

Long range & challenging tiebacks
– eliminating the umbilical

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Production
Technologies**



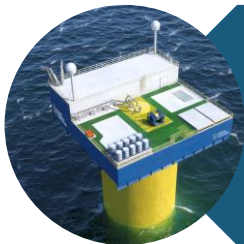
Introduction



Buoyant Production Technologies (BPT) is a subsidiary of Crondall Energy Consultants Ltd. focussed on technology development

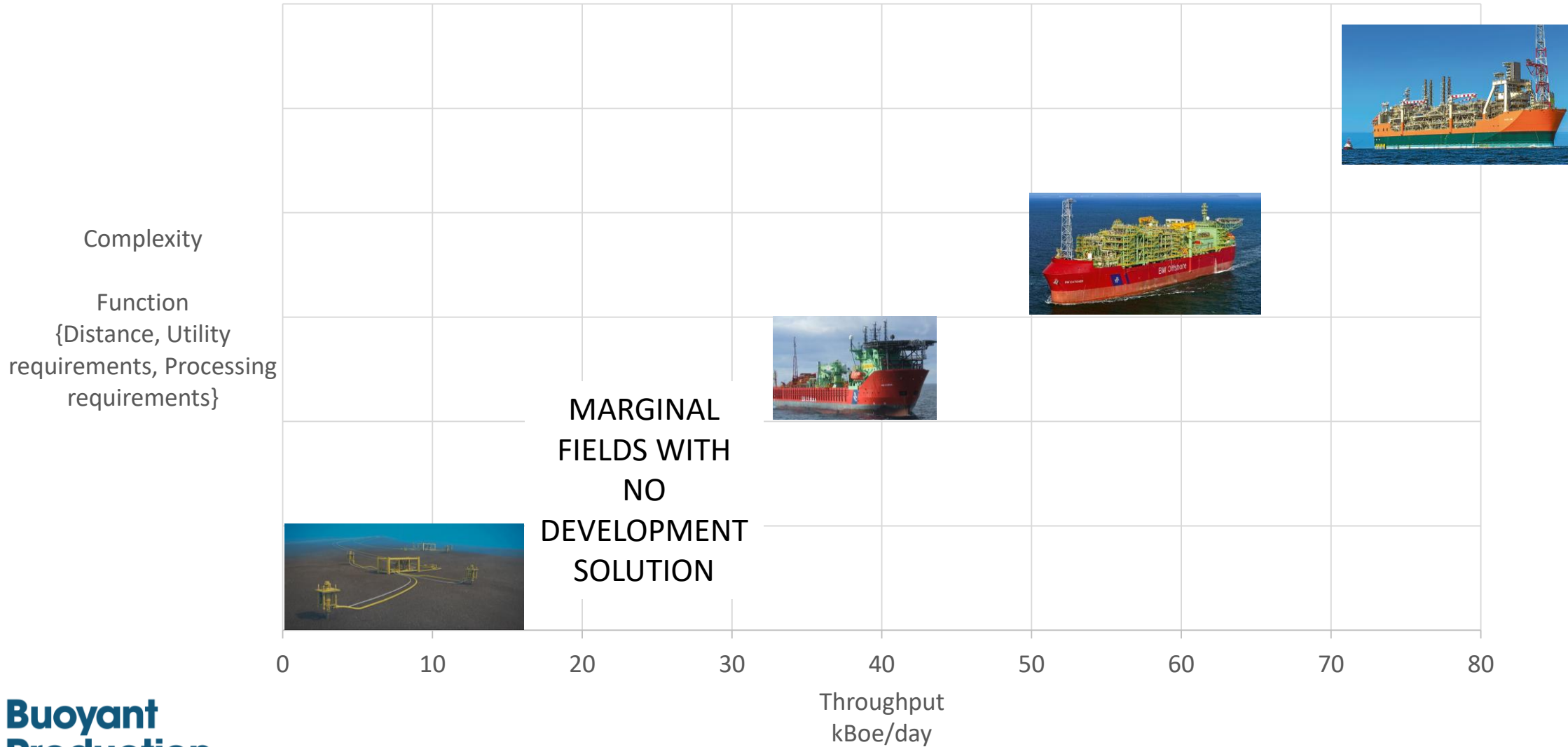


BPT has developed Floating NUI technology products offering low lifecycle cost to support marginal fields

