Global Climate Action Partnership
regional leadership, global change

Enhancing Energy Efficiency in NDCs

MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO
GOVERNO FEDERAL BRASIL UNIÃO E RECONSTRUÇÃO
ASIA LEDS PARTNERSHIP
PLATAFORMA REGIONAL LEDS LAC
African Climate Action Partnership
United Nations Climate Change
NDC PARTNERSHIP

AGENDA

10:30-10:35	**Welcome & scene-setting** Ms. Gabriela Prata Dias, Head of Section, UNEP-CCC
10:35–11:05	**Lightning Talks** *Energy efficiency in NDCs: status and opportunities* Ms. Jeniffer Hanna-Collado, Regional Manager, NDC Partnership *Next generation NDCs: enhancing energy efficiency action* • Mr. Alex Perera, Deputy Director, Energy, WRI *Country experiences* • Mr. Felix William Fuentebella, Undersecretary, Department of Energy, the Philippines* • Mr. Francis Nderitu, Assistant Director Renewable Energy, Ministry of Energy, Kenya • Ms. Deborah Ewelyn de Araujo, Consultant, GBC Brazil • Mr. Kamal Muhammad Raini, Senior Assistant Director of Engineering, Seberang Perai City Council, Malaysia
11:05–11:55	**Breakout group discussions: World Café** Table 1: The role of the power sector and demand flexibility Table 2: Efficient transport Table 3: Efficient and “cool” buildings Table 4: Efficient appliances Table 5: Promoting efficient lifestyles
11:55–12:25	**Debrief & plenary feedback** Moderated by Ms. Gabriela Prata Dias, UNEP-CCC
12:25–12:30	**Closing**

Mission Efficiency is a global collective of actions, commitments and goals on energy efficiency by a coalition of governments, organizations and initiatives. Energy efficiency represents the largest share of cost-effective actions to achieve the Paris Agreement. Mission Efficiency unites these partners and actions to accelerate the transition towards energy efficient economies worldwide.

Learn more at
missionefficiency.org

Mission Efficiency
Elevate. Support. Invest.

Photo: Energy efficiency financing charette hosted at the UNEP Copenhagen Climate Centre, June 2022

We work across sectors and countries to:

ELEVATE

SUPPORT

INVEST

Energy Efficiency Ecosystem fostered by Mission Efficiency

- **Energy Efficient LiFE**, people-focused communication & engagement strategies. (in progress)
- **The Power of Energy Efficiency,** knowledge and resources for policy makers for stronger commitments and actions. (in progress)
- **Convening** of key actors in strategic fora, workshops and other advocacy activities.

- **Capacity building and Technical Assistance** including grid efficiency, demand flexibility, energy audits, development of MEPS etc.
- **South-South and North-South knowledge sharing,** providing platforms

- **Mission Efficiency Marketplace**, connecting energy efficiency projects with de-risking instruments and funding opportunities.

Local community of practice in select countries

Why enhancing energy efficiency in NDCs?

Most cost-effective measure to curb carbon and GHG emissions

Demand-side measures can cut global GHG emissions by 40-70% by 2050 in sectors like food, transport, buildings, and industry.

Doubling the energy efficiency progress from 2% annual energy intensity each year to 4% until 2030 would:

- Reduce CO_2 emissions by 7 Gt CO_2 – or 20% of current total emissions
- Reduce by 50% the CO_2 emissions needed by 2030

Social and economic benefits to foster a just and equitable energy transition

Doubling the energy efficiency progress from 2% annual energy intensity each year to 4% until 2023 would:

- Create 4.5 million more jobs than today in energy efficiency across the manufacturing, building renovation, construction, industry and transport sectors
- Reduce energy bills by over 1/3 in advanced countries
- Improve grid resilience and facilitate integration of renewable energy
- Increase productive energy uses (clean cooking, lighting, cooling).

Source: IEA, 2023.

Doubling the rate of EE improvement to implement climate commitments

First GST calls for countries to work together to double the annual rate of energy efficiency improvements until 2030.

