

# Net Zero 2040

## Explainer of UCD's commitment in the Breaking Boundaries Strategy to 2030

UCD Sustainability  
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### What is net zero?

Net zero broadly refers to a state in which the greenhouse gases going into the atmosphere are balanced by their active removal (Figure 1). From an organisation's point of view, this involves substantially reducing its own emissions and those arising through its value chain and ultimately also requires some steps for active removal and storage of greenhouse gases (Figure 2). It is also desirable to help reduce greenhouse gas emissions beyond an organisation's own value chain by contributing to the initiatives of others, through investment, advice and other supports and indeed through education and innovation (Figure 2). Such contributions are not counted in the balance sheet of emissions and removals, but help to underscore the organisation's commitment to global net zero.

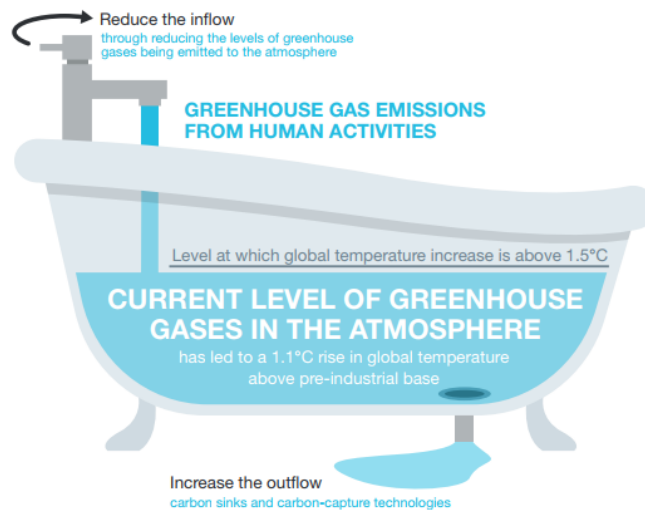


Figure 1. Net zero can be achieved by reducing emission of greenhouse gases into the atmosphere and increasing removal of greenhouse gases from the atmosphere (from SDSN et al 2022).

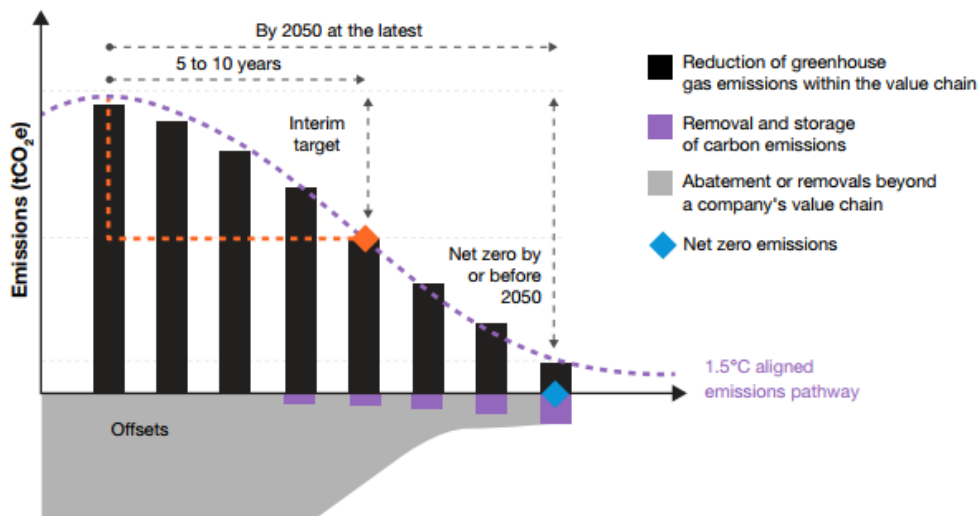


Figure 2. Key elements of setting targets and interim targets using a science-based pathway to net zero (adapted from SBTi 2021 by SDSN et al 2022).

