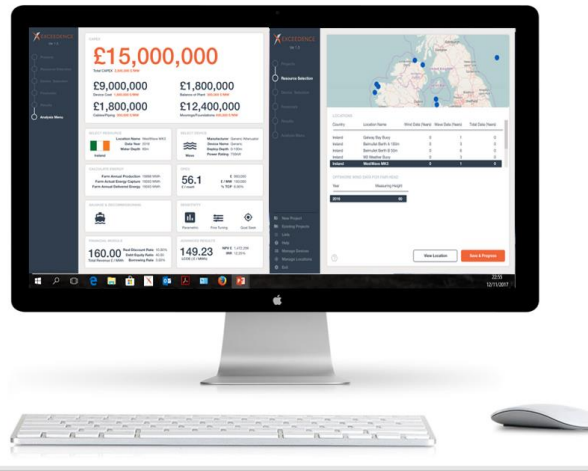


- + Focus on Analytics
- + Standardised
- + Identify and Reduce Risk



Key Findings:

By using Exceedence FINANCE the following was found:

- Different elements of the software were interesting to different members of our team
- All outputs were clearly presented in graphical form

“The outputs were ideal for presentation purposes. This I believe was one of the major advantages of the software, its ability to clearly present its findings allowing for transparent data dissemination amongst our team and clients.”

- GRSI Energy Ltd.

For more information on Exceedence FINANCE please visit:

Exceedence.com



For more information on GRSI please visit:

Globalrenewablesolutions.org



Exceedence FINANCE

Case study: GRSI

Proving the viability of combined platforms

The ocean energy sector has been plagued with both technical and financial failures over the last number of years. Given that the sector is still in its infancy it is vital that engineering innovation is assessed not only in a performance manner but also financially to ensure a sustainable sector is created.

It is therefore imperative to guide early stage development and conceptual designs in a cost competitive direction, allowing for ocean energy to reach its goal of a competitive levelised cost of energy. For these obvious reasons, GRSI was very interested in using the Exceedence financial software.

They have a number of projects underway at present including the development of their ¼ scale device as well as tidal site development opportunities in South East Asia and could therefore internally highlight a number of appropriate applications that they wanted to use Exceedence FINANCE for.

The Exceedence team offered a turn key approach, providing the software from their office in Cork, Ireland, which is 12,000km from Melbourne, Australia where the GRSI computers are located.

The user-friendliness of Exceedence FINANCE allows for a plug and play output, as industry standard resource data and power curves/matrixes are pre-loaded. However, it is the user that ultimately defines the level of detail based on the available information. In this case, GRSI already had a number of sites and associated resource data. Exceedence helped to load this data and the software was tailored for a wide range of projects from early stage project development to refined detail financial review.

GRSI were impressed by the model's ability to easily assess the financial viability involving both wave and wind. This had previously taken them considerable time and effort when using their own techno-economic models.

The software was first adapted to GRSI's current projects in Ireland which allowed them to verify their existing financial model. Different elements of the software were interesting to different members of their team; an example includes the ability for the software to carry out a sensitivity analysis on resulting outputs – e.g. minor changes in the development cost can have a large effect in the ROI/NPV; all outputs were clearly presented in graph form which is ideal for presentation purposes.

As highlighted by GRSI, one of the major advantages of the software

is its ability to clearly present its findings allowing for transparent data dissemination amongst team and clients. The sensitivity analysis paints a very interesting picture for developers allowing them to clearly understand that 'large' energy production is not always the most economical.

The GRSI team have been delighted to part take in the Exceedence trail and now happily become one of the first customers of the software. It's clear that the software has massive potential to help commercialise wave and tidal renewable energy in a sustainable manner.



“It's clear that the software has massive potential to help commercialise wave and tidal renewable energy in a sustainable manner.”

– GRSI

Key benefits of Exceedence

FINANCE:

Accurate financial metrics

Financial projections based on detailed engineering models and real-world wave, tidal or wind resources.

Accelerated project development

Screen out weaker concepts earlier and accelerate the development and refinement of innovative design with genuine prospects.

Design optimisation

Explore potential advances in energy generation and identify opportunities for cost reduction

Design understanding

Key insights into annual energy production, local power fluctuations, loads in structural members and fatigue life expectancy, based on detailed engineering simulation

Clarity

Complete transparency of both financial and engineering design processes

Consistency

Suitable for all stages in the design process, from concept development, to model scale prototypes, and right through to full scale versions

Unlock investment

Increase investor confidence by de-risking projects

Recognised by industry

Validated via industry case studies and technical papers

Environmental and societal benefits

Reduces entry barriers to new developers and facilitates growth of wave energy sector in general