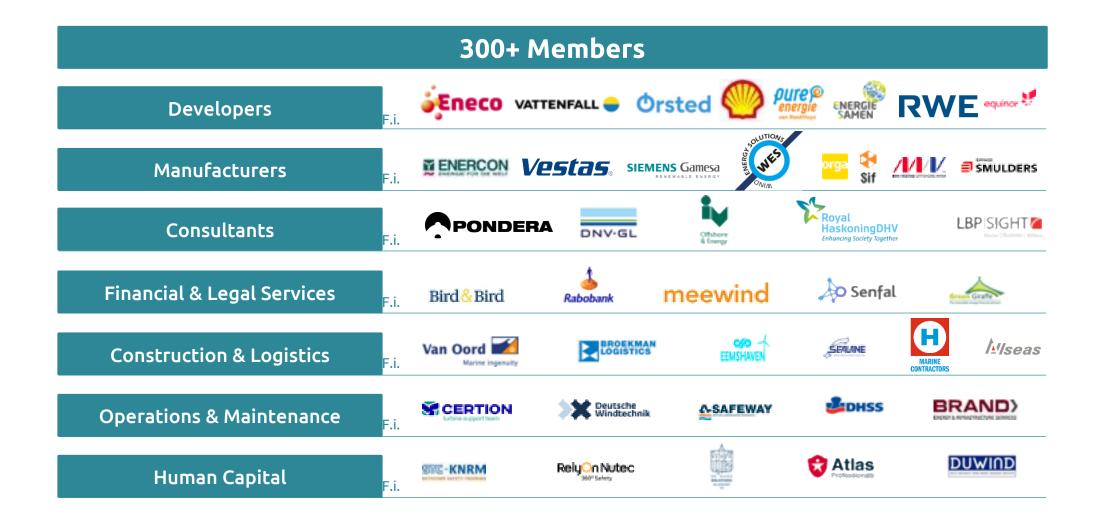
Oil Services

Ongoing positive market expected assuming 'normal' conditions

Richard Brakenhoff 6 September 2023



NWEA: Promote the development of Wind Energy



Our daily operations

Administrations











Related associations























NGO's

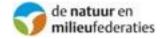














Authorities





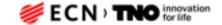










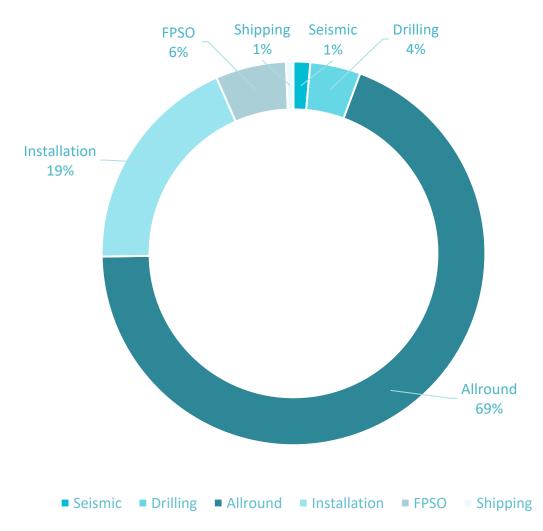


Agenda

01	Introduction
02	Energy Scenarios
03	CAPEX Renewables
04	Short-term Outlook
05	Netherlands
06	Oil Services Outlook
07	Conclusions

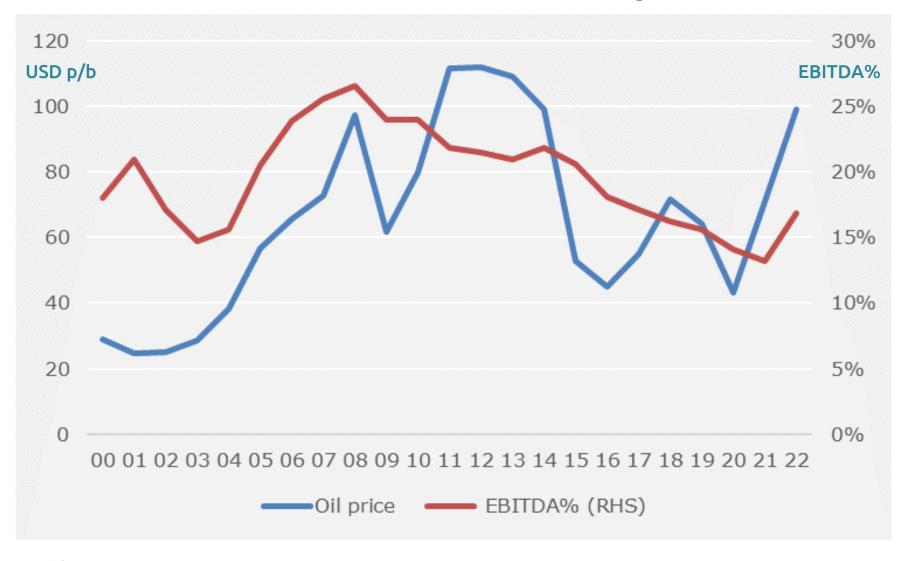


Oil Services market by activity (2022)