## **Why should UCD commit to net zero by 2040?**

A commitment to net zero by 2050 is enshrined in the European Green Deal. This 2050 target is directly reflected in Ireland's national Climate Action Plan. A commitment to 2050 is therefore inherently incumbent on us as part of Irish and EU policy. A commitment to 2040 signals a stronger intent to be a leader and will help us address national and global targets more urgently.

## **What would the commitment entail?**

A first step will be to sign up to the United Nations Framework Convention on Climate Change (UNFCCC) [Race to Zero](#) programme. This makes the commitment widely visible and provides a framework for progress. It includes fora for development and sharing of best practice. The next step will be the development and implementation of a plan, which will require change across a range of aspects of university activity, including some changes that will require substantial resourcing and others that will require behavioural change. There is a view that some of the technologies considered necessary to reach net zero are still in development. UCD has an opportunity to contribute to the innovations required.

A wide range of steps can be taken to progress towards net zero, as outlined in excellent [guidance to universities](#) by the Sustainable Development Solutions Network (Figure 3). Many of the steps are already being taken by UCD as part of our compliance with the national Climate Action Plan (CAP) through our [Climate Action Roadmap](#), though it would be necessary to go further to reach net zero. For example, under the CAP we are assessing and reducing our Scope 1 and 2 emissions (Figure 4). While some actions under the CAP do relate to Scope 3, there is no obligation to assess and reduce Scope 3 emissions (those linked to our supply chain and our own business travel, commuting and investments – Figure 4). Nevertheless, many organisations are assessing their Scope 3 emissions and have found them to far outweigh Scope 1 and 2 emissions. As such, the most significant additional steps that we would need to take relate to Scope 3 emissions, particularly in terms of our supply chain.

To close the final gap to net zero, some effective form of carbon capture and storage would be needed (Figure 2).

