

# West Islay Tidal

TIDAL ENERGY PROJECT 2013

[www.westislaytidal.com](http://www.westislaytidal.com)



## **Presentation to Islay Community Council – 8<sup>th</sup> April 2013**

- Project Status
- Design Envelope and Project Description for Consent
- Open Day Display & Our Goals
- Planned Schedule
- Potential Opportunities
- Cumulative Impact & Interaction with other Developers
- Future Commercial Scale Project

## Project Status – Tidal Site and Export Cable to Islay

- Final survey completed – Geophysical 1<sup>st</sup> March 2013
- Meetings with local fishermen
- LVIA and Photomontages Complete
- Updated website with Q&A list
- Baseline surveys and reports complete – (ES Appendices)
- EIA and HRA ongoing – Plan to clear HRA prior to submission
- Draft Navigational Safety Risk Assessment under review
- Open Day Displays/Consultation
- Resource Assessment and Metocean Modelling Continuing

## Design Envelope - Project Definition

### DEVELOPER

#### FLEXIBILITY

- OEM Contracts
- New Site Information
- New Technology
- Cost Reduction
- Supplier Agreements
- Device Failure
- OEM Withdrawal
- Industry Consolidation



### REGULATOR

#### DEFINITION

- EIA Verification
- Single Pass Assessment
- Not complex
- Device Data
- Experience History

## Design Envelope “Rochdale Envelope”

- R. v Rochdale MBC ex parte Milne (No. 2) [2000]
- Endorsed by Scottish Government
- Define a “worst case” approach to assessing impacts
- Consolidation in Industry ...BUT....
- Recognition that detailed definition is not possible due to:
  - Unknown seabed geology
  - Insufficient operational experience of devices
  - Insufficient detailed knowledge of resource
  - Lack of security from supply chain