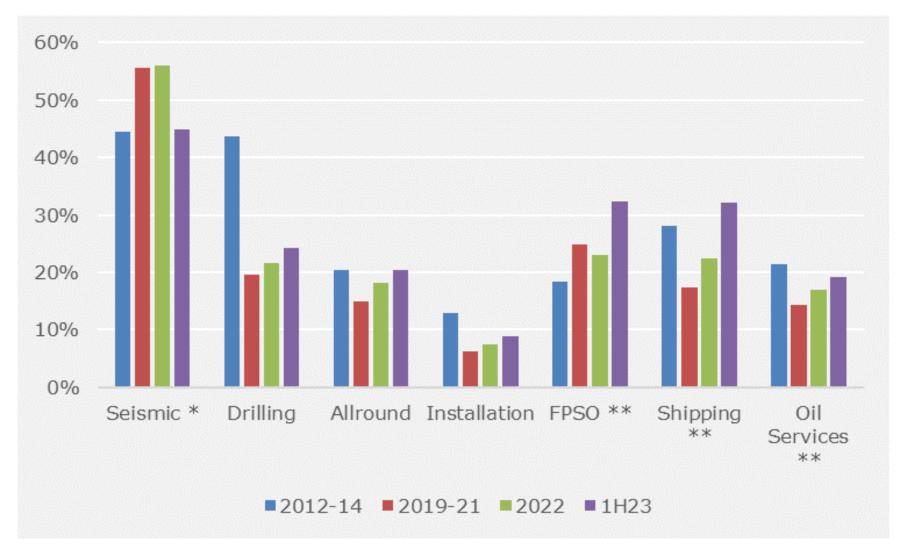
Source: Company reports of nearly 50 quoted Oil Services companies

Oil Services' EBITDA% versus Oil price



Source: Company reports

EBITDA margin continued recovery in 1H23



Source: Company reports; Please note: Seismic looks strong due to IFRS changes, net margin negative in 2019-21 *) Seismic seasonally weak 1H; **) Not all 1H23 results released yet



IEA's three energy scenarios until 2050

Stated Policies (SPS)

Governments will not meet their climate goals

Announced Pledges (APS)

All climate commitments made by governments around the world will be met in full and on time

Net Zero Emissions (NZE)

Pathway to achieve net zero CO₂ emissions in 2050

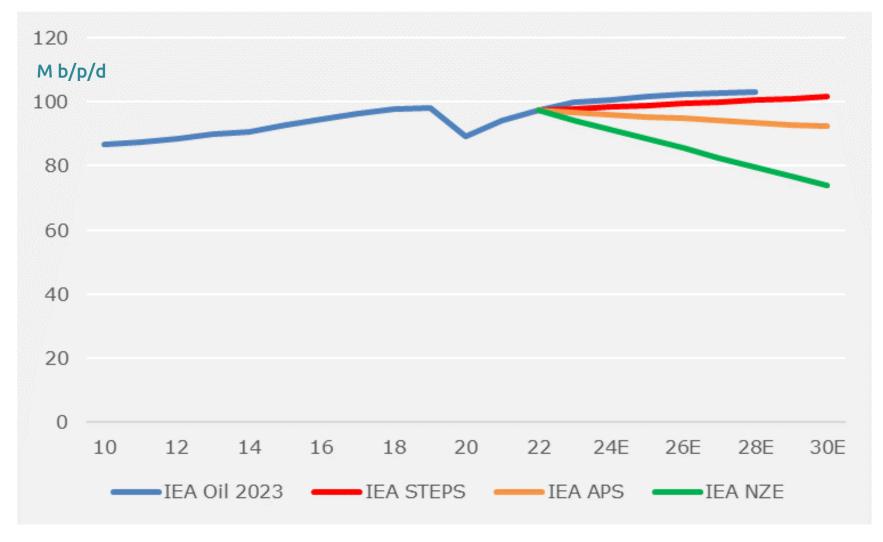
Source: IEA World Energy Outlook 2022

IEA Energy Scenarios compared to 1990-2020

	1990-2020	STEPS 2020-2050E	APS 2020-2050E	NZE 2020-2050E
Population	+45%	+25%	+25%	+25%
GDP% per yr	2.9%	2.9%	2.9%	2.9%
Energy use	+61%	+25%	+6%	-10%
Energy use per Capita	+11%	0%	-15%	-29%
Fossil fuels	+57%	-2%	-47%	-79%
Renewables	+97%	+212%	+362%	+441%

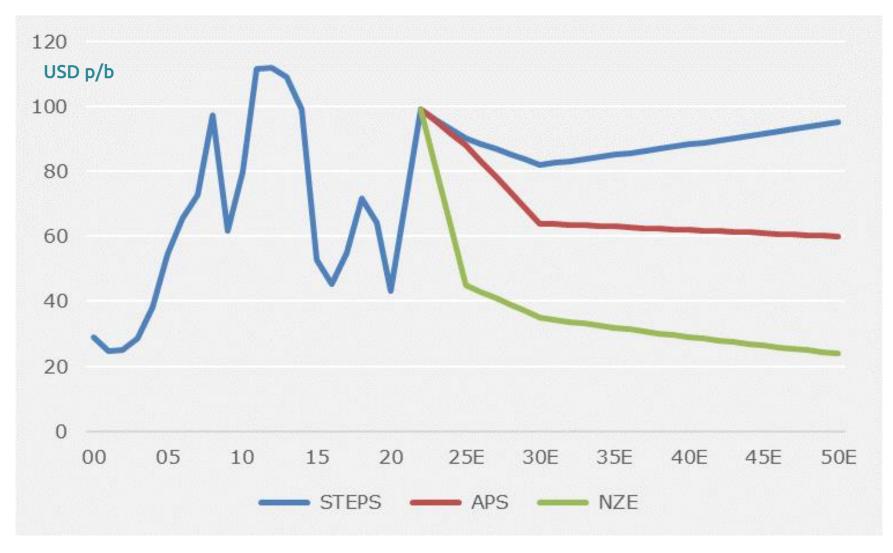
Source: IEA World Energy Outlook 2022; Please note: Renewables = new renewables, i.e. excl. traditional wood

Peak global oil demand in 2028?



