Daily Decarbonisation:
The Early Career Researcher Carbon Challenge
in partnership with Carbon13 and Cambridge Enterprise with support from Energy IRC

We invite small teams of postgraduate students and postdoctoral researchers to submit early-stage proposals for scalable ideas to decarbonise activities in our everyday lives!

Who is the Challenge is for?
• We’re looking for small (2–3 people) inter-disciplinary teams of postgraduate students and postdoctoral researchers (see eligibility section below for more detail). You don’t need to be a seasoned entrepreneur.
• You don’t need to be a scientist or engineer to participate! We’re also interested in ideas related to economic, societal and behavioural change that could lead to reductions in energy consumption and greenhouse gas emissions.

What does the Challenge involve?
• We’re interested in ideas that are in their initial conceptual stages, rather than fully formed projects or products1.
• The Challenge is also a learning opportunity in entrepreneurship, with the potential to translate into a business opportunity.

What problems do we want you to solve?
The focus of the carbon challenge is on finding solutions to facilitate and/or accelerate energy transitions that affect most of us almost every day, including:
• How we travel,
• What we eat,
• How we use power, and
• How we spend and invest our money.

What are Energy Transitions?
Energy Transitions include anything that allows us to shift away from fossil fuel consumption. Examples include:
• Walking, cycling or taking electric scooters instead of driving a car
• Encouraging customers to consume products with lower energy footprint
• Using solar cells to heat water in homes instead of natural gas
• Generating electricity from offshore wind and solar energy instead of fossil fuels

The brief is deliberately broad, as solutions could involve anything from on the ground innovations that could drive systemic behavioural change in individuals and communities, to technological and digital solutions. Critically, we’re looking for solutions that are intrinsically scalable, i.e., they have significant potential to grow in size, capacity or scope.

Examples of previous carbon challenge projects:

1 If you have an idea that is further along in its development, you might want to explore some of the other entrepreneurship projects offered at the University.
Note that the carbon challenges have taken different forms over time in terms of prize money, theme etc.

- Carbon Challenge 2020; Carbon Challenge 2018; Carbon Challenge 2017

Note: in this carbon challenge we would encourage you to consider ways to achieve your desired outcome without app-based solutions in the first instance. However, if you determine that an app is the best solution, we welcome app-based submissions.

Our partners

Over the next five years Carbon13 will bring diverse and amazing people together to create scalable ventures with the combined potential to reduce CO$_2$e emissions by 400 million tonnes (or 1% of global emissions). Carbon 13 provide the opportunity to build teams, bypass barriers and access expertise and finance to create impactful start-ups that address the climate emergency.

Cambridge Enterprise supports academics, researchers, staff and students in achieving knowledge transfer and research impact. They help with using commercial avenues to develop ideas and expertise by offering expert advice and support in commercialisation and social enterprise.

Energy IRC is a University-wide Interdisciplinary Research Centre which supports the activities of over 250 Cambridge academics working in energy research. Energy IRC supports academics with interdisciplinary funding opportunities and industry engagement to increase the impact of the University’s research into the global energy transition away from fossil fuels.

Eligibility

Teams should be of 2-3 people. At least 50% of the team (i.e. at least one person in a team of two, and at least two people in a team of three) must be a postgraduate student or postdoctoral researcher at the University of Cambridge. See Terms and Conditions for full eligibility details.

Prizes

First prize: £1500
First and second runner-up prizes: £750

Prizes will be shared evenly between all team members. For exceptionally tractable proposals, there may be opportunities to engage further with Carbon13 and their Venture Builder or for ideas to be implemented in the University itself as a pilot study. See Terms and Conditions for more details on prizes.
How will the competition work?

→ The proposals will be assessed at two stages

1. **The Concept Note.** All teams must submit a concept note detailing their idea, including the potential for carbon mitigation, scalability, budgeting, risks etc. A full summary of what to include in the concept note is given in Annex 1.

2. **The Pitch Presentation (for shortlisted proposals only).** Shortlisted teams must give a presentation of their idea at the final competition event, which will be judged by an expert panel.

→ Throughout the competition we will support you with events and training. See Key dates below for more details.

