202500479235 Emails for release

Email chain 1

redacted - S.38(1)(b)

Diary please

redacted - S.38(1)(b) I Assistant Private Secretary (Diary)
Private Office of Michael Matheson, Cabinet Secretary for Net Zero, Energy & Transport
redacted - S.38(1)(b) I St Andrew's House **I** Regent Road **I** Edinburgh **I** EH1 3DG **I**

From: redacted - S.38(1)(b) < redacted - S.38(1)(b)@quantumcommunications.co.uk>
Sent: 21 March 2023 09:02
To: Cabinet Secretary for Net Zero, Energy and Transport <CabSecNetZET@gov.scot>
Cc: DG Net Zero <DGNetZero@gov.scot>; Kersti Berge <Kersti.Berge@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@lhyfe.com>
Subject: Lhyfe and Centrica to develop offshore renewable green hydrogen in the UK

Dear Cabinet Secretary

On behalf of Lhyfe, one of the world's pioneers in the production of green and renewable hydrogen, please find below a press release on a new partnership with Centrica.

Lhyfe's UK base is in Newcastle and the company has already launched a world-first offshore wind to green hydrogen demonstrator project in France https://www.lhyfe.com/press/worlds-first-offshore-renewable-hydrogen-production-pilot-site-is-inaugurated-by-lhyfe/.

They are keen to look at the opportunities from ScotWind and Lhyfe UK MD, redacted - S.38(1)(b), would welcome a meeting with you to discuss both this and how Scotland can set its hydrogen framework for success?

I look forward to hearing from you.

Regards

redacted - S.38(1)(b)

UK FIRST: Lhyfe and Centrica to develop offshore renewable green hydrogen in the UK

- **Memorandum of Understanding will pave the way for green hydrogen pilot production site at sea**
- **Energy firms explore large scale partnership in drive to net zero**
- **Aim for UK to become a global leader in the hydrogen sector**

Lhyfe and Centrica have agreed to jointly develop offshore renewable green hydrogen in the UK in a first for the country. The companies have signed a memorandum of understanding (MoU) that could accelerate green hydrogen as part of the energy transition in the UK.

Under the agreement, Lhyfe and Centrica will explore combining their expertise to collaborate on a pilot green hydrogen production site in the Southern North Sea.

The pilot will aim to combine Lhyfe's expertise on green hydrogen production and Centrica's experience of gas storage and infrastructure to ensure that the hydrogen produced can be safely stored and utilised in the UK. The end result would be proof that an end-to-end hydrogen production, storage, and distribution system is possible in the country.

The energy firms will also examine an additional partnership to deploy the technology at commercial scale alongside offshore wind electricity production.

Renewable green hydrogen coupled with offshore wind power is expected to play an increasingly important role in the UK's energy mix, particularly with rapid expansion expected in both of these areas over the next 5-10 years.

redacted - S.38(1)(b)**, UK and Ireland country manager of Lhyfe, said:**

"We are pleased to announce this agreement with Centrica, which represents an exciting opportunity to drive forward the clean energy transition through large-scale offshore green hydrogen production. Offshore electrolysis coupled with hydrogen storage will maximise the huge potential of offshore wind around the UK. The UK can become a global leader in the production of renewable green hydrogen, moving away from our reliance on fossil fuels and improving our homegrown energy security, while delivering net zero and boosting local economies."

redacted - S.38(1)(b)**, Managing Director of Centrica Storage, said:**

"We are delighted to be working with our partners Lhyfe on another exciting and world-leading Hydrogen project. Hydrogen is going to play a key role in decarbonising the UK's power supply by 2035 and our long-term ambition is for Rough, our gas storage site, to be the world's largest hydrogen store, offering up to 16TWh of storage capacity. This pilot will show how green hydrogen can be produced, moved and stored in the UK market; all while supporting the UK on its net zero journey."

The UK Government has doubled its low-carbon hydrogen production target from 5GW to 10GW by 2030, with at least half of this coming from green hydrogen. Hydrogen production is expected to initially support decarbonisation of industrial clusters, like the Humber cluster with further use cases developing with a growing hydrogen economy.

A recent report by the Climate Change Committee confirmed the essential role of hydrogen production, storage and use in achieving the goal of a net zero electricity system in the UK by 2035.

ENDS

Email chain 2

From: redacted - S.38(1)(b)
Sent: 11 April 2023 16:05
To: redacted - S.38(1)(b)@abpmer.co.uk>
Cc: redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>
Subject: Consideration of Hydrogen in SMP and INTOG assessments

Good Afternoon redacted - S.38(1)(b)

Please find attached a paper on the Proposal for consideration of Hydrogen Production from ScotWind and Innovation and Targeted Oil and Gas (INTOG) developments in assessments for Sectoral Marine Plans.

This follows the same format as the one redacted - S.38(1)(b) sent today for Wet Storage.

Many thanks
redacted - S.38(1)(b)

redacted - S.38(1)(b)
Marine Scotland – Policy and Planning

Scottish Government **|** Marine Laboratory **|** 375 Victoria Road **|** Aberdeen **|** AB11 9DB
Mobile: redacted - S.38(1)(b)
Email: redacted - S.38(1)(b)

Email chain 3

From: redacted - S.38(1)(b)@gov.scot>
Sent: 10 February 2025 14:50
To: redacted - S.38(1)(b)@gov.scot>
Cc: redacted - S.38(1)(b)@gov.scot>
Subject: FW: Combination Germany's hunger for energy with Scotland's offshore capabilities

Hi redacted - S.38(1)(b),

We have received an email from Jens Cruse, requesting to present the Cruse Offshore GmbH project to Ms Martin. I note in the attached summary you are mentioned as supportive of the project. Do you think that we should go ahead and suggest a meeting between Ms Martin and Jens, or do you think this would be better suited to first connect SG officials?

Grateful for any thoughts you have on the project.

redacted - S.38(1)(b)

redacted - S.38(1)(b) | Hydrogen Regulation and International Engagement | Directorate for Energy and Climate Change | Scottish Government
redacted - S.38(1)(b) | redacted - S.38(1)(b)

From: redacted - S.38(1)(b) **On Behalf Of** Cabinet Secretary for Net Zero and Energy

Sent: 30 January 2025 09:33
To: Central Correspondence Unit
Cc: Cabinet Secretary for Net Zero and Energy
Subject: FW: Combination Germany's hunger for energy with Scotland's offshore capabilities

For MR please.

Many thanks.

Kind regards,
redacted - S.38(1)(b)
redacted - S.38(1)(b) | Office of the Cabinet Secretary for Net Zero and Energy - Gillian Martin MSP
Scottish Government | St Andrew's House | Regent Road | Edinburgh | EH1 3DG |
Email: CabSecforNZE@gov.scot
All e-mails and attachments sent by a Ministerial Private Office to any other official on behalf of a Minister relating to a decision, request or comment made by a Minister, or a note of a Ministerial meeting, must be filed appropriately by the recipient. Private Offices do not keep official records of such e-mails or attachments.

