

# The balance between local content and industry growth

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## About BVG Associates

### Business advisory

- Analysis and forecasting\*
- Strategic advice\*
- Business and supply chain development\*

### Economics

- Economic impact and local benefits\*
- Technology and project economic modelling\*
- Policy and local content assessment\*

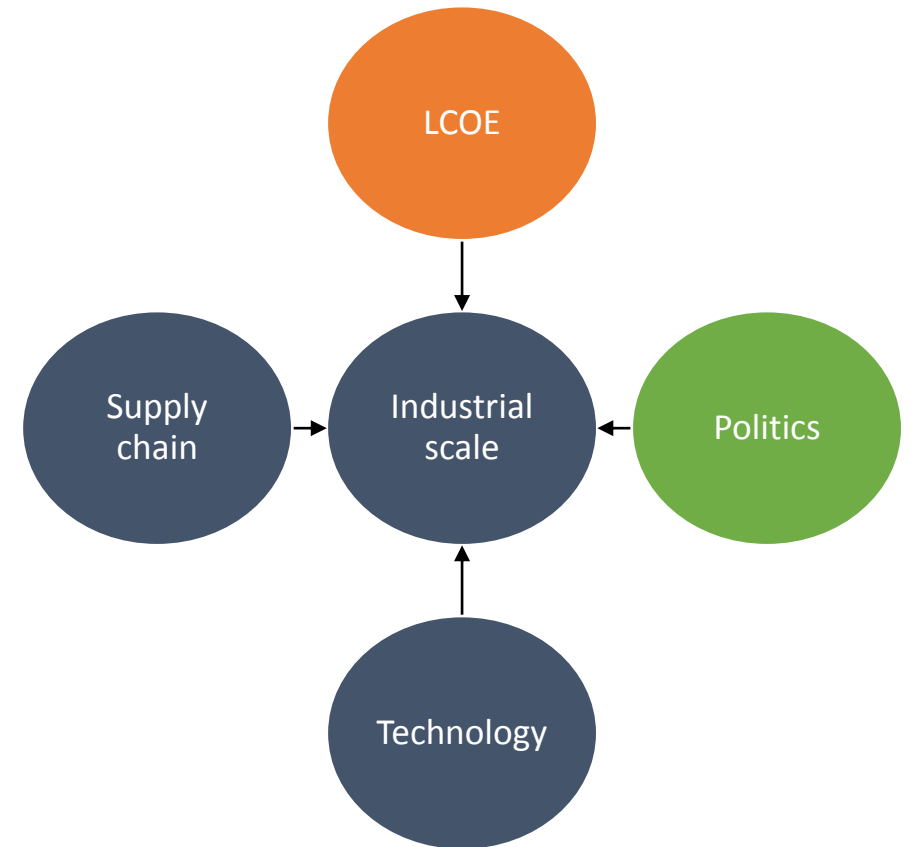
### Technology

- Engineering services
- Due diligence
- Strategy and R&D support\*



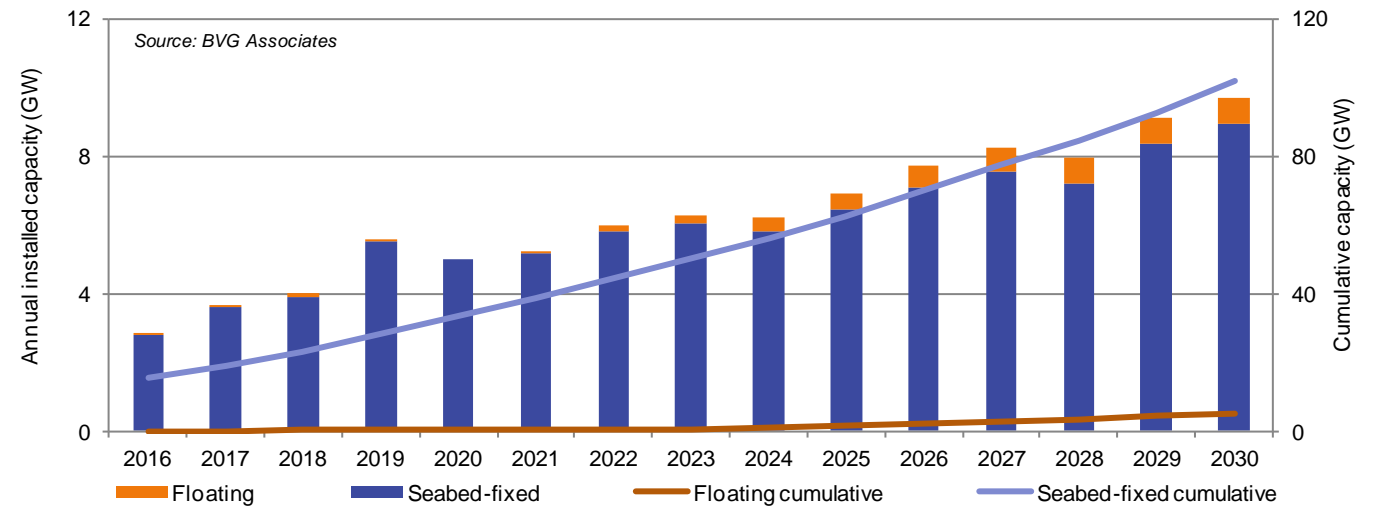
## Agenda

1. European fixed and floating market
2. The cost of energy challenge
3. The political challenge
4. The local supply chain risk
5. The local content heat map
6. Conclusions



