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## Monthly AGENDA – 90+mins

- 1400      Open online
  - Members Updates (tour de table)
  - Supplier's updates (tour de table)
- 1430      Guest speaker(s) followed by Q&A
  - Andrew Reynolds Reynolds Logistics "Hydrogen Journey"
- 1500      FTAI Updates
- AOB      Reminders
-  Enter questions, topics, and promotions, links in chat!



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# This is the FTAI ~~A#~~ All Fuels Working Group

All fuels welcome (non-members & suppliers alike) priority is given to FTAI member companies.  
<https://www.ftai.ie/alternative-fuels-working-group>

## 2019-2023 fuels covered



- Liquids
  - B20
  - B100 (HVO)



- Gases
  - CNG & LNG
  - Biomethane
  - Hydrogen



- Electric
  - Battery Electric
  - Hydrogen electric

## 2024 topics proposed (poll follows)

- ~~Bus Depot charging (Athlone)~~
- ~~Infrastructure~~ — Ten T Buildings
- Logistics Hubs
- Ports (low carbon routing & fuelling)
- Electric Bikes / cargo eBikes
- Irish made HVO
- ~~Rail freight~~



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## Members Update

- Round table raise hand to speak.
- We will try to call on you all (time allowing)
- Pls keep comments short to allow all to get a shout in

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# Suppliers updates

Raise hand 🙋 and we'll call each in turn  
2 minutes please to allow questions from participants

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## GNI 4 more CNG stations open

- Now 9 public stations
  - 3 private
- Supply of CNG is now 95% biomethane from local and imported sources
- [insert map here]

[https://www.gasnetworks.ie/business/natural-gas-in-transport/compressed-natural-gas/?gad\\_source=1&gclid=EAlalQobChMly46aibDFiQMVx11QBh0G6Ba0EAAYASAAEgISHPD\\_BwE](https://www.gasnetworks.ie/business/natural-gas-in-transport/compressed-natural-gas/?gad_source=1&gclid=EAlalQobChMly46aibDFiQMVx11QBh0G6Ba0EAAYASAAEgISHPD_BwE)

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## Hydrogen Journey

November 2024



At Reynolds Logistics we are more than just a **Liquid and Gas** Logistics company.

Reynolds add significant value throughout the life cycle of every partnership to deliver customer focused change and innovation which underpin savings, operational and environmental efficiencies for our customers.

**We drive change and innovation**



# Statistics

## Ireland

- 50 Tractor Units
- 130 Drivers
- 60 Trailers - Both General Fuels & Dedicated Aviation Fuels