From: redacted - S.38(1)(b) **On Behalf Of** Martin G (Gillian), MSP
Sent: 30 January 2025 08:52
To: Cabinet Secretary for Net Zero and Energy
Subject: FW: Combination Germany's hunger for energy with Scotland's offshore capabilities

From: Jens Cruse <jens.cruse@cruse-offshore.de>
Sent: Wednesday, January 29, 2025 5:04 PM
To: Martin G (Gillian), MSP <Gillian.Martin.msp@parliament.scot>
Subject: Combination Germany's hunger for energy with Scotland's offshore capabilities

Dear Minister, Dear Ms. Martin,
It was with great interest and pleasure that I read in German newspapers about Scotland's offer to export green hydrogen to Germany in the future. This development provides an excellent opportunity for me to draw your attention to a highly promising project that has been supported by the German Ministry of Economic Affairs over the past three years.
Cruse Offshore GmbH (COG), in collaboration with the Universities of Hamburg and Nuremberg-Erlangen, has developed a floating hydrogen generator specifically designed for the high-wind regions of the North Sea off the Scottish coast. What makes this installation unique is its ability to autonomously produce and store large quantities of green hydrogen on floating platforms. The system is not connected to a pipeline or grid. Instead, the hydrogen is stored in LOHC (Liquid Organic Hydrogen Carrier), enabling safe, efficient, and straightforward transport by tanker, similar to the transport of oil, like Aberdeen shuttle tanker company has been doing for

decades, see also https://www.knotoffshorepartners.com/shuttle-tankers/default.aspx#shuttle-tanker-industry
All relevant studies and simulations have now been successfully completed, and preparations are underway for the construction of a pilot project and the planning of a large-scale rollout. Enclosed, you will find an executive summary for your review.
In only one sentence: It's a combination of Germany's hunger for energy and its plant-building skills with Scotland's offshore capabilities, its huge wind-rich EEZ and the existing oil infrastructure in the most effective way.
We would be delighted to present our project to you and are, of course, available to answer any questions you may have.
Yours sincerely,

Jens Cruse

CRUSE Offshore GmbH (COG)
Eppendorfer Marktplatz 10
20251 Hamburg
Germany
T redacted - S.38(1)(b)
F redacted - S.38(1)(b)
M redacted - S.38(1)(b)
redacted - S.38(1)(b)
www.cruse-offshore.de

Geschäftsführer/CEO: Jens Cruse
Handelsregister/Commercial Register:
Amtsgericht Hamburg HRB 148438

Email chain 4

From: redacted - S.38(1)(b)@gov.scot>
Sent: 17 February 2025 14:40
To: redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b) @gov.scot>; redacted - S.38(1)(b)@gov.scot>
Cc: redacted - S.38(1)(b)@gov.scot>
Subject: RE: NEW UK funding proposal for offshore electrolysis

Hello

I'm not aware of any plans by UKG to fund offshore hydrogen demonstration projects for Aberdeen but that's not to say there aren't any but agree unlikely to be connected to HAR with its focus on the domestic market.

redacted - S.38(1)(b)

From: redacted - S.38(1)(b)
Sent: Monday, February 17, 2025 10:33 AM
To: redacted - S.38(1)(b); redacted - S.38(1)(b); redacted - S.38(1)(b)
Cc: redacted - S.38(1)(b)
Subject: RE: NEW UK funding proposal for offshore electrolysis

That would be great to ask redacted - S.38(1)(b), who will of course also be behind partly the TransHyDe conference 😊. I love it when things come together….

From: redacted - S.38(1)(b)@gov.scot>
Sent: 17 February 2025 10:22
To: redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>
Cc: redacted - S.38(1)(b)@gov.scot>
Subject: RE: NEW UK funding proposal for offshore electrolysis

That would be good if you could! Yes, redacted - S.38(1)(b) say grey as well, though it was reported as blue.

BMBF was working on a liquid H2 transportation container, I suppose though it would be a question of whether they're going any faster than LH2Europe's supplier! I could ask redacted - S.38(1)(b). Agree though that ammonia might just be easier – and nearly as good, from a story perspective.

redacted - S.38(1)(b)

redacted - S.38(1)(b)
Direktorin der Schottischen Regierungsvertretung, Deutschland
Head of Scottish Government Office in Berlin

Location: British Embassy, Wilhelmstraße 70, 10117 Berlin, Germany
Phone: redacted - S.38(1)(b)
Email: redacted - S.38(1)(b)

From: redacted - S.38(1)(b)@gov.scot>
Sent: 17 February 2025 11:03
To: redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>
Cc: redacted - S.38(1)(b)@gov.scot>
Subject: RE: NEW UK funding proposal for offshore electrolysis

Perhaps only ask naively when you're in conversation anyway, e.g. about: whether UKG has any further thoughts around how to take forward the outputs of the trade study or how GB Energy might be looking to take up its work in Aberdeen. Are there any further plans to support offshore production in the northern areas of the North Sea?

On the redacted - S.38(1)(b) idea, liquid H2 would be challenging to do early – LH2 Europe is going to use either a new ship that is already in development, but not on the market yet, or commission their own. Given the cooling facilities required etc, I am not sure there is an easy temporary mechanism for a very early pilot delivery – unless e.g. a university or other sector that already has the necessary cooling facilities were able to get involved, using a suitable small tank (from the LNG sector?). redacted - S.38(1)(b), redacted - S.38(1)(b) and redacted - S.38(1)(b) will know better.

On ammonia, the company to ask would be Eneus – redacted - S.38(1)(b) there used to work for Wood. Eneus is now looking to the German market again in its development plans. We could easily ask could ask about the practicalities of such a pilot when we next have a catch-up call with redacted - S.38(1)(b) (involving redacted - S.38(1)(b) and redacted - S.38(1)(b) as appropriate). You're right about the last test shipment – I think redacted - S.38(1)(b) may have even told me it was grey (but they didn't tell anyone).

All the very best,
redacted - S.38(1)(b)

From: redacted - S.38(1)(b)@gov.scot>
Sent: 17 February 2025 09:47
To: redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>; redacted - S.38(1)(b)@gov.scot>
Subject: RE: NEW UK funding proposal for offshore electrolysis

No but I can ask.

Separately but quasi relatedly, thinking about redacted - S.38(1)(b) proposal of a test shipment of e.g. ammonia, liquid H2 from Scotland to Hamburg – I think this could be really powerful if we can pull it off. As I understand it there hasn't been any more since the 2022 UAE shipment, which in any case was blue (rather than green) ammonia. So could be pretty impactful to do the first green. Do we think anyone is likely to be in a position? Redredactected - S.38(1)(b) - S.38(1)(b) is talking to Wood Group about possibilities, but perhaps we could think it over as well. Perhaps MHP, LH2Europe (AS I think you were talking to them about the possibility?)

Redacted - S.38(1)(b)
Direktorin der Schottischen Regierungsvertretung, Deutschland
Head of Scottish Government Office in Berlin

Location: British Embassy, Wilhelmstraße 70, 10117 Berlin, Germany
Phone: Redacted - S.38(1)(b)
Email: Redacted - S.38(1)(b)

Ich arbeite von Montag bis Freitag ganztags. Ich sende diese E-Mail zu einer Zeit, die meinen Arbeitszeiten entspricht, und wenn dies außerhalb Ihrer normalen Arbeitszeiten liegt, erwarte ich nicht, dass Sie antworten, bevor Sie das nächste Mal zur Arbeit kommen.