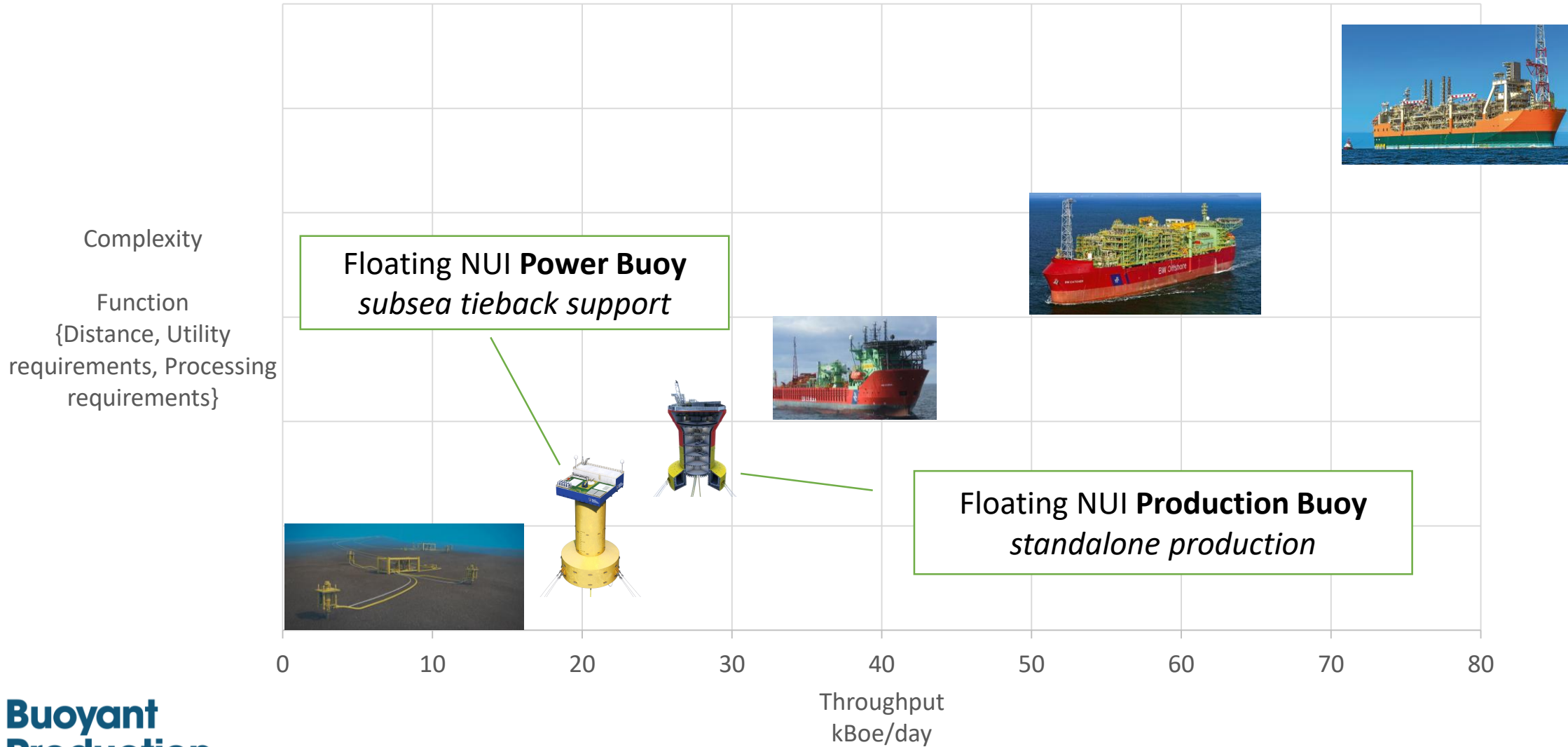


This presentation introduces a NUI Power, Control and Communication Buoy as a means of enabling long-distance and challenging subsea tiebacks

