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## Contributions from the United Nations Human Settlements Programme (UN-Habitat)

## COP30 Presidency Roadmap on the Transition Away from Fossil Fuels in a Just, Orderly and Equitable Manner

### Background

At the request of the COP30 President, the UNFCCC secretariat has invited Parties and observer organizations to submit written inputs to inform two Roadmaps led by the COP30 President. These Roadmaps are intended to support implementation of key elements of the First Global Stocktake (GST1) of the Paris Agreement, adopted at COP28 in Dubai in 2023:

1. The COP30 Presidency Roadmap for Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner (paragraph 28(d) of the GST1 outcome); and

2. The COP30 Presidency Roadmap for Halting and Reversing Deforestation and Forest Degradation by 2030 (paragraphs 33 and 34 of the GST1 outcome).

This document outlines UN-Habitat's contribution to the first Roadmap, on Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner.

### Introduction

As the UN focal agency for sustainable cities and human settlements, UN-Habitat welcomes the opportunity to contribute to the COP30 Presidency Roadmap, building on its mandate to support Member States in implementing the Paris Agreement and the New Urban Agenda, and in strengthening the urban and energy-related content of Nationally Determined Contributions (NDCs).

Cities and human settlements are at the heart of the global energy transition. They consume up to 75 per cent of global energy and produce approximately 70 per cent of greenhouse gas (GHG) emissions. More than half of the world's population already lives in urban areas, a proportion projected to reach nearly 70 per cent by 2050. Urban areas are thus both a primary source of emissions and the places where most energy demand, climate risks and opportunities for low-carbon development are concentrated. How cities are planned, financed and governed in the years ahead will determine the pace and effectiveness of both mitigation and adaptation, including the transition away from fossil fuels.

From the perspective of UN-Habitat's mandate and experience, integrating multilevel action and governance, housing, landuse and urban basic services into energy and climate strategies is essential to deliver an effective, just, orderly and equitable energy transition. This is consistent with the New Urban Agenda, which calls for integrated, participatory and

inclusive urbanization, and for aligning spatial development, infrastructure and basic services with climate and sustainability goals.

UN-Habitat's latest analysis, "Urban Content in NDC 3.0 – A snapshot of 128 NDCs", confirms that the recognition of cities in national climate plans has reached a turning point. Of the 128 NDCs3.0 submitted by 31 December 2025:

- 81 per cent (102 NDCs) now contain well-developed urban content, up from 49 per cent in the previous cycle;
- 81 per cent include urban mitigation measures and 81 per cent include urban adaptation measures;
- 53 per cent reference mitigation measures in the energy sector in an explicitly urban context, underscoring the centrality of cities to national (and global) energy transitions;
- 51 per cent reference mitigation actions in the built environment, and 70 per cent include mitigation measures for urban transport and mobility, two of the most energy-intensive urban sectors; and
- 77 per cent explicitly reference multilevel governance, while 37 per cent cite specific urban climate finance mechanisms.

These trends show that NDCs 3.0 are beginning to anchor key elements of the energy transition in cities - from efficiency and electrification in buildings and transport to investments in resilient urban infrastructure. However, the same analysis also reveals critical gaps in means of implementation, especially in finance, operational linkages and implementation capacity for subnational and local actors. Only 4 per cent of NDCs include urban GHG baselines, and the majority still do not specify how local authorities will be resourced and empowered to deliver energy related targets.

UN-Habitat's inputs draw on its Strategic Plan 2026–2029, its work with Member States on urban contributions to NDCs and National Adaptation Plans (NAPs), and its broader support to national and local governments in implementing the Paris Agreement and the New Urban Agenda. It addresses questions (a) and (b) of the COP30 Presidency's invitation, focused on the barriers and levers of the transition away from fossil fuels, with a particular focus on the role of subnational governments and multilevel partnerships in delivering the energy components of NDC.

