Improving Energy-Efficiency in Buildings – Efficiency Standards & Labelling – Lessons Learned

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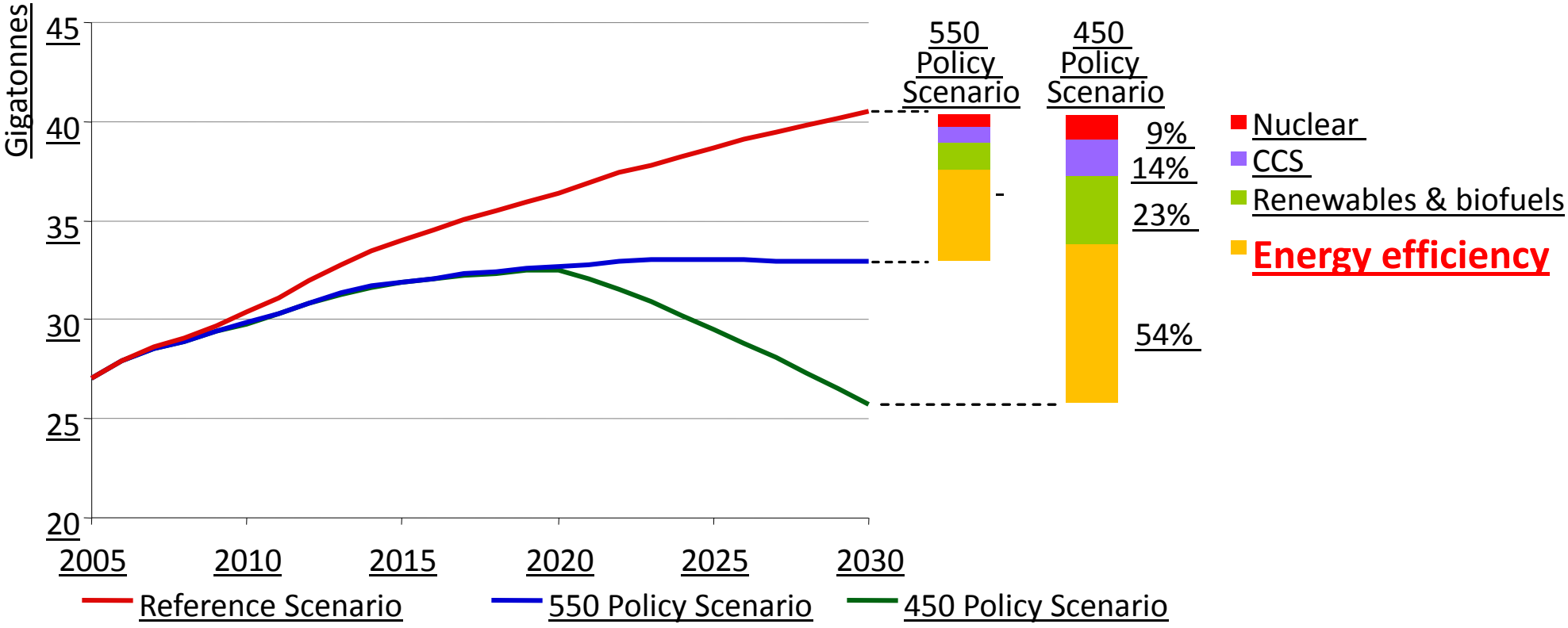
Presentation Structure

1. General Observations – Potential for EE
2. UNDP Portfolio on Energy-Efficiency
3. Removing Barriers to Energy-Efficiency
4. Lessons Learned from UNDP Projects

Everybody says energy-efficiency is critically important and yet overall one has to conclude that a lot more needs to be done …