Background to Floating NUI



Background to Floating NUI

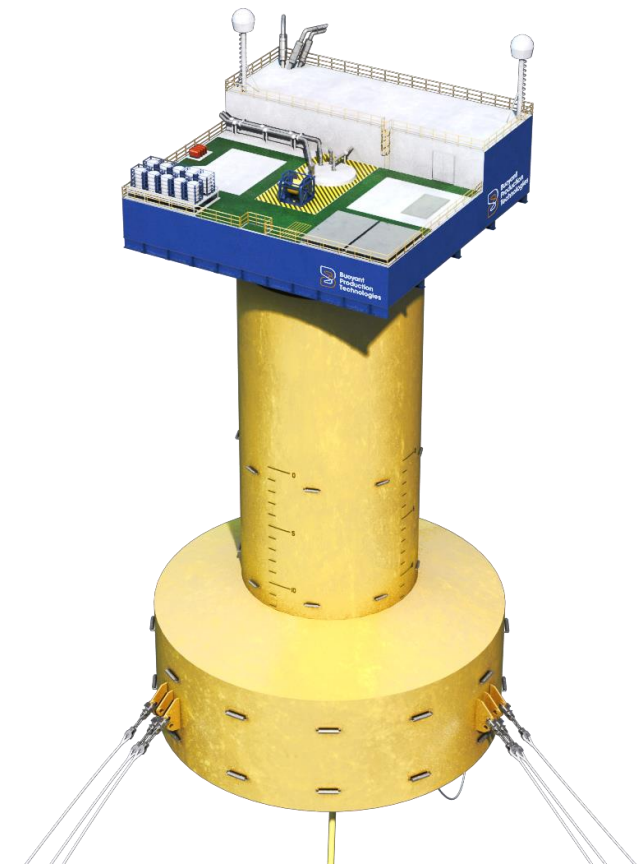
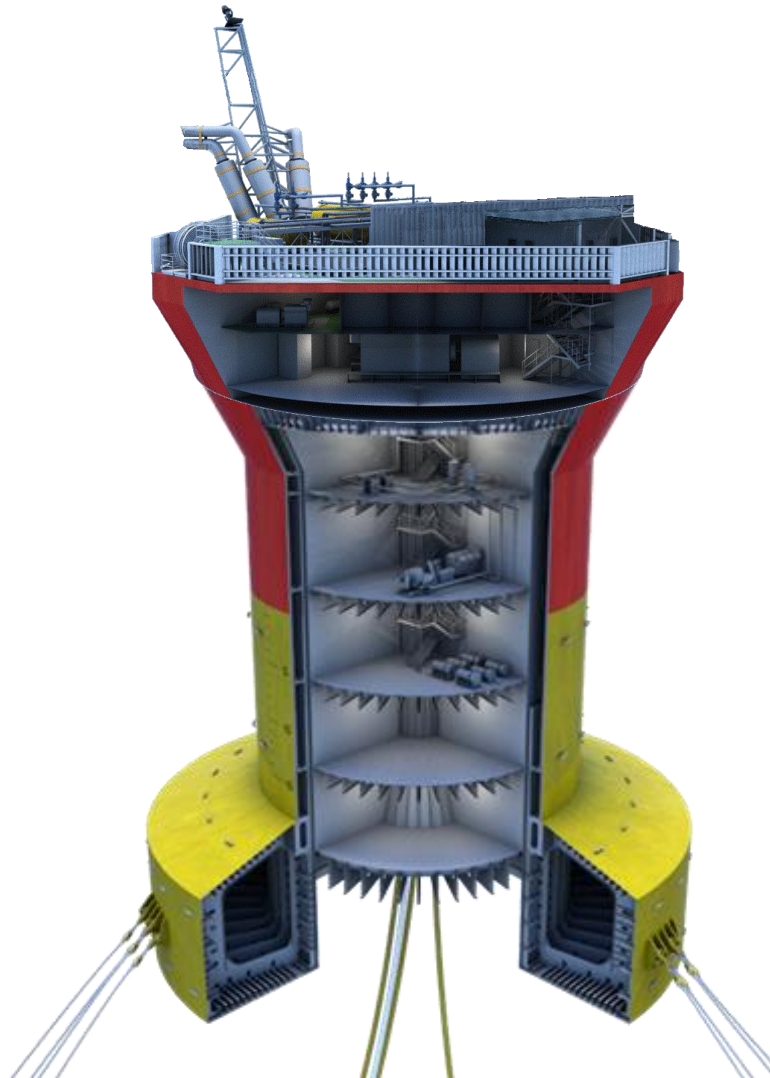


Floating NUI



- Patented and novel floating facility design, IP owned by BPT;
- Designed for NUI operations, remote control and infrequent maintenance;
- Lloyds Register Approval in Principal (AiP);
- Lifecycle cost savings relative to traditional alternatives:
 - Digitally enabled NUI operations drive a low OPEX;
 - Compact minimal facilities achieves a low CAPEX.

