

# Global Alliance on Accelerating Energy Efficiency

 **UNEP DTU PARTNERSHIP** | COPENHAGEN CENTRE ON ENERGY EFFICIENCY  
SE4ALL EE HUB

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# Outline

- Copenhagen Centre on Energy Efficiency (C2E2)
- Energy efficiency target and investment requirements
- Readiness for Investment in Sustainable Energy (RISE)
- Economy-wide targets, benefits and potential
- Global Alliance on Accelerating Energy Efficiency
- Climate Technology Climate Technology Centre & Network (CTCN)
- African Development Bank
- Opportunities for the UN Regional Commissions

# Copenhagen Centre on Energy Efficiency (C2E2)

1. C2E2 is SE4ALL's Energy Efficiency Hub and is part of UNEP-DTU (Danish Technical University) Partnership
2. Initial funding from Danish Government
3. Main work areas include:
  - Global Champion on Energy Efficiency
  - Analytical and Technical Support
  - **Supporting Energy Efficiency Accelerators**
  - A Knowledge Platform and Network for Energy Efficiency



# Doubling energy efficiency is an ambitious target!

Year	Annual Rate of improvement in energy intensity
1990-2010	-1.3%
2030 Target	-2.6%

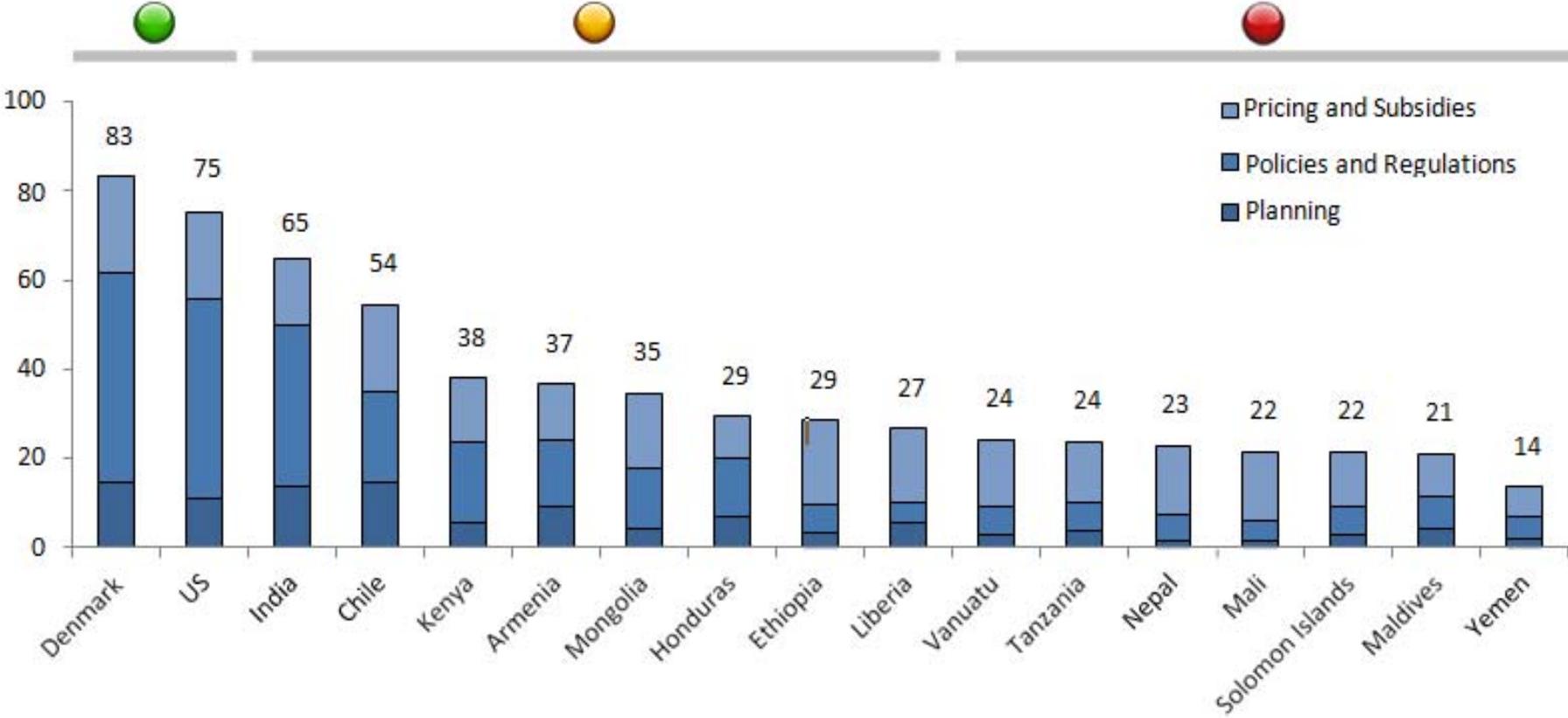
# Energy efficiency investment requires a three-fold increase

