
Submission to the Consultation on Carbon Budgets

Prepared by Codema – Dublin's Energy Agency

February 2022

Background

About Codema

Codema - Dublin's Energy Agency is a not-for-profit company limited by guarantee and was founded in 1997. We are the energy agency to the four Local Authorities in Dublin, and our mission is to accelerate Dublin's low-carbon transition through innovative, local-level energy and climate change research, planning, engagement and project delivery, in order to mitigate the effects of climate change and improve the lives of citizens. We are the Dublin Local Authority's (DLA's) one-stop-shop for developing pathways and projects to achieve their carbon reduction and climate targets. Examples of Codema's work include energy master-planning, district heating system analysis, energy performance contracting, management of European projects, energy saving behavioural campaigns and detailed energy reviews. Codema is well networked in Europe and has been very successful in bringing European projects to Dublin with a local implementation for the Local Authorities.

Context

Codema welcomes the opportunity to make a submission to this consultation process. Codema's interest in the Consultation on Carbon Budgets stems from our role in spatial energy planning in Ireland. Our research and practical experience of spatial energy planning and developing projects allows us to advise on local level low-carbon policies which aim to reduce energy, fossil fuel use and associated costs & emissions in line with national targets. We have more than 20 years' experience in the climate change and energy sector, specifically in how EU and national legislation will affect the DLAs activities and the Dublin region as a whole.

Codema's Experience in Spatial Energy Planning

Codema are Ireland's leading experts in the area of spatial energy master-planning. As part of our work on the [Dublin Region Energy Masterplan](#)¹ (DREM) we have assessed cost-optimal, technically feasible decarbonisation pathways for the heat, electricity and transport sectors in Dublin to 2030 and 2050.

The masterplan addresses all energy sectors of electricity, heat and transport, and crucially has been modelled from a spatial perspective as well as from a technology perspective. The analysis is at a granular spatial level called the 'small area' level². This project also identifies and supports the use of low-carbon sources indigenous to Dublin, develops and harnesses new local level energy policy practices, and strengthens Ireland's integrated energy system modelling capabilities.

The pathways developed as part of the masterplan are based on detailed local-level, spatially-driven energy scenario modelling, which has not been carried out before for any county in Ireland.

¹ Report to be published Q2 2022.

² Small Areas are areas of population generally comprising between 80 and 120 dwellings created by The National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland (OSi) in consultation with CSO.

This innovative local-level energy planning methodology builds upon leading international-class energy research in the area, and findings from the DREM have already been directly applied and demonstrated by the Dublin Local Authorities.

This work, when published, will present a set of clear, evidence-based pathways, which will enable the Dublin region to create effective, long-term energy policy in areas such as spatial planning, land-use, and public infrastructure. In addition to this the work also presents a geographic analysis of the current situation for energy use, along with additional spatial data layers to facilitate contextual analysis³.

The results of the DREM will allow local authorities to effectively create evidence-based policies and actions to affect CO₂ emissions county-wide, by using the local authority's powers in spatial planning, land-use, planning policy and public infrastructure.

Summary of key points

- Codema support the target of a 51% emissions reduction economy-wide by 2030, and the proposed carbon budgets to 2030 as outlined in the CCAC analysis.
- Spatial energy planning is international best practice and a highly effective method for delivering climate action at local level.
- For carbon budgets to be successfully delivered, **it is imperative that local level spatial energy planning tools** (like the Dublin Region Energy Masterplan) **are further developed and made available to every local authority in Ireland.**
- Faster feedback between emissions trajectories and policy is required to stay on track to deliver Ireland's Carbon Budgets.

Response to Consultation

[Codema support the target of a 51% emissions reduction economy by 2030, and the proposed carbon budgets as outlined in the CCAC analysis](#)

As outlined in the CCAC analysis, achievement of this target is required for Ireland to play its part in meeting the objective of the Paris Agreement of the United Nations Framework Convention on Climate Change. Ireland must also go wider than this target and deliver action in support of climate justice and a global just transition to support delivery of the Paris Agreement. Additionally, action is required to mitigate against the biodiversity crisis as outlined by the Intergovernmental Science Policy

³ Preliminary geographic outputs of the current situation for energy use in Dublin, as part of the Dublin Region Energy Masterplan: <https://codema-dev.github.io/posts/>

Platform on Biodiversity and Ecosystem Services (IPBES) in 2019⁴, as actions in one sphere can create co-benefits in the other.

