Sectoral Emissions Ceilings

Q4: What do you view as the key actions required to ensure the emission reduction targets set out in the Sectoral Emission Ceilings are met?

[redacted] Arigna Fuels UC:

Drastically reducing combustion of fossil fuels, through electrification (heat pumps/ electric cars etc.).

Emphasis on rapidly growing plants/ trees to draw down carbon from the atmosphere quickly, then utilizing these locally for the construction industry - retrofitting houses with insulation etc.

Conversion of agricultural residues/ slurry to biogas and biochar, mitigating imported fertilizer, capturing energy and sequestering carbon.

Q5: What do you view as the main challenges/obstacles to the Sectoral Emission Ceilings being met?

[redacted] Arigna Fuels UC:

The Dairy/ Beef industry.

The Department of Health - removing the licence requirements or exempting hemp from the misuse of drugs act would help stimulate the industry and remove stigma from farmers.

The fossil fuel lobby groups - business as usual, if they can offset emissions.

Renewable Gases

Q13: What role does renewable gas have in the power generation sector?

[redacted] Arigna Fuels UC:

From AD, it's a good, robust and reliable process. More small scale plants and infrastructure (compression/ grid injection) needed.

Enterprise, Waste & Circular Economy

Q23: How can we encourage the diversification away from products with high levels of embodied carbon, such as traditional cement in construction to lower carbon alternatives?

[redacted] Arigna Fuels UC:

Use locally-sourced bio-based materials (hempcrete, wool, fibre insulation).

Q71: What are the main barriers to consumers embracing the Circular Economy, e.g. lack of awareness, increased costs compared to disposable products, lack of access to circular goods and services?

[redacted] Arigna Fuels UC:

Lack of hemp processing facilities.

Electricity

Q11: What options are available to increase the penetration of renewable electricity beyond the up to 80% committed to in Climate Action Plan 2023?

[redacted] Arigna Fuels UC:

Biogas CHP from anaerobic digestion

Solar PV and battery storage for households/ farms etc.

Biomass-powered CHP for industrial/ community use

Q13: What role does renewable gas have in the power generation sector?

[redacted] Arigna Fuels UC:

From AD, it's a good, robust and reliable process. More small scale plants and infrastructure (compression/ grid injection) needed.

Q14: What role could carbon, capture and storage have in decarbonising our power sector?

[redacted] Arigna Fuels UC:

CO2 extraction from existing powerplants/ Direct Air Capture are a red herring from the standpoint of the energy needed to capture/ store. Better strategies are fast-growing plants and pyrogenic CCS (Py-CCS).

Q15: What other opportunities exist to support the decarbonisation of the electricity sector?

[redacted] Arigna Fuels UC:

Smart grids, localized battery storage, community-owned power (CHP/ Solar/ Wind)

Agriculture & LULUCF

Q61: What are the opportunities to increase take-up of measures identified in AgClimatise and encourage adoption of other practices which reduce emissions?

[redacted] Arigna Fuels UC:

Hemp growing

Q62: What policies and measures would be needed to support farmers diversify their farm activities to include opportunities such as bioenergy, vegetable growth, forestry, organic farming, etc.?

[redacted] Arigna Fuels UC:

Carbon Credits for farmers involved in carbon farming/ sequestration

Built Environment

Q37: Further to the existing supports financed by carbon tax revenues, how can we protect those who are currently experiencing fuel poverty and those who are at risk?

[redacted] Arigna Fuels UC:

Target households for insulation/ retrofitting/ heat pumps etc. with very poor BER certs first. Free BER for tenants to produce a national register.

Research & Innovation

Q91: Are the required research and innovation programmes and structures in place to support our climate ambitions; including the provision of the evidence needed to underpin policy in a timely manner?

[redacted] Arigna Fuels UC:

The evidence exists for most of the systems for climate ambitions already. There needs to be an implementation policy now in place that reviews the science and methods for carbon capture.

Q92: Have you identified any research and innovation gaps which need to be addressed? If so, how can these gaps best be addressed?

[redacted] Arigna Fuels UC:

Yes - large scale production and addition of biochar to soils, as an AD additive, water treatment, concrete additive, asphalt additive etc. These have the potential to sequester thousands of tonnes of CO2 every year, while replacing fossil-based additives.

Q93: Are there important areas of research and innovation, where Ireland currently does not have sufficient capability, that need to be developed? If so, what are these areas?

[redacted] Arigna Fuels UC:

Specifically, pyrogenic carbon capture and storage, with related analytical and field testing. This is very niche in Ireland at present, but is vital to future carbon drawdown, in a way that doesn't require unproven/ expensive/ energy intensive methods of CCS. The risk is that fossil fuel use will continue to rise.

Q94: Is the research and innovation system developing and retaining the skills needed to deliver on our climate ambitions?

[redacted] Arigna Fuels UC:

Probably, but with extra targeted funding, more could be achieved.