Bellona Building, Oslo, Norway

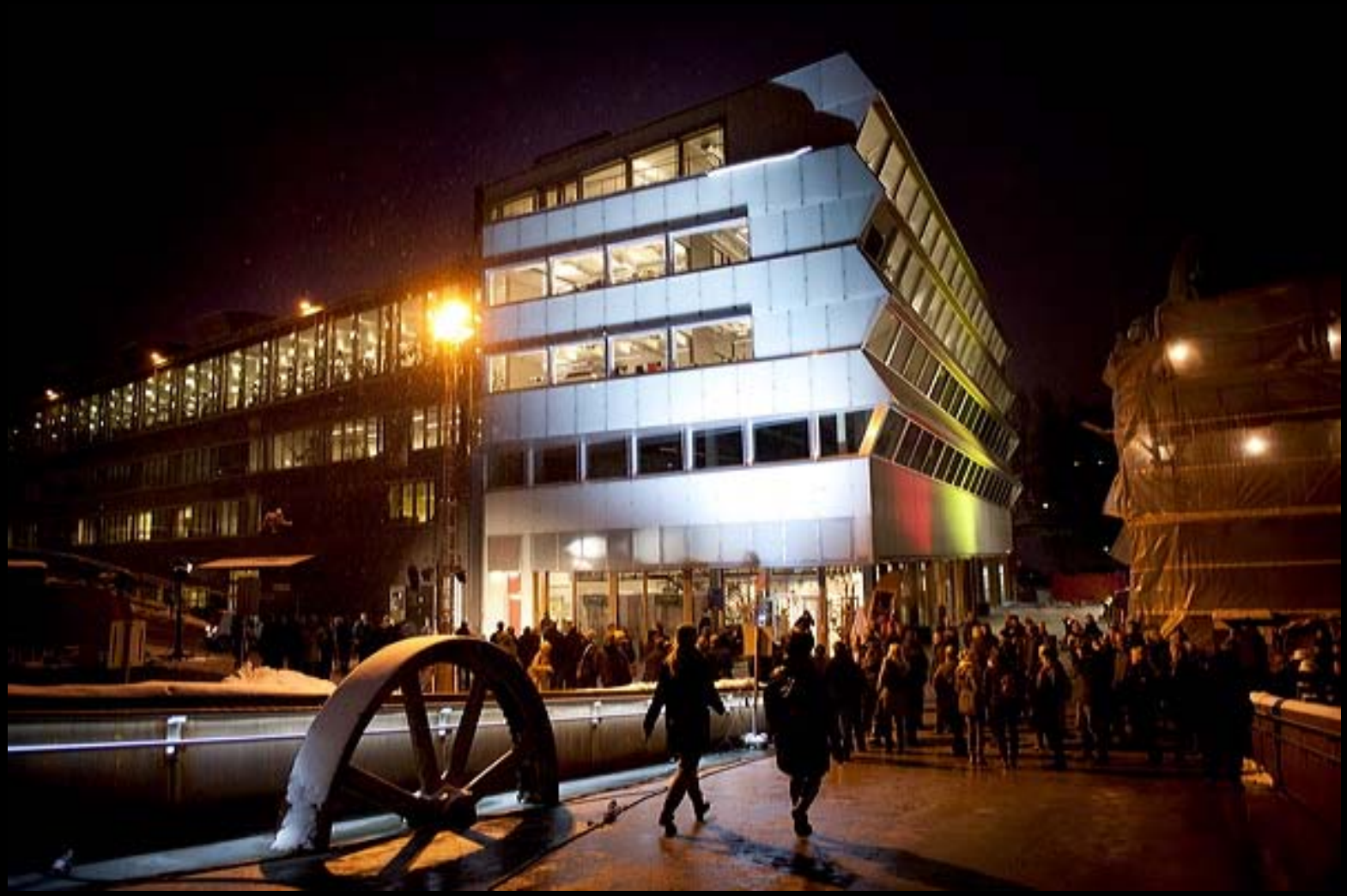


Photo: Finn Staale Feldberg

The Bellona Building, Oslo, Norway

Commercial building - offices and stores - with solar collectors integrated in the façade

PROJECT

The Bellona building is an office building with floor space of 3,120 m^2 over five storeys. The first floor is housing commercial activities, while the remaining four floors contain offices where the Bellona Foundation (a multi-disciplinary international environmental NGO) occupy two and a half floors. The building is constructed of in situ concrete with facades in plaster and glass. Solar collectors cover large parts of the south-facing facade and contribute towards reducing energy requirements. The solar collectors heat the water used in the offices and in other buildings nearby.

