

Incentivising energy use improvements in sports centres

Municipality of Getxo (Basque Country, Spain)

Background and procurement objectives

The [Municipality of Getxo](#) is home to 78,000 people, and is located in the Basque Country, Spain. It is one of 25 municipalities which make up the Greater Bilbao region.

In 2014, [Getxo Kirolak](#) (Getxo Sports) – the municipal body that manages municipal sports centres and facilitates sports, leisure and health activities for the citizens of Getxo – began a long term process to improve the energy performance of the town's three municipal sports centres (Fadura, Andra Mari, and Gobela). This included a series of works and investments in energy saving and renewable energy in order to modernise sporting facilities and reduce the facilities' contribution to CO₂ emissions.

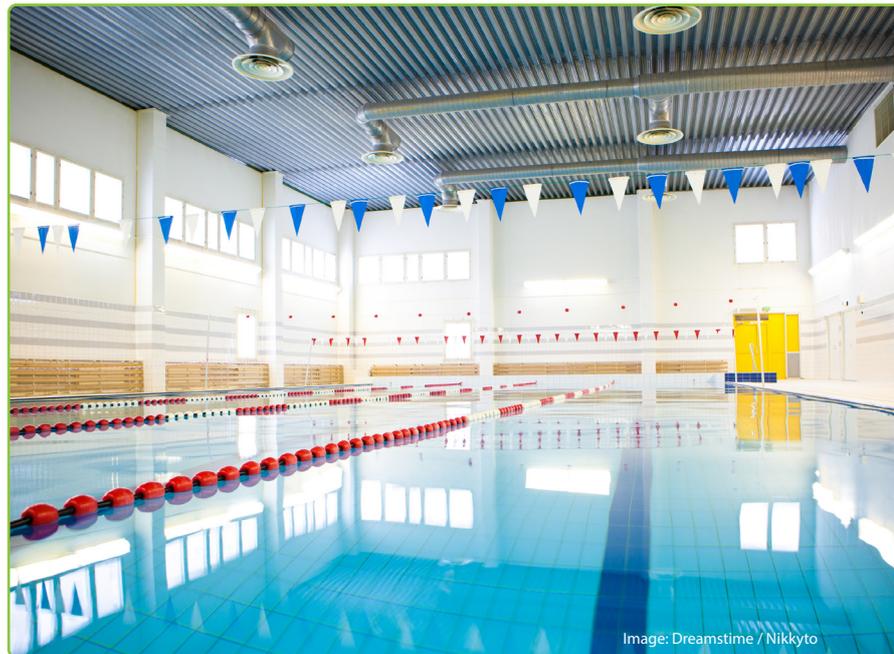
Getxo Kirolak decided to combine a series of measures and investments in energy saving and renewable energy into one service contract for the supply and management of energy, energy efficiency improvements, and maintenance of the facilities. The goal was to obtain optimal results in the field of energy efficiency, without loss of benefits for Getxo Kirolak and the sport centres' users.

The contract, which began in 2015 and runs until the end of 2021, covers just under 50,000m² of facilities, including swimming pools (both indoor and outdoor, from small heated pools to large Olympic-sized swimming pools), air-conditioned gyms and sport courts, changing facilities and other amenities.

Procedure

Getxo Kirolak used a competitive dialogue procedure to procure energy efficient services for its sports centres. In the first stage, a tender notice was published, which included an overview of the facilities covered by the contract, their current electricity, gas and water use, and details of the equipment being used to regulate and measure energy use. Minimum functional requirements were also defined (such as the acceptable temperature range for comfort). A call for a competitive dialogue procedure was published, to which six suppliers responded and five were selected. Selected suppliers were invited to apply with their initial solutions, against which their ability to meet Getxo's complex needs was assessed.

In stage two, bidders were asked to define in detail how they would satisfy Getxo Kirolak's needs from an operational point of view, as well as meet the energy efficiency requirements. This process involved several cycles of dialogue with bidders. The dialogue process was organised to ensure equal treatment and confidentiality. During stage two, solutions which did not meet the criteria set in the tender documents were discarded.



In the tender documents, the contracting authority did not specify what renewable energy investments should be made. Instead, it asked bidders to propose measures which would achieve at least a 10% annual reduction of the initial energy used by the facilities, without reducing the comfort of the users. Any financial savings in energy costs achieved can be kept by the supplier.

After the dialogue process, bidders were invited to submit final offers, which were evaluated using the award criteria described below.

Criteria used

Subject matter of the contract:

Improvement of the energy efficiency of the Getxo sports facilities.

Minimum requirements:

Comfort

Solutions should ensure the following comfort levels are maintained:

- Indoor heated room temperature: 20-22 °C
- Indoor cooled room temperature: maximum 25 °C
- Covered swimming pools: 27-28 °C

Sanitation

Hot water must be provided for sanitary use, complying with requirements of current legislation, especially rules related to the prevention of legionella.

