



Green Building Solutions Awards 2015

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CLIMATE SOLUTIONS

FOR THE COP21

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Agence de l'Environnement
et de la Maîtrise de l'Énergie



REGIONS OF
CLIMATE ACTION



Construction21

The social media for sustainable building & cities

THE CROSSROADS BETWEEN GREAT POLICIES AND PRACTICAL ACTIONS

EDITORIAL



Christian Brodhag
President of Construction21

The stake behind the COP21, to maintain global warming at 2°C, represents a very ambitious goal. It implies a drastic reduction of CO2 emissions and must even aim for **zero emission by the end of the century**, according to scientists.

The level of commitment of countries to reduce their emissions is at the center of the negotiations in Paris. The Agenda of the solutions comes in addition to these commitments. This agenda includes cooperative initiatives, involving governmental and non-governmental stakeholders (companies, local governments, international organisations, NGOs,...).

The building sector currently contributes for about one third of these emissions. That contribution will double by 2050 if nothing is done (business as usual). And yet, **solutions exist!** Entrepreneurs, innovators, architects, developers... have already built comfortable, healthy and affordable low carbon buildings.

The Green Building Solutions Awards, a yearly international competition run by Construction21 since 2013, aims to highlight these exemplary buildings. You will discover the best of them in the next pages.

By visiting the **www.construction21.org** website, you can also browse a thousand more exemplary buildings, read news and exchange with other professionals in the numerous online communities.

With ten national portals allowing professionals to work in their language, Construction21 asserts its position as the international social media for green buildings. With City21, its new database on urban solutions launched in December 2015, and projects in several countries, the platform scales up. **Construction21 aims to become THE professional social media to achieve the UN Sustainable Development Goal #11 on sustainable cities and buildings.**

Join us : share your solutions, support us, sponsor the 2016 Awards, open a portal in your country... **and be part of this collective intelligence adventure!**

United Nations SDG #11 : "Make cities inclusive, safe, resilient and sustainable"



INTERNATIONAL JURY

The competition finals mobilized an international jury with 10 members.



Bruno Peupartier
France

Senior Research Fellow,
Mines ParisTech



Christian Rech
Luxembourg

Graduate Civil Engineer in charge
of the Advice and Information
Service, Cimalux SA



Oliver Rapf
Germany

Executive Director, BPIE



Dorin Beu
Romania

Reader, University of Cluj-Napoca



Jose Solé Bonet
Spain

Building engineer
European Sustainability &
Technical Manager, URSA
INSULATION SA.



Frédéric Verhaeghe
Belgium

Industrial Engineer in
Electromechanics
Training Manager, Greenwal



Ahmed Belamine
Morocco

Founding Architect,
ABG Studio



Marco D'Egidio
Italy

Technology officer, ANCE



Abderrahmane Zidane
Algeria

Architect
Founding Member,
Eco-Construction Cluster
of Oran



Isabella Annesi Maesano
France

Director of Research and head
of the Epidemiology of Allergic
and Respiratory Diseases
(EPAR) department, INSERM

THE CONTEST : KEY FIGURES

Every year the Green Building Solutions Awards mobilize more and more professionals wanting to showcase their solutions and share their experiences.

6 categories and 1 online vote



113 competing
buildings from
12 different countries



259 solutions



32 finalists

Construction21 wishes to thank the national juries who selected the finalists.

FRANCE : Antonin Briard, Meka Brunel, Jean-Mathieu Collard, François Gélin, Emmanuel Gloumeau, Jean François Grazi, Julien Hans, Régis Le Corre, Philippe Nunes, Bruno Peupartier, Thomas Philippon, Emmanuel Poussard et Mariana Woodrow.

BELGIUM : Séverine Baudoin, Christian Capart, Jean-Maris Haugkustaine, Frédéric Verhaeghe, Hélène Groessens, Aymé Argeles.

LUXEMBOURG : Bruno Renders, Christian Rech, François Thiry, Christian Tock, Steve Weyland.

MOROCCO : Ahmed Belamine, Mathilde Darras, Abdelatif Touzani.

ROMANIA : Dorin Beu, Andrei Botis, Adrian Cristrescu, Eugen Goldhammer, Andreas Laspidakis, Rodica Margarit, Cristian Popescu, Elena Rastei, Dragos Riti, Serban Tiganas.

