

ABERDEEN CITY COUNCIL

COMMITTEE	Urgent Business Committee
DATE	30 October 2023
EXEMPT	The covering report is not exempt, however the content of Appendices A, B and C are exempt under paras 6, 8 and 9 of Part I of Schedule 7A to the Local Government (Scotland) Act 1973
CONFIDENTIAL	No
REPORT TITLE	Aberdeen Hydrogen Hub - Joint Venture Partnership Phase 1 Business Case Approval
REPORT NUMBER	COM/23/342
DIRECTOR/CEO	Angela Scott
CHIEF OFFICER	Craig Innes
REPORT AUTHOR	Barry Davidson
TERMS OF REFERENCE	1.

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to seek a range of approvals to progress Phase 1 of the Aberdeen Hydrogen Hub (“AHH”).

2. RECOMMENDATIONS

That the Committee:-

- 2.1 Approve the revised Business Case contained in Appendix A, noting the funds to be provided by the Council in support of a positive final investment decision (FID) for Phase 1 of the AHH are to be drawn from the Council’s General Fund Capital programme; and
- 2.2 Note the list of Project Contracts in Appendix B that will be entered into by bp Aberdeen Hydrogen Energy Limited to deliver Phase 1 of the AHH and authorise the Chief Officer – Governance following consultation with the Head of Commercial and Procurement, the Chief Officer – Finance, and the Chief Officer – Corporate Landlord, to discharge the Council’s shareholder function in relation to the approval of such Project Contracts and authorise the entering into of them and any other Project Contracts and/or documentation, that they consider to be necessary or desirable in connection with the delivery of Phase 1 of the AHH, subject to the budget approval in recommendation 2.1 above.

3. CURRENT SITUATION

- 3.1 bp Aberdeen Hydrogen Energy Limited (the “JVCo”) was incorporated on 10 March 2022 and has been progressing the front end engineering design for Phase 1 of the AHH through equity funding provided from both Shareholders.

- 3.2 The detailed design work has allowed JVCo to engage the market and the revised Business Case in Appendix A reflects the updated costs to deliver Phase 1 of the AHH.
- 3.3 The JVCo has held two public consultation events; the first on 10 December 2022, and the second on 28 January 2023 inviting members of the public to shape the proposed plans for Phase 1 of the AHH.
- 3.4 Planning permission for the erection of a hydrogen production and vehicle re-fuelling facility, solar farm and underground solar grid connection (Aberdeen Hydrogen Hub) at Hareness Road and Ness Former Landfill Site, Coast Road, Aberdeen was granted on 29 June 2023 under application 230299/DPP.
- 3.5 The JVCo has issued the business case for Phase 1 of the AHH. The business case requires to be considered before 31 October in order for JVCo to take a FID on Phase 1 as any delay could jeopardise the award of external grant funding which would negatively impact the shareholder investment case.

Previous Council/Committee Decisions in relation to the AHH

- 3.6 On 28 October 2020 (COM/20/185) the City Growth and Resources Committee instructed the Chief Officer - City Growth following consultation with the Chief Officer - Finance, Head of Commercial and Procurement Services and the Chief Officer - Governance to identify the optimum investment and delivery model for the production, storage and distribution of renewable hydrogen for Aberdeen.
- 3.7 On 10 March 2021 (RES/21/055) Full Council authorised the Chief Officer - City Growth, in consultation with the Head of Commercial and Procurement, to undertake a procurement exercise for the appointment of a partner to deliver the hydrogen hub programme and agreed in principle to a sum of £19.4 million over the financial years 2021/22 and 2022/23 for a hydrogen production facility on completion of the procurement exercise to secure a joint venture partner for the hydrogen hub programme.
- 3.8 On 25 October 2021 (COM/21/269) the Urgent Business Committee approved the appointment of BP International Limited ("bp") as the preferred bidder for the AHH Joint Venture.
- 3.9 On 3 February 2022 (COM/22/031) the City Growth and Resources Committee approved the appointment of bp as Joint Venture partner to deliver the Aberdeen Hydrogen Hub Strategic Partnership and also approved the Business Case for Phase 1 of the AHH, including the estimated capital investment and the seed funding investment to support the delivery of community benefits, supply chain development and training and skills and referred it to the Council's budget process.
- 3.10 On 7 March 2022 (RES/22/061) Full Council approved the £19.4 million budget for NHCP891 Aberdeen Hydrogen Hub (Joint Venture) as part of the General Fund Capital Programme.