I work full time Monday to Friday. I am sending this email at a time that suits my working arrangements and if this is at a time outwith your own normal working hours, I do not expect you to respond until you are next at work.

From: Redacted - S.38(1)(b)@gov.scot>
Sent: 17 February 2025 10:41
To: Redacted - S.38(1)(b)gov.scot>; Redacted - S.38(1)(b)@gov.scot>; Redacted - S.38(1)(b)@gov.scot>
Subject: FW: NEW UK funding proposal for offshore electrolysis

To see below. Are any of you aware of anything? Presumably this is more of an innovation fund, unrelated to HAR. If the embassy is also talking about it, I wonder whether there may be an international dimension / this is something that might be badged as a follow up to the export study (not convinced about the latter, since the focus would surely still be production for domestic applications?). Or could they be looking to work up something positive for something for GB Energy?

We've got our monthly call with DESNZ on Thursday – we could try and find out more then.

All the best,
Redacted - S.38(1)(b)
From: Redacted - S.38(1)(b)@aquaventus.org>
Sent: 17 February 2025 09:00
To: Redacted - S.38(1)(b)@gov.scot>
Subject: NEW UK funding proposal for offshore electrolysis

Dear Redacted - S.38(1)(b),

I hope all is well and you have had a brilliant weekend.

Last week I was in Cologne for a not so well attended hydrogen fair. It was at the same time than Eworld and therefore only a handful of people were there. Nevertheless, that allowed for very productive talks. During one conversation with a UK OEM producer, I received the information that a ministry in London (I don't know more) is looking for proposals to fund offshore hydrogen demonstration projects for Aberdeen. A similar message I got from someone talking to the UK embassy in Berlin.

To keep these leads short, I was asking myself if you know anything more or are somehow involved. Happy to organize a brief Teams call this week to tie up all lose ends. 😉

Best wishes,
Redacted - S.38(1)(b)

AquaVentus	**Redacted - S.38(1)(b)**	**AquaVentus** Förderverein e.V. Amtsgericht Pinneberg VR 2339 PI	Vorstand: Redacted - S.38(1)(b)
	Redacted - S.38(1)(b) Aquaventus.org LinkedIN / YouTube	c/o DWV e.V. Robert-Koch-Platz 4 10115 Berlin	

202500479235 Documents for release

Ministerial advice note (12th April 2023)

From: **Redacted - S.38(1)(b)**
Hydrogen Strategy

DECC: Energy Industries
12 April 2023

Minister for Energy

1. Advice to the Minister for Energy on UK Government Hydrogen Policy and Regulatory Priorities

1.1 Priority and Purpose

1. Routine.

2. To advise the Minister of the UKG's hydrogen policy positions and regulatory priorities and how these align with Scottish Government ambitions.

Redacted - S.29(1)(a)

Offshore Pipeline Regulation

3. The current legislative framework does not include provision for the consenting of offshore hydrogen pipelines to connect offshore hydrogen production developments to shore. This is already delaying first-of-a-kind projects from taking final investment decisions (e.g. Vattenfall HT1 project).

4. We have urged the UKG to implement a legislative solution at the earliest possible opportunity to resolve this issue for first-of-a-kind projects to prevent significant further delays to investment in offshore hydrogen production.

Redacted - S.29(1)(a)

- **Regulation** – Establishing a regulatory framework to support onshore and offshore hydrogen production, storage, transportation, and use.

Redacted - S.29(1)(a)

5. The Minister is invited to note this submission.

Redacted - S.38(1)(b)
DECC: Energy Industries

Cabinet Secretaries and Ministers Copy List	For Action	For Information Portfolio interest	For Information Constituency interest	For Information General awareness
Cabinet Secretary for Wellbeing Economy, Fair Work and Energy		✓		
Cabinet Secretary for Net Zero and Just Transition		✓		
Minister for Small Business, Innovation and Trade		✓		

Officials Copy List
Kersti Berge Andrew Hogg Redacted - S.38(1)(b)

Redacted - S.29(1)(a)

Scottish Projects on the Shortlist

Project	Location	Production Scale	Company	Summary
GordonBush Hydrogen Project	Brora, Sutherland	10.5MW	SSER	Plan to produce and deliver renewable hydrogen using renewable energy from SSE's Gordonbush Extension Wind Farm in Sutherland in the Scottish Highlands – the project will aim to demonstrate a replicable and low-cost solution as an enabler to move on to electrolysis at scale at demand centres and for export.
Cromarty Hydrogen Project	Cromarty	17.9MW	Pale Blue Energy	Proposal to construct and operate an electrolyser plant east of the Beinn Tharsuinn Windfarm to produce renewable hydrogen initially to meet local distillery demands and prove the technology at this scale.
Whitelee Green Hydrogen	East Renfrewshire	7.1MW	Scottish Power Renewables	Whitelee wind farm, one of Europe's largest onshore wind farms, plans to have the UK's largest electrolyser at 20 MW, producing renewable hydrogen to help to reduce vehicle emissions in Glasgow as part of the Green Hydrogen for Glasgow project.
Dolphyn – Commercial Scale Demonstrator	Offshore, Aberdeen Coast	6.1MW	ERM	Demonstration project aiming to use a floating offshore wind turbine to produce renewable hydrogen at multi-GW scale – ERM intends to situate demonstrator project off the Aberdeen coast consisting of a floating offshore wind platform with a capacity of 10MW of green hydrogen production on site.
Green Hydrogen 1	Lanarkshire	5.6MW	Octopus Energy	HYRO is a joint venture between Octopus Energy Generation and renewable energy developer RES that has pledged £3bn to build three new green hydrogen plants across the UK by 2030.

Redacted - S.29(1)(a)

- We urge the UK Government to include the supporting of infrastructure at our ports and harbours in its wider energy infrastructure considerations. This is evidenced already with ERM's Dolphyn (offshore hydrogen production project) and Vattenfall's (HT1 project) for offshore production of hydrogen from the existing Aberdeen Windfarm - both of which will need offshore infrastructure pipelines and onshore infrastructure at the ports to be upgraded.

Redacted - S.29(1)(a)

Update from Cabinet Secretary to Just transition Commission (6th February 2024)

Cabinet Secretary for Transport, Net Zero and Just Transition
Mairi McAllan MSP

T: 0300 244 4000
E: scottish.ministers@gov.scot

Scottish Government
Riaghaltas na h-Alba

Just Transition Commission
Secretariat
PO Box 24152
Edinburgh
EH7 9FW
E: JustTransitionCommission@gov.scot

6 February 2024

2. Just Transition Fund for the North East and Moray: Update on progress

Dear Redacted - S.38(1)(b),

I am pleased to write to you to share the most recent progress update on the Just Transition Fund for the North East and Moray for 2023-24.

It has been another busy and exciting year of delivery for the Fund, which commenced in April (the start of the financial year) with the First Minister's visit to Aberdeen to announce a £25 million allocation in 2023-24 from the Just Transition Fund to the Scottish National Investment Bank. Funds allocated to the Bank are being invested within the North East and Moray on a commercial basis in line with the Bank's Investment Strategy and one of its key Missions: to support a Just Transition to net zero.

