

Data and SDG 7

Access to affordable, reliable, sustainable and modern energy

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About ESCAP

The Economic and Social Commission for Asia and the Pacific (ESCAP) is the most inclusive **intergovernmental platform** in the Asia-Pacific region. The Commission promotes cooperation among its **53 member States** and **9 associate members** in pursuit of solutions to sustainable development challenges. ESCAP is **one of the five regional commissions** of the United Nations.



Global framework for SDG 7

GOAL

TARGETS

INDICATORS



7.1 ensure **universal** access to affordable, reliable and modern energy services

Proportion of population with access to **electricity**

Proportion of population with primary reliance on **clean fuels** and technology

7.2 increase **substantially** the share of renewable energy in the global energy mix

Renewable energy share in the total **final energy consumption**

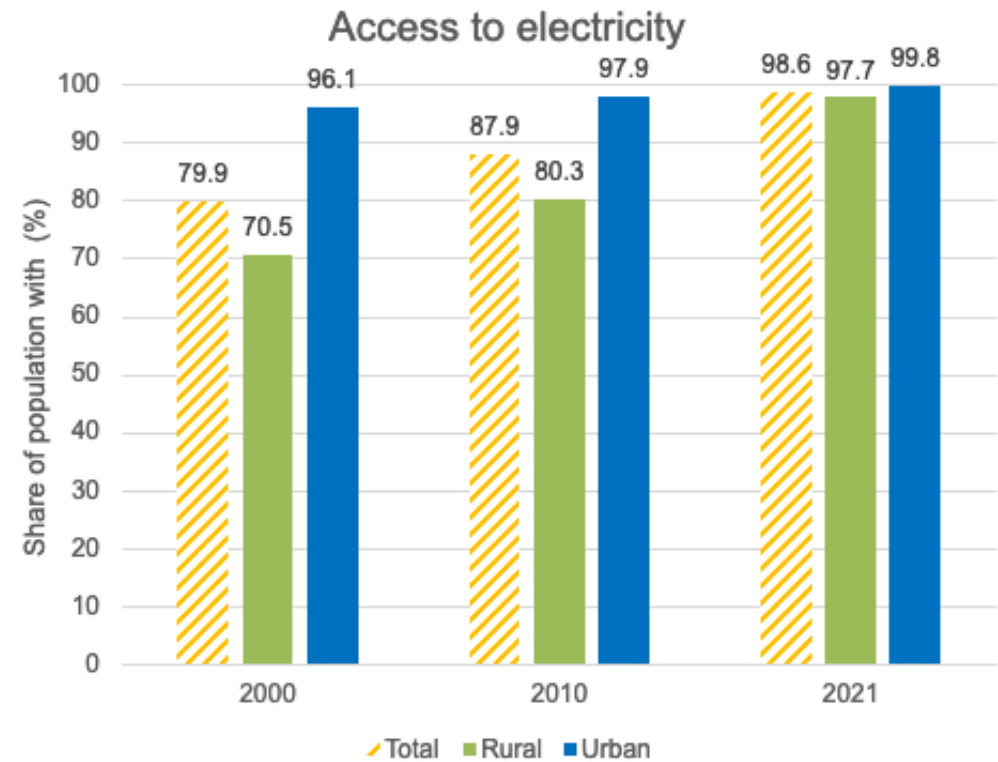
7.3 **double** the global rate of improvement in energy efficiency

Energy **intensity** measured in terms of **primary energy and GDP**

Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services

Indicator 7.1.1

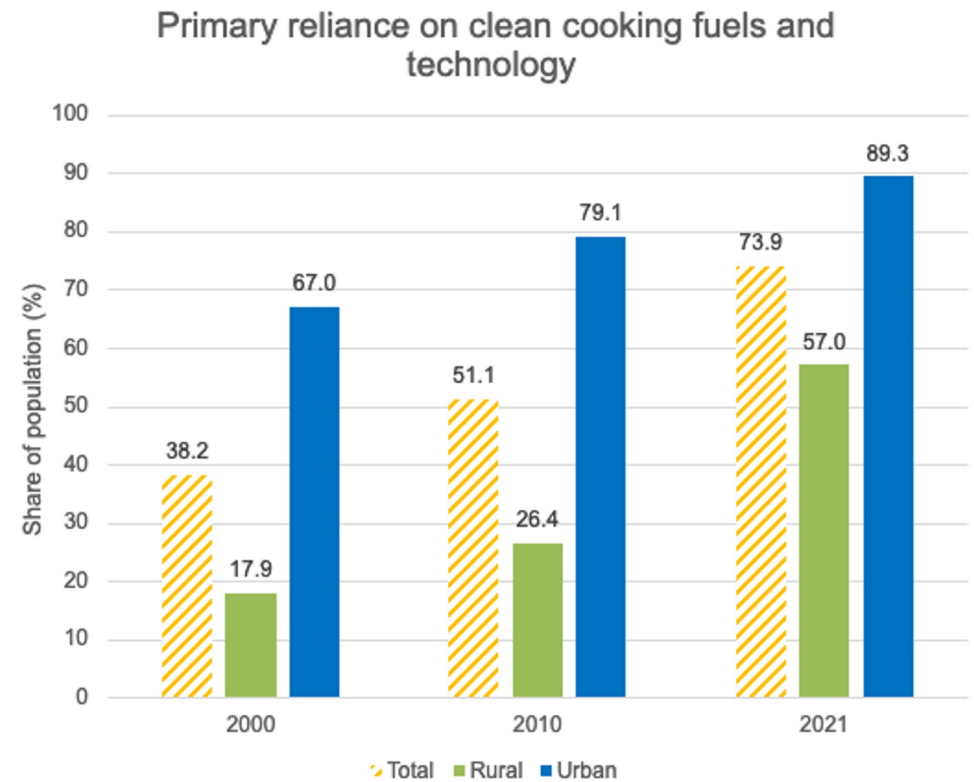
Proportion of population with access to electricity



Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services

Indicator 7.1.2

Proportion of population with primary reliance on clean fuels and technology



Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services

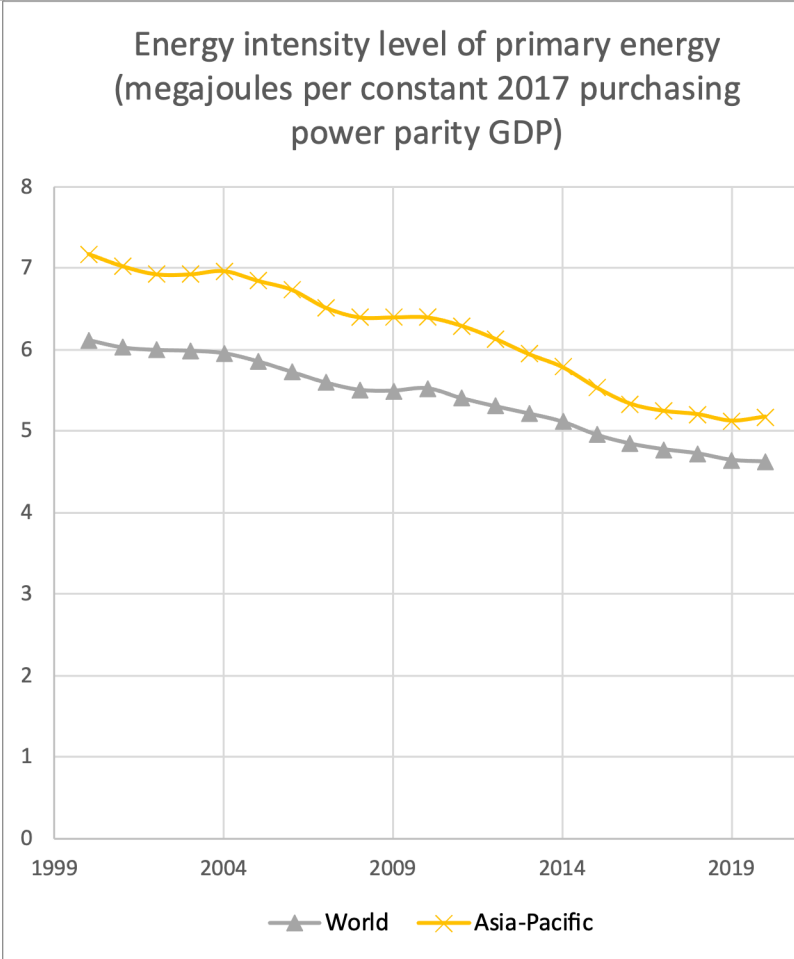
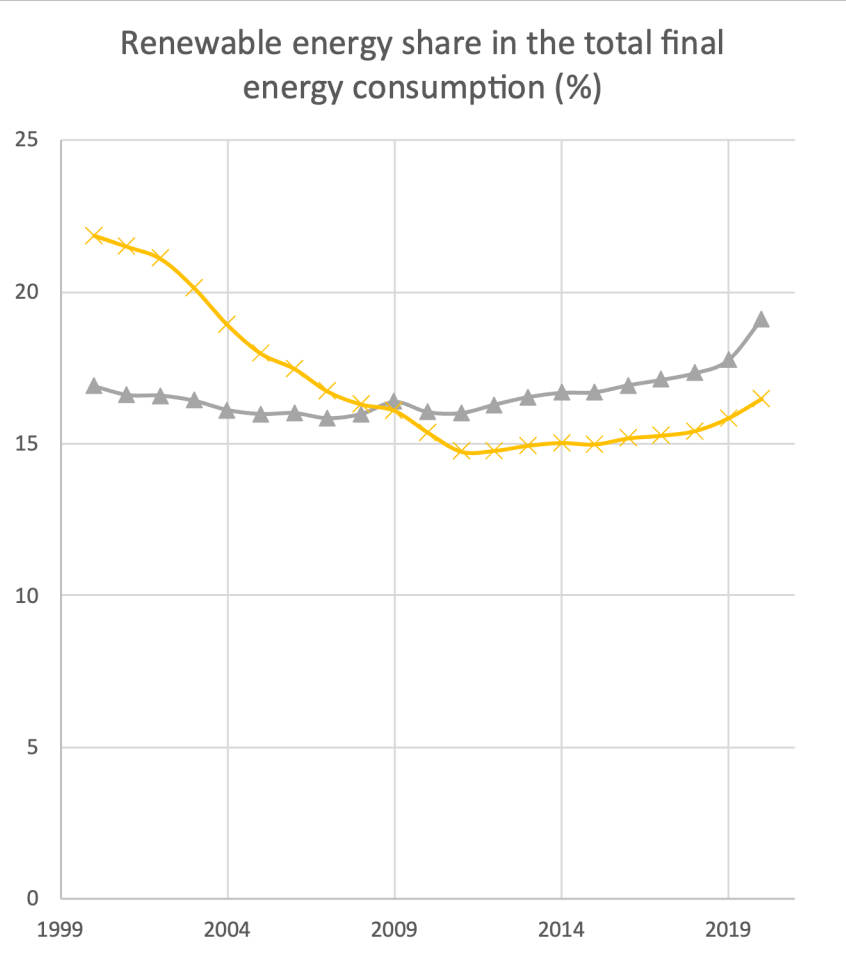
MINIMUM REQUIREMENTS BY TIER OF ELECTRICITY ACCESS



