

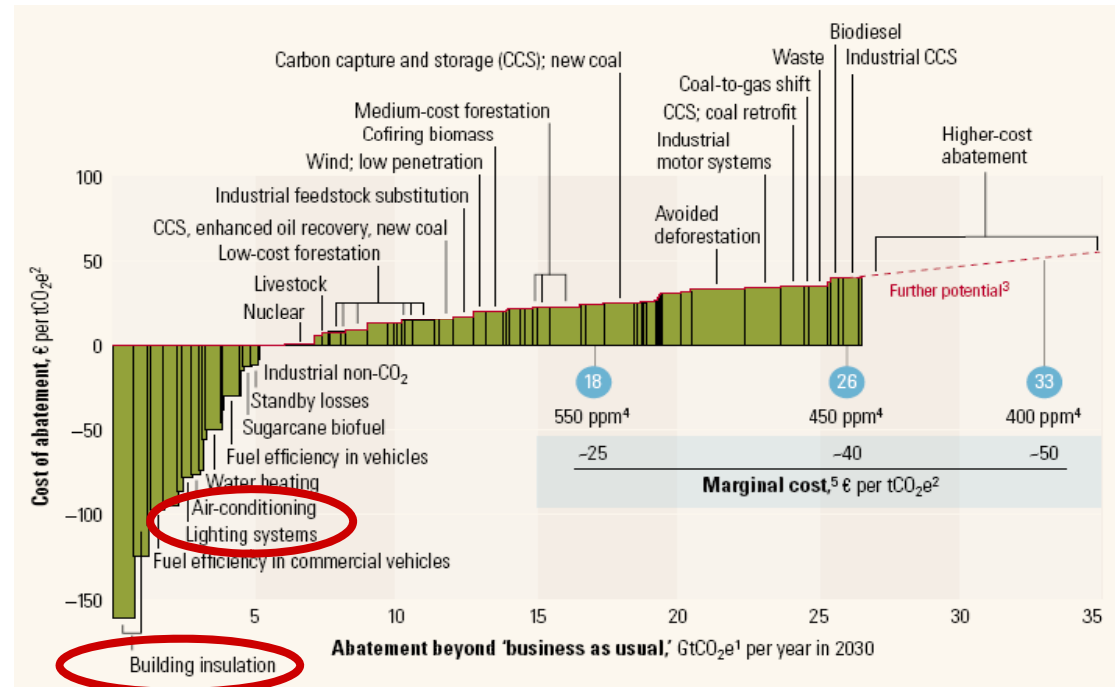


Energy Efficiency in Buildings

CCICED Roundtable Enterprise Forum
Friday, April 17th 2009 - Beijing, China

 **BASF**
The Chemical Company

How buildings relate to our goal to increase energy efficiency



Source: McKinsey, 2007

Improvements of buildings is one of the most effective measures to increase the national energy efficiency

