

Doubling Energy Efficiency: How – and Why – to Bring the Target in Sight

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Delivering on the doubling energy efficiency goal is the critical path to a just transition. It determines the extent to which clean energy deployment cuts fossil use or is overtaken by rising demand. When efficiency stalls, fossil demand, costs, emissions, and insecurity rise. When it accelerates, it paves the way for savings, resilience and fairness. The solutions and leaders for a step change already exist – but must come together now.

Accelerating energy efficiency improvements makes economic sense

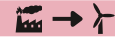
The UAE Consensus, established at COP28, includes three co-dependent global goals that are essential for limiting global warming to 1.5 °C. These goals are to:

2 × EE

Double the global average annual rate of energy efficiency improvements by 2030.

3 × RE

Triple global renewable energy capacity by 2030.



Transition away from fossil fuels.

The energy efficiency goal is significantly off track – with consequences for economy and climate

The **target** to meet the COP28 goal is for energy efficiency to improve by **4%** per year.

4%

To achieve the goal of trebling renewable power capacity, a total of **11.2 TW** capacity is needed by 2030.



This would deliver **\$2 trillion in annual energy cost savings** by 2030,³ including \$650 billion for households.⁴

However, the **actual** rate in 2023, and estimated in 2024, was just **1%**.¹

1%

If that low rate of efficiency improvement persists, a hypothetical **27 TW** of power capacity would be needed to achieve the same emissions reductions.²



This would require 30% more investment.

And deliver 75% less savings.

In practice, the slow improvement in energy efficiency since 2020 is deemed to account for the steady growth in oil and gas demand,⁵ despite accelerating clean energy deployment. Continuing this trend risks entrenching fossil fuels further.

¹ IEA, 2024, [Energy Efficiency 2024](#); ² According to the UAE's Undersecretary for Energy and Petroleum Affairs HE Sharif Al Olama, reported in Forbes Middle East, 2025, [Power shift | How the UAE's global alliance is redefining the energy equation](#); ³ World Economic Forum, 2024, [Transforming Energy Demand](#); ⁴ IEA, 2022, [The value of urgent action on energy efficiency](#); ⁵ BP, 2025, [BP Energy Outlook 2025 edition](#)

Priority actions to deliver rapid and persistent benefits

Households, businesses and countries feel fast benefits from energy efficiency measures

Savings from replacing appliances are instant, while most projects and technologies are deployable in under a year – improving conditions for clean power deployment, just transition, competitiveness and security in the process.

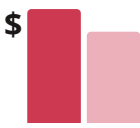
Near-term action on energy efficiency can reduce reliance on unabated fossil fuels by 19% by 2035, enabling renewables to reduce reliance by an additional 28%.⁶



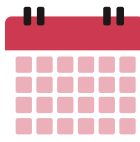
80% of households in sub-Saharan Africa could afford to buy and run best-in-class efficient household appliances.¹



Only 50% could afford to run low-efficiency models.



Efficiency improvements have **reduced energy import dependency by 20%**,¹ and enhance grid stability by reducing peak demand.



Energy efficiency improvements in SMEs can pay for themselves in **as little as 1 year** on average – when improved productivity and resource use, and reduced waste are added to energy cost savings.¹



In investment terms, energy efficiency **costs half as much to deploy** per unit of energy saved as power generation and grid build-out does per unit of energy supplied. At the same time, it permanently reduces energy bills.⁷

Five priority areas can bring us one-third of the way to the target

Action in the following areas is needed to bring the doubling energy efficiency target in sight. They reflect the priorities agreed to by 47 government signatories to the Outcome Statement of the International Energy Agency's 2025 Annual Conference on Energy Efficiency,⁸ and reaffirm several previous sectoral pledges that encompass a broader range of government signatories.

We estimate that these measures collectively could deliver close to one-third of the energy savings needed to meet the doubling energy efficiency goal, which is in line with IEA expectations. Electrification of heating, industry and transport, and changes in behavioural patterns, are expected to deliver the remaining savings.

