

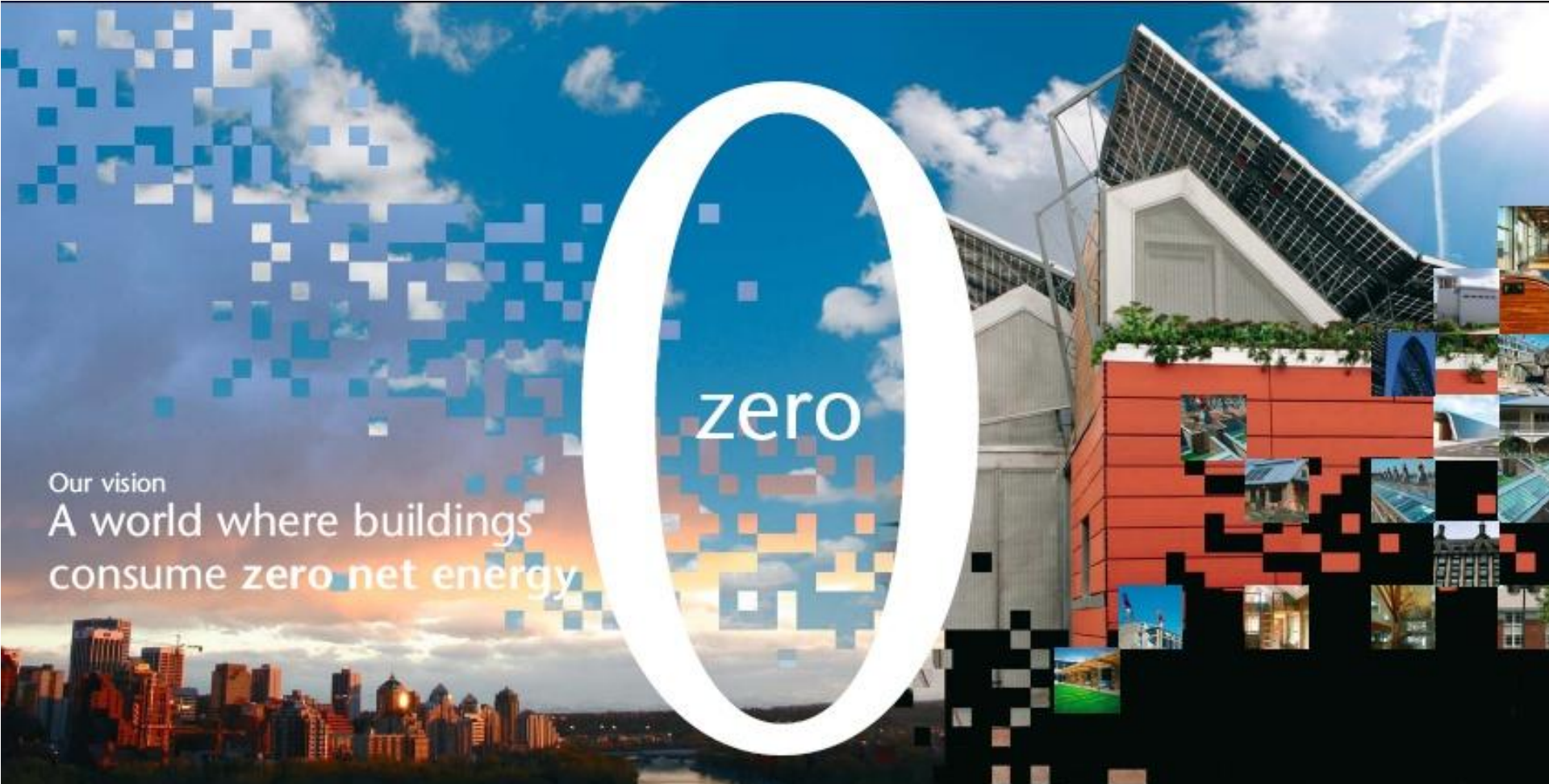
Solar XXI Building

Towards Net Zero Energy Buildings

NZEB

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April 2011



Our vision
A world where buildings
consume zero net energy

zero



IEA SHC Task 40/ECBCS Annex 52

Towards Net Zero Energy Buildings

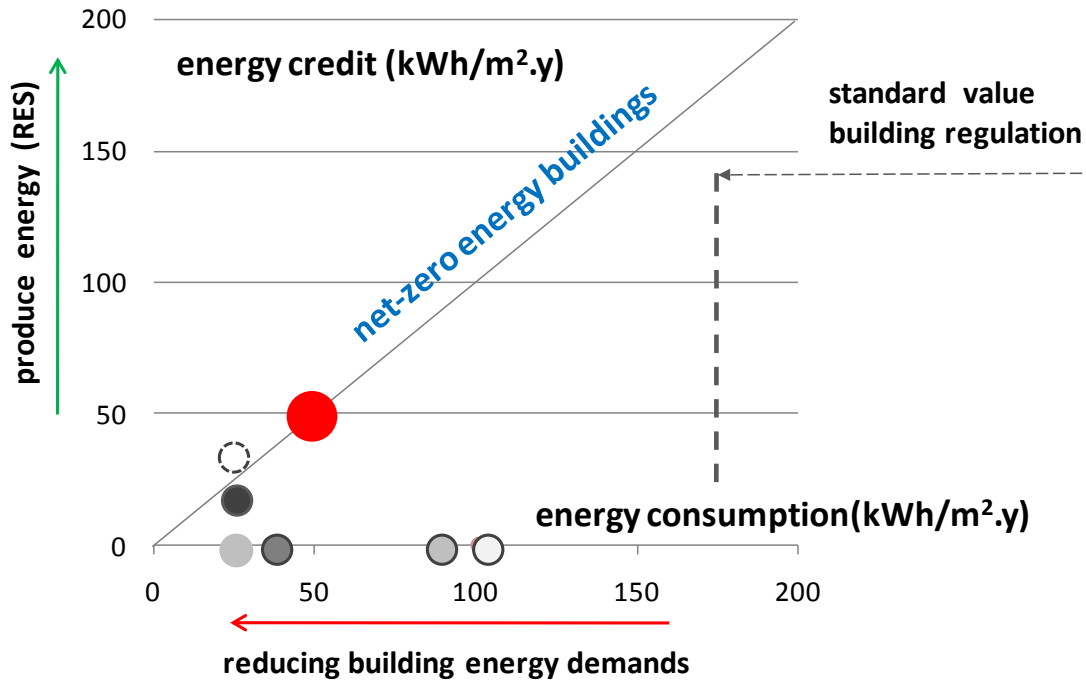


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Reaching “zero energy” = Energy Production* = Energy Demand

* on site ou near



- Building in accordance with actual building code+typical building related loads
- Improved standard + Typical building related loads
- Use of efficiency measures (passive techniques and strategies)
- Use of renewable energies
- Feed-in credit
- Feed-in credit (estimated in 2011)