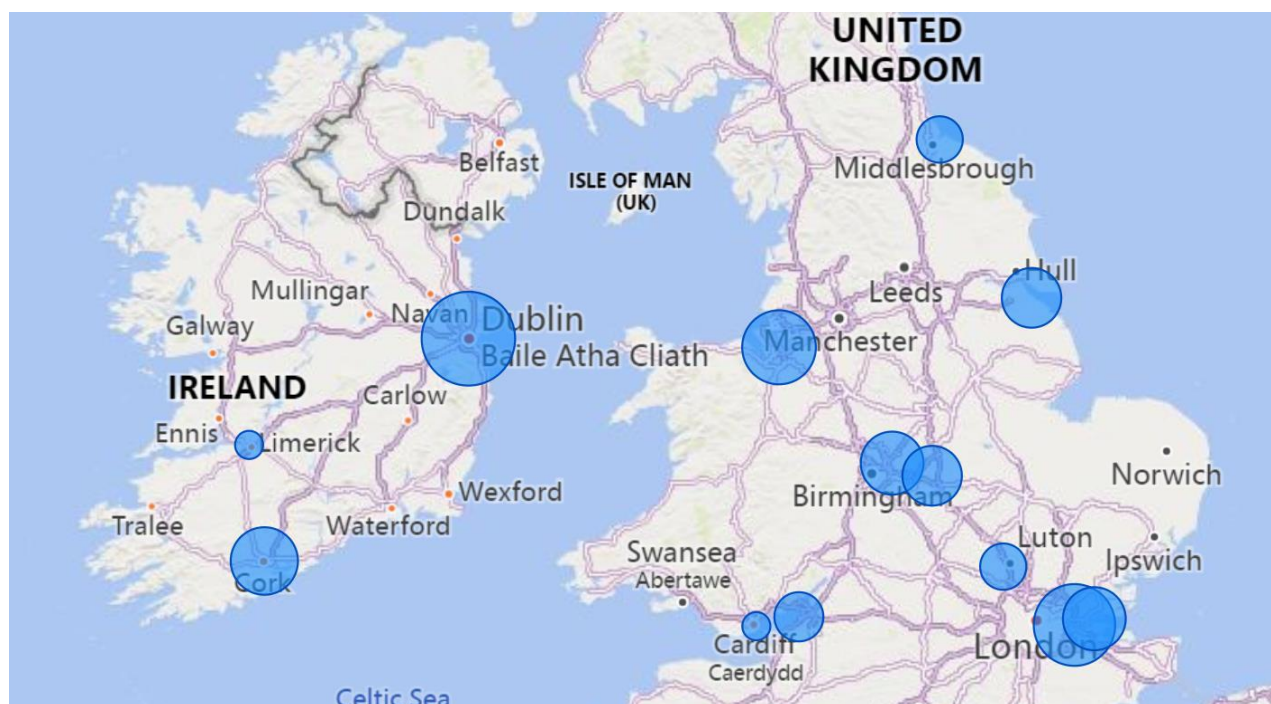


## UK

- 105 Tractor Units – All 44t GVW
- 270 Drivers
- 120 Trailers - Both General Fuels & Dedicated Aviation Fuels
- 13 Specialised Rigs



# Operating Locations





# Current Operations



Aviation  
Fuels

Hydrogen

Commercial & Retail  
Fuels

LNG Gas

Lubricants



## Selection of Customers



# Our 5- Year CO2 Reduction Plan - 2021 to 2026

## Ambition

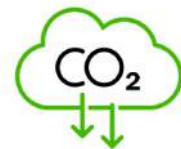
- Our aim is to reduce CO2 intensity across our fleet by 5% to 7% over the life of this 5-year plan, this will be measured CO2 KG / Tonne of product delivered.

## Approach

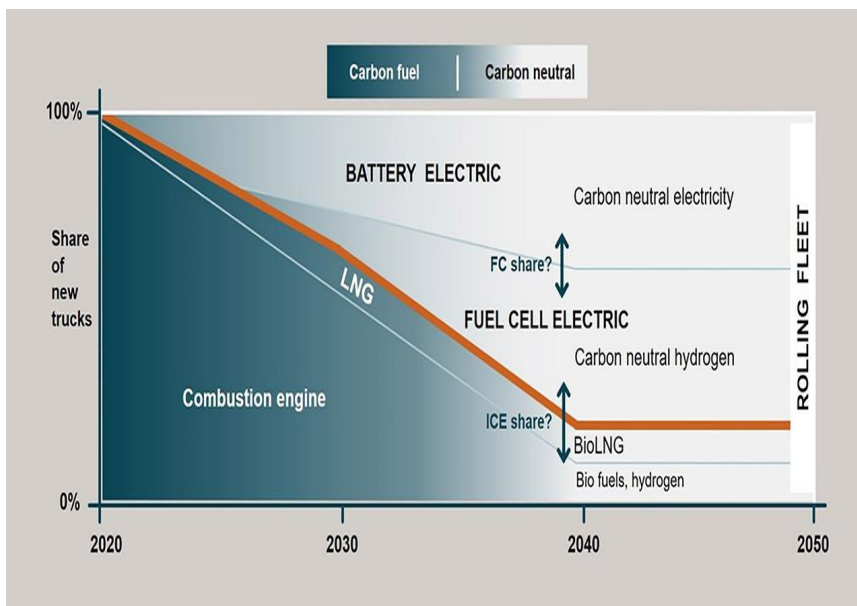
- Our approach is reducing emissions by use of technology, alternative fuels and improving the overall efficiency of our operations by working in collaboration with our customers .

## Tactics

- Avoid**
  - Load Optimisation
  - Route optimisation target 2% less to reduce CO2e per tonne delivered,
- Shift (Change)**
  - Modes are determined by customers, but Reynolds Logistics will encourage alternative modes such as rail/ship if/when opportunity arises.
- Improve**
  - Driver training programme, new vehicle specification, tyres, low viscosity oils, aerodynamics and speed controls.
- Alternative Fuels**
  - Reynolds Logistics are operating 10 LNG tractors
  - Reynolds are working with Truck manufacturers to operate ADR certified Hydrogen tractor units.



