

Energy Efficiency in Buildings

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The global specialist in
energy management



North America
€ 28%
31,500

Europe
€ 45%
49,000

€ 17.3B revenue
120,000 people
E&d in 25 countries

Rest of the world
€ 8%
8,000

Asia-Pacific
€ 19%
31,500

Committed to the energy dilemma... we are "Energy Optimists"

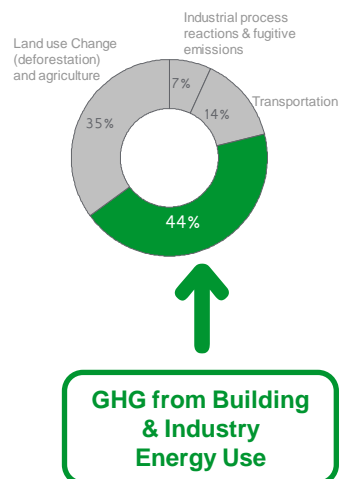


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Buildings and Industry are the 1st GHG emission contributors...

- **~44%** GHG contribution comes from buildings & Industry
 - 3x larger than GHG contribution from transportation
- **In industry & buildings:**
 - **70%** of electricity is generated via coal or hydrocarbons
 - **90%** of heat and process activities burn hydrocarbons



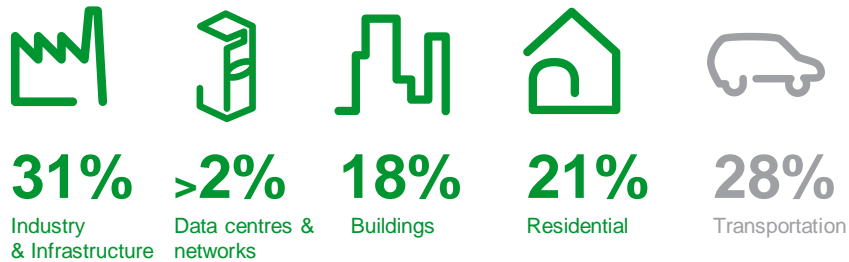
Data extracted from WRI: navigating the numbers 2005

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...and also the first energy consumers !

•Energy use split



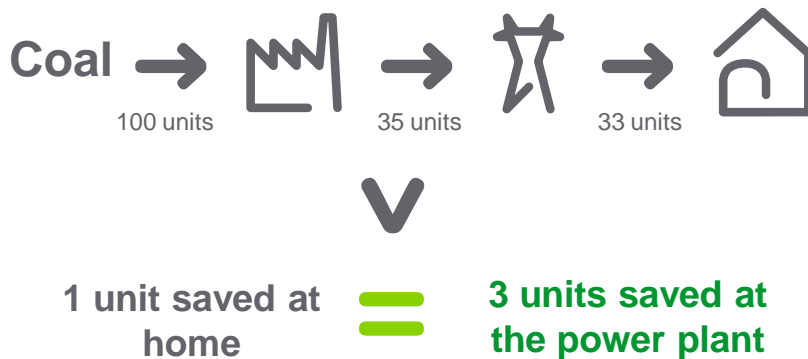
Main energy consumption is for heating, cooling, motors, lighting, electronics and appliances

Source:
EERE Building Energy Data book 2006
EERE Manufacturing Systems Footprint ,
http://www1.eere.energy.gov/industry/energy_systems/pdfs/mfg_footprint.pdf

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And remember: a small save at home is a big save at the power plant !

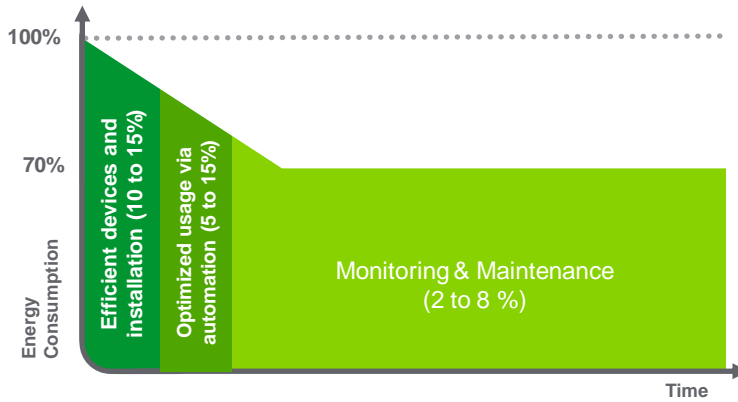


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30% savings are available today...