SPAIN : Josep Solé Bonet, Ignacio Zabalza Birbain, Ferran Bermejo, Patxi Hernandez, Bruno Sauer, Xavier Casanovas, Micheel Wassouf.



1 500 000 pageviews
on Construction21



8 winners

VELUX

The VELUX Group is committed to improve quality of life by providing more natural light and fresh air through roofs. Its line of products includes a large variety of roof windows, solutions for flat roofs, natural light conducts and modular skylights. That same line also presents several equipments: a complete range of decoration, sun screenings, roller shadows and intelligent home controls. These products contribute to a better indoor environment, healthy and sustainable to live, work and play in the best conditions. The VELUX Group owns selling companies and production units in around 40 countries and employs 10,000 people across the world.



Support to the Awards and climate commitment

The VELUX Group is actively committed to transition towards sustainable habitat, combining energy efficiency, comfort and healthy interior, with the least impact on environment. We are committed to overcoming the challenges of climate change, of reduced energy resources and of fundamental need to preserve health and well-being in buildings. While we spend 90% of our time inside buildings (housings, offices, schools, leisure, hobbies), impact of buildings on our health and well-being are not sufficiently taken into account. If reducing consumptions of buildings is key to fighting climate change, it must fully include concepts of comfort and health of users.

That's why the VELUX Group supports the «Health & Comfort» category of the Green Building Solutions Awards 2015, to promote solutions combining energy efficiency and well-being of the users.



Our winner:

HEALTH & COMFORT



Groupe scolaire Simone VEIL

Located in a regenerated district of Bourgoin Jallieu (France), the kindergarten and primary school Simone Veil combine controlled consumptions and carbone emissions with a thorough regard on health and comfort for children.

The project favors natural ventilation, assisted by towers, acoustic comfort – essential for pupils attention, generous daylight sources and air quality, a very important matter for this school, built on a former industrial site.



Contractor:

Ville de Bourgoin Jallieu

Architect: Tekhné Architectes

Thermal Consultancy: Astrius

Address: 1, Promenade des Réveries, Bourgoin Jallieu, France



TERREAL

For 150 years, TERREAL has been a key player of terracotta-based construction materials. Based on that unique experience, our group creates innovative solutions for the envelope of buildings, through 4 activities: roofing, structure, façades and decoration. Terreal achieves 350 million euros sales and counts more than 2,400 collaborators across the world.



Support to the Awards and climate commitment

To build more efficient housings, professionals usually go through a modelling of their performances before the construction, then through experimentation on the field and feedbacks. **Building and living in positive energy buildings needs even more experimentation in real conditions.** It's not about building an efficient envelope with performant equipment anymore. There is also the necessity of understanding the interaction of the users with their home, because of its impact on the final results. **TERREAL supports the Net Zero Energy Buildings category of the Green Building Solutions Awards 2015, because positive energy is our future by 2020, barely 5 years from now.**

Terreal supports this initiative collecting real feedbacks. Collecting and displaying remarkable buildings is a real challenge for the construction sector, especially during the negotiations of the international conference on climate in 2015 in Paris. This is one element of Terreal's contribution to the debate on energy efficiency in housings.

TERRAL built, with its partners from Castelnaudary, two positive energy social houses, recently noticed by the French Ministry of Ecology, during the presentation of positive energy territories.

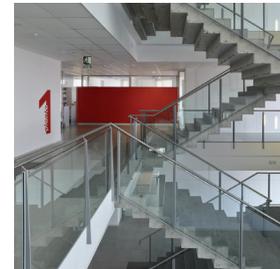


Our winner:

NET ZERO ENERGY BUILDINGS



LUCIA



Contractor:

Universidad de Valladolid

Architect:

Francisco Valbuena García

Address: Campus Miguel Delibes, Valladolid Spain

This Net Zero Energy and Zero CO2 Emission Building is destined to shelter the laboratories and the research center of the University of Valladolid. It combines thorough bioclimatic design and use of renewable energies to respond to every energy need of the project.

The energy mix includes biomass, photovoltaic solar energy and geothermal energy. A strategy to reduce consumptions was also laid out.

This building is an excellent example of sustainability for the management and production of autonomous local renewable energies, contributing to decentralizing energy and to developing renewable energies.



WITH THE SUPPORT OF



RABOT DUTILLEUL

Rabot Dutilleul was **founded in 1920** in the Lille area. Over the years and with acquired competences, the company developed complementary professions linked to the world of construction, reaching a nearly complete mastery of the real estate chain.