- Capacity
- Duration
- Reliability
- Affordability

Target 7.2: increase substantially the share of renewable energy in the global energy mix

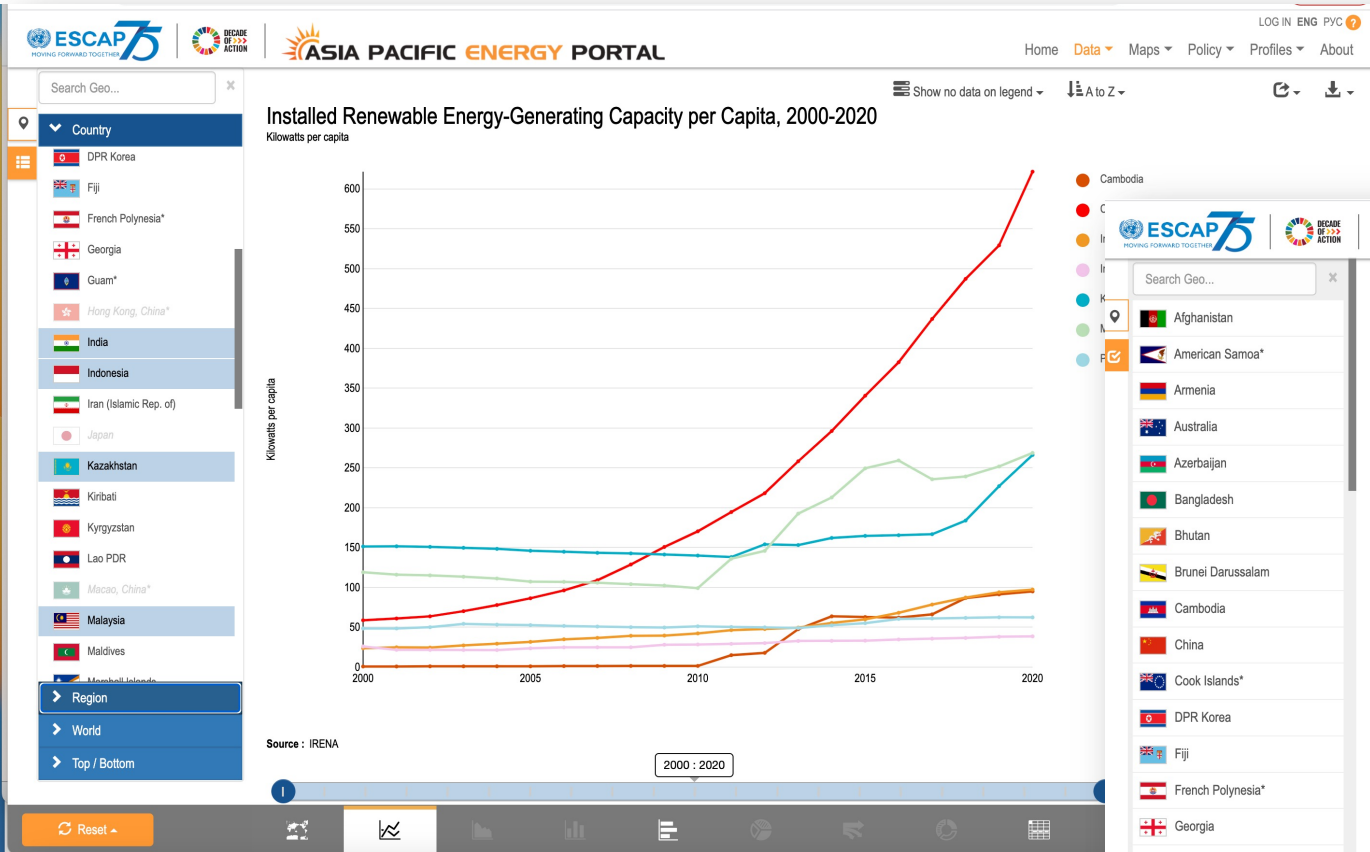
7.3 : double the global rate of improvement in energy efficiency



