

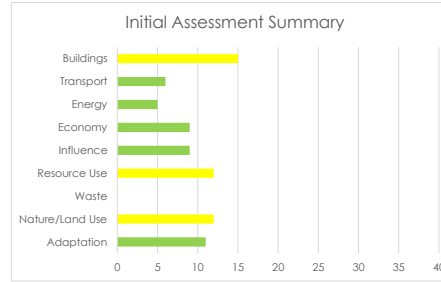
Climate Change Impact Assessment Summary

Project/Proposal Name	Energy Generation and Storage Routemap	Portfolio	City Futures
Committee	Transport, Regeneration and Climate	Lead Member	Ben Miskell
Strategic Priority	Clean Economic Growth	Lead Officer	Kathryn Warrington
Date CIA Completed	04.12.2023	CIA Author	Kathryn Warrington
		Sign Off/Date	04.12.2023

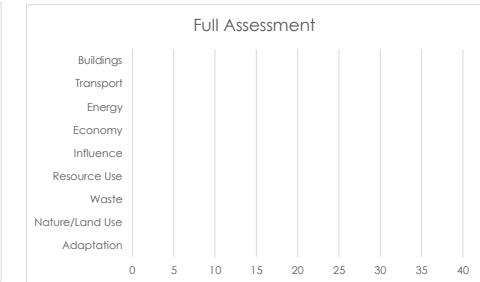
Project Description and CIA Assessment Summary	In 2019, the Council declared a Climate Emergency and set a target for the council and the city to reach net zero by 2030. In March 2022, the Council adopted its 10 Point Plan for climate action and set an objective for decarbonisation routemaps to be developed in key sector areas that require decarbonising to meet the 2030 target. In July 2023, the Our Council and The Way we Travel routemaps were approved by TRC Policy Committee. The Energy Generation and Storage routemap is the third to be developed. It is a high-level document that summarises the on-going work with DESNZ on preparing for Heat Network Zoning and initiates the studies and feasibility work now needed to identify specific delivery to decarbonise the local energy system. In particular, the routemap outlines that a Local Area Energy Plan (LAEP) will be commissioned in 2024, a data driven, place based assessment of current and future energy demands and sets a delivery plan for the lowest cost route to decarbonisation. Full CIAs will be undertaken in due course on individual programme and project areas when more detail is known.
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Rapid Assessment	Does the project or proposal have an impact in the following areas? Select all those that apply. Only complete the sections you have selected here in the assessment.		
Buildings and Infrastructure	Yes	Influence	Yes
Transport	Yes	Resource Use	Yes
Energy	Yes	Waste	Yes
Economy	Yes	Nature/Land Use	Yes
		Adaptation	Yes

Initial Assessment Summary



Full Assessment Summary



>=27	The project will increase the amount of CO2e released compared to before.
21-26	The project will maintain similar levels of CO2e emissions compared to before.
12-20	The project will achieve a moderate decrease in CO2e emissions compared to before.
3-11	The project will achieve a significant decrease in CO2e emissions compared to before.
0-2	The project can be considered to achieve net zero CO2e emissions.

Initial Assessment

Category	Impact	Description of Project Impact	Score
Buildings and Infrastructure	Construction	During any construction phase there will be an increase in CO2e due to manufacturing, transportation and installation and waste processes.	9
	Use	Once new decarbonised energy systems are in place, there will be reduced operational CO2e.	3
	Land use in development	A renewable energy scoping study will be carried out to ascertain the potential of large scale renewable energy on council owned land. Brownfield, under utilised land will be prioritised and always with consideration to BNG.	3

Transport	Demand Reduction		NA
	Decarbonisation of Transport	The studies, such as the LAEP resulting from the routemap will help to identify opportunities for EV charging infrastructure	3
	Public Transport		NA
	Increasing Active Travel	There is potential through infrastructure projects, when roads are dug up for the laying of utilities, roads go back in a better condition that previous and with active travel lanes included.	3