COP28 Global Renewables and Energy Efficiency Pledge Over 120 countries signed the pledge and committed to work together to double energy efficiency progress.

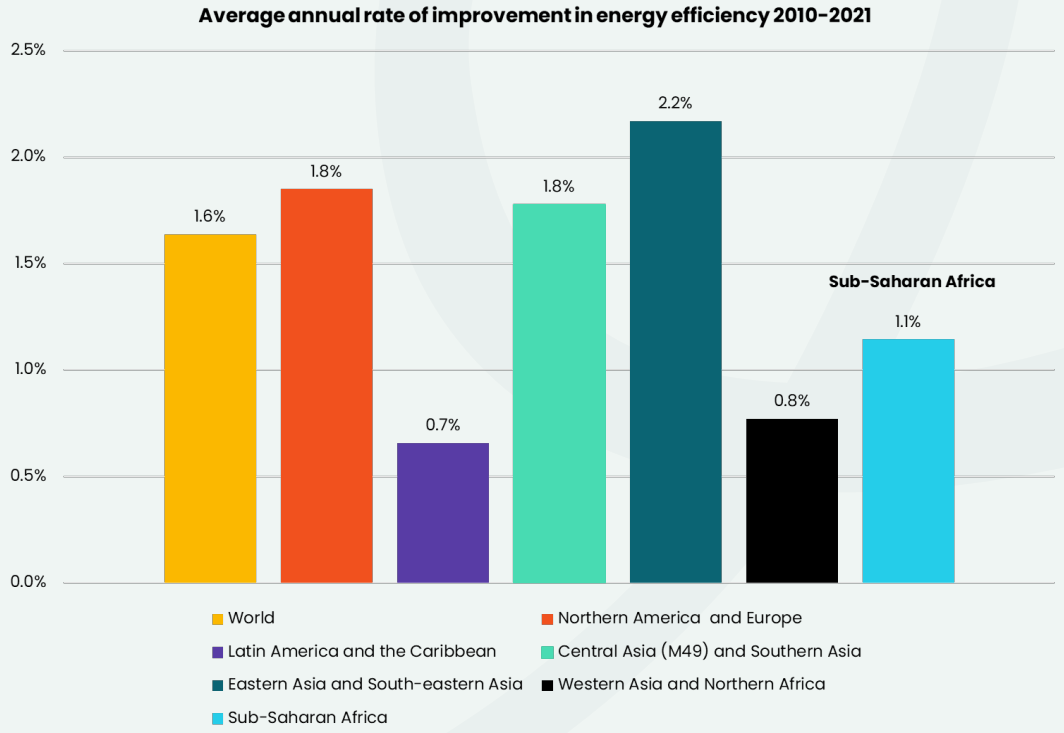
Mission Efficiency Call to Action and Pledge to endorse the COP28 Pledge. Countries and organizations are encouraged to specify energy efficiency commitments through the Mission Efficiency pledge.

Nairobi Declaration call to accelerate decarbonization of transport, industry and electricity sectors with efficient technologies.

