To:
Biofuels Consultation
Heat & Transport Energy Policy
Department of Communications, Climate Action and Environment
29-31 Adelaide Road
Dublin 2
D02 X285

From:
SkyNRG B.V.
Rapenburgerstraat 109
1011VL Amsterdam
The Netherlands

Concerning:
Reaction of SkyNRG on the "Consultation on the development of the Biofuels Obligation Scheme for the period 2021 to 2030"

Answers to section 4 questions

1a) Ambitious: yes, in light of the voluntary increase. Although 14% is the EU RED-II level in any case. Feasibility: challenging, but not impossible. Although it might not be realistic if only road transport fuels are taken into consideration. The difficulty will of course lie in the limited amount of conventional biofuel that can be used to meet these targets, and the challenges in increasing volumes of advanced biofuels to meet the 14%. There are only limited conversion technologies with a commercial readiness level that can handle Part A feedstocks (to turn into transport fuels). Main options will be ethanol and biogas, and the blending walls in gasoline for ethanol is not making the Irish challenge any easier, in our opinion. On top of that, there will be a large Irish import need for advanced biofuels, which will be scarce in Europe in (at least) the first years of RED-II. This will likely have a considerable effect on the price of the final products to the consumers.

1b) Appropriate: yes. In the sense that Ireland is taking its EU obligations seriously, and although conventional biofuel will be capped at 2%, it is still bold enough to hold on to the 14%. From a legal obligation perspective 9% would have been sufficient as well (to my understanding), but that would directly mean 5% more fossil fuel in the Irish transport system, which is in the end exactly what these measures are trying to reduce.

2a-f) This is not our expertise. We have limited to knowledge of road transport biofuels. However, we are experts in the field of Sustainable Aviation Fuels (SAF). SkyNRG is global market leader in the supply of SAF to airlines and in the development of SAF supply chains. We think SAF, made from advanced feedstocks (and preferably with new production capacity build in Ireland), can contribute significantly to the Irish RED-II targets, and with that also solve some of the challenge mentioned under 1.

3a) Yes.

4a) Yes.

5a) Yes. We would even argue that sub targets are critical.

5b) Sustainable Aviation Fuels of course!

6a) Do you have a choice? Those are the RED-II obligated end-markets, right?

7a) No. It creates a loophole for incumbents to delay the transition to sustainable, low carbon modes of transport. We need to reduce the use of <u>all</u> fossil energy carriers.

8b) Yes. As long as the CO2 savings associated with the energy credits can also be claimed by the party using the actual fuel

9a) Fundamentally: no. We would have rather seen the creation of actual, volume/energy-based markets based on real percentages and obligations i.e. better to increase volumes of a certain fuel or in a specific segment through sub targets (or mandates instead of opt-ins) than to incentivize by means of an admin trick. However, if there is, for instance for the aviation sector, no sector mandate than a multiplier (and related opt-in) is well appreciate and definitely necessary to make the business case work for SAF.

9b) Not more than in a credit trading scheme without multipliers. There is need for strong MRV and checks and balances system by the government.

10a) Yes. And this methodology (i.e. indirect displacement effects) should be applied to certain waste and residue streams as well, in our opinion

11a) We understand the rational for the cap on food/feed-based biofuels. The cultivation of certain feedstocks does more harm than good to ecosystems and the overall carbon balance. However, in the current approach (i.e. 7% cap, and a list of which feedstocks are "sustainable") we think that the EU is missing out on the EU potential of crop-based biofuels and the linked to the renewable energy needs of the Union. They have chosen a very dogmatic approach, largely driven by a few very vocal NGOs. They have shunned away from creating an objective assessment methodology for the sustainability of full supply chains. It completely ignores the fact that the sustainability of a biofuels is determined by the setup of the system and its impacts on other markets/systems. A biofuel from waste/residue is not per definition sustainable, and a crop-based biofuel is not per definition unsustainable. With the Annex IX the EC (and EP) has chosen for a simple ("one size fits no one") solution to a very complex problem. In our opinion, there needs to be a complex solution to a complex problem. Yes, this will increase cost of the final product. So what? The Annex IX "list" approach is not ok, and will cause serious issues in the next decade. From fraud to unknown displacement effect to capacity constraints.

12a) Why would you put a limit on the use of these feedstocks? What else are we going to do with it? Burn or flush it? Cannot go into feed anymore. Strict disposal regulations under the EU waste directive. Just have to be (very) mindful of fraud. But that's the case in every regulated market.

12b) Yes! We can show, together with strong Irish aviation partners, the relevance and feasibility of a waste oil based SAF supply chain, in Ireland. The most mature conversion technology to produce Sustainable Aviation Fuel is called HEFA (Hydrotreated Esters and Fatty Acids). Under the RED-II the Part B feedstocks are the most logical options to use for the HEFA technology (and there are Part A feedstock options as well. There is a strong case to be made for an Irish, waste oil based HEFA supply chain, supplying SAF to Irish airports. The SAF can be blended up to 50% with conventional jet fuel and can be used in the existing jet fuel distribution infrastructure and commercial aircraft operations. Preconditions for this "Irish HEFA" case:

- The multiplier of 1.2 for aviation is installed in Ireland
- Double counting for PartA & B feedstocks
- SAF can generate biotickets under the BOS (i.e. contribute to the Irish RED-II targets)
- The CO2 reduction associated with the use of SAF can be claimed by the airline/aviation sector

We are more than willing to help the Irish government better understand the potential of this opportunity

13a) No opinion

14a) Yes. Only possible to enforce with appropriate penalties/cost for non-compliance

15a) Not sure, then year 2 will be extra challenging for the market. And it basically shifts the cost of non-compliance from NORA to the market, correct? P.S. SAF can be stored in a similar way to conventional jet fuel. There is no oxygen in the final SAF product, hence to biological degradation occurs. Perhaps also an interesting consideration to have a fix percentage of SAF in the NORA volumes?

16a) Yes! Great. Less fossil fuel is better!

16b) Nothing that the market cannot solve, if incentivized correctly. Incumbents and vested interest always complain about the difficulties, but in hindsight these difficulties were usually far smaller than projected.

16c) No opinion. Perhaps link to RED-II targets?

17) Drive home message on Sustainable Aviation Fuels

- Aviation needs to reduce its emissions, and Sustainable Aviation Fuel is the best short term, high impact option
- There can be a strong case for a Sustainable Aviation Fuel supply chain in Ireland, including:
  - Maximized use of national raw materials
  - Investments in local production capacity
  - Use of fuel at national airports
  - Bio-economy spin-out effects with this new supply chain as backbone (e.g. development of biobased materials, R&D capacity etc)
  - Positive impacts for Ireland (economic activity, jobs, rural development, CO2 savings and meeting related EU and UN targets, license to operate for aviation sector, sustainable tourism opportunities etc.)
- To realize a SAF supply chain in Ireland, there is need to transpose the RED-II in a way that works for aviation:
  - Ensure the possibility to generate tradeable certificates across fuel types/uses
  - Decouple the CO2 savings related to the SAF, from the actual fuel volumes
  - Installing the multiplier of 1.2 will make the business case easier, and gets us closer to parity with road transport biofuels
- Important note: The SAF supply chain will focus on Annex IX Part A and B feedstocks. This means that the 1.2 multiplier can translate into a 2.4 contribution, under the current RED-II double counting regulations. This also means that this SAF supply chain can be a serious contribution towards Irelands renewable energy targets.
- The blending percentage of SAF in conventional fuel is 50%. With a carbon reduction potential of >85% and an energy content of 43GJ/ton, SAF should be a very interesting option to consider for the Irish government.