- 3.11 On 29 June 2023 the Planning Development Management Committee approved an application (230299/DPP) for detailed planning permission for the erection of a hydrogen production and vehicle re-fuelling facility, solar farm and underground solar grid connection (Aberdeen Hydrogen Hub) at Hareness Road and Ness Former Landfill Site, Coast Road Aberdeen.

4. FINANCIAL IMPLICATIONS

- 4.1 The revised Business Case contained in Appendix A includes details of the funding required of the Council by the JVCo which will be met using capital budget NHCP891 Aberdeen Hydrogen Hub (Joint Venture). The total approved budget is £19.4 million.
- 4.2 The Council has provided £1.975 million of funding to JVCo to date to support development of the Phase 1 AHH proposal.
- 4.3 The capital funding provided by the Council will be converted into share capital on the Council's balance sheet.

5. LEGAL IMPLICATIONS

- 5.1 The Council has consent from Scottish Government to act as a trading operation through its investment in JVCo under Section 1A of the Local Authorities (Good and Services) Act 1970.
- 5.2 The proposed investment by the Council as a public authority (previously "the state" under former State Aid Rules) in the Joint Venture is considered to be compliant with subsidy control legislation.

6. ENVIRONMENTAL IMPLICATIONS

- 6.1 The following environmental assessments were undertaken by JVCo and formed part of the planning application for which permission was granted on 29 June 2023:
- Landscape and Visual Assessment;
 - Transport Statement (x2);
 - Noise Impact Assessment;
 - Preliminary Ecological Appraisal (PEA);
 - Protected and Notable Species Report;
 - Wintering Birds Survey;
 - Habitats Regulations Appraisal Screening Report; and

- Heritage Assessment.

Additional environmental assessments undertaken by JVCo include:

- Glint and Glare Assessment;
- Drainage Impact Assessment;
- Breeding Birds Survey; and
- Ground Investigation Survey (x2).

6.2 The recommendations within this report will have a positive environmental impact on the reduction of carbon emissions from vehicles. Renewable hydrogen used in a fuel cell electric vehicle has zero well to wheel emissions and will support the delivery of the Council's Climate Change Plan targets.

7. RISK

7.1 The recommendations contained within this report and the assessment of risk contained within the table below have been carefully considered against the Council's Risk Appetite Statement. The proposals set out in the recommendations are consistent with the Council's approved risk appetite statement.

7.2 The risks in this report reflect the risk of failure to progress Phase 1 of the AHH from a Council Shareholder perspective. A separate risk assessment for JVCo is contained in Appendix C.

7.3 The risk ratings in this report reflect the risk level post-mitigation assuming the mitigation actions identified will be implemented and completed.

Category	Risks	Primary Controls/Control Actions to achieve Target Risk Level	*Target Risk Level (L, M or H) *taking into account controls/control actions	*Does Target Risk Level Match Appetite Set?
Strategic Risk	If the Business Case and equity investment for Phase 1 of the AHH is not approved, there is a risk that the City will lose first mover advantage in the hydrogen market.	Approval of the recommendations in this report would support the Council to deliver these strategic objectives.	L	Yes

	<p>This will negatively impact the commercialisation of green hydrogen and the strategic vision to establish Aberdeen as a global centre of excellence for hydrogen, supporting the transition of skills, and the diversification of the energy supply chain in the North East from fossil based to renewables.</p>			
Compliance	<p>Compliance with relevant commercial legislation including trading, procurement and subsidy control.</p>	<p>A full legal review has been undertaken to ensure compliance with applicable legislation.</p>	L	Yes
Operational	<p>Lack of hydrogen supply for vehicles in the City.</p> <p>With the commitments the Council has made to vehicles (buses, Council fleet, etc.) there is a danger that demand will exceed supply.</p> <p>Supply failure will either delay the roll out of the Council's hydrogen fleet</p>	<p>Approval of the recommendations within this report will ensure the delivery of a new resilient, reliable green hydrogen production and dispensing facility in the City.</p>	L	Yes

	programme (and transition to a net zero fleet) or will require hydrogen to be sourced through external retailers which will leave the Council exposed to market pricing volatility.			
Financial	If JVCo decides not to proceed with Phase 1 of the AHH at the point of final investment, the Council would have to write down the value of shares issued.	Approval of the recommendations in this report would mitigate against this risk.	M	Yes
Reputational	Failure to obtain approval to approve the Business Case and equity investment for Phase 1 of the AHH would damage the City's reputation as an exemplar of best practice in deploying zero-carbon technologies in the energy and transport sectors.	Approval of the recommendations in this report would mitigate against this risk.	L	Yes
Environment / Climate	Failure to obtain approval to approve the Business Case and equity investment for Phase 1 of the AHH would negatively impact the	Approval of the recommendations in this report would mitigate against this risk. The delivery of the AHH will contribute to the City's energy transition from fossil	L	Yes

	decarbonisation of the Council's fleet operations and general air quality improvements in the City region.	based to net carbon zero public sector; net carbon zero city and ultimately a climate positive city over the next few decades.		
--	--	--	--	--