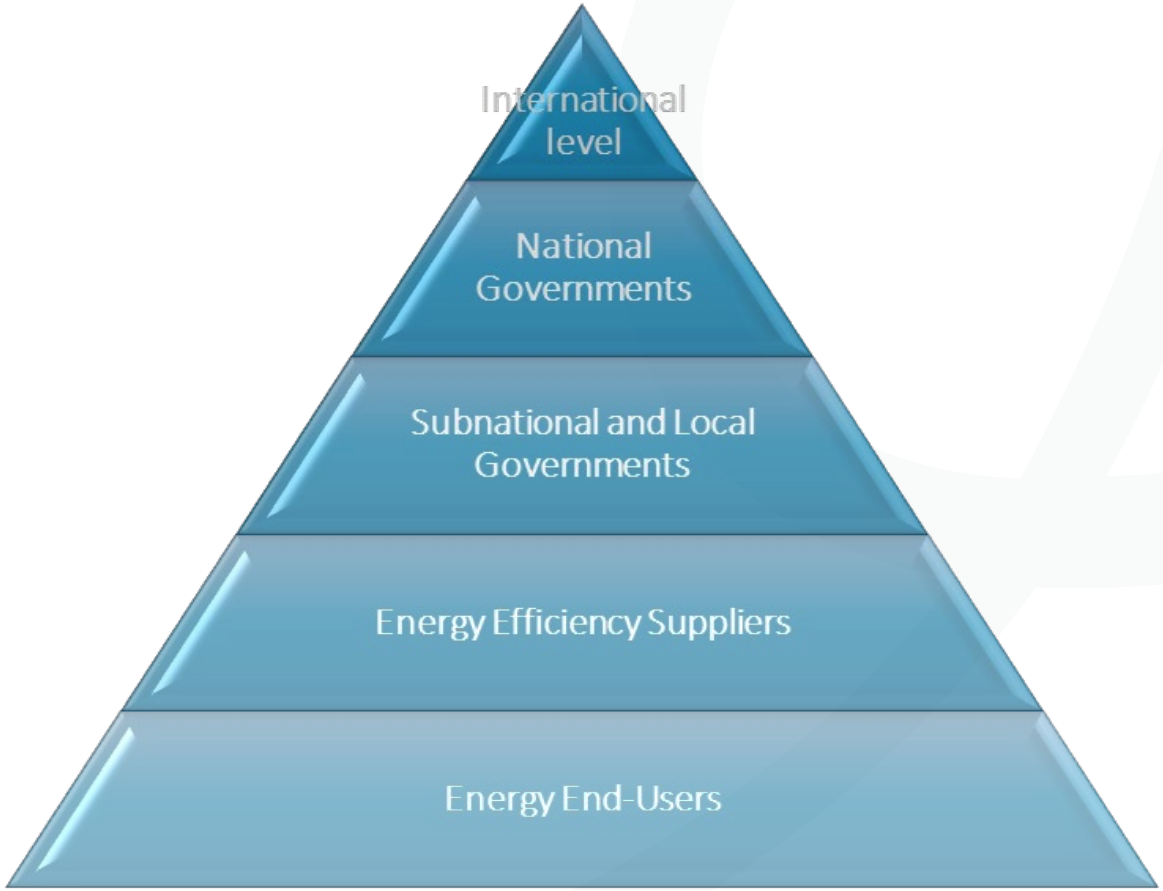
G20 Energy Transition Ministers Meeting agreed on a Voluntary Action Plan on doubling the global rate of energy efficiency improvement by 2030 – recalled by G20 Leaders New Delhi Declaration.

Global Progress on Energy Efficiency

The world needs not only to improve faster but to be significantly more ambitious. From the initial objective of 2.6% annual improvement to 3.6% to achieve SDG7.3 and 4.2% reach the IEA Net Zero Scenario.



From commitments to impact



Key success factors for effective Energy Efficiency in NDCs

Involve all the government-relevant areas: environment, energy, transport, finance, industry, housing, education, domestic and foreign trade, etc.

Involve different government levels: national, sub-national and local

Action Plans

- Developed jointly with the relevant areas
- Aligned with country development objectives
- Validated with external stakeholders (private sector, academy, NGOs, unions, financial sector, etc.)
- Include implementation details for each action: barriers and drivers; stakeholders; associated regulation (existing or new); economic, human and other resources needed; specific financial instruments; monitoring indicators

What to be aware of?

Barriers

- Upfront **cost** of energy-efficient equipment
- Lack of access to **financing mechanisms**
- Highly perceived **risks** and promised energy savings
- Competing investment **priorities**
- Lack of knowledge or **awareness**
- Split **incentives**

Support mechanisms

- **Standards** and **regulations**
- Supporting **Policies**
- **Awareness** raising
- Behaviour change programmes
- Monitoring, verification and enforcement
- Disposal and waste management

And from the Finance side...