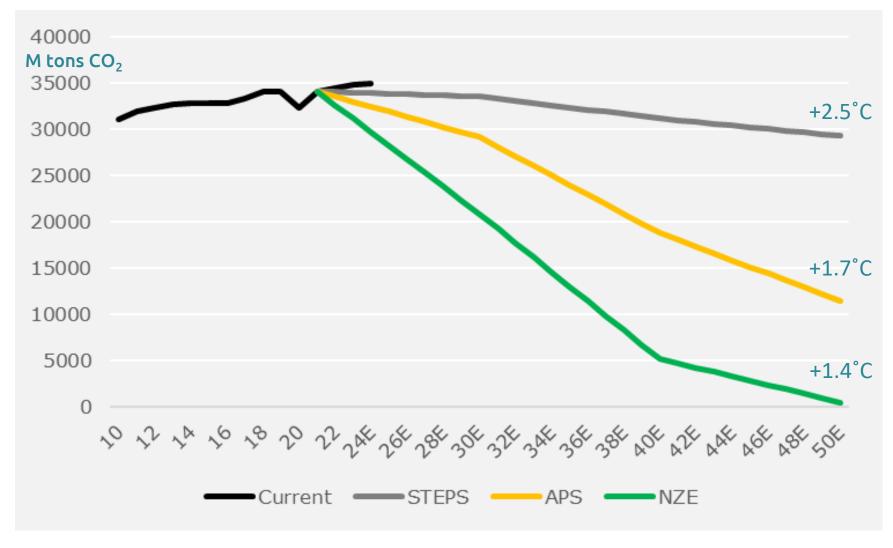
Source: IEA World Energy Outlook 2022 (October 2022); IEA Oil 2023 (June 2023)

Long-term Oil price forecast (IEA's scenarios)



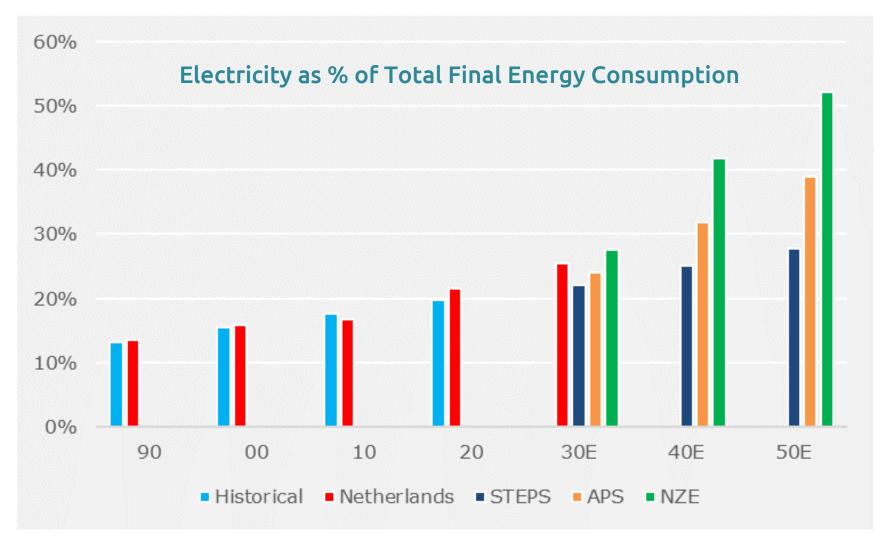
Source: IEA World Energy Outlook 2022 (October 2022)

Global CO₂ emissions caused by combustion



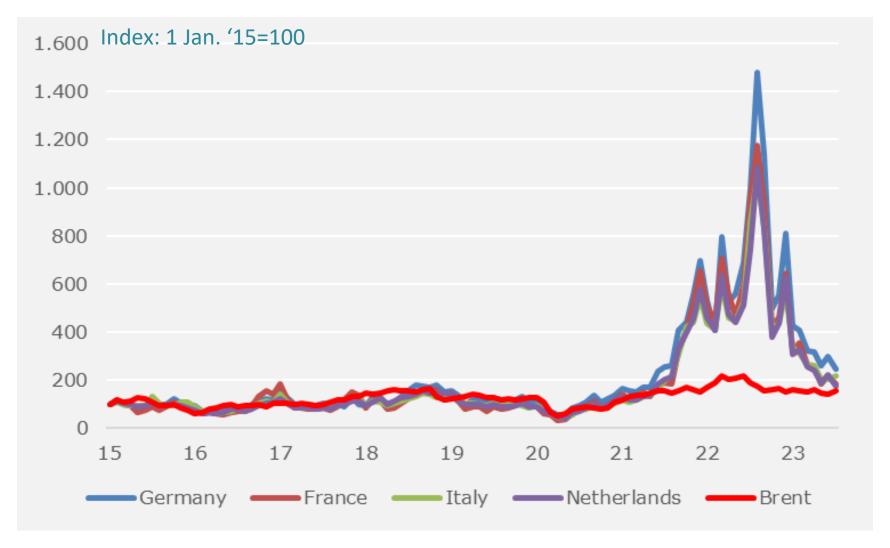
Source: IEA World Energy Outlook 2022; IEA Oil 2023; IEA 3Q23 Gas market; IEA Coal market update