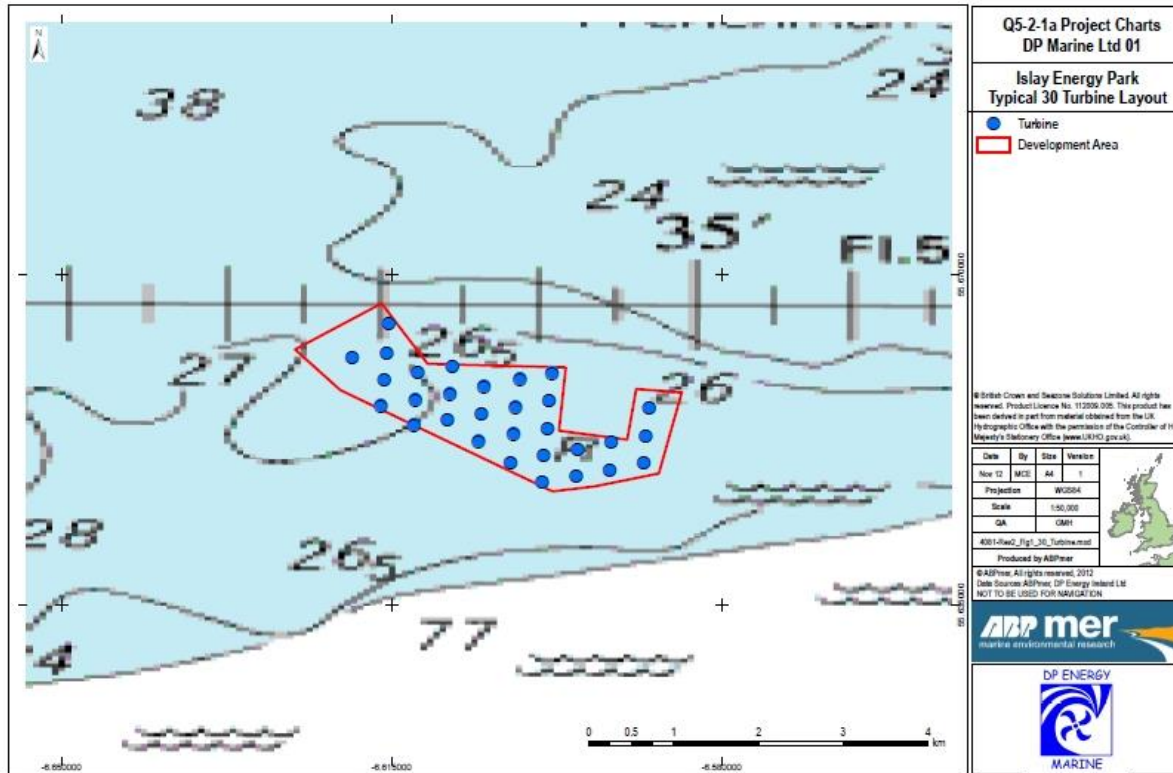
## Project Description

- WHO
- **WHAT?**
- WHY?
- **WHERE?**
- **WHEN?**

### WHAT DO WE KNOW?

- 30MW
- TEC will be HATT
- Between 1 & 2MW per Unit
- Between 15 & 30 TEC`s
- 6MW planned SeaGen S (FP7)
- Revised AfL Area (TBC)
- Inter-array Cabling
- Preferred Export Cable Route