UN-Habitat stands ready to work with the COP30 Presidency, Parties and partners to support the implementation of the Roadmap, including through strengthening multilevel governance, enhancing the urban content and implementation of NDCs, and advancing the New Urban Agenda as a framework for a just, orderly and equitable transition away from fossil fuels in cities and human settlements.

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

Despite growing global commitment to transitioning away from fossil fuels, implementation remains constrained by a set of structural barriers that are particularly visible in urban areas and human settlements. These barriers cut across the supply and demand side of the energy transition and are deeply intertwined with the way cities are planned, financed and governed.

### 1. Institutional and governance barriers: fragmented multilevel governance and weak local mandates

Although the latest NDC cycle signals a significant shift towards urban implementation, with 81 per cent of NDCs 3.0 featuring well-developed urban content and 80 per cent mentioning means of implementation, governance fragmentation remains a critical barrier:

- **Fragmented multilevel governance**: 77 per cent of NDCs 3.0 reference multilevel governance; yet in many countries these arrangements remain largely declarative rather than operational. National climate and energy strategies are often not systematically translated into local mandates, urban plans or sectoral regulations. This misalignment undermines cities' ability to phase down fossil fuels in key sectors such as buildings, transport and urban services.

- **Limited authority and capacity of subnational governments**: Local and regional governments often lack the legal authority or institutional tools to implement energy plans, enforce building codes, or design integrated urban policies that reduce fossil fuel dependence. Around 70 per cent of climate solutions depend on decisions made by local and regional governments, yet without clear mandates, coordination structures and access to resources, national energy transition targets remain disconnected from the realities of implementation.

- **Weak integration of cross-cutting urban sectors**: National climate strategies frequently treat housing, land use, transport, water and basic services in isolation. This runs counter to the New Urban Agenda's call for integrated urban and territorial planning, and results in siloed interventions that fail to shift the underlying urban form and infrastructure away from fossil intensive patterns.

- **Limited participation and social accountability**: Exclusion of communities and civil society, especially from informal settlements and slum dwellers, from planning and decision-making processes leads to unequal allocation of resources and may generate resistance to transition policies perceived as unfair. This undermines the New Urban Agenda's principles of participation, equity and "leaving no one behind".

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These governance barriers hinder the translation of global energy commitments and NDC pledges into coherent local implementation pathways.

**2. Economic and financial barriers: underinvestment in urban basic services and limited access to climate finance**

Persistent economic and financial constraints limit the ability of national and subnational governments to pivot away from fossilfuel-based development models:

- **Fiscal constraints and dependence on fossil related revenues**: In some contexts, national and subnational budgets rely on revenues linked to fossil fuel extraction or consumption. This creates disincentives to phase out fossil fuels and reduces fiscal space to invest in diversified, low carbon urban development, green jobs and social protection measures needed for a just transition.

- **Chronic underinvestment in urban basic services**: Cities require an estimated USD 4.5 trillion per year in investment through 2030 to meet climate and development goals, yet current flows are significantly below this level. Underinvestment in public transport, efficient buildings, water and sanitation, and resilient infrastructure locks urban systems into fossil intensive pathways.

- **Limited direct access to finance for subnational governments**: Although 37 per cent of NDCs 3.0 now mention urban climate finance mechanisms - a 61 per cent increase compared to the previous cycle - this remains insufficient. Many local governments lack creditworthiness, borrowing capacity or dedicated funding windows, and are rarely able to access international climate funds directly. This limits their ability to invest in building retrofits, electrified transport, decentralized renewables, and resilient housing, furthering their dependence on fossil fuels.

- **High upfront costs and risk perception**: Clean technologies such as energy efficient retrofits, electric mobility, heat resilient buildings and distributed renewable energy often entail higher upfront capital costs. In the absence of concessional finance, guarantees or blended finance structures, these investments are perceived as high-risk, particularly in low-income neighbourhoods and informal settlements. Private capital remains cautious, reinforcing a structural bias towards incremental, fossil fuel-based investments.