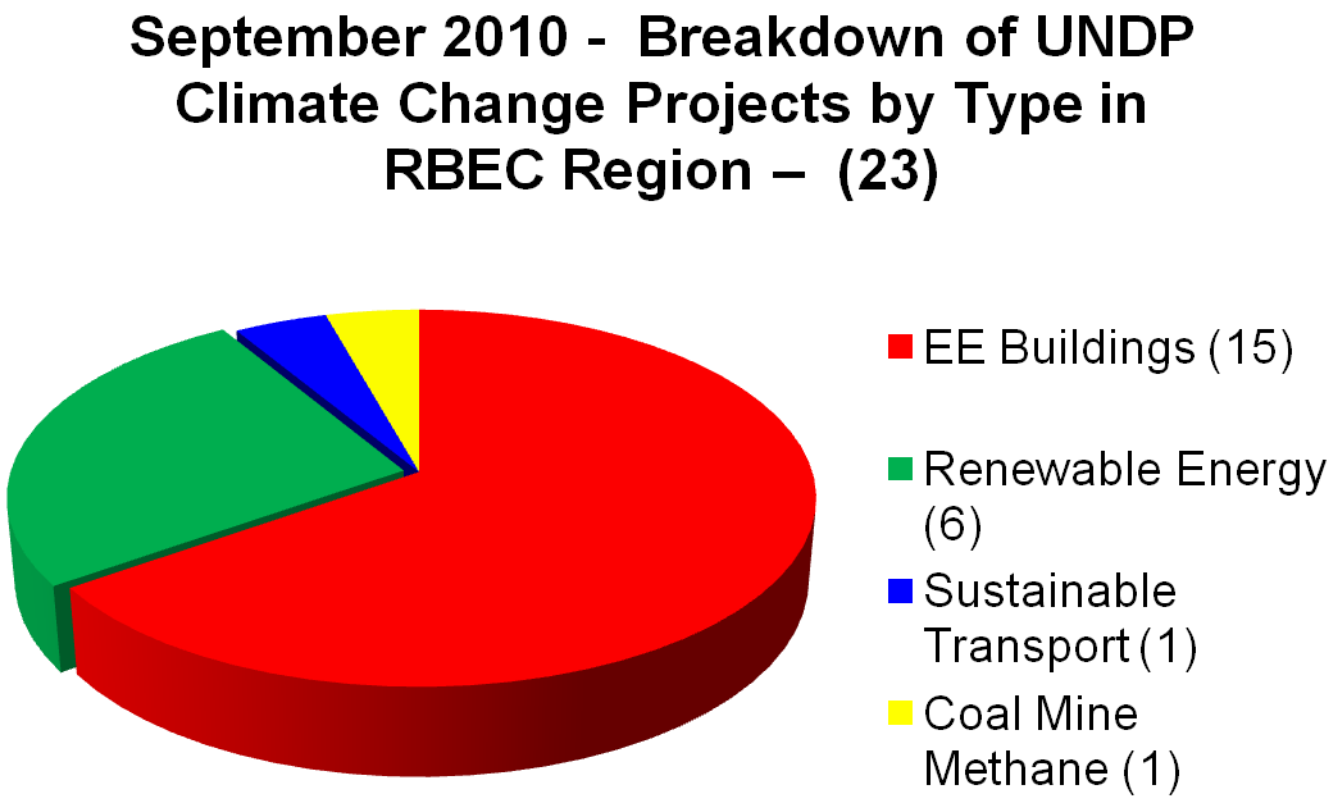
Energy Efficiency represents the largest potential reduction in energy-related CO_2 emissions , in particular in this region …



While technological progress is needed to achieve some emissions reductions, efficiency gains and deployment of existing low-carbon energy accounts for most of the savings

