

Greening the construction, renovation and design of buildings in the Basque Country, Spain

Background

SPRILUR S.A. is a public authority, which is integrated in the Department of Economic Development and Competitiveness of the Basque Government. It was established in 1995 to improve the business environment of the 3 regions of the Basque Country: Álava-Araba, Bizkaia and Gipuzkoa - creating employment and enhancing economic competitiveness.

SPRILUR's intervention in the business market is aimed at guaranteeing the provision of public land and sufficient good quality industrial buildings to meet demand, while promoting industrial and business activity as a source of employment and wealth in the Basque Country. SPRILUR leads and participates in a number of projects related to energy, eco-innovation and sustainable development. It engages in the internal and external transfer of knowledge and experience through agreements with state-level societies, with the aims of both studying and seeking sustainable solutions.



Procurement objectives

Since 2009, within all tenders for the construction, restoration and design of industrial buildings (from the design stage to the execution of works), SPRILUR include as part of the award criteria, the degree of sustainability of the proposed project, which is based on the application of guides for the sustainable development of industrial buildings and urban development projects.

Criteria used

Applicable works: Construction, renovation and design of urban development projects and industrial buildings

For each tender for construction, restoration and/or design projects, from design-stage architectural services, to the execution of works, the tender documents require bidders to submit an assessment of the environmental quality of the proposed design, restoration or construction proposal.

The guides contain good practice measures to reduce the impacts in a number of key environmentally sensitive areas (explained below in greater detail) that occur during the different stages of the building's lifecycle i.e. the design, construction, maintenance, and end of life stages.

When a bidder applies the aspects set out in the guides, the end result is a document, which includes all the measures they are agreeing to implement in the project, in addition to a weighted environmental sustainability value.

For the assessment, bidders have to use two documents specified in the tenders and available on SPRILUR's website: the [Guide for the Sustainable Development of Urban Developments](#) and the [Guide for Environmentally Sustainable Industrial Buildings](#) (both in Spanish). For each good practice measure the guide includes: an explanation of its purpose, a description of the potential environmental impact, the construction phase where it is relevant, a quantitative value based on its environmental relevance and a procedure which enables the bidder to quantify the degree of compliance and makes it possible to weigh and obtain the total environmental sustainability value of the proposed project or construction proposal. In the tender, each bidder is required to submit:

- 1) the report resulting from applying the guides
- 2) the total points obtained (environmental sustainability value)
- 3) the justification of the measures not applied or not applicable based on their project or proposal.

This process is assisted with the help of software available on SPRILUR's website, which enables bidders to easily prepare the requested documents. This computer programme is directly linked to the guides and acts as a tool for applicants.

Environmental impacts

40-50% of globally utilised raw materials are transformed annually into materials and products which are used in the construction industry. Buildings account for a major share of energy consumption and greenhouse gas emissions in the European Union, while 40% of the total amount of waste generated in Europe annually derives from construction and demolition prior to recovery. Most of this waste can be recycled or re-used. Construction work can also have significant impacts on local water reserves due to high wastewater generation during construction.

In addition, the construction process itself can have considerable impacts on energy and water resources, as well as on acidification and land use. Transport and waste streams are other important environmental issues to consider during the construction process. During the use phase, the energy consumption of a building represents the most significant environmental element, accounting for about 40% of total European energy consumption. Buildings are of critical importance for sustainable development in Europe.

As each tender carried out by SPRILUR takes into account the above list of environmental categories, the environmental impact of each tender is significantly reduced.



