



The
Oil & Gas
Technology
Centre

Your Innovation Partner

Marginal Developments

Tieback of the Future

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Background

An animation of the initiative can be viewed on youtube:

<https://www.youtube.com/watch?v=XNF86cZ653Q>

If you'd like a copy of the animation pls contact:

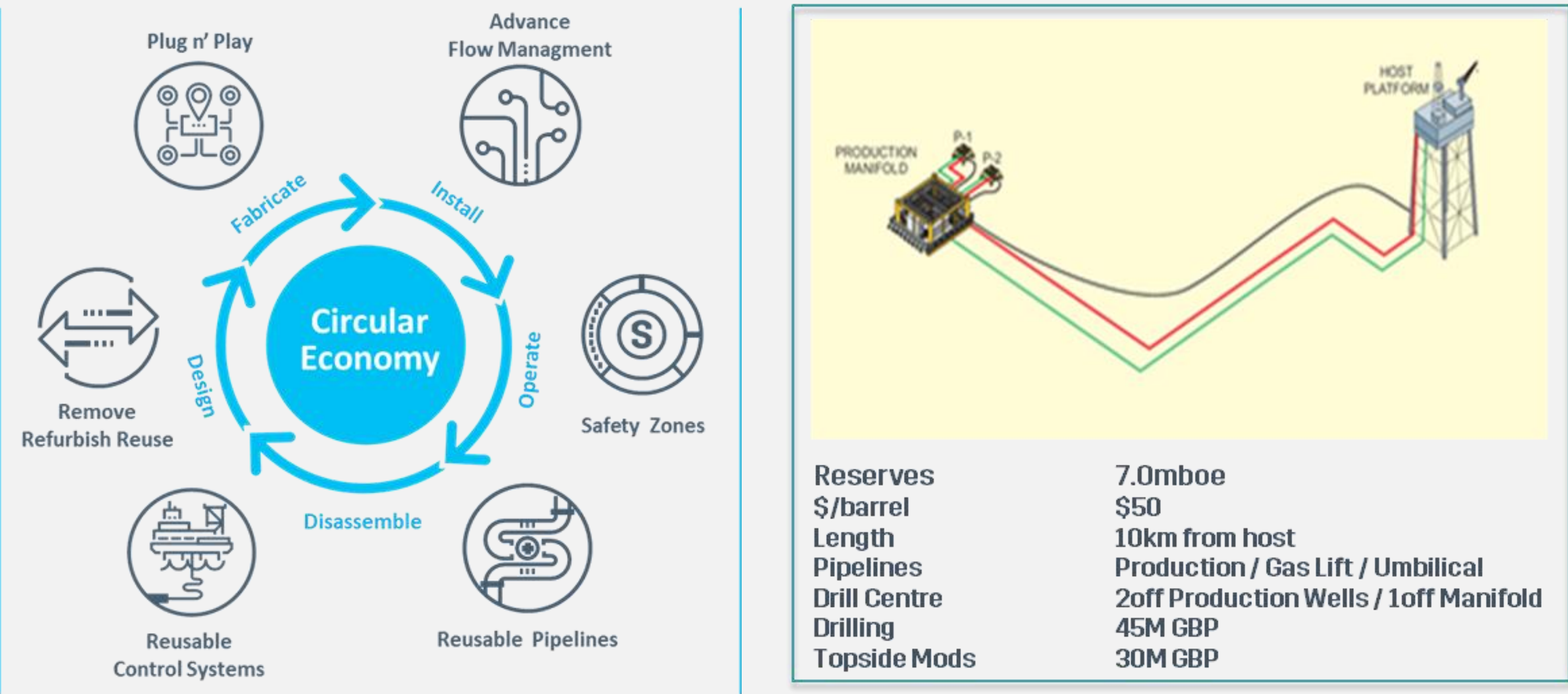
kay.marshall@theogtc.com



Background



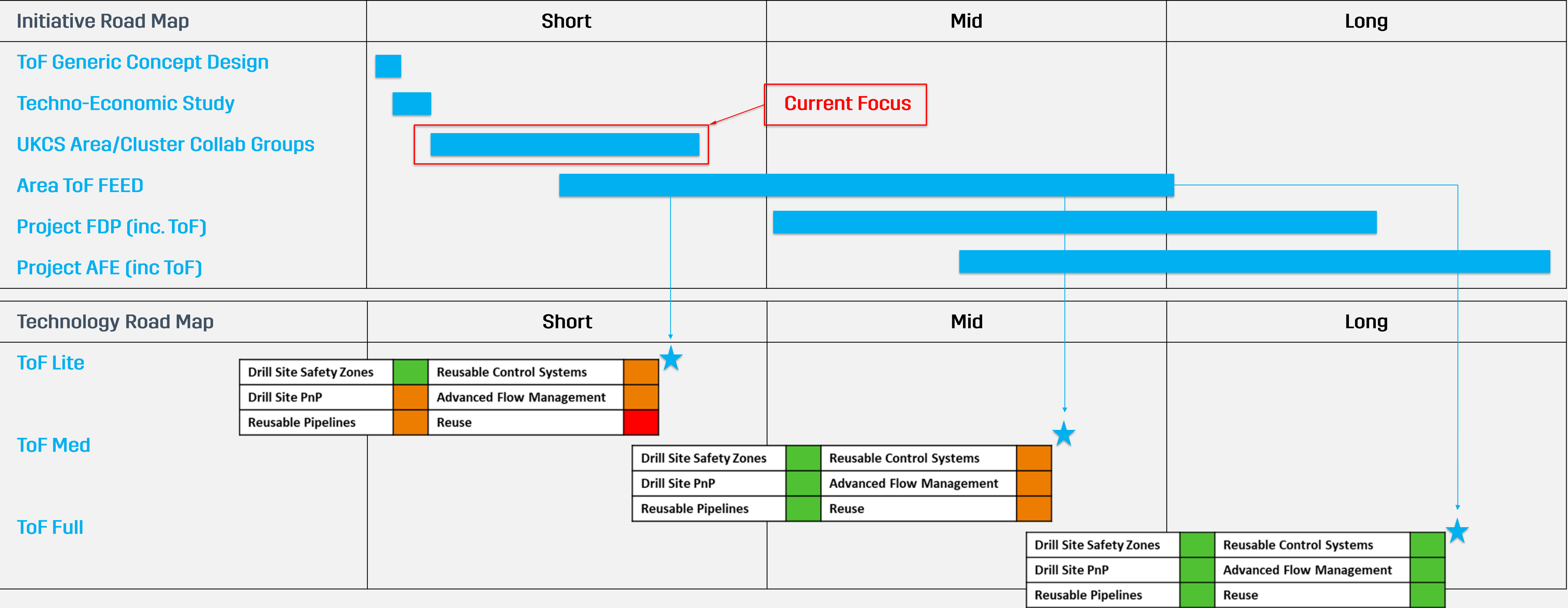
- Support for OGA 30th Licensing Round
- Competition: Design for disassembly and reuse
- Concept design and techno-economic study complete
 - > k£250 & 3000MH
 - > 6 areas to focus on
 - > 40% subsea CAPEX saving in first use
 - > 30% additional CAPEX/ABEX saving in 2/3/4th use
 - > Impacts on NPV / IRR
- 26 Studies / Projects completed or ongoing
- £4.5M committed investment to date
- 5 field trials



	Current TieBack	TieBack of the Future (1st Use of Equipment)	TieBack of the Future (Reuse of Equipment)
Subsea CAPEX	£65M	£40M (40% saving)	£18M (70% saving)
NPV/IRR	\$3.9M / 11.2%	\$33.4M / 24.5%	\$116.8M / 28.9%**