As an independent and international family company for promotion and construction, Rabot Dutilleul stands among the 10 first actors of French construction. The group cultivates its value based on collective performance with 1,957 collaborators and the building of long-term relationships with its partners.

The Rabot Dutilleul group is present in France, Belgium and Poland.



Support to the Awards and climate commitment

Sustainable construction requires to manage energy efficiency in buildings. Rabot Dutilleul didn't wait to follow this approach, as many projects can testify, and pushes it further to achieve excellency with the expertise of its filiale Pouchain, specialized in electric and climatic engineering. The Rabot Dutilleul Group deploys several processes to push forward ecodesign, without ever losing sight that the best building is the one in which the users feel the best.

Rabot Dutilleul structures its development on a strong environmental approach: design and construction of low energy buildings (BBC), HQE certified projects, CO2 assessment of its activities and a CSR action plan. This approach allows the Group to renew its offer always watching its markets and environment.



Our winner: LOW ENERGY RENOVATION



Edifici Aconcagua



Architect: Engesa
Thermal Consultancy: Engesa
Adresse : meritxell Andorra la Vella, Andorra

Reaching a passive standard level in the rigorous climate of Andorra was the challenge for this Minergie-Eco certified renovation of a 27 housings building. To achieve that goal, several solutions, easily replicable and low-cost, have been implemented:

- Thermographic study
- Reinforced insulation of façades and suppression of all thermal bridges
- Triple glaze joinery
- Air tightness tests

In the end, heating consumptions were reduced by 82%, tenants are happy to see their bills reduced and the owner glows with the increase of demands for his apartments.





SILLIA

Born from the Sofie Group, **the Sillia Energie company was created in 2008**. In 2011, the BOSCH Vénissieux production site became BOSCH Solar Energy before handing over their production lines to Sillia in 2014. The Sofie Group now owns Sillia VL, first French photovoltaic panels producer, and the Elvia company, French leader in circuit boards.

Sillia VL generates 70 million euros sales with 185 salaries. Their headquarters are located in Lannion (Brittany).



Support to the Awards and climate commitment

Since 2008, Sillia VL through its Sillia Energie branch, has become the French leader for solar panels.

By developing Sillia VL, the group shows its will to **contribute to the emergence of renewable energies**, a critical effort for our society and future generations.

Our policy, internal and external, aims to ensure perfect ethics, in social and environmental domains. In the market of photovoltaic panel, Sillia VL builds an economic model based on transparency, quality and sustainability of safeguards. Since 2008, Sillia VL is on the market of photovoltaic panels through Sillia Energie and became the first French producer of solar panels.

For the 3rd edition of the Green Building Solutions Awards, it was natural for Sillia VL to sponsor the Renewable Energies category.



Our winner: RENEWABLE ENERGIES



Solarwind

Beyond a triple certified (HQE, DGNB, BREAAAM) energy performance of the envelope, the contractor wished to multiply the energy sources and to favor renewable energies. By doing so, Solarwind showcases innovative and replicable technologies while illustrating their complementarity:

- Geothermal energy
- Biomass (wood/miscanthus boiler)
- Canadian well
- Geocooling
- Adiabatic cooling on rainwaters for air treatment units
- Thermal solar energy
- Photovoltaic solar energy
- Urban wind turbines



Contractor:
In Del Laey S.A.
Designer: Progroup
Thermal Consultancy:
Boydens Luxembourg
Address:
11, rue de l'industrie,
ecoparc Windhof, Luxembourg



Our winner:



BIO-BASED AND RECYCLED MATERIALS



Natura, organic and bio-based supermarket

Owners of this organic supermarket wanted a building illustrating their commitment for the environment. The building only uses reusable high quality natural material with low environmental impact:

- Natural stone,
- Wood,
- Cellulose fiber insulation.

One exception : the concrete slab, insulated with foam glass gravel. The result : a 99% green building respecting the environment.



Contractor: Oikopolis
Architect: Hain Architektur
Address: 30, route d'Arlon
 Windhof, Luxembourg



Our winner:



SMART BUILDINGS



Neobuild Innovation Center

Neobuild Innovation Center is an innovative experimental and showcasing building. It anticipates on the Net Zero Energy buildings of 2020. But most of all, it integrates a true experimentation approach involving all building users. The building is smart on various levels:

- A BMS accessible to employees with tablets for pedagogical purposes.
- A smart grid ready building.
- Active materials (variable tint windows, changing phase materials).
- An evolutive building, able to integrate new materials to showcase their implementation and qualities.



