



VEF  
VIRTUAL  
SERIES

ACCELERATING ENERGY TRANSITION

# ENERGY USE IN BUILDINGS – ENERGY EFFICIENCY & OPPORTUNITIES



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*In Partnership with*



  
UN  
environment  
United Nations  
Environment Programme

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# DEFINITIONS

## Energy efficiency related to buildings and building related products:

- Design (Window-to-wall ratio, orientation, passive house ... )
- Insulation, louvrette, reflectors ...
- Low carbon building materials (Autoclaved aerated concrete, ... )
- Appliances (Air conditioner, refrigerator, heat pump ... )
- Services

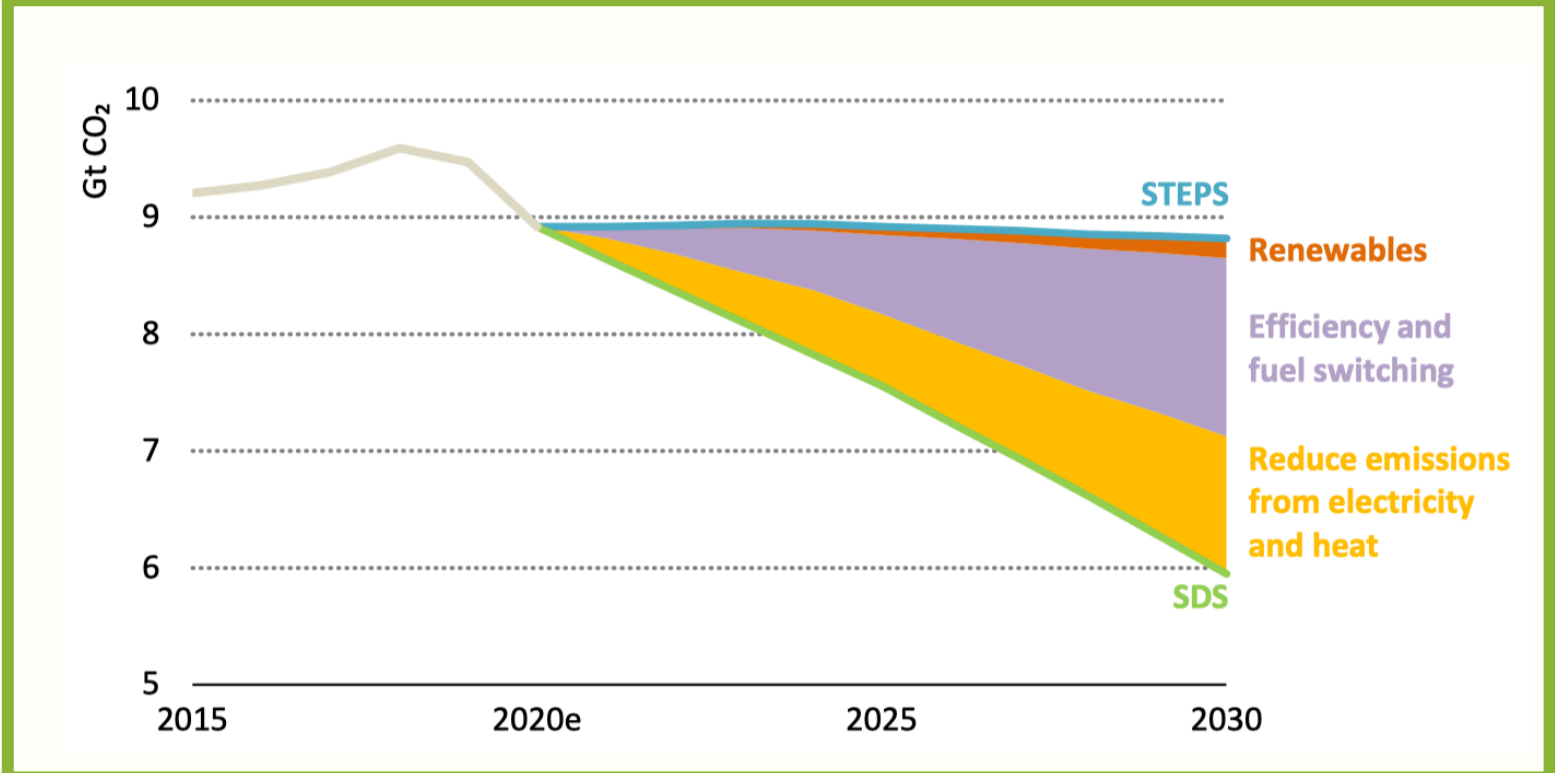


