Question 1.1: Which LCLF should be eligible under the program and why?

Production for SAF and to a lesser extent RD should be considered as priorities. These are the two LCLF with high demand and no clear alternative energy solutions for many applications.

Question 1.2: Should certain types of LCLF be prioritised over others? a. Should LCLF suitable for particular sectors or uses be prioritised? For example, should sustainable aviation fuel be prioritised over renewable diesel? b. Should LCLF for certain sectors or uses be de-prioritised due to other viable decarbonisation pathways? c. What market impacts are anticipated by influencing prioritisation of particular fuel types?

Yes. SAF and RD production from scalable and sustainable sources should be incentivised above others because of the following factors:

- Australia's critical dependence on aviation for world connectivity
- There is no current viable alternative to liquid fuels for aviation whereas most other fuel applications have potential electrical substitutes.
- It is probable that RD will continue to be used for heavy demand applications such as military, mining and agriculture. These are critical sectors for the Australian economy so from a national security perspective the supply of RD should be prioritised.

In addition to the type of fuel being prioritised some consideration should be given to the level of sustainability and scalability of different fuel feedstocks used in the production of the LCLF.

Question 2.1: Should the production credit be a fixed amount per litre of production, or a variable amount that depends on the market price of LCLF?

a. Are there any potential benefits, risks or constraints considering the two different production credit options?

b. What outcomes do you think can be delivered with the available funding?

c. What type of mechanism provides the greatest investment certainty or level of bankability to projects?

d. How can this support be structured to prevent substantial upside to producers?

e. How do you consider pricing for LCLF will be set over the short-medium term and longer term?

Will pricing be matched to a premium on equivalent fossil fuel or price of imported LCLF or be on a carbon abatement basis

As a general response to these questions we feel that a variable level of subsidy would provide more certainty for the bankability of projects. However, many supply arrangements between suppliers and customers could be complex and off market and could require disclosure of these commercial arrangements.

Question 2.4: What are your views on the cost to deploy LCLF domestically compared to internationally? Is there a local premium for domestic production?

The key driver in the production of LCLF is the cost and availability of feedstocks. When considering large scale production many international competitors will have an advantage over Australia because of availability of fresh water for dedicated agricultural production, from large residual waste streams and from low labour costs in the production of biological feedstock. To counter this advantage Australia must develop technology pathways that substantially increase photosynthetic active areas at very low capital and operating cost. This will require funding options for R&D investment into new technologies that are particularly developed to take advantages of Australian conditions.

Question 2.5: Should the total value of production credits be capped for each project? If yes, what should the capped amount be and why?

Yes we believe that there should be a cap on the amount of funds that are allocated to individual projects. As above we believe that this industry is in its's infancy and that new technology pathways will emerge that radically change the industry. National grant funding mechanisms need to facilitate this development to occur in Australia to support the emergence and development of a plurality of solutions across the Technology readiness levels. Failure to constantly advance these technology through the TRLs will risk Australia's long-term competitiveness

Question 2.6: Should production be focused on domestic supply only or should export also be permitted? What impact could restriction have for projects or the market?

Fuels are an internationally traded commodity. As such there should be no differentiation between production for domestic or export. Furthermore, Australia has a vast land and ocean estate, approximately 50x more solar energy than is required to power the entire global economy, access to CO_2 and a highly skilled workforce. It is therefore almost uniquely positioned to support an expanding renewable fuel export section for domestic and international supply.

Question 2.7: Is there a role for combined production support with capital grants for first-of-a-kind facilities?

Yes. The pathway to economically viable LCLFs is not clear at this point in time. Many questions concerning ultimate capacity, food vs fuel, feedstock availability and quality of carbon abatement levels are not resolved for many LCLF pathways. The ultimate winners in this competition will be technologies that address all of these concerns and it is likely that competitors will rapidly become unviable even with production incentives. The grant program therefore should be directed to generating an industry with long term viability at a scale that will fully satisfy current and projected fossil fuel demand. This could well encompass new first of a kind facilities with nacent technologies. Programs should therefore be technology agnostic, results focused and open to considering capital grants for first-of-a-kind facilities as required.

Question 2.8: What other types of funding or concessional finance could support LCLF projects (e.g. funding from CEFC and NRF)?

As the LCLF industry is still evolving. New technologies already demonstrated at pilot scale may be able to substantially improve yields and deliver scalable volumes in the near future. Many existing technologies may be viable in the near term but will not have the ultimate capacity to satisfy even small portions of the final demand. There is a significant risk that these technologies will be made redundant by emerging pathways that will satisfy full LCLF demand.

It is critical that options remain available to ensure the new emerging technologies be developed here in Australia rather than overseas. Directing assistance purely to the production from existing technologies could result in the local elimination of new technology development, risking future Australian competitiveness and fuel security.

Question 2.9: Is any other support required across the supply chain to enable domestic production of LCLF?

Yes. Proponents of technology pathways must answer the fundamental question as to their capacity to substantially supply future demand. Most of the current technology pathways cannot do this without serious implications for land clearing , water use and competition with food production. It is critical that the support provided by government seriously investigate this problem of feedstock supply and invest in technologies that can be scaled while not incurring these downside issues. These pathways are in the pilot/demonstration scale stage of development and significant support is required at this level to ensure that future LCLF production does not stall in Australia or is overtaken by foreign producers that have addressed these issues. Funding agencies are encouraged to consider funding larger projects based on TEA and LCA analyses which demonstrate economic, social and environmental benefits. This provides transparency on the Business model and ESG benefits being offered.

Question 2.10: What lessons can Australia learn from other jurisdictions that have already implemented LCLF production support measures

The world needs a sustainable solution to the supply of LCLFs. These fuels are dependent on the large-scale conversion of solar radiation into fuel. Australia has the natural resources to become the world leader in this multi $trillion industry. Countries that have succeeded in developing and remaining leaders of new industries clearly show that long term sustained strategic planning by government is necessary. To achieve world leadership in the LCLF industry the Australian government will needs to provide such strategic long-term commitment and a focus on those pathways that will meet a substantial portion of the ultimate capacity demand. Allocation of funds to support innovation and an ecosystem in LCLF is the key to achieve this.

Question 3.1: Considering this objective, what production pathways should be focused on or prioritised?

a. Should priority be given to projects that use more-established production pathways (e.g. HEFA and HVO) than nascent production pathways that may present a higher level of technology risk?

Regardless of the conversion process (HEFA or HVO) the cost and capacity of feedstock production is the most important element (more than 60% of the final production cost) in LCLF production. Funding agencies are encouraged to consider that all funding to projects be based on TEA and LCA analyses which demonstrate economic, social and environmental benefits. This provides transparency on the Business model and ESG benefits being offered.

b. How can nascent production pathways compete with more-established production pathways (e.g. HEFA and HVO)?

c. What minimum stage of project development (and evidence) should be expected by projects under the program?

Australia should keep options open as a strategic long-term plan. For the funding being considered here the technology selected should be able to demonstrate the viability pathway at pilot plant scale.

Question 3.2: Should there be a minimum facility size to be eligible?

No.

Question 3.3: Should LCLF be required to meet a carbon intensity threshold (% carbon intensity reduction compared to fossil equivalent) to be eligible for the program? If yes, what would be a reasonable threshold, and how should that threshold be calculated and verified? If not, why not?

a. If the production incentive is based on carbon emissions reduced, rather than volume of LCLF produced (see Question 2.3), is a minimum carbon intensity threshold still needed as part of the eligibility criteria?

No. At this point all options should be kept open to incentivise the industry. In the future the pricing of carbon will address carbon intensity issues. Funding agencies are encouraged to consider that all funding to projects be based on TEA and LCA analyses which demonstrate economic, social and environmental benefits. This provides transparency on the Business model and ESG benefits being offered.

b. Should Indirect Land Use Change be included in the method for determining carbon intensity, for the purpose of the Program?

Yes.

c. Should any feedstocks be prioritised or otherwise considered out of scope?

No. Feedstock needs to be considered as this is the most critical factor in the net emissions reduction.

Question 3.4: Other than carbon intensity, should any other sustainability criteria be included?

Yes. To ensure a sustainable industry all sustainability factors must be considered including fresh water usage, food security and environmental impacts. Funding agencies are encouraged to consider that all funding toprojects be based on TEA and LCA analyses which demonstrate economic, social and environmental benefits. This provides transparency on the Business model and ESG benefits being offered.

Question 3.5: Which international and domestic sustainability schemes should be allowed to verify sustainability claims?

Question 4.1: What are your views on the aforementioned factors affecting the merit of a proposal?

Question 4.2: Recipients under the Program will need to deliver benefits according to the Community Benefit Principles under the Future Made in Australia Act (see Appendix D). How do you consider the Community Benefit Principles in relation to LCLF projects? Are there specific Community Benefit Principles that are more or less relevant?

Question 4.3: How will overseas policy developments interact with domestic policy settings to support projects reaching final investment decisions? For example, LCLF demand-side targets or mandates, and international frameworks such as the International Civil Aviation Organisation long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050.

International sovereignty is increasingly important. Other countries will be viewing the LCLF industry from a strategic perspective and be contributing substantial incentives to capture this $trillion industry both for security and economic advantage. Australia's immediate choices will determine if we will become an importer or an exporter of LCLF.

Question 4.4: In addition to production support, what other measures are considered critical to achieve final investment decisions for projects? What are their key features?

- Probability that the selected technology will not be superseded and therefore made redundant should be a critical parameter of evaluation of any project.
- Capacity to extend the selected technology onto subsequent facilities (scalability) is critical.

Question 4.5: What are the intersecting policies you expect need to be considered to unlock a domestic LCLF production industry?

- Investment in education, research, simplification of applicable legislation.
- Assessment of net environmental impact across the approval process.

Question 4.6: Is there any other feedback you would like to provide that isn't covered by questions above?

- The effective transition to net zero will require developments at all TRL levels. Government should stage contributions at all levels but ensure that industry contribution increase with increasing TRL.