Source: IEA World Energy Outlook 2008

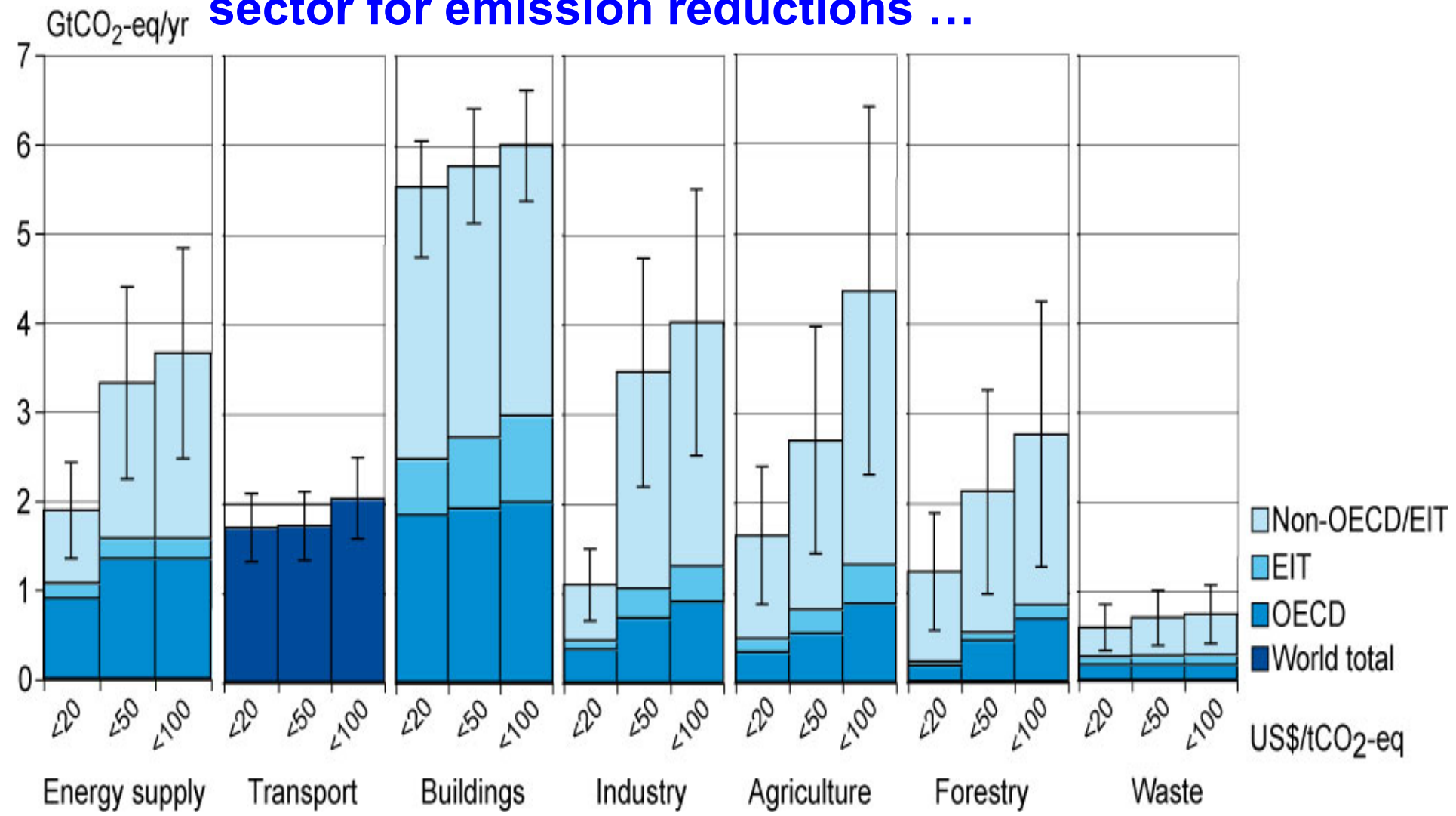
Energy-Efficiency in Buildings remains the most common project type for UNDP – 70% of the Portfolio



Ten new Climate Change Mitigation Projects in the last 12 months totaling over $35m include the following projects …

Country	Project	Prodoc Signed	Amount USD M
Armenia	EE Buildings	July 2010	$1.00
Kyrgyzstan	Small Hydro	February 2010	$1.00
Russia	EE Lighting	April 2010	$7.00
Russia	EE Standards & Labels	August 2010	$7.80
Russia	EE North-West Buildings	September 2010	$5.60
Russia	Greening Sochi Olympics	Dec 2010	$1.00
Serbia	Sustainable Transport	May 2010	$1.00
Tajikistan	Sustainable Transport	April 2010	$1.00
Turkey	EE Buildings	August 2010	$2.62
Turkey	EE Standards & Labeling	March 2010	$2.70
Ukraine	EE Lighting	March 2011	$6.50