... thanks to a combination of

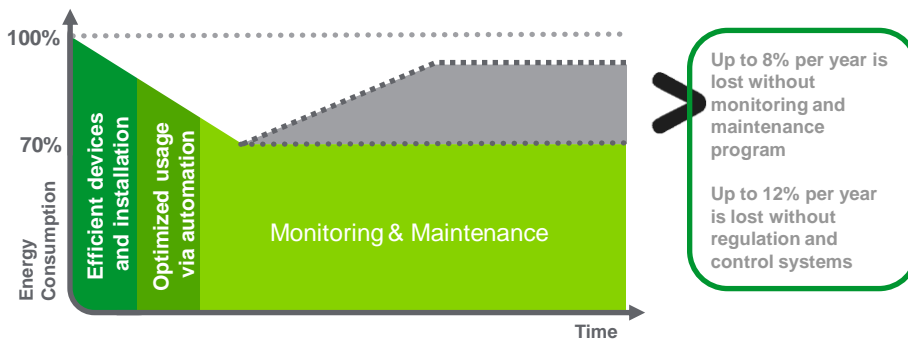


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... but savings can be lost quickly...

- Unplanned, unmanaged shutdowns of equipment and processes
- Lack of automation and regulation (motors, heating)
- No continuity of behaviours



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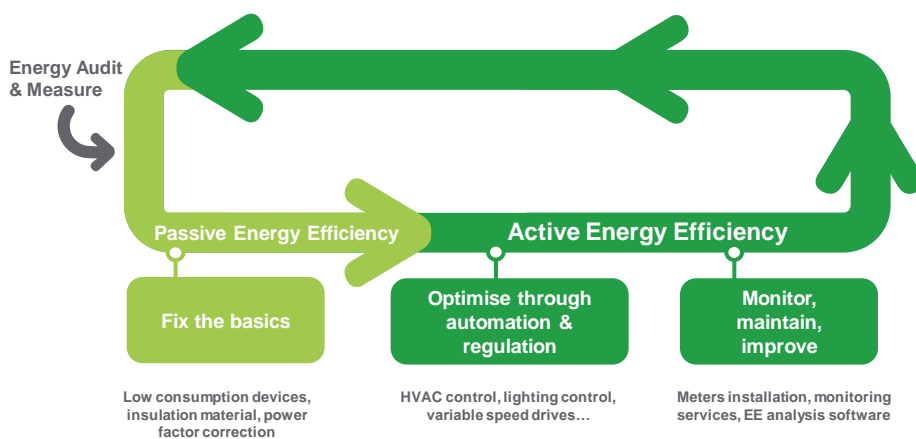
Sustaining Energy savings is easy, just follow the 4 Energy Efficiency steps

- 1 Measure
- 2 Fix the basics
- 3 Automate
- 4 Monitor and Improve

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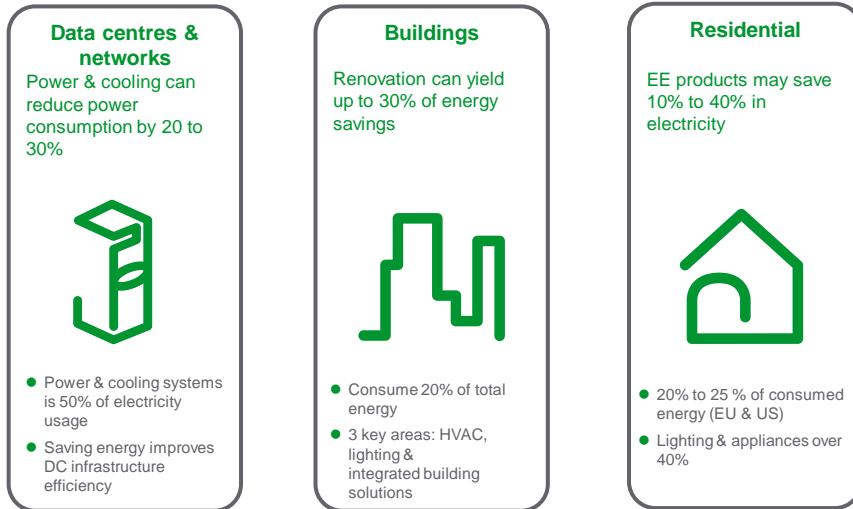
Lifecycle solutions for Energy Efficiency



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Where are the savings in Buildings ?



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Economical and Eco-Planet benefits can be achieved today

- The technology is available and working today
- The payback on investment can be very short (even in months)
- A direct benefit of Energy Efficiency investments can be creation of local employment and growth engine for the economy

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The Electrical Industry has a key role to play in standardisation

- Success is dependant on better guiding the market to answer to customer needs:
 - Standardisation of energy efficiency architecture within a building
 - Optimise complete architecture, not stay at product level only
 - Deal with application level for Energy Efficiency
- On products – necessity to:
 - Define performance level
 - Measure & verify performance
- Definition of reference architectures associated to performance classes
- Definition of services performance levels

Cooperation between Business, Electra & Authorities is a key success factor

- Alignment of stakeholders on :
 - Policies & Regulations – from the Government
 - Standards & Practices – with help of Electra and the Electrical Industry
- Is critical to accelerate implementation through :
 - Identified and described processes
 - Reference architectures associated to performance classes
 - Aligned incentives and obligations

Make the most of your energy



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