Developing Floating NUI – industry collaboration

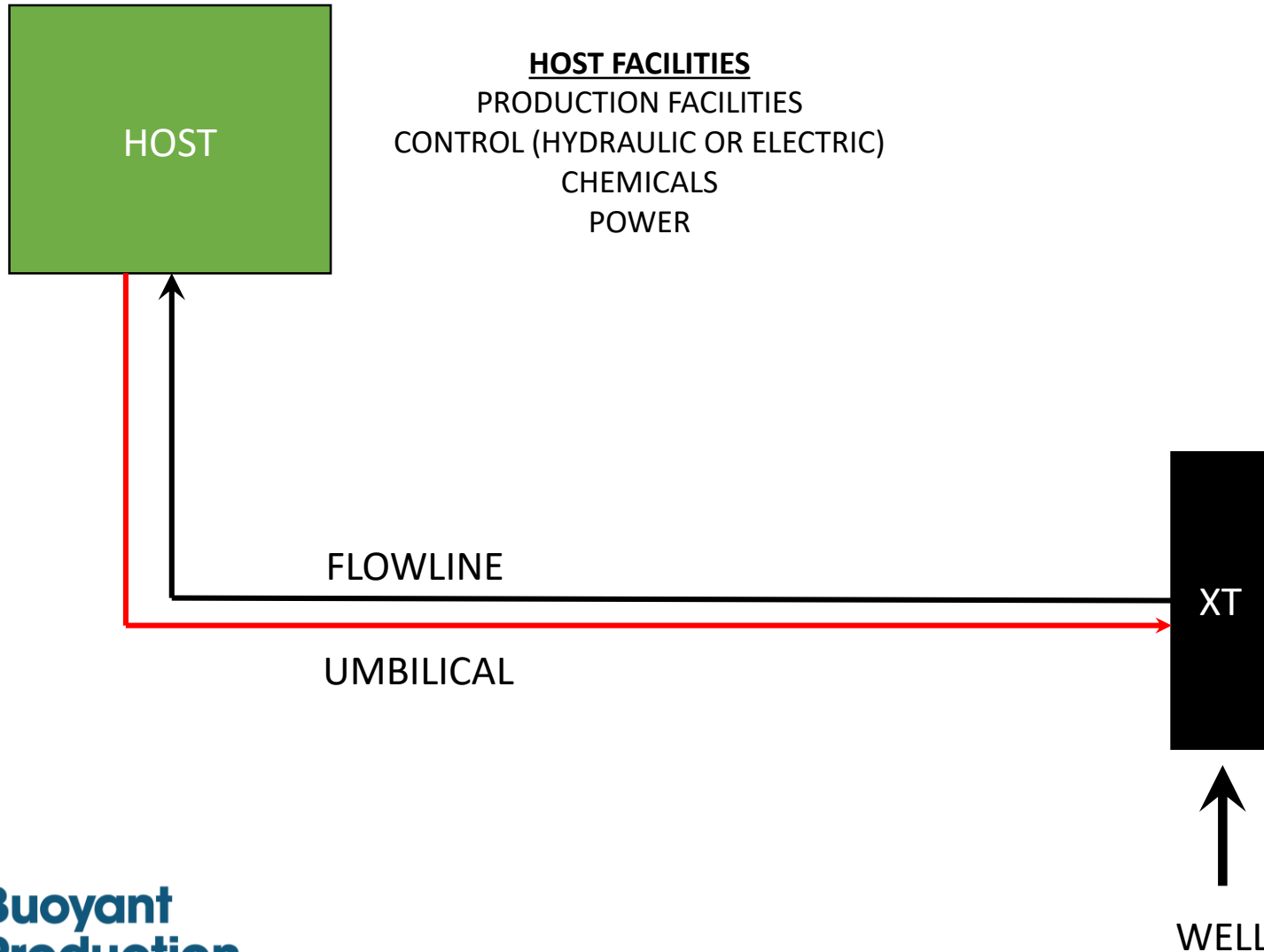


Floating NUI: - subsea tieback support

The background is a solid dark blue. Overlaid on this are several thick, stylized lines. A white line starts from the left edge, moves horizontally, then angles upwards and to the right, and finally becomes horizontal again at the top right. An orange line follows a similar path but is positioned lower and to the right of the white line, also starting from the left edge and moving towards the right. The lines have rounded corners and create a sense of depth and movement.

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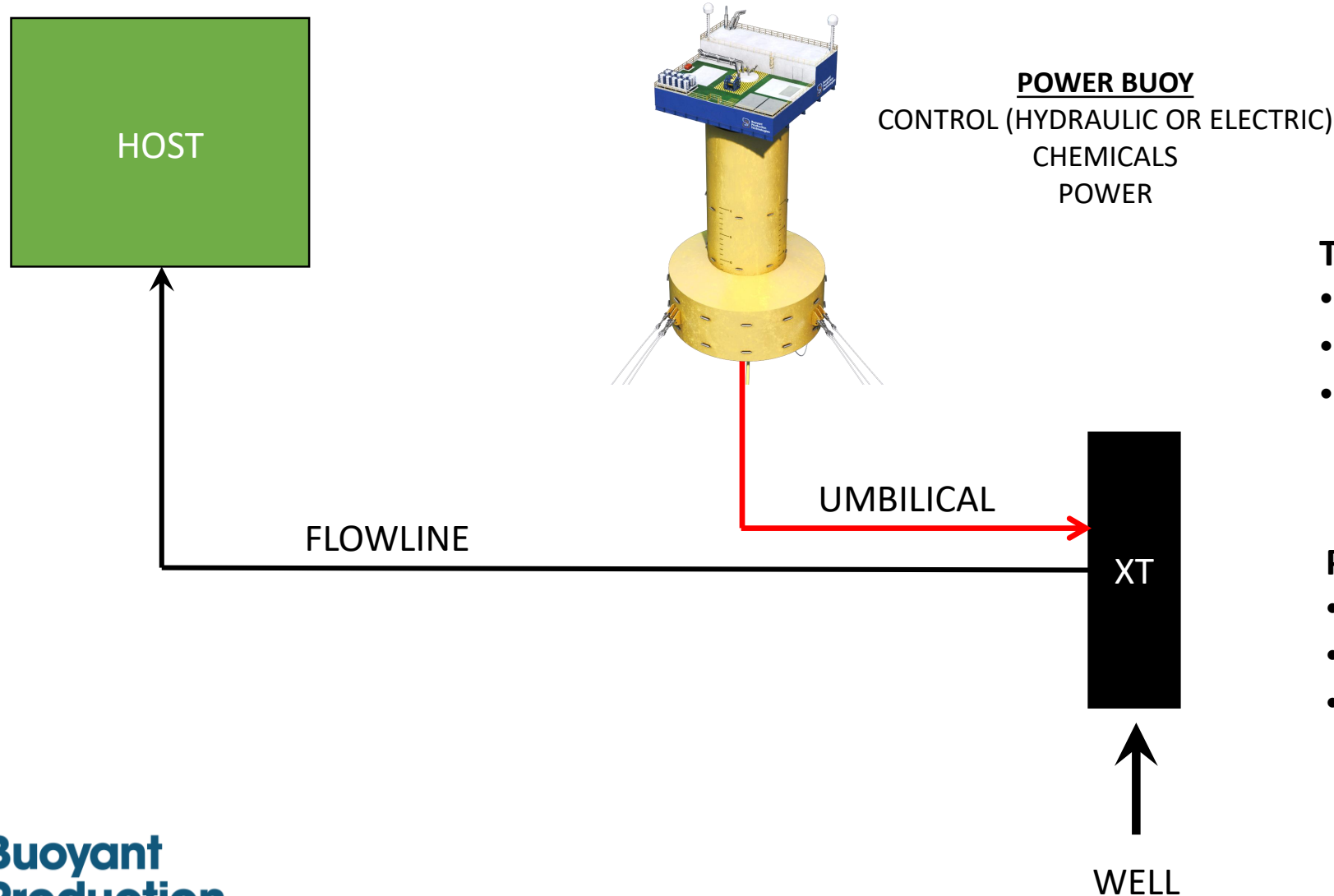
Floating NUI application



