

World Green Building Council (WorldGBC) Response to the COP30 Presidency Invitation to Submit Contributions to:

A) The COP30 Presidency Roadmap on the Transition Away from Fossil Fuels in a Just, Orderly and Equitable Manner;

The COP 28 outcome called on Parties to contribute, in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches, to the global effort to transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner (paragraph 28.d/GST1). The COP 30 Presidency Roadmap aims to translate that global consensus into implementation, building on the debates initiated in Belém and recognizing initiatives and solutions being accelerated through the Action Agenda. It will map critical barriers and enabling factors, while recognizing that no single transition pathway applies to all countries and regions. The Roadmap will offer differentiated options that countries, subnational entities, and economic sectors can adapt according to their circumstances, serving as both a reference document and a catalyst for advancing this agenda.

Contributors may consider submitting concise inputs on one or more of the following questions:

a) *What are the most critical barriers — whether physical, economic, financial, institutional, technological or social— preventing a transition away from fossil fuels?*

Buildings must be recognised at the forefront of the transition away from fossil fuel as they are active enablers of the global energy transition, capable of delivering nearly 70% of buildings-related emissions reductions by 2050 through electrification and energy efficiency (IEA Net Zero Scenario).

To drive the decarbonisation of national grids, modernise infrastructure, and shift mindsets, building electrification needs to become mainstream — supported by an enabling ecosystem of coherent policy, financing, and social and cultural frameworks.

While electrification offers one of the most powerful routes to phasing out fossil fuel use, many countries and regions face barriers that can slow progress. These range from systemic issues, such as ageing infrastructure, limited grid capacity, fossil fuel-dependent electricity systems, and uneven energy costs, to social and behavioural barriers like cultural attachments to gas cooking.

Technical challenges may also persist, including the cost and availability of electric equipment, the need for reliable backup systems, land use, and ensuring that technologies are suited to different climatic conditions. These challenges are real, but they are also solvable.

The transition to an all-electric, zero-emission and resilient built environment depends on overcoming barriers across four key areas:

- **Modernising energy infrastructure** - Grid upgrades and improved interconnection are essential to manage growing demand, particularly where developments, including EVs and data centres, are dramatically increasing electricity use. Innovations in energy storage, distributed renewables, and flexible demand technologies can help maintain reliability and reduce pressure during peak loads.
- **Enabling policy and finance** - Governments can accelerate electrification through targeted incentives (such as Feed-in Tariffs*), low-interest finance and phase-out timelines for fossil fuel systems. Clear and consistent regulation gives industry confidence to invest in clean technologies e.g. enabling policies to sell excess energy generated on-site back to the grid.
- **Cultural and behavioural change**
- Shifting public and industry perception — from viewing electrification as experimental to seeing it as efficient and aspirational — is crucial. Programmes that demonstrate the safety, performance, and health benefits of electric cooking and heating can drive widespread acceptance.
- **Collaboration and international cooperation**
- Sharing lessons and pooling investment across borders can help developing markets leapfrog to clean electric systems through blended finance and technology transfer.

b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the transitioning away commitment?

Modernising energy infrastructure

- **Accelerating electrification requires a coordinated effort** to modernise and expand energy infrastructure. National grid modernisation and interconnection plans aligned with electrification scenarios can ensure that electricity networks can meet rising demand from buildings, transport, and digital sectors.
- **Investments in energy storage**, distributed renewables, and flexible demand technologies will help maintain system reliability and reduce pressure during peak loads.
- **Strengthening supply chains and scaling up domestic manufacturing** of electrification technologies can reduce bottlenecks, while targeted workforce development programmes will build the skills needed for heat pump installation, electrical upgrades, and grid technologies. Streamlined permitting and planning processes are also essential to accelerate deployment of both grid upgrades and renewable energy infrastructure.

Misaligned policy, regulation and market signals

- **Clear, consistent, and forward-looking policy frameworks** are essential to overcome misaligned market signals. Establishing phase-out timelines for fossil fuel heating in new and existing buildings, alongside mandatory minimum energy performance standards with increasing stringency, can provide long-term certainty for industry and households.
- **Reforming fossil fuel subsidies and redirecting public finance** toward electrification and efficiency will help shift incentives in the right direction. Cross-ministerial task forces can align buildings, energy, finance, and social policy, ensuring coherent decision-making and integrated planning. Financial levers such as national retrofit banks, guarantee facilities, low-interest loans, grants, and on-bill financing can reduce upfront costs and de-risk private investment.
- **Enabling regulations** that support self-generation and allow households and businesses to sell excess renewable energy back to the grid can further accelerate adoption.

Social, behavioural and equity challenges

- **Trusted communication, targeted support, and inclusive engagement** is essential to addressing cultural, behavioural, and equity barriers. Public awareness campaigns that highlight the safety, performance, and health benefits of electric technologies can shift perceptions and build confidence.
- **Community-led retrofit and electrification** programmes can strengthen local ownership and demonstrate real-world benefits. Targeted subsidies and progressive financial support are essential to ensure low-income households can participate in and benefit from the transition.
- **Consumer protection and quality-assurance schemes** can improve trust in installation and operation, reducing perceived risks. For communities dependent on fossil-fuel industries, transition support — including retraining, reskilling, and economic diversification — is vital to ensure no one is left behind. Engagement strategies that centre local voices can help ensure the transition is socially inclusive and equitable.

c) What country, regional or sector roadmap experiences, best practices, and lessons learned can be shared?