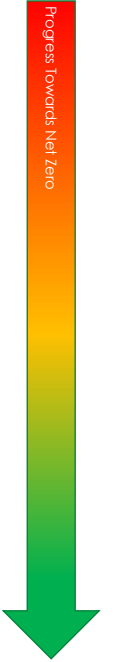
Energy	Decarbonisation of Fuel	The energy routemap includes for the expansion of heat networks in the city, providing lower carbon heat than gas. The LAEP will identify areas where heat supplied by heat pumps will be most viable.	1
	Demand Reduction/Efficiency Improvements	At the building level, this is largely picked up in the Our Council and Housing decarbonisation routemaps. However, the Energy Generation and Storage routemap will include actions to look into collective purchasing options for the supply and installation of solar pv	3
	Increasing infrastructure for renewables generation	The resulting LAEP will assess current and future energy demands and grid constraints and will set a delivery plan for the infrastructure needs of the city ahead of 2030.	1

Economy	Development of low carbon businesses	The routemap addresses the need to support local low carbon skills, jobs and supply chain opportunities	3
	Increase in low carbon skills/training	The routemap addresses the need to support local low carbon skills, jobs and supply chain opportunities	3
	Improved business sustainability	The routemap addresses the need to support local low carbon skills, jobs and supply chain opportunities	3

Influence	Awareness Raising	The Energy Generation and Storage routemap and resulting projects, particularly the LAEP that will include extensive engagement with businesses, citizens and community groups will raise awareness of the energy transition	3
	Climate Leadership	The development of the routemap and resulting studies (LAEP) and potential role of Heat Network Zoning Coordinator will demonstrate the Council's climate leadership	3
	Working with Stakeholders	Extensive stakeholder engagement and consultation will take place. This is already happening on heat network development and preparing for upcoming Heat Network Zoning legislation	3

Resource Use	Water Use		Unknown
	Food and Drink		Unknown

10	The project will significantly increase the amount of CO2e released compared to before.
9	The project will increase the amount of CO2e released compared to before.
8	The project will maintain similar levels of CO2e emissions compared to before.
7	
6	The project will achieve a moderate decrease in CO2e emissions compared to before.
5	
4	
3	The project will achieve a significant decrease in CO2e emissions compared to before.
2	
1	The project can be considered to achieve net zero CO2e emissions.
0	
Carbon Negative	The project is actively removing CO2e from the atmosphere.



Products	There will be an increase in manufacturing of utilities and products required for future low carbon energy projects. Procurement should be used to ensure products are sourced ethically and have the lowest embedded CO2e	9
Services	Future low carbon energy supplies and associated services will lead to decarbonisation compared to existing electricity and gas infrastructure	3

Waste	Waste Reduction		NA
	Waste Hierarchy	Construction waste impacts will be considered at project level	Unknown
	Circular Economy	Consideration of this will be given at project level	Unknown

Nature/Land Use	Biodiversity	Any land based energy infrastructure projects will be developed alongside nature recovery and BNG objectives	6
	Carbon Storage	Any land based energy infrastructure projects will be developed opportunities for carbon sequestration. Routemap also refers to Veolia's algae carbon capture trial.	6
	Flood Management	Infrastructure projects will need to consider any flood risks	Unknown

Adaptation	Exposure to climate change impacts	Energy infrastructure needs to be resilient for future climate impacts and the future energy needs of the city need to be based on future climate e.g. district heating needs to also considere future cooling needs.	5
	Vulnerable Groups	The Energy Generation and Storage routemap acknowledges that the energy transition needs to happen in a fair and just way. It needs to support our most vulnerable citizens and not push them further into fuel poverty.	3
	Just Transition	The LAEP and heat network zoning work seeks to identify the lowest cost route to decarbonisation to support vulnerable citizens and economic growth. In addition, projects and programmes will support low carbon skills, jobs and supply chains	3

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