In addition to projects supported by the Bank, a total of 20 existing Just Transition Fund projects continue to progress toward delivery this year, with 12 scheduled to conclude by Mar end 2024. Further detail on successful projects is enclosed at **Annex B.**

Over the course of the year, I have had the opportunity to engage directly with stakeholders across the current portfolio of projects and to experience firsthand how Scottish Government investment in the region is supporting businesses, workers, and communities on the pathway to achieving a just transition to net zero.

In April 2023, I met with the Net Zero Technology Centre, Opportunity North East, the Energy Transition Zone Ltd, and Aberdeen and Grampian Chamber of Commerce. It was encouraging to see the range of innovative, cutting-edge projects being developed by businesses and organisations across the North East and Moray that will help fairly accelerate Scotland's journey towards net zero. The importance of

harnessing the knowledge and expertise of those who have lived and worked in the region was clear to me and has remained a priority for the Just Transition Fund over the course of this year.

In September 2023, I was delighted to have the opportunity to meet with students and staff, both at Camphill School Aberdeen and North East College Scotland, benefitting from the Social Enterprise Just Transition Fund and the Energy Transition Skills Hub projects respectively.

At Camphill School I visited the site of Murtle Market, a new social enterprise under construction by the school that will create an additional 40 meaningful training, work experience and skills development placements on campus, increasing the number of young people accessing the school's young adult services and workshops to 100. At North East College Scotland I was able to visit the site of the Energy Transition Skills Hub under construction which is set to quadruple the capacity of existing training facilities at North East Scotland College. Once operational, the Hub aims to help 1,000 people into energy transition jobs across five years. I also met with Friends of St Fittick's Park, a local campaign group, to better understand how the energy transition is affecting their community.

Given the diverse, cross cutting nature of the Just Transition Fund's current cohort of projects, visits have also been undertaken by Ministerial colleagues across the Energy, Business and Community Wealth portfolios. Most recently, the Minister for Small Business, Innovation Tourism and Trade visited two businesses in Aberdeen who have felt the transformational effects of Just Transition Fund support this year.

First, the Minister met with Ripcell who take industry by-products such as liquid waste from the whisky industry to produce ultrapure bio-acetic acid for the pharmaceutical and EV recycling industries at their pilot plant and warehouse in Aberdeen, established with Just Transition Fund capital. Having proven the technology in an industrial setting, Ripcell have recently begun an investment drive to upscale the project's operations and were able to demonstrate their patented processes to the Minister firsthand.

Secondly, the Minister met with AJT Engineering, a local firm based in Aberdeen with over 75 years' experience servicing traditional energy sectors, who have been supported to access new opportunities in renewable energy through our Supply Chain Pathway and Energy Transition Challenge Fund.

My officials continue to engage regularly with projects, monitoring and evaluating progress against key deliverables. Some key projects milestones and achievements in 2023-24 include:

- Just Transition Fund support for Just Transition Participatory Budgeting of £1.5 m in capital (up £500k from 2022-23) has resulted in 53 successful projects being awarded support across the region. 98 projects in total have been supported with £2.5 m in capital through this initiative since the Fund's launch in 2022. Participatory budgeting ensures that the voices, perspectives and priorities of local communities are heard, especially those with little engagement on climate change, but who may be particularly vulnerable to its impacts. Over 19,000 people voted for projects in 2023-24, almost double the number of voters in 2022-

23. This increased participation is something I am particularly pleased to see and wish to build upon. A full list of successful Just Transition Participatory Budgeting projects is enclosed as **Annex C.**

- 24 supply chain companies have been supported through the Supply Chain Pathway and Energy Transition Challenge Fund over the past two years, unlocking almost £5 million in private sector investment to date, with a further two years of delivery still ahead.
- In January 2024, the Scottish National Investment Bank announced the first investment made, committing up to £10 million of the Bank's Just Transition Fund allocation. A total investment of up to £20 million in renewable energy service provider Aurora will be made, to help supply a pipeline of reskilled workers and apprentices to drive forward Scotland's journey to net zero, and to help Aurora seal international acquisitions.
- The Pilot Energy Transition Skills Project delivered by the National Energy Skills Accelerator (NESA) is on track to provide over 600 learners across the region with access to free upskilling and reskilling opportunities.

You have rightly emphasised to the First Minister and to me, the importance of Measurement and Evaluation in our JT approach. The Scottish Government is committed, over the course of the coming year, to undertake an evaluation of the JT Fund's impact to date which will help inform the future development of the Fund. As part of this process, we will consider the outputs of the ongoing Economy and Fair Work Committee Inquiry into a Just Transition in the North East and Moray, as well as engage closely with our stakeholders across the region. We would also welcome the Commission's advice and input as this work progresses, and further detail will be provided on this within my next progress update in early summer.

I look forward to our next meeting.

3. MAIRI MCALLAN

ANNEX B

JUST TRANSITION FUND – CURRENT LIVE PROJECTS

Innovation

Digital Innovation Lab – Robert Gordon University **(£1.34 million)**

A cross-sector immersive technologies Digital Innovation Lab for the NE and Moray with an initial focus on supporting the construction sector to decarbonise through retrofitting of existing buildings and intelligent design of new ones.

Robert Gordon University proposed expansion of the lab to support decarbonisation of the built environment, which is one of the core deliverable goals of just transition.

Project is progressing in line with expectation. Remains on track for delivery.

Completion due **31/03/24**

Hydroglen – The James Hutton Institute **(£6.218 million)**

A green hydrogen powered farming community pilot project designed to help acquire knowledge needed to address fuel poverty and increase self-reliant, net zero carbon energy producers in rural communities.

Potential to create and support existing green jobs across farming, green hydrogen technologies, renewables, transport, and design/construction.

Environmental surveys have been completed for: proposed site of hydrogen facility; preferred wind turbine locations and preferred access route with other options in reserve.

Project is progressing in line with expectation. Remains on track for delivery.

Completion due **31/03/25**

Just Transition Hub – The James Hutton Institute (JHI) **(£7.192 million)**

Net Zero innovation hub and capacity building centre of excellence at JHI Aberdeen campus.

Hub will bring together industry and stakeholder groups to co-design and collaborate on JT initiatives, supporting the transition of the land use and agriculture sectors.

Potential to create new green jobs and support existing jobs at JHI, as well as at associated companies.

Completion due **31/03/25**

Moray Council Just Transition Masterplan – Moray Council **(£881 k)**

Five studies to support Moray's net zero energy transition including a feasibility study to expand Buckie Harbour to meet the needs of Offshore Wind companies and existing harbour users.

Potential to unlock capital investment in the region and complement existing regional strategies.

Two potential expansion options Identified for Buckie Harbour from the feasibility study.

Resource gaps with third parties have led to delays, which is an indication that not all allocated funding will be spent.

Completion due **31/03/24**

SeedPod – The Food Hub (NES) **(£3.1 million)**

Construction of a centre providing incubator and product development space to accelerate the growth and decarbonisation of food and drink sector businesses and start ups.

Sustainable, consumer focused and customer driven approach to build on the strengths of the food and drink manufacturing industry, with potential to generate between £69 - £109 million of net additional GVA over 30 years, and net additional employment of c.90 people FTE.

Ground works are now complete, Timber & Steel frame complete in late November with roof panels and cladding commence in the new year making the building wind and water tight by early March 2024.

