PRESS RELEASE by Severn Estuary Tidal Bar (SETB) Ltd.

For Immediate release

SETB and Jacobs are collaborating to advance development of tidal energy technology using a Research and Innovation SMART grant from the UK Government to support a £2m project.

"SETB is a UK-based research and development company dedicated to developing new turbine technology that has the potential to open up the multi-billion-pound tidal energy industry," said Professor Brian Morgan of Cardiff Metropolitan University and Chairman of SETB Ltd.

SETB, Jacobs and a consortium of stakeholders, consisting of the Tidal Range Alliance and two universities, have been awarded funding from the UK government to help develop a new type of contra-rotating, bi-directional turbine. This new turbine will be able to operate at a much lower head of water than conventional turbines.

The successful development of this 'low head' turbine will improve the viability and potential of the UK tidal range industry. A total of nearly £2m will be invested in the project – part funded by a SMART grant from UK Research and Innovation (UKRI) and match funded by industry.

The project will progress the optimisation and testing of a very low head turbine (VLHT) via a programme of computational fluid dynamic (CFD) modelling. It will involve building a large-scale test rig that will allow the accreditation and manufacture of a fully functional prototype turbine at Jacobs' Warrington Technology and Innovation Centre.

"If the testing of this prototype confirms the results of the CFD modelling, it will allow an outline design and pricing of a 'demonstrator' turbine, which will underpin the next stage of the project – a fully operational tidal lagoon or barrage," said Stephen Prendergast, Director of SETB and Head of Design for the project.

"The VLHT is being developed to address the challenges faced by several UK Tidal Range schemes. The aim is to improve the performance and reduce the costs of zero carbon electricity through the development of bi-directional generation and storage," said Don Snow, SETB Director for Sustainable Development.

Professor Brian Morgan added: “The VLHT technology will support the capture of wider economic and environmental benefits in terms of local jobs, cheaper grid connections and the long-term protection of coastal communities and natural habitats from rising sea levels.”

Notes to Editors

The SMART project is the first stage of a comprehensive programme summarised in “Turning the Tide”:

Turning the tide on climate change and energy resilience (adobe.com)