** Leased model (4off developments)

Initiative & Tech Roadmap

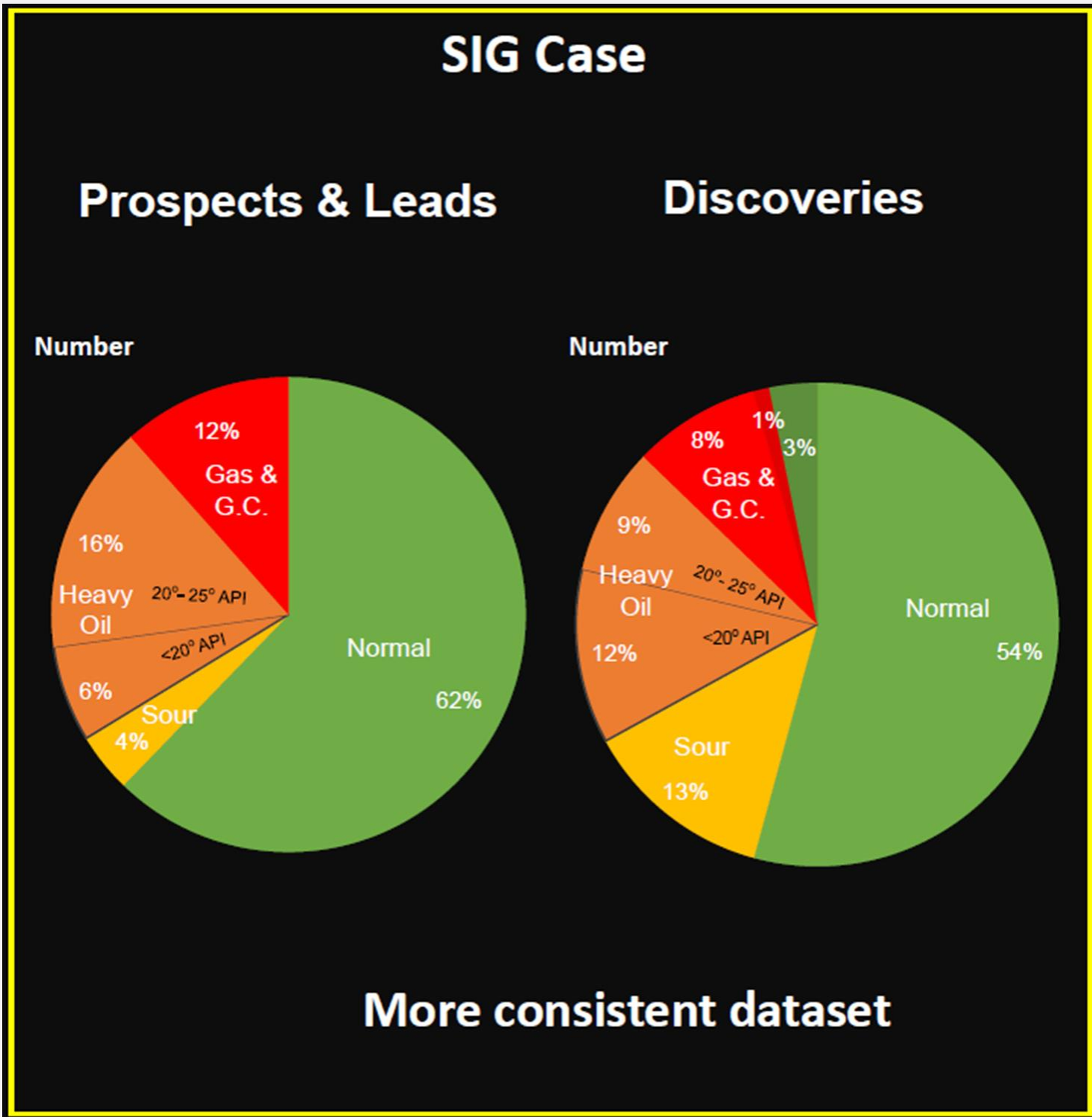


Outer Moray Firth Significant Interest Group : OMF SIG : (Equinor / Nexen / Repsol-Sinopec / Parkmead)

- Phase 1 focused on subsurface work undertaken by 1st Subsurface Oilfield Management. All discoveries, prospects and leads identified and held on an open access database called TROVE.

