

## What are the steps:

Set targets and develop policies

Buildings: Session 7







## Energy Efficiency Training Week: Buildings Program



- 1. Where to start: Understanding energy use in buildings
- 2. Where to start: Energy efficiency potential in buildings
- 3. Toolkit: Energy efficient building design
- 4. Toolkit: Energy efficient building technologies
  Where do I get help? IEA's Technology Collaboration Programmes
- 5. Toolkit: Enabling investment with energy efficiency policies
- 6. What are the steps: Building energy codes and standards Site Visit: Ministry of Public Works and Housing
- 7. What are the steps: Set targets and develop policies
- 8. Did it work: Evaluating the multiple benefits of energy efficiency
- 9. Did it work: Tracking progress with energy efficiency indicators
  Where do I get help? International and regional energy efficiency initiatives
- 10. Energy Efficiency Quiz: Understanding energy efficiency in buildings

## **Energy Efficiency Training Week:** Buildings





7. What are the steps: Set targets and develop policies

**Trainers:** Brian Dean and Autif Sayyed

**Session:** 1 hour

Purpose: To teach the fundamentals of how energy efficiency targets and policies can be used in tandem to reduce energy use in buildings and meet energy and development goals.

**Scenario:** There has been a change of government and the incoming government wants a range of options for interventions to rapidly increase energy efficiency. How do you identify, prioritise and quantify these policy options?



# **Target Setting**

Targets matter

Using roadmaps

National targets

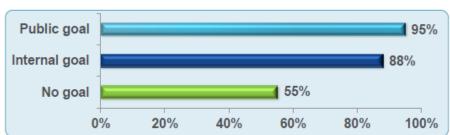


## Targets Matter – What is committed (and visible), gets managed



Of over 3,000 respondents from 10 countries....

Percent that have invested in energy efficiency or renewable energy in past 12 months:



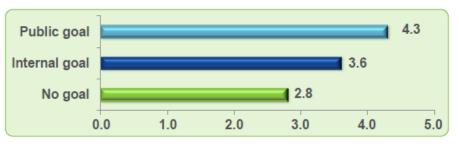


Industrial

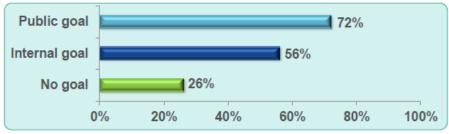
Commercia

Institutional

Average number of energy efficiency measures adopted in the last 12 months:



Percent that plan to increase investment in energy efficiency or renewable energy in next 12 months:



Other

C-level

## Target setting: Using roadmaps



# Global Policy Priorities





### NZEB Roadmaps: Eastern EU





BUILDINGS PERFORMANCE INSTITUTE EUROPE



# Rating & Disclosure: USA

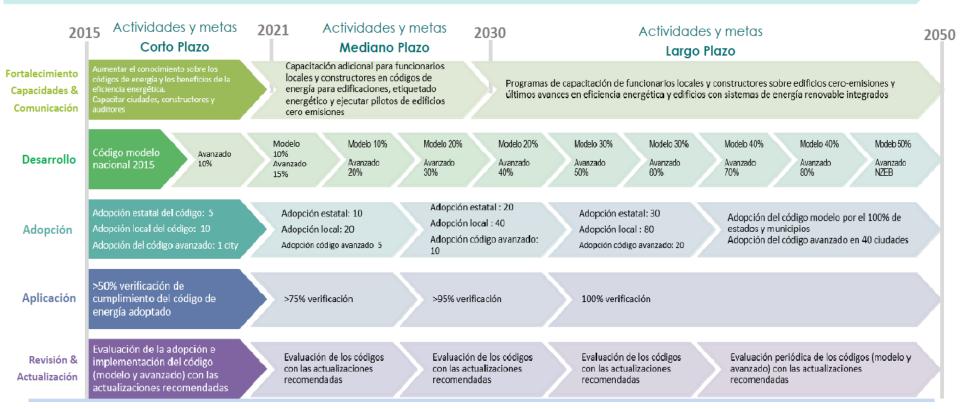
JABERS NatHERS ACThers EnerGuide CRESNET HE Comparing Building Energy Performance Measurement PC label A framework for international energy efficiency assessment systems energy consumption energy type buil Energimaerkning BER David Leipziger rating certificate I rgieausweis score use Institute for Market Transformation ERGY STAR leasable floor area unconditio nergy delivered energy CRESNET HERS me erformance scale gross floor area Resid umption Survey net floor area DPE BER conditioned sp