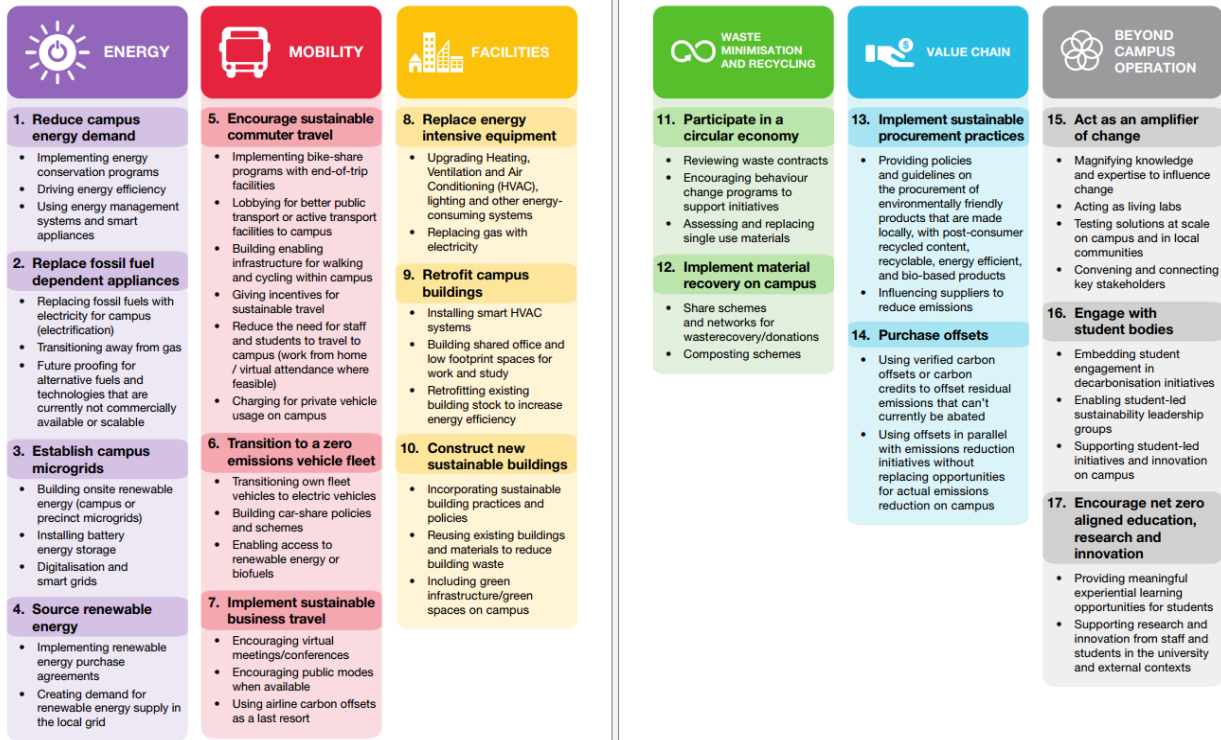


Figure 3. Six action areas for net zero on campus (from SDSN et al 2022).

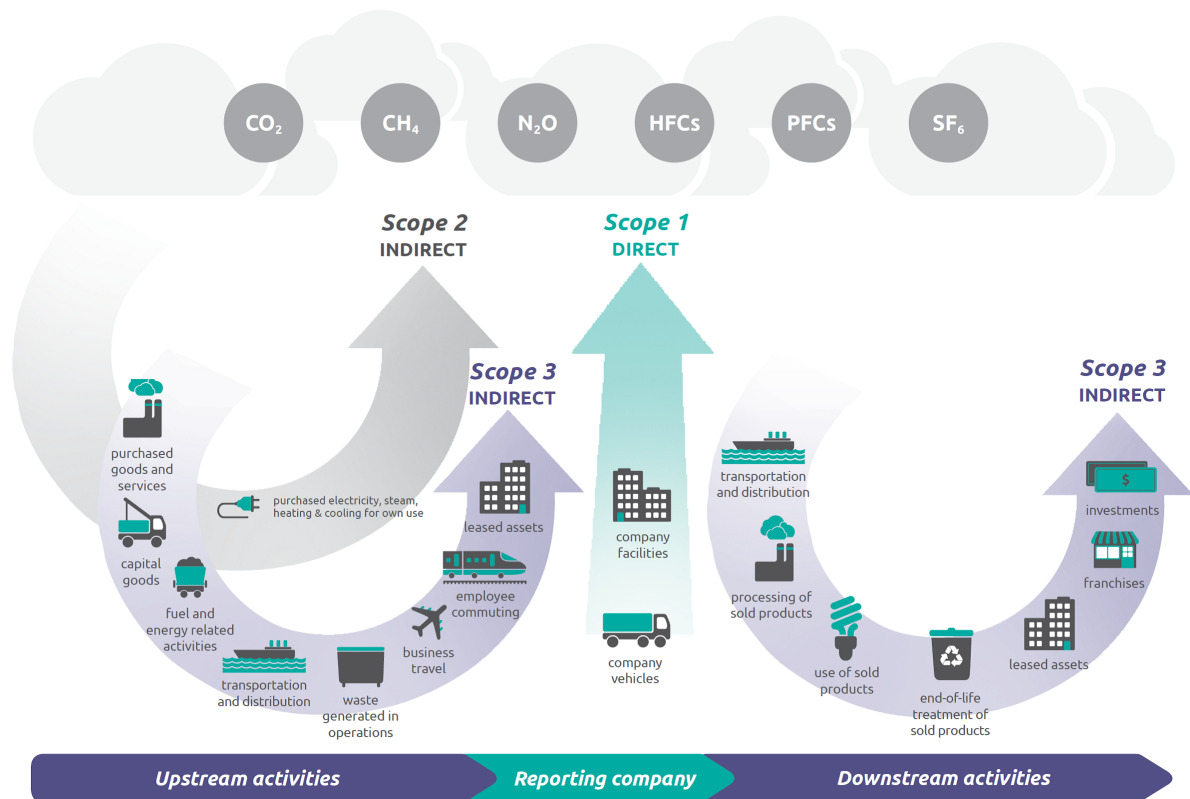


Figure 4. Characterisation of Scope 1, 2 and 3 emissions.