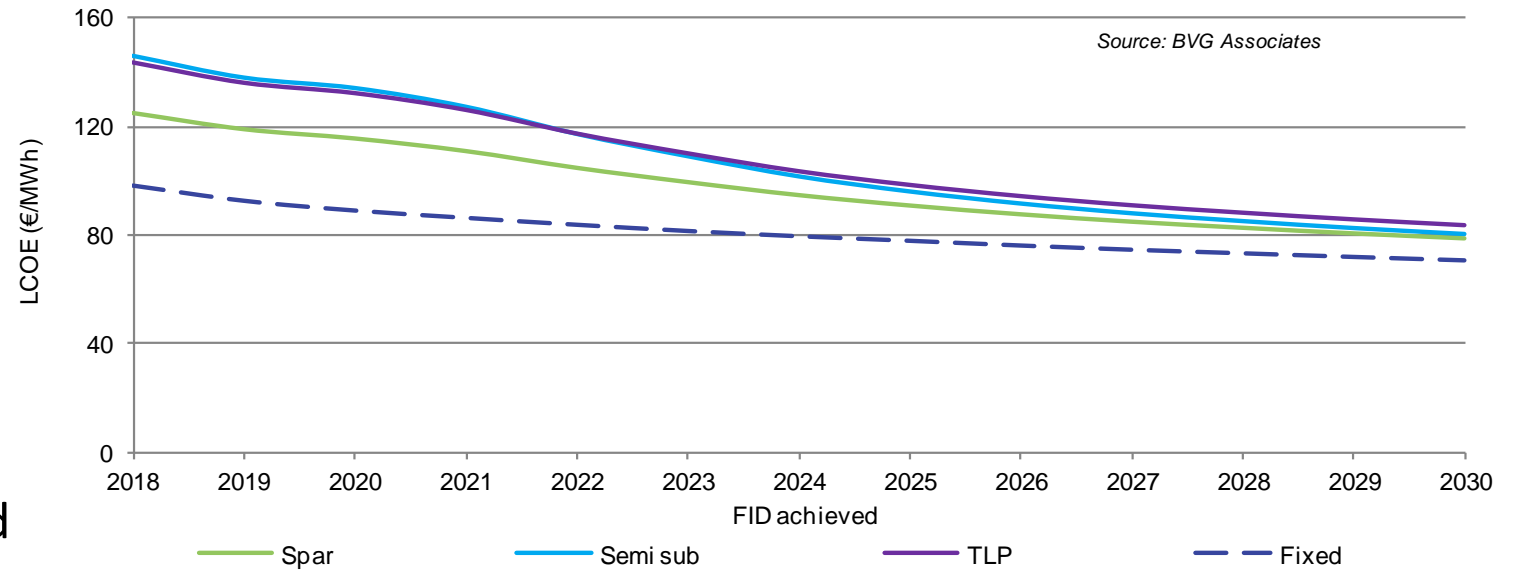
## The European market

- There are no commercial-scale projects in development
- Minimum time from site award to turbine commissioning is probably seven years
- Floating wind will probably not reach critical mass before the late 2020s



## The LCOE challenge

- Significant cost reduction is possible for floating offshore wind
- Learning is slow because ramp-up in installation is slow
- We also expect fixed offshore wind costs to fall
- Fixed and floating offshore wind are complementary



# The political challenge

- Why does a government want floating offshore wind?
  - They need offshore wind badly, do not have available shallow water or want to access high wind resources
  - It believes floating offshore wind provides a *new* opportunity for industrial development
  - It believes in the long term floating will be cheaper than fixed offshore wind on the same site
- How long will governments stay patient and provide additional price support?
- Will politicians demand local content in return for support?
- What are the consequences to long-term cost reduction from using a local supply chain?

## The local supply chain risk

- A local supply chain pushes up costs, undermining the reputation of floating offshore wind – and a clear cost reduction trend is vital
- A local supply chain is suboptimal – engineering challenges are poorly tackled
- Local suppliers are, at the beginning, poorly equipped to scale up for commercial projects – learning is not tackled
- Local activity to support local companies is great (and important) but choose your targets and enable not mandate

Element	Sub-element	Percentage of lifetime cost	Floating wind specific	Benefit of local supply	Scalability to commercial scale	Risk to future cost reduction	Exportability
Development and project management	Wind farm design	Red	Red	Red	Green	Green	Green