- Islay Landfall

# Project Description – WHERE?



- AfL Dev Area
- 30 metre Depth
- Maximum 30 TEC
- Inter-array Cabling

Location:

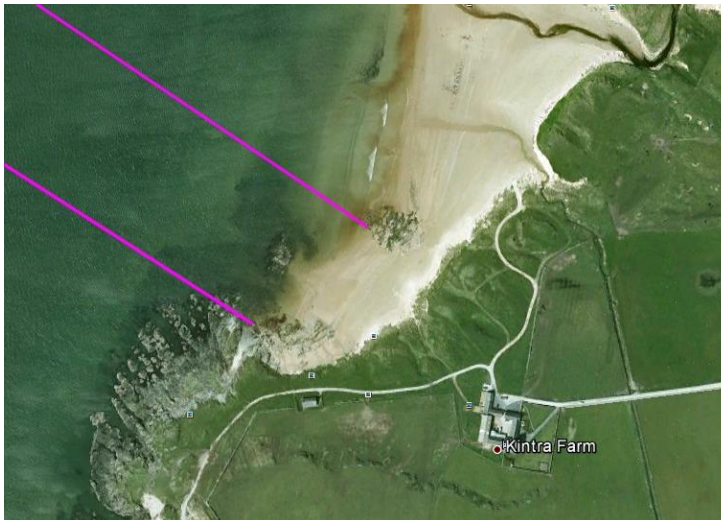
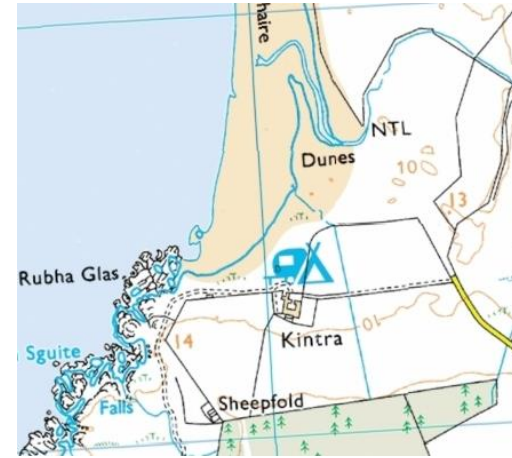
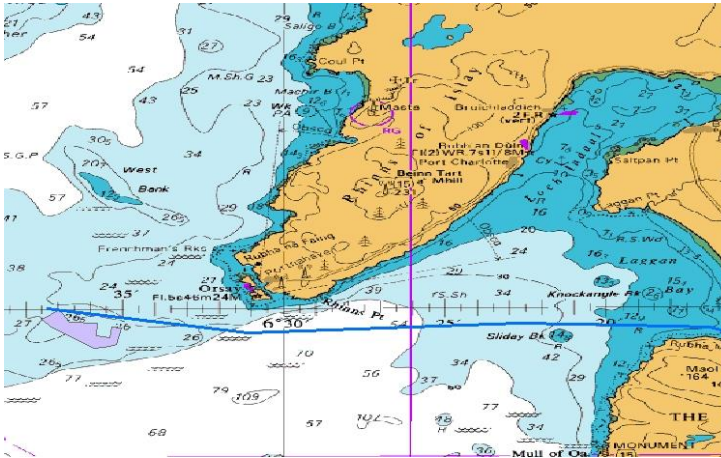
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SE: -6 35.200/55 38.940