Ventilation and indoor air quality should comply with the minimum levels established in Spanish Technical Building Code (CTE) [HE DB-HS3](#) for indoor air quality or equivalent.

Lighting level

The current lighting level in each space should be ensured. In the event these levels do not comply with the values established in the [UNE 12464-1](#) standard and the limit value of energy efficiency (VEEI) of the CTE [HE DG-HE3](#) or equivalent, the awardee should carry out appropriate improvements.

Award criteria:

The Most Economically Advantageous Tender (MEAT) was assessed according to qualitative criteria (49 points), and quantitative criteria (51 points).

Qualitative criteria:

- Description of management process (37 points), including energy management (6 points), maintenance (27 points), and guarantee on equipment (4 points).
- Description of proposed works for the improvement and renovation of energy consuming facilities (8 points) and investments in energy saving and renewable energy (4 points).

Quantitative criteria:

- Economic offer (40 points).
- Investments associated with energy saving and renewable energy (4 points): highest points were awarded to the offer proposing the highest investment volume. The rest of the offers were scored using the formula P (points) = $4 * (\text{value of investment proposed excluding VAT} / \text{value of highest investment among accepted offers})$.
- Environmental impact (3 points): the offer proposing the largest CO₂ emission reduction (measured against 2013 reference values) received 3 points. The rest of the offers were scored using the formula $P = 3 * ((\text{VRETA}-E)/(\text{VRETA}-mE))$, where VRETA equals the 2013 level of CO₂ emissions, E equals the value in tonnes of CO₂ to be saved by the proposal, and mE equals the value in tonnes of CO₂ of the lowest level of emissions below VRETA offered by a bidder.

"The energy savings and efficiency improvements implemented have exceeded the 10% annual improvement required by the contract. By the time the first independent evaluation was carried out during the first year of the contract (in 2015), energy savings of 23% had been achieved. By 2019, this had reached 33%."

Contract performance clauses:

Verification of the results obtained must be carried out twice per year, both in terms of energy savings and compliance with the functional indicators and of comfort. This is carried out by an independent company selected by the contracting authority.

Results

The contract has been running since 1 January 2015 and will end on the 31 December 2021 (with the option of one additional year). The winning bidder provides energy management and improvement services for approximately €1.2 million per year (including VAT), or €8.4 million over the total length of the contract.

Between 2013 and 2019, annual financial savings of approximately €55,000 were observed, although it is important to remember that energy prices also fluctuate, so not all savings can be directly attributed to energy saving measures. The financial savings can be kept by the supplier, who is responsible as part of the energy management services for paying the sports facilities' energy bills, as such, they are incentivised to continually reduce energy use as much as possible.

Environmental impacts

To date, many energy efficiency and renewable energy generation improvements have been carried out as part of this contract, including:

- The rehabilitation of the mixed glass roof of the Olympic-sized swimming pool, in order to reduce heat loss.
- Improvements in the lighting system in the Fadura sports complex's main hall area, main building changing rooms, the indoor swimming pool area, the table tennis and changing rooms.
- Implementation of gas leakage detection systems in the Thermal Fadura, Athletics and CD Getxo boiler rooms
- Implementation of a biomass boiler to produce thermal energy required for heating the pools. The boiler uses pellets made of wood from public space maintenance.
- Installation of a dehumidifying heat pump in the Gobela swimming pool area, which will substantially reduce energy demand, among other things, due to its capacity to recover the thermal energy available in the extracted air.
- Installation of capacitor banks in Gobela, which are used to store electricity and smooth the flow of electricity.
- Replacement of Andra Mari's incandescent lighting with low-energy lamps.

The energy savings and efficiency improvements implemented have exceeded the 10% annual improvement required by the contract. By the time the first independent evaluation was carried out during the first year of the contract (in 2015), energy savings of 23% had been achieved. By 2019, this had reached 33%.

Through the combination of renewable energy, using biomass (wood pellets) and solar thermal energy, and energy efficiency improvements, the total carbon footprint of the complex in 2018 was 2,447 tonnes of CO₂. This includes energy efficiency savings of 125 tonnes of CO₂. In 2019, the total carbon footprint of the complex was reduced further to 1,704 tonnes of CO₂, including savings of 226 tonnes CO₂. The solar thermal facility on the Gobela site had been out of use at the start of the contract but has now been repaired and now also contributes to the heating.

Lessons learned

Using a competitive dialogue procedure allowed Getxo to incorporate the experience and suggestions of suppliers and experts in the contracting process.

By combining energy use, efficiency improvements and maintenance into one service contract, Getxo has been able to streamline its approach to improving the environmental performance of its facilities.

Understanding energy use and the CO₂ produced as a result is essential for defining and monitoring improvements. This includes understanding how much energy was being used before the start of the contract, in order that improvements can be measured.

The next contract will aim to have 35% of the energy consumed self-generated through sustainable, renewable and green production systems.

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For related information, please see European [GPP criteria for Office Building Design, Construction and Management](#) and the [Technical Background Report](#) and [Procurement practice guidance document](#).