The mechanisms

Support mechanisms

- **Standards** and **regulations**
- Supporting **Policies**
- **Awareness** raising
- Behaviour change programmes
- Monitoring, verification and enforcement
- Disposal and waste management

Finance mechanisms

- Blended loans
- Climate Bonds
- ESCOs
- Crowd funding
- Convertible debt
- Bulk procurement
- On-bill financing
- Etc...

The energy efficiency opportunity

QUICK

Energy efficiency can be done today

LOCAL

Energy efficiency investment brings local jobs and local benefits

READY

Energy efficiency policy and technology solutions are available

BENEFICIAL

Energy efficiency brings social, economic and health benefits

SIGNIFICANT

Energy efficiency to deliver over 40% of the Paris Agreement

COST EFFECTIVE

Energy efficiency can cost-effectively support net-zero by 2030

WHAT ARE TODAY'S OBJECTIVES?

- ✓ Exchange experiences on successful energy efficiency programs and best practices related to enhancing energy efficiency in NDCs
- ✓ Share practical tools, techniques, and strategies across various geographies and sectors
- ✓ Addressing specific gaps, next steps, and necessary resources, to prioritize energy efficiency in NDCs
- ✓ Identify opportunities to collaborate at bilateral, regional, global levels to mobilize additional training and technical assistance

LIGHTINING TALKS

Jeniffer Hanna-Collado
Regional Manager, Latin America & the Caribbean, NDC Partnership

Alex Perera
Deputy Director, Energy, World Resources Institute

Felix William Fuentebella
Undersecretary, Department of Energy, the Philippines*

Francis Nderitu,
Assistant Director, Ministry of Energy, Kenya

Deborah Ewelyn de Araujo
Consultant, Green Building Council Brazil

Kamal Muhammad Raini
Senior Assistant Director, Seberang Perai City Council, Malaysia

GROUP DISCUSSION: WORLD CAFÉ

Break into 5 tables:
1: The role of power sector and demand flexibility
2: Efficient transport
3: Efficient and “cool” buildings
4: Efficient appliances
5: Promoting energy-efficient lifestyles

For 25 minutes, work within groups to:
- Address at least 2 questions under "AMBITION"
- Summarize at least 3 recommendations or learnings, using the template

After 25 minutes, you can move to another table (or stay).

For 25 minutes, work within groups to:
- Address at least 2 questions under "IMPLEMENTATION"
- Summarizing at least 3 recommendations or learning, using the template

In each segment, nominate a rapporteur!

Break-Out Session Title:

Key Insights
(Gaps, Needs, Opportunities, Successful Approaches and Lessons Learned)

HOW TO SUMMARIZE YOUR LEARNINGS & RECOMMENDATIONS:

HARVESTING TEMPLATE

Next Steps/Actions/Requests

Opportunities for Collaboration and Champions

Global Climate Action Partnership
regional leadership, global change

DEBRIEF & PLENARY DISCUSSION

Rapporteurs from each table share key learnings or recommendations with the plenary (5 minutes):

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration and champions

Global Climate Action Partnership
regional leadership, global change

Enhancing Energy Efficiency in NDCs

MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO
GOVERNO FEDERAL BRASIL UNIÃO E RECONSTRUÇÃO
ASIA LEDS PARTNERSHIP
PLATAFORMA REGIONAL LEDS LAC
African Climate Action Partnership
United Nations Climate Change
NDC PARTNERSHIP

Power Sector and Demand Flexibility

STEP 1. ADDRESS THE GUIDING QUESTIONS

AMBITION (25 min)

- How do energy transition plans currently consider demand sectors and demand flexibility?
- What demand flexibility or demand side management measures can NDCs?
- What are data, modelling and planning capabilities and gaps?

IMPLEMENTATION (25 min)

- What financing instruments have proven successful and can be replicated across countries?
- How to design inclusive plans that meet the needs of low-income and vulnerable populations?
- What partnerships and collaborations are needed to tackle challenges and share knowledge?

