

Marine Infrastructure Development Overview

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A scenic view of a rugged coastline. In the foreground, the sea is a deep blue-green with white foam from waves crashing against dark, jagged rocks. The middle ground shows a steep, rocky cliffside that meets the water. Above the cliff, a green hillside is dotted with a few buildings, including a prominent white one. The background features rolling green hills under a clear, light blue sky.

What is the presentation's purpose?

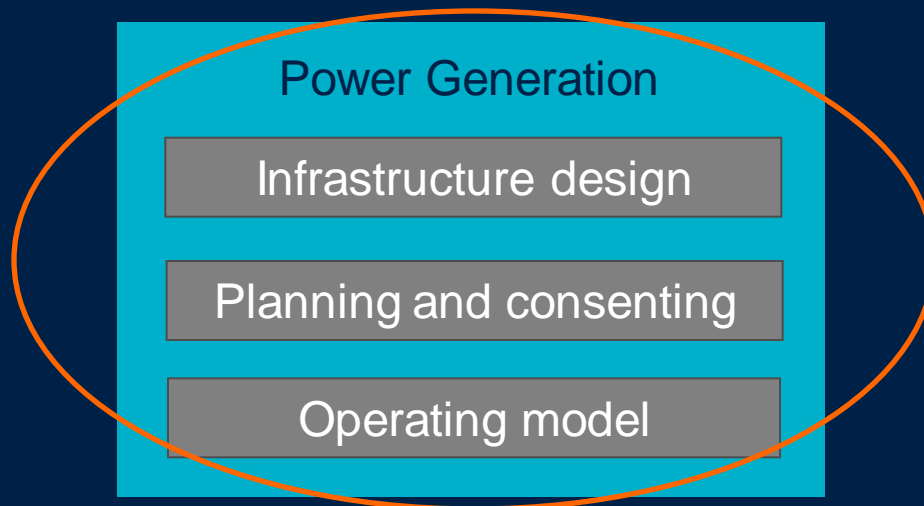
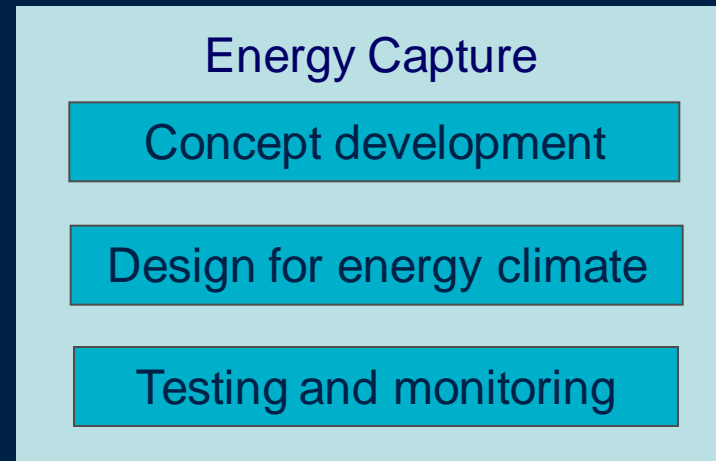
To discuss the required infrastructure to support the marine energy industry in Pembrokeshire

What is marine infrastructure?

How is it selected?

What are the benefits?

Marine Energy Development



Turning energy potential into kWh exported to grid

Defining Infrastructure Requirements

- What is the scale of development?
 - 10MW or 100MW will require different specification including cable sizes or subsea transformer requirement
- What is the purpose of the development?
 - Development site or commercial site will have different monitoring and protection requirements
- What are the physical conditions?
 - Seabed conditions and likely loading on equipment
- What are the requirements of stakeholders?
 - Device developers, fishermen, environmental groups, shipping and local industry
- What is the economic model?
 - Is it publicly or commercially owned and is the focus on profit or value to local economy

What are the benefits?

- Device developers
 - Shared infrastructure & consenting costs
 - Access to support facilities e.g. vessels, monitoring, knowledge
- Academia
 - Research focus
 - Practical opportunities
- Local Industry
 - Ports
 - Manufacturing
 - Knowledge and skills
- Global marine energy industry
 - Competition for deployment berths
 - Collaboration and development into commercial industry

Skill requirements

- Knowledge of device technology
 - Carbon Trust device assessment and developer support
- Marine infrastructure design
 - Development of concept design of Wave Hub
 - Port master-planning and development including Milford Haven
- Environmental Assessment
 - SEA process for Scottish Water offshore wind farms
- Development strategy & consenting
 - Strategic advice to Guernsey state government including consenting regime
 - Obtained consent for Wave Hub
 - Regional marine energy assessments
- Socio-economic assessments
 - Scottish government community and economic benefit study

Conclusions

- The marine energy industry is moving forward globally and the UK has some strategic advantages
- Pembrokeshire has a great opportunity to utilise existing infrastructure and skills
- Developers must be supported by this infrastructure to create a viable and sustainable industry
- Careful planning of the infrastructure system leads to:
 - Attraction and support of developers and funding
 - Ability to carry out specific planning activities
 - Developer and investor confidence
 - Accelerating the wider development of the industry and focussing benefits within the region
- Opportunity to define best practice and roll out across Wales



Wales has the resource and infrastructure to become the centre of the UK marine energy industry.

Let's make Pembroke the capital.