	Sea bed surveys	Red	Red	Red	Green	Green	Green
	Project development	Red	Red	Red	Green	Green	Red
Turbine	Nacelle and hub	Green	Red	Red	Green	Green	Green
	Blades	Green	Red	Red	Green	Green	Green
	Towers	Green	Red	Red	Green	Green	Yellow
Balance of plant	Subsea cables	Yellow	Yellow	Red	Green	Green	Green
	Substations	Green	Red	Red	Green	Green	Green
	Foundations	Green	Green	Yellow	Red	Red	Yellow
	Anchors and mooring	Yellow	Green	Red	Yellow	Red	Green
	Balance of plant other	Red	Green	Red	Yellow	Yellow	Yellow
Installation and commissioning	Installation ports	Red	Green	Green	Red	Red	Yellow
	Turbine construction	Red	Green	Green	Red	Red	Yellow
	Foundation and turbine installation	Yellow	Green	Red	Yellow	Red	Green
	Subsea cable installation	Yellow	Yellow	Red	Yellow	Red	Green
	Subsea engineering	Yellow	Yellow	Red	Green	Red	Green
	Installation other	Red	Yellow	Yellow	Green	Yellow	Yellow
O&M	Routine turbine maintenance	Green	Red	Green	Green	Green	Red
	Major repairs and spares	Yellow	Red	Red	Green	Yellow	Yellow
	Other maintenance	Yellow	Yellow	Yellow	Green	Green	Yellow
	Marine operations	Yellow	Green	Green	Green	Green	Red
	Overheads and fees	Red	Red	Red	Green	Green	Red



# Conclusions

- All national and local organisations want to maximise the economic opportunity from infrastructure projects
- The floating wind industry has some visionary companies which really believe in their technology
- The future for floating wind is far from assured: need a vision for commercial deployment
- Auctions are very popular in offshore wind – governments need a good reason to give extra support to floating wind
- If governments want to maximise the economic benefits from floating wind, they need to make sure that there is a sustainable industry
- Supporting local companies is important but intervention needs to be carefully targeted to give floating wind the best chance of success.