## Alternative Fuels are the only solution to deliver significant carbon reduction in transport



Source - Volvo





# Alternative Fuels challenges

- ❖ **Alternative Technologies:** Battery-electric and hydrogen fuel cells are the primary alternatives for heavy-duty trucks. Each has its own advantages and limitations.
  - **Electricity Demand:** A significant increase in renewable electricity generation is needed to support both electric vehicles and hydrogen production.
    - 3x Generation and Grid capacity
  - **Hydrogen Challenges:** Developing the necessary infrastructure for hydrogen is challenging.
    - Reynolds Investing in this area
  - **Current Solutions:** Battery-electric trucks are already available and suitable for operations within 300 kilometers. Hydrogen fuel cells are still in development but show promise for longer distances.
  - **Internal Combustion Engines:** These engines will still have a role using alternative fuels like: HVO, biogas, hydrogen, and E-Fuels.
  
- **New technology requires government incentivization and financial support to enable the market to transition**

## What are we doing in the Hydrogen space & why?

- ❖ By 2050 Ireland and UK want to be net zero and we will no longer have a traditional liquid fuels market, so we need to move into different markets
- ❖ Significant focus on development of H2 business; asset rental, maintenance and movement
- ❖ Own and operate 3 MEGC's ; 3 more in order
- ❖ Support no of clients with ADR Maintenance support in H2 space
- ❖ Involved in key UK Government supported projects including HyHaul / Element One & no of HAR2 project submissions
- ❖ Pursuing H2 tractor units with OEM's (ADR)







## Hydrogen - Where does it come from?

High Carbon		Low Carbon		
<b>Grey Hydrogen</b>  Made using steam methane reforming. Produces carbon monoxide and CO <sub>2</sub>	<b>Blue Hydrogen</b>  Made using carbon capture and storage. Reduces greenhouse gasses released	<b>Turquoise Hydrogen</b>  Made using methane pyrolysis. Produces solid carbon instead of CO <sub>2</sub>	<b>Green Hydrogen</b>  Made using electrolysis by renewable energy. Zero Carbon emissions	<b>Pink Hydrogen</b>  Made using electrolysis by nuclear power.



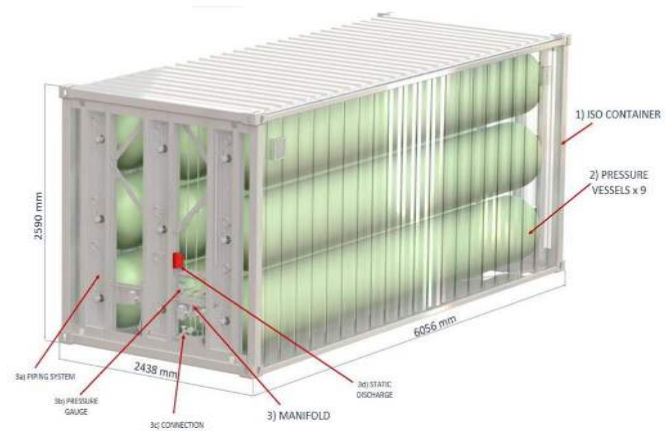
# Where will it be used?

- ⚙️ All areas where electrification is not easily achieved
  - Feedstock for industry using H<sub>2</sub> now and in the development of other low carbon/synthetic fuels
    - SAF or E-Fuels
  - Feed for high heat industrial processes that electricity cannot abate
  - Long Distance / Heavy transportation sector
    - HGVs / Aviation / Rail / Shipping / Construction
  - Power Generation & Grid Balancing (including off grid power)



# What are MEGC's?

- ⚙️ MEGCs = Multi Element Gas Containers
- ⚙️ Units made of cylinder banks of composite material that store H<sub>2</sub> at up to 380bar and are the way in which compressed H<sub>2</sub> is being transported and stored in the UK&I
- ⚙️ Capacity 320Kg to 1000KG
- ⚙️ These are not cheap! €0.3-€1m each