Priority area for technical energy efficiency	Existing pledges they relate to	Estimated contribution to hitting the target	
MOTORS AND APPLIANCES			
1	Harmonisation, adoption and doubling of industrial motor efficiency standards by 2030	Product Efficiency Call to Action, with 14 government signatories, seeks to double efficiency of industrial motor systems, air conditioners, refrigerators, and lighting by 2030.	20% ⁹
2	Harmonisation, adoption and doubling of average appliance efficiency standards by 2030	Global Cooling Pledge (72 signatories) includes commitment to increase by 50% the average energy efficiency rating of new air conditioning equipment sold by 2030.	3% ¹⁰
BUILDINGS			
3	Skills and one-stop shops needed to double the rate of building renovation	Buildings Breakthrough (30 governments) seeks to make near-zero emissions and resilient buildings the new normal by 2030.	2.5% ¹⁰
4	Closing gaps in coverage and enforcement of mandatory energy codes for new buildings		
TRANSPORT			
5	Driving up fuel economy and electric vehicle efficiency standards	The Global Fuel Economy Initiative supports countries with research and capacity building, while 31 governments are signatories to the Zero Emission Vehicles Declaration	6% ¹⁰

6 Ember, 2023, [Tripling renewables and doubling efficiency will accelerate a fossil phaseout](#); 7 IEA, 2025, [Multiple Benefits of Energy Efficiency](#); 8 IEA, 2025, [Outcome Statement of the IEA's 10th Annual Conference on Energy Efficiency](#); 9 Clasp, 2025, [Doubling Energy Efficiency with Appliances](#); 10 E3G illustrative estimate

A twin track approach to achieving the energy efficiency goal

A large number of international sectoral initiatives, pledges, business and civil society groups, development and financial institutions are working hard to drive energy efficiency forwards. The countless projects under way deliver multiple benefits to people at home and at work.

1. Leadership from nations successfully pursuing energy efficiency in specific sectors, pledging to do more for themselves and to support neighbours with the backing of international initiatives they are already actively engaged in.

This diversity – a strength for delivering progress on the ground – can present as fragmentation at the international level, posing challenges for concerted focus and action at COP towards meeting the overall doubling goal. A twin track approach can overcome this.

2. A reorientation of climate finance for energy efficiency to turbo charge technical assistance, through governance support and capacity building that empowers countries to act more quickly on the five priority areas identified above.

1. Galvanising sectoral leaders in energy efficiency to promote and spread achievements

We have identified global energy efficiency leaders among regions and nations who have pursued successful energy efficiency policy in specific sectors. They are driven by a range of national and regional interests. All are engaged in international initiatives and diplomacy specific to the sectors they lead in and can act as efficiency “mentors” for other countries, especially neighbours, seeking to do more.

As they “walk the walk” on energy efficiency at home and in collaboration, they have the ability to bring progress on

doubling energy efficiency to the top of the agenda at COP30. They can draw together existing sectoral pledges and platforms that underpin collective efforts for progress.

The leaders highlighted below, and the roles they can play, are part of a broader set that includes the EU’s leadership in energy efficiency governance, UAE leadership in finance, China’s leadership in industrial efficiency, and US cities’ and states’ leadership in using digital technologies to manage and reduce energy demand.

ASEAN



Non-residential buildings and cooling

Why?

ASEAN’s rapidly growing cities face surging cooling demand, while members lead on urban cooling innovation (Singapore) and air conditioner manufacturing (Thailand).

What can ASEAN do?

Build on regional cooperation with Germany’s GIZ for clean cooling, memberships of the Cool Coalition, and its work on a world-leading passive cooling roadmap for the region.

INDIA



Appliances & lighting

Why?

India’s rapidly growing domestic market, BEE Star label and growing role in appliance exports position it to drive uptake of appliance efficiency standards across the global south.

What can India do?

Advance the Energy Efficiency Strategic Plan it prepared for the G20 in 2023, and scale engagement via UNEP’s United for Efficiency (U4E) and the International Solar Alliance, for south-south standards alignment.

BRAZIL



Affordable housing

Why?

Brazil’s revived *Minha Casa, Minha Vida* programme combines access to affordable housing with climate resilience.

What can Brazil do?

Promote its integrated approach via C40, the Urban Transitions Mission, UN-Habitat, and inform IDB/CAF support to green regional housing construction pipelines.