8. OUTCOMES

<u>COUNCIL DELIVERY PLAN 2023-2024</u>	
	Impact of Report
<p>Aberdeen City Council Policy Statement</p> <p><u>Working in Partnership for Aberdeen</u></p>	<p>The proposals within this report support the delivery of the following aspects of the policy statement:-</p> <p><u>Improving Education Choices</u></p> <ul style="list-style-type: none"> - Work with the City's universities, North East Scotland College and businesses to increase educational and training options. <p><u>Building a Greener and Sustainable City</u></p> <ul style="list-style-type: none"> - Work with partners to deliver a just transition to net zero and plan to make Aberdeen a net-zero City by no later than 2037, and earlier if that is possible. - Support Aberdeen's continued pioneering of hydrogen technologies and make the case to bring alternatively powered rail services to the City. - Continue to reduce the carbon footprint of the Council's building estate and vehicle fleet. <p><u>A Prosperous City</u></p> <ul style="list-style-type: none"> - Develop our economy in a genuine partnership with the private sector, third sector and residents. - Work with partners to stimulate sustainable economic development, including a managed transition to a carbon neutral economy and work in partnership with the academic, business and other relevant sectors to ensure the long-term future of the energy industry.

	<ul style="list-style-type: none"> - Seek to buy goods, services and food locally whenever possible, subject to complying with the law and public tendering requirements.
<u>Aberdeen City Local Outcome Improvement Plan 2016-26</u>	
<p>Prosperous Economy Stretch Outcomes</p>	<p>The proposals within this report support the delivery of the following LOIP Stretch Outcomes:</p> <ol style="list-style-type: none"> 3. 500 Aberdeen City residents upskilled/reskilled to enable them to move into, within and between economic opportunities as they arise by 2026. <ul style="list-style-type: none"> - The deployment of hydrogen vehicles as part of the long-term plan to deliver the AHH is directly linked to Aberdeen’s energy transition and economic diversification. - Delivery of the AHH programme will have a direct impact on local jobs (additional technicians, refuelling capability, local supply chain support, training, construction, delivery) and significant potential on GVA of the region and the number of jobs.
<p>Prosperous People Stretch Outcomes</p>	<p>The proposals within this report support the delivery of the following LOIP Stretch Outcomes:</p> <ol style="list-style-type: none"> 11. Healthy life expectancy (time lived in good health) is five years longer by 2026. <ul style="list-style-type: none"> - Poor air quality can impact on human health by aggravating existing respiratory and cardiovascular illness and other medical conditions, including asthma. Road traffic is the main source of raised pollution levels, the use of fuel cell vehicles will benefit residents in air quality management areas across the City as fuel cell electric vehicles have lower nitrogen dioxide and particulate matter emissions than diesel equivalents.
<p>Prosperous Place Stretch Outcomes</p>	<p>The proposals within this report support the delivery of the following LOIP Stretch Outcomes:</p> <ol style="list-style-type: none"> 13. Carbon emissions reduction by 61% by 2026 and adapting to the impacts of our changing climate.

	<ul style="list-style-type: none"> - Renewable hydrogen used in a fuel cell electric vehicle has zero emissions. ACC's hydrogen vehicles have saved over 140 tonnes of CO2 in the past few years as they run on green tariff produced hydrogen.
<p>Regional and City Strategies</p> <p><u>City Strategies</u></p>	<p>The proposals within this report directly support the delivery of the following City Strategies:</p> <p><u>Net Zero Aberdeen Routemap (2022)</u></p> <p>The AHH supports the delivery of three of the six net zero themes:</p> <ul style="list-style-type: none"> - Mobility: the production, storage and dispensing of green hydrogen from the AHH will support the transition to low and zero emission vehicles helping to secure the City as a world leader in transport and energy technologies, improving air quality and significantly reducing carbon emissions from transport to support net zero 2045. - Buildings and Heat: the built environment accounts for 19% of Aberdeen's emissions, the vast majority of which are residential. Almost 90% of all homes use fossil fuels for heating, cooking and hot water and majority are connected to gas grid. Hydrogen could potentially displace natural gas (this is largely dependent on successful demonstration and positive decisions on the future of hydrogen in the gas grid from the UK Government). - Energy Supply: the AHH will support the commercialisation of green hydrogen and establish Aberdeen as a global centre of excellence for hydrogen, supporting the transition of skills, and the diversification of the energy supply chain in the North East from fossil fuel to renewables. <p><u>Net Zero Vision & Prospectus for Aberdeen (2020)</u></p> <ul style="list-style-type: none"> - The AHH will support Aberdeen to become a climate positive city, and at the same time help to lead the world on the rapid shift to a net zero future by leveraging its unique assets and capabilities to support the global energy transition.

