

LIVERPOOL CITY REGION COMBINED AUTHORITY

To: The Metro Mayor and Members of the Combined Authority

Meeting: 26th November 2021

Authority/Authorities Affected: All

EXEMPT/CONFIDENTIAL ITEM: No

KEY DECISION No

REPORT OF THE PROJECT DIRECTOR, MERSEY TIDAL POWER PROJECT AND PORTFOLIO HOLDER: CLIMATE EMERGENCY & RENEWABLE ENERGY

MERSEY TIDAL PROJECT UPDATE

1. PURPOSE OF REPORT

- 1.1. This report provides an update on the Mersey Tidal Power Project (MTPP) for the period from March 2020 to date and looks ahead into 2022/26.

2. RECOMMENDATIONS

- 2.1. It is recommended that the Liverpool City Region Combined Authority:
- (a) note the continued strategic and economic fit of the tidal project as a central cog of LCR NetZero Plan to 2040, in that it's a public sector led project, targeting decarbonisation of regional electricity with a predictable, low carbon generation asset that has alignment to industrial, employment, and green growth agendas;
 - (b) note the progress under Phase 3 Concept and the planned works until the end of this phase in March 2022; and
 - (c) note the extent of Phase 4 activity required in the period 2022-26 and the intent to provide a further update in early 2022 on a recommended way forward when there is greater clarity on national policy in relation to Tidal energy.

3. BACKGROUND

- 3.1. This paper provides an update on MTPP further to the paper submitted and approved in February 2020 which recommended to take forward with a dedicated internal team made up of internal staff and/or secondments, with reduced consultancy support.
- 3.2. The project team were to be responsible for carrying out the necessary technical studies and commercial due diligence to choose a preferred scheme going forward and inform the scheme design selected to take through the planning process.
- 3.3. The project is in Phase 3 which is to progress the detailed understanding of the project's technical and geographical parameters which in turn will aid selection of a preferred scheme in Liverpool Bay and to position this within the context of UK Energy market and national policy.
- 3.4. The Phase 3 activity includes understanding the environmental constraints, development of engineering concept and hydrodynamic modelling to enable assessment of a preferred scheme and the likely schedule, costs and benefits.
- 3.5. Phase 3 activity supports the Combined Authority Corporate Plan for 2021-24 objectives in respect of the continued development of a Tidal scheme which provides the opportunity for a major low carbon generation project valuable to the UK and regional Net Zero ambition.
- 3.6. There is still a compelling case for low carbon, sustainable projects like this and national government is moving towards the acceleration of electrification from Renewable sources with an ambition to fully source electricity generation from low carbon sources by 2035.

Environmental

- 3.7. In Phase 3, officers are developing understanding of the river and coastal environment, its dynamic and complex systems and the potential environmental impacts, benefits, mitigation or enhancements.
- 3.8. Merseyside Environmental Advisory Services (MEAS) have been commissioned to produce a study in the Mersey and Liverpool Bay area over a 1,600 sq. km area. The purpose of this was to provide a better understanding of the designations, potential data and evidence strategy, and trends associated with the local marine environment in advance of any further assessment of the physical location of potential schemes. This work is now complete and provides reference information as Officers start to consider the options for schemes and preferred location.
- 3.9. The project will be considered a Nationally Significant Infrastructure Project (NSIP) which means it will require a detailed and comprehensive Environmental Impact Assessment (EIA), consistent with national guidelines, and this will be subject to scoping and consultation. This will be an essential part of Phase 4 activity.
- 3.10. An outline Consenting Strategy is in development this will include the scope, the activities, schedule, and cost of compiling a Development Consent Order (DCO) for

the project. An external environmental consultancy has been appointed to advise and develop this and it will include Birds, Fisheries, Habitats and Water quality.

- 3.11. In the period to end June 2021, informal discussions have been held with several key environmental stakeholders, on a voluntary basis or under discretionary advisory services. The stakeholder group have been advised of the intention to commence initial wildlife surveys to use the ecology calendar windows in late 2021 and recently provided an update to the same stakeholders on plans for Wintering Bird surveys to commence in Oct 2021.
- 3.12. Wider engagement continues with academic and other environmentally interested parties to encourage knowledge-sharing, long-term trends and aspects of climate adaptation and mitigation that may affect the region. Of interest are predictions for the sea level rise and storm surges that will change the character of the river and associated marshes under the banner 'Mersey 2150'.
- 3.13. Over the remainder of 2021/22 further engagement will take place with The Crown Estate, Duchy of Lancaster and, Marine Management Organisation (MMO) which will help inform the anticipated timescales for licensing.

