



## Session 3 – Energy and the Estuary

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@SevernEstuary #SEPForum24

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**Western** Porth y  
Gateway Gorllewin



**Severn Estuary**  
Commission  
Comisiwn  
**Aber Afon Hafren**

# Severn Estuary Commission Update

Dr Madeleine Havard



8<sup>th</sup> October 2024

## Western Gateway

The Western Gateway, the pan-regional partnership for South Wales and Western England, launched the independent Severn Estuary Commission on 12th March 2024 in the Senedd, with support from both UK and Welsh Government.



**Bath & North East Somerset Council**  
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# Commissioners



Western  
Gateway Porth y  
Gorllewin



Severn Estuary  
Commission  
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**Chair, Dr Andrew Garrad**  
FREng CBE



**Sue Barr**



**Peter Davies CBE**



**Dr Nigel Costley**



**Dr Madeleine Havard**



**Ian Simm**



**Chris Mills**

## Why now?

- The UK faces the critical challenge of balancing the need for energy security with the imperative of tackling the climate and nature emergencies.
- Harnessing the Severn Estuary could generate up to 7% of the UK's electricity needs and support energy security.
- The Estuary is of internationally important ecological value, home to diverse species and habitats that contribute to Europe and the UK's rich biodiversity.
- The Estuary plays a major role not only in the local and regional economy, but in the UK as a whole.

The Severn Estuary Commission is tasked with exploring the feasibility of tidal energy development in a way that aligns with the principles of the Well-being of Future Generations (Wales) Act 2015, and may conclude that large-scale tidal energy development is not feasible in this context, allowing for an honest and objective assessment of the best path forward.



## Severn Estuary Commission

An independent commission to  
explore the potential for sustainable  
energy from the Severn Estuary

March 2024

[www.severncommission.co.uk](http://www.severncommission.co.uk)



## Commission's Objectives

- Review and update the evidence base developed over the last several decades;
- Understand and assess:
  - the physical and ecological characteristics of the estuary, especially the importance of its unique environment and the future impact of climate change;
  - the relevant policy and legislation;
  - the current and potential future uses of the estuary.
- Review the different methods of generating electricity from the tidal energy resource and their contribution to a future energy system;
- Identify the key socio-economic challenges and opportunities of developing tidal energy schemes; and
- Identify means of financing and regulating potentially very long-term projects.