The expected Company activity as set out in the business case continues to be delivered.

Completion due **31/03/24**

4. **Social Enterprise Just Transition Fund** – Social Investment Scotland (SIS) (£2 million)

Pilot challenge fund alongside programme of market building activity to support social enterprises.

Funding breakdown position: £1m Capital and £1m financial transactions.

Potential to unlock capital investment by increasing capacity of social enterprises to take advantage of upcoming opportunities in the region's net zero transition.

The pilot is coming to an end and this project is now at the point where the next step is in review for the options of future developmental delivery.

Completion due **31/03/24**

Supply Chain Pathway and Energy Transition Challenge Fund – Energy Transition Zone Ltd **(£9.8 million)**

Programme of capital grant awards to stimulate energy supply chain investment and programme to inform companies of pipeline of opportunities and support them in development of plans and strategy to optimise these available opportunities.

There is now evidence of the intended impact as this has offered the opportunity to diversify the skills in the local economy promoting opportunities for resilience and future sustainability and development.

Currently 13 applications in place forecast at a spend of £6,477 million.

Completion due **31/03/26**

Skills

Energy Transition Skills Hub - Energy Transition Zone Ltd **(£4.5 million)**
(Formerly Advanced Skills Manufacturing Hub)

Skills hub with options for accommodating new teaching, demonstration, storage and workspaces and associated equipment.

Provision of training facilities to upskill members of community, delivery of STEM engagement, potential long-term benefit for employment.

The delivery of this project has been extended to **31/3/25.**

5. Energy Skills Passport – OPITO (£4.996 million)

Development and deployment of a digital offshore energy skills passport to support the transition of skills and jobs.

Potential to increase skills mobility in the region supporting the cross-sector transfer of offshore energy workers and the net zero energy transition.

The delivery of this project has been extended to **31/3/24.**

Pilot Energy Transition Skills – National Energy Skills Accelerator (NESA) **(£1 million)**

Two phase project to determine skills required to meet needs of a just energy transition, looking at gaps in green courses and jobs and offering free courses.

Increase green course offering in the region and provides direct benefit to workers through support to re-skill and transition from the oil and gas sector.

Completion due **31/03/24**

Moray Net Zero Bottlenecks – University of the Highlands and Islands **(£209,596)**

State Analysis and Feasibility study focused on current and future skills requirements and labour supply chain bottlenecks in Moray.

UHI Moray has commissioned a piece of work from Warwick University's Centre for Employment Research for an evidence-based overview of the shifting demand for green skills based on an employment review and future needs analysis

Direct engagement and consultation with 120 regional business, public sector and third sector organisations

Identified that in Moray Hydrogen Strategy Steering Group (in partnership with Moray Council, Storegga and Mott MacDonald) can represent skills development and training in the region.

Completion due **31/03/24**

Emerging Technologies

Hydrogen Offshore Production (HOP2) – Net Zero Technology Centre **(£2.12 million)**

Demonstration of feasibility of offshore hydrogen production and storage by repurposing existing assets to produce green hydrogen.

Potential for significant impact on just transition outcomes if successful in demonstrating scalable offshore green hydrogen production.

Concept development activities are underway and are progressing. Conversations with operators and wind developers was started to secure an asset for modelling activities for Phase 2.

Tender was advertised on PCS for topsides layout & design scope.

Completion due **31/03/26**

6. Sustainable Solvent Recovery/EV Battery Recycling – Ripcell (£626,734)

Pilot separating green solvents from distillery waste.

Potential to unlock significant private investment and generate significant revenue streams for the region through:

- chemical sales to pharma, food and drink, plastic industry or through technology licences using distillery co-products as a pipeline to service a battery recycling plant supporting the EV industry.

Completion due **31/03/24**

Tidal Rotor Generator – Shine Engineering **(£167,200)**

Feasibility to develop a modular tidal/river energy generator system.

Potential for positive impact in terms of decarbonising local energy supplies, reducing energy costs and supporting transition of workers from oil and gas to renewables.

Completion due **31/03/24**

Wave Energy Converter – Seaweed Energy **(£100,100)**

Development of device that generates electricity from the oscillation of waves.

Potential to supply low cost, low carbon energy, and support transition of oil and gas workers into renewables.

Completion due **31/03/24**

Community Benefits

Community Capacity Support - North East Scotland Climate Action Network (NESCAN Hub) **(£70,250)**

Delivery of community engagement projects and events.

Support to help build capacity and ensure communities can actively engage in the just transition.

Completion due **31/03/24**

Railway Feasibility - Aberdeen and Grampian Chamber of Commerce/Campaign for North East Rail (CNER) **(£250K)**

The first of two quarterly meetings with the Full Stakeholder Group were held on 23 November 2023 together with discussions on future targets and milestones.

Focus has moved towards public, business, and political engagement with a survey currently in design and plans being made for public meetings and drop-in sessions in January. A briefing to locally based politicians is planned for 11th December.

Completion due **31/03/24**

Findhorn Watershed Riverwoods Pilot - Findhorn, Nairn, and Lossie Rivers Trust (£969,972) 7.

Creation of a thriving, regenerated River Findhorn watershed, with an unbroken network of riparian woodland along its riverbanks, supporting the restoration of wild salmon populations.

Supports community and wider stakeholder engagement to help ensure preservation of key biodiversity and ecosystems.

The delivery of this project has been extended to **31/3/25**

Just Transition Participatory Budgeting – tsiMoray, Aberdeen Council of Voluntary Organisations, Aberdeenshire Voluntary Action, NESCAN Hub and Money4Moray (£1 million) 8.

Coordination and delivery of PB approach ensuring local people have opportunity to directly influence how public money is spent to support a just transition.

Empowers and directly benefits local communities across the region.

Completion due **31/03/26**

North East Adventure Tourism - Opportunity North East **(£2.097 million)**

Supports the transformation of the region into a world class destination for adventure tourism by facilitating the development of high-quality sustainable facilities and low carbon infrastructure.

Potential to unlock large scale investment, supporting new job creation and developing the tourism sector helping diversification across the region.

Completion due **31/03/24**

ANNEX C Redacted - S.33(1)(b)

Redacted - S.33(1)(b)

Redacted - S.33(1)(b)

Briefing for Cabinet Secretary regarding Just Transition Fund (27th March 2024)

MINISTER EJTFW BRIEFING: JUST TRANSITION FUND
March 2024

Just Transition Fund Projects

To date, the Just Transition Fund (JTF) has awarded £75 million: £50 million to 24 projects, plus £25 million to the Scottish National Investment Bank to be invested in the North East on a commercial basis. A breakdown of projects supported by the Fund is available in **Annex A**.

JTF - Capital Expenditure

FINANCIAL YEAR	CAPITAL BUDGET (Allocated/Indicative) (£ Millions)	SPEND (Actual/Forecast) (£ Millions)
2022-23	10.0	9.95
2023-24*	25.0	13
2024-25	12.2	16.04
2025-26	40.0	7.4
TOTAL	**87.2**	**46.4**

JTF – Financial Transactions

In 2023-24, £25 million in financial transactions has been allocated to the Scottish National Investment Bank to be invested in line with the Bank's Investment Strategy and its missions, including in support of a just transition. Officials met with the Bank on Tuesday 26 March for an update on the Bank's progress investing the JTF allocation. In summary the Bank has committed:

- up to £10 million of its JTF allocation as part of a £20 million overall investment in Aurora Energy Services to support upskilling and reskilling of existing workforce.
- up to £9 million of its JTF allocation as part of a £26 million overall investment in Aberdeen-based EV charging technology manufacturer Trojan Energy.