Discoveries	Total	HPHT (incl Sour)	NPNT (incl Sour)
No.	95	4	91
Contingent Resource (mmboe)	1171	50	1121
Prospects & Leads			
No.	298	16	282
Unrisked Prospective Resource (mmboe)	5856	492	5364
Riskied Prospective Resource (mmboe)	994	84	910

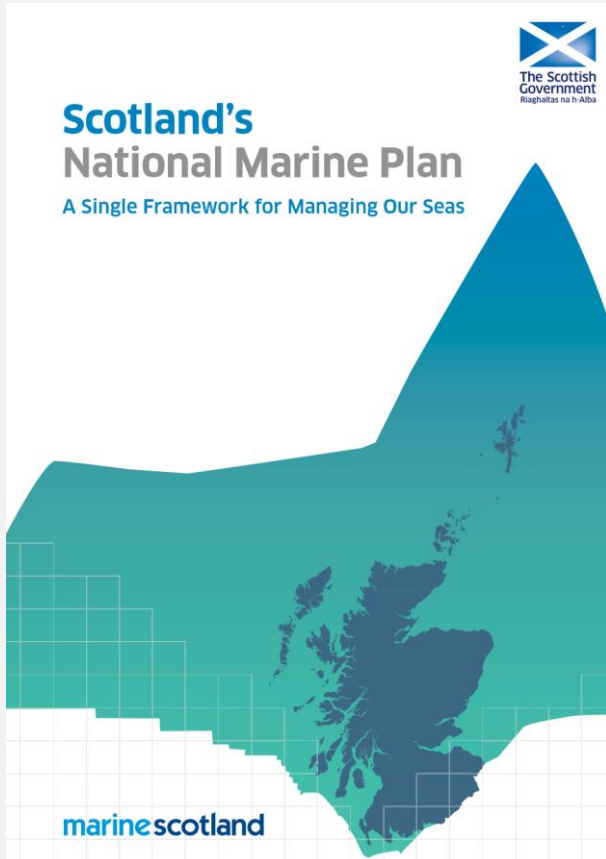
- Phase 2 focused on development options and should KO Q1 2019.
- OMF SIG / OGTC / Scottish Enterprise are currently working through governance to release funding for an OMF subsea FEED based on TieBack of Future





Fishing Interaction (Safety Zones)

Theme	Recommended Action
Marine Planning Framework	Work with UK Marine bodies (eg. Marine Scotland) to explore spatial planning initiatives to separate fishing and O&G activities.
Drill Site Exemplars	Utilising this study, work with UKCS operators to develop exemplar models for drill sites designed without fishing gear protection
Technology (Site Monitoring /Protection)	Work with technology providers to test and bring to market a range of site monitoring and protection systems
Technology (Vessel Tracking)	Work with UK marine bodies / operators and tech providers to implement a UKCS vessel tracking system
Technology (Fishing Industry)	<u>Data Handling</u> Work with operators and industry bodies to improve the data (subsea infrastructure) handing between O&G/fishing industry <u>Fishsafe</u> Work with fishing industry to improve and upgrade fishsafe
Legislation	Work with industry and Gov bodies to explore implementing a change to the current legislation covering subsea safety zones



GLOBAL FISHING WATCH

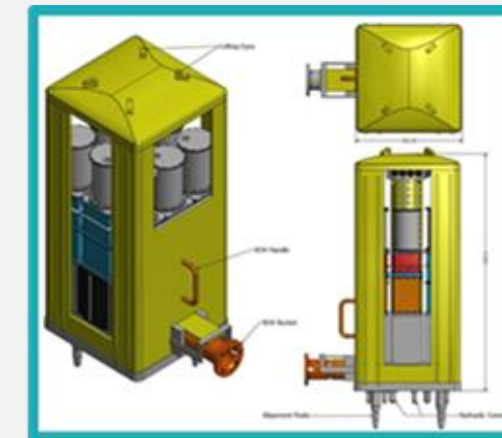
Global Fishing Watch enables anyone with an Internet connection to see fishing activity anywhere in the ocean in near real-time, for free.