## Work Programme



**Environment**



**Energy**



**Finance**



**Socio-economic**



**Stakeholder Engagement**



**Existing Evidence Base**



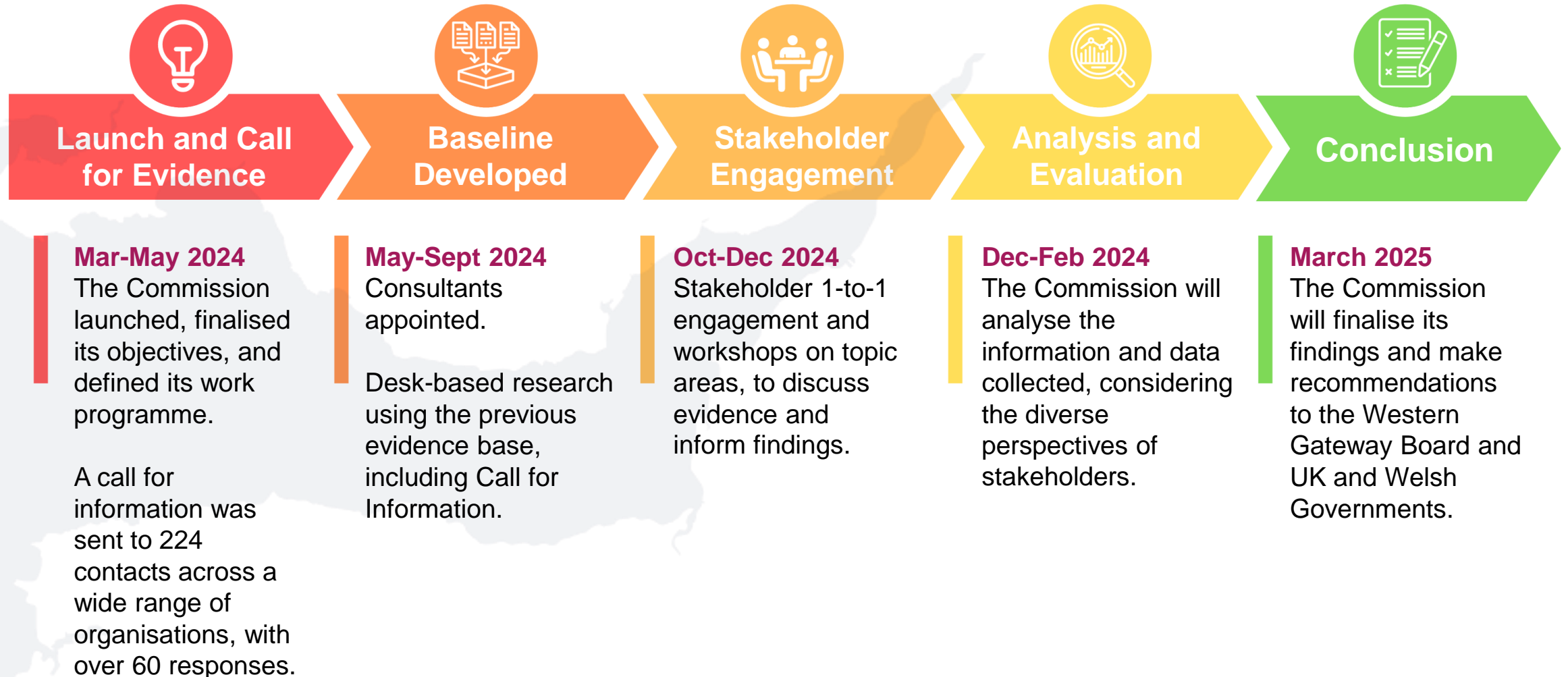
**Consultants and Experts**



**Key Partners**



## Timeline



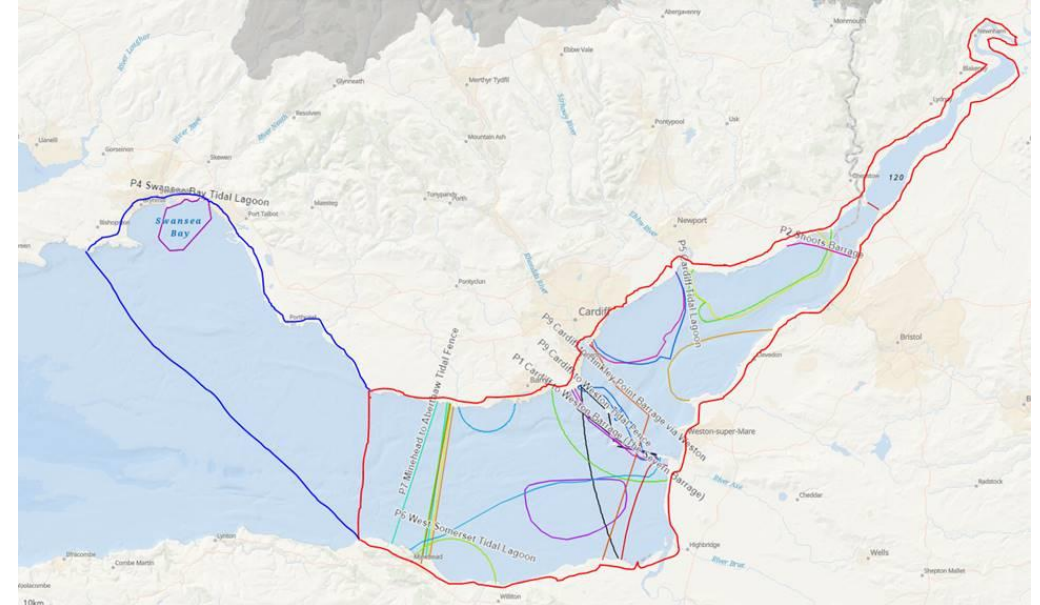


## Environment

A consortium of WSP, APEM, and Tresor Consulting have been appointed.