These financial and economic constraints inhibit both the **demand-side transition** (urban energy efficiency, electrification, modal shift) and the **supply-side transition** (expansion of renewable generation and storage, distributed energy systems) that are necessary to deliver the energy components of NDCs at the urban level.

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**3. Physical and infrastructural barriers: fossil intensive urban forms and locked-in systems**

The physical configuration of urban centers and their infrastructures pose major obstacles to a rapid transition away from fossil fuels:

- **Sprawling urban forms and car-dependent mobility**: Decades of car-oriented development have locked cities into high transport emissions, chronic congestion and air pollution. NDCs 3.0 show that 76 per cent now reference urban transport and mobility, and 70 per cent include specific mitigation measures in the sector - such as public transport expansion and vehicle electrification. However, many cities continue to expand through low-density sprawl, making it difficult and expensive to provide efficient mass transit and active mobility infrastructure.

- **Inefficient and rapidly expanding building stock**: Buildings and construction account for around 37 per cent of global $CO_2$ emissions. Over half of the buildings that will exist in 2050 have yet to be built, predominantly in rapidly urbanizing regions of Africa and Asia. While 57 per cent of NDCs 3.0 include the built environment and 51 per cent identify it as a key mitigation sector, only 15 per cent link building actions to specific means of implementation. This gap inhibits systematic implementation of (net) zero carbon building standards and largescale retrofits.

- **Ageing and fossil dependent infrastructure**: Many urban energy, transport, water and housing systems have been designed around fossil fuels and are ageing and difficult to retrofit at scale. This locks cities into high-carbon trajectories and exposes them to climate risks such as extreme heat, flooding and sealevel rise, as highlighted by the growing emphasis on urban water (58 per cent of NDCs) and urban heat (60 per cent).

Without integrated planning approaches, as advocated by the New Urban Agenda, these physical configurations continue to generate high fossil fuel demand and limit the feasibility of clean energy alternatives.

**4. Social and equity barriers: energy poverty, informality and unequal access**

Social and equity barriers undermine the fairness and political sustainability of the energy transition:

- **Energy poverty and unequal access**: High energy prices, unreliable electricity supply and limited access to clean cooking disproportionately affect low-income households and residents of informal settlements. This makes fuel switching risky

or unaffordable for many, and can entrench reliance on cheaper, polluting fuels such as diesel, kerosene and traditional biomass.

- **Vulnerability and tenure insecurity**: Around one billion people live in informal settlements, often in hazard-prone areas with weak tenure security. NDCs 3.0 show that 50 per cent now reference housing and informal settlements in an urban context, and 42 per cent of these frame them as vulnerable systems. Yet limited tenure security, lack of documentation, and fears of eviction can prevent households from investing in clean technologies or benefiting from retrofit programmes and decentralized energy solutions.

- **Labour and livelihoods risks**: Workers and small enterprises linked to fossil-dependent sectors - such as urban freight, construction, transport services and informal energy markets - are rarely included in transition planning, raising risks of job losses and loss of income. In the absence of adequate reskilling and social protection, transition measures can exacerbate inequality and undermine public support.

The New Urban Agenda and UN-Habitat Strategic Plan 2026-2029 emphasize the centrality of housing, land-use, basic services, inclusive urban economies and participatory governance for sustainable urbanization. When these principles are not embedded in energy transition policies, the result is a pattern of exclusion that slows implementation and risks deepening existing urban inequalities.

**5. Data and knowledge barriers: limited urban baselines and decision support**

Finally, critical information gaps compromise decision-making and monitoring on energy policy:

- **Lack of robust urban baselines**: Only 4 per cent of NDCs 3.0 include urban GHG baselines, even though 58 per cent mention urban climate risks. This makes it difficult to design evidence-based urban energy strategies, to prioritise interventions in high-impact sectors and neighbourhoods, and to track progress on clean energy at the city level.

- **Limited disaggregated and spatialized data**: Many cities lack granular data on emissions, energy use, and vulnerability at the scale of neighbourhoods, housing types, or informal settlements. This constrains the design of targeted policies and pro-poor measures aligned with the New Urban Agenda's emphasis on data-driven, inclusive planning.