STEP 2. TAKEAWAYS

Summarize learnings and/or recommendations from the group on:

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration

Power Sector and Demand Flexibility

Example: NDC OPPORTUNITIES IN THE POWER SECTOR (Source: World Resources Institute, 2024)

Countries can strengthen or add:

- **Economywide GHG targets consistent with net-zero emissions by mid-century, reflecting more ambitious abatement options in the power sector.**
- **Ambitious GHG targets for the power sector, such as:**
  - A power-sector carbon emissions target.
  - A power-sector carbon intensity target.
- **Targets to support planning for clean power, such as:**
  - Clean energy targets as a share of total electricity generation mix.
  - Clean energy targets aligning with longer-term national plans and national cost-effective clean energy potential.
  - Energy access targets (e.g. through the deployment of decentralized energy solutions).
  - Rooftop solar targets.
- **Targets to support grid flexibility, such as:**
  - Energy storage targets to support renewable energy deployment.
  - Targets for transmission and distribution grid investments.
  - Targets to reduce transmission and distribution losses.
  - Targets for smart meter deployment and forecasting technologies to predict real-time output of variable renewable energy generation.
- **Targets and commitments to address existing fossil fuel assets, such as:**
  - Fossil fuel (e.g. coal or natural gas) phase-out targets for the power sector, coupled with just transition plans to support fossil fuel workers and communities.
  - Commitments to no new added traditional fossil-fuel-fired capacity after current projects under construction are completed.
  - Air quality targets related to the power sector.
- **Targets to promote universal energy access**
- **Targets to address integration with end-use sectors such as buildings and transport.**

Learn more at: https://www.wri.org/ndcs/resources/power-sector

Efficient Transport

STEP 1. ADDRESS THE GUIDING QUESTIONS

AMBITION (25 min)

- What role does efficient transport play in your current NDC?
- Which efficient transport actions can be integrated into the revised NDCs?
- What are good practices and challenges in data systems, target-setting, monitoring and verification?

IMPLEMENTATION (25 min)

- What financing instruments have proven successful and can be replicated across countries?
- How to design inclusive measures that meet the needs of low-income and vulnerable populations?
- What partnerships and collaborations are needed to tackle challenges and share knowledge?

STEP 2. TAKEAWAYS

Summarize learnings and/or recommendations from the group on:

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration

Efficient Transport

Example: NDC OPPORTUNITIES IN THE TRANSPORT SECTOR (Source: World Resources Institute, 2024)

Countries can strengthen or add the following sub-sectoral targets:

- Ambitious GHG targets for the transport sector, such as reducing transport GHG emissions by a certain percentage by 2035 from a base year.
- Non-GHG targets addressing the transport sector, such as:
  - Modal share targets (e.g., a certain percentage of trips within cities that should happen by walking, cycling or public transit).
  - Targets for kilometers of high-quality public transit (e.g. BRT, LRT, metro).
  - Targets for walking and cycling infrastructure (e.g. kilometers of protected cycling infrastructure, bicycle share systems or standards for inclusion of pedestrian infrastructure).
  - Vehicle electrification targets (for light-duty vehicles, medium- and heavy-duty vehicles, buses, and two- and three-wheelers, as relevant).
- Electric vehicle charging infrastructure targets.
- Phase-out targets for internal combustion engines.
- Fuel efficiency targets and policies on export and import of used vehicles.
- Targets to phase out fossil fuel subsidies for transport, coupled with policies to offset any economic impacts on vulnerable populations.
- Where applicable, targets to address informal transport modes such as minibus taxi systems or two- and three-wheelers, particularly in low and middle income countries.
- Alternative fuel targets (for sustainable aviation fuel and zero-emissions shipping fuel, as relevant).
- Goals to link the transport sector to renewable energy and away from fossil fuel power sources.