# HYDROGEN USE CASES



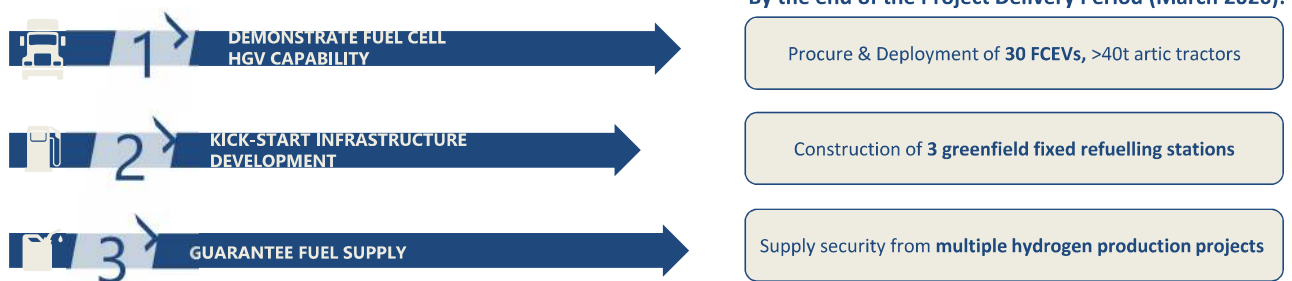


# Project Summary

HyHAUL will develop a hydrogen supply chain and provide hydrogen refuelling infrastructure along the M4 corridor. It will deploy a minimum of 30 Fuel Cell Electric Trucks (FCEV), with the majority being >40-tonne Heavy Goods Vehicles (HGVs).

UK Government funding over £30million

## HyHAUL Overarching Objectives



## A comprehensive decarbonisation offer out of one hand



**Benefits** | HyHAUL is the **simplest and most cost-effective option** to decarbonise heavy haulage with FCETs

- 1 Access to >40t FCETs via various lease options
- 2 80% FCEV cost subsidy via DfT grant
- 3 Predictable and stable hydrogen fuel prices
- 4 Refueling infrastructure following demand
- 5 Dedicated R&M support via vehicle OEMs
- 6 Commercial improvements over time
- 7 Minimal administrative burden for full solution
- 8 Publicity benefits due to limited offer



## Leading the Construction Industry Towards a Zero Emissions Future

### What & Why:



**Design & demonstrate** an end-to-end solution for the manufacture, supply, distribution, storage & use of hydrogen as a fuel



Industrial Non-Road Mobile Machinery (NRMM) accounted for **6.0 MtCO<sub>2</sub>e, 8% of total industrial emissions** in 2019



Low carbon hydrogen will be **critical to achieve net zero**, particularly in “hard to electrify” UK industrial sectors, and across heat, power and transport

### Where:



**Planned sites for Deployment Q4 2024**



# Fuels Working Group

Alt Fuels Working Group | 5<sup>th</sup> November 2024

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## Decarbonisation / Sustainable Working Group – focus areas

- **Education:** Develop an approach to upskilling FTAI members.
- **Championing:** Develop a forum for promoting industry progress.
- **Financials for SME's:** Define a financially feasible approach to sustainability.
- **Consignor Liability:** Develop guidelines defining the consignors role.
- **HVO Ready:** Develop guidelines for establishing vehicle compatibility.

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# budget



Amendments to the Vehicle Registration Tax (VRT) regime for electric commercial vehicles will mean they qualify for the €200 rate.

At present, due to the heavy battery weight, many electric vans exceed the 3½-tonne limit for the lower rate of tax.



The rate of carbon tax levied on fossil fuels goes up by another €7.50 to €63.50 per tonne of carbon dioxide emissions in Budget 2025.



The installation of EV charges by employers at their workers' homes is to be exempted from Benefit in Kind tax.



A €99 million financing package will allow the Port of Cork to develop the port infrastructure needed to support the construction of offshore wind farms.



In the longer term, it is proposed that the RSA become a 'Driver and Vehicle Services Agency', focusing on core responsibilities such as driver licencing and testing services. A new, dedicated Road Safety Office will be proposed to run road safety awareness, education and promotional campaigns

- EV Summit – 20% Discount - EV 2024 FTAI <https://events.businesspost.ie/event/electric-vehicle-summit/>

The screenshot shows the website for the Electric Vehicle Summit & Expo 2024. The page features a navigation bar with links for Home, Agenda, Speakers, Sponsors & Exhibitors, Floorplan, Gallery, and Book Now. The main content area is divided into several sections:

- Speakers:** A list of speakers including Blake Boland (Co-Founder, EV Platform) and Emma Mitchell (Operations Director, Society of the Irish Motor Industry (SIMI)).
- 2:05PM TEST DRIVE:** Titled "From Malin to Mizen on one charge!", featuring Paddy Comyn (Transport & Electric Vehicle Expert) as the speaker. The text describes a challenge of driving from Malin Head to Mizen Head on a single charge.
- 2:05PM AFTERNOON KEYNOTE ADDRESS:** Titled "Decarbonising the road freight sector", featuring Aidan Flynn (CEO, Freight Transport Association Ireland) as the speaker. The text discusses the challenges of decarbonisation in the road freight sector.
- 2:20PM PANEL DISCUSSION:** Titled "Addressing workforce issues", featuring Rainer Hoerbst (Head of Green Logistics, ATC Logistics) as the speaker. The text lists topics such as ensuring a pipeline of talent, upskilling the workforce, and meeting demand for EV technicians.
- 2:20PM PRESENTATION:** Titled "ATC Our Journey Towards Net Zero", featuring Rainer Hoerbst as the speaker. The text mentions a €22.5 million investment to support the transition of the global transportation fleet to zero emission heavy goods vehicles.



# FTA Ireland Decarbonising Road Freight Sector Report



## Decarbonising The Road Freight Sector Report

FTA Ireland are delighted to introduce the first 'Decarbonising the Road Freight Sector Ireland' report that will provide plenty of food for thought for owners and operators of commercial Heavy Duty Vehicles and policy makers as we grapple with understanding the challenges decarbonisation poses from a cost and timeline perspective.

The report can be used as a reference for commercial fleet operators to reaffirm that change is necessary, highlighting the options available to them. Our partners Gas Networks Ireland, Inver Energy, SSE, and Air Products offer up the position and the service provided by key players that support decarbonisation of commercial transport in Ireland.








Download the Report by scanning the QR code

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# Decarbonising Road Freight Sector Ireland – Report



### New Energy Sources

- Availability of green energy for Transport
- Ability to supply energy that is affordable for transport
- Ireland currently imports over 80% of energy.



### Electricity

Report published by Eirgrid in October 2022 – Generation Capacity Statement (GCS) - predicts challenging outlook for Ireland with **capacity deficits identified up to 2031**

**By 2031, 28% of all electricity demand is expected to come from data centre's** and other new large energy users (Data center's currently account for 21% of all electricity consumption)



### Hydrotreated Vegetable Oil (HVO)

DoT commissioned report on demand

Concern over certification - - Irish Government call on the European Commission to examine imports of biofuels from outside the European Union as concerns grow about sustainability



