



Company Profile

Legal Name: Sistemes avançats d'energia solar tèrmica, SCCL

Registered Trademark: AIGUASOL

Headquarters: Barcelona

Company Description:

Established in 1999, AIGUASOL (www.aiguasol.coop/en) is an SME staffed with a team of over 20 professionals with a high level of technical and scientific experience. They include engineers, PhD holders, architects and physicists with considerable experience both in private companies and research centres. AIGUASOL is a locally based, globally active company. We have offices in Barcelona and the Basque Country, as well as a presence in Santiago de Chile, Lisbon and Bogotá. The head offices take on projects throughout Europe, Asia and Africa.

Our aim is to create indoor and outdoor spaces and to devise exceptional, comfortable and efficient systems and processes that exert the least possible impact on the environment. By applying best practices in the creation process, we believe we can improve human experience while reducing the resources used. On the strength of our extensive knowledge, experience, neutrality and rigor, we see sustainability as a key factor in getting people to give their all and feel comfortable in their surroundings.

AIGUASOL works from a variety of perspectives according to its clients' needs so as to offer appropriate solutions and optimum designs.

Consulting services. Proposing solutions and allowing for conclusive and quantifiable decision-making to achieve the desired objectives.

Engineering services. Developing detailed solutions from the early stages through to executive designs, implementation and subsequent monitoring.

R&D services. Designing and marketing new technologies, methodologies and processes rooted in energy efficiency and renewable energy sources.

Software services. Distributing, providing training in and maintaining simulation software and developing custom-made tools.



AIGUASOL Solutions

Over the past nineteen years, AIGUASOL has accumulated a wealth of experience in the fields of energy efficiency, renewable energy systems and environmental quality, both in commercial project implementation, energy planning, policy analysis and the appraisal of R&D&I projects, as key components of a common mission: to reduce greenhouse gas emissions in the framework of a circular economy, creating healthy and sustainable environments. The different solutions are client- and user-oriented, taking their specific requirements, needs and objectives into consideration.



Energy in buildings.

Studies and projects in both new and existing residential buildings and all manner of large consumer tertiary buildings.



District networks and large-scale generation.

Feasibility, design, implementation and monitoring of district heating and cooling (DHC) systems and other large-scale energy production systems.



Energy policy.

Development of energy plans, investment strategies and subsidies as well as local, regional and national regulations.



Energy rehabilitation.

Approaches, definition and dimensioning of energy rehabilitation activities in residential and tertiary buildings, whether a client's own investment or a third-party ESCO investment.



Energy management systems.

Design and implementation of smart energy management systems: optimised management, preventive maintenance, results-oriented rehabilitation and benchmarking.



Net zero-energy buildings (NZEBS) and environmental certification.

Concept, design, implementation and monitoring of net zero-energy buildings (NZEBS), private environmental certification and public energy certificates.



Energy intensity in industry.

Analysis and projects to reduce energy intensity and emissions in industrial processes and facilities.



Other client-oriented solutions.

Other client-oriented solutions that require the calculation and optimisation of energy consumption and energy costs.



R&D&I solutions.

Services for applied research in energy-related issues such as the development of specific elements, global solutions or product lines, the search for better building solutions and more.



Indoor Environmental Quality (IEQ)

Development of strategies to create healthy and comfortable buildings, by incorporating Indoor Environmental Quality requirements and standards in the building's design. Specific consulting service as well as CAI and WELL certifications.



Outdoor Environmental Quality (OEQ)

Development of strategies to improve Outdoor Environmental Quality with a view to promoting healthy and comfortable urban environments. Implementation of monitoring and communication projects on air quality (LIQUENS).

AIGUASOL works for real estate developers, property owners, building contractors, ESCO and investment fund companies, professionals (architects and engineering companies), professional associations, public agencies, industries and manufacturers, the primary sector, public services and research centres.



Indoor Environmental Quality

Indoor Environmental Quality (IEQ) encompasses the conditions inside a building (air quality, lighting, thermal conditions and ergonomics) and their effects on occupants or residents. Strategies and solutions for enhancing IEQ seek to protect human health and to improve people's quality of life and well-being. In addition, other benefits, derived from these improvements, can be gained, such as increased productivity at work, enhanced learning in teaching environments and the increased value of the spaces and buildings concerned.

AIGUASOL, as a company concerned about the health of the building and its occupants, is also a member of ACESEM (the Catalan Association of Companies Specialised in Sick Building Syndrome) with which it collaborates to disseminate the needs for and benefits of good indoor environmental quality.

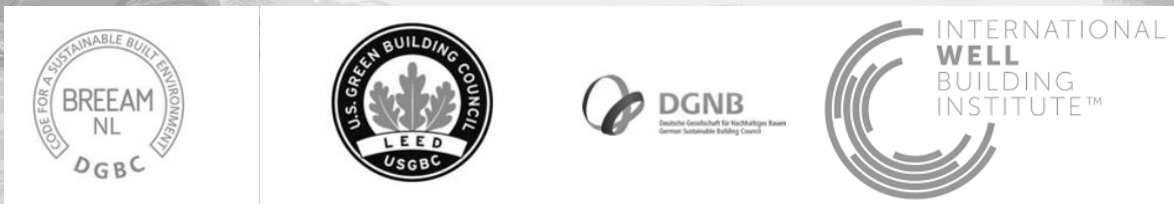
Indoor environmental quality consulting service in the design phase (new and rehabilitated buildings)

AIGUASOL offers a consulting service in IEQ to building design teams, to integrate strategies and solutions from the outset, which is the key time to leverage the utmost potential and optimum performance from investing in these improvements.

