

ROADMAP TO NET ZERO CARBON BUILDINGS FOR 2020-2030: Policy Update

The Roadmap below presents the key activities required by the City to achieve net zero carbon buildings by 2030. The activities highlighted in the roadmap and the corresponding approaches are pragmatic, innovative, and flexible and will be adapted to the global and local context as well as to the evolving national and legal landscape, when and if required.

2020-2025

The key activities outlined for 2020 to 2025 are as follows:

1. The Finalisation of the City Policy:

The objective of the policy is to achieve a net zero carbon consumption for new buildings in the municipality by 2030. The policy acts as a decision-making guide and sets out the core principles, processes and systems required to realise the goal of the City. This policy is developed in line with the provisions of SANS 10400 XA and the National Building Regulations.

The policy unpacks the problem area and provides the necessary contextual background for the reader. The document also notes the processes for the applicant to follow when submitting their building plan/s to the requisite City official. Thereafter, the document offers the key City officials an understanding of the subject area as well as the requirements for developing and measuring a net zero carbon building. Included in the policy are a set of EUI tables to monitor energy efficiency compliance. As mentioned above, The EUI tables published in this policy, taken from SANS 10400XA (2020) thus apply until 2025/2026 and thereafter the standards will be set through a performance-based model. An easy to use model is being developed and tested for this purpose (noted below). The City of [X] has also included provisions on the scope of the policy, the renewable energy contribution and other areas of relevance including water and waste.

Going forward, the City will assess the effectiveness of policy in terms of its intention and results. The findings from this assessment will influence the conceptualisation of the bylaw in 2025.

2. Engagement with the IFC on Modification of the Edge Tool to Create an effective Tool for Compliance Purposes:

In partnership with the C40 Cities South Africa Building Programme, the City of [X] will offer their input into the modification of the IFC's Edge Tool. Recognising the absence of reliable energy efficient buildings performance data and other critical metrics in emerging markets and their worth to the investment community, the UK government joined forces with IFC on the Market Accelerator for Green Construction (MAGC) to create the Edge Tool. The tool was created to address the need for more consistent data gathering and analysis, track progress against local benchmarks and to encourage the certification of buildings from conventional buildings to 'green' buildings.

The C40 Cities South Africa Building Programme is currently engaging with the developers of the tool to create a version of the instrument which will be aligned with our local context and the latest regulatory requirements; that addresses the capacity shortage that necessitated a 'prescriptive route in SANS. This will pave the way for a performance based approach that is affordable and accessible within the capacity context of the SA property development sector. The incumbent tool can also then be used by applicants and City officials to determine compliance with the City's policy and by law or with national regulations (as outlined in this policy and in SAN 10400 XA, respectively).

3. Consultations with Key Stakeholders to ensure Institutional Alignment:

The City and its associated partners will conduct several consultations with key stakeholders from civil society organisations to national level government officials, to reach institutional alignment. For effective building and compliance monitoring to be achieved, cooperation between authorities at national and local, as well as between key stakeholders (for e.g. the Green Building Council, National Treasury, DTI and SALGA), is paramount to delivering an effective policy for realising low carbon buildings in the City. The City intends to work in harmony with these stakeholders to deliver on the policy's objectives, effectively and efficiently.

4. Piloting of Campaigns and Communications:

A pivotal milestone on our roadmap is to pilot and publish campaigns and communications. The aim of the marketing materials is to circulate the premise, intention, and progress to date in achieving the mandate of the programme. The materials produced will also showcase:

- A. Promotion of the uptake of the Edge Tool as a central resource for determining compliance with the City's energy efficiency requirements. The communication will also outline the process for receiving green certification for a building when the Edge Tool is utilised effectively.
- B. The advancements made towards modifying the Edge Tool.
- C. Updates by the four main cities in the C40 Cities South Africa Building Programme on their achievements, challenges, and mitigation measures.
- D. Key takeaways from consultations hosted with core stakeholders which are of relevance to the public.

5. Involvement in the Development of the Next Version of SANS 10400 XA:

The City will continuously engage with the drafters of SANS 10400 XA to offer inputs, feedback, and comments to the development of the incumbent version of the standards. By working collaboratively with the drafters of SANS 10400 XA, the City can assist to formulate the next set of energy efficiency requirements and ensure that they are aligned with the City's ultimate vision.

