



# Delegated Decision Report

3 June 2020

**Subject:** Business Case Development Funding - Investment Fund Update and Funding Approvals - VAWT Urban Wind Power

**Report of:** Maria Antoniou

**Decision maker:** Paul Hanson, Interim Head of Paid Service

**Portfolio:** Place and Productivity

## Report Summary

The purpose of this report is to request the approval of Business Case Development Funding, to the total value of £12,500 for Newcastle City Council to test the viability and deliverability of Vertical Axis Wind Turbines (VAWT).

Following the approval of the Delegated Decision Report - Investment Fund Update, Part A on the 1<sup>st</sup> of April under standing delegation HPS11 in Part 2.9 of the Constitution, the Interim Head of Paid Service, in consultation with Investment Panel, can approve Business Case Development Fund (BCDF) investment decisions up to the value of £150,000 of NTCA Investment..

## Recommendations

The Interim Head of Paid Service is asked to

- i. Approve £12,500 from the Business Case Development Fund to support the Vertical Axis Wind Turbine Urban Power proposal, subject to the funding conditions set out in paragraph 1.8.

## 1. Background Information, Proposals and Timetable for Implementation

Proposal Name	Vertical Axis Wind Turbines (VAWT) Urban Wind Power
Lead Organisation	Newcastle City Council
Partners	N/A
Delivery Areas	Newcastle
Timescales	May 2020 – March 2021
Total expenditure	£50,000
NTCA Investment Fund	£12,500 (25%)

- 1.1** Decarbonisation of energy and transport is at the core of clean growth, the UK has set a legal obligation to reduce emissions and most recently legislated for a net zero target for emissions by 2050. Newcastle City Council declared a climate emergency on 3<sup>rd</sup> April 2019 and is actively seeking to invest in ways to reduce the local authority's emissions through low carbon projects that contribute to a low carbon economy.
- 1.2** Newcastle City Council has already implemented multiple PV systems on homes and public buildings, however as the area is largely urban, wind technology has not been a viable option. Early modelling suggests that VAWT has the potential to offer a new and productive option for renewable energy within the City's administrative area. This project seeks to build on initial modelling and assess the feasibility of the technology, identify pilot sites, undertake stakeholder engagement, and determine the potential impact of wider rollout.
- 1.3** The project will test the viability and deliverability of Vertical Axis Wind Turbines (VAWT) using a pilot site in Newcastle and through consultancy work determine the business models and related economic and environmental impact. This could support wider deployment leading to business growth opportunities in the local offshore energy sector, strengthening the lead role of North of Tyne for energy demonstration and innovation assets.
- 1.4** Business Case Development Funding is requested to commission a technical and design feasibility study which will cover:
- The technology options of Vertical Axis Wind Turbines (VAWT) – looking at different settings but developing a package upon which a much wider range of projects could lead from;
  - The planning application requirements, acoustic and shadow flicker modelling, load profiles, and the potential for the onsite utilisation of the energy and cost savings based on a selected pilot site;
  - The response from a wide range of stakeholders including local community through consultation, in relation to the selected pilot site
  - The whole lifecycle costings and funding models which will include full installation costs, grid connection issues, maintenance and services costs;
  - The economic impact analysis including opportunities for the offshore energy supply chain, business growth and jobs
- 1.5** The tangible objectives which the project seeks to achieve include:
- Identification of up to two potential sites in Newcastle to be part of a pilot project.
  - Identification of wider deployment sites should the pilot project be successful.
  - Development of a local blueprint for VAWT deployment based on the consultation, planning and connection learning from the demonstrator/s.

- Production of a feasibility study for VAWT including technology options, commercial and financial models, and environmental impacts by February 2021, to support the wider roll out of VAWT in the region.
- An economic impact analysis including opportunities for the offshore energy supply chain, business growth and jobs.
- Dissemination event to share outcomes to North of Tyne local authorities and wider stakeholders in March 2021.

**1.6** Following the feasibility study, Newcastle Council will be in a position to develop a full business case to proceed with the construction of the demonstrator on the most appropriate site.

**1.7** A full appraisal was undertaken on the BCDF proposal and it identified that the proposal has a strong fit with the Combined Authority's Vision and key priorities and has clear strategic fit with wider regional and national policy. The overall risk rating of the business case is green.

**1.8** The North of Tyne Investment Panel considered this project on the 7<sup>th</sup> April and recommended to the Interim Head of Paid Service that Business Case Development Funding of £12,500 (25% of overall project costs) is approved for the Vertical Axis Wind Turbines Urban Wind Power project.

This funding award should not be seen as a gateway to future funding from NTCA for the wider project.

The funding approval is subject to the following conditions:

- Newcastle City Council acknowledges that they must meet any additional costs that arise following the procurement exercise.
- Prior to NTCA issuing a funding agreement, Newcastle Council must provide additional information within the application document to demonstrate how the project aligns with the NTCA Inclusive Economy Statement.
- Approval of funding is conditional upon NTCA receiving evidence that all match funding is in place.
- Newcastle City Council must provide a state aid position to the satisfaction of NTCA which justifies the aid approach in relation to the applicant organisation

## **2. Potential Impact on Objectives**

**2.1** The proposals to establish the feasibility of Vertical Axis Wind Turbines (VAWT) as a means of renewable energy generation within a predominantly urban area has a strong fit with the Combined Authority's vision and key priorities. The project demonstrates strong alignment with the North of Tyne Economic Vision and demonstrates alignment with regional and national policy, specifically the North East Energy for Growth Strategy and the UK Industrial Strategy.

## **3. Key Risks**

**3.1** Risks associated the funding application have been considered as part of the application and appraisal process. The conditions associated with the funding approvals relate to the mitigation of risks.

#### 4. Financial and Other Resources Implications

Financial Implications Associated with the programme allocation and budget approvals proposed in this Report

	2019/20	2020/21	2021/22	2022/23	Total
VAWT Urban Wind Power	0	12,500			£12,500
<b>Total</b>					<b>£12,500</b>

Resources are available in the NTCA budget to cover the proposed expenditure.

#### 5. Legal Implications

5.1 The Interim Monitoring Officer's comments have been included in this report.

#### 6. Equalities Implications

6.1 All of our constituent authorities receiving grant have in place individual equality policies which they adhere to and are in line with the Public Sector Equality duty which came into force in April 2011.

#### 7. Inclusive Economy Implications

7.1 Prior to NTCA issuing a funding agreement, Newcastle Council must provide additional information within the application document to demonstrate how the project aligns with the NTCA Inclusive Economy Statement.

#### 8. Climate Change Implications

8.1 With all three Local Authorities in the North of Tyne area and the Combined Authority announcing climate emergencies, there is a need to develop innovative approaches to decarbonisation. The urban environment in Newcastle creates a unique problem for localised energy generation. VAWT is, as yet, an unproven technology in urban environments. However, it has the potential to generate significantly more energy than other renewable technologies, such as PV, which are deemed to be better suited to heavily built areas. The application states that no UK city is currently investing in this technology and if the demonstration is successful, Newcastle and the North of Tyne would be the first area in the UK to seek to roll out the technology.

#### 9. Consultation and Engagement

9.1 The project has been discussed at Technical Officers Group meeting, Investment Panel, at Officer level in NTCA, Newcastle City Council and North East LEP.

#### 10. Appendices

None

#### 11. Background Papers

None

## **12. Contact Officers**

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## **13. Glossary**

VAWT - Vertical Axis Wind Turbine