5 Recommendations



1. Learn from others



- Afghanistan
- American Samoa*
- Armenia
- Australia
- Azerbaijan
- Bangladesh
- Bhutan
- Brunei Darussalam
- Cambodia
- China
- Cook Islands*
- DPR Korea
- Fiji
- French Polynesia*
- Georgia
- Guam*
- Hong Kong, China*
- India

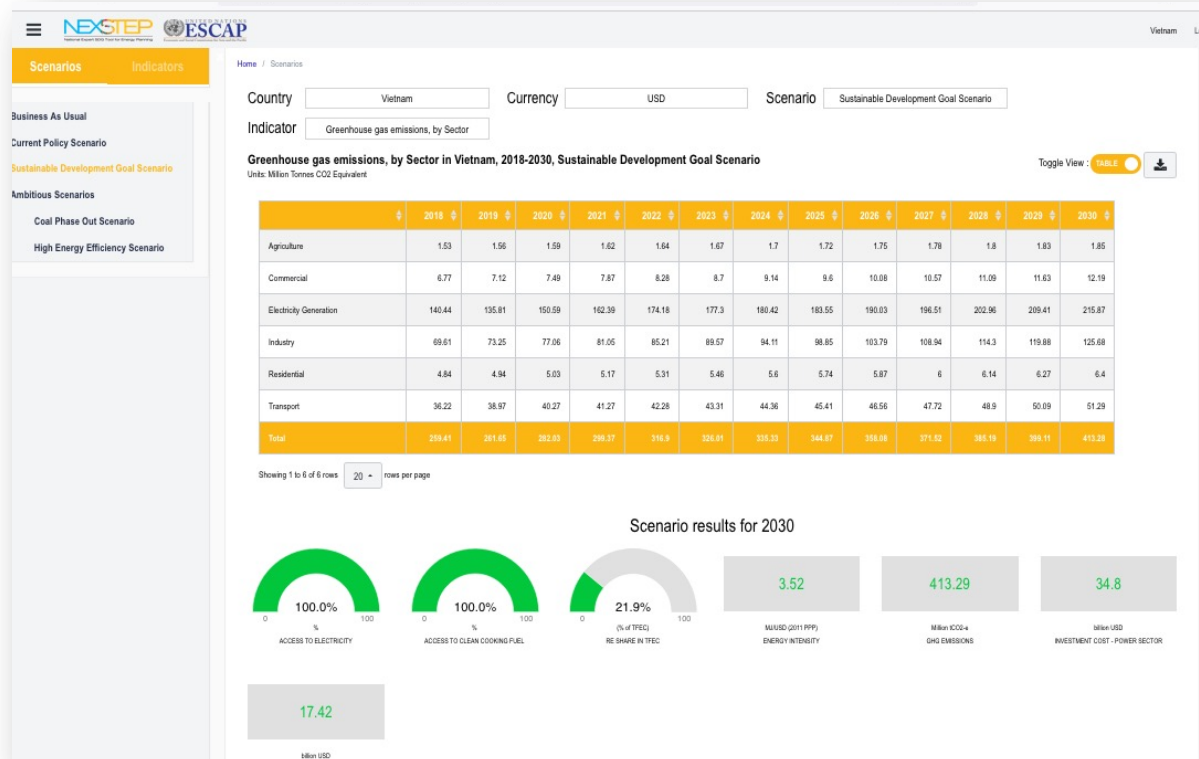
Effective date in: 1990-2023

DOCUMENT SEARCH offshore wind Title Content

Title	Start	End	Agency
CHINA: Interim Measures for Management of the Development and Construction of Off-Shore Wind Power ... Construction of <i>Off-Shore Wind Power</i> (No. 29 [2010] of the National Energy Administration) The Development ... Design General Institute: To standardize management of the development and construction of <i>off-shore wind</i> ... power projects, promote <i>off-shore wind</i> power's sound and orderly development, the Interim Measures ... for Management of the Development and Construction of <i>Off-Shore Wind Power</i> have been formulated and	2010		National Energy Administration, State Oceanic Administration
CHINA: Notice No. 1216 of 2014 on Offshore Wind Power Tariff Policy ... through research, we hereby notify the relevant issues of <i>offshore wind</i> power tariff as follows: First, ... the non-tender <i>offshore wind</i> projects, the distinction between intertidal and <i>offshore wind</i> power are ... <i>offshore wind</i> power project tariff of 0.85 yuan per kilowatt-hour (tax, the same below), intertidal <i>wind</i> ... competition. Determined by the owner of the concession, tenders for <i>offshore wind</i> projects, the tariff	2014		State Development and Reform Commission
CHINA: Notice No. 2729 of 2016 on On-grid Solar PV Power and Onshore Wind Power Benchmark Price (Feed-in-Tariffs) ... between <i>offshore wind</i> power and <i>wind</i> power are two types of intertidal determine the tariff. <i>Offshore</i> ... projects in the benchmark electricity price of 0.75 yuan per kilowatt-hour. <i>Offshore wind</i> power ... photovoltaic power generation, onshore <i>wind</i> , <i>offshore wind</i> power and other new energy project owners and tariff ... <i>offshore wind</i> power electricity price benchmark. Implementation of competitive bidding to determine the	2017		National Development and Reform Commission
CHINA: 13th Five-Year Plan for Wind Power Development ... the problem of <i>wind</i> curtailment. [...]—carry out <i>offshore wind</i> energy resources survey and ... evaluation, improve the <i>offshore wind</i> power development plan in coastal provinces. Speed up the construction ... of <i>offshore wind</i> power project progress[...] The plan clarifies the guidelines, principles, ... <i>wind</i> power integrated to the grid network will be more than 210 million kilowatts, of which <i>offshore</i>	2016	2020	National Energy Administration
INDIA: National Offshore Wind Energy Policy – 2015 (Notification G. S. R. 765(E) of 2015) ... from the date of publication of the Policy in the Official Gazette. NATIONAL OFFSHORE WIND ENERGY ... the world, exploitation of <i>offshore wind</i> energy is yet to reach a comparable scale. India has achieved ... the success of <i>offshore wind</i> power development in the <i>offshore wind</i> power development. 1.1 Global ... Status Over 8.7 GW <i>offshore wind</i> capacity has already been installed around the world and approximately	2015		Ministry of New and Renewable Energy
PHILIPPINES: Executive Order No. 232 of 2000 Amending Executive Order No. 462 Enabling Private Sector Participation in the Exploration, Development, Utilization and Commercialization of Ocean, Solar and Wind Energy Resources for Power Generation and Other Energy Uses ... EXPLORATION, DEVELOPMENT, UTILIZATION AND COMMERCIALIZATION OF OCEAN, SOLAR AND WIND ENERGY RESOURCES FOR POWER ... and <i>wind</i> (OSW) energy resources for power generation and other energy uses; WHEREAS 1990 : 2023 assessment, field verification, harnessing, development and	2000		President of the Philippines