Spatial energy planning is international best practice and a highly effective method for delivering climate action at local level

Spatial energy planning allows local authorities to create evidence-based policies and actions which affect CO₂ emissions county-wide, by using the local authority's powers in spatial planning, land-use, planning policy and public infrastructure.

Energy planning in Ireland is primarily focused at national level and there is little integration with spatial planning, particularly at local authority level. Without bottom-up energy planning, the unique energy solutions and synergies available only at a local level are often overlooked. Thus, there is a recognised need to build on city/county-wide development plan energy policies, focusing on more evidence-based and spatially appropriate policies and objectives.

Local energy planning also allows for greater local participation and benefits, which can help with improving citizen buy-in to the low-carbon transition. Local level energy planning is therefore key in helping local authority areas achieve 2030 and 2050 emission reduction targets. Co-benefits of climate action such as air quality, water quality, and biodiversity are most keenly felt at a local level, and can be planned for in tandem with energy planning.

At a local level, local authorities in Ireland have to meet a number of legal climate action obligations and targets, and the spatial energy planning pioneered in Dublin has already helped and will continue to help support the Dublin local authorities to meet these obligations by taking action on climate and meeting their policy requirements in areas such as:

- Preparation of **County/City Development Plans**
- Identification of **Strategic Energy Zones**
- Assessment of **Decarbonising Zones**
- Preparation of **climate mitigation plans**
- Roll out of **low-carbon infrastructure** (district heating, electric vehicle (EV) charging, etc)
- **Carbon and energy assessment** of planning applications
- Creation of EU Covenant of Mayors **Sustainable Energy and Climate Action Plans**

Spatial energy planning is international best practice. The advantages of implementing effective local level energy plans are clear; the most sustainable cities in Europe, like Stockholm, Copenhagen and Hamburg, have implemented city-wide energy plans, with clear pathways and long-term commitments to a low-carbon future. The implementation of these plans not only accelerates carbon reductions, but enhances the cities competitiveness, reputation, and quality of life.

Sweden is among those countries leading the way - under the Act on Municipal Energy Planning, all Swedish municipalities are required to carry out and implement an Energy Plan⁵. Additionally, the

⁴ <https://www.ipbes.net/global-assessment>

⁵ Wretling et al. (2017), *Strategic municipal energy planning in Sweden – Examining current energy planning practice and its influence on comprehensive planning*, Energy Policy Volume 113, p.688-700

Covenant of Mayors for Climate and Energy⁶ is an EU initiative which aims to accelerate the decarbonisation of municipality territories across Europe through implementation of local level energy action plans. The initiative has been very successful, with over 7,000 signatories (12 of which are Irish local authorities) and is backed by the EU Directorate General for Energy.

Delivery of Ireland's ambitious Carbon Budgets requires local level spatial energy planning

Delivery of carbon budgets will require extraordinary and urgent action at all levels of society and will cascade from national to local government, to citizens, businesses and other stakeholders. As noted in the CCAC letter to the Minister ***“Adaptation and mitigation must be considered together at the appropriate geographical scale with coherence from national to local government while harnessing potential of local authorities”***.

At present Dublin is the only region in Ireland where local authorities have access to detailed local level evidence-led spatial energy planning such as the [Dublin Region Energy Masterplan](#) (DREM), developed by Codema. To ensure that adaptation and mitigation are considered together the Dublin local authorities work with the support of the Dublin Climate Action Regional Office and Codema, using Codema's spatial energy planning expertise, to deliver climate action at a local level.

For carbon budgets to be successfully delivered, it is imperative that tools like the Dublin Region Energy Masterplan are further developed and made available to every local authority in Ireland.

Faster feedback between emissions trajectories and policy is required to stay on track to deliver Ireland's Carbon Budgets.

As outlined by the CCAC report, significant societal change beyond that supported by current policies and measures will be required to deliver on Ireland's climate action obligations. Our current systems of climate action governance must be updated to support the increased ambition legislated for in the Climate Action and Low Carbon Development (Amendment) Act 2021⁷.

The time lag between action, observation, reporting, and re-planning in terms of climate action is of the order of 1 – 2 years. To deliver ambitious action in an eight-year timeframe to 2030 this feedback cycle must be shortened or new metrics found which facilitate a faster feedback cycle.

⁶ <https://www.covenantofmayors.eu/en/>

⁷ <https://www.oireachtas.ie/en/bills/bill/2021/39/>