These data gaps impede the design and scaling of urban energy solutions and weaken accountability across levels of government.

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## (b) Potential levers for accelerating the implementation of the transitioning away commitment

To overcome these barriers, the COP30 Presidency Roadmap can highlight a set of mutually reinforcing levers - economic, financial, institutional, social and technological - that place urban centers and subnational governments at the core of implementation, in line with the New Urban Agenda and the evolving landscape of implementation-oriented NDCs 3.0.

### 1. Strengthening multilevel governance to localize the energy components of NDCs

With 77 per cent of NDCs 3.0 already referencing multilevel governance, the groundwork is in place for a decisive shift from recognition to implementation:

- **Operationalize multilevel governance arrangements**: National governments can establish and institutionalize formal coordination mechanisms that link national climate and energy institutions with subnational and local governments, including through multilevel and multistakeholder governance bodies, joint planning workshops and structured consultation processes. The inclusion of subnational governments in decision-making process increases their ownership and accountability on energy and climate interventions and increase the degree of implementation of climate commitments. These mechanisms should explicitly cover urban energy, buildings, transport and basic services.

- **Translate NDC 3.0 energy targets into urban mandates and plans**: National implementation strategies for NDCs 3.0 should embed clear urban energy targets, define the roles of subnational governments, and require the preparation of municipal or regional energy and retrofit plans aligned with national commitments. This can lead to the strengthening of the urban content in NDCs, emphasizing joint stocktaking, coordination and co-design with local actors.

- **Incorporate New Urban Agenda principles**: Multilevel governance arrangements for energy policy should be grounded in the New Urban Agenda's call for integrated urban and territorial planning, inclusive participation, and balanced development between urban and rural areas. This means linking energy transition strategies to compact, connected and inclusive urban development pathways that structurally reduce fossil fuel demand.

- **Institutionalize the role of local governments in global processes**: Building on COP Presidencies initiatives such as the Coalition for High Ambition Multilevel Partnerships (CHAMP) for Climate Action and the Sustainable Urban Resilience for the next Generation (SURGe), as well as the Local Governments and Municipal Authorities (LGMA) constituency, Parties can further formalize the involvement of

cities and subnational governments in energy and climate governance, ensuring that their inputs inform national submissions, stocktakes and implementation reviews. This will create stronger interlinkages between the normative decision-making process and the urban implementation of national commitments.

This lever addresses **institutional and governance frameworks** and creates the enabling conditions for subnational actors to deliver the energy transition on the ground.

**2. Expanding climate finance and financial instruments accessible to cities and subnational governments**

Closing the urban climate finance gap is essential to accelerate both demand-side and supply-side transitions:

- **Create dedicated urban and subnational climate finance windows**: International climate funds, Just Energy Transition Partnerships and multilateral development banks can establish facilities that allow direct or programmatic access for cities and regions, building on emerging good practice where national or regional urban climate funds channel resources to local governments.
- **Strengthen fiscal decentralization and subnational funding mechanisms**: National governments can revise fiscal frameworks to allocate a predictable share of climate-related resources to local governments to support their energy transition, including through grants, intragovernmental transfers and national urban climate funds.
- **Deploy blended finance and derisking instruments**: 37 per cent of NDCs 3.0 mention urban climate finance, with increasing references to blended finance, public-private partnerships and results-based grants. Scaling these instruments can reduce perceived risk, mobilize private investment and enable largescale retrofits, transit-oriented development and decentralized renewable energy systems.
- **Leverage municipal financial innovation**: Where feasible, municipal green bonds, sustainability-linked loans and revolving funds can be used to finance urban energy and retrofit programmes, supported by capacity-building on financial management and project preparation.

This lever responds directly to **economic and financial systemic risks** and enables subnational authorities to invest in the infrastructure and services needed to move away from fossil fuels.