Traditional tieback challenges

- Host constraints (space, upgrade CAPEX)
- Umbilical constraints (cost, availability)
- Distance (power transmission)

Floating NUI application



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Power & Control Buoy

- No umbilical is required from the host
- No utilities are exported from the host
- Brownfield modifications are minimised

Industry opportunity



Oil price uncertainty

- Reduced finance for new production facilities

Environmental challenges

- Focus on Carbon footprint

Mature industry

- Reducing exploration potential around existing hubs
- Decommissioning of facilities and pipelines can strand tieback prospects

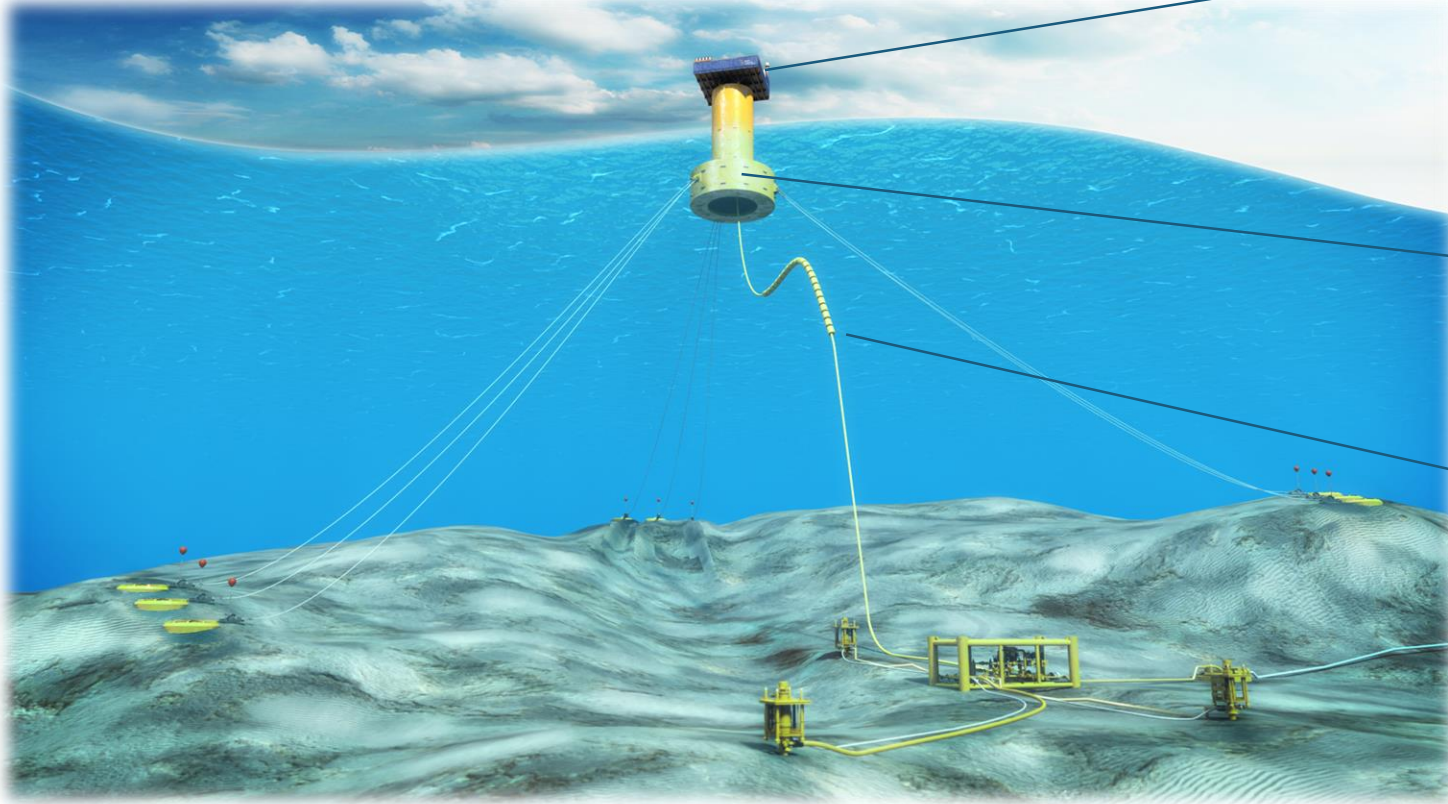
Subsea tiebacks are attractive:

- Reduced capital requirements for new production
- Lower Carbon footprint than standalone facilities
- Shorter project schedule

If we can extend the economic and technical range of tiebacks

- Extend the life of host facilities and export pipelines
- Maximise economic recovery
- Minimise the industry carbon footprint

Power Buoy features



Topsides:

Power generation (50kW – 15+MW)
Chemical injection
Switchgear
Communication

Hull:

Fuel & chemical storage
Semi-taut mooring system

Dynamic umbilical:

Well control, power, chemicals

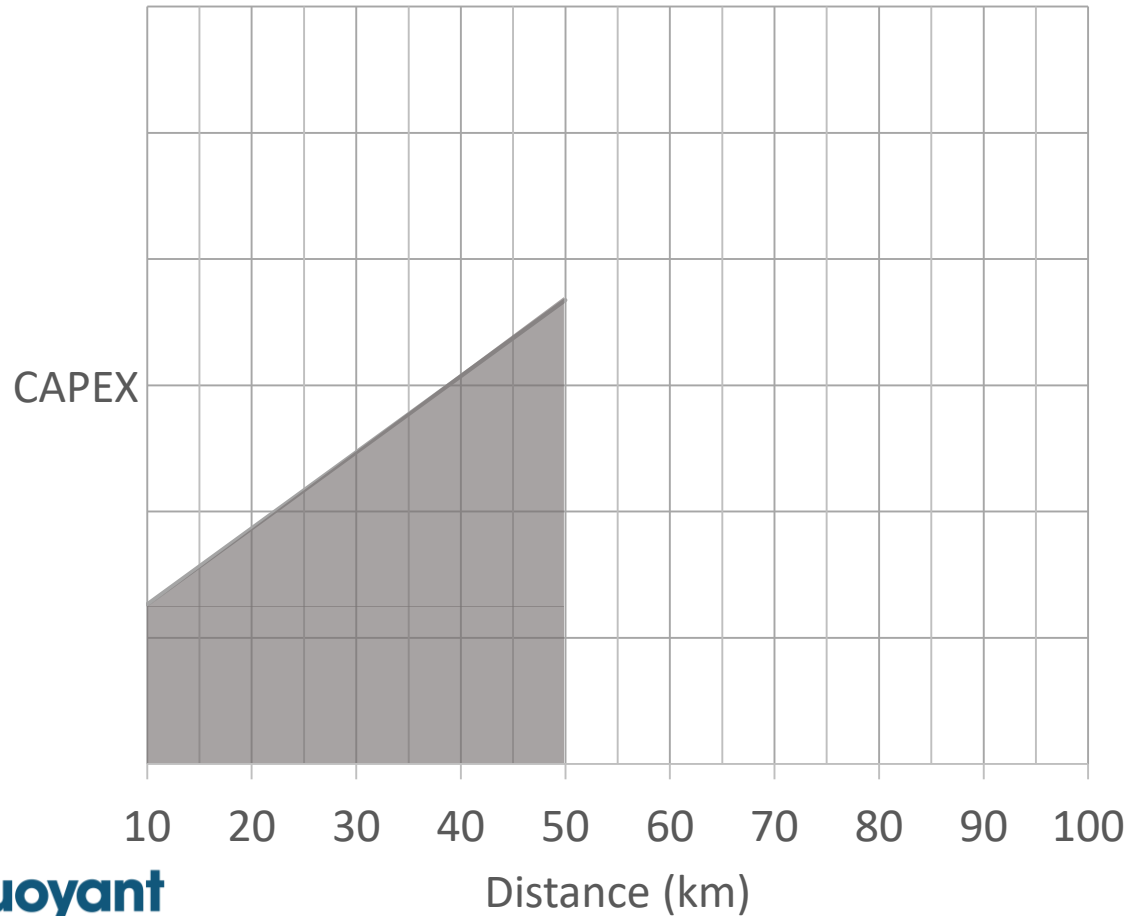
Range of power demands

