

# Comments on the LCFS review draft workplan

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The proposed workplan seems a good starting point for the review and Advisory Panel process. I have made some notes on specific topics below.

### Topic 1: Progress Against Targets

Several Panel members commented that it might be of interest to consider more than just the 2011 target in this area. It would seem reasonable to consider the more challenging targets in later years in this context.

One question included is, “If there is a shortage of credits, what are the causes of this so that it can be remedied?” I would note that there are some scenarios for credit shortage that might not be amenable to remedy by the Agency of CARB – i.e. it might be that the market should be left to correct itself in some circumstances.

### Topic 2: Compliance Schedule

It was noted by several Panel members that a change to the existing compliance schedule, or the impression that such changes are likely, might not be conducive to a confident investment climate. It might be constructive to reinforce that the default position of CARB would be to maintain the declared compliance schedule, and that changes would be predicated on exceptional circumstances.

It might also be pertinent within this topic to consider the concept of a ‘buy-out price’ such as is used in the UK’s RTFO. A buy-out price would allow a compliance route by payment of some set fee, and would allow companies to achieve legal compliance in the absence of an adequate certificate supply. The money raised by such a mechanism could, in principle, be recycled to the low carbon fuels industry.

### Topic 3: Lifecycle Assessment

It is worth noting that it may not be immediately clear which future developments in LCA can be considered ‘advances’ and which might be considered in some sense backward steps. In particular, as demonstrated by the Expert Workgroup process, it will not always be clear that ‘more’ analysis constitutes better analysis. CARB should hence treat external analysis with respect and interest, but also with caution and due review processes.

On a related note, setting clear criteria for a study to activate a program amendment process might create an unhelpful incentive for interested groups to produce increasingly large numbers of diverging revised LCA studies. All stakeholders should be given the opportunity to comment on and critique innovations in LCA on a reasonable and predictable timeframe – it would be unfortunate if new work was inadequately scrutinised because CARB considered studies at unpredictable intervals, making it difficult for stakeholders to assign resources. There might be advantages to suggesting defined review intervals that would allow all stakeholders to contribute equally to the generation of improved results, before any revision is considered.

Regarding the compliance schedule, it is noted that the CARB LCFS, as I understand it, is designed to be transformative. It is intended to push developments beyond ‘business as usual’ improvements. Within that context, even if advances in LCA suggested that certain fuels would no longer be available as compliance pathways, or no longer be credited with such substantial carbon savings, I would suggest that the default position should be to maintain the existing compliance schedule and challenge the market/industry to find alternative compliance solutions.

## Topic 5: Ultralow Carbon Fuels

I, and others, commented at the April Panel meeting that it might be unhelpful to conflate the definition of ultra-low carbon fuels in the CARB LCFS with the definition of advanced biofuels in RFS2. On that basis, if a specific carbon saving is to be set as an indicative metric for UCFs, I would suggest that it should not be set at 60%. It was also noted at the Panel that it might not be helpful to treat any CI metric as absolute in the definition of UCFs. I would add that the understanding of which fuels constitute UCFs should be somewhat forward looking – so a technology that currently had more limited savings but seems to have potential to deliver much greater savings in future might be appropriate for consideration in this category, while a fuel that currently would just about qualify based on a savings value but has little promise of improvement might be of less interest.

On a related note, there seems to be a lack of clarity about whether crop-based ‘first generation’ biofuels could be considered UCFs in this context, and no comment on whether biofuels produced avoiding iLUC should be given specific consideration (I suggest they should, but that this topic of the workplan may not be the best place to do it).

The questions suggest that additional support measures for UCFs might be appropriate. While this may be so, I would suggest that specific consideration should be given to how existing measures could be made consistent and maximised for effectiveness, as well as adding further measures to the pool. This consideration should not be limited to measures taken by the State of California only.

## Topic 7: Impact on State Fuel Supplies

It was suggested at the Panel that in some scenarios a shortage of LCFS certificates might cause a threat to the fuel supply (if companies choose compliance rather than oversupplying higher carbon fuels). Issues of this sort would be somewhat addressed by the type of 'buy-out' mechanism mentioned above.

## Topic 8: Revenue and Consumers

I note that a buy-out mechanism could have the effect of putting a ceiling on the economic impacts of the program. I also note that if such a mechanism was implemented, it need not follow that it would be widely used – in general one might hope that compliance would still be achieved largely or solely through certificates.

## Topic 10: Air Quality Impacts

In assessing changes in state wide fuel consumption, care should be taken to consider whether it is legitimate to draw conclusions about causality with respect to LCFS. It would be of interest to compare any conclusions drawn on this subject to predictions of a fossil rebound effect from GTAP or other modelling exercises.

## Topic 11: Hurdles or Barriers

The consideration of federal state and local funding proposed here should be linked to the consideration of measures to support UCFs in topic 5.

## Topic 12: Economics

It was noted by the Panel that it might be unhelpful to consider environmental issues within a topic that is titled only 'Economics'. I would support either expanding the title, or breaking environmental impacts out into a further topic.

## Topic 15: Credit Trading Market

It would be interesting to consider explicitly whether companies generating relatively small numbers of credits are able to access the credit trading market effectively. This could relate to UCFs in the earlier stages of commercialisation