Electrification key at Energy Transition



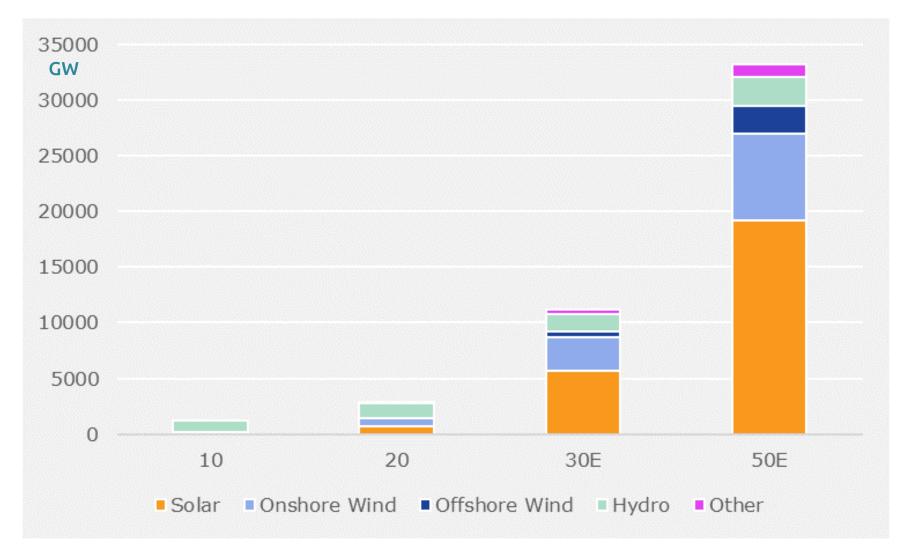
Source: IEA World Energy Outlook 2022; Eurostat; PBL Klimaat- en Energieverkenning 2022

Electricity prices more volatile than Oil?!?



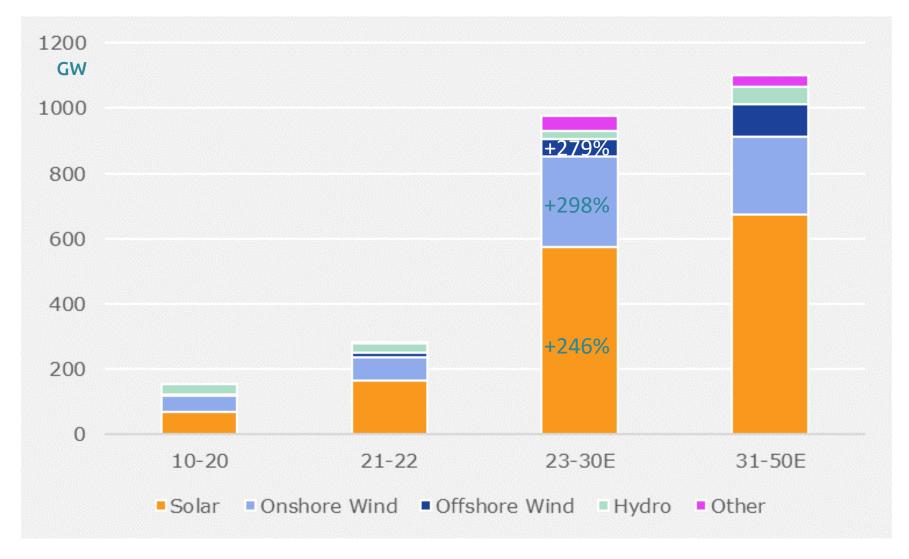
Source: Ember-climate, Business Insider; Please note: Brent recalculated in EUR

Global Renewable Capacity needed in 2050



Source: IRENA World Energy Transitions Outlook 2023

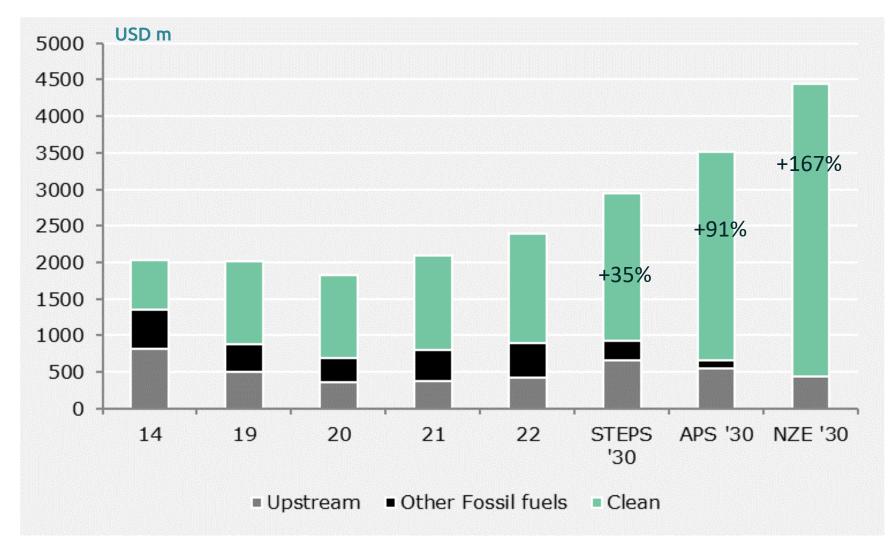
Average annual Renewable capacity additions



