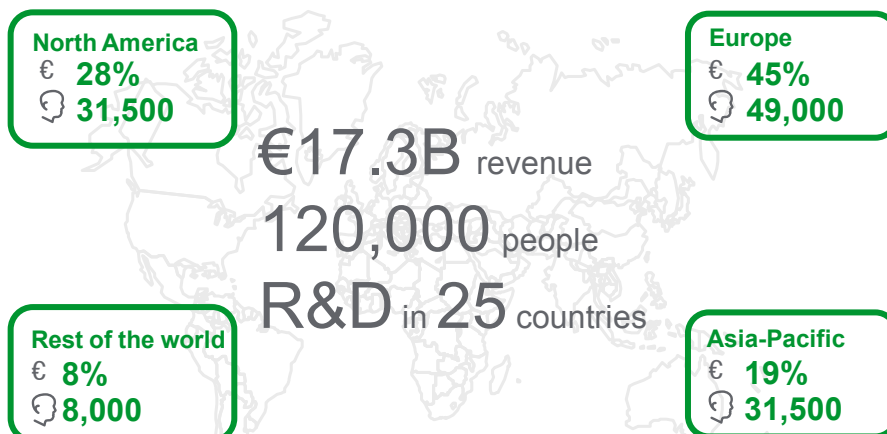


Reducing energy consumption in buildings by  
implementing programs for energy efficiency  
consulting and solutions

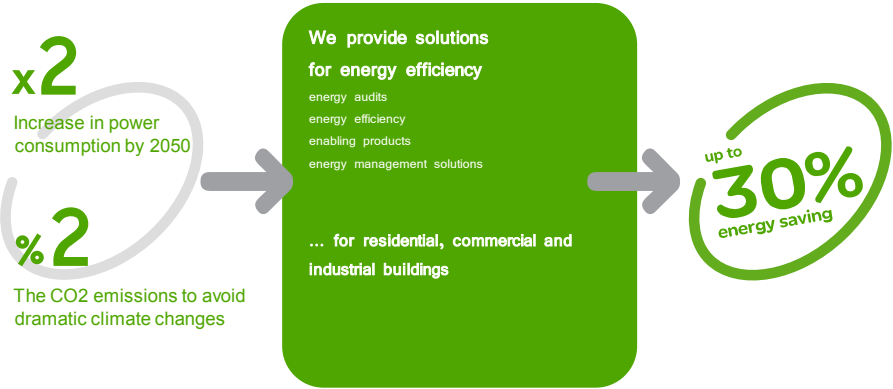
Mr. Andrew SLOAN  
Managing Director  
Schneider Electric Bulgaria  
April 2009



The global specialist in  
energy management (2007 figures)



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



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3

## Energy challenges & opportunities are everywhere

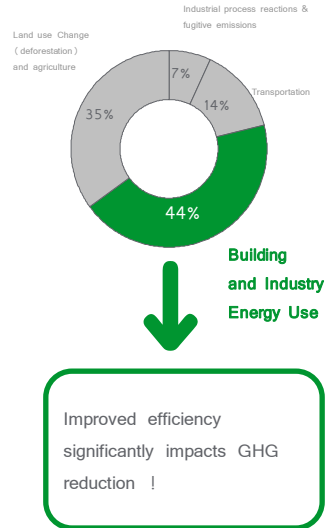


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4

# Buildings and Industry are the 1<sup>st</sup> GHG emission contributors...

- **≈ 44%** GHG come from non-transportation energy use
- **70%** of electricity is generated via coal or hydrocarbons
- **90%** of heat and process activities burn hydrocarbons



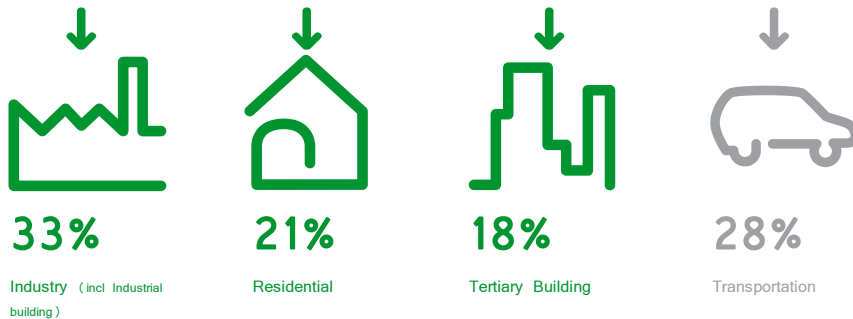
Data extracted from WRI: navigating the numbers 2005

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5

## ...and also the first energy consumers !

- Energy use split



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

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6

## Active Energy Efficiency in all sectors

**Buildings**

Renovation can yield up to 30% of energy savings

HVAC and climate control,  
Lighting control,  
Building management systems,  
Power factor correction



- Consume 20% of total energy
- 3 key areas: HVAC, lighting & integrated building solutions
- Motors consume 35%+ of electricity

**Residential**

EE products may save 10% to 40% in electricity

Lighting control,  
Climate control,  
Heating monitoring,  
Shutter control



- 20% to 25 % of consumed energy (EU & US)
- Heating is 30% of energy usage.
- Lighting & appliances over 40%

