



ETIPOCEAN

European Technology & Innovation Platform for Ocean Energy

Warranties, guarantees and insurance

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Agenda

Moderator: Jacopo Moccia, Policy Director, Ocean Energy Europe

Presentation:

Michael Bullock, Renewable Risk Advisors, Director

Rémi Gruet, Ocean Energy Europe, CEO

Q&A session with the audience



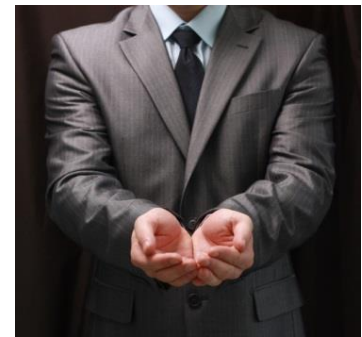
Renewable Risk Advisers

Warranties, Guarantees and Insurance
Re-stating the problem

Michael Bullock, Renewable Risk Advisers
www.renewablerisk.com

How to finance the first commercial arrays?

- Public sector mechanisms normally require an element of matched funding;
- Technology risk-bearing equity often insufficient to fill the funding gap;
- How can we tap into commercial project finance, as per offshore wind?



Checklist for project finance

Bankers want comfort they should get their money, and interest back so their needs include:

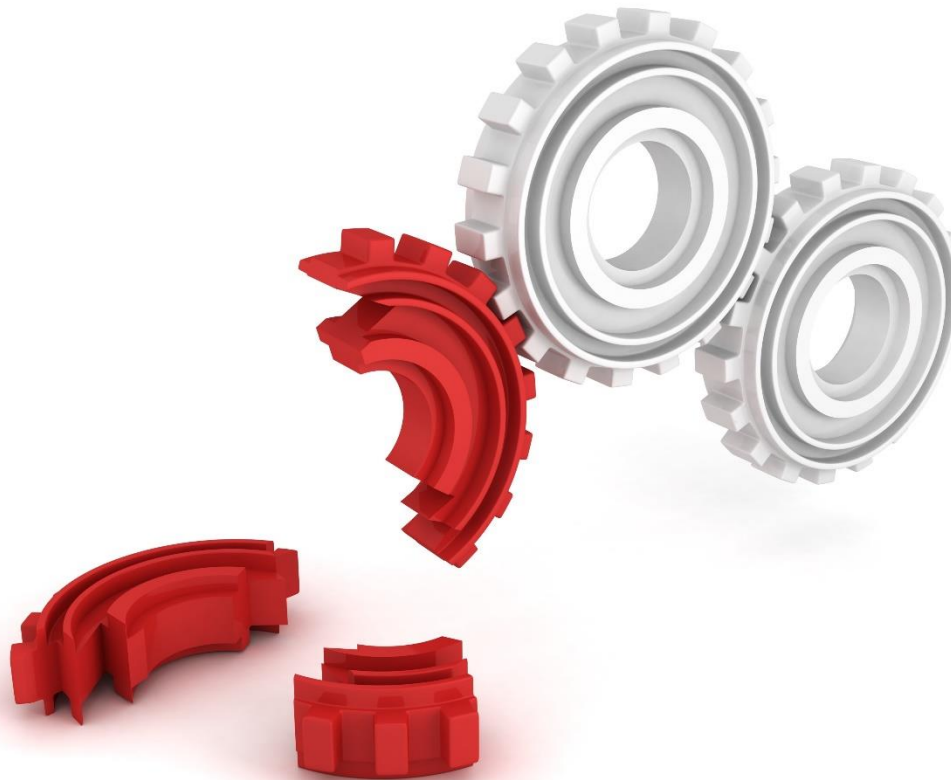
- Certification / third party technology verification;
- Broad physical damage insurance, including resultant loss of revenue;
- Robust manufacturer warranties and guarantees.

Certification not within scope of this presentation, although should help accelerate commercial insurance solutions.

Independent verification a pre-requisite for commercial finance.



Physical damage and revenue insurance



Physical damage and revenue insurance

- ***Financiers are risk averse*** and want broad All Risks and Liability insurance for all stages of the project, normally inc. machinery breakdown and consequential loss arising from a defect, from well rated insurers;
- ***Insurers are (technology) risk averse*** and exclude breakdown and defect cover until successful, continuous demo of the same spec device for min 8,000 hours.

Scope of insurance for arrays depends upon prior testing.



Supplier and EPC warranties

- Financiers will look for parts and labour warranties, availability and power curve guarantees, probably for at least the first 3 years; but
- Scope of such warranties and guarantees will vary, including in respect of marine operations costs, and power curve calculations are not straightforward; and
- Performance and credit risk will be closely scrutinised – favouring diversified OEM's with a strong balance sheet (effect of serial defect?);
- Some potential for insurer support, e.g. power curve warranties, and *eventually* serial defect, but subject again to suitable data from prior trials.

Warranty risk profile, particularly for smaller OEM's, problematic for the first arrays even with data and certification.



How to fill the gaps?



How to fill the gaps?

- Maximise prior testing and proving of availability, reliability and power curve;
- Maximise equity finance availability;
- Create risk-funding mechanisms, e.g. industry mutual (but not straightforward) or public-funded risk-bearing instrument (e.g. insurance fund proposed via the OEF roadmap);
- Continue to develop commercial insurer appetite for the longer term.

kWh generation will close the gaps – the problem is financing construction and the first years of commercial demo arrays.

