



Regeneração Urbana – parcerias e modelos de negócio na área de Lyon

Conference

Mercado Liberalizado de Energia: Que Visões?

Bruno Gaiddon

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Not-for-profit organization
Promotion of Energy Efficiency and
Renewable Energy Systems



Solar PV assistant of



EU project assistant of



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Lyon-Confluence

A major Urban project in Lyon - France



Objectives

- To enhance the urban area's functional centrality
- To offer the public a true urban project
- To encourage social variety
- **To make room for innovation and creativity**

Basic long-term statistics (2020)

- 150 hectares (70 renewed)
- 1,000,000 m² net floor area
- 20,000 residents (7000 in 2000)
- 22,000 jobs (7000 in 2000)

Lyon-Confluence



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Lyon Smart Community project



- The New Energy Development Organisation of Japan (NEDO) is undertaking a large Smart Community project in Lyon
- Toshiba has been selected to implement this project
- Demand response, RES, EV, Smart building, community management system, ...



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Lyon Smart Community project



Task 1 : construction of 12 000 m2 Zero Energy Building in Lyon-Confluence (P plot building)

Developers : Bouygues immobilier/SLC
Architects : Kengo Kuma & associates/CRB architects
Industrial partnership : Toshiba corporation - Japan



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P plot

International competition



Many top level architects and large developers
Barbosa & Guimaraes Architectes (but finally not selected to design the P plot)



P plot

Reduction of energy needs

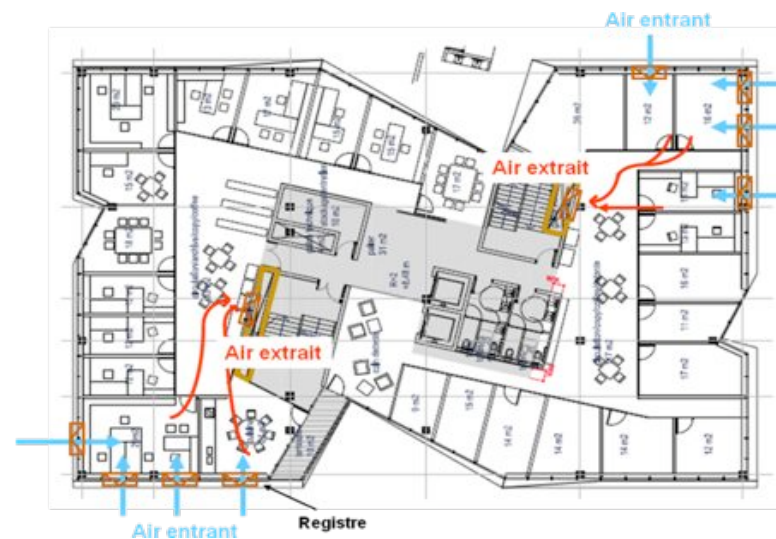


An architecture that maximizes solar gains and natural lighting

Insulation of building shell with reduced thermal bridges

Heat recovery ventilation and heat recovery of DHW

Cooling by night natural ventilation



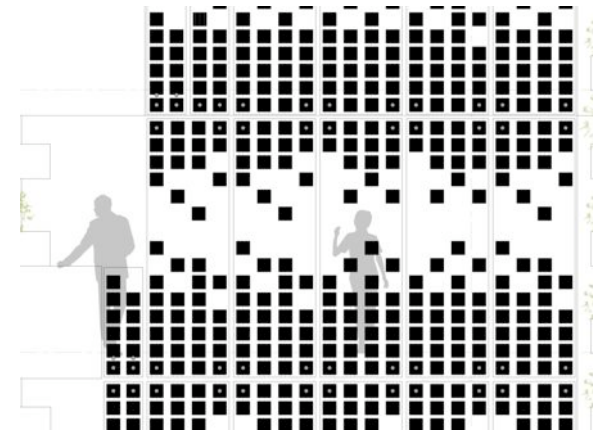
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P plot On-site energy production



Photovoltaics - 200 kWp
Cogen with rapeseed oil



Main objectives of the demonstration project



- To build a positive energy building in order to reduce the use of conventional energy,
- To shave the electricity peak demand in order to reduce impacts on the distribution grid,
- To study the effect of demand response thanks to a Building energy Management System (BEMS) and Home Energy Management systems (HEMS),
- To control energy supply and demand and the district scale thanks to a Community Management system (CMS)

Conclusion



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114, boulevard du 11 novembre
F-69100 Villeurbanne
Tel : +33 4 37 47 80 90
Fax : +33 4 37 47 80 99
info@hespul.org



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