Source: IRENA World Energy Transitions Outlook 2023

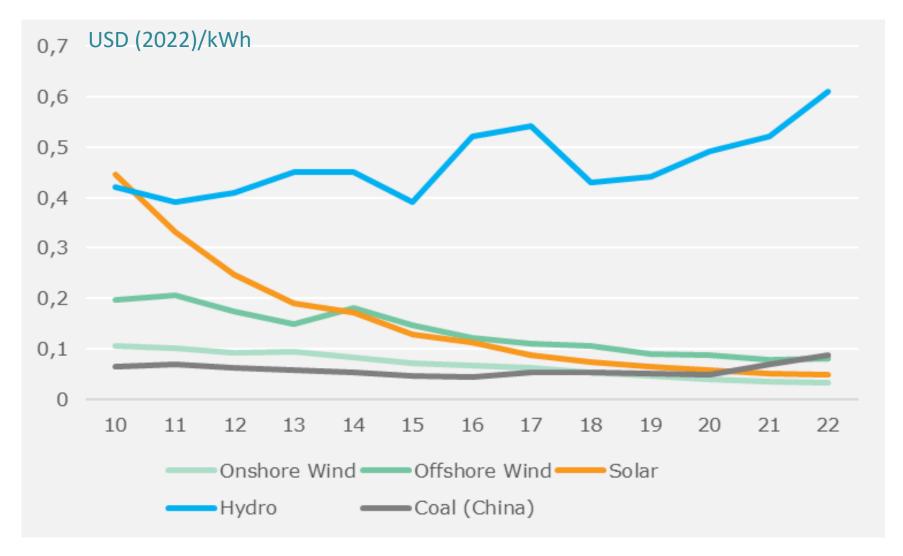


Spectacular rise Clean Investments needed



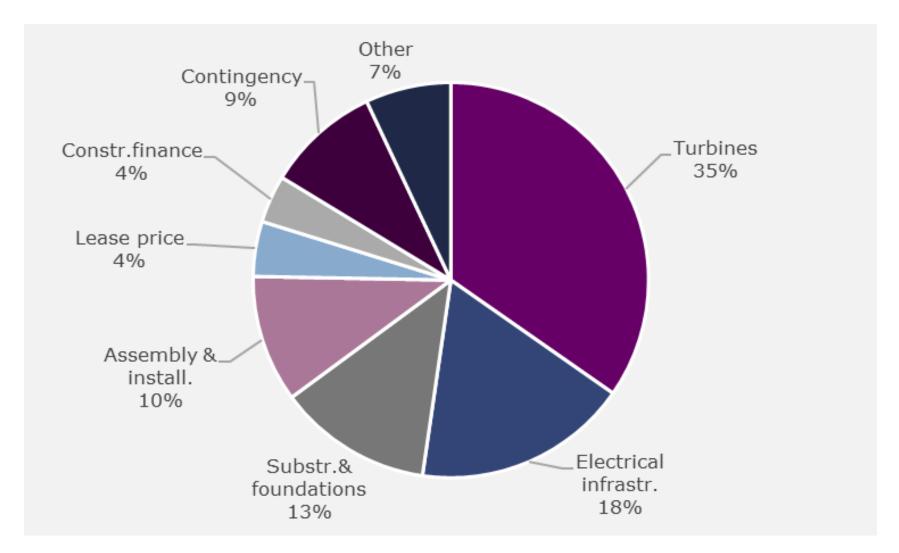
Source: IEA World Energy Outlook 2022; IEA World Investments; IRENA World Energy Transitions Outlook 2023

LCOE Onshore Wind lowest in 2022



Source: IRENA Renewable Power Generation Costs in 2022; Please note: LCOE = Levelised Cost of Electricity of new commissioned power plants

CAPEX breakdown Offshore Wind farm (2020)



Source: GWEC Global Offshore Wind report 2022; Please note: Typical fixed-bottom project of 600MW in 2020

Possible risk factors CAPEX plans



Turbine manufacturers: Vestas, Siemens Gamesa, GE, Nordex loss making



Electrical infrastructure: Price Copper USD 8,400/ton (was USD 6,172/ton in 2020) EBITDA margin Cable manufacturers stable in recent years, i.e. the companies pass on higher prices to customers



Foundations: SIF slightly above break-even, Bladt Industries and Steelwind loss making



Installation: Seaway7 loss making, just like Saipem, Van Oord, Jan De Nul in 2021. Cadeler & Eneti merging. Shortage of large installation vessels as of 2026



Lease price: Uncapped negative bidding at offshore wind auctions (Germany EUR 12.6bn for 7GW in 2023. Increased risks offshore wind farm developer



Interest rates up: 10-year Dutch government rate up from 0% in 2020 to 2.9% currently