NW: -6 36.960/55 40.010

SW: -6 37.500/55 39.720

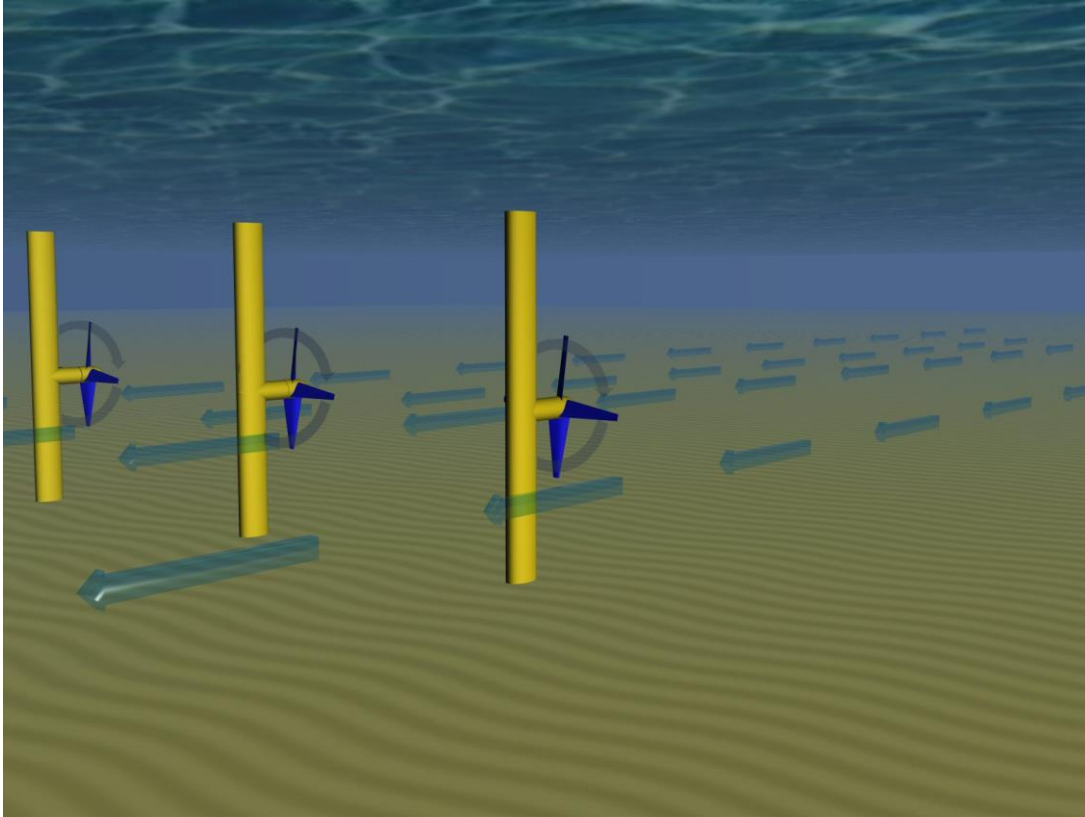
## Project Description – WHERE?