2025-2030

The key activities outlined for 2025 to 2030, are as follows:

1. The Development and Publication of the City By-law:

The introduction of a bylaw will be a critical point on the roadmap. The bylaw will provide the legislative measures that will secure the minimum energy efficiency requirements of buildings. The bylaw will also require renewable energy systems of adequate capacity to achieve net zero carbon buildings. The bylaw will detail the outcomes of non-compliance (including but not limited to fines and penalties) as well as provisions on exemptions, administration, and enforcement. This formative document will also enforce the policy. Conversely, the bylaw may also encourage applicants to abide by the policy in order to avoid punitive measures.

2. Update to the Policy:

The City endeavours to explore additional policy and regulatory mechanisms to progress towards net zero carbon buildings by 2030. This includes the possibility of prioritising the consideration of land use applications for new buildings that follow the rational design or reference building routes, among other pragmatic steps to advance the attainment of this standard.

3. Creating Stringent Requirements for Achieving Net Zero Carbon by 2030:

Continuing the progress made in previous years, the City will advance engagements with the drafters of SANS 10400 XA. Periodic consultations with the drafters will guarantee that the subsequent versions of SANS 10400 XA continue to provide more stringent energy efficiency requirements so that the net zero carbon of buildings can be achieved.

4. Updating and Fostering Relationships with Key Stakeholders:

Branching off the progress made from 2020-2025, further engagements will ensue to drive institutional alignment and gain the necessary buy-in from key stakeholders. The relationships developed will also assist to:

- A. Develop and implement a policy and bylaw which is supported by all spheres of government.
- B. Integrate the Edge Tool as integral instrument for city planning and development, specifically when determining a building's energy efficiency obligations.
- C. Create a system of collaboration between parties with a similar mandate to (a) discuss the topic in detail; (b) devise strategic processes and outcomes (c) consult with the specific levers in the organisation and gain their buy-in and (d) identify the possible risks and mitigation measures which are applicable to the City and other cities.

5. Driving Campaigns and Communications on Progress in Achieving Net Zero Carbon by 2030:

The City will continue to pilot and publish campaigns and communications centred on achieving net zero carbon by 2030. The marketing materials will be adapted to the global and local context in which we find ourselves in by 2025-2030. The

communications will persistently strive to encourage the uptake of the Edge Tool as a key compliance measuring resource and to highlight the progress made by the programme in realising its mandate.

Finally the overall roadmap is depicted below for reference:

ROADMAP TO NET ZERO CARBON BUILDINGS [1/2]

Net Zero Carbon Roadmap	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Responsible
Local Government Frameworks												
<ul style="list-style-type: none"> Cities' Policies are developed and approved Cities' Bylaw is developed and approved Refinement and adaptation of City Policy and Bylaw 												The Cities' The Cities' The Cities'
Energy Use Intensity Reporting Requirements												
<ul style="list-style-type: none"> Introduction of EUI reporting requirements Incremental improvement of EUI requirements (may or may not include operational energy) 												The Cities', C40 and SEA The Cities', C40 and SEA
Alignment of the National Legislative and Regulatory Framework												
<ul style="list-style-type: none"> Implementation of SANS 10400 XA (2021) Net Zero Carbon XA or more stringent set of EUI indicators in revised XA Engagement with DTI and National bodies Alignment with the national construction permitting and Doing Business process 												DTI and the Cities' DTI and the Cities' DTI, Cities', C40, SEA, DoE and DEFF World Bank & NT

ROADMAP TO NET ZERO CARBON BUILDINGS [2/2]

Net Zero Carbon Roadmap	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Responsible
EDGE Tool Mainstreaming and Capacity Development												
<ul style="list-style-type: none"> Tool is signed in to the Cities' and Agreement certification process is underway Edge Tool is mainstreamed Capacity building (designers, developers, SCO's, City officials etc.) 												IFC, Cities', C40, SEA and DTI IFC, Cities', C40, SEA and DTI Cities' and C40, SEA
Aligning Financial Resources (e.g. value chain strengthening, access to climate finance and tenant demand)												
<ul style="list-style-type: none"> Investor and Developer NZC consensus statement development Supportive financial mechanisms are developed 												NT, DOE, DEFF, investors and developers and Cities' NT, DOE, DEFF, investors and developers and Cities'
Renewable Energy Provision												
<ul style="list-style-type: none"> RE provision in Policy and Bylaw Development of City RE strategy and Policy City RE schemes for developers RE Requirement for NZC 												DOE and Cities' and Cities' DOE and Cities' and Cities' DOE and Cities' and Cities'
Creating a NZC Buildings Movement / Campaign												
<ul style="list-style-type: none"> Develop communication campaign strategy Support messages/materials for public participation Develop web hub for ongoing engagement – to be both citizen and professional (public and private) facing 												DOE, DTI and Cities' C40, SEA and Cities' C40, SEA and Cities' C40, SEA, DTI, DOE and Cities'