Energy-Efficiency in Buildings has more potential than any other sector for emission reductions …



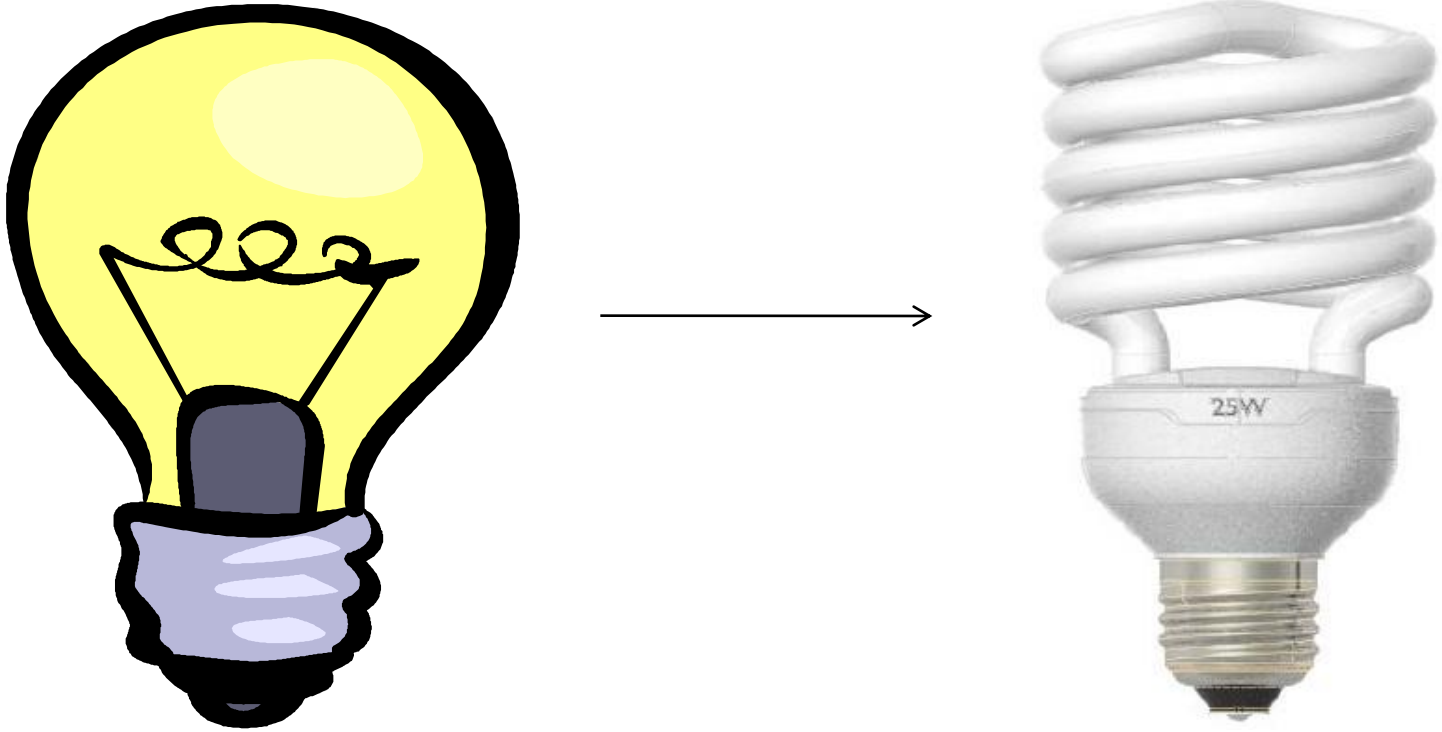
How to reduce emissions – EE Buildings

- Passive Solar Design,
- Solar heating & cooling
- Improved building envelop through insulation
- Efficient lighting;
- Efficient appliances & airconditioning