Source: GBPN

## Target setting: roadmap example in Mexico



### Cronograma de la Hoja de Ruta hacia 2050



## Target setting: example in Jakarta, Indonesia



#### JAKARTA GREEN BUILDING

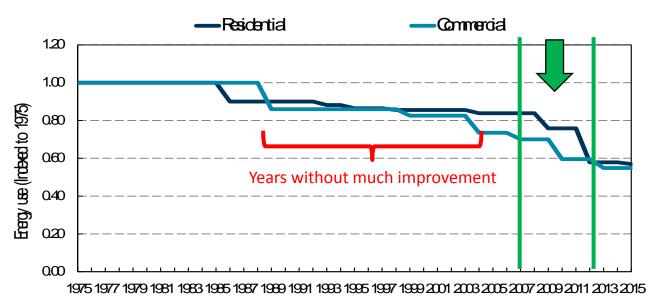
**GRAND DESIGN** REGULATIONS **ACHIEVEMENT OUOTES NEWS USEFUL LINKS** CONTACT **USER GUIDE** INDONESIA VISION MISSION GOAL 100% 3.785 GWh new buildings energy saving and To be 2,4 billion liters 60% The Center of Excellence of existing buildings water saving Green Building implementation in meet Jakarta Green Building 3,37 million tons Indonesia. compliance in 2030 CO<sub>2</sub>e

CO<sub>2</sub>emission reduction

## Target setting: Building code targets in the United States



- In 2007, US Congress directed US DOE to support efforts to reduce energy use in new buildings by at least 30% by 2010.
- In October 2010, final voting confirmed code improvements that resulted in 32% energy savings.



2007 Target:
resulted in 32%
improvement.
More energy
savings than any
period since 1975.

Source: US DOE and IEA Energy Efficiency Market Report

## Target setting: national targets in the EU





#### Europe Energy Performance of Buildings Directive

- Moving toward new and retrofitted nearly-zero energy buildings by 2020 (2018 in the case of public buildings)
- Application of a cost-optimal methodology for setting minimum requirements for both the envelope and the technical systems

#### **Europe Energy Efficiency Directive**

- The 2012 Energy Efficiency Directive established a set of binding measures to help the EU reach its 20% energy efficiency target by 2020.
- Individual country level regulations and targets





# **Policy Making**

Stakeholders

Group exercise



## Who: Stakeholders involved in governance of buildings





## Who: Stakeholders influence action across building lifecycle



NEW BUILDINGS			EXISTING BUILDINGS				
Land Use/ Planning	Design	Construction	Sale or Lease	Tenant Build-Out	Operations & Maintenance	ダダダ ダダダ Retrofit	Demolition & Deconstruction
Local governments	Design & construction professionals	Design & construction professionals	Buildings owners and managers	Buildings owners and managers	Buildings owners and managers	Buildings owners and managers	Design & construction professionals
Developers and self-help builders	National and provincial governments  Local governments	Building investors Suppliers & manufacturers	Developers and self-help builders Building occupants	Building occupants  Design & construction professionals	Energy utilities  Building occupants	Building investors  Building occupants  Design & construction professionals	Buildings owners and managers

## Group discussion and exercise



### Scenario:

There has been a change of government and the incoming government wants a range of options for interventions to rapidly increase energy efficiency.

How do you identify, prioritise and quantify these policy options?