Contractor: Neobuild
Architect: ARCO
Address: ZAE Krakelshaff 5A
 Bettembourg, Luxembourg





Our winner:
**USERS'
CHOICE**



 **Refuge du Goûter**

The new Refuge du Goûter is a true challenge to the extreme conditions of its environment. Located at 3,835 meters in altitude on the Mont Blanc, the building endures powerful winds sometimes reaching 250km/h and very low temperatures (-40°C). The design took all these factors into account to result in an ellipsoidal shape, the main axis facing the wind. This shape is both simple and smooth, combining esthetics and ingenuity.

The whole wooden structure is assembled with resin casting. The facets of the envelope are insulated with woodfiber panels and covered with satin finished stainless steel. Designed for transport, the prefabricated modules have been assembled on site.

The building works in total autonomy thanks to the conjugation of several systems : thermal and photovoltaic solar panels, colza oil cogeneration...



Contractor: FFCAM
Architects:
Groupe H / DECAALAGE
Thermal Consultancy:
Cabinet STREM
Address:
Saint-Gervais-les-Bains, France



Saint-Gervais-les-Bains



Our winner:
**USERS'
CHOICE**



 **CREAS**

Designed as a training center for environment protection and dissemination of sustainable principles, CREAS is an exemplary building in terms of energy efficiency, use of bio-based and recycled materials, and waste management on the building site.

The orientation of the building, the management of resources and especially the flexibility of spaces to adapt to the evolution of usages are what makes this project an exceptional case deserving to be highlighted and replicated.



Contractor: Concejalía de Educación y Juventud
Architect:
Antonio Baño Nieva
Address: Pozuelo de alarcón (Madrid), Spain



Madrid

PAREXLANKO

PAREXGROUP, with its brand Parexlanko, is a major international actor in construction chemistry, providing solutions for:

- protection, decoration, insulation and renovation of façades,
- air tightness, maintenance and reparation of concrete structures,
- laying of floor tiles.

ParexGroup favors long-term developments and aims to contribute to the progress of construction with innovative solutions and services, to be the preferred partner in its markets as well as in the local social and economical fabric around its implantations.



Support to the Awards and climate commitment

The building sector, major energy consumer and responsible for more than 20% of CO2 emissions in France, faces numerous environmental, social and societal challenges.

To answer those challenges and help the construction to progress, ParexGroup SA is committed for years in a voluntary and collective approach for sustainable development, with the signature « Let's build responsible ». As a major actor in new constructions and renovation, under the Parexlanko brand, ParexGroup leads an ever more demanding innovative policy around its products and services.

That's why Parexlanko supports the «Low Energy Renovation» category of the Green Building Solutions Awards 2015, to highlight the most interesting solutions and experiences.



GET READY FOR 2016 !

NEW FEATURE

Construction21 opens a new observatory dedicated to cities : City21. Ecodistricts and specific urban projects (campus, hospitals, activity zones...) will be highlighted and most of all their sustainable urban solutions for mobility, energy, water and waste management, citizen participation or smart cities.

The new observatory replicates the Construction21 original concept, already successful with buildings: a database both national and international. It will provide local governments and companies with a place where to promote their most innovative realisations, but also where to search for inspiration for their projects to come.

City21, launched on December 4th, 2015 in French and in English, will be deployed on all Construction21 platforms by spring 2016.

In 2016, Green Building Solutions Awards scale up

- **to cities**, with the new observatory dedicated to sustainable cities and urban solutions: City21.
- **to new countries**, with partnerships signed with organisations involved in sustainable construction in their country. Each partner will run a national competition for the professional of the country, while benefitting from the global communication power of the Construction21 network.

Save the dates :

- May 2016 : launch of the contest
- December 2016 : Awards ceremony in Marrakech, during the COP22

How to participate ?

- Submit your most innovative realisations, buildings or districts.
- Organise the contest in your country by becoming an «**Awards partner**»
- Associate your brand with the competition by sponsoring a category, at a national or an international level



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powered by Construction21

Browse the winners,
distinguished solutions,
all the candidates and the videos on :
www.construction21.org
Section case studies



In partnership with :



Fabricant français de panneaux photovoltaïques



TERREAL
Terre de votre imagination



ADEME



Agence de l'Environnement
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