- Export Cable Route
- Landfall on Islay
- Options but Preferred Route Laggan Bay



## Project Description – WHAT?



- Technology Consolidation
- TEC will be HATT
- Between 1 & 2MW

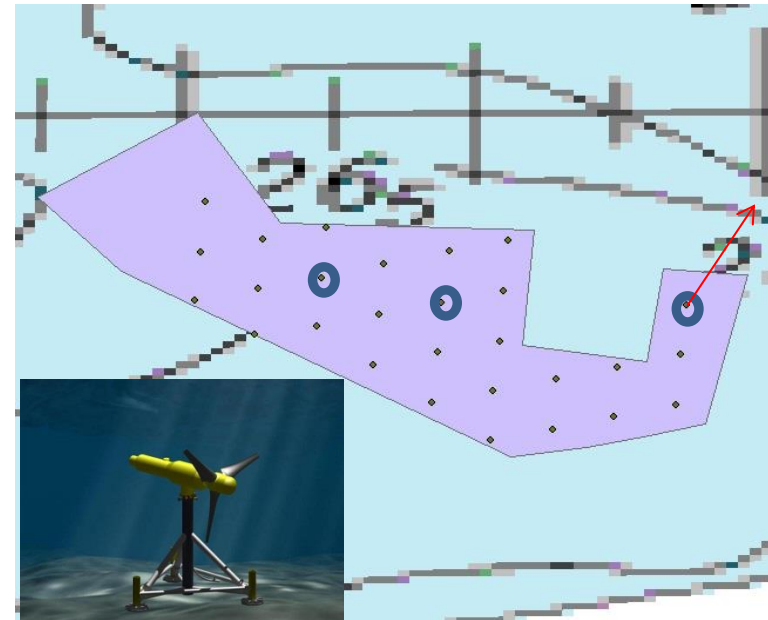
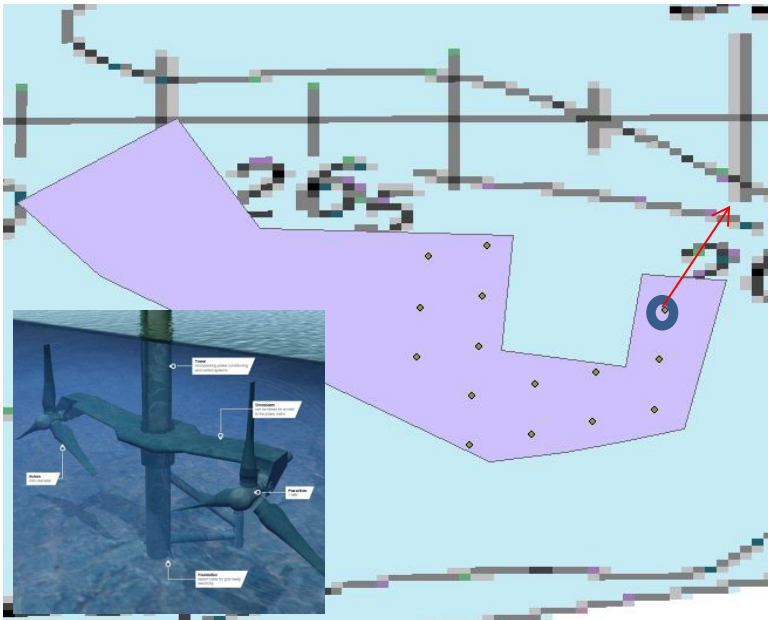
## Project Description

- WHO
- **WHAT?**
- WHY?
- **WHERE?**
- **WHEN?**

### WHAT IS THE MOST LIKELY?

- 3 to 15 MCT SeaGen S Mark 2 TEC`s (2MW)
- Up to 24 TGL TEC`s (1MW)
- Drilled and pinned to seabed (quad or tripod)
- Flying leads from each TGL TEC
- SeaGen TEC for marshalling & export connection
- Single 33kV export cable
- Installation by barge or DP Vessel
- Foundations by rock drill, piles & grout