The Bank also anticipates committing up to £5 million of its JTF allocation in satellite launch vehicle manufacturer Orbex, Redacted - S.33(1)(b).

Redacted - S.33(1)(b)

Future Financial Years

Redacted - S.33(1)(b)

All existing projects will continue to be funded in 2024-25. Officials will undertake an evaluation of JTF activity so far ('Phase One') in 2024-25 aiming to commence the next phase in the following financial year.

Future Funding

Redacted - S.33(1)(b)

The Economy and Fair Work Committee recently published a report into just transition in the North East and Moray, shared with Ministers Friday 22 March.

Redacted - S.33(1)(b)

Participatory Budgeting

The Just Transition Participatory Budgeting Fund (JTPBF) has run in 2022-23 and 2023-24 across the North East and Moray with funding from the JTF. Through the Fund, organisations are invited to apply for capital spend projects that will contribute towards a net zero future for their communities. Unlike traditional models of funding distribution, the decision about what projects do and do not get funding lies with the public, who are invited to vote for their preferred projects.

The JTPBF is delivered through a local delivery partnership of 5 organisations (ACVO TSI, Aberdeenshire Voluntary Action, TSI Moray, NESCAN Hub, Money for Moray) and is supported by Scottish Government's Community Empowerment team. Capital and resource for the Fund are managed by the Just Transition Fund team.

In Year 1, 2022-23, the JTPBF launched with £1 million from the Just Transition Fund, supporting a total of 45 projects to deliver a range of activities including the purchase of electric vehicles, fabrication of a mobile climate change exhibit, retrofitting, increasing energy efficiency and improving community green space. Projects were decided by 10,000+ voters from across the 3 regions.

In Year 2, 2023-24, the JTPBF launched with £1.5 million capital from the Just Transition Fund, funding a total of 53 projects which range from electric vehicles that aim to tackle social isolation, sustainable community garden resources, energy efficient building replacements, zero-waste enterprises and active travel initiatives. Projects were decided by 19,000+ voters who cast over 100,000 votes from across the 3 regions.

Redacted - S.33(1)(b)

Annex A: Just Transition Fund Projects

Concluding 2024-25, 2025-46

Hydroglen – The James Hutton Institute (£6.218 million)
- ***Redacted - S.33(1)(b)***
- A green hydrogen powered farming community pilot project designed to help acquire knowledge needed to address fuel poverty and increase self-reliant, net zero carbon energy producers in rural communities.
- Potential to create and support existing green jobs across farming, green hydrogen technologies, renewables, transport, and design/construction.
- Environmental surveys have been completed for: proposed site of hydrogen facility; preferred wind turbine locations and preferred access route with other options in reserve.

Climate Assembly Pilot - North East Scotland Climate Action Network (NESCAN Hub) (£386,152 k)
- ***Redacted - S.33(1)(b)***
- Community led just transition assemblies to develop an innovative participatory and deliberative process to drive decision making.
- Supports young people and communities, including vulnerable communities across the region to engage and help shape the net zero transition.

Community Capacity Support - North East Scotland Climate Action Network (NESCAN Hub) (£70,250 k)
- ***Redacted - S.33(1)(b)***
- Delivery of community engagement projects and events.
- Support to help build capacity and ensure communities can actively engage in the just transition.

Just Transition Participatory Budgeting – tsiMoray, Aberdeen Council of Voluntary Organisations, Aberdeenshire Voluntary Action, NESCAN Hub and Money4Moray (£3 million)
- ***Redacted - S.33(1)(b)***
- Coordination and delivery of PB approach ensuring local people have opportunity to directly influence how public money is spent to support a just transition.
- Empowers and directly benefits local communities across the region.

Just Transition Hub – The James Hutton Institute (JHI) (£7.192 million)
- Net Zero innovation hub and capacity building centre of excellence at JHI Aberdeen campus.
- The Hub will bring together industry and stakeholder groups to co-design and collaborate on JT initiatives, supporting the transition of the land use and agriculture sectors.
- Potential to create new green jobs and support existing jobs at JHI, as well as at associated companies.

Supply Chain Pathway and Energy Transition Challenge Fund – Energy Transition Zone Ltd (£9.8 million)

- Programme of capital grant awards to stimulate energy supply chain investment and programme to inform companies of pipeline of opportunities and support them in development of plans and strategy to optimise these available opportunities.
- Potential to facilitate creation of good quality, sustainable jobs, address skills gaps, secure pipeline for future workforce and increase stem engagement.

Energy Transition Skills Hub (Formerly Advanced Skills Manufacturing Hub) – Energy Transition Zone Ltd (£4.5 million)
- Skills hub with options for accommodating new teaching, demonstration, storage and workspaces and associated equipment.
- Provision of training facilities to upskill members of community, delivery of STEM engagement, potential long-term benefit for employment.

Hydrogen Offshore Production (HOP2) – Net Zero Technology Centre (£2.12 million)
- Demonstration of feasibility of offshore hydrogen production and storage by repurposing existing assets to produce green hydrogen.
- Potential for significant impact on just transition outcomes if successful in demonstrating scalable offshore green hydrogen production.
- Concept development activities are underway and are progressing. Conversations with operators and wind developers was started to secure an asset for modelling activities for Phase 2.
- Tender was advertised on PCS for topsides layout & design scope.

Findhorn Watershed Riverwoods Pilot - Findhorn, Nairn, and Lossie Rivers Trust (£969,972 k)
- Creation of a thriving, regenerated River Findhorn watershed, with an unbroken network of riparian woodland along its riverbanks, supporting the restoration of wild salmon populations.
- Supports community and wider stakeholder engagement to help ensure preservation of key biodiversity and ecosystems.

<u>Concluding March 2024</u>

Innovation Digital Innovation Lab – Robert Gordon University (£1.34 million)
- A cross-sector immersive technologies Digital Innovation Lab for the NE and Moray with an initial focus on supporting the construction sector to decarbonise through retrofitting of existing buildings and intelligent design of new ones.
- Robert Gordon University proposed expansion of the lab to support decarbonisation of the built environment, which is one of the core deliverable goals of just transition.
- Project is progressing in line with expectation. Remains on track for delivery.

Moray Council Just Transition Masterplan – Moray Council (£881,000 k)
- Five studies to support Moray's net zero energy transition including a feasibility study to expand Buckie Harbour to meet the needs of Offshore Wind companies and existing harbour users.

- Potential to unlock capital investment in the region and complement existing regional strategies.
- Two potential expansion options Identified for Buckie Harbour from the feasibility study.
- Resource gaps with third parties have led to delays, which is an indication that not all allocated funding will be spent.