- The market for energy efficiency investments is very large – estimated between USD 310 - 360 billion in 2012
- USD1-1.2 trillion in investment is required each year until 2050
- Increased investments flows can occur through a suitable regulatory environment and provision of technical assistance
- Increased certainty of Government policies and programs can encourage private sector investment
- Investor interest in energy efficiency has been challenging due to a range of factors, particularly market barriers (e.g. information, split-incentives).

# Readiness for Investment in Sustainable Energy (RISE)

- A suite of indicators that capture the quality of the legal and regulatory environment for investment in sustainable energy.
- Provide a global reference point that will support decision-making and inform country-level interventions under the SE4ALL initiative
- Pilot phase of 17 Developed and Developing Countries with a global rollout in 2015
- RISE encompasses 28 indicators across three pillars of sustainable energy.
- Over time, progress in RISE scores ought to demonstrate relationships with flows of private investment as well as incremental achievements in SE4ALL goals.

# RISE Energy Efficiency Score



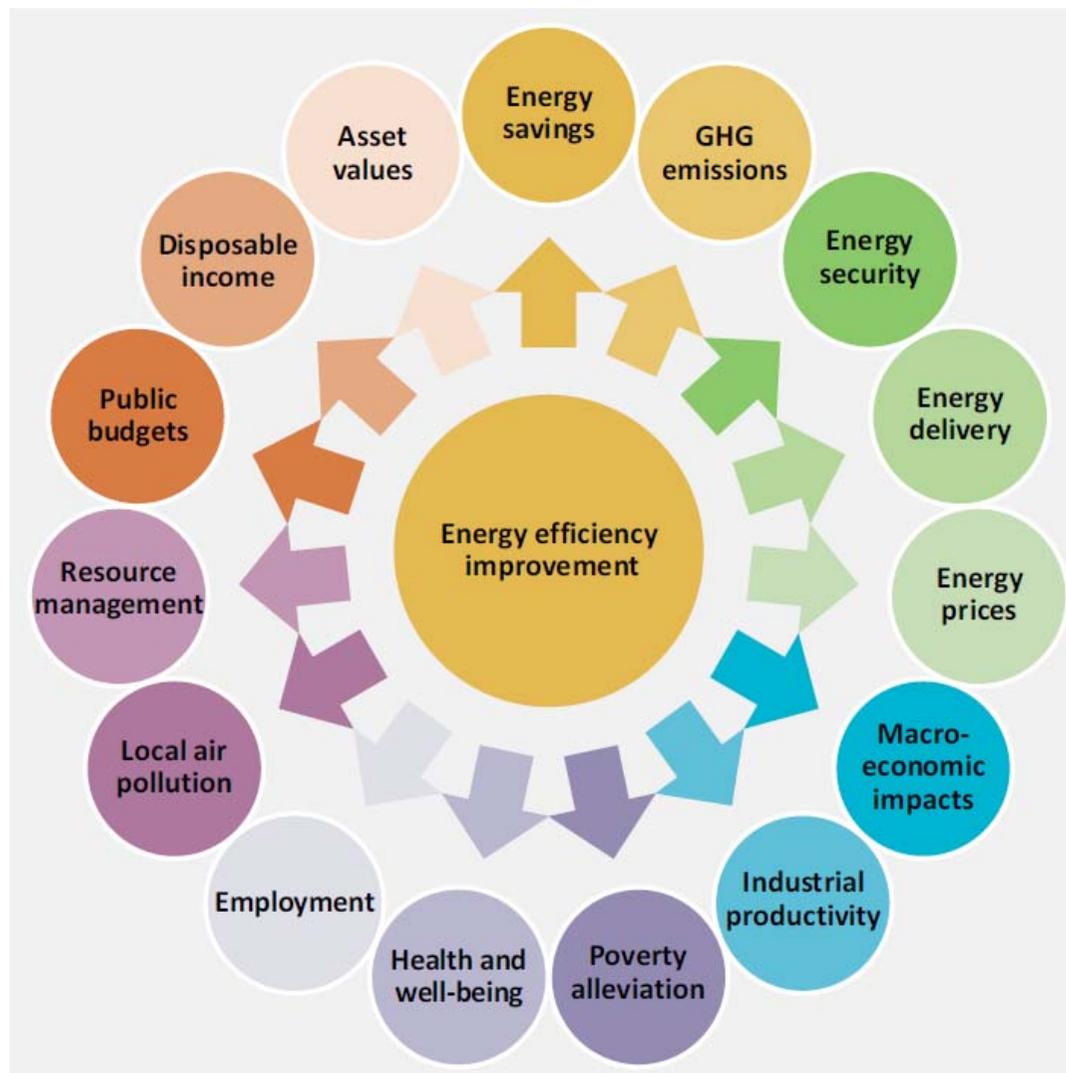
Source: RISE Database

# Economy-wide targets can accelerate energy efficiency across sectors

Examples of targets include:

- Emission reduction targets- Putting a price on carbon e.g. carbon trading, carbon tax
- Energy efficiency targets
- Energy intensity reduction targets
- Setting carbon-neutral targets
- Removing fuel subsidies to reflect the true price of energy

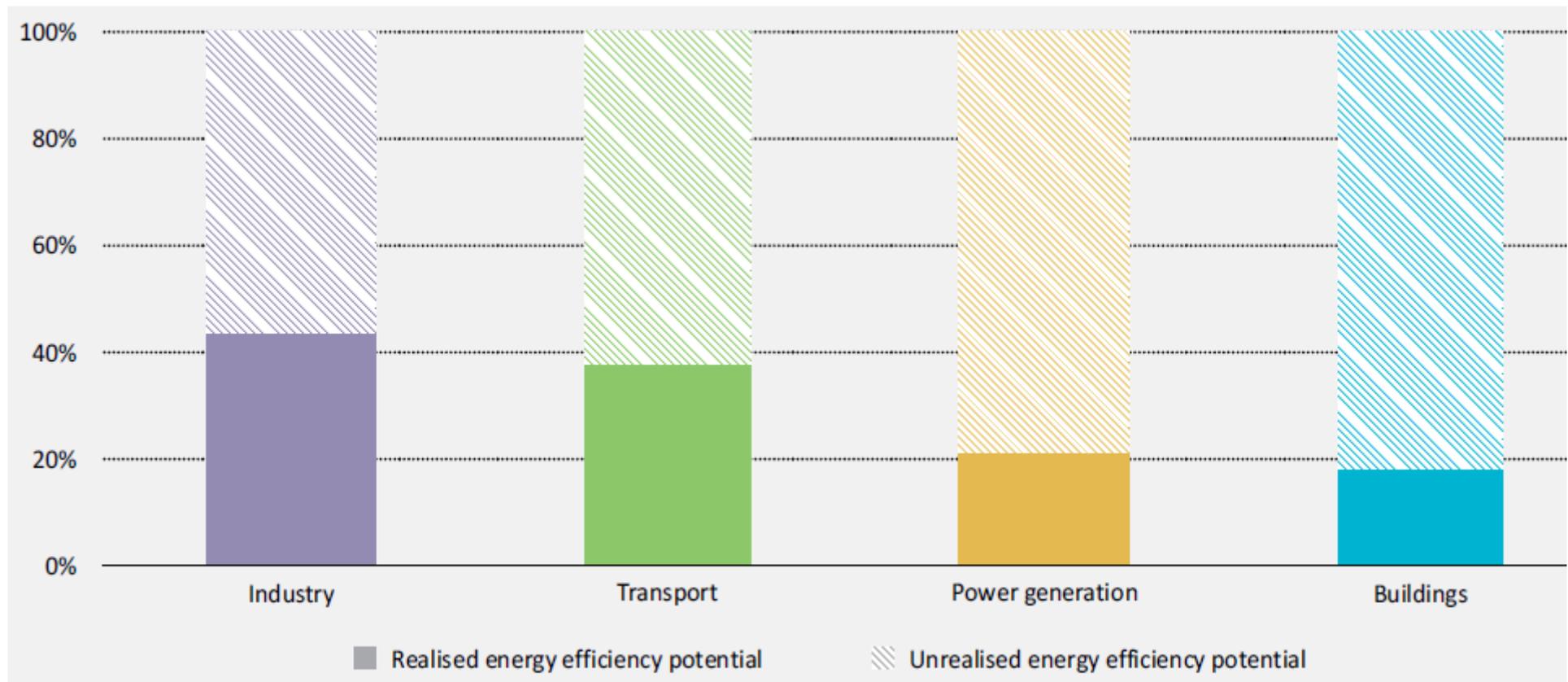
# Multiple Benefits of Energy Efficiency



