Creating a Business Case for Low & Zero Carbon Buildings

Alexandra Notay
Research Director – ULI Europe
Urban Land Institute

ULI’s mission is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

Founded 1936, USA
35,000 global real estate professionals

- Developers and Corporate (Hotel, Retail, Industrial Firms): 36%
- Architects, Engineers, Other Service Firms: 33%
- Public and Non-profits: 12%
- Investment Firms: 7%
- Financial Institutions: 6%
- Other: 6%
5 Global Policy Priorities

- Sustainability, Climate Change and Energy
- Infrastructure
- Housing (particularly ‘workforce’/affordable)
- Capital Markets
- Public Leadership
“…route to a valued conversation…”
Background

- Sir Stuart Lipton’s Nichols Prize gift
- Increased industry focus on energy efficiency
- Existing buildings
- Economic crisis = pressure to act to reduce costs
- Avoid “green-wash and geek-speak”
Collaboration & Partnership

**Stakeholders**

**Users**
- ULI members
- Manufacturers
- Energy suppliers
- City leaders
- Content Partners
- Public

**Providers**
- ULI membership
- Civic, Academic
- Arup
- Private Sector

**Communication**
- Trade Press
- Urban Land
- Web sites
- Events/Awards

**ULI**
- Project Management
- Filter Information
- Disseminate

**Content**

**Media**
Survey results 1

How do you and your peers access information on energy use in buildings?

Source

- Colleagues
- Conferences
- Consultants
- Internal Research
- Internet Search
- Professional Body
- Specific Websites

Percentage of respondents (%)
What barriers have you encountered when looking for information to support your work on energy efficiency and energy efficient retrofitting?

- Information too generic or broad
- Not sure of the objectivity of the data
- Regulatory framework is confusing
- Too much information
- Too technical
- Not relevant to my region
- Not relevant to my sector
- I haven't encountered any barriers
Survey results 3

What would attract you to use the Energy Exchange Initiative website?

- Blogs: 10%
- Business case for energy efficiency: 70%
- Case studies: 80%
- Clarification of policy: 40%
- Forums: 10%
- Impartial factsheets: 50%
- Opportunity to contribute: 20%
- Up to date policy and best practice information: 100%
- Webinars: 10%

Attraction to the site
Focus of Site

- Research has led to a specific focus of the site:
  - Non-domestic only
  - Pan-European
  - Energy efficiency and retrofitting, rather than new build
  - Covers efficiency of energy use, rather than energy supply
Welcome to The ULI Energy Efficiency Exchange - we're here to help you learn & share information to increase the uptake of energy efficient retrofitting.

“Energy has rightly become one of the primary concerns of the decade. In future most occupiers, investors and tenants will need buildings which are highly energy efficient both in their construction and use. ULI has joined with leading commentators in the field to demonstrate what can be achieved now using existing technology and methods to save energy.”

Sir Stuart Lipton, Co-Founder, Chelsea

Case Studies

ADIA Headquarters
The building is alive and responsive to natural forces, with an impressive sustainability profile.

Pall Italia Building
The new headquarters of Pall Italia S.r.l. includes the renovation of an existing two-storey building.

About Us

Products & Services

Energy News

Become a ULI Member

Partners:
Kraanspoor
Amsterdam, Netherlands

Architect
De Brouwer v/d Velde Horreur (DWH)

Developer
DVG Real Estate Development

Engineer
Dutch Engineering Consultants

Other
Project advisors: E. van der Sluis, Woudenberg (planning and design); Team KochersIndicator (design, building mechanics, logistics, structural engineering)

Contractor
W.J. van de Voorn

See Detailed Drawings
Download PDF

About this Project
Kraanspoor (translated as crane) is a lightweight, transparent office building of three floors built on top of a concrete structure on the edge of the IJ river in Amsterdam. The building is covered with a 380mm-thick plate of glass with a 100mm-thick concrete wall, a height of 12.5 meters and a width of 8.5 meters. It has a sleek look and feels tense. The new construction on top of the same 26 meters long, with a width of 12.5 meters, accentuates the height of Kraanspoor and the glassed-in elevation view of the river IJ. Fully glazed facades and doors of the second floor create the impression of volumes rising above the river, appearing to float above the impressive waterfrontadidas.

The design is the result of utilizing the maximum allowable load of the existing mooring. The concrete canopy functions as a 5-story-level canopy. The glass-glass and glass-concrete contact areas are beautiful. The building is constructed using the latest in construction methods.

The glass building is clear and easy to see. The very tall building is characterized by its transparent structure, its height, and its sleek look.