SeedPod – The Food Hub (NES) (£3.1 million)
- Construction of a centre providing incubator and product development space to accelerate the growth and decarbonisation of food and drink sector businesses and start ups.
- Sustainable, consumer focused and customer driven approach to build on the strengths of the food and drink manufacturing industry, with potential to generate between £69 - £109 million of net additional GVA over 30 years, and net additional employment of c.90 people FTE.
- Ground works are now complete, Timber & Steel frame complete in late November with roof panels and cladding commence in the new year making the building wind and water tight by early March 2024.
- The expected activity as set out in the business case continues to be delivered.

Social Enterprise Just Transition Fund – Social Investment Scotland (SIS) (£1.027 million)
- Pilot challenge fund alongside programme of market building activity to support social enterprises.
- Potential to unlock capital investment by increasing capacity of social enterprises to take advantage of upcoming opportunities in the region's net zero transition.
- The pilot is coming to an end. Officials are reviewing a proposal for Year 3 of the Fund.

Energy Skills Passport – OPITO (£4.996 million)
- Development and deployment of a digital offshore energy skills passport to support the transition of skills and jobs.
- Potential to increase skills mobility in the region supporting the cross-sector transfer of offshore energy workers and the net zero energy transition.

Pilot Energy Transition Skills – National Energy Skills Accelerator (NESA) (£1 million)
- Two phase project to determine skills required to meet needs of a just energy transition, looking at gaps in green courses and jobs and offering free courses.
- Increase green course offering in the region and provides direct benefit to workers through support to re-skill and transition from the oil and gas sector.

Moray Net Zero Bottlenecks – University of the Highlands and Islands (£210,000 k)

- State Analysis and Feasibility study focused on current and future skills requirements and labour supply chain bottlenecks in Moray.
- Potential to join up private and public sector interests in the region to identify areas for supply chain and skills investment.
- UHI Moray has commissioned a piece of work from Warwick University's Centre for Employment Research for an evidence-based overview of the shifting demand for green skills based on an employment review and future needs analysis
- Direct engagement and consultation with 120 regional business, public sector and third sector organisations
- Identified that in Moray Hydrogen Strategy Steering Group (in partnership with Moray Council, Storegga and Mott MacDonald) can represent skills development and training in the region.

Sustainable Solvent Recovery/EV Battery Recycling – Ripcell (£626,734 k)

- Pilot separating green solvents from distillery waste.
- Potential to unlock significant private investment and generate significant revenue streams for the region through:
    - chemical sales to pharma, food and drink, plastic industry or through technology licences
    - using distillery co-products as a pipeline to service a battery recycling plant supporting the EV industry.

Railway Feasibility - Aberdeen and Grampian Chamber of Commerce/Campaign for North East Rail (CNER) (£250,000 k)

- Feasibility relating to proposal for a new Buchan to Peterhead and Fraserburgh via Ellon railway.
- The first of two quarterly meetings with the Full Stakeholder Group were held on 23 November 2023 together with discussions on future targets and milestones.
- Focus has moved towards public, business, and political engagement with a survey currently in design and plans being made for public meetings and drop-in sessions in January. A briefing to local politicians was planned for 11th December.

North East Adventure Tourism - Opportunity North East (£2.097 million)

- Supports the transformation of the region into a world class destination for adventure tourism by facilitating the development of high-quality sustainable facilities and low carbon infrastructure.
- Potential to unlock large scale investment, supporting new job creation and developing the tourism sector helping diversification across the region.

<u>Concluded</u>

NESS Carbon Capture Feasibility Study – Aberdeen, Aberdeenshire, and Moray Councils (£100,000 k)

- Feasibility study to determine if there is a viable project to retrofit carbon capture systems to the existing 'NESS energy from waste' facility which processes

nonrecyclable waste from Aberdeen City, Aberdeenshire and Moray councils, to produce both electricity for the national grid and heat for a district heating network in Torry, Aberdeen.

Easter Anguston Farm - VSA (£500,000 k)

- Feasibility evaluating vision for Centre of Excellence and providing a detailed and structured business plan with project timeline and budgets.
- Longer term potential to create sustainable jobs. Free to access resource and learning space for local community.

Tidal Rotor Generator – Shine Engineering (£167,200 k)

- Feasibility to develop a modular tidal/river energy generator system.
- Potential for positive impact in terms of decarbonising local energy supplies, reducing energy costs and supporting transition of workers from oil and gas to renewables.

Wave Energy Converter – Seaweed Energy (£100,100 k)

- Development of device that generates electricity from the oscillation of waves.
- Potential to supply low cost, low carbon energy, and support transition of oil and gas workers into renewables.

Findhorn Ecovillage - Park Ecovillage Trust and Findhorn Innovation Research and Education (£226,775 k)

- Four feasibility studies including scaling organic food and ambient ground loop district heating.
- Potential for learning to support roll-out of just transition across Scotland including in affordable sustainable housing and transport.

The Cabrach Distillery – The Cabrach Trust (£361,767 k)

- Development of distillery to use revenues for rural regeneration and community led regeneration master plan.
- Potential for new job creation and supports a circular economy providing co-products to local green gas supplier positively impacting on green energy production in the region.

Ministerial briefing regarding Net Zero Technology Centre (16 June 2023)

BRIEFING: NET ZERO TECHNOLOGY CENTRE (NZTC)

Just Transition Fund Project: Hydrogen Offshore Production (HOP2)

- NZTC were awarded **£2.12 million** in Just Transition Fund support over financial years 2022 to 2026 for the HOP2 project.

- HOP2 builds on the £500,000 HOP feasibility study funded via the competitive BEIS Low Carbon Hydrogen Supply competition in 2018 and aims to demonstrate that offshore hydrogen production and storage is feasible at a scale of 500MW – 1GW through the repurposing of existing assets.

- The Project also intends to outline what a new build asset for offshore hydrogen production could achieve within the UK Continental Shelf, and what the impact of anchoring this emerging sector in Scotland will be on regional workforce, supporting a just transition.

- The project will identify the technologies for deployment offshore as well as transport and storage options. The project will also include an assessment of fixed and floating assets.

- HOP2 has potential to positively impact on jobs, skills and education as well as support realisation of SG's net zero goal.

Forthcoming Ministerial engagement with NZTC

Redacted - S.33(1)(b)

ANNEX A

CABINET SECRETARY FOR NET ZERO AND JUST TRANSITION – VISIT TO NZTC, ABERDEEN – TUESDAY 4 APRIL

Attendees:

- Màiri McAllan, Cabinet Secretary for Net Zero and Just Transition
- Redacted - S.38(1)(b), Head of Just Transition Fund
- Redacted - S.38(1)(b), Just Transition Fund
- Colette Cohen, CEO, NZTC
- Redacted - S.38(1)(b), Head of External Relations, NZTC
- Redacted - S.38(1)(b), Solution Centre Director, NZTC

Key Points:

- NZTC gave a short introduction emphasising their relationship with industry and focus on maximising the potential of the North Sea followed by a comprehensive view of activity including level of investment made alongside industry, quantum of technologies screened and field trials completed.
- Cab Sec noted her commitment to continued close working between NZTC and SG and the important role the Centre and others can play by giving government the evidence base needed to accelerate policy development.
- Redacted - S.33(1)(b)

Ministerial briefing for Cabinet Secretary (2 May 2025)

Marine Directorate: Marine Environment
2 May 2025

Cabinet Secretary for Net Zero and Energy

Redacted - S.29(1)(a)

9. Hydrogen production in Scotland's inshore region (0-12nm) is devolved to Scottish Ministers, and our SG policy position in the Hydrogen Action Plan 2022 is that we will not support new developments producing grey hydrogen (i.e., hydrogen produced from oil and gas) where CO2 emissions are unabated. We anticipate that most Scottish offshore hydrogen projects will be producing renewable electrolytic hydrogen, and would therefore fall under the offshore renewables amendments, if these are agreed.

