Efficient Energy and Smart Cities
Buildings for a Smart City. How to drive the change?

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Buildings – why EE first matters?

Smart City pillars:

• Sustainable Urban Mobility
• Sustainable Districts and Built Environment
• Integrated Infrastructures and Processes

= sustainable, efficient & integrated buildings
Buildings: more than EE, but ...

Operational cost and primary energy – EE / RES
Climate change – resilience
Productivity – healthy environment
How to drive the change?

- Long Term Orientation
- Minimum Standards (Regulation)
- Demand Drivers
- Finance & Subsidies
- Removal of Market Barriers
Importance of a target

Fraunhofer’s cost-effective potential of 41% against PRIMES 2009 is in fact 49% against PRIMES 2007 baseline

20% = 5%
20% in 2020 against PRIMES 2007 baseline means today we are short only 5% against newest PRIMES 2013 baseline

40% = 25%
Similarly, 40% in 2030 against old PRIMES 2007 baseline is in fact only 25% against newest PRIMES 2013 baseline

- FED PRIMES 2007
- FED PRIMES 2009
- FED PRIMES 2013
- FED EUROSTAT (EU 28)
- 20% target in 2020
- 30% target in 2030
- 40% target in 2030
- Fraunhofer 41%
Enabling action

Challenges

• Financing and subsidies
• Accounting rules – invest-to-save
• Clear and simple state aid rules
• District heating systems and ROI of renovation
• Energy Performance Certificates that work
• R&I – low tech, yet smart
Mission possible