**Overall timeline:**

**January 2022:** Competition launch
- 3 weeks from launch to submit concept note

**Early February 2022:** Shortlisting process

**Late Feb/Early March 2022:** prizes announcement and event

**Key dates in 2022**

<table>
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<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>Thursday 22 January</td>
<td>Launch and brief released</td>
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<tr>
<td>Monday 24 January 5–8pm.</td>
<td><strong>Ideas Jam session</strong> - Hear from industry experts and brainstorm in a structured way!</td>
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<tr>
<td>Thursday 27 January 7–9pm.</td>
<td><strong>Pub Trip,</strong> meet other participants and form teams! Eagle Pub, Cambridge.</td>
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| Monday 31 January           | **Concept note training session with Q&A,** including how to evaluate your ideas potential impact on greenhouse gas emissions (non-compulsory but highly recommended)  
                              | This session will be recorded                                                      |
| Date and Time TBC           | **Intellectual Property Rights Masterclass** by Cambridge Enterprise.                |
| Friday 11 February          | Concept Note Deadline                                                             |
| Friday 11 – Friday 25 February | Shortlisting Period                                                             |
| Friday 25 February          | Shortlisting results announced                                                   |
| Monday 28 February          | **Pitch training session with Q&A** (non-compulsory but highly recommended)   
                              | This session will be recorded                                                      |
| Monday 14 March (approx. 2–6pm) | Final Pitching and Awards Event                                                |
How will the winners be decided?

- **Long-list (based on concept note only)** – judged by members of Cambridge Zero and Carbon 13 team.
- **Shortlisting (based on concept note and presentation)** – judges
  - Emily Shuckburgh
  - Nicky Dee
  - Chris Gibbs
  - James Vaccaro
  - Final Judge to be confirmed!

Criteria for longlisting and shortlisting are given in Annex 3.

Benefits of being involved

- Contribute to efforts to reduce greenhouse gas emissions at the University and beyond.
- Develop an idea into a defined project that can be applied in a real-life context.
- Increase links and collaborations with others around the University.
- Develop experience in the practical implementation of projects.
- Take advantage of training opportunities
- Enhance skills such as teamwork, project planning and management, and development of a business case.
- Receive expert input.
- Gain recognition for, and promotion of, your idea/proposal by a world-leading institution.
Annex 1 - Structure of concept note

**Deadline:** Friday 11\(^{th}\) February 2022, proposals to be emailed or transferred via wetransfer to Living.Laboratory@admin.cam.ac.uk

**Structure:** Teams are free to present their proposal as they please but must incorporate the following pieces of information. **Maximum 1500 words.**

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**Project name**

**Project team**

**Initiative Summary (please indicate if we can use this publicly, if not please complete a separate summary that we can share publicly)**

Tell us more about what inspired you to enter this competition with this initiative?
What carbon challenge is your initiative trying to address?
What is the proposed solution to the above challenge?

**Team**

Tell us about your team and how you have the right mix of qualities to address the challenge?
Beyond your team, who else are you working with to support this initiative?

**Carbon Impact\(^2\)**

How does your initiative impact carbon? Tick all that apply
- Direct mitigation
- Enabler
- Carbon dioxide removal

What is the total addressable carbon (TAC) for your initiative in 2022?
Walk us through an example of how your initiative will impact a stakeholder
Beyond carbon, what other positive impacts or outcomes do you expect to achieve (e.g. think about the sustainable development goals)?

**Business model / commercial case**

Who do you think would pay for your solution and why?
What do you see as the next milestones for your initiative to progress over the next 2 years?

**Innovation and competitor awareness**

Who else is addressing this carbon challenge and what makes your approach different?
Please tell us a bit more about how your initiative is linked to research in Cambridge Zero if applicable
What do you think are the next steps to develop your solution?

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\(^2\) We will provide further guidance on how you evaluate carbon, what total addressable carbon means and how you access relevant info. Ahead of this session you might want to think about an example of how your initiative impacts stakeholders, where a stakeholder might be a customer (consumer or business).
What do you think are the main risks to developing your initiative (technically, commercially, regulatory)?