The south-facing facade is divided between inward-facing windows and outward-facing dividers. The outward-facing dividers are perfect for installing solar collectors, 240 in all.

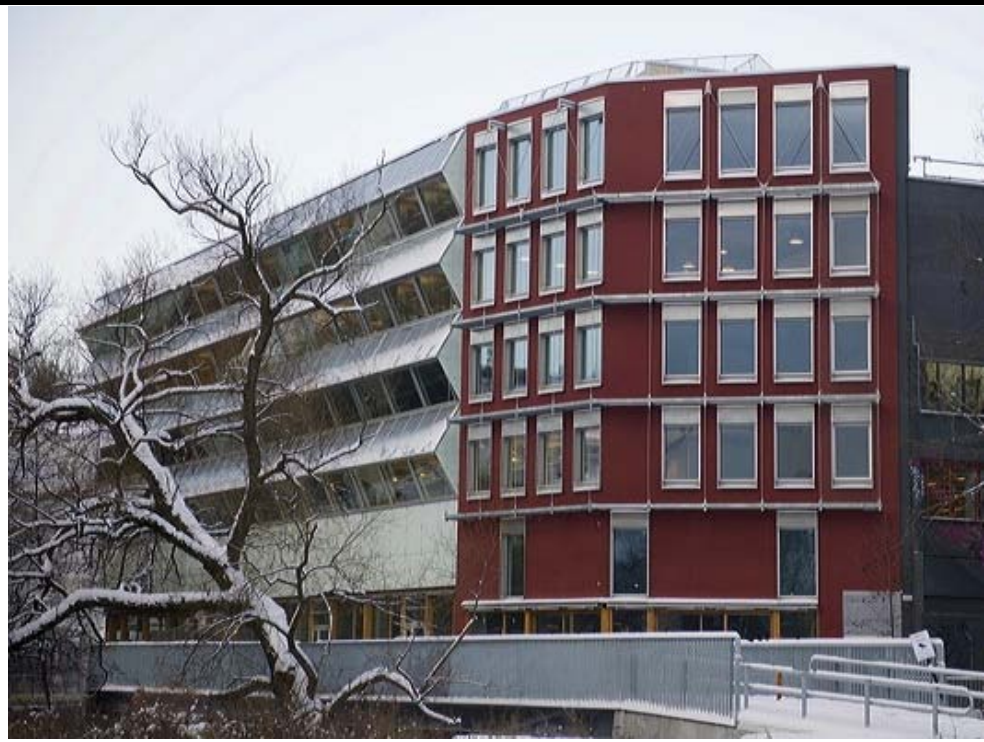


Photo: Finn Staale Feldberg

Key figures

Heated area :	Offices: approx. 2600 m^2
	Stores: approx. 800 m^2
Energy demand:	Offices: 82,7 kWh/m^2/year
	Stores: 137,5 kWh/m^2/year
Collector area :	291 m²
Supplied energy:	Solar collectors, heat pumps, district heating and electricity

Heating system

Heating demand in the building is very low because of good insulation (roof 400mm, 270mm walls), excellent windows (U-value 0.8), minimized thermal bridges and low air leakage factor (0.5-1.0). The solar collectors heat the water used in the offices and in other buildings nearby. Heat is acquitted from the site's energy central whose main source is 14 geo-wells that go 300 meters into the ground.

The energy consumption of the building is calculated to be just 68 kWh/m2/year, which is far below the requirement towards class A buildings.

Estimated additional costs: 2500/m^2 (+10% compared to average costs)