asiapacificenergy.org

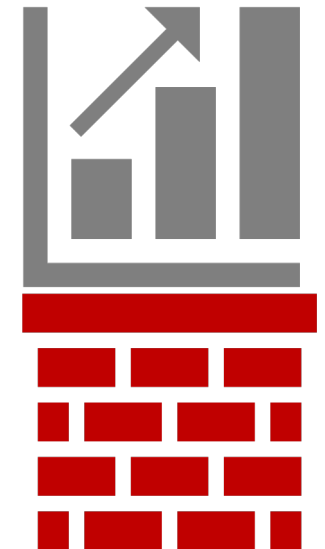
2. Deepen the national knowledgebase

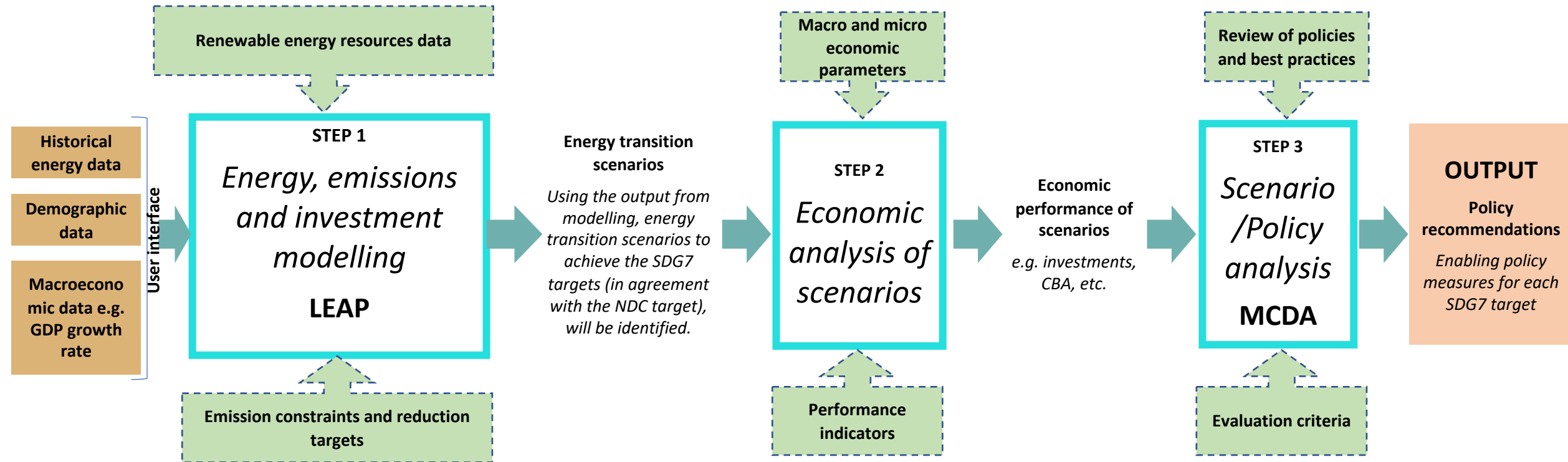


DATA

Supply
Demand
End use
Economic
Demographics
Etc.