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**3. Embedding just transition principles in urban policy, planning and programmes**

To ensure that the transition is just, orderly and equitable, especially for low-income urban residents and workers in fossil-dependent sectors:

- **Align urban energy transition with the New Urban Agenda's social commitments**: Urban energy policies should be integrated with housing, slum upgrading, social protection and inclusive service provision. This includes prioritizing retrofits and electrification in low-income housing, public buildings, and informal settlements, and ensuring clean, affordable energy access and mobility for vulnerable groups.

- **Develop "green good jobs" programmes at city level**: Local "green good jobs" programmes can link urban renewable energy, building retrofits, sustainable transport and basic services to reskilling and decent employment opportunities. Subnational governments can integrate these programmes into urban development plans, while national governments provide enabling regulation and just transition finance.

- **Protect tenure and prevent displacement**: Urban retrofit and redevelopment programmes must safeguard tenure security and avoid involuntary displacement, in line with the human rights-based approach of the New Urban Agenda. This is critical to ensure that low-income households can benefit from the transition rather than being pushed out of upgraded areas.

- **Ensure meaningful participation and cocreation**: Participatory planning processes that involve communities, women, youth, Indigenous Peoples, informal workers and slum dwellers in energy-related decisions can improve the social legitimacy of policies, align interventions with local needs and encourage uptake of new technologies.

By embedding justice and inclusion in urban transition strategies, this lever addresses **just transition and differentiated pathways** and enhances the social and political viability of ambitious fossil fuel phase-out measures.

**4. Accelerating urban retrofit, electrification and compact urban development**

On the **demand side**, urban planning and built environment policies offer powerful levers to reduce fossil fuel use:

- **Integrated urban retrofit programmes**: Municipal and regional governments, supported by national policy and finance, can develop integrated retrofit plans that target public buildings, social and affordable housing, informal settlements and local enterprises. These plans can combine electrification, efficiency measures,

passive cooling, and distributed renewables such as rooftop solar and battery enabled microgrids.

- **Reforming building codes and standards**: National and subnational authorities can update building codes to include energy performance requirements, electrification readiness and climate resilient design, and support their implementation through technical guidelines and incentives. The New Urban Agenda calls for such regulatory reforms to deliver safe, resilient and energy efficient housing and infrastructure, reducing the demand for fossil fuels.

- **Promoting compact, mixed-use and transit oriented development**: Landuse planning that supports higher density, mixed-use neighbourhoods around public transport corridors can reduce energy demand from both buildings and transport. NDCs 3.0 already show strong integration of transport and mobility (76 per cent of NDCs mention the sector). Scaling transit oriented development can amplify these efforts and structurally reduce car dependence and demand for fossil fuels. However, transit-oriented development must not be used to promote urban sprawl and low densities.

- **Scaling sustainable mobility and electrification**: Expanding and improving public transport, walking and cycling infrastructure, and accelerating the electrification of public and private vehicle fleets, can dramatically cut fossil fuel consumption in cities. National policies on vehicle standards and energy pricing should be aligned with local investments in shared and non-motorized transport.

These measures directly target **energy transition from a demand side perspective**, tackling some of the most entrenched sources of urban fossil fuel demand.

**5. Enhancing data, digital tools and capacity for urban energy planning**

To address the information and capacity gaps that currently hinder implementation:

- **Develop urban GHG and energy baselines**: National and local governments, supported by international partners, can invest in city level GHG inventories and energy use assessments. This will help close the current gap where only 4 per cent of NDCs provide urban GHG baselines, and will allow for more precise targeting of energy interventions.

- **Strengthen institutional capacity at subnational level**: Technical assistance and capacity building programmes - through Climate Promise: Forward, among others - can help national governments to prepare bankable projects, manage complex retrofit programmes, and navigate climate finance opportunities focused on the urban implementation of their NDCs 3.0.

Better data and capacity enhance the effectiveness of all other levers, supporting **technological solutions and innovation pathways** as well as more robust governance and finance.