Redacted - S.29(1)(a)

Redacted - S.38(1)(b)

Redacted - S.29(1)(a)

Proposal for consideration of Hydrogen Production from ScotWind and Innovation and Targeted Oil and Gas (INTOG) developments in assessments for Sectoral Marine Plans

Purpose: the aim of this paper is to describe the approach to consideration of hydrogen production from offshore wind developments within the assessments supporting the development of the Sectoral Marine Plan for Offshore Wind Energy (SMP-OWE) and Innovation and Targeted Oil and Gas decarbonisation (INTOG)

Policy context

The Scottish Government Hydrogen Policy Statement sets an ambition of generating 5GW of hydrogen by 2030. The ambition for hydrogen production is closely aligned with expanding capacity ambitions for both offshore and onshore wind. The Scottish Offshore Wind to Green Hydrogen Opportunity Assessment, which was published alongside the Scottish Hydrogen Assessment report, sets out Scotland's renewable hydrogen production potential as 25 GW by 2045, dependent on market conditions[1].

Some of the successful applicants for ScotWind leases are considering hydrogen production as part of their plans. The INTOG leasing round allows applicants to consider conversion to hydrogen from excess generation capacity beyond powering oil and gas platforms.

Future Hydrogen production technologies

Hydrogen production powered by offshore wind is in early stages of development in Scotland. The development of hydrogen production and transportation infrastructure and maturation of technologies at commercial scale is required. Review of the available literature has identified the following potential hydrogen technologies:

<u>Offshore Hydrogen production</u>

- Jacket support structure
    - New fixed or floating or attached to existing wind turbine
    - Re-use of existing oil and gas assets
- Hydrogen production equipment
    - Hydrogen electrolyser with abstraction of seawater and discharge of saline effluent to sea
    - Or steam methane reformation [this would need to be combined with either CCS or exhaust emissions]
- Compressors and cooling equipment
- Substation (to convert electricity from offshore wind development into requirements for hydrogen production equipment)
- Export cabling from offshore wind development (HVAC)
- Export/ offtake facilities
    - Export flowline (with risers to seabed) ~250 m offshore corridor buried (to at least 0.6m (regulatory depth requirements unclear)) or rock dumped or mattress placement – requires compression and cooling of Hydrogen

[1] Hydrogen Action Plan (www.gov.scot)

    - Offtake tankers – flexible offtake pipelines – requires compression and cooling of hydrogen
- Onshore tie-in location
- Onshore receiving facility
    - Hydrogen storage
    - Compressors and processing equipment
    - Export
        - off-take facilities by road
        - transportation by sea - tanker
        - Pipe - connection to onshore national grid transmission network

Onshore Production

- Production facility
    - New or re-purposed (e.g. Sullum Voe, Flotta)
- Hydrogen production equipment
    - Hydrogen electrolyser with abstraction of water
    - Or steam methane reformation [this would need to be combined with either CCS or exhaust emissions]
- Substation (to convert electricity from offshore wind development into requirements for hydrogen production equipment)
- Export cabling from offshore wind development with landfall point
- Hydrogen storage
- Compressors, cooling, and processing equipment
- Export facilities
    - off-take facilities by road
    - transportation by sea - tanker
    - Pipe - connection to onshore national grid transmission network
    - Conversion to ammonia or metal hybrids

ScotWind and INTOG Projects with proposals for conversion of electricity generated to Hydrogen

- N1 - West of Orkney - potential connection to Flotta terminal (Orkney) overland via Hoy and potentially Fara Scoping Report (marine.gov.scot)
- NE1 sites
- BP Alternative Energy Investments 50MW Innovation Project

Hydrogen Production Projects in early stages of development:

Onshore Production

- Flotta Hydrogen Hub, Orkney
- Orion Project, Shetland

Offshore Production

- HT1 hydrogen demonstration project, Aberdeen connection to Aberdeen Offshore Wind Farm (AOWF) vattenfall_-_screening_opinion_request_report_redacted.pdf (marine.gov.scot)

Existing projects: Surf n turf (Eday – Orkney) 500kW of Hydrogen from onshore wind

Proposals for Hydrogen production in assessment

A non-exhaustive list of the potential sources for impacts on marine environment are captured in table 1.

As large-scale hydrogen production powered by offshore wind is in its infancy, project development proposals are still in the design phase, and details such as export routes to market or connection points are unknown it is proposed that a summary narrative of the potential future hydrogen production sector and potential impacts is incorporated into both the SMP-OWE and INTOG assessment reports but that no site specific, qualitative or quantitative assessment is undertaken at this time.

Using available literature potential impacts from future hydrogen production within the scope of the SMP-OWE and INTOG plans will be identified. The impacts will then be reviewed to establish if they are already captured and considered within the scope of the assessments. For any residual impacts not currently captured within the assessments, a summary of the known impact from literature and any mitigation measures will be included in the narrative, building on table 1 below.

Activity	Source	SEA topic	Receptor
Geophysical and environmental survey	Seismic - Noise and vibration	Biodiversity flora and fauna	Benthic habitats and species Marine mammals and fish
Offshore construction works	Drilling, pipelay, jetting, cutting etc – Noise and vibration	Biodiversity flora and fauna	Benthic habitats and species Marine mammals and fish
	Rock dump, mattresses, substructure footings, -loss or change of habitat physical disturbance/ sediment re-suspension	Biodiversity flora and fauna Population and Human Health Soil (marine geology and physical processes) Water quality	Benthic habitats and species Marine mammals and fish
Onshore construction works	Hydrogen production or receiving facility – visual impacts	Population and Human Health Cultural heritage Landscape, seascape and visual amenity	
	Road traffic – air quality/ noise	Population and Human Health	
Maintenance and operation	Cabling – EMF	Biodiversity flora and fauna	Benthic habitats and species
	Mooring lines - entanglement	Biodiversity flora and fauna	Marine mammals and fish
	Physical presence – habitat loss/ displacement or disturbance Changes to sediment dynamics	Biodiversity flora and fauna Ecosystem change Population and Human Health Soil (marine geology and physical processes) Water quality	Benthic habitats and species Marine mammals and fish Other marine sectors
	Physical presence – hydrogen production	Climatic factors	
	Physical presence – visual impacts	Population and Human Health Cultural heritage	

		Landscape, seascape and visual amenity	
	Operation – water extraction, desalination or saline effluent	Biodiversity flora and fauna Ecosystem change Soil (marine geology and physical processes) Water quality	Benthic habitats and species Marine mammals and fish
	Transportation: vessel traffic / road traffic - Navigational safety Transits routes air quality / noise	Population and Human Health	Other marine sectors

Table 1: non-exhaustive sources and potential impacts from future hydrogen production.