AIGUASOL applies a participatory and integrated working methodology from the very start of the process, which allows different perspectives to be borne in mind, especially that of the user, the main beneficiary of enhanced indoor environmental quality. We have the technical expertise and tools required to advise architects, building contractors, developers and local authorities as well as interior designers or other agents involved in construction, in terms of the most appropriate strategies and solutions (materials, installations, equipment, spaces, etc.) to ensure good indoor environmental quality in the newly-built or rehabilitated building.

Moreover, the proposed solutions are put forward taking other criteria as relevant as energy efficiency and environmental impact into consideration.

We also offer different certification processes, since we have extensive experience in private certification consulting, including BREEAM, DGNB and LEED. Additionally, we integrate innovative building standards such as WELL, offering a comprehensive and holistic vision from the early stages to guarantee the optimum achievement of the objectives pursued.



We take care of all the administrative procedures with third parties, both in terms of regulations and matters with international bodies responsible for approving private certifications.



Indoor environmental quality consulting service in the operating phase (existing buildings)

AIGUASOL fosters the improvement of the environmental conditions inside existing buildings (during its operating phase) through the provision of comprehensive guidance on indoor environmental quality. This service ranges from the monitoring and evaluation of the main indoor pollutants to appraisal, participatory design and support in the implementation phase of the most efficient and innovative strategies to improve indoor environmental quality. Consulting can be performed in any type of building: offices, schools, hospitals, shops, industrial environments and public buildings. The following stages are included:

1. Basic diagnosis:
 - a. air quality (most common indoor pollutants)
 - b. thermal comfort
 - c. acoustic comfort
 - d. lighting comfort
2. Detailed diagnosis, as needed
3. Strategic plan for improvements and description of technical solutions to be implemented
4. Support and implementation of improvements

The consulting service can be executed in line with UNE standard 171330 (required in RITE 2013, the Spanish regulation governing thermal installations in buildings) in a customised manner, according to the needs of the building and the client.

Ad-hoc services

- Guidance to improve the comfort and health conditions of workers, beyond the requirements set forth in the current legislation pertaining to Occupational Risk Prevention (section on indoor environmental quality). It differs from the consulting service as it is smaller in scope and focuses on an improvement of less potential and faster implementation.
- Building simulations prioritising one of the areas of indoor environmental quality (air quality, thermal comfort, acoustics or lighting). This service can take the form of ad-hoc, differentiated support for a specific project, facilitating decision-making.
- Appraisals of indoor environmental quality according to the provisions of RITE 2013 and UNE standard 171330 (a smaller-scale service that the consulting company can also include in the monitoring of said regulation).
- Development and implementation of an ad-hoc or on-going monitoring plan to control indoor air quality.
- Development of state-of-the-art analysis and technology foresight in indoor environmental quality.
- Market research into indoor environmental quality products.
- Search for funding for indoor environmental quality improvements.
- Development of technical guides.



Some Success Stories

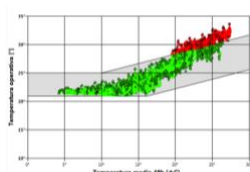


Title: “Rehabilita'm! fes-me eficient i saludable” (Rehabilitate me! Make me healthier and more efficient). Guide that outlines energy-saving strategies by setting standards of comfort and health inside buildings.

Client: Barcelona City Council

Year: 2018.

Location: Barcelona

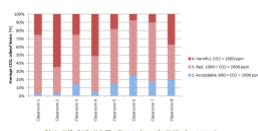


Title: Workshops on strategies to improve indoor environmental quality in secondary schools

Client: Government of Catalonia's Escoles Verdes (“Green Schools”) Programme

Year: 2017.

Location: Barcelona



Title: Basic monitoring of indoor environmental quality in different schools across Catalonia

Client: Government of Catalonia's Ministry for Education

Year: 2016.

Location: Province of Barcelona



Title: Design, optimisation and execution of HVAC and the provision of guidance and appraisals for the new Charmex corporate building to earn the LEED Gold certification

Client: Charmex Internacional

Year: 2015.

Location: Getafe



Title: Energy optimisation of a new residential building pursuing the LEED Gold certification in Colombia

Client: Arias Serna y Saravia SAS

Year: 2015.

Location: Cartagena, Colombia



Title: Optimisation and analysis for the Puig Tower to earn the LEED Gold certification

Client: ERF - Estudi Ramon Folch i Associats, S.L.

Year: 2013.

Location: Hospitalet del Llobregat



Title: Validation of the integral energy rehabilitation actions of a hotel in Barcelona pursuing the LEED Gold certification

Client: Hostal Grau

Year: 2013.

Location: Barcelona



Title: Energy design criteria and validation for the new Hostal Empúries to earn the Cradle to Cradle certification

Client: Hostal Empúries

Year: 2013.

Location: L'Escala (Girona)



Title: Validation of the new Ferrer pharmaceutical laboratories pursuing the LEED Gold and NZEB building certifications

Client: Eco Intelligent Growth

Year: 2012.

Location: Hospitalet del Llobregat



Title: Energy optimisation of the building and design of the HVAC system for an assisted living facility, crèche and primary health-care centre.

Client: European Commission – Barcelona's Municipal Board of Housing

Year: 2010.

Location: Barcelona

2011 Endesa Sustainability Award for the Most Sustainable Non-Residential Development