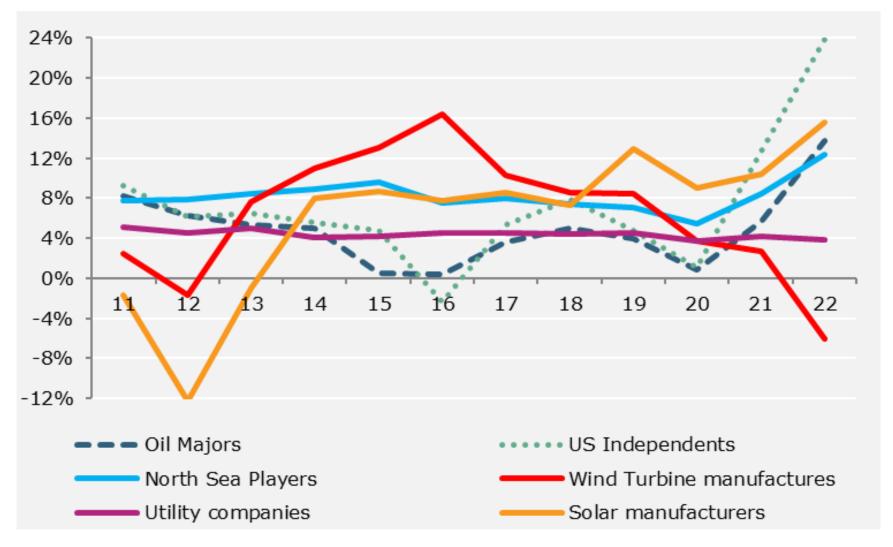


Aftermath COVID-19: Supply chain risks, delays



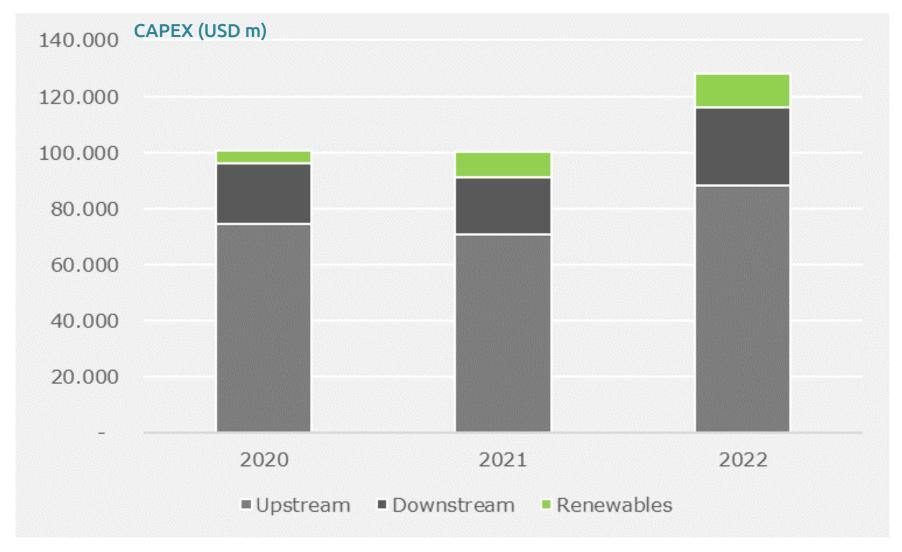
Governments have ambitious plans for Renewables, but are risks becoming unacceptable?

ROCE Oil & Gas exceeds Renewables ...



Source: Company reports; Please note: ROCE based on quoted companies; ROCE Ørsted 9.3% in '22, target 14%

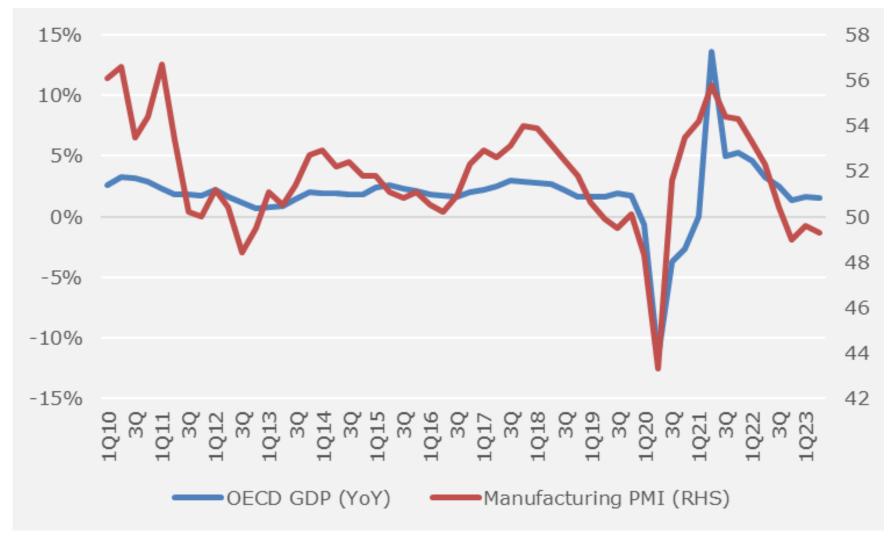
...Limits CAPEX appetite by the Oil Majors



Source: Company reports; Please note: ExxonMobil, Chevron, Shell, BP, Total, Eni, ConocoPhillips, Equinor