**Entrepreneurship and dissemination (not assessed!)**

Do you want to continue as a net zero entrepreneur?
- With the existing team and idea
- With the existing idea but a different team
- With the existing team but a different idea
- With a different team and idea
- I do not want to be an entrepreneur
Annex 2: Competition terms and conditions

These terms and conditions apply to Daily Decarbonisation: The Early Career Researcher Carbon Challenge 2022 (“the Competition”). By submitting an entry to the Competition, entrants confirm that they have read and understood these terms and conditions and agree to be bound by them. Persons submitting entries to the Competition on behalf of teams must have written authority from all team members to do so.

Organiser of the Competition
1. The organiser of the Competition is The Chancellor, Masters, and Scholars of the University of Cambridge (“the University”).

Eligibility
2. Entry is via team submission only. No individual entries will be accepted or considered. Teams must consist of a minimum of 2 members and a maximum of 3. At least 50% of the team (i.e. at least one person in a team of two, and at least two people in a team of three) must be a postgraduate student or postdoctoral researcher at the University of Cambridge. The other team member must only fulfil criteria set out in clause 3.
3. Entrants must be UK residents (England, Scotland, Wales and Northern Ireland) and aged 18 years or over. Staff members within the Sustainability Team, Cambridge Zero, Carbon13, Cambridge Enterprise Ltd and Energy IRC, and staff funded by Cambridge Zero and their immediate families are not permitted to take part in the Competition.
4. Any questions regarding eligibility shall be determined by the University, whose determination shall be final. If unsure of eligibility, entrants should contact living.laboratory@admin.cam.ac.uk before submitting an entry.
5. The University reserves the right to require reasonable evidence of eligibility before making payments of prizes.

General
6. The deadline for submission of entries is 23:59 GMT on Friday 11 February 2022.
7. Support can be sought from external bodies but a majority of the work must be completed by the team members. Please see the section on Intellectual Property in competition entries, below.
8. Teams must generate proposals for a specific technology, policy, intervention or campaign aimed at making carbon savings in accordance with the Competition brief.
9. To be considered in the Competition, the proposals must not have been implemented already, either on the University estate, or externally.
10. Carbon savings must be estimated through thorough theoretical calculations and/or physical trial and metering. All calculations should use the current year’s carbon conversion factors published by the UK Government.
11. The University reserves the right to hold void, suspend, cancel, or amend the Competition at its discretion.

Prize award and Funding
12. Proposals will be judged on the basis of the published judging criteria. The judges’
decision is final and the University will not enter into correspondence regarding the
outcome of the Competition. Feedback will be provided at the University’s discretion.
The University reserves the right to award prizes dependent on the quality of
Competition submissions and may not award one or more prizes where entries do not
meet requisite standards.

13. Prizes will be shared equally amongst the registered members of winning teams.

14. Payments to staff may be subject to deduction of applicable tax.

15. Payments may be made by the University or a third party nominee of the University,
including but not limited to Cambridge Enterprise Limited or Carbon13 Limited.

16. The University does not commit to taking forward any proposals but if it does go on to
provide funding it further reserves the right to elect not to proceed further with and to
cease funding a successful project at any time at its sole discretion.

17. Aside from the prizes, Teams will not be compensated for their time or costs incurred in
developing proposals for the Competition.

**Intellectual Property and Confidentiality**

18. Entrants are reminded that failure to take steps to preserve the confidentiality of their
entries may result in loss of available intellectual property rights to protect the subject
matter, including patentable inventions or registerable designs.

19. Those receiving and judging Competition entries will be required to sign confidentiality
undertakings in materially the form annexed to these terms and conditions. However,
none of the University, Carbon13 Limited or Cambridge Enterprise Limited is
responsible for enforcement of any confidentiality obligations on entrants’ behalf nor
do the University, Carbon13 Limited or Cambridge Enterprise Limited accept any
liability for any breach of the confidentiality undertakings by individuals.

20. Entrants warrant and represent that the submission of their Competition entries to the
Competition, the grant of the licences at clause 22 below (and the exercise by the
University or its Competition Partners of the rights granted), and their participation in
the Competition, do not and will not infringe any third party intellectual property rights
or constitute an unlawful act or breach of entrants’ obligations to any third parties in
any applicable country or jurisdiction.

21. Entrants must declare any third party interests or involvement in their entry to the
University on submission of their proposal.