Strategic Infrastructure Plan – Energy Transition (2020)

The AHH will support the following strategic infrastructure goals which will contribute to the City's energy transition from fossil based to net carbon zero public sector; net carbon zero city and ultimately a climate positive city over the next few decades:

- Clean energy supply for the city, UK and, particularly, globally by decarbonising electricity using – hydrogen, solar, wind and wave.
- Sustainable mobility – extending alternative fuel use (hydrogen) for transport.

Council Climate Change Plan 2021-2025

- The AHH will provide a resilient supply of green hydrogen to support the Council's growing hydrogen fleet and interim net zero targets.

Aberdeen City Region Hydrogen Strategy & Action Plan 2015-2025

- The AHH will support the development of a hydrogen economy in Aberdeen by developing infrastructure, increasing fleet, developing supply chain and training opportunities, hydrogen storage/grid balancing, and production of green hydrogen through connection to renewables.

Air Quality Action Plan (2011)

- The production, storage and dispensing of green hydrogen from the AHH will support the transition to low and zero emission vehicles which can have a positive impact on air quality in the City. Poor air quality can impact on human health by aggravating existing respiratory and cardiovascular illness and other medical conditions, including asthma. Road traffic is the main source of raised pollution levels, the use of fuel cell vehicles will benefit residents in air quality management areas across the City as fuel cell electric vehicles have lower nitrogen dioxide and particulate matter emissions than diesel equivalents.

<p><u>Regional Strategies</u></p>	<p>The proposals within this report directly support the delivery of the following Regional Strategies:</p> <p><u>Nestrans 2040: Regional Transport Strategy for the North East of Scotland (2021)</u></p> <p>The production, storage and dispensing of green hydrogen from the AHH will support two of the six key priorities:</p> <ul style="list-style-type: none"> - Significantly reduced carbon emissions from transport to support net zero by 2045; and - Air quality that is cleaner than the World Health Organisation standards for emissions from transport. <p><u>Regional Economic Strategy (Draft - 2023)</u></p> <ul style="list-style-type: none"> - The AHH will support the 2035 Vision for our economy to lead in the production of green energy solutions and production of new renewable energy.
-----------------------------------	---

9. IMPACT ASSESSMENTS

Assessment	Outcome
<p>Integrated Impact Assessment</p>	<p>Stage 1 Integrated Impact Assessment has been completed.</p>
<p>Data Protection Impact Assessment</p>	<p>Not required. JVCo will be responsible for ensuring compliance with any data protection obligations.</p>
<p>Other</p>	<p>No additional impact assessments have been completed for this report.</p>

10. BACKGROUND PAPERS

10.1 The following papers were consulted in the preparation of this report:

- Net Zero Vision and Infrastructure Plan – PLA/20/088 – Urgent Business Committee – 6 May 2020
- Aberdeen Hydrogen Hub Programme – COM/20/185 – City Growth and Resources Committee – 28 October 2020
- General Fund Revenue Budget and Capital Programme 2021/22 to 2025/26 – RES/21/055 – 10 March 2021

- Hydrogen Hub Preferred Bidder Appointment – COM/21/269 – Urgent Business Committee – 25 October 2021
- Aberdeen Hydrogen Hub Strategic Partnership – Contract Award/Approval of Joint Venture – COM/22/031 – City Growth and Resources Committee – 3 February 2022
- General Fund Revenue Budget and Capital Programme 2022/23 to 2026/27 – RES/22/061 – 7 March 2022
- Detailed Planning Permission – Application Reference 230299/DPP – Planning Development Management Committee – 29 June 2023

11. APPENDICES (all exempt)

Appendix A – AHH Phase 1 Business Case
 Appendix B – Project Contracts
 Appendix C – JVCo Risk Assessment

12. REPORT AUTHOR CONTACT DETAILS

Name	Barry Davidson
Title	Commercial Manager
Email Address	bdavidson@aberdeencity.gov.uk
Tel	01224 045414