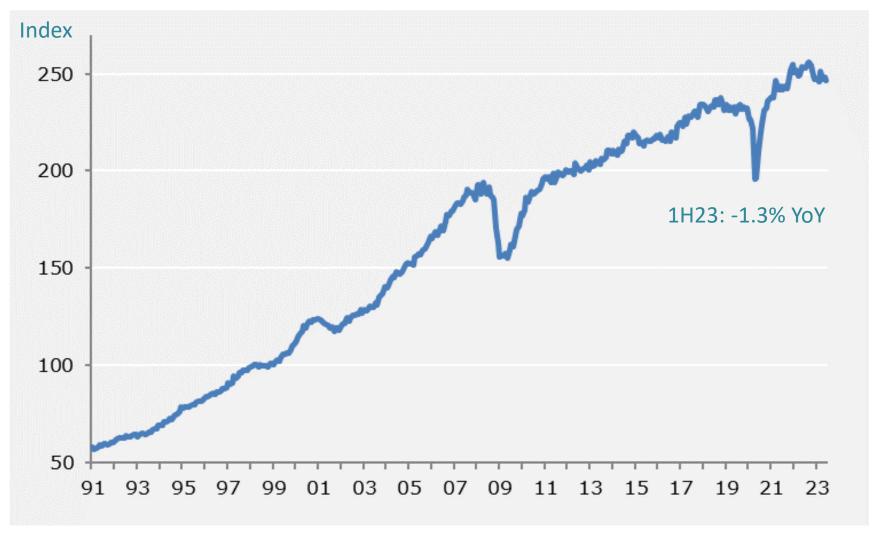


Global Manufacturing PMI below 50



Source: OECD (GDP Advanced Economies), JP Morgan (Global Manufacturing PMI)

Growth World Trade halted in 1H23



Source: CPI; Please note: Index 1998 = 100

Brent Oil price forecast 2023-2027E

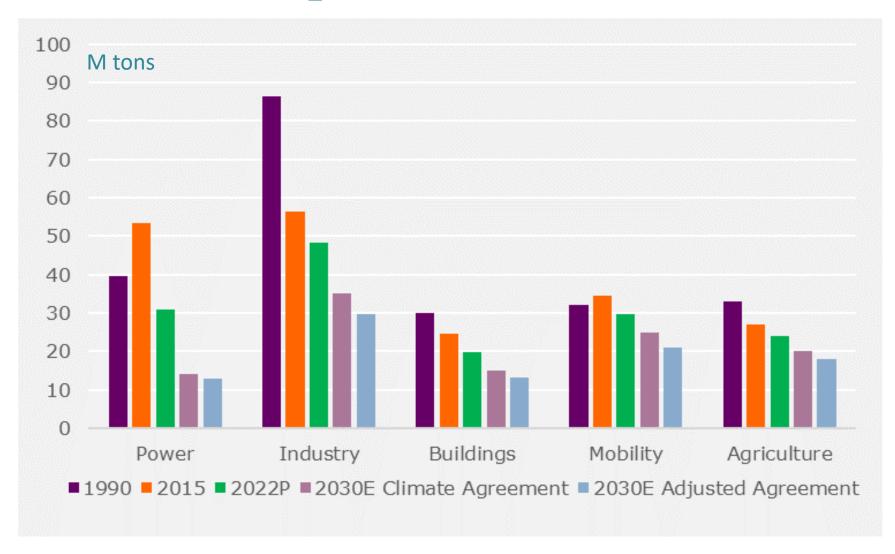
USD p/b	2023E	2024E	2025E	2026E	2027E
U.S. EIA	83	86	n/a	n/a	n/a
World Bank	80	82	84	n/a	n/a
IMF	75	71	69	68	67
Bloomberg	81	83	81	78	70
Rabobank	78	92	100	103	n/a
Richard Brakenhoff	80	78	72	68	64

Henry Hub gas price forecast 2023-2027E

USD p/b	2023E	2024E	2025E	2026E	2027E
U.S. EIA	2.58	3.22	n/a	n/a	n/a
World Bank	2.70	3.70	n/a	n/a	n/a
IMF	2.87	3.59	4.20	4.37	4.36
Bloomberg	2.90	3.55	4.00	3.41	2.99
Rabobank	3.02	3.92	4.41	4.33	n/a
Richard Brakenhoff	2.70	3.50	3.80	3.50	3.20