Energy efficiency in buildings is more than insulation of new structures



→ ... Energy conservation

Protects environment through innovative products



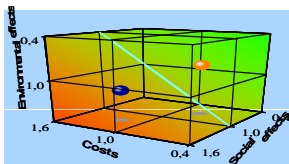
→ ... Efficiency and Strength

Improves functionality and construction materials usage



→ ... Value protection

Increases life span and enhances design of buildings

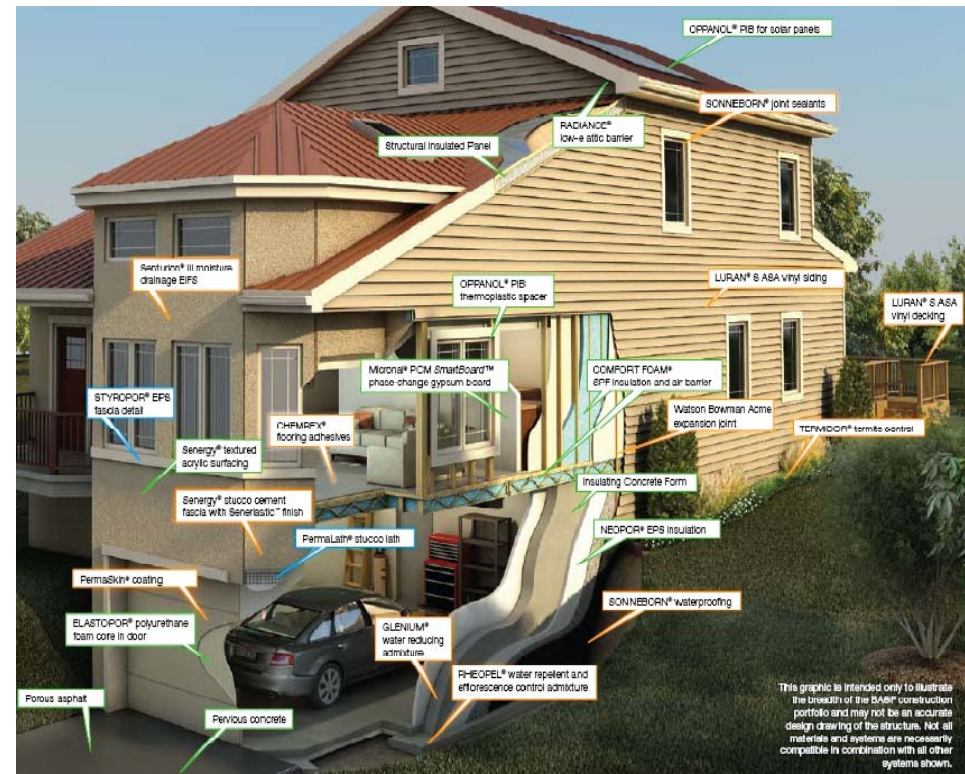
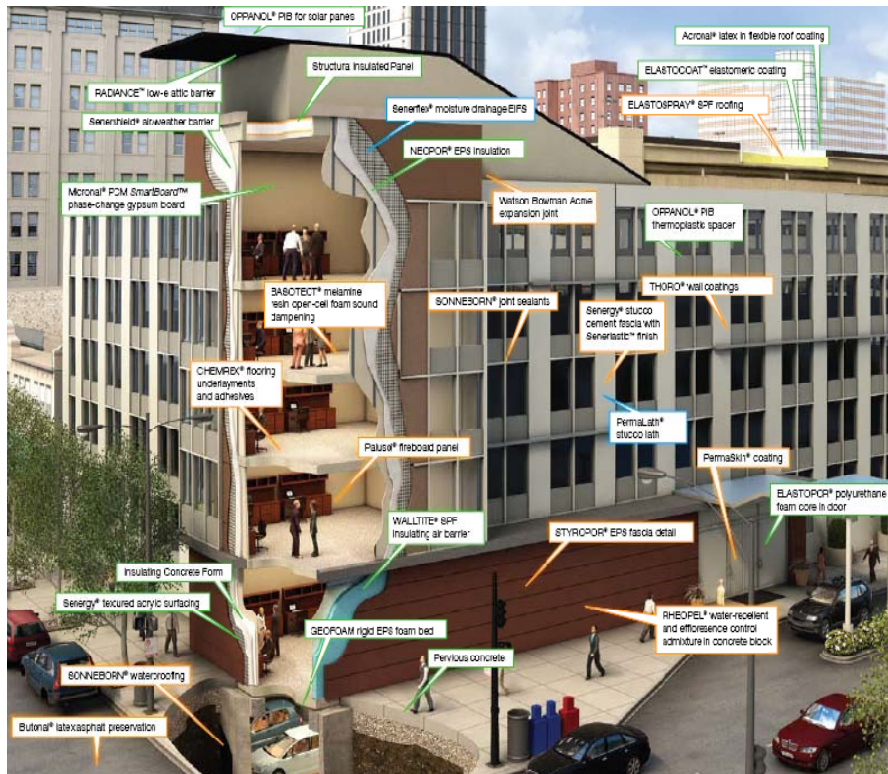


→ ... Proof of concept

Life-cycle analysis, Socio-efficiency analysis ...

Innovative technology exists to improve building energy-efficiency

Construction Chemicals play an important role



This graphic is intended only to illustrate the breadth of the BASF construction portfolio and may not be an accurate design drawing of the structure. Not all materials and systems are necessarily compatible in combination with all other systems shown.

BASF portfolio examples from N.America

Material technology is key for a building's energy efficiency , enhancing envelope and interior

'Demonstration Projects' with municipalities focused on Building energy efficiency

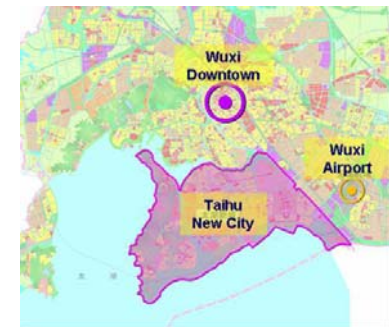
- Earlier showcases in which BASF successfully demonstrated its low-energy home concept, are not sufficient to create a market shift
- Create impact via commercial 'demonstration projects'
 - ▶ Working on pull-effect with strong influencers
 - ▶ Newly set-up "Construction Industry Group" interacts with the important decision makers and represents the full BASF competence
- E.g. Liberate 1948 Nanjing Industry Design Park , Wuxi Taihu New City
 - ▶ Involved in early project stage, e.g. in design phase
 - ▶ Comprehensive offer including Wall and Roof Insulation , Paints , Flooring
 - ▶ Based on project needs, the insulation specifications were optimized, which increased the energy saving effectiveness and combined functions of thermal insulation and water-proofing



Technology alone is not enough to ensure implementation of improved building energy efficiency

Expected successes in the future for Building energy efficiency

- Building trustful relationship with authorities (Strategic Cooperation Agreement) and other project stakeholders
- Dialogue on (future) construction standards
- Based on early-on involvement in project: value-added and tailor-made solution possible
- Achieving a repeatable 'roadmap', how to apply regulations for overall energy savings to a concrete project
- Education on the technology achieved, allowing for multiplication in the surrounding market in rather quick manner
- Increase market awareness , including on consumer level



Win-win collaboration with the local authorities and partners

Recommendations to Government to further advance Energy efficiency in Buildings

- Consider most effective measures and best technologies for energy saving
- Continue to define clear standards and rules, implement and enforce more
- Encourage investments in building projects (both new and renovation) that reduce energy use
- Foster trainings and certifications to ensure optimal applications on-site
- Act as role model
 - Best practices at public buildings , promote energy saving technologies at the Government procurement list
 - Install publicly visible and tangible lighthouse projects with significant impact on energy saving to initiate behavior change of citizens
- Initiate awareness campaigns
- Ensure the protection of intellectual property
- Public private partnerships to generate strong market impact

It takes joint , continuous efforts of government and industry

Invisible Contribution. Visible Success.



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