KENYA



Efficient and clean energy access

Why?

Kenya has achieved one of the highest electrification rates in sub-Saharan Africa, and integrated appliance efficiency, clean cooking, and renewables productivity into its energy access agenda.

What can Kenya do?

Lead regionally through the African Union Energy Efficiency Alliance, and its participation in the Clean Cooking Alliance, United for Efficiency, the Modern Energy Cooking Services programme, and push for efficiency-linked finance from MDBs and climate funds.

2. Reorienting climate finance for energy efficiency to turbo charge technical assistance

Insufficient progress on energy efficiency is reflected in investment levels. According to the IEA:



Investment in renewables, grids and storage needs to double to ~\$2.1 trillion each year by 2030.



Languishing further behind, energy efficiency investment needs to **treble** by then, to ~\$1.9 trillion

In emerging markets and developing economies, the gap between where we are and where we need to be is far larger.

Multilateral development banks (MDBs) have a major role to play

In 2023, MDBs delivered \$125 billion in climate finance, 60% of which went to low- and middle-income countries. Close to \$100 billion of the total went towards mitigation action.¹¹

MDBs' own tracking does not reveal the precise share that contributes directly to the UAE Consensus. However, 29% of the \$100 billion spent on mitigation in 2023 supported energy supply projects, while 18% went towards end-use efficiency.¹¹ This is unbalanced, but to be expected given that public banks – as well as governments, private investors and financiers – tend, for administrative reasons, to support a smaller number of larger projects, placing typically smaller efficiency projects at a structural disadvantage.¹²

As the volume of climate finance increases towards the New Collective Quantified Goal, MDBs must become the vanguard of increasing the share of climate finance going to efficiency projects – with a specific, science-based and quantified goal in mind. More important than quantity,

however, is the quality and nature of climate finance reorientation for energy efficiency.

This means that MDBs need to place enormous emphasis on scaling up technical assistance: governance support and capacity building that empowers others to establish increasingly robust policy and regulatory frameworks for tackling the five priority areas. In doing so, efforts to address the “smaller projects” structural challenge that energy efficiency faces can become more suitably devolved.

In addition, there is a need for MDBs to go upstream and support integrated energy system planning across supply and demand, ensuring demand-side reduction, electrification and flexibility are on par with supply expansion.

Linking back to the other track, technical assistance efforts should dovetail wherever possible with the cross-border work of sectoral energy efficiency leaders and the international initiatives and platforms they support.

The road ahead

As COP30 approaches, there is a near-term opportunity to follow through on energy efficiency's rise up the global climate agenda by drawing together the many sectoral initiatives, leaders, and platforms already delivering results. The **Global Energy Efficiency Alliance (GEEA)**, launched by the UAE to support implementation of the doubling goal, **could serve as a unifying platform** to enable this. **GEEA can also work closely with Brazil's Global Coalition for Energy Planning** to ensure energy efficiency becomes fully embedded in the planning and financing of the wider energy transition. What matters now is convergence, momentum, and delivery.

By inviting countries that have demonstrated leadership in specific sectors to become early Alliance members and energy efficiency mentors, **the GEEA could help convene a focused coalition** committed to sharing national successes and supporting others – particularly through existing international initiatives. With facilitation from the Alliance

secretariat, this group could **collectively advocate for a reorientation of climate finance to increase technical assistance**, especially in the five priority areas identified in this briefing.

MDBs, in turn, could respond with pledges to scale technical assistance for energy efficiency through relevant channels, while countries joining the Alliance would be encouraged to reflect raised ambition in their NDCs, supported by sectoral mentorship and finance-linked implementation support.

Over time, this effort could evolve to encompass new priority areas, new sectoral initiatives, and more robust support systems – anchored in continual evaluation and a clear articulation of the benefits delivered. **GEEA stakeholders now have a unique opportunity** to shape this momentum and embed energy efficiency at the core of the global climate response.

¹¹ European Investment Bank, 2024, [2023 Joint Report on Multilateral Development Banks' Climate Finance](#); ¹² World Bank Group, 2025, [Power More with Less: Scaling Up Energy Efficiency for Growth and Energy Security](#).