Learn more at: https://www.wri.org/ndcs/resources/transport-sector

Efficient and ‘cool’ buildings

STEP 1. ADDRESS THE GUIDING QUESTIONS

AMBITION (25 min)

- What role do energy-efficient buildings play in your current NDC?
- Which building energy efficiency actions can be integrated into the revised NDCs?
- What are good practices and challenges in data systems, target-setting, monitoring and verification?

IMPLEMENTATION (25 min)

- What financing instruments have proven successful and can be replicated across countries?
- How to design inclusive measures that meet the needs of low-income and vulnerable populations?
- What partnerships and collaborations are needed to tackle challenges and share knowledge?

STEP 2. TAKEAWAYS

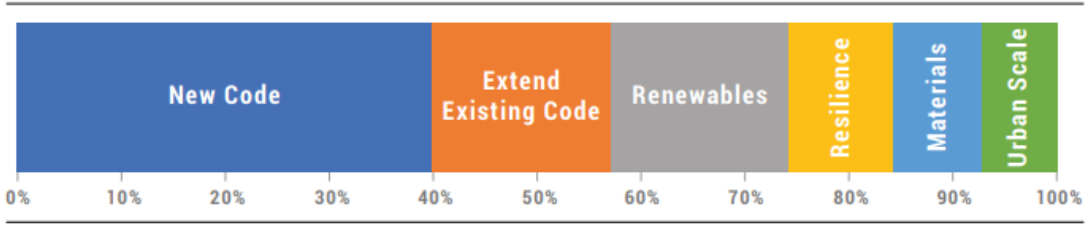
Summarize learnings and/or recommendations from the group on:

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration

Efficient and ‘cool’ buildings

Example: A GUIDE FOR INCORPORATING BUILDINGS ACTIONS IN NDCs (Source: UNEP, 2018)

Figure 5 **Policy Action Focus of Building Sector Actions mentioned in NDCs**



Learn more at: https://www.unep.org/resources/toolkits-manuals-and-guides/first-edition-guide-incorporating-buildings-actions-ndcs

2 – Prioritise Actions:

- Codes: Commit to implementation of near or net zero energy performance new building codes and complimentary sustainable buildings policies for residential and non-residential construction and renovation
- Complimentary Sustainable Building Policies: Commit to extending the coverage of existing climate policy and codes to include all major building types, energy uses and life-cycle
- Technology: Commit to reducing the energy intensity of air-conditioners, heating, lighting, appliances, and the construction material supply chain & switching from solid and fossil fuel use to renewable electricity and increasing the energy performance of building envelopes.
- Education & Research: Ensuring all building practitioners are capable and responsible for decarbonising the buildings sector, and that building performance data is systematically collected and shared
- Incentives and financing: to develop and grow markets for low-carbon building
- Urban Scale: Integrated urban land-use and development control plans to capture mitigation and adaptation potential of sustainable urban systems
- Adaptation (Vulnerability & Resilience): Links to adaptation measures noted in the NDC and other national and sub-national initiatives.

Efficient Appliances

STEP 1. ADDRESS THE GUIDING QUESTIONS

AMBITION (25 min)

- What role do energy-efficient appliances play in your current NDC?
- Which appliances energy efficiency actions can be integrated into the revised NDCs?
- What are good practices and challenges in data systems, target-setting, monitoring and verification?

IMPLEMENTATION (25 min)

- What financing instruments have proven successful and can be replicated across countries?
- How to design inclusive measures that meet the needs of low-income and vulnerable populations?
- What partnerships and collaborations are needed to tackle challenges and share knowledge?

STEP 2. TAKEAWAYS

Summarize learnings and/or recommendations from the group on:

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration

Efficient Appliances

Example: NET ZERO APPLIANCES NDC TOOLKIT (Source: CLASP, 2024)

Meeting targets for the ten most critical appliances— **fans, air conditioners, electric cooking appliances, electric motors, lighting, televisions, refrigerators, solar irrigation, space heating and water heating equipment**—could mitigate 9.2 gigatons of CO2 in 2050 alone.