Global Roadmap Insights from the WorldGBC Network

In a recently [published paper on Electrification](#), the WorldGBC network reviewed around 30 global, regional, and national roadmaps developed by WorldGBC, member Green Building Councils (GBCs), the UN Environment Programme GlobalABC, and other organisations. The aim was to identify common themes and calls to action that support the electrification of buildings.

This high-level synthesis provides stakeholders with a consolidated view of electrification measures drawn from a representative sample of climate action roadmaps. The recommendations highlight emerging trends for business and finance actors and can support GBCs and industry stakeholders in developing new roadmaps or updating existing ones to accelerate electrification in their local markets.

The roadmap recommendations span technical solutions, policy measures, and financial mechanisms, and are organised across three time horizons:

- **Short term (to 2030):** enabling frameworks and pilot programmes
- **Medium term (to 2040):** mainstreaming and scaling
- **Long term (to 2050):** full transformation to an electrified built environment

A full list of roadmaps reviewed is provided in the resources section of the paper.

Short Term (by 2030)

- Roadmaps emphasise strengthening building energy codes and clean-energy requirements. Early actions include reviewing fossil fuel subsidies, establishing clear pathways for electrification, and developing finance mechanisms to accelerate the uptake of electric appliances and all-electric new buildings.

Medium Term (by 2040)

- A phase-out of fossil fuels—particularly in heating—and expect new buildings to be powered primarily by renewable energy sources.

Long Term (by 2050)

- By mid-century, roadmaps converge on a fully electrified built environment and anticipate:
 - Universal access to clean cooking
 - Buildings achieving greenhouse gas neutrality
 - Widespread integration of clean energy technologies

Specific examples from countries are listed below:

Green Building Council of Australia Roadmap

- **By 2030:** All new buildings and fitouts must achieve zero operational greenhouse gas emissions.
- **By 2050:** All existing buildings and fitouts must achieve zero operational emissions.

Colombia (Joint GBC–Government Roadmap)

By 2030:

- Existing buildings electrify **70–80%** of end uses (cooking and water heating), raising electricity's share to **50%** of sectoral energy use.
- **100%** of new buildings and major renovations in high-income residential, commercial, and institutional urban buildings electrify all final energy uses.

By 2040:

- Existing buildings electrify **85–100%** of end uses, raising electricity's share to **72%**.
- All new buildings and major renovations in urban areas electrify all final energy uses.

By 2050:

- Electricity reaches **94%** of energy use in the buildings sector, with full electrification of cooking and water heating in urban areas.
- The remaining **6%** is LPG use in rural areas.

Costa Rica (Government Roadmap)**By 2040:**

- **100%** of new buildings are designed and built with low-emission, resilient systems and technologies.

By 2050:

- **50%** of commercial, residential, and institutional buildings operate under emissions standards requiring high electrification or renewable energy use for cooking and water heating.

Examples of Fossil Fuel Phase Out**United Kingdom**

- New buildings must use low carbon heating from 2025.
- No further sales of gas and oil boilers for existing homes and non-domestic buildings from 2030.

European Union (EPBD Recast)

- Member States must **phase out fossil fuel heating systems by 2040**.
- Public subsidies for stand-alone fossil boilers are being **ended**.

d) How can a just, orderly and equitable transition best reflect the diverse realities of countries at different stages of development and with different degrees of dependence on fossil fuels?

A just, orderly and equitable transition must recognise that climate action can reduce existing inequities but can also deepen them if poorly designed. The global shift to electrification and clean energy is no exception. Without careful planning, risks include the extraction of transition critical minerals—such as copper—on Indigenous Peoples’ lands, and job losses in sectors like steel, cement, and fossil fuels. A sustainable shift to an all electric future therefore requires a just transition approach that considers all impacts, protects people and communities, and ensures that the benefits of decarbonisation are shared fairly.

Differentiated pathways

- Countries start from very different positions, and the transition must reflect this diversity as a one size fits all approach is neither realistic nor equitable.
- Nations with high dependence on fossil fuels—economically or socially—will require longer timelines, targeted support, and clear pathways to diversify their economies.

- Least developed countries need access to concessional finance, technology transfer, and capacity building to electrify without compromising development priorities.

Protecting vulnerable households

- Electrification must not exacerbate energy poverty and subsidies and incentives for electrification and efficiency should be progressive, ensuring that low income households benefit first.
- Social protection schemes—including targeted cash transfers or energy bill support—can buffer households from energy price volatility during the transition.
This ensures that clean energy becomes more affordable, not less.

Supporting workers and communities

- Communities and workers whose livelihoods depend on fossil fuel industries must be at the centre of transition planning.
- Transition plans should include retraining and reskilling, support for economic diversification, and community led planning to ensure local ownership of new opportunities.
- Investments in clean industries should be directed toward regions facing the greatest disruption.
This approach strengthens social cohesion and builds durable political support for climate action.

Respecting national circumstances

- A just transition must allow countries to choose the policies that best fit their context.
- The global roadmap should provide modular, adaptable policy options that countries can tailor to their development stage, energy mix, and institutional capacity.
- This flexibility ensures that all countries can contribute to global goals while pursuing pathways that are feasible, fair, and aligned with national priorities.