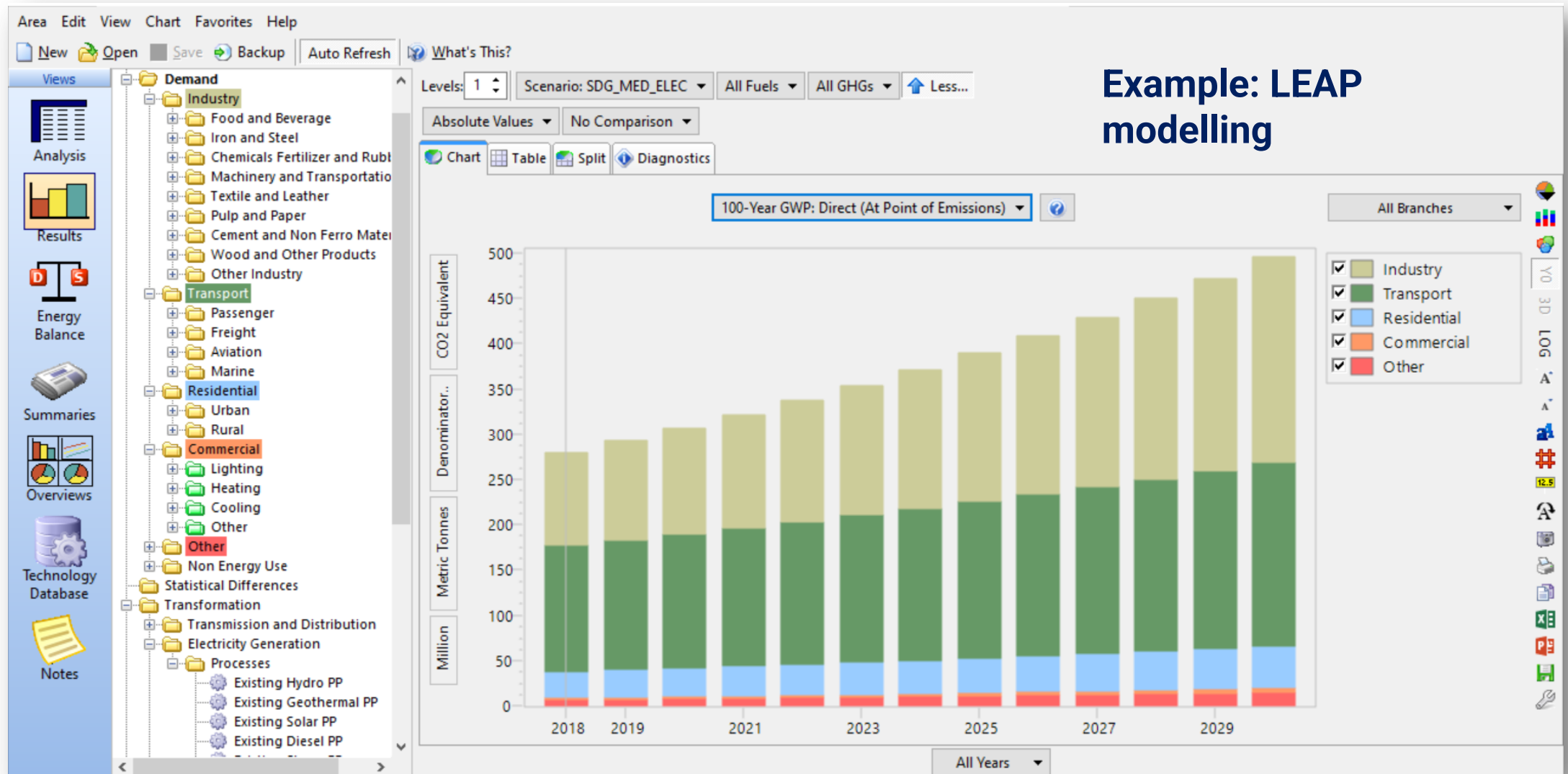
**ANALYTICAL
TOOLS**





The unique feature of this methodology is the backcasting approach for energy and emissions modelling which