## Resourcing

Detailed resource requirements are not yet available. However, it should be noted that the IUA has made a [request to government](#) for nearly €500 million towards the costs of implementing the CAP in the IUA universities. The request is detailed and was developed by a Sustainability Working Group comprising VPs of Sustainability or equivalent. Senior representatives of DFHERIS and DECC have indicated that relevant funds exist and may be made available. This is also an area of interest to philanthropic donors. A range of other finance options are described by SDSN et al (2022). A concerted effort will be made to secure external funding. Nevertheless, UCD is working on the basis that some significant investment of its own will be required.

## Next Steps

- Sign up to the UNFCCC Race to Zero programme
- Form a working group to lead on planning and implementation
- Engage with key stakeholders
- Establish a SMART plan, drawing on SDSN university guidance and including commitments to engage with policy and other organisations to accelerate the wider net zero transition
- Secure funding for key resource-intensive steps
- Implement the plan, with periodic reviews, updates and adaptations

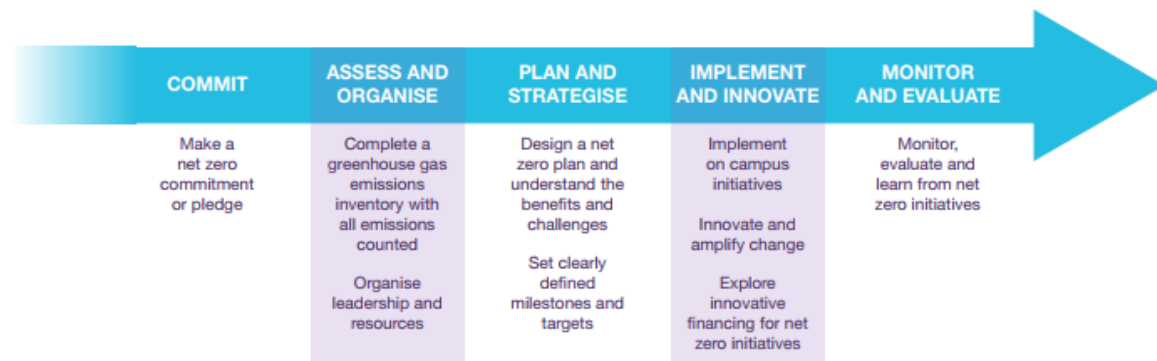


Figure 5. The net zero journey with principles to consider at each stage of the journey (from SDSN et al 2022).

## References and resources

IUA 2024. Climate Action Roadmap Delivery – delivering on our 2030 carbon emission targets [https://drive.google.com/file/d/1\\_uXKph7KyolZt\\_IbQ5C6wsyPutUCsUWx/view?usp=sharing](https://drive.google.com/file/d/1_uXKph7KyolZt_IbQ5C6wsyPutUCsUWx/view?usp=sharing)

Science based targets 2021. SBTi Corporate Net-Zero Standard, Ver 2.0, accessed on 15 Aug 2022. <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>

SDSN, Climateworks Centre, and Monash University 2022. Net Zero on Campus. New York: Sustainable Development Solutions Network (SDSN), Climateworks Centre, and Monash University. <https://www.unsdsn.org/net-zero-encampus>.

UCD 2024. UCD Climate Action Roadmap update 2024. [https://drive.google.com/file/d/1VWTuPiOINAxAXCM2csoJQ1JyrEQ\\_x1kV/view?usp=sharing](https://drive.google.com/file/d/1VWTuPiOINAxAXCM2csoJQ1JyrEQ_x1kV/view?usp=sharing)

United Nations Framework Convention on Climate Change (UNFCCC) Race to Zero 2020-22. <https://climatechampions.unfccc.int/system/race-to-zero/>