22. Entrants grant the university and its competition partners use of the public summary in
the application form for the purpose of promotion, operation and/or administration of
the competition and any future equivalent or related competition or activity. For
information contained within the public summary the entrant is granting the University
and its Competition partners (including but not limited to Carbon13 Limited and
Cambridge Enterprise Limited) a non-exclusive, worldwide, royalty-free, irrevocable
licence (with right to grant sub-licences), for the full period of any intellectual property
rights, to (i) copy, adapt, distribute and publish via any media the entry public
summaries for all purposes in connection with the promotion, operation and/or
administration of the Competition and any future equivalent or related competition or
activity. Entrants further grant the University and its Competition partners a limited
licence to copy, adapt and distribute the substantive content of their entry solely in
connection with the internal operation and administration of the Competition, including but not limited to for the purpose of judging and/or coaching/mentoring.

Data protection

23. The University will collect and process entrants’ personal information (names, contact details, any personal information supplied in competition entries, and, for successful entrants, financial information such as bank details) for the purpose of administering the Competition and contacting entrants as necessary. We also collect diversity data for statistical monitoring purposes; the provision of this data is optional. It will not be shared with any third parties except in aggregated, anonymised form. For these purposes the University is a data controller in respect of entrants’ personal data. The University will share entrants’ personal information with a limited number of third parties solely in connection with the administration of the Competition, for example for the purpose of judging, including but not limited to Carbon13 Limited. A link to Carbon13 Limited’s applicable privacy notice is here: https://carbonthirteen.com/legal/ . In addition, the University may wish to issue and manage publicity arising from the Competition and the University will liaise with entrants about this as applicable. The University will retain entrants’ personal information for 3 years after the end of the competition. For more information about how the University handles and shares entrants’ personal information, and entrants’ rights under data protection legislation, please see https://www.information-compliance.admin.cam.ac.uk/data-protection/general-data

Governing law and jurisdiction

24. These terms and conditions shall be governed by English law, and the parties submit to the exclusive jurisdiction of the courts of England and Wales.

If you have any questions, please email living.laboratory@admin.cam.ac.uk.
Annex 3: Judging criteria

Evaluation criteria
The evaluation criteria are drawn from the concept note headings in annex 1. The same criteria will be used to assess the concept note and the pitch. See below:

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**TOTAL:**

All criteria above will be scored between 1 to 6, where 1 is low and 6 is high. The maximum score is 30.

- 6 - Significant potential, is compelling, relevant, specific and very convincing
- 5 – Shows potential, is relevant, specific and convincing
- 4 - Shows potential and relevance, but not entirely convincing or specific
- 3 - Some potential but has missing information and unsupported statements
- 2 – Limited potential, inaccuracies in parts and in need of more specificity
- 1 - Unconvincing, contradictory information, and missing critical information
Annex 4: Confidentiality undertaking

To be signed by those receiving entries in connection with the Daily Decarbonisation: The Early Career Researcher Carbon Challenge 2022 (“the Competition”)

As a judge or other authorised recipient of entries to the Competition, I acknowledge that entries may include information, technology and ideas that entrants participating in the Competition regard as confidential.

Accordingly, in consideration of the provision of the Competition entries to me, I agree for the benefit of all entrants that I will make all reasonable efforts to hold in strict confidence any information, technology and ideas in Competition entries, and will not copy, reveal or disclose such information, technology and ideas to any third party save as provided for in the Competition terms and conditions. Additionally, I will not use any such information, technology and ideas for my own benefit or the benefit of any organisation with which I am affiliated now or in the future. I will not use information for any purpose without first obtaining the written agreement of all applicable entrants.

This Agreement shall not apply to any information, technology and ideas which at the date of this Agreement (i) are in the public domain or subsequently come into the public domain through no fault of mine (including but not limited to Competition entry public summaries), (ii) were already known to me on the date of disclosure, provided that such prior knowledge can be substantiated, (iii) properly and lawfully become available to me from sources independent of the supplying party, or (iv) are disclosed by me to the extent required by law or pursuant to the requirement or request of a governmental agency provided that in such event I shall inform the Competition organiser of the nature and extent of any disclosure so required if I am lawfully able to in advance if reasonably practicable or, if not reasonably practicable, as soon as possible after disclosure.

This undertaking shall come into effect on the date below and the obligations above shall continue for a period of three (3) years.

This undertaking shall be subject to the law of England of Wales.

Name:

Signature:

Date: