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European Union
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Development Fund

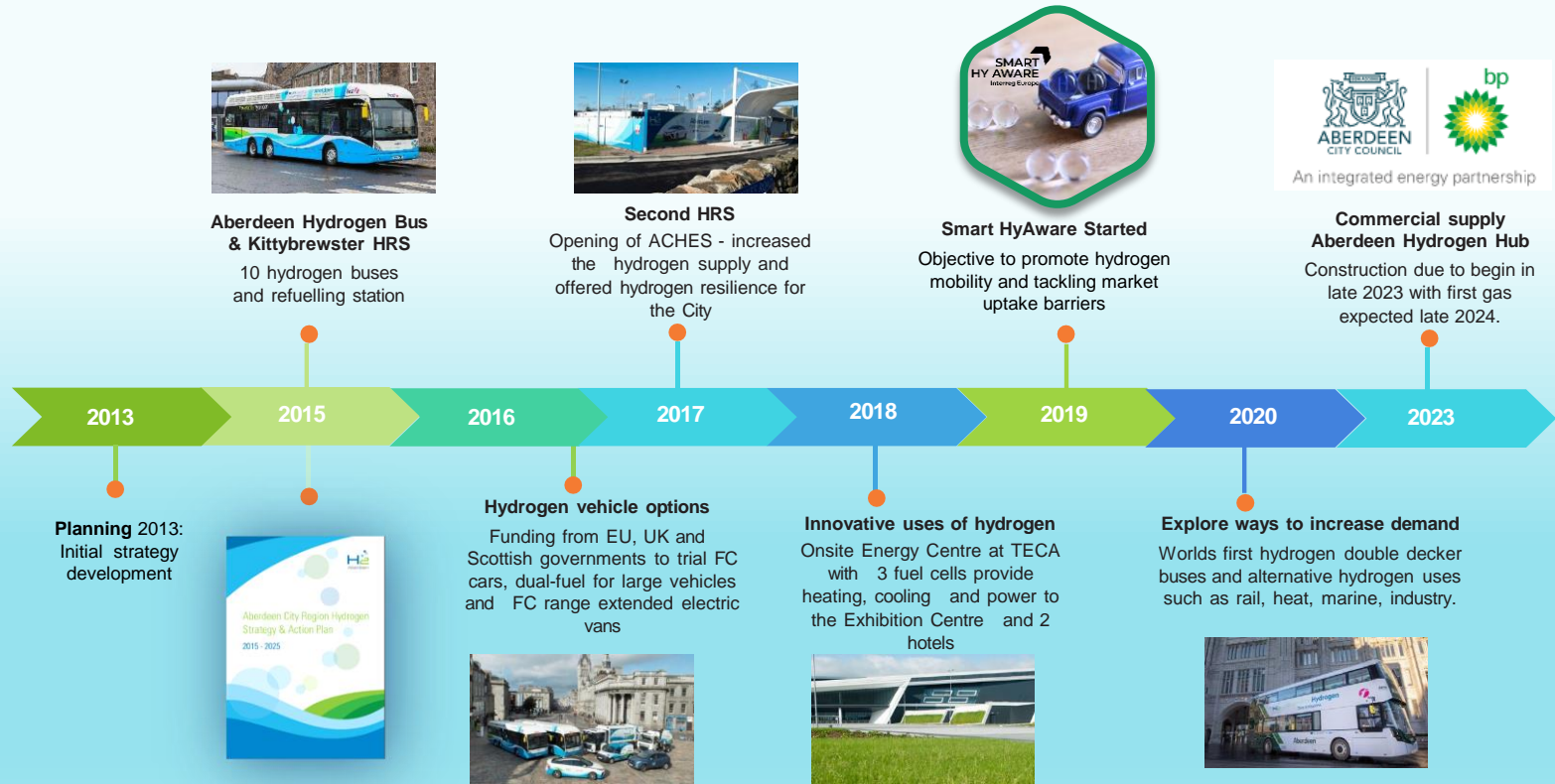
Regional Action Plan

*Facilitating the use of hydrogen through a network of hydrogen
refuelling stations*

**Sandra Omondi
Aberdeen City Council**

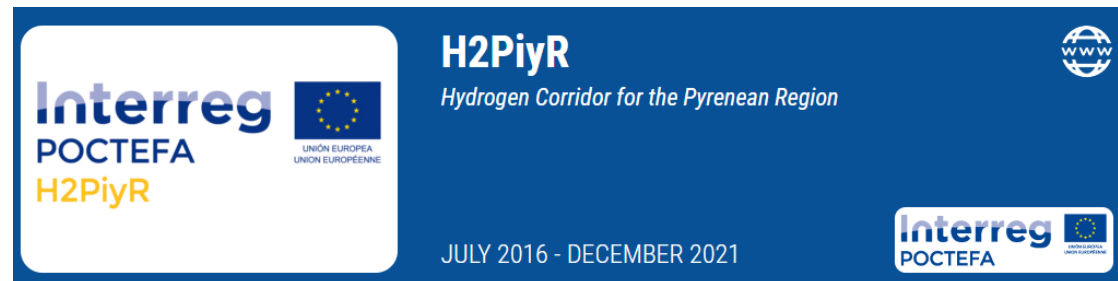
20.06.23

H2 Aberdeen Timeline 2013 - Present



Exchange of Experiences

- The Regional Development Agency of Aragon are delivering and expanding a network of hydrogen refuelling points through the Pyrenees region, known as the 'Hydrogen Corridor for the Pyrenees Region'.
- North East Scotland Fleet Review (Hydrogen Demand)
- Key recommendation: explore the expansion of regional hydrogen refuelling stations along the strategic road network to serve regional hydrogen demand.



Regional Action Plan

Aberdeen City Council will create a strategic network of hydrogen refuelling points throughout North East Scotland. This hydrogen will be used to support regional hydrogen projects and as back-up supply / emergency supply for future hydrogen transport projects in Aberdeen.



Sub-actions:

1. Assess at least 3 sites across North East Scotland for remote refuelling and technical capability
2. Approach the market for adaptation and upgrade of existing hydrogen assets to enable tube trailer refuelling.
3. Purchase and/ or lease tube trailers.
4. Develop at least 1 remote hydrogen refuelling site across North East Scotland.

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ABERDEEN CITY COUNCIL



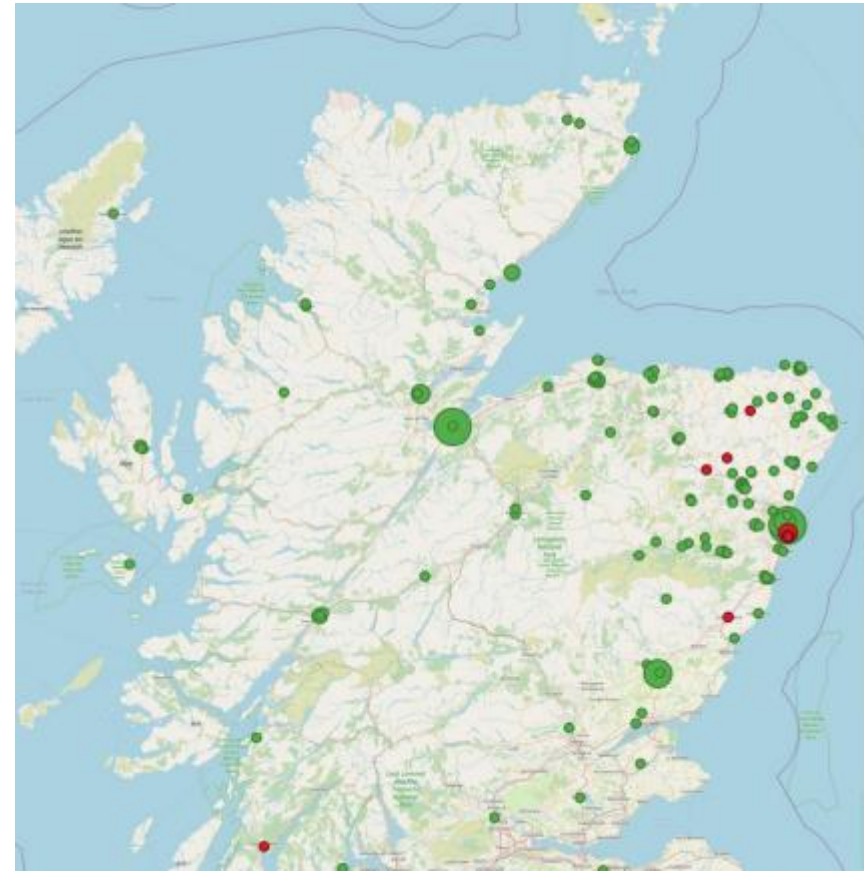
Objectives and Impacts

Objectives:

- Increase the number of remote refuelling sites across North East Scotland by Q2 2023
- Increase the number of hydrogen vehicles across the North East of Scotland by Q2 2023
- Increase the amount of hydrogen dispensed from existing Aberdeen City Council assets by Q4 2022

Impacts:

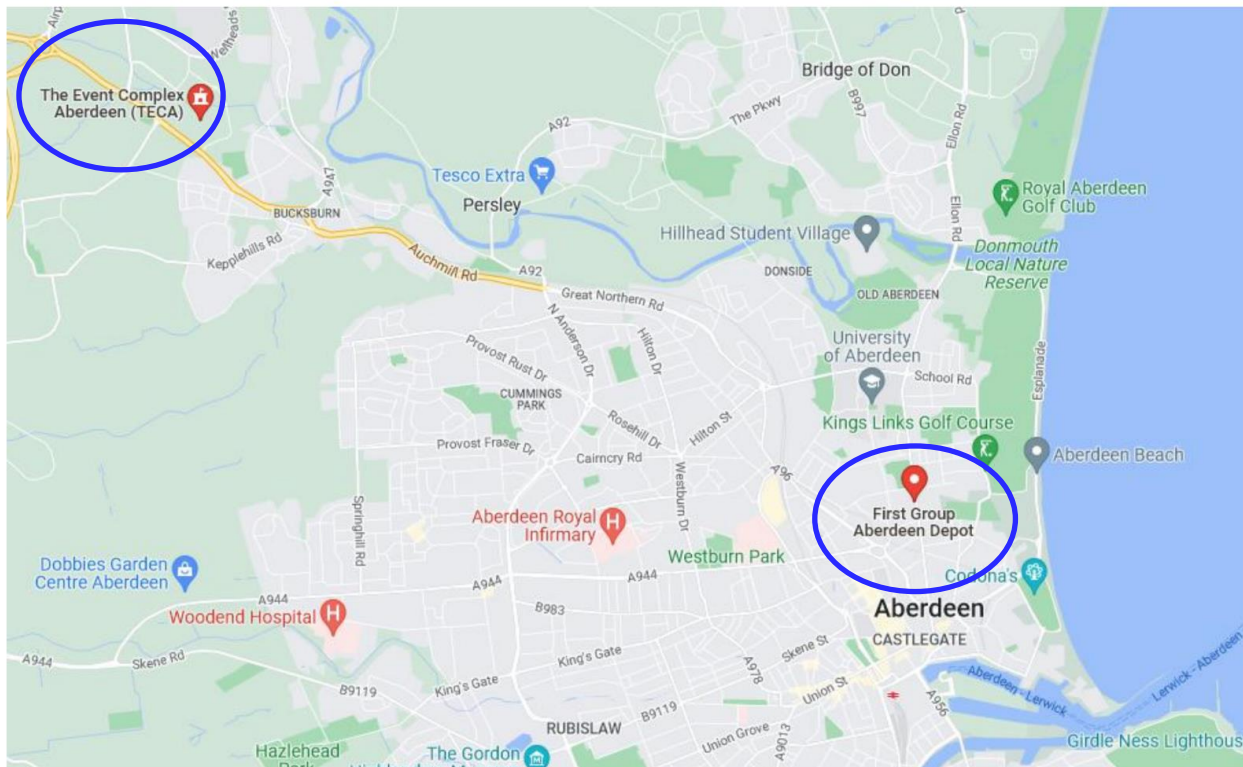
- Result in the creation of a hydrogen refuelling network in North East Scotland
- Result in the upgrade of Aberdeen City Council assets
- Result in the outworking of public-private partnership working to foster hydrogen technology development in North East Scotland.



Action Progress

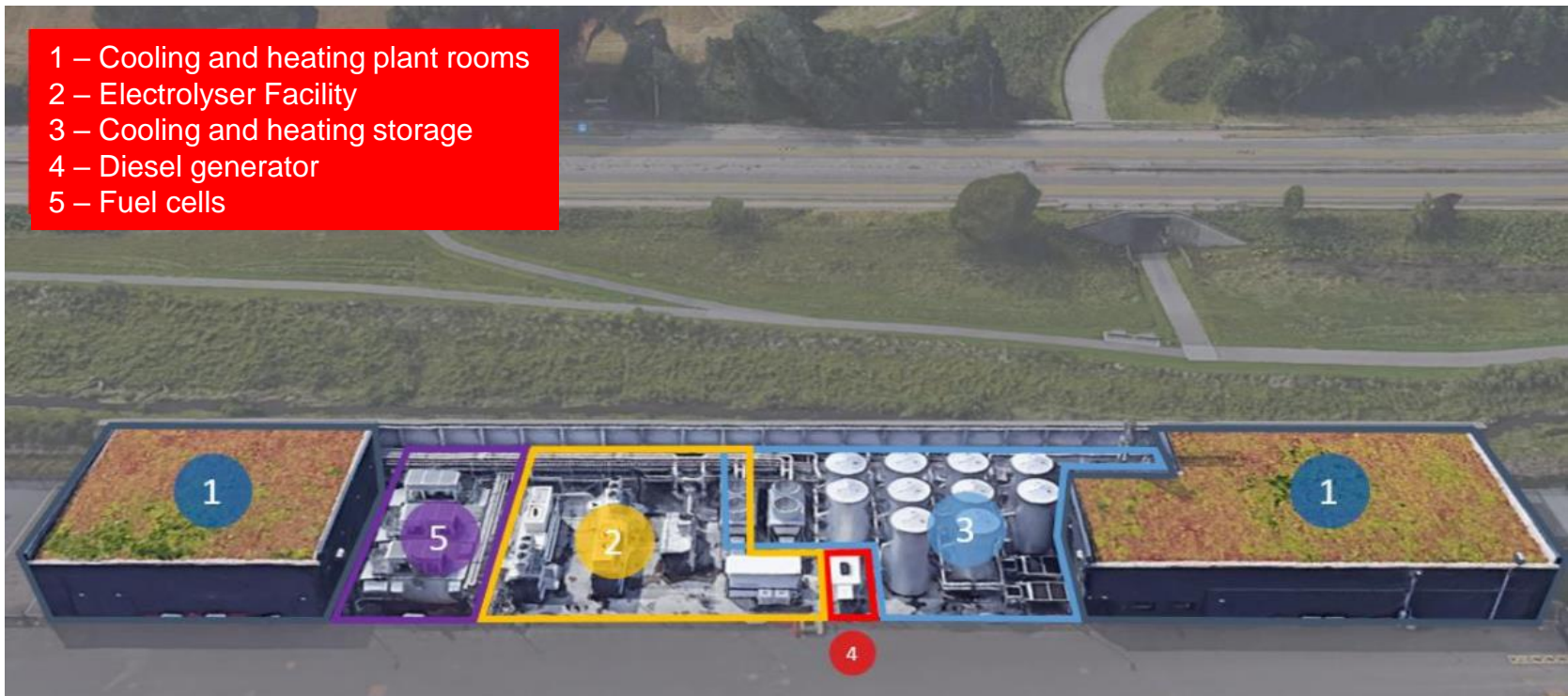
1. Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:

- a) King Street – tendered Summer 2022, preferred bidder appointed in October 2022
 - *Provide hydrogen to the King Street First Bus depot using existing equipment at TECA*



Action Progress

1. **Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:**
 - a) King Street Depot – tendered Summer 2022, preferred bidder appointed in October 2022
 - *Provide hydrogen to the King Street First Bus depot using existing equipment at TECA*



Action Progress

1. Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:
 - b) Energy Transition Zone, south of Aberdeen
 - *12 week consultation with members of the public from December 22 with two roadshows held*





Action Progress

1. Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:
 - a) Energy Transition Zone, north of Aberdeen
 - b) Energy Transition Zone, south of Aberdeen
 - *Tri-modal refuelling requirements for rail, maritime and HGVs*
 - *Funded by NESTRANS, City Region Deal and Interreg HyTrEc2*

Action Progress

1. Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:

c) Port of Peterhead, Inverurie, Stonehaven, Banchory, Macduff

- *Tendered in March 2023 – work ongoing and concluding in September 2023*

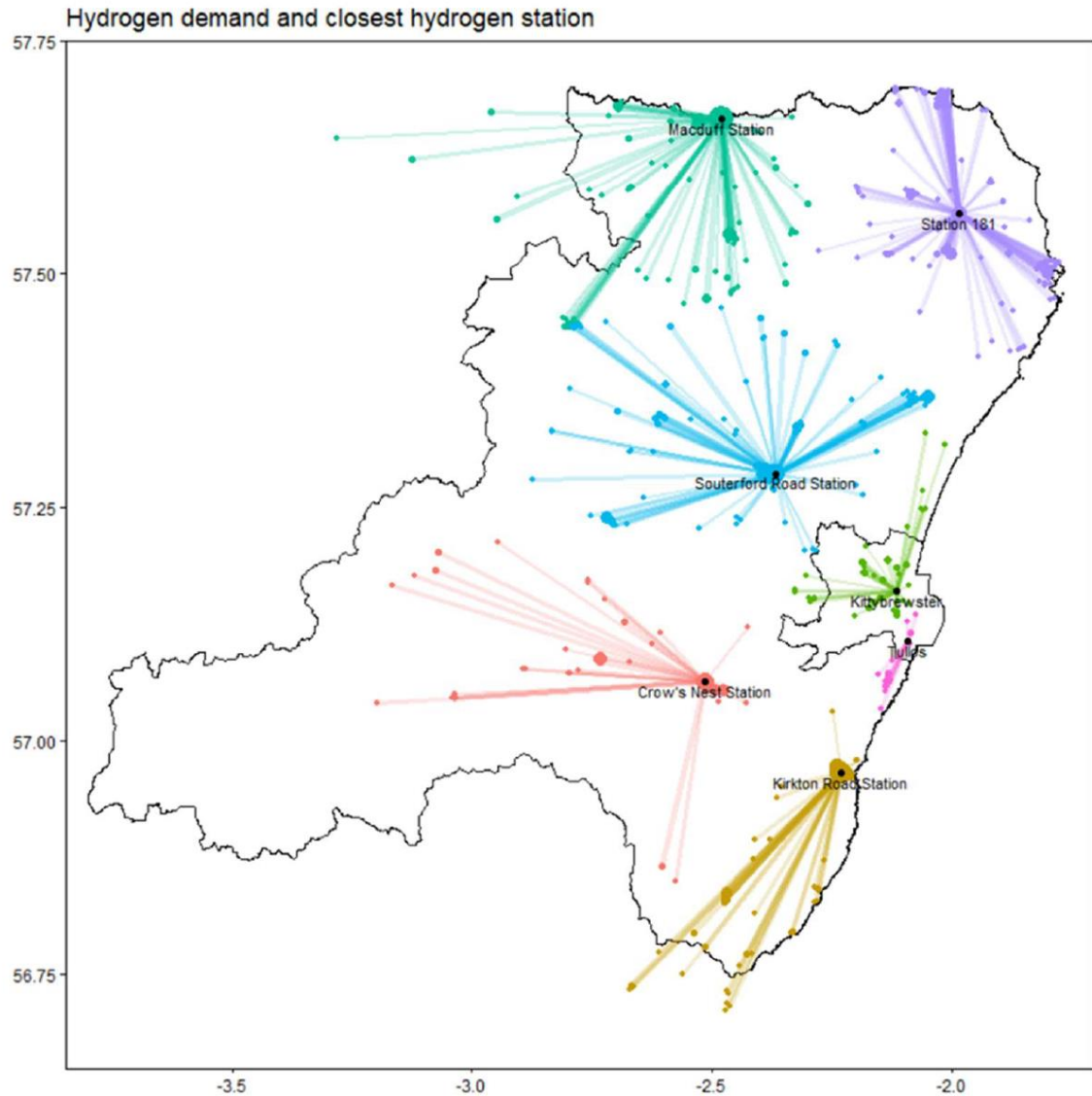
[View Published Notice](#)

Details of the published notice are shown below.

| Introduction | Full Notice Text | Further Info | Contact Info | Coding |
|--|------------------|--------------|--------------|--------|
| <p>Title: Hydrogen Infrastructure Requirements for Large Scale Distribution and Refuelling in North East Scotland</p> <p>Reference No: MAR474409</p> <p>OCID: ocds-r6ebe6-0000726541</p> <p>Published by: Aberdeen City Council</p> <p>Publication Date: 23/03/2023</p> <p>Deadline Date: 20/04/2023</p> <p>Deadline Time: 10:00</p> <p>Notice Type: 02 Contract Notice (below GPA/OJEU threshold or call offs of any value)</p> <p>Has Documents: Yes</p> <p>Has ESPD: No</p> <p>Abstract: Hydrogen Infrastructure Requirements for Large Scale Distribution and Refuelling in North East Scotland including design / considerations for standardised hydrogen refuelling footprint; trimodal refuelling requirements for trains, HGVs and maritime; and preliminary design of remote H2 refuelling station in Peterhead</p> <p>CPV: 71311300, 65400000, 24111600, 63712600, 71311200, 71312000, 71313000, 71311000, 71311300.</p> | | | | |

Action Progress

1. **Assess at least 3 sites across North East Scotland for remote refuelling and technical capability:**
 - c) Port of Peterhead, Inverurie, Stonehaven, Banchory and Macduff
- *Standardised refuelling footprint can be applied in Aberdeenshire locations.*



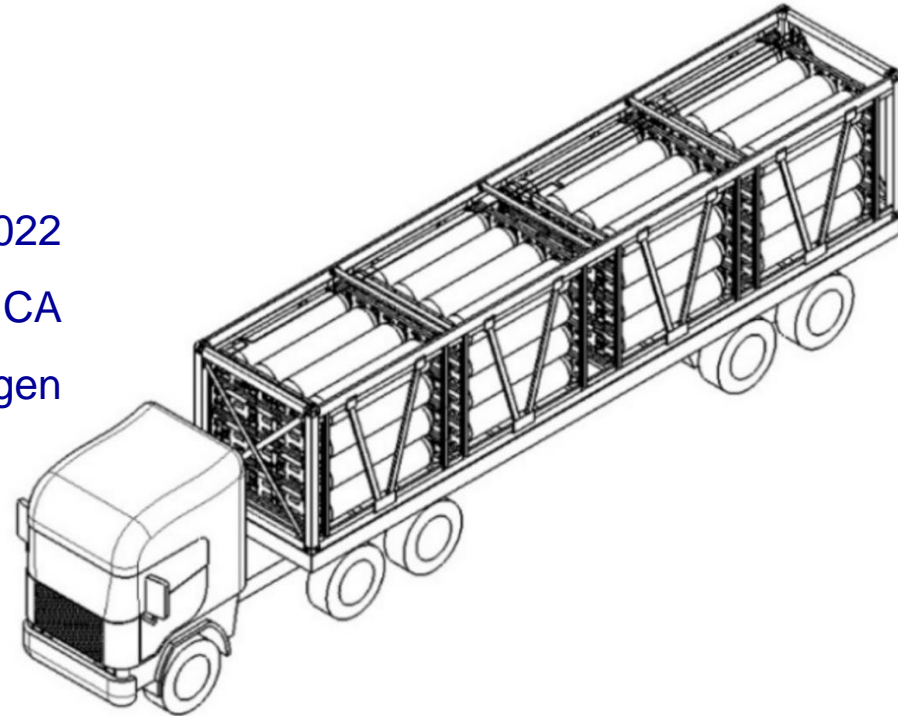
Action Progress

2. **Approach the market for adaptation and upgrade of existing hydrogen assets to enable tube trailer refuelling**
 - Two contracts released for procurement in Summer 2022 with preferred bidders appointed October 2022. Discussions are ongoing with preferred bidders to reconfigure and enhance the two existing assets to allow import and export:
 - TECA
 - Recommissioning of electrolyzers, purchasing of dispenser, tube trailers, storage vessels
 - Production Capability: 400kgs per day
 - ACHES
 - Additional storage on site
 - Remedy of day-to-day issues with maintenance
 - Enhancements to allow greater flexibility of site: removal of canopy to allow buses to refuel
 - Software modifications to systems on site
 - Civils work
 - Funding: Scottish Government's Energy Transition Fund

Action Progress

3. Purchase and/ or lease tube trailers:

- Tube trailers included in Summer 2022 procurement for moving hydrogen from TECA to First Bus Depot to refuel Clean Hydrogen Partnership JIVE H2 buses
- Delivery: Scheduled for Q4 2023



4. Develop at least 1 remote hydrogen refuelling site across North East Scotland:

- Feasibility undertaken for depot refuelling at the First Bus depot to refuel JIVE buses.
- 10 buses refuelling initially with scope for expansion
- Planning Permission for site works commencing shortly
- Delivery: Scheduled for Q4 2023

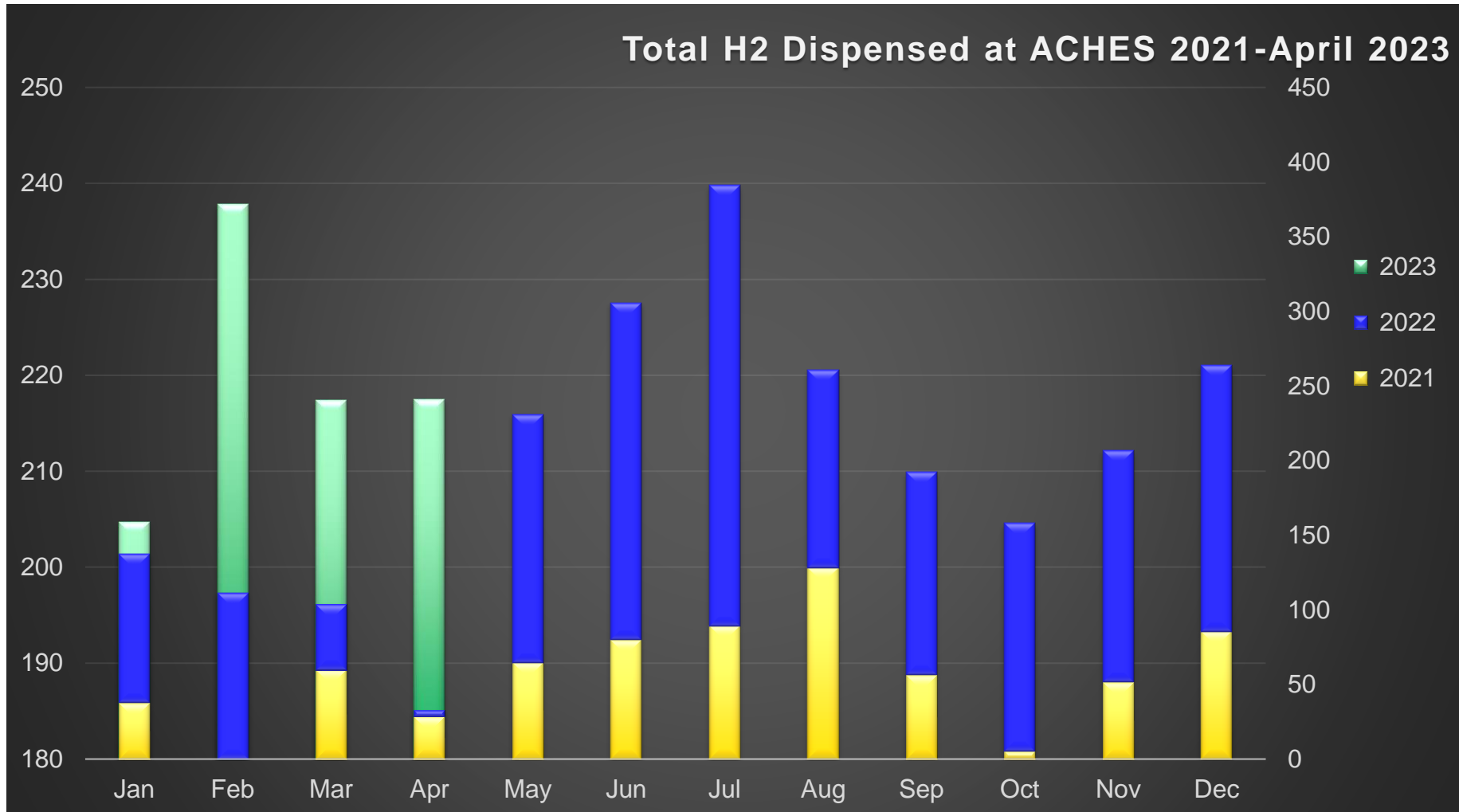
Objectives

| | Objective | Achievement |
|---|---|---|
| 1 | Increase the number of remote refuelling sites across North East Scotland by Q2 2023 | Preferred Bidder Tender Award for TECA/King St Depot in October 2022. |
| 2 | Increase the number of hydrogen vehicles across the North East of Scotland by Q2 2023 | 9 new RCVs: 1 FC waste truck and 8 H2ICED (tippers, trucks and tractors) |



Objectives

3 Increase the amount of hydrogen dispensed from existing Aberdeen City Council assets by Q4 2022



Key Programme Stakeholders

- Hydrogen Team, Aberdeen City Council
- Aberdeenshire Council
- First Bus
- Cummins and Norco – OEM and operator of existing Cove refuelling site
- FES – operator of existing 'TECA' production site
- Energy Transition Zone Ltd and Port of Aberdeen
- Appointed bidders for tube trailer supply and intervention works to hydrogen assets to enable mobile refuelling.
- Fichtner – consultant to provide framework for Tender process.



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POLICE
SCOTLAND
Keeping people safe



TRANSPORT
SCOTLAND
CÒMHDAIL ALBA



ABERDEEN
CITY COUNCIL



Aberdeenshire
COUNCIL



Angus
Council
Comhairle Aonghais



The Highland Council
Comhairle na Gàidhealtachd



SEPA
Scottish Environment
Protection Agency

Achievements and Impact

| | Action | Achievement |
|---|--|--|
| 1 | Assess at least 3 sites across North East Scotland for remote refuelling and technical capability | King Street and Hydrogen Hub assessed, another 6 sites currently underway |
| 2 | Approach the market for adaptation and upgrade of existing hydrogen assets to enable tube trailer refuelling | TECA and ACHES works both procured in Summer 2022 and work commencing shortly |
| 3 | Purchase and/ or lease tube trailers | Preferred contractor for tube trailers appointed October 2022 to serve H2 Buses at First Bus depot |
| 4 | Develop at least one remote hydrogen refuelling site across North East Scotland | First Bus depot planning permission shortly underway, scheduled for delivery Q4 2023 |

- **Creation of a hydrogen refuelling network across North East Scotland**
 - Upgrade of Aberdeen City Council assets
- **Outworking of public-private partnership working to foster hydrogen technology development in North East Scotland.**
 - Opportunity to export hydrogen in the future



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Thank you!

Questions welcome



Project smedia