

## YEA National Case Competition FAQ

This document lists responses to questions emailed to the Case Competition Committee, as well as questions asked during the FAQ webinar. In case you missed the webinar, the recording is available [here](#).

### **6.1 Problem statement**

#### **Can our utilisation solution be composed of multiple technologies?**

Yes - Feel free to incorporate multiple technologies.

#### **Can our solution include more than one form of carbon capturing?**

Yes - Feel free to incorporate multiple techniques of carbon capture.

#### **Can our solution consist of multiple utilisations?**

Yes - Feel free to incorporate different techniques of carbon utilisation.

#### **Is storage an option at all? Or is it considered as a utilisation?**

Within the CCUS process, utilisation and storage are two different components. For this case competition, we're primarily focusing on the utilisation of the captured carbon.

#### **Is the proposal meant to be around a product made from carbon, or the process to convert it to a product?**

The focus of the problem statement is on how your team would utilise captured carbon for maximum environmental and economic benefit. The product does not have to be made from carbon and you may showcase your innovation by elaborating on the conversion process if you wish.

#### **What is EUA?**

EUA refers to an Environmental Upgrade Agreement, which is an agreement that allows asset owners to fund upgrade works that improve environmental and sustainability performance of the existing asset.

#### **In regard to the life cycle assessment, could you please provide an example of what might be discussed?**

For example, if we look at the life cycle assessment of a plastic bag, and delve specifically into the manufacturing stage, process energy is used within the production of the physical material, and can include polymerisation and extrusion processes (go onto detail process). The energy to create polyethylene is generally produced from non-renewable energy, such as fossil fuels (link to your design requirement source). It is estimated that one bag produced 495kJ of natural gas (final estimate of emissions from the manufacturing process).

### **Can we do pre-existing solutions? Or do we have to innovate/ improve on it?**

Yes, you can do pre-existing solutions. But in saying that, we are looking for teams to be creative in your approach, and this is reflected in the selection criteria (20% weighting to creativity).

### **What is the scope of the solution? Is our solution supposed to be something ground-breaking or is it alright to incorporate existing ideas to create a new solution?**

The solution does not have to be ground-breaking and can incorporate existing ideas, there is a 20% weighting to feasibility of your solution. Innovation in your solution can come from how you research, use and maybe combine existing technologies to maximize environmental benefits as much as it can come from using novel technology. Creativity can sometimes be in the simplicity of your solution.

### **With regards to Task 4, what is desired from this section? Would you be able to expand on it a bit? How are we meant to address the 3 dot points under this section?**

It is important to note that not every point in Task/Question 4 needs to be addressed. The bullet points are there to assist teams to think about how they might responsibly obtain resources, funds, or political muscle for their solution. As we move away from an industry reliant on fossil fuels, we will need to engage multiple levels of the community, businesses, and government to transition our systems towards green alternatives.

### **Should we choose only one UN Sustainable Development Goal?**

Not necessarily - You can choose as many Sustainable Development Goals as you want to incorporate within your solution. The best way to approach this may be to first have a read through all the 17 Sustainable Development Goals and see whether/ where the individual objectives and description of the goal, matches to the objective and actions of your solution.

### **Is it necessary for us to meet the requirements for EUA, UN 17 sustainable goals, and Australia's Climate Change Strategy (2020-2025)?**

Yes, please explain which of the UN Sustainable Development Goals your team's solution will address and how it will do so. The EUA and Australia's Climate Change Strategy are only examples and you do not have to specifically discuss them, but rather discuss relevant or similar economic tools to the context and location of your solution.

### **When it says "global location" does that mean all around the world as the goals are Australia?**

It is not necessary for it to be located in Australia - It can be any global location. The Australian goals are only mentioned as an example and you do not have to relate your solution to Australia, but rather discuss relevant or similar government policy to the context and location of your solution.

**For the location, is it necessary to be located in Australia? Or can it be elsewhere?**

It is not necessary to be located in Australia - It can be any global location.

**When we implement the utilisation, can we implement it in another country instead of Australia?**

It is not necessary to be located in Australia - It can be any global location. Part of determining your solution, you should be considering where the most suitable location would be.

**Capturing carbon can also be through natural processes?**

Correct - Capturing carbon could also be through a natural process such as chemical absorption or forestation.

**Could we have this type of idea: Replace the material to decrease the CO2 emission? Is that out of the study or not?**

Yes - A substitution of a material that results in a decrease in CO2 emissions would be a viable solution as long as you are showing how this relates to the utilisation of captured carbon. The aim is not to just decrease the CO2 emission of a process, but to incorporate carbon capture and utilisation.

**If carbon is captured from any of the mentioned sources (fossil fuels, biomass field power stations etc.), can we pick and choose one?**

Yes - You can choose to select from either a single source, or diversify your sources of carbon.

**What is meant by 'supply chain'? Is it the supply chain of the captured CO2 or any and all materials we would need to implement our proposal?**

Your supply chain includes all inputs and outputs of your solution, not only the captured CO2.

**If we want, can we talk about the whole life cycle assessment?**

Yes - If your team wishes to do so, feel free to address the whole lifecycle. However, that is beyond the scope of the brief, and is not a requirement, and as such, if you choose to address the entire lifecycle, make sure to address at least one phase in detail.

**Does a feasibility proposal report mean that we show the solution and describe the solution?**

Your proposal would detail your solution to utilise captured carbon and its completeness would address the requirements of sections 6.1 and 6.2 of the brief. The feasibility of the solution would relate to the practicality of your solution, including cost consideration, capacity considerations, and a realistic timeline.

### **If we have the solution, can we have our own topic for the feasibility proposal report? For example, what our solution is and we make the topic based on our solution?**

Yes - We are hoping that every team will come up with a different solution to utilising carbon, and as such, every proposal will have its own “topic”, that incorporates our tasks and specific design requirements as a framework.

### **What does it mean to focus on one life cycle stage in Task 2?**

A life cycle assessment is an involved process that details the assessment of environmental aspects associated with a product over its useful life. Because each specific stage incorporates an array of different aspects, and with your timeline to submit the team proposal, we only require teams to focus on one stage of the life cycle; for example any of raw material extraction, manufacturing, distribution, use or disposal/ recycling.

### **What are the factors we need to consider when choosing one state of the life cycle?**

Prior to selecting a single stage of the life cycle, you may want to consider different avenues you can detail, so as a team, you can decide which stage you want to pursue. This can be done through creating a simple framework that lists how your solution delivers on every stage of the life cycle, and then the one that your team feels most comfortable with, could be the one you select. Example factors to consider are:

- What is the most exciting/ creative stage for your solution?
- What stage best highlights your solution?
- What stage is most relevant to showcasing our solution?

### **Is it necessary to promote our ideas to educational resources, partnership with carbon emitting businesses, and EUA/Sustainability Victoria?**

Teams are not required to address each of these three dot points mentioned within Task 4, but rather, they are there to guide teams to start thinking about the different avenues of how your solution will promote responsible sourcing throughout the supply chain; such as through education that raises awareness, creating market synergies through business partnerships, incorporating carbon certificates/incentives etc.

## **6.2 Specific design requirements**

### **For Design Requirement 1, are we meant to focus on the industry where the carbon is coming from or where the utilisation of the carbon is to target?**

Design requirement 1 asks that you consider and comment on the location of your solution and the source of the carbon (e.g. power plant, manufacturing facility, etc.). Your solution itself will be focused on how the carbon will be utilised.

### **6.3 Key considerations**

#### **Do we need to go into detail about how carbon is captured from a chosen energy asset?**

The main focus for this competition is the utilisation component of the captured carbon. However, taking a step back, and referring to the 6.3.2 of key considerations, it would be beneficial to outline how your team plans to capture carbon from a chosen energy asset.

**From 6.3.2: To better transition into clean energy, CCUS technologies can provide a method of offsetting emissions from existing sectors, where reaching a state of zero emissions may not be economically feasible. While alternatively, adaptation of the technology can be used to retire existing power plants or repurpose them at lower operational rates of capacity - I am confused about how the two sentences are different from one another.**

Two examples of different ways CCUS can be beneficial include either reducing the carbon footprint of an existing process (e.g. captured carbon as an alternative to fossil fuel), or repurposing existing assets to retire them from an emission-intensive use (e.g. using an oil rig to pump carbon back into the ground as opposed to extracting fossil fuels).

### **7. Submission details**

#### **Is the “proposal” in the file name meant to be left as that, or replaced by the name of our proposal?**

Please keep it just to “proposal”.

#### **Is there an example of last year’s report to know what the quality looks like?**

Unfortunately, we cannot release last year’s submissions, but we can recommend having a look at the different frameworks to help get started. Also, make sure to check out the [Case Competition 101 video](#), which outlines very useful tips on how to best map out an idea.

#### **How should we use the A3 page and should the proposal be in report format?**

The proposal can be in any format that you decide as a team. Essentially, we are looking for teams to answer the four tasks (6.1 Problem statement), while also incorporating the three specific design requirements (6.2 Specific design requirements). In terms of the A3 page, it’s purpose is for teams to be creative. As an example, the A3 page could be used for a concept diagram, creative mind map, ideation plan etc.

#### **Is there a page limit on the appendices?**

No. There is no page limit for the appendices.