Table 8: Summary of Appliance Efficiency Policies & Market Development Programs

TYPE OF POLICY OR PROGRAM	EXAMPLES
Market Clearing	MEPS limit the maximum amount of energy an appliance can consume, clearing out the most inefficient products in a specific market.
Market Growth	Appliance labeling programs, incentives, bulk procurement requirements, and awareness raising efforts work to lower economic, market, and information barriers to drive the sale of efficient appliances, which in turn help create economies of scale to improve overall appliance efficiency.
Market Innovation	R&D funding, awards and competitions, and endorsement labels help drive innovation and increase the availability of high-efficiency appliances on the market.

Learn more at: https://www.clasp.ngo/tools/ndc-appliance-efficiency-toolkit/

Promoting Efficient Lifestyles

STEP 1. ADDRESS THE GUIDING QUESTIONS

AMBITION (25 min)

- What role do awareness and lifestyles changes play in your current NDC?
- How can NDCs tap into behavioural and lifestyle changes potential?
- What are good practices and challenges in data systems, target-setting, monitoring and verification?

IMPLEMENTATION (25 min)

- What financing instruments have proven successful and can be replicated across countries?
- How to design inclusive programs that meet the needs of low-income and vulnerable populations?
- What partnerships and collaborations are needed to tackle challenges and share knowledge?

STEP 2. TAKEAWAYS

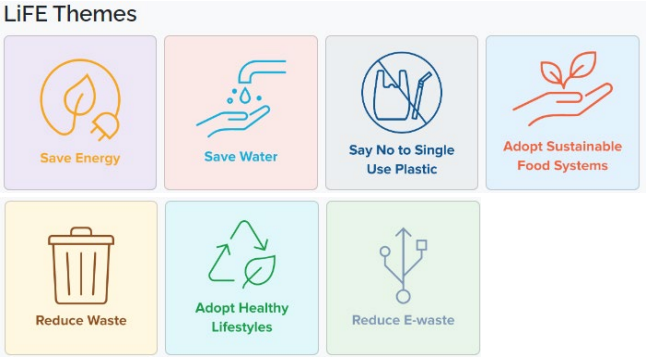
Summarize learnings and/or recommendations from the group on:

- Key insights (e.g. gaps, needs, opportunities, successful approaches and lessons learnt)
- Next steps / actions / requests
- Opportunities for collaboration

Promoting Efficient Lifestyles

Example: INDIA'S MISSION LiFE (Lifestyle for Environment)
(Sources: Ministry of Environment, Forests and Climate Change of India; IEA)

- India's Prime Minister and the UN Secretary General launched Mission LiFE in 2022: a **mass-movement to nudge behavioural change** to reduce emissions and protect the environment.
- LiFE is **embedded in India's 2nd NDC** (2022).
- If adopted worldwide, LiFE's measures would reduce annual GHG emissions by **2 billion tonnes** and save consumers around **USD 440 billion** in 2030.



	Energy Saved
1	Use LED bulbs/ tube-lights
2	Use public transport wherever possible
3	Take the stairs instead of an elevator wherever possible
4	Switch off vehicle engines at red lights and railway crossings
5	Use bicycles for local or short commute
6	Switch off irrigation pumps after use
7	Prefer CNG/ EV vehicle over petrol/ diesel vehicles
8	Use carpooling with friends & colleagues
9	Drive in the correct gear. Keep your foot off the clutch when not changing gears
10	Install a solar water or solar cooker heater on rooftops
11	Switch off appliances from plug points when not in use
12	Use biogas for cooking and electricity needs
13	Keep temperature of Air Conditioners to 24 degrees
14	Prefer pressure cookers over other cookware
15	Keep your electronic devices in energy-saving mode
16	Use smart switches for appliances which are used frequently
17	Install community earthen pots for cooling water
18	Defrost fridge or freezer regularly
19	Run outdoors instead of on a treadmill

Learn more at: https://missionlife-moefcc.nic.in/