## Project Description – WHERE/WHAT?

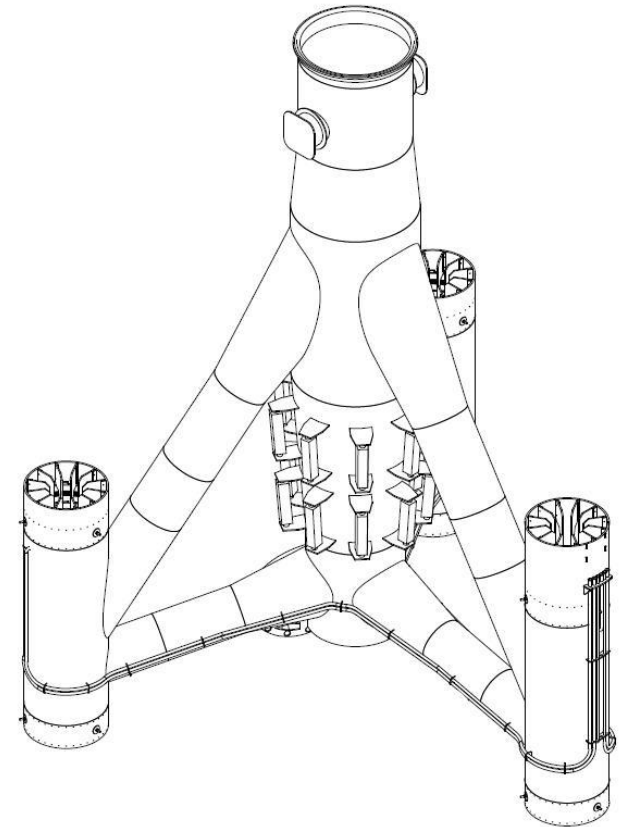


MCT SeaGen S Mark 2 (2MW) – 15 TEC

TGL (1MW) + 3 MCT – 27 TEC

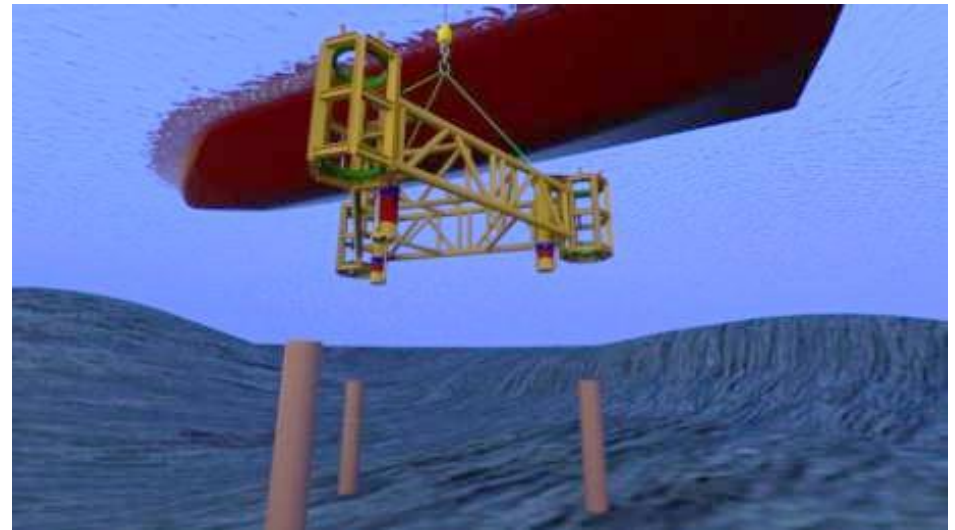
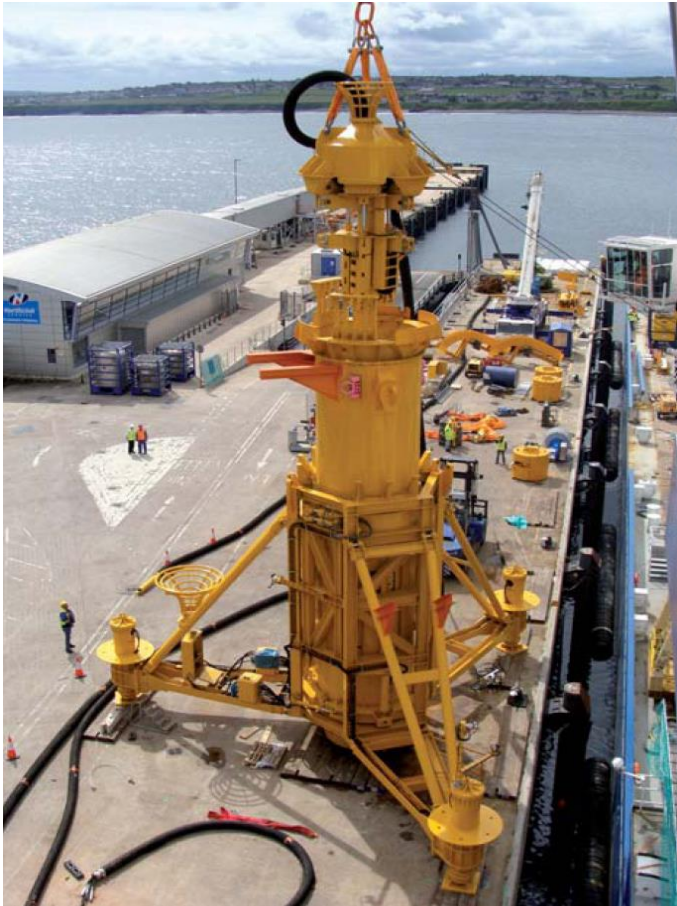
- 3 to 15 MCT SeaGen S Mark 2 TEC`s (2MW)
- Up to 24 TGL TEC`s (1MW)
- Flying leads from each TGL TEC
- SeaGen TEC for marshalling & export connection
- Export voltage probably 33kV