Source: IEA, 2014

# Long-term energy efficiency economic potential by sector

IEA (2014) projections to 2035 show that as much as two-thirds of energy efficiency potential will remain untapped



# Global Alliance on Accelerating Energy Efficiency

- Display concrete transformational initiatives/instruments in support of the SE4ALL efficiency objective.
  - *Promoting Public-Private Partnership*
  - *Focus on the interphase between sector/technology initiatives, policy and consumption aspects (countries, cities, companies) and finance - in a phased approach.*
    - *Initial accelerators focus on lighting, appliances, buildings, district energy systems and vehicle transport.*
    - *Additional accelerators being developed for Industry and Power Sector.*
    - *Umbrella approach with individual groups engaged on each topic, each group has an industry co-lead*
    - *Implemented in cooperation with governments, cities and private sector.*
  - *Accelerator Platform was launched at UN SG CC Summit - Sept 2014*
  - *Larger showcasing envisaged in Paris 2015.*



# Lighting and Appliance Accelerators

- Global transition to widely available efficient lighting solutions in all lighting sectors by 2030 could reduce electricity demand by about 30 %.
- An increasing global demand for appliances like air conditioners, refrigerators and televisions requires increased energy efficiency.

	Regional/Country	State/Municipal/City	Private sector/Utilities/Households
Targets	Enacting standards and labelling legislation	Setting energy efficiency targets	Purchasing high efficient appliances
Policies	Harmonising test methods	Government procurement policies requiring the installation of energy efficient appliances	Commitment to only manufacture, distribute or sell highly efficient appliances
Programs	Monitoring, verification and enforcement program	Incentive programs for purchasing energy efficient appliances	Research and development programs
Education and awareness	Promotional material and public awareness campaigns to promote energy efficient products	Support the capacity building of retail staff on energy efficiency	Energy Efficiency Innovation Awards for manufacturers

# Vehicle Transport Accelerator

- Global fleet of vehicles is set to increase from 850 million today to some 3 billion by 2050 with most of increase in developing countries and transition economies – transport sector as a whole has highest growth of CO<sub>2</sub> emissions of any sector.

	Regional/Country	State/Municipal/City	Private sector/Utilities/Households
Targets	Fuel economy targets for vehicles	Fuel emission targets for vehicles	Targets on technology-related improvements
Policies	Changing taxes to make efficient vehicles cheaper and inefficient vehicles more expensive	Low emission zones	Commitment to funding development to improve fuel economy
Programs	Introducing vehicle labelling to provide information to consumers	Improve public transport networks including use of clean technologies	Technological innovation program to improve vehicle economy
Education and awareness	Promoting eco-driving	Participation in car-free days for cities - September 22 is World Car Free Day	Demonstrate efficiency improvements to consumers

# District Energy Systems (DES) Accelerator

- Bringing more effective ways to distribute electricity as well as heating and cooling is estimated to deliver 80 to 90% efficiency gains relative to conventional separate generation of electricity and heat.

	Regional/Country	State/Municipal/City	Private Sector/Utilities/Households
Targets	National targets for district energy systems	Carbon-neutral district energy systems	Utilities targeted to co-invest in district energy systems
Policies	Measures and standards that provide incentives for the electricity produced in district energy systems (e.g. CHP) with clear, consistent rules for connecting to the grid	Mandate areas to be connected to district energy systems	Leasing or owning buildings connected to DES
Programs	Evaluation of policies and programs related to district energy system	Energy mapping and infrastructure planning	Research and innovation in improving district energy systems
Education and awareness	Promoting the benefits of DES in the region	Initiate city partnerships or 'twinning's'	Promote benefits of district energy systems

# Building Accelerator

- Policies, building design and technologies combined with behaviour change could deliver reductions in energy demand from new and existing buildings of over 50% compared to BAU.