Barriers to Energy-Efficiency – Lots of Barriers

- Information and Awareness Barriers
- Legislative & Policy Barriers
- Opportunity Cost Barriers
- Institutional & Market Barriers
- Technical & Skill Base Barriers
- Financial Barriers

1. Information & Awareness Barriers …

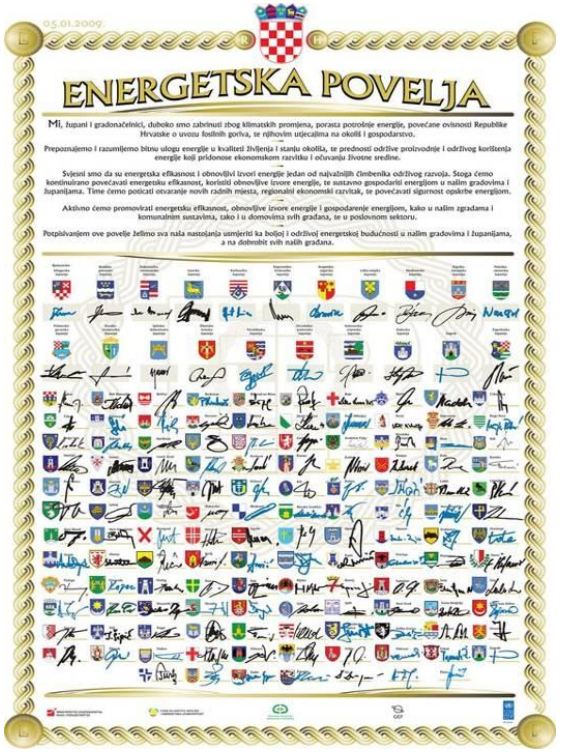


Even when we are aware we will make significant savings, very little is often done …

Lugansk example

2. Legislative & Policy Barriers

- New Energy Legislation
- New Building Codes
- Standards & Labelling
- New Policies which promote EE (audits etc …)



Significant Issue:

-Enforcement of Legislation

Significant Issues

Construction companies make more money by reducing building costs and this often means at the expense of energy-efficiency.

3. Opportunity Cost Barriers

✓Management focuses on making money, not saving energy costs

✓Energy often treated as a fixed cost

✓Liquidity – Many businesses prefer to keep day-to-day liquidity instead of
✓embarking on an investment leading to net savings in the future

✓ EE Not a priority for most companies

How do we change this?

One answer – speak financial language to companies

UK experience – ESCOs can work

3. Institutional Barriers

✓ Governments and private sector with limited capacity to identify and implement EE measures / Weak capacity at regional/local level

✓ Top officials working in other sectors (EE not '**sexy**')

✓ Creating favorable investment conditions requires reforms to institutions

✓ Weak ability of Housing & Condominium Associations

✓ Lack of trained architects, engineers, skilled personnel

✓ Lack of incentive to overcome institutional barriers when energy prices are low institutions simply **DO NOT CARE** that much

4. Technical Barriers & Skill Base Barriers

- ✓ Insufficient capacity to design/implement EE products
- ✓ Inability to deploy EE technologies
- ✓ Technical standards not in place in many countries
- ✓ Lack of training and skills development for EE , esp. at university level

5. Financial Barriers

✓ Inability of households (in particular) to obtain credit

✓ EE not 'sexy' for financial institutions due to small project size

✓ Debt/Equity not easily available in many countries and if it was available most consumers would prefer to buy a new car

✓ Carbon Finance Barriers – small size vs high transaction costs

Financing has to be accompanied by an enabling policy environment, capacity building, awareness building and technology innovation.

- Political leadership
- Revise sector policies and economic and fiscal policies to take climate risks into account
- Strengthen institutions

UNDP and Energy-Efficiency

✓ Focus is on EE in Buildings (public & private) (not industry)

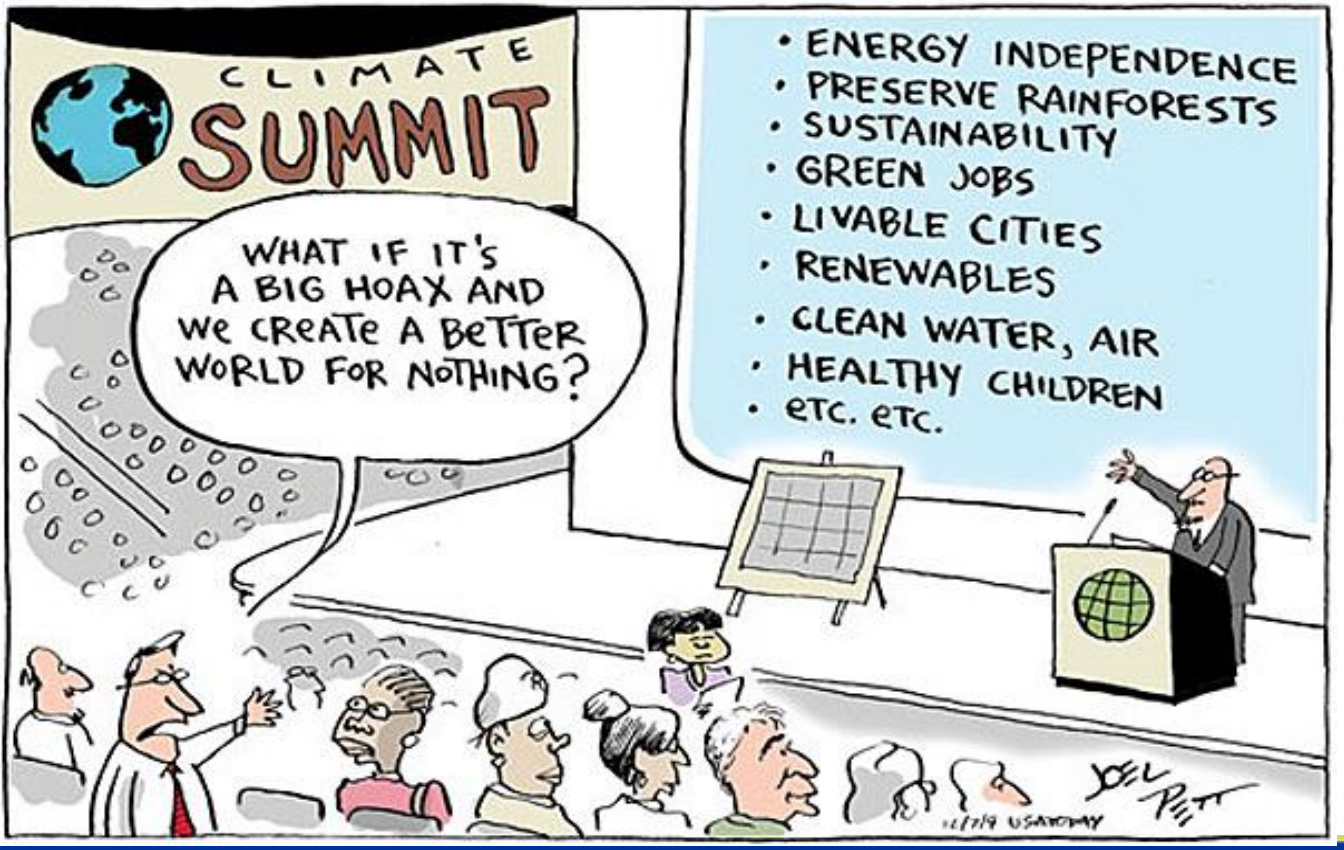
✓ Support to approx 30 projects on EE in Buildings in public and residential sectors in all regions of the globe (mainly through GEF)

✓ 15 EE projects and over us$40 million dollars in Europe & CIS region

✓ Projects target barrier removal activities and often have a demonstration component

✓ Lessons Learned Exercise is Currently Underway

Thank You!



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