# ENERGY EFFICIENCY – A KEY DRIVER TO LOW CARBON BUILDING

## IMPACT OF DEMAND GROWTH

- Buildings responsible for 25% of global energy related emissions
- Energy efficiency of buildings and their products essential for meeting **Paris Targets (e.g. NetZero 2050)**
  - **Over 20 countries committed and more joining.**

## LOWERING OF BUILDING EMISSIONS BY 1/3 UNTIL 2030



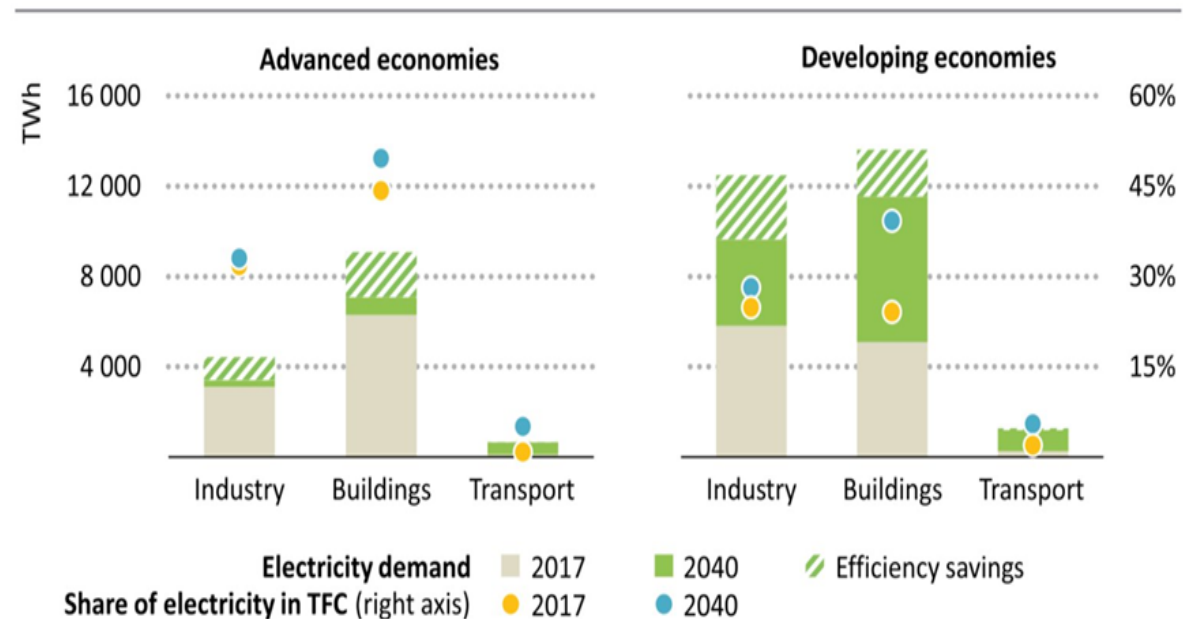
Source: WEO, 2020 (NetZero 2050 Scenario)

# THE POTENTIAL OF ENERGY EFFICIENCY TO SUPPORT DEVELOPMENT

## SUSTAINABLE ENERGY IN BUILDING

- WRI – Cost benefit ratio of 1:4 for EE investment in buildings
- IEA – Sustainable buildings can produce savings of USD 1 trillion by 2050
- IEA – Covid-19 recovery plans focusing on energy in buildings will deliver economic growth, create jobs and reduce GHG emissions.