Reusable Control Systems



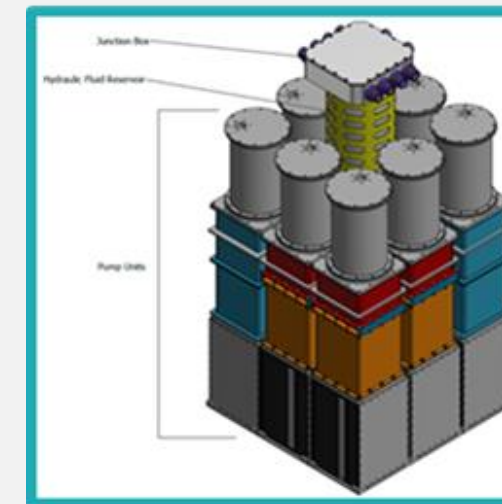
OPT

- Remote pwr generation/storage
- Platform for through air comms



QL Tech

- Remote Chemical Injection & Storage
- Pwr Storage



Oceaneering

- Remote Chemical Storage & Injection



EC-OG

- Remote pwr generation/storage



Xodus Group

- Wireless Comms Test Programme

Reusable Pipelines

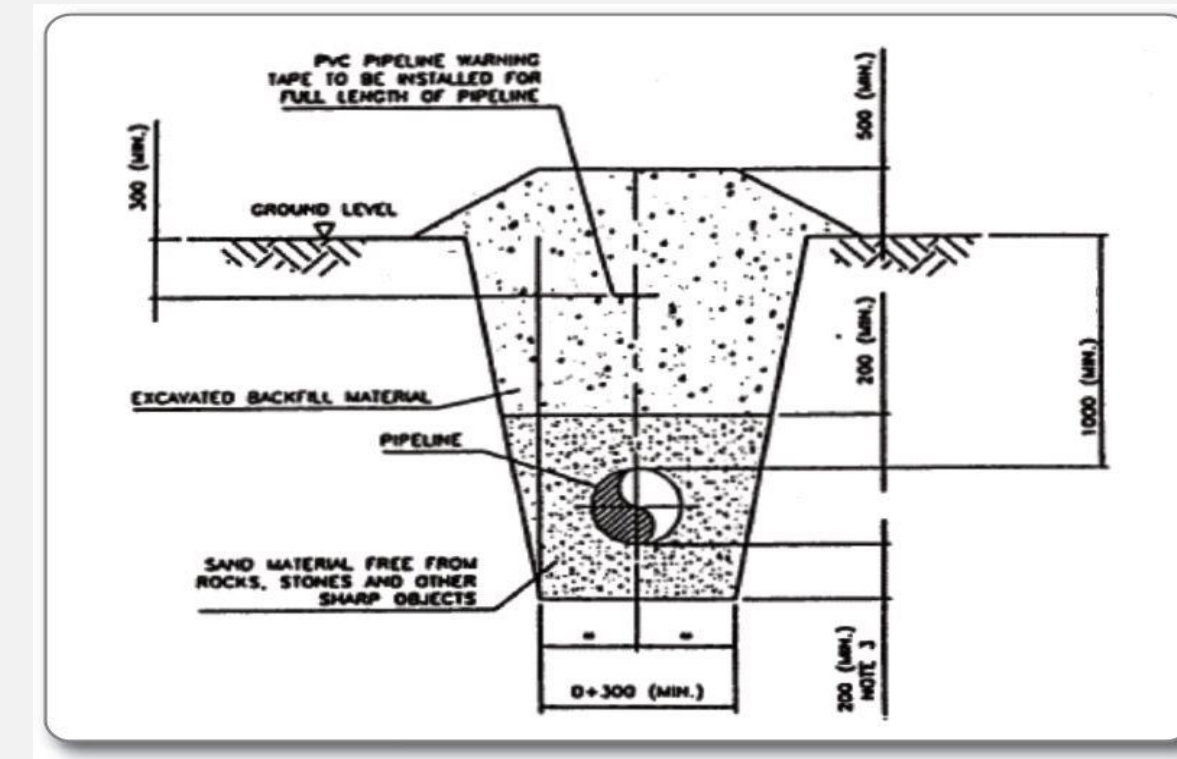
Approved Projects:

OGTC/OGIC/Crondall/Heriot-Watt

- Internal Coating System

Marine Direct Consultants Ltd

- Mechanical pipe connector



Challenge Trench & Burial



 **AkerSolutions™**

 **magma**

Tuboscope |  **Wellbore Technologies**

Airborne
Oil & Gas

VAM®

Advanced Flow Management

Retrofittable / Non-Instrusive flow monitoring device

Approved Projects:

Exnics A-EYE

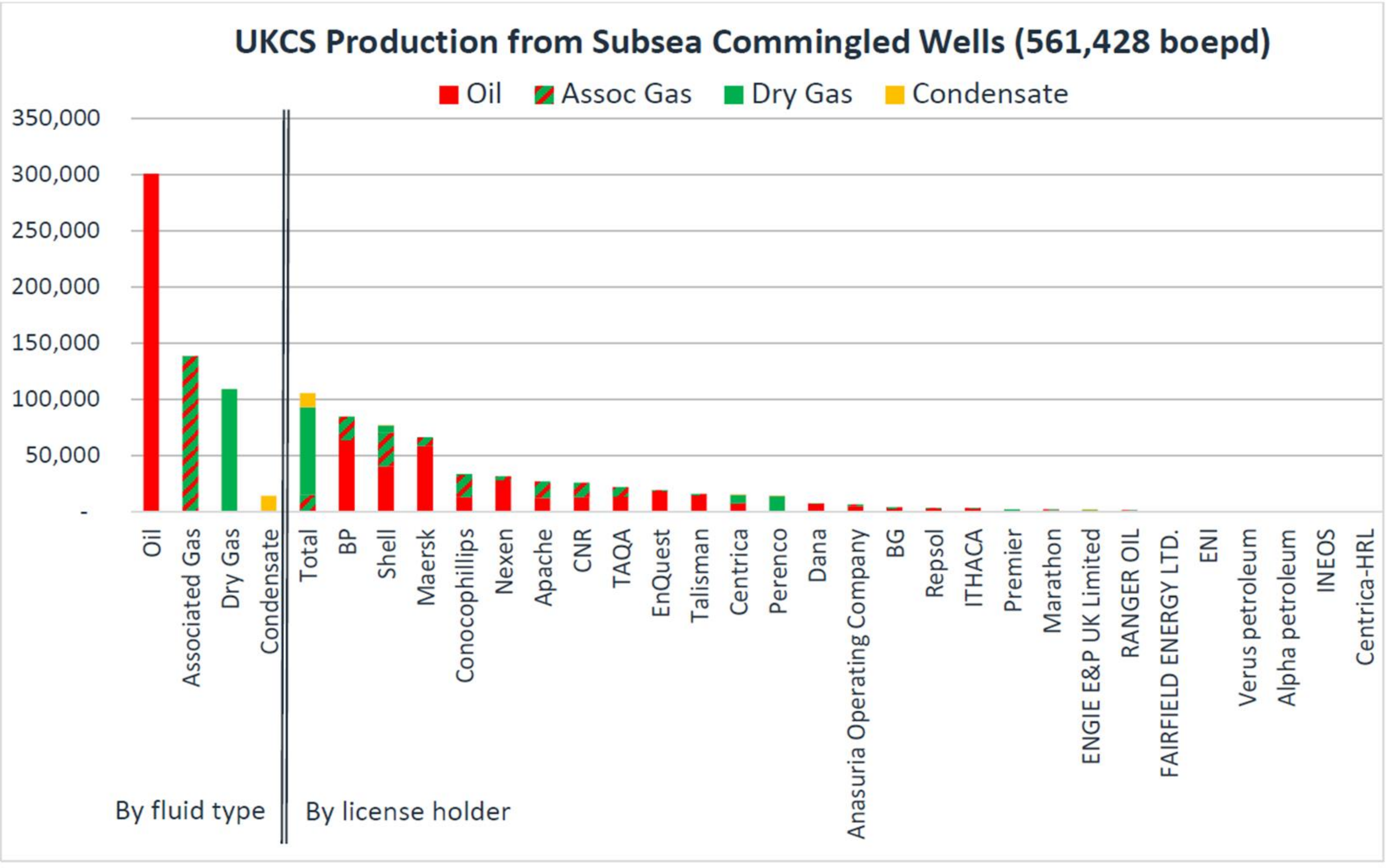


Proposals:

NEL



Dashboard





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