Energy, Hydrodynamic and Marine Traffic Modelling

- 3.14. In Phase 3, there will be confirmation of the potential energy yield possible from options identified in Phase 2. Officers have procured expert modelling services from specialist consultancies and academics to model the potential yield from the river and estuary and to gain a further understanding of how a tidal range project can be controlled to minimise any changes to river water levels and tidal profile. This work is currently underway and will inform the scale of the project and configuration that will be most appropriate for future development.
- 3.15. A Marine Traffic Study has been commissioned to better understand the extent of vessel movements in the Mersey and surrounding areas including the volume of traffic that transfers to QEII docks at Eastham and to the Manchester Ship Canal. This activity will report on historic traffic, future forecasts including the potential of Freeport and will enable a marine navigation risk assessment against potential scheme locations.
- 3.16. In the remaining period of Phase 3, Officers will complete the current modelling scope, review results and then start to integrate the technical performance assessment for energy production with considerations of the environmental processes related to sediment, water quality and wider impacts. This will include a cross-discipline review of current work and recommendations on potential location of a barrage and a potential location of a lagoon.

Cost analysis and engagement with Supply Chain

In Phase 3, cost estimates have also been further developed within the scope of concept design to allow comparison between barrage and lagoon schemes and approval of further development budget.

- 3.17. Mott McDonald have undertaken a further review of Phase 2 feasibility work. This concept work will help improve the understanding of major design elements and

form the basis of a structured cost estimate and constructability assessment. Additional expertise in the production of an outline cost plan has been procured and a schedule for the remaining development phases. This will lead to the creation of a high-level Construction Phase Plan.

- 3.18. In the remaining period of Phase 3, Officers will conclude the cost reports for development activity and develop a supply chain strategy including how the project could be supported by regional manufacturing content and green employment skills. Initial economic assessment activity is being delivered by the LCRCA evidence team.

Funding and Development Model

- 3.19. The development funding requirement for future years is being prepared and will include a Development Business Case, which will be brought to a future meeting of the Combined Authority.
- 3.20. The current funding of development activity to Mar 2022 will include the preparation of a concept plan in readiness for the commencement of Consenting and outline Design Development, known as Phase 4. An option to extend the current concept development, Phase 3, for a further 12 months may be timely given this is an emerging area of national policy.
- 3.21. The investment model for the capital project, with an expected investment decision in 2025/6 will be developed further in Phase 4 alongside of the structure, ownership and counterparties.
- 3.22. There is growing interest in the UK renewables market including oil and gas majors looking to diversify, and from corporate investors. Fund availability continues to grow to support renewable projects and consideration of models and route to market will be explored further in 2021/22. The recent volatility in gas price and continued push for renewables to provide all electricity by 2035 will continue to create the strategic context where the development of this tidal range project in LCR will be a valuable option for UK energy policy to help achieve Net Zero and maintain low emissions for the next century.

4. STAKEHOLDER COMMUNICATIONS

- 4.1. In addition to specific parties identified above, the Tidal project has continued to engage with a variety of stakeholders and is currently refreshing and developing a wider communication plan for 2021.
- 4.2. The Covid situation and lockdown have restricted the ability for engagement to be through face-to-face meetings and promotion events since April 2020, and hence most meetings have been through electronic means. However, the approach has received positive feedback.
- 4.3. In the remaining period of Phase 3, engagement will continue with a wide body of stakeholders in advance of any formal consultation.

5. PROPOSED NEXT STEPS

- 5.1 The remaining activity in Phase 3 until March 2022 will focus primarily on;
- Government engagement to influence policy and secure place for investment as a significant low carbon generation asset as part of UK and LCR Net-Zero.
 - Environmental work necessary to inform the approach to Consenting and Permitting including consideration of timescales for surveys and evidence.
 - Detailed energy and hydrodynamic modelling to understand scheme operations and assessments of total generation capacity and connection.
 - Detailed cost analysis and engagement with the supply chain on the remaining development activity and capital investment.
 - Funding and delivery model development.
- 5.2 A preferred option for the tidal scheme will be presented in March 2022 as part of the development business case.

6. RESOURCE IMPLICATIONS

Financial

- 6.1. The MTPP Phase 3 activity is being managed within the existing budget.
- 6.2. The anticipated budget to continue to progress and seek relevant consents for the project in Phase 4 is in the range £30-70m depending on the scope and scheduled ambition for construction start date.

Human Resources

- 6.3. The current MTPP team is formed of eight staff members and is supplemented by external consultancy support.
- 6.4. The scale of team envisaged in Phase 4 rises to twenty staff as part of LCRCA client team during 2022-26.

Physical Assets

- 6.5. At this stage of the development project, a final geographical location or scheme configuration has not been chosen, so the absolute site and access lands are not yet decided.
- 6.6. Officers expect to engage an outline land access and site availability study within the current development phase to better understand planning designations, potential connection points and utility corridors and final office/maintenance locations.

Information Technology

- 6.7. The current project team has procured computing software and services consistent with a complex engineering project and will review software and licence requirements on a regular basis. All procurement and enabling of software are accessed in liaison with the IT team to manage the wider cybersecurity assessments required.
- 6.8. The final project asset will have a wide requirement for data connections and specialist systems both in terms of operational and control facilities but also wider trading and interconnection systems. This is consistent with an increase in digital and flexibility of the future energy system.

7. LEGAL IMPLICATIONS

- 7.1. The current project development phase involves liaison and support from the internal legal team and from external advisors, currently Weightmans solicitors.
- 7.2. In the next stage of development, Phase 4, Officers look to embark on formal consenting, as a nationally significant infrastructure project and through the Development Consent Order process. This will require a range of legal and planning law support. Officer will also look to explore the structure and financial arrangements necessary to create an organisation with capacity to lead a multiple billion infrastructure project.

8. RISKS AND MITIGATION

- 8.1. A project risk register has been established and is regularly reported on, capturing project specific risks and mitigation actions. These will be developed further during the current activities and presented with the recommended scheme and final development funding paper. The project has also commenced an assessment of the cost envelope for the future scheme using quantitative risk assessment techniques. Further work is required in this area in advance of the final development funding approval.

9. EQUALITY AND DIVERSITY IMPLICATIONS

- 9.1. The initial Equality Impact Assessment screening for Phase 3 is a preliminary and basic assessment of the method of resourcing and the project has followed CA policy on recruiting.
- 9.2. The scale of the development activity and community consultation envisaged in Phase 4, will present significant opportunity to engage across the region. Officers will seek advice from the wider LCR diversity programme on how this might be best reviewed, assessed and achieved.
- 9.3. Phase 4 activity will include assessments on accessibility and wider employment opportunities. Officers expect to commission an initial assessment of the variety of employment and skills opportunities that the project could support as part of the wider industrial strategy and green economy. This will include thoughts on how

training and access to work could feature as part of the future manufacturing and construction activity.

10. PRIVACY IMPLICATIONS

10.1. The current phase of development activity involves discussion with a number of parties, associations and individuals. Officers are reviewing how the GDPR elements on communication is managed to comply with wider obligations and how information is stored and how responses to questions and queries are progressed. This will be assessed through a DPIA and reviewed again before formal consultation commences in Phase 4.

11. COMMUNICATION ISSUES

11.1. The project team continues to engage widely and recognise the need to provide an update to CA, Local Authority colleagues and members over the next six months. A plan is in preparation with respect to providing information updates on a planned and reactive basis.

11.2. The project team continue to promote open conversations with a broad audience concerning current activity and potential plans A record of engagement is retained.

12. CONCLUSION

12.1. This report provides an update on the progress of the Phase 3 development activities on the MTPP and outlines the scale of Phase 4 Consenting activity that will be necessary to progress the scheme to a Development Consent Order.

12.2. The team will continue to develop and position the project in anticipation of either a continuation of Phase 3 concept work or the potential for Phase 4 commencement in 2022. Further updates report will be provided to the Combined Authority.

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Appendices:

None

Background Documents:
None.