## ENERGY EFFICIENCY IN BUILDINGS POTENTIAL



## **KEY OPPORTUNITIES TO DRIVE ENERGY EFFICIENCY IN BUILDINGS AND THEIR PRODUCTS**

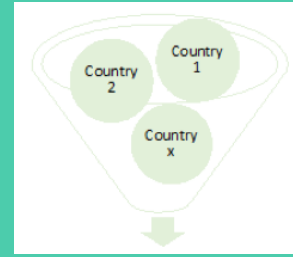
- **Policy framework to provide clear signals to market players, innovators and consumers.**
- **Regulatory tools to drive the uptake of highly efficient options and ban worst performers.**
- **Information to ensure public awareness and informed choices**
- **Financing tools to bridge financial barriers for adoption of energy efficiency**
- **SDGs: access to energy, employment for youth and gender balance**

# ENABLING ENERGY EFFICIENCY: WHAT IS REQUIRED?

- **Policy:**
  - Universal minimum energy & carbon performance for key appliances and systems
  - 2030 MEPS at level what is today best in class;
  - Building codes with maximum energy & carbon use per square
- **Information:** Digitalisation to increase demand-side response potential through increased flexibility and controllability of end-use devices.
- **Technology:**
  - Product design standards
  - Low GWP & environmentally friendly refrigerants
  - Circular economy: reusable and recyclable low carbon materials
- **Financing & incentives:**
  - Green public procurement
  - Below market interest rates for low carbon products
  - Incentives to drive innovation and build scale for “green building products”

# METHODOLOGIES FOR COUNTRY SELECTION

01



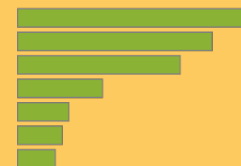
List of countries to be assess

02



Organisation of countries by level of development (3 groups)

03



Ranking by GHG mitigation potential

04



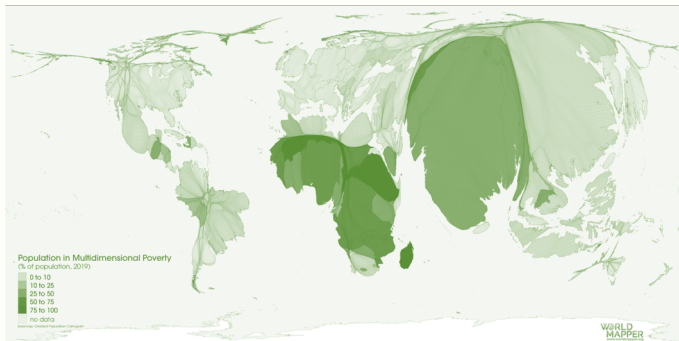
Assessment of readiness for implementation

# COUNTRY SELECTION

- identify partner countries for future engagement and supported transformational change

## COUNTRY REQUIREMENTS

Selection based on the needs for support (countries in 3 groups)



## IMPACT

Potential to improve energy efficiency and to lower GHG emissions



## ENGAGEMENT

Readiness for implementation and to engage in collaborative action





# VIRTUAL DISCUSSION SESSIONS (2020-21)

## VEF virtual series (Oct 20 – May 21):

- 1) Accelerating a market transformation towards efficient products– addressing climate change with economic opportunities
- 2) Affordable energy-efficient products
- 3) Energy efficiency information and capacity building
- 4) Equity, youth and gender
- 5) Energy efficiency policy and regulations
- 6) Supporting economic recovery through innovation and digitalization
- 7) Financial mechanisms for energy efficiency and buildings
- 8) Building political momentum

(Key cross-cutting factors: COVID-19, job creation)

**THANK YOU**