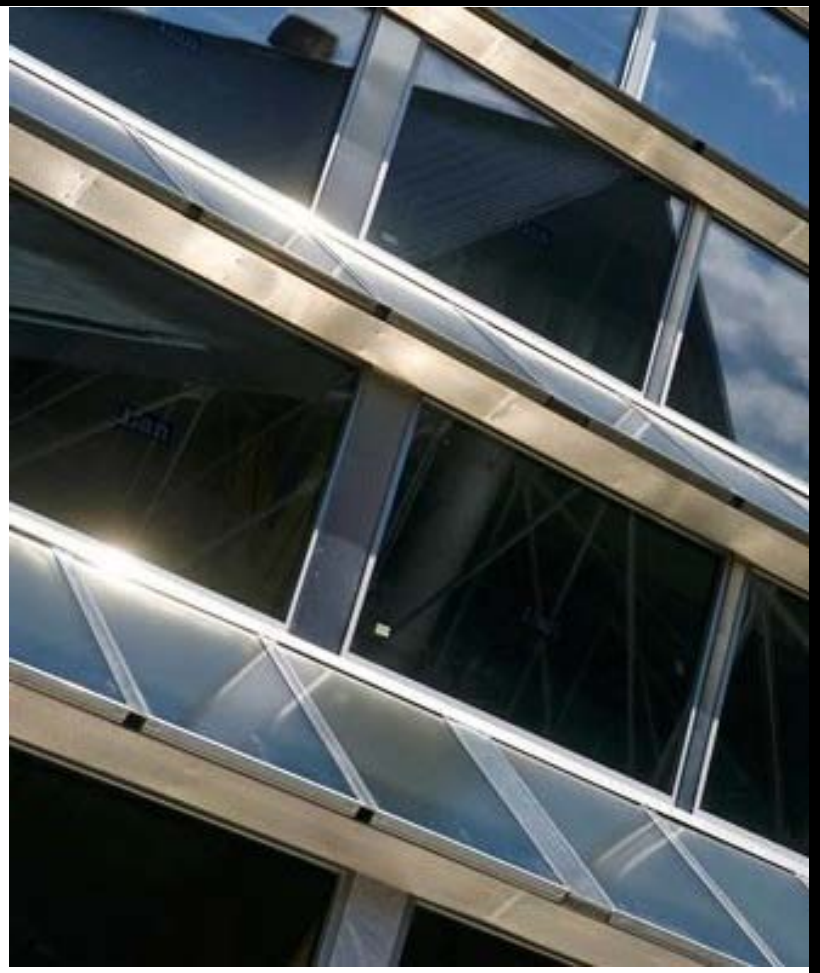
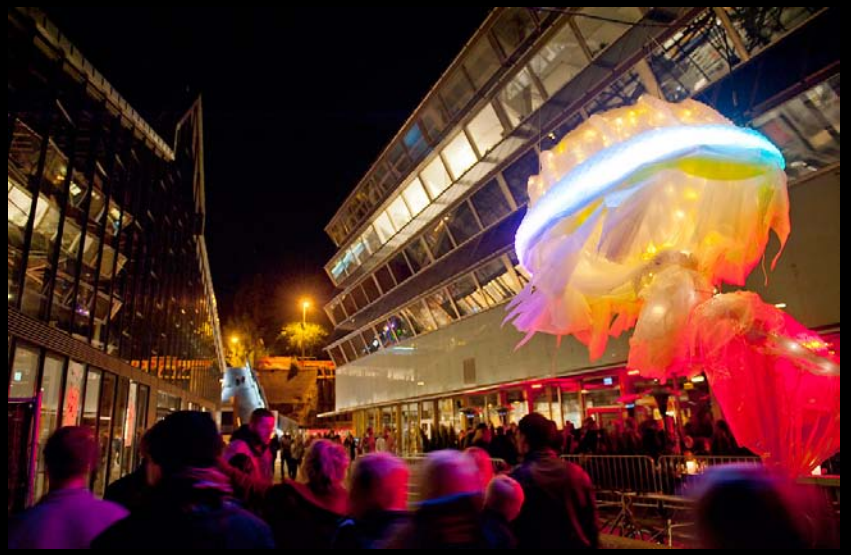


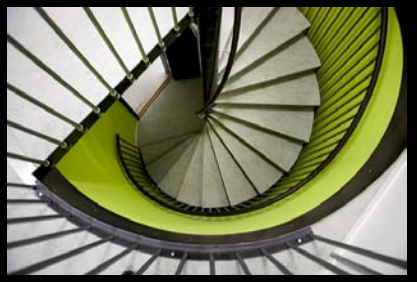
Photo: Finn Staale Feldberg

GALLERY

PHOTOS;
Finn Staale Feldberg

- Built/Completion:
  2010
- Arvhitect:
  LPO arkitekter
- Engineers /advisors:
  Ing. Petter Nome AS (RIV),
  ÅF-consulting AS (RIE),
  Hambra (RI Miljø),
  Kjell Ludvigsen (RIB),
  Brekke&Strand Akustikk AS (RIA)
- Client:
  Vulkan Utvikling AS/Aspelin Ramm
- Entrepreneur:
  Veidekke ASA
- Address:
  Maridalsveien 13
- Location:
  Oslo, Norway
- Type of project:
  Commercial building





- Read more: http://en.veidekke.com/reports/2010/communityreport/environment/energy-efficient-buildings/article45010.ece