is important for the case of SDG7 planning.

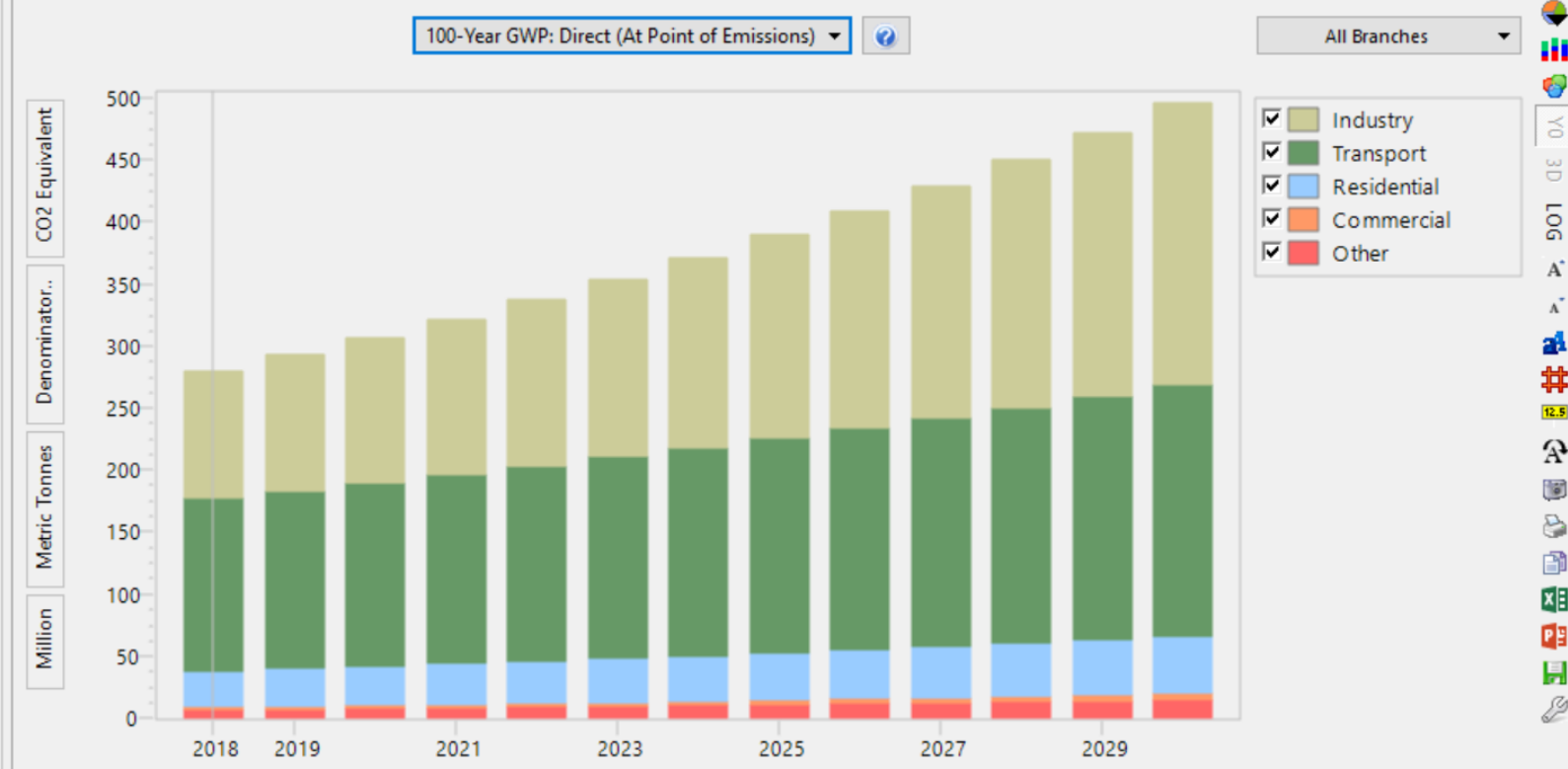
Example: LEAP modelling



Levels: 1 Scenario: SDG_MED_ELEC All Fuels All GHGs Less...