### Bio(CNG)

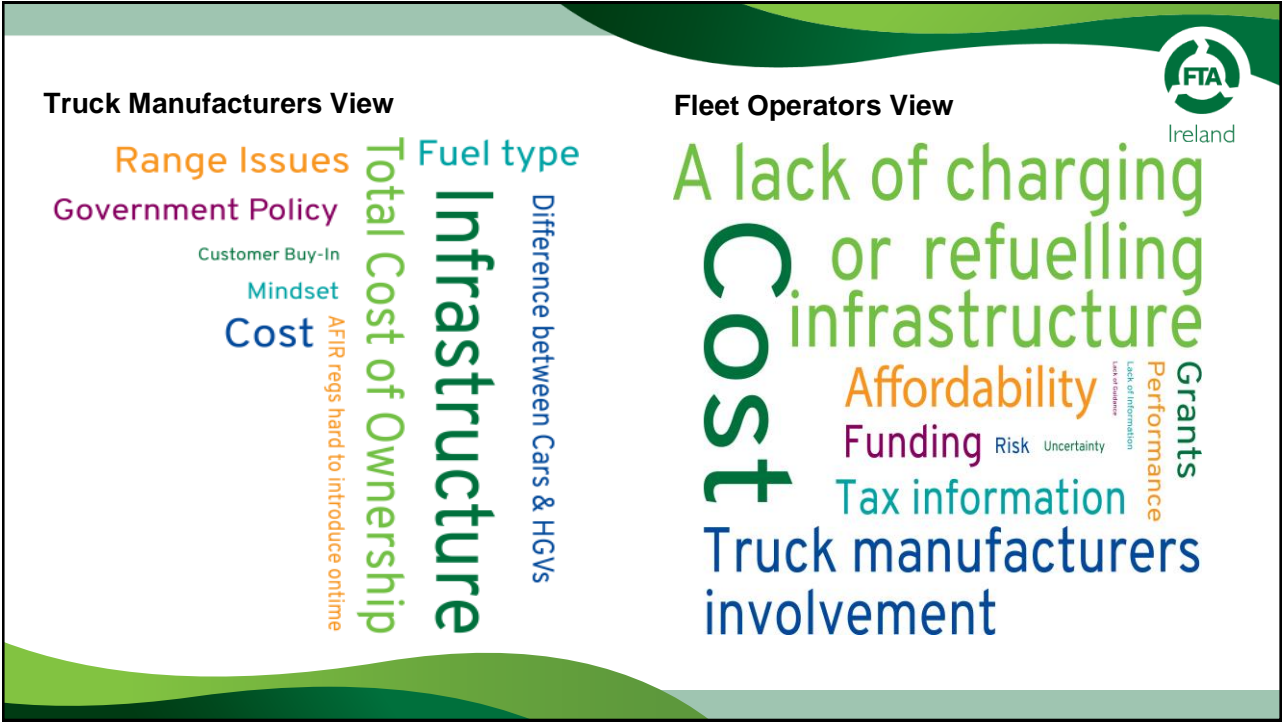
**The Irish Government has allocated €3m in state investment in budget 2023 to help reach a target of 150 – 200 operational anaerobic digestion plants by 2030.** EU Policy is to diversify the EU's gas supplies, phasing out Europe's dependency on Russian fossil fuels and reducing the exposure of consumers to volatile natural gas prices.



### Hydrogen

Low carbon hydrogen fuel at scale requires reliable supply, accessible infrastructure and investment from companies with proven track record to deliver hydrogen safely and at scale.

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The success or otherwise of ambitious targets to decarbonise are wholly reliant on the leadership of the incumbent Government. The national policy is taking the lead from the European regulatory framework. The extent of legislation, regulations and advice that is being published to enshrine the policy position is somewhat overwhelming. Clear and unambiguous messaging that details the availability of national / European funding that supports transition as well as definitive sectorial guidance and information is essential to support the demands of the ambition.

## Key Takeaways

**More than one solution** –There is a requirement for a myriad of solutions and technologies to decarbonise the road freight sector.

- Government must support the private sector with deployment of sufficient alternative fuelling infrastructure and electric charging facilities.

Develop a **'National Decarbonisation Road Freight Strategy'** through collaboration and engagement with key stakeholders.

- Need to be realistic about our starting position.
- Ireland has different challenges to decarbonisation than mainland EU – this must be reflected in the national decarbonisation strategy.

**New tax supports and better grants** must be introduced to encourage commercial fleet operators to purchase alternatively fueled vehicles, CNG/Biomethane, Hydrogen and Electric as well as lower emitting fuels such as HVO.

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To change behaviour, (which can be either good or bad) requires repetition of messaging, clear instruction and buy in. It takes much more work to change behaviour for the better than it does to experience negative change. The scale of change requires a positively disposed mindset. It also requires a clear strategy and vision that is not at threat to changing government policy.

## Key Takeaways

**Security of energy supply is critical for commercial fleet operators.**

- **Ireland as an island is reliant on the importation of energy.**
- There is a need to create a resilient alternative energy import supply chain.

**Perception is an influencer – not always in a positive way.**

- More positive commentary and support from Government for all alternative fuelling solutions is needed. Road Freight Sector is essential for a vibrant Irish Economy.

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## Sum Up

Calls to action by members



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## Calls to action

- Election – FTAI will build our key asks of new government briefing note – what are priorities for this group – access to grid – decarb strategy for freight distribution
- Keep in touch with projects etc
- What topics do you want to hear about?
- See if we can start tracking who is using HVO – how is it used – blended – 100% - issues with supply or any other issues – why is HVO being used?