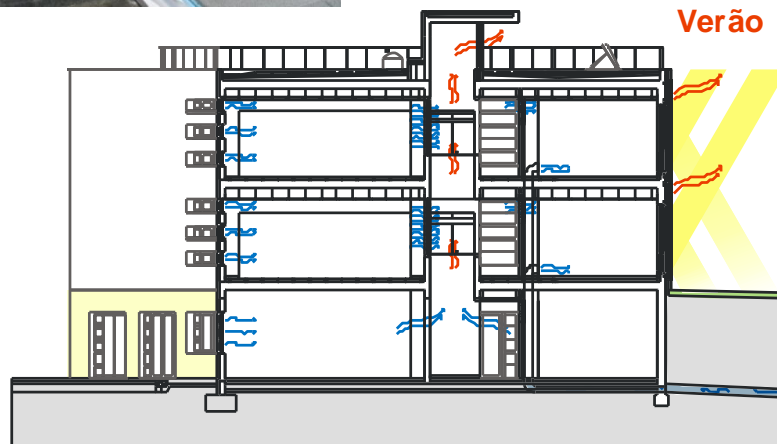


Reducing Cooling Loads

Solar Control

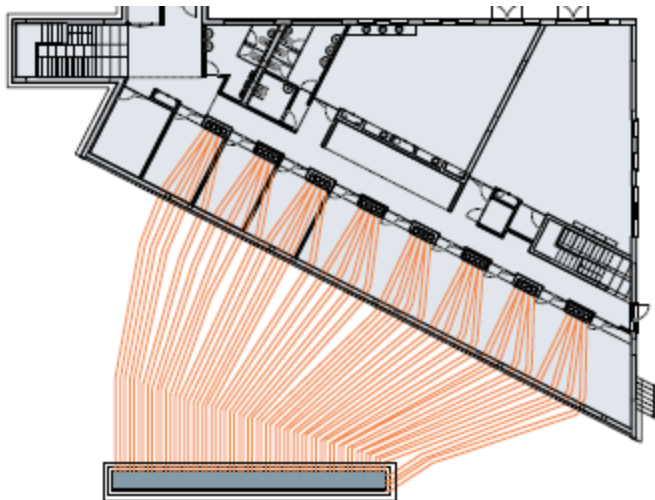
External Solar Shading (users)

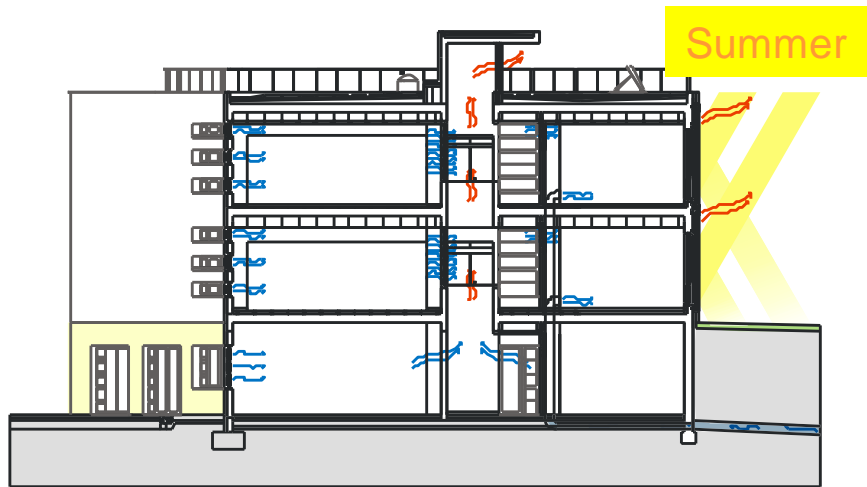
External Insulation (reducing the loads in the mass envelope)



PASSIVE COOLING SYSTEM

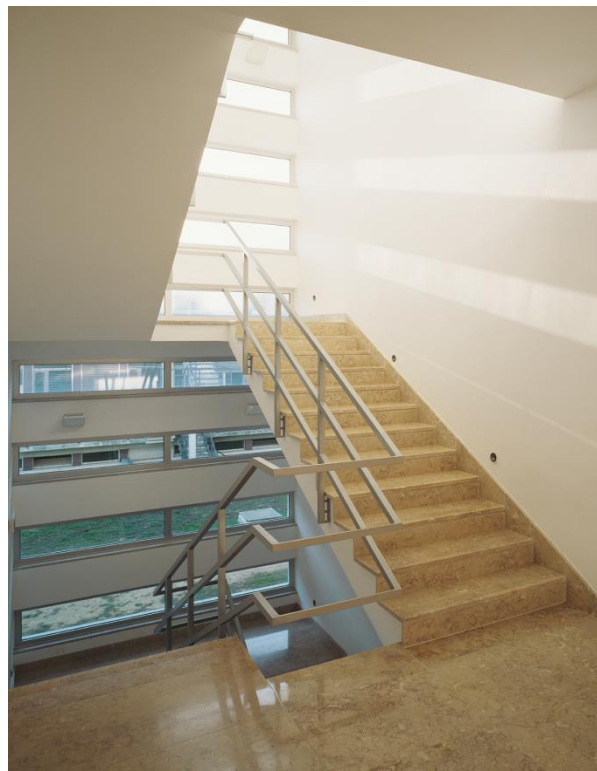
Heat exchanger in the soil
32 buried pipes.





Central Glazing in the main Hall (3 floor deep)

Translucid material in the upper doors



INTEGRATION OF RENEWABLE IN THE BUILDING



PV Facade in vertical
south (96 m²- 12 kWp)

Car Parking (6 kWp)

Solar Panels for
auxiliary heating



SOLAR

Em direcção à energia zero **Towards zero energy**

Em direcção à energia zero **Towards zero energy**

SOLAR XXI



Thank you



MINISTÉRIO DA ECONOMIA E DA INOVAÇÃO



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