	Regional/Country	State/Municipal/City	Private sector/Utilities/Households
Targets	Net- or nearly-zero targets for all buildings	Net- or nearly-zero targets for government buildings	Net- or nearly-zero targets for private buildings
Policies	Introduction and update of stringent Building Energy Code	Implementation and enforcement of Building Energy Code	Requirement for the private sector to own or lease energy efficient buildings
Programs	Monitor and evaluation of the effectiveness of building policies and programs	Energy efficiency retrofitting program	Building energy monitoring programs for rapid feedback
Education and awareness	Mandatory energy efficiency training on design, construction and operation of efficient buildings	Pilot projects and demonstration of efficient buildings	Demonstrating innovation through industry awards

# Climate Technology Centre & Network (CTCN) [www.ctc-n.org](http://www.ctc-n.org)

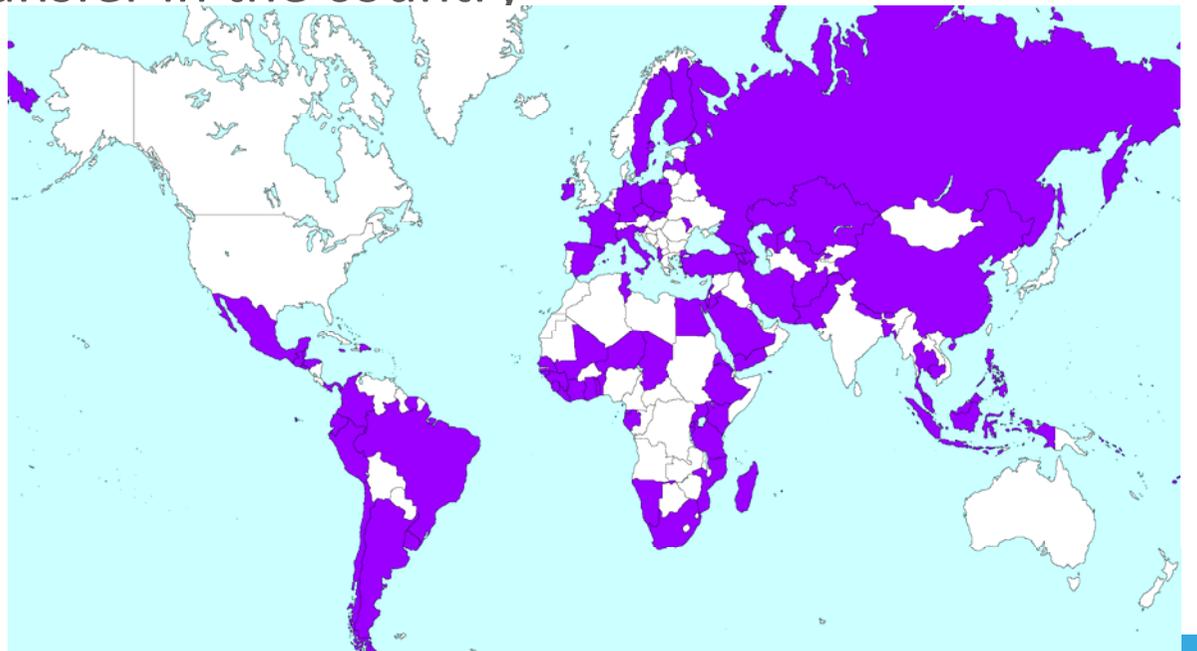
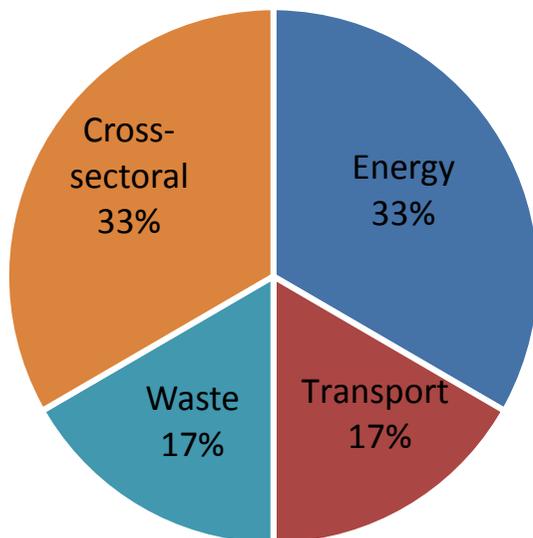
- CTCN mission: “Stimulating technology cooperation and enhance the development and transfer of technologies to developing country Parties at their request (...)”
- UNFCCC Technology Mechanism that engages through a National Designated Entities (NDEs): national CTCN focal points selected by each country. Three Core services
  1. Provide technical assistance to developing countries to enhance transfer of climate technologies
  2. Provide and share information and knowledge on climate technologies
  3. Foster collaboration and networking of stakeholders on climate technologies

# Current Status - NDEs

101 National Designated Entities have been selected by their countries as of 17 October 2014 to serve as CTCN focal points in:

- Coordinating and submitting technical assistance requests to the CTCN
- Strengthening networks, partnerships and capacity building for climate technology transfer in the country

## Mitigation Requests

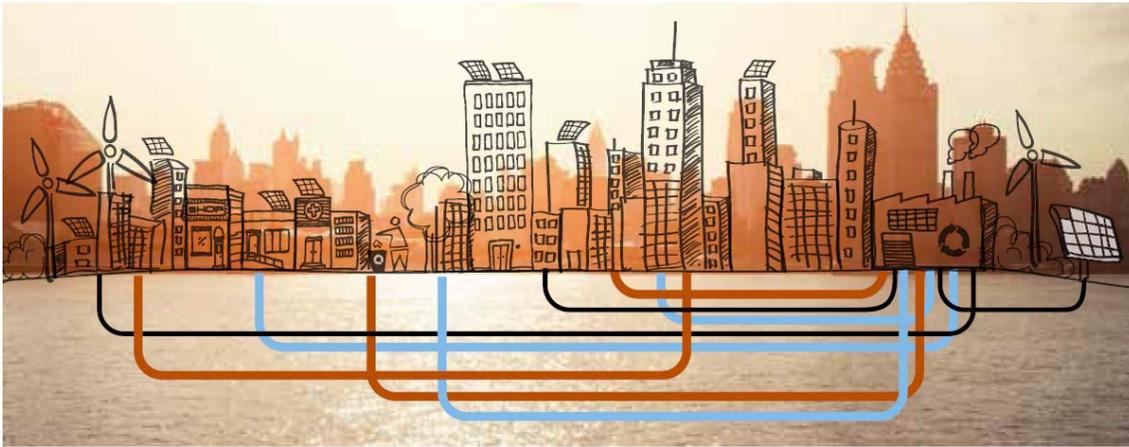


# African Development Bank (AfDB)

- Willingness to invest in energy efficiency
- Understand that many investment opportunities exist in various sectors e.g. public buildings, industry etc
- Sustainable Energy Fund for Africa (SEFA)
- Africa Climate Technology Finance Center and Network (ACTFCN)
- AfDB leading development of SE4ALL's Action Agenda and Investment Prospectus in engaging countries in Africa.

# Opportunities for UN Regional Commissions in SE4ALL's EE Accelerators

- Accelerators can help engage countries.
- Participate and support the existing accelerators and contribute to the development of new accelerators.
- Provide leadership to build momentum across accelerators in the UN Regional Commissions (countries, cities and private sector).
- Jointly promote best practice and demonstration projects.
- Make energy efficiency an integral part of energy policies and programs.



# Thank you

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# Questions for discussion:

- What has already been done to create an attractive and business-friendly investment climate?
- What else could Governments do to create a predictable, fair, transparent and efficient policy and regulatory environment that would catalyse investment?
- What are the measures that can reduce risks to potential investors?
- What are the recommendations of the UN RCs?

# DELETE? Energy efficiency investment is increasing - but more is needed!

Examples of Institutions providing investment in energy efficiency include:

- European Bank for Reconstruction and Development (EBRD)
- European Energy Efficiency Fund
- World Bank
- Asian Development Bank
- International Finance Corporation

Examples of Institutions providing technical assistance in energy efficiency include:

- GIZ
- Global Environment Facility (GEF)
- Renewable Energy and Energy Efficiency Partnership (REEEP)

# Key components and Stakeholders

## An Inclusive Agenda

All parties must act...

...and work together to realize a world with Sustainable Energy for All

### Governments

National governments  
Public institutions  
Cities and municipalities  
Multilateral organizations  
Bilateral development partners

### Businesses

Energy companies  
Financial players  
All companies

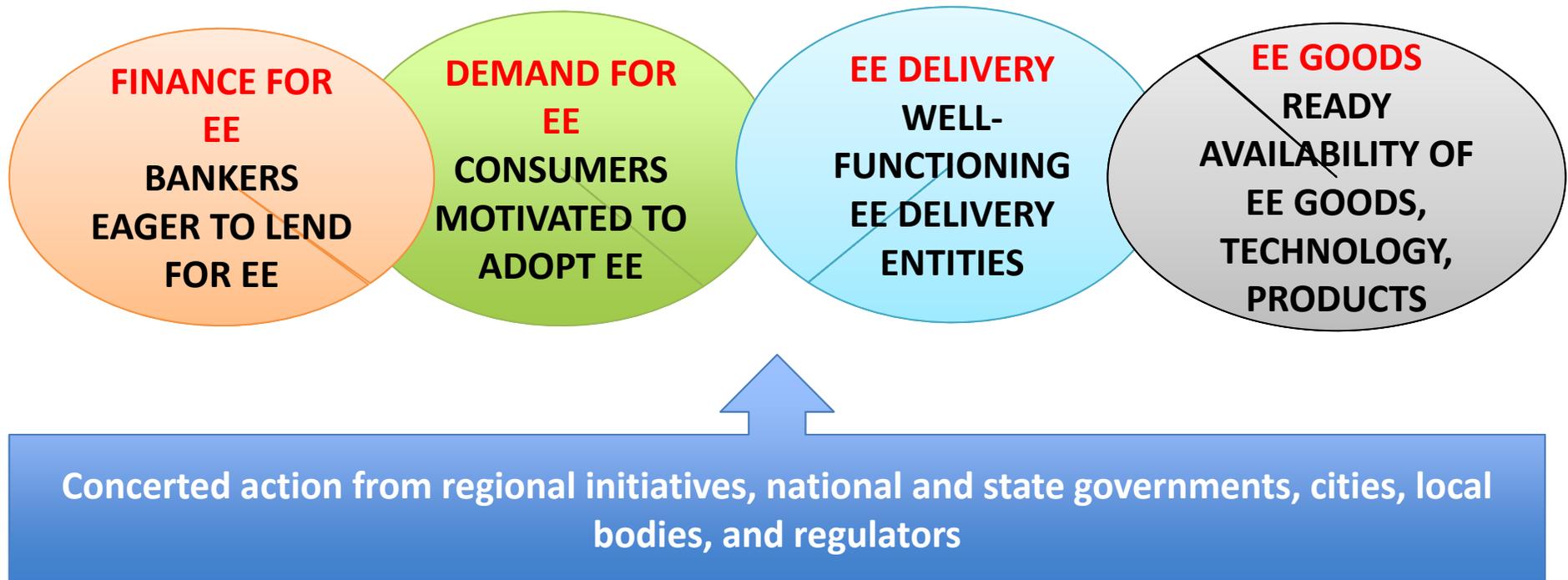
### Civil society

Organization  
Academic institutions  
Individuals



For energy efficiency to happen, you need coordinated action from several stakeholders.

- Consumers willing to adopt EE,
- Bankers willing to finance EE,
- Energy delivery entities to deliver EE,
- Availability of EE goods and services in the market place,
- AND ABOVE ALL governments, cities, public bodies and regulators to make commitments and create conducive conditions for consumers, bankers, energy delivery companies and EE goods and service providers to help fulfill commitments.



# EE Financing increasing

- GIZ -planning, system
- Decentralised approach
- partner programs with ministries- joint programs
- knowledge management, new ways to deal with old and new issues.
- EE -lots of bilateral projects
- little communication between them
- ee in pakistan is different to
  
- CTCN

# Investment in energy efficiency needs to accelerate

- selection criteria
- role of secretariat
- communication materials
- why and how and dissemination platforms
- 10 step program -interested so what. follow up
- common list of cities and follow-up with cities
- near term
- need a secretariat- building accelerator- UNEP?
- agenda - on decisions
- cop target focus paris
- french us cities 100 cities signed up ´-side event