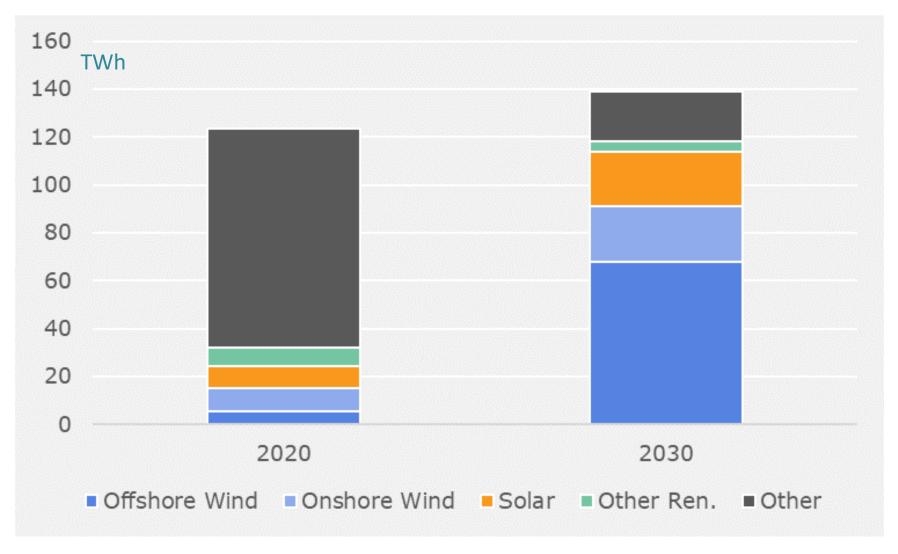


Target Dutch CO₂ reduction 55-60% in 2030



Source: PBL Klimaat- en Energieverkenning 2022; CBS

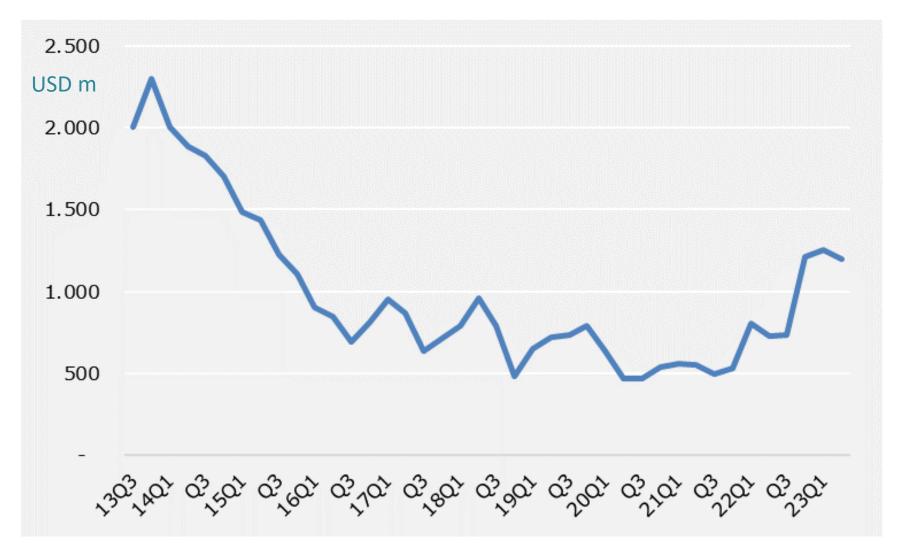
Offshore Wind provides 50% of all electricity



Source: PBL Klimaat- en Energieverkenning 2022; CBS

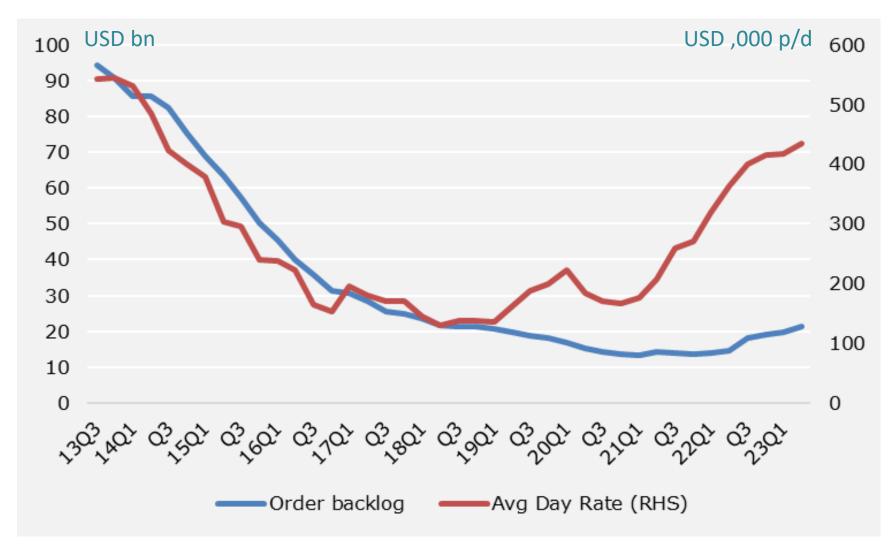


Seismic: Order backlog marginally up



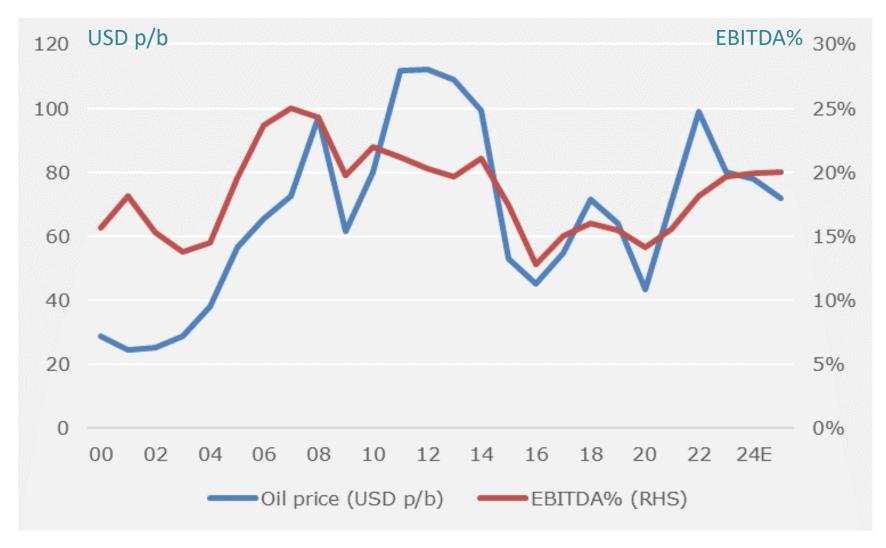
Source: Company reports; Please note: Strong rise order backlog in 22Q4 due to Magseis (TGS)

Drilling: Rates up, but order backlog limited



Source: Company reports, Clarkson Research (high-spec floaters)

Allround: Nearly back to the heydays