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7

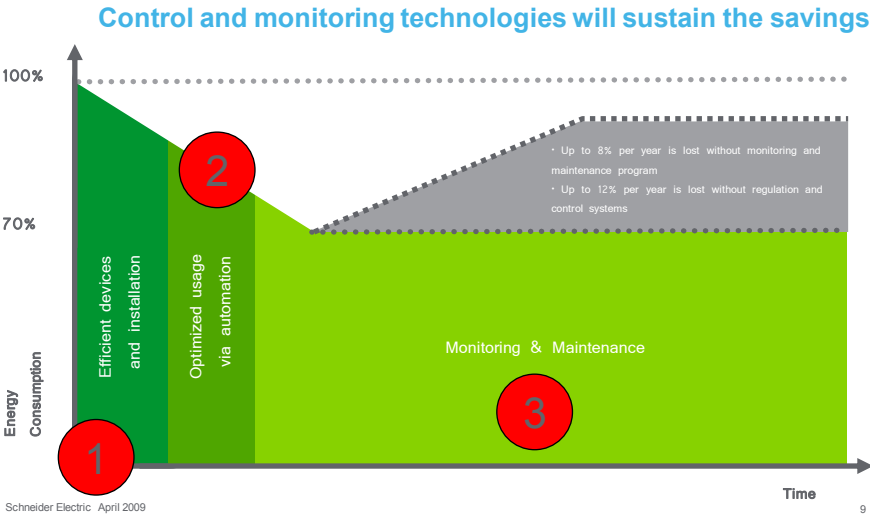
## Helping people make the most of their energy

Energy production	Energy Management	Energy Usage
<ul style="list-style-type: none"> <li>• Thermal</li> <li>• Nuclear</li> <li>• Genset</li> <li>• Hydro</li> <li>• Solar</li> <li>• Wind</li> </ul>	<p><b>Schneider Electric solutions to make energy:</b></p> <ul style="list-style-type: none"> <li>• Safe</li> <li>• Reliable</li> <li>• Efficient</li> <li>• Productive</li> <li>• Green</li> </ul>	<ul style="list-style-type: none"> <li>• Appliances</li> <li>• Lighting</li> <li>• HVAC</li> <li>• Lifts</li> <li>• Motors</li> <li>• Machines</li> <li>• Conveyors</li> <li>• IT servers</li> </ul>

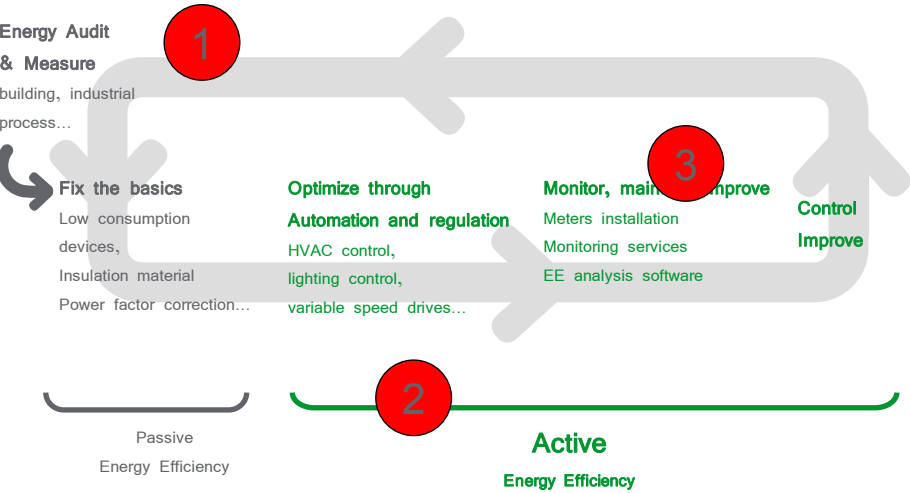
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8

**EE on demand side : 30% Savings are available today**



**Lifecycle solutions for Energy Efficiency**



## Active Energy Efficiency enablers in Building



- Increase Energy Efficiency of equipments and of electric distribution
- Use the only necessary Energy and only when necessary
- Encourage and Favor Energy Efficient behavior
- Sustain Energy Efficiency Performance over the time
- Optimize Energy Sources Use (including renewable )

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11

## Economical and Eco-Planet benefits can be achieved today

- The technology is available and working today
- The payback on investment can be very quick, from 3 months+
- A direct benefit of Energy Efficiency investment for Bulgaria, would be the creation of local employment and a growth engine for the economy
- Some actual examples of Energy Efficiency Successes:
  - Schneider Electric's internal program generated 11% consumption reduction in 1 year, with a 2 year payback, focused on HVAC and lighting control, (including a 58.7% saving in 1 year for controlling the pumps on a building heating system)
  - A global supermarket chain realised a 23% electricity consumption reduction over a 4 year period with a 'Web Energy Solution' sending data in real time to mobile phones

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12

## 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
  - Optimize 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.

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13

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

- Alignment of stakeholders on:
  - Policies & Regulations – from the Government
  - Standards & Practices – with the help of Electra and the Electrical Industry (possibly in the form of a 'mirror group')
- Is critical to accelerate implementation through:
  - Identified and described processes
  - reference architectures associated to performance classes
  - Aligned incentives and obligations

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14

**Make the most  
of your energy**