## Project Description – WHERE/WHAT?



- Drilled and pinned to seabed (quad or tripod)
- Gravity possible but unlikely

## Project Description – WHERE/WHAT?



- Drilled and pinned to seabed (quad or tripod)
- Foundations by rock drill, piles & grout

## Project Description – WHERE/WHAT?



Heavy Lift Shearleg Vessel Rambiz



DP Jackup Vessel Innovation

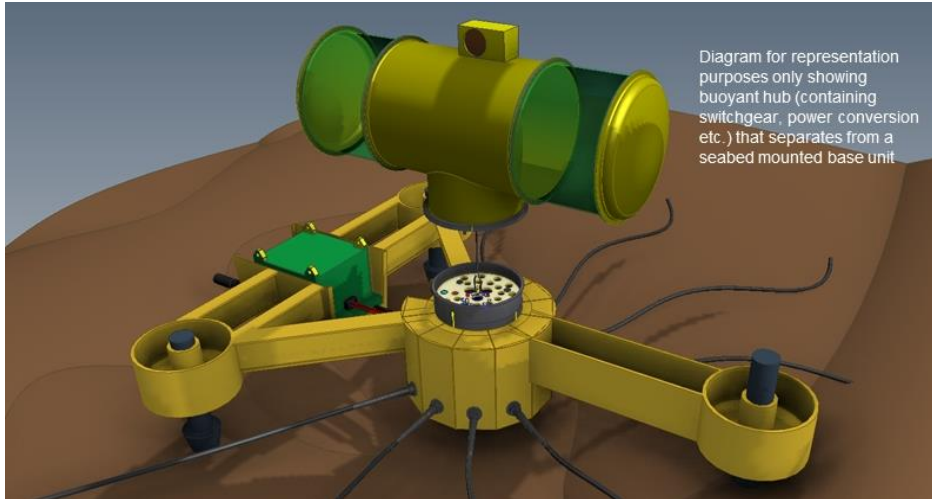
- Installation by Barge or DP Vessel

## Project Description

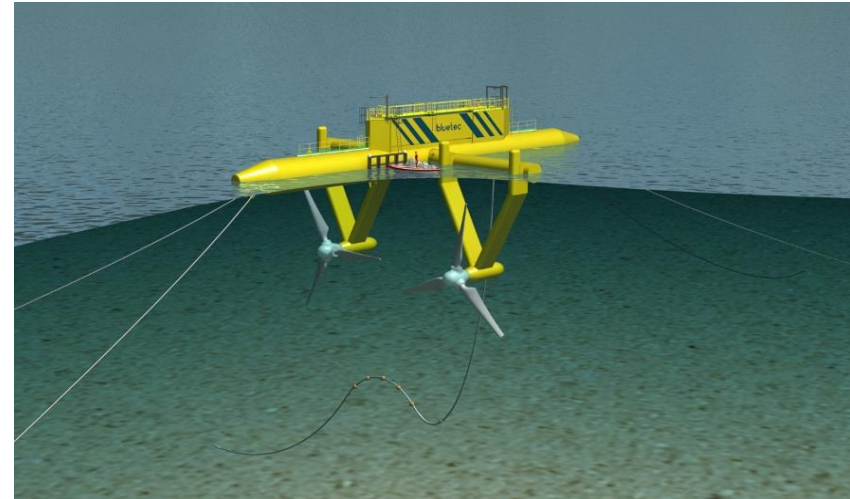
### WHAT HAS FUTURE POTENTIAL? & WHY?

- WHO
  - **WHAT?**
  - WHY?
  - **WHERE?**
  - **WHEN?**
- Floating Platform Solutions (INSTALLATION COSTS)
  - Alternate Manufacturers ? (TURBINE COSTS)
  - Increased project size 40-60MW (GRID COST)
  - ....Multiple 33kV export cables
  - ....Subsea Marshalling & 132kV

## Project Description – WHERE/WHAT?



Subsea Marshalling Unit



BlueTEC Moored/Floating Arrangement



## Project Description Goals

- Compromise between FLEXIBILITY & DEFINITION
- Focus on TEC, the rest is methodology
- Need to ensure that issues with “less likely” scenarios don’t impact on “most likely”

BUT

- Critical we have enough flexibility for viability

## Open Day Displays

- Bowmore: 11 – 2pm Tuesday 9<sup>th</sup> April
- Port Ellen: 5.30 – 8pm Tuesday 10<sup>th</sup> April
- Portnahaven: 11 – 3pm Wednesday 11<sup>th</sup> April
- Display Structured as per Environmental Statement
  - Introduction, Physical, Biological & Human Environments
  - Updated information on site design, installation & survey results
  - Some detail on EIA findings but this is ongoing
  - Attended by DPME personnel

**HAPPY TO ANSWER ANY QUESTIONS**

## **Our Goals for the Open Days**

- Identify Key Concerns (and discuss)  
...Visibility and Possible Fishing Impacts already noted
- Clarify the confusion around the SSE Islay Wind Farm vs us  
...We are not a wind farm
- Outline the longer term goals and make the distinction between the 30MW consent (Now) and what we would hope in the future
- Discuss any local benefit potential and how that might vary depending on technology
- Understand the Community view

# Potential Opportunities

## Islay Economic

Vessel and crew hire (Guard?)  
Onshore construction  
Haulage, plant hire  
Monitoring Ornithology  
Marine supplies (chandlery)  
Transport

Support Vessel and crew (Other? coding?)  
Maintenance Support Staff  
Accommodation  
Sea mammals Monitoring  
Marine engineering (fabrication)  
????