Technical Specifications
- The transparent double skin facade of glass: the outer layer of moderate solar factor glass known as low-e glass and the inner layer of high-performance glass is packed inside the window with a full-height, floor-to-ceiling window. The inner layer of glass is black to prevent the reflection of the offices and acts as a reflector instead of the sun and can catch the rainwater.
- The concrete facade is often interrupted by the building's unique, single-story concrete structure.
- The water from the IJ river is pumped up and used for heating as well as cooling via a water pump.

This page contains advertisements from various companies related to real estate development.
Energy Efficiency and Retrofitting Tips

Guide to energy efficiency and retrofitting ‘quick wins’ capital investments for your climate. Based on Arup’s Survival Strategy for Existing Buildings and adapted by our members and users of The Exchange.

Quick Wins

1. Relax room temperature set points
2. Optimize outside air free cooling
3. Raise building users’ awareness of energy consumption
4. Energy consumption targets and monitoring
5. Ensure controls / energy consuming systems are working

Light Refurbishment

Relax room temperature set points

- Description
  Building manager modifies setpoints to increase the range between the upper and lower limits for both humidity and temperature.

- Environmental Benefit
  ★★★ (High)

- Cost
  ★☆☆☆☆ (Low)

Prepared By
Sara Turnbull, Senior Consultant, Arup

Reviewed By
Chris Twin, Director, Arup

About Us
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh autem lorum

More info

Products & Services
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh autem lorum

More info

Energy News
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh autem lorum

More info

Become a ULI Member
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh autem lorum

More info

Partners: ARUP, Chelsfield, Gensler

© 2009 Urban Land Institute (ULI). All rights reserved.
Policy

Here you can find out about all of the regulatory requirements that apply across Europe and in your country, with brief summaries of all legislation covering energy efficiency and buildings. There is also information on emerging policies, and commentary pieces on how some companies have dealt with new regulations.

Filter these items - get the information relevant to you.

Pan European Policy
Information on the key pieces of legislation affecting all Member States of the European Union.

National Policy
Information on all policies in place in specific countries across Europe.

Commentary
Commentary pieces on current and emerging policy from industry members.

Benchmarking Debate
A collection of reports discussing the various environmental benchmarking schemes in the industry.

About Us
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt.

Products & Services
Supported by:

Energy News
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt.

Become a ULI Member
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt.
The Energy Performance of Buildings Directive

Governing Body
The European Parliament and The Council of the European Union

Jurisdiction
Pan-European

Date
December 2001

Source
EuroCE

Website
www.euroce.org

Images

Download Report

Commentaries

Summary
The CFPD of the European Parliament and Council, on the energy performance of buildings, came into force on 4 January 2001. It greatly affects awareness of energy use in buildings, and is intended to lead to substantial increases in investments in energy efficiency measures within these buildings.

All related legislation needed to be adopted by 4 January 2007 in the Member States, and it affects all buildings, both domestic and non-domestic. The Directive has been implemented in different ways by different countries, and over different time periods.

Key Impacts
This Directive lays down requirements as regards:

- the general framework for a methodology of calculation of the integrated energy performance of buildings (Article 3);
- the application of minimum requirements on the energy performance of new buildings (Article 5);
- the application of minimum requirements on the energy performance of large existing buildings that are subject to major renovation (Article 6);
- energy certification of buildings (RECs and BDEs - Article 7), and regular inspection of boilers and air-conditioning systems in buildings and in addition an assessment of the heating installation in which the boilers are more than 15 years old (Article 8 and 9);
- inspection of boilers and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating as sole traders or employed by public or private enterprise bodies (Article 10).
This page recognizes those organisations who kindly support the Energy Efficiency Exchange. If you are interested in becoming an Exchange Partner, there are a number of different ways to become involved. Please contact Josie Baum at jbaum@uli.org for more information.

Exchange Primary Partners:

ARUP  Chelsfield

Exchange Partners:

Union Investment  Gensler

Exchange Collaborators:

Exchange Knowledge Partners:

News updates from The Exchange and our partners.
Project Status / Next Steps

Phase I – completed October 2009
- Professionals & Leadership workshops
- Member survey, leadership interviews
- Initial content acquisition
- Website design & beta-test
- Corporate supporter group established

Phase II – by March 2010
- Additional content development and partnerships
- Site launch - media partners, ULI events
- Establish Advisory Board

Phase III – 2010-2011
- Product page, links, Webinars, forums/blogs
- Memberships/subscription revenue through tiered access
- Outsource maintenance to external parties
Alexandra Notay
Research Director – ULI Europe
anotay@uli.org
+44 207 487 9571