Absolute Values No Comparison

Chart Table Split Diagnostics



3. Quantify the costs of inaction

2021 value lost to electrical outages
(for affected firms, globally)

4.2%
of sales

Source: World Bank

2018 deaths from burning fossil fuels

8
million

Vorha K. et al. (2021). Global Mortality From Outdoor Fine Particle Pollution Generated by Fossil Fuel Combustion. Available at <https://doi.org/10.1016/j.envres.2021.110754>.

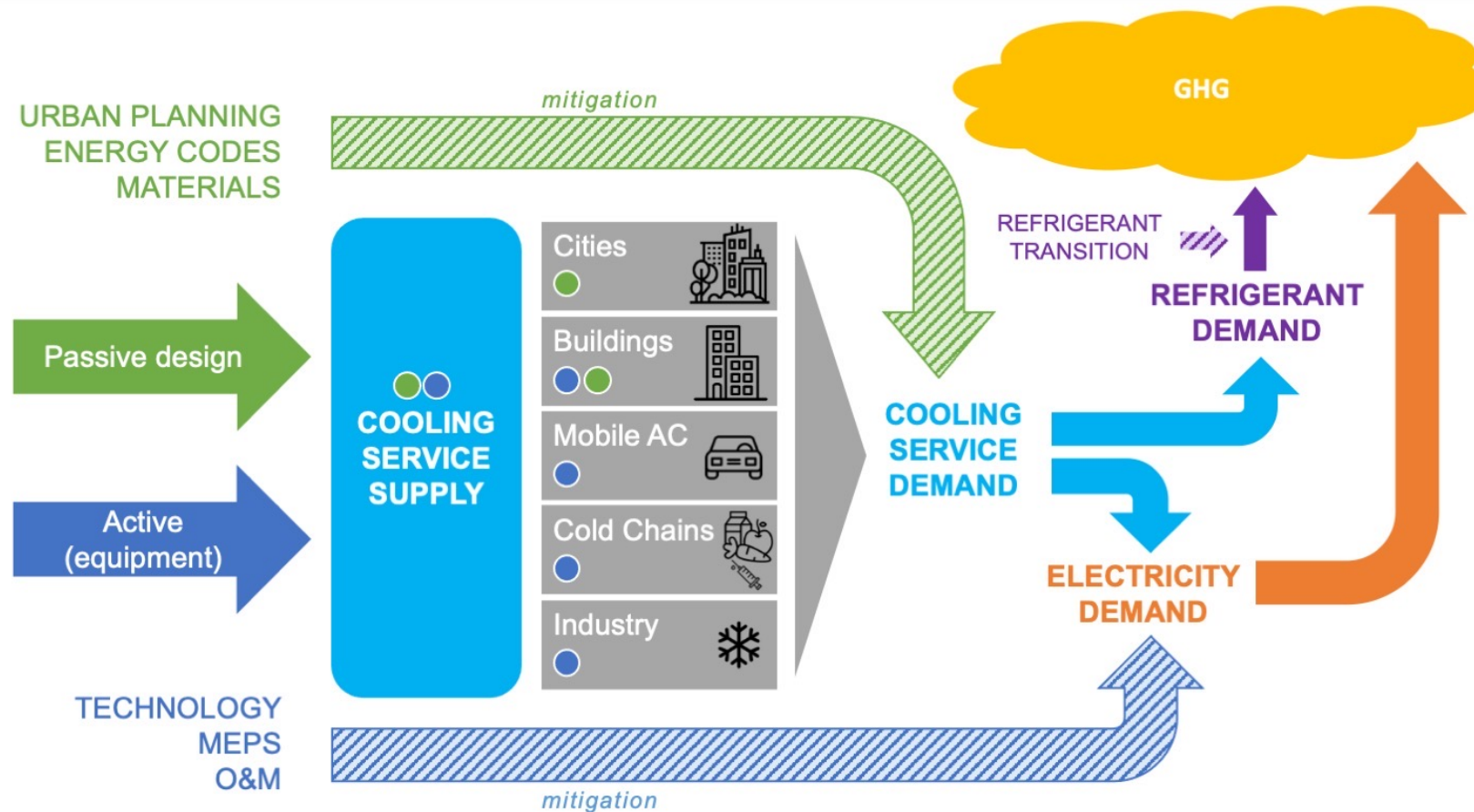
2.2°C of warming by 2050 impact to global GDP levels

-20%
global GDP

Source: Oxford Economics

4. Think in systems and co-benefits

A SYSTEMS APPROACH TO COOLING ENERGY AND EMISSIONS



5. Enable innovation



Example: Virtual Singapore

A 3D-empowered Smart Nation where the data is used in applications related to national security, urban development, climate change adaptation, etc.

A virtual no-risk testing platform





ESCAP

Economic and Social Commission
for Asia and the Pacific