The good practice measures are based on the below impact areas:

Environmental impact categories	Definition
Materials used	Reduction of non-renewable raw materials
Energy consumption	Reduction of energy consumption during the life cycle and / or generation of energy from renewable sources
Water consumption	Improved water management and quality
Atmosphere	Reduction of atmospheric emissions (gases, pollutants, dust, heat, lighting, noise, etc.)
Waste	Improved management of waste and / or reduction of waste generated
Land use	Reducing the amount of land occupied
Accessibility and transport	Promoting sustainable mobility and transport
Landscape	Integrating the natural landscape of the building and its facilities
Risks and security	Minimising both natural and man-made risks
Ecosystems and biodiversity	Enhancing the functionality of the natural areas and increasing the degree to which biodiversity is conserved
Climate Change	Adaptation to the impacts of climate change

The sustainability value (ranging between 0-100) is calculated based on the total amount of points received for each of these impact categories. This value places each project/proposal on a gradation of 7 levels, in a similar way to the energy efficiency label (see below). If a bidder receives a score of I., it demonstrates that their project/proposal incorporates a high number of environmental measures, whereas, if a bidder receives a score of VII., it demonstrates that the project includes few environmental considerations. In this way, the environmental impact of the project proposed by each bidder is not marked against those of other potential contractors, but against established environmental guidelines and requirements.

Score	Points
I.	100 - 85 points
II.	84.99 - 71 points
III.	70.99 - 57 points
IV.	56.99 - 43 points
V.	42.99 - 29 points
VI.	28.99 - 15 points
VII.	14.99 - 0 points

For constructions works, bidders have to provide:

- An environmental management plan for the site with assessment of potential environmental aspects
- A management approach for how the bidder intends to dispose of construction and demolition waste

The contract is then awarded based on price and other weighted award criteria, including the environmental sustainability value, which accounts on average for 10% of the total award criteria.

In the tendering of construction works, sometimes an additional award criterion for alternatives that improve the quality, durability and/or efficiency of materials or construction methods without increasing the costs is added.

An example of how points are distributed is presented below:

Award criteria based on the environmental protection of the proposal (5 points)

- Provision of the document resulting from the application of the guidelines, environmental management plan for the site and management approach for how to dispose of construction and demolition waste (2 points)
- Correct explanation of the measures implemented, not implemented or not applicable (2 points)
- Higher environmental sustainability value, which ensures a higher number of measures implemented (1 point)

Alternatives that improve the quality, durability and/or efficiency of materials and construction solutions

Bidders may get points for proposing more sustainable materials and construction solutions without generating a cost increase:

- For two major improvements (5 points)
- Additional four or more improvements (1-5 points, depending on their relevance)

Contract performance clauses:

The documents resulting from the guides, together with the environmental management plan and the management approach for the disposal of construction and demolition waste (for construction works tenders), which are proposed by the successful bidder, are incorporated into the final contract.

The winning bidder has to ensure that it applies all of the measures that they selected from the guide in the actual operation of the contract. In the case of a contract to develop a construction, design or renovation project, SPRILUR holds weekly meetings with the winning bidder to prepare the technical specifications for the construction tender, based on their proposals and recommendations from SPRILUR that improve the environmental characteristics of the project without increasing the cost (such as the use of wall division and other construction elements with recycled concrete or higher insulation values in walls and ceilings).

Results

The [Guide for the Sustainable Development of Urban Development Projects](#) was developed by SPRILUR in collaboration with IHOBE, while the [Guide for Environmentally Sustainable Industrial Buildings](#) was developed by IHOBE in collaboration with SPRILUR.

The guidelines and method are increasingly used by other public authorities in the Basque Government, which further increases the positive environmental impact.

SPRILUR are now finishing a certification system for urban development projects (called the DURBE label or sustainable urban development label) that would allow SPRILUR staff to verify that all sustainability measures in urban developments have been applied and produce a certificate similar to the energy efficiency certificate for buildings for communication purposes. IHOBE is likely to use this certification for its buildings also.

Lessons learned

SPRILUR realised that introducing such a system needs to be a step-by-step process, so that companies can adapt to the process and be in a position to meet the requirements. For example, the organisation realised that it was essential to provide training to bidding companies so that they understood correctly how the guide works and understood how to use it.

The importance of understanding the market and the environmental alternatives available was also recognised by SPRILUR, especially as contractors were often unaware of such options.

For more information, please see European GPP criteria for [Construction](#).

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GPP Criteria: Construction