Benign or Harsh metocean

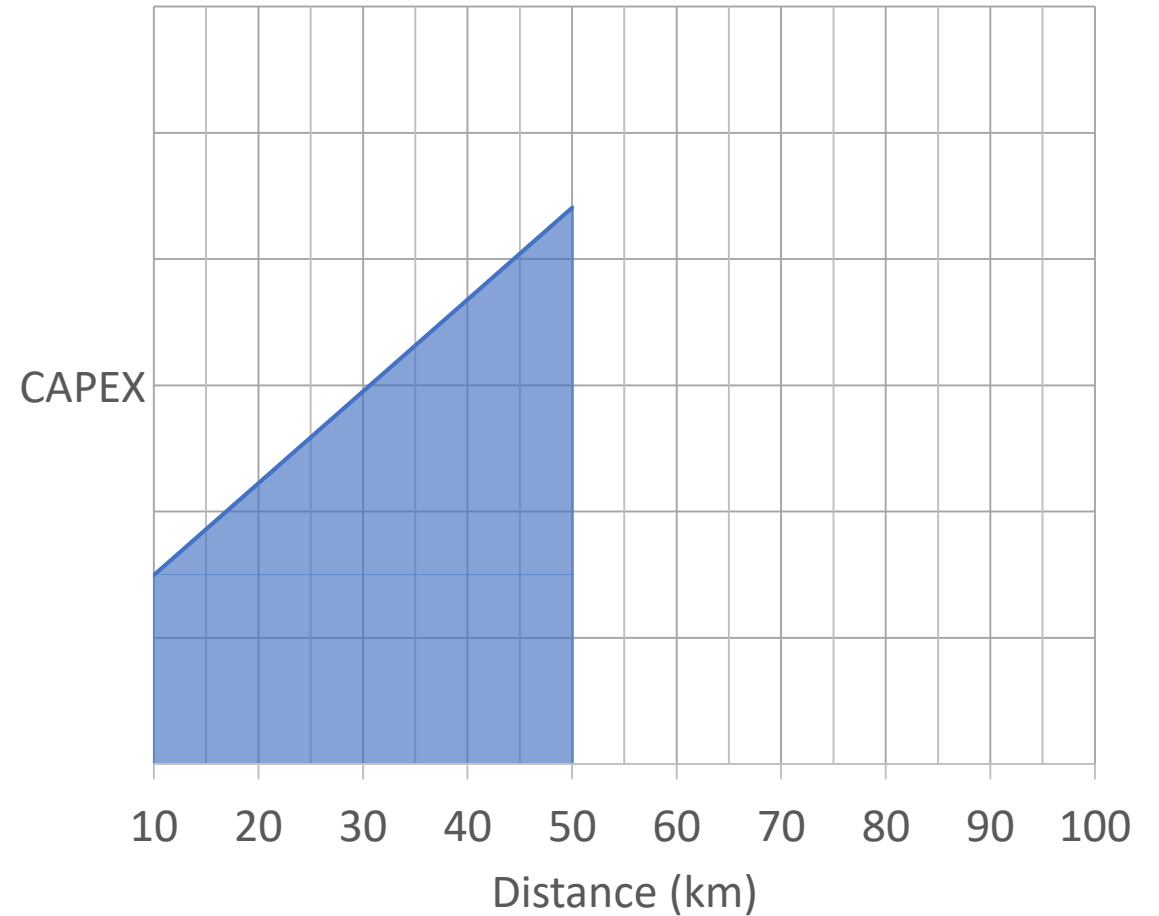
70m + water depth

Tieback CAPEX – utilising umbilical

Low Power

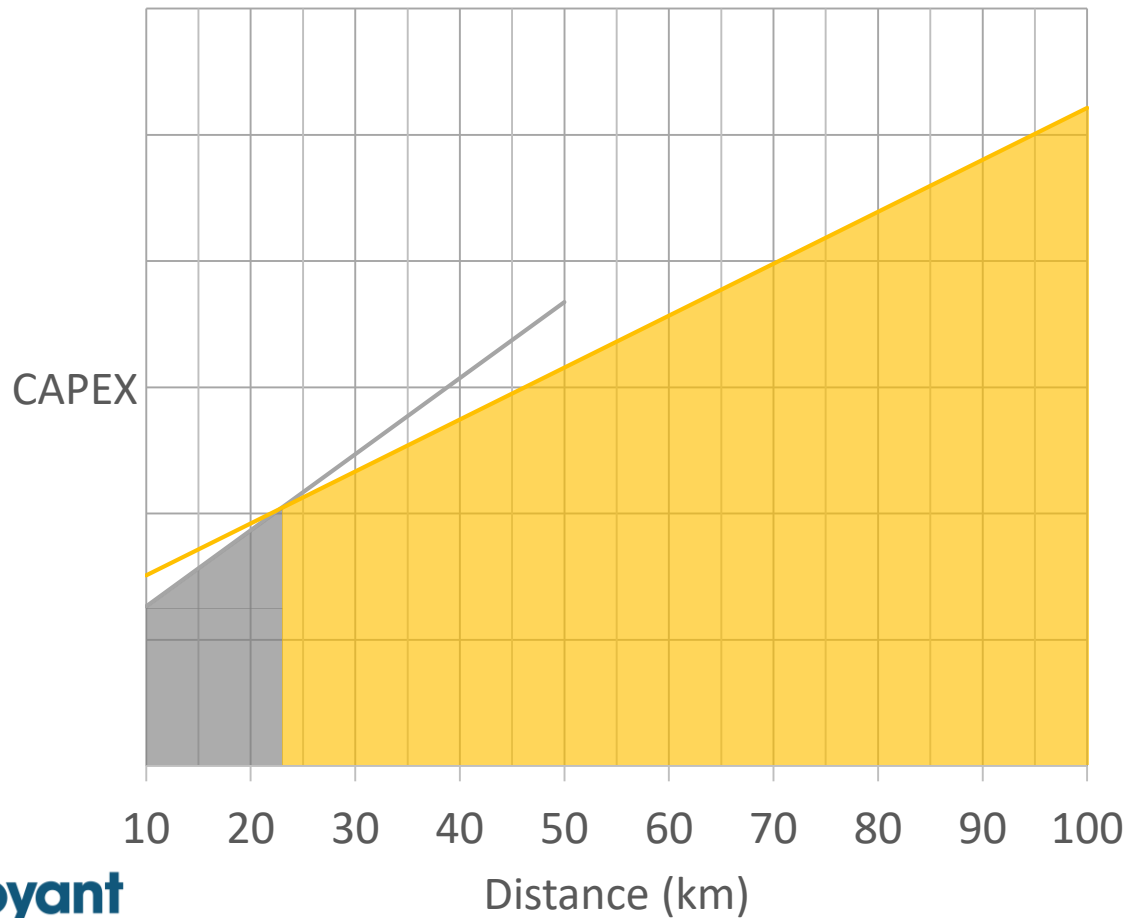


High Power

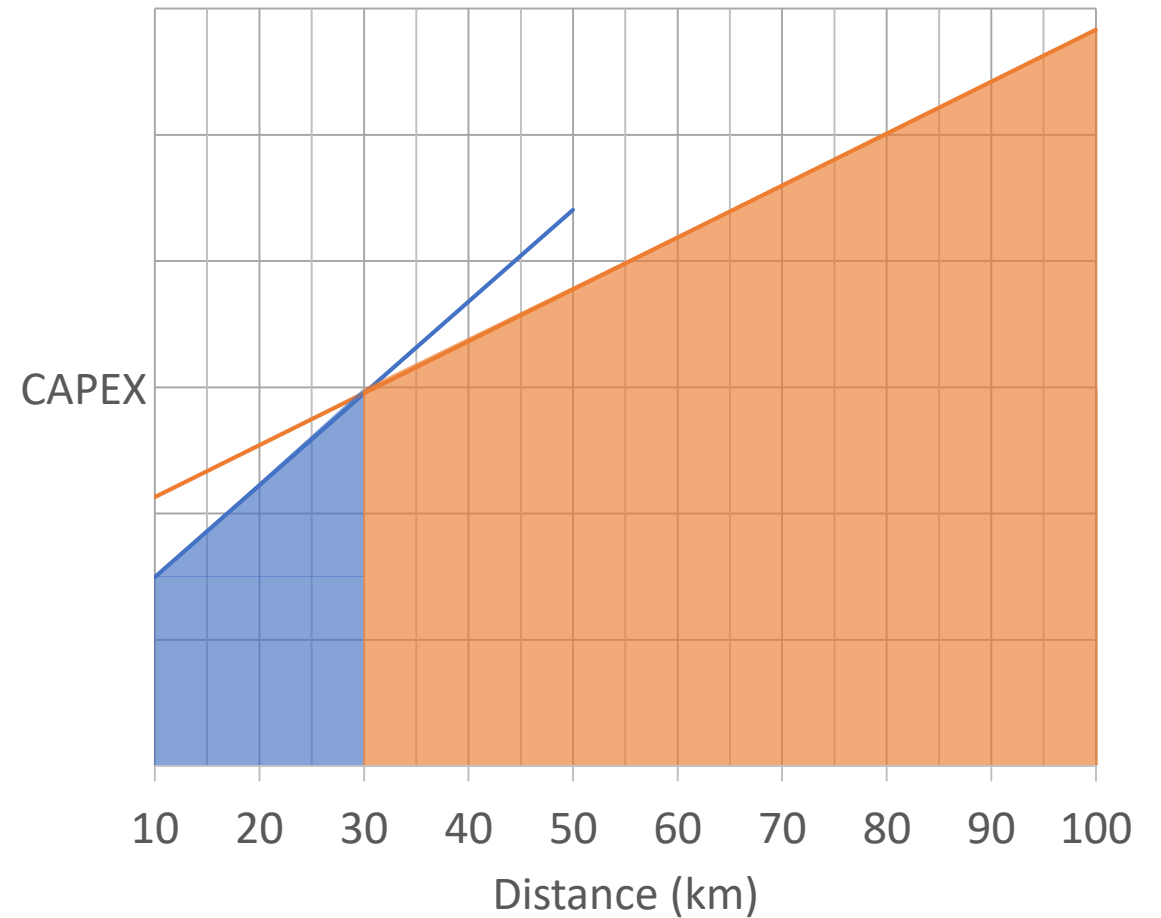


Tieback CAPEX: - power buoy vs umbilical

Low Power



High Power



Benefits: - Power buoy vs umbilical



CAPEX reductions for longer tiebacks (20-25 km upwards)

Reduce offshore vessel operations for installation and abandonment

- Carbon footprint
- Environmental footprint (trenching and burial)
- ABEX

Simplified host interface

- Reduce host brownfield modification risk
- Overcome host space constraints
- Reduce host contracting & commercial challenges

Conclusion

A wellsite Power & control buoy can expand the **range & functional capabilities** of a subsea tieback

Potential outcomes:

- Unlock tiebacks challenged by distance or technical issues
- Minimise tieback impact on host facility
- Supercharge a hub strategy



Further details:

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A decorative graphic consisting of several thick, rounded lines in white and orange, creating a sense of movement and depth across the slide.

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