To gain a long-term view of the Severn Estuary, how it may change in future, the potential impact of tidal energy development, and how environmental considerations can be integrated into their design. The key deliverables are:

- Baseline of current and future condition of the Severn Estuary
- Tidal energy considerations
- Legislation and policy review
- Understanding stakeholders



## Socio-economic

A consortium of Hardisty Jones Associates, Oxford Economics, and Arcadis have been appointed.

To understand the potential socio-economic effects of tidal energy generation in the Severn Estuary. The key deliverables are:

- A regional economic baseline
- Assessment of supply chain, jobs, and skills
- Potential impact on ports and businesses
- Community impacts



## Finance

Agilia have been appointed.

Financing large-scale tidal energy projects presents some specific challenges not encountered in other renewable projects, and they necessitate a strategic approach:

- Identification of possible models and case studies
- Application of advantages and disadvantages of models against objectives
- Engagement with potential investors and financial regulatory bodies
- Development of effective governance and policy support
- Ownership structure and development vehicles

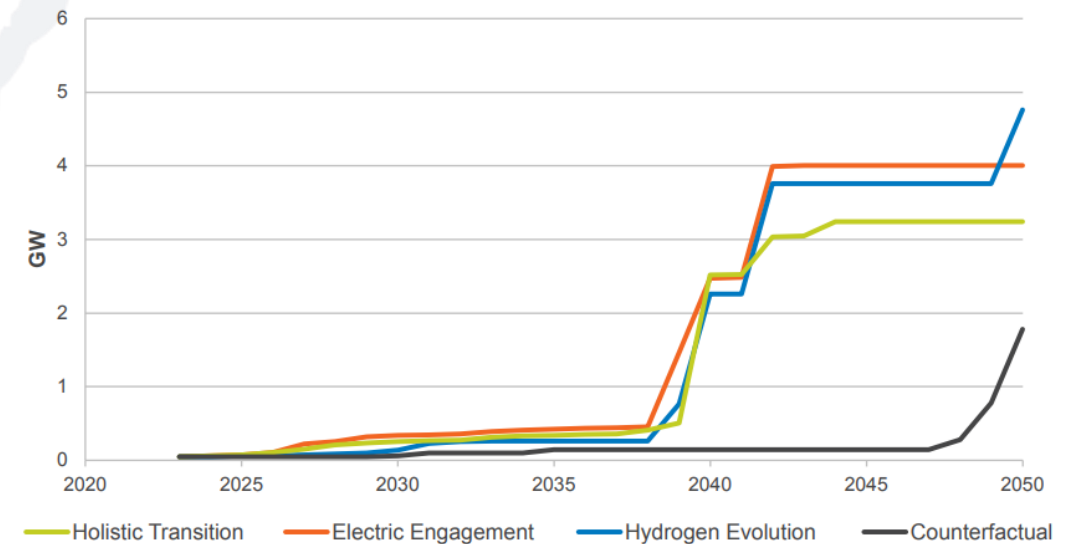


## Energy

Collaborating with The Crown Estate, NESO, and DESNZ.

The work will seek to understand how the Severn Estuary can contribute to UK ambitions for net zero, energy security, and system benefits. It is also important to understand the ramifications of connecting such large generator(s) to the system and to determine what modifications are required to do so.

Figure ES.15: Tidal capacity



National Grid ESO (2024) *Future Energy Scenarios 2024: ESO Pathways to Net Zero 2024*, 116, Figure ES.15: Tidal capacity.

## Next steps and how you can engage

- One-to-one engagement to gain expert input and identify relevant data, its gaps, and where further information is required.
- In-person topic-specific stakeholder workshops to inform tidal energy considerations. These workshops will bring together a broader set of stakeholders to present the findings thus far and to gather feedback.

The Commission's purpose is to ensure its recommendations are objective, based on the best available information, and is informed by stakeholders.

If you would like to be involved, please contact [William.Mansfield@western-gateway.co.uk](mailto:William.Mansfield@western-gateway.co.uk) or [Severn.Commission@western-gateway.co.uk](mailto:Severn.Commission@western-gateway.co.uk)