fossil fuels into biomass. Estimation of CO_2 reduction: 2.079.064 kg CO_2.		

(*) **Planned market research/engagement activities**

The tenders included in the planning are under the framework of the *Catalan Government buildings energy efficiency plan 2011-2014*, approved by the Catalan Government on 30th August 2011, and updated for the period 2015-2017, approved also by a governmental agreement on 16th June 2015.

In the beginning of the Plan, a tender market research was done in relation to different models of existing energy services contracts, and Energy Performance Contracting model was chosen because it guarantees energy saving and therefore CO2 emission savings.

Besides, previously to the implementation of the Plan, the tender model documents were elaborated in collaboration by stakeholders of the ESCo sector, as ESCo companies, building owners, building managers and end users. This broad consensus generated confidence among stakeholders and so in this market.

On the other side, the market of public buildings owned by the Catalan Government is limited.

In relation to decide what kind of investments and EPC contract was going to be implemented, the buildings were divided into three different types:

- Type 1 (High energy use): Investment projects under modality of guaranteed savings (EPC).
- Type 2 (Medium level of energy use): Low investment projects; only applicable for remote energy managing.
- Type 3 (Very short potentiality of savings): EPC not applicable. Investments not recovered by savings.

(**) Planned methodology for calculating CO2 savings

All bidders will have to present in their offer a preliminary proposal of a Plan of Measure & Verification (M&V) of energy performance according to the established IPMVP EVO 10000-1:2009(CAT) protocol (www.evo-world.org). Contractor will prepare within a maximum lead time of one month a definitive M&V Plan.

So energy savings will be measured and CO_2 savings are easily calculated from energy savings with the following ratios:
Ratios:

- 0.25 kg CO2/kWh electricity
- 0.201 kg CO2/kWh natural gas
- 0.263 kg CO2/kWh diesel fuel