**Improved Grid Connection to Mainland**

**Community Renewable Energy Projects**

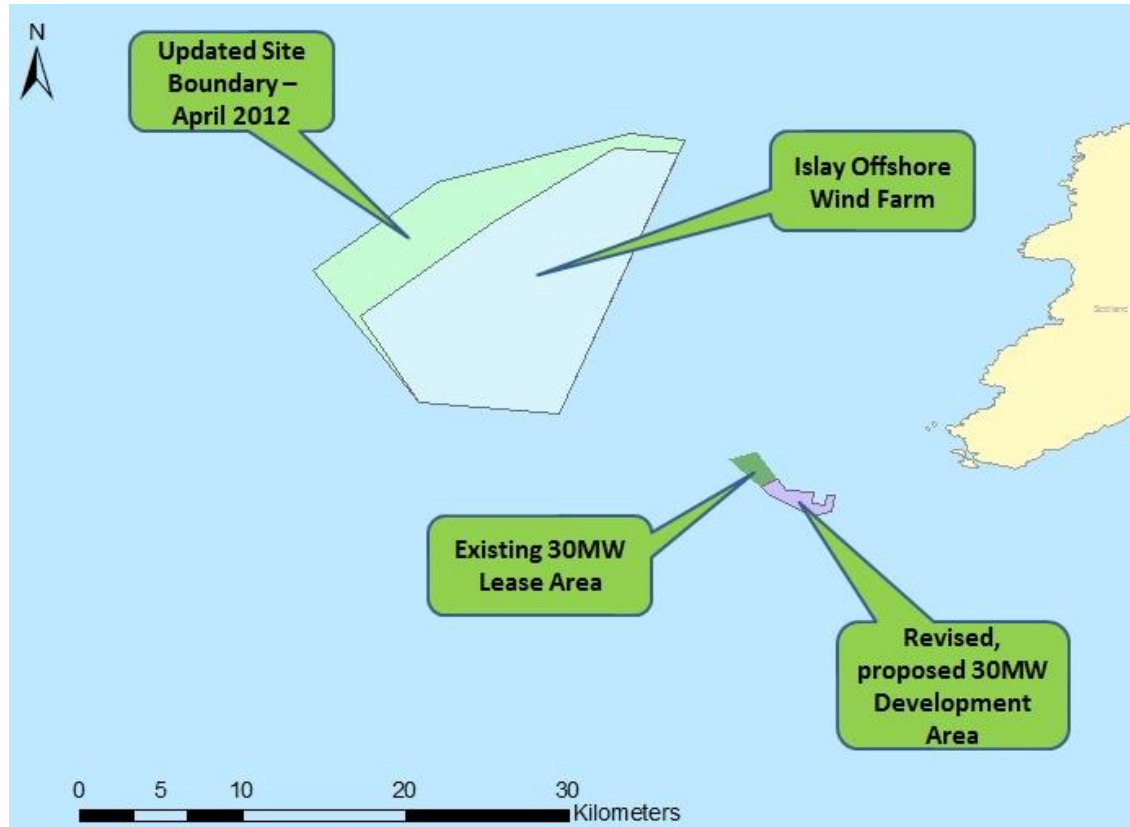
**Distillery Heat Loads and CO2 Benefits**

## Forward Schedule

- Complete Open Day Displays/Consultation – 10/4
- Submit application to Marine Scotland for “gate check” – 30/4
- Update and final submission and acceptance – 30/4
- 8 months target for consent – 31/12
- Continue onshore works for Open Days – 30/9
- Submit application for remaining works – 31/10
- Commence detailed design and geotechnical survey March 14

**INSTALLATION SUMMER 2015**

## Cumulative Impact with Other Developers



- Islay Offshore Wind Farm
- Sound of Islay

## Interaction with Other Developers

- West Islay Tidal is completely separate to SSER Islay Wind Farm
- Dialogue and information sharing for Cumulative Impact Assessment only
- Cumulative for elements of EIA (Visual and other) for Islay Offshore Wind Farm and Sound of Islay Tidal Farm
- SSE R 670MW+ grid connection unrelated to current 30MW West Islay proposal
- Unclear whether future expanded plans would associate with SSER grid connection or not

## Future Commercial Scale Project

- Plans are still to develop a larger scale multi hundred MW site
- Second phase potentially around 70 – 100MW
- Incorporating lessons learnt feedback from Phase 1
- Requires further project consenting process, and further Crown Estate leasing round
- Subsequent phase should utilise the sites potential
- Definition of ultimate potential capacity dependent on ongoing resource assessment and investment
- Future grid strategy uncertain - possibly different to SSER grid strategy





THANK YOU

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