### **Group Exercise:**

- You have the opportunity to consult with key stakeholders on prioritising energy efficiency policies for buildings.
- We will use a platform created to engage stakeholders on energy efficiency.



### Roles: (pick your color based on where you are working)

Asia (excluding Indonesia) Indonesia (excluding Jakarta) **Jakarta** 

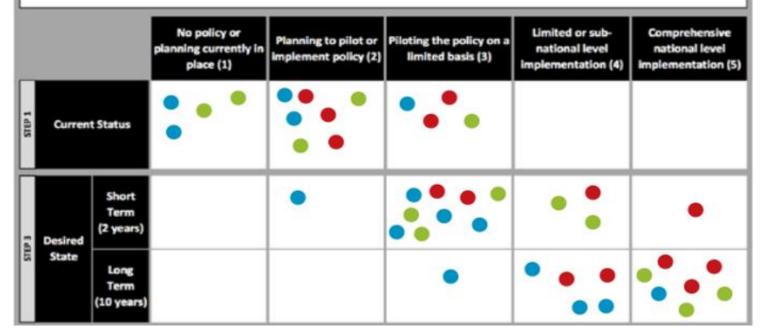
Typically we set roles by stakeholder type (such as consumers, industry, government), but today we will do it based on the geographic representation in the room.



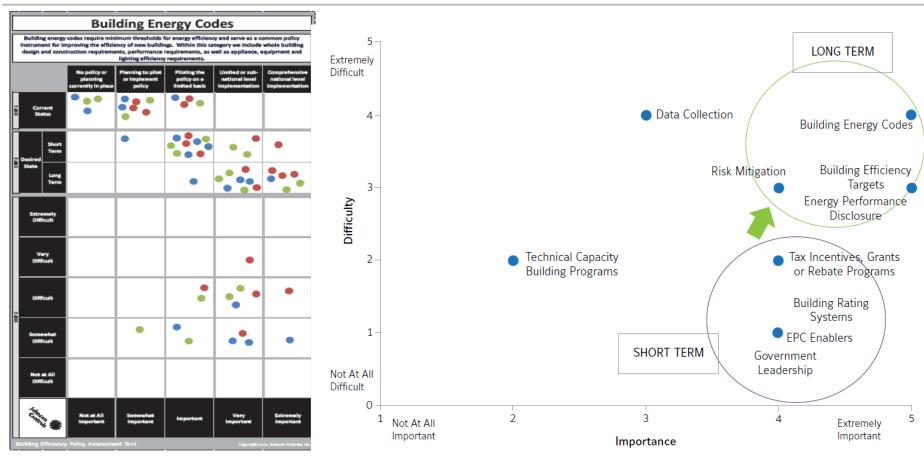
## Sample

## **Building Efficiency Codes & Standards**

Building energy codes require minimum thresholds for energy efficiency and serve as a common policy instrument for improving the efficiency of new buildings. Within this category, we include whole building design and construction requirements, performance requirements, as well as appliance, equipment and lighting efficiency requirements.

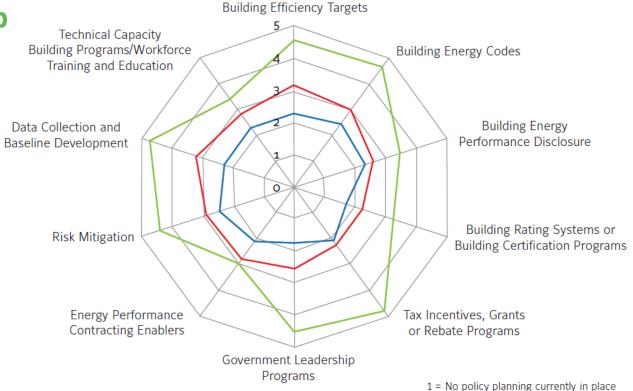












4 = Limited or sub-national level implementation

2 = Planning to pilot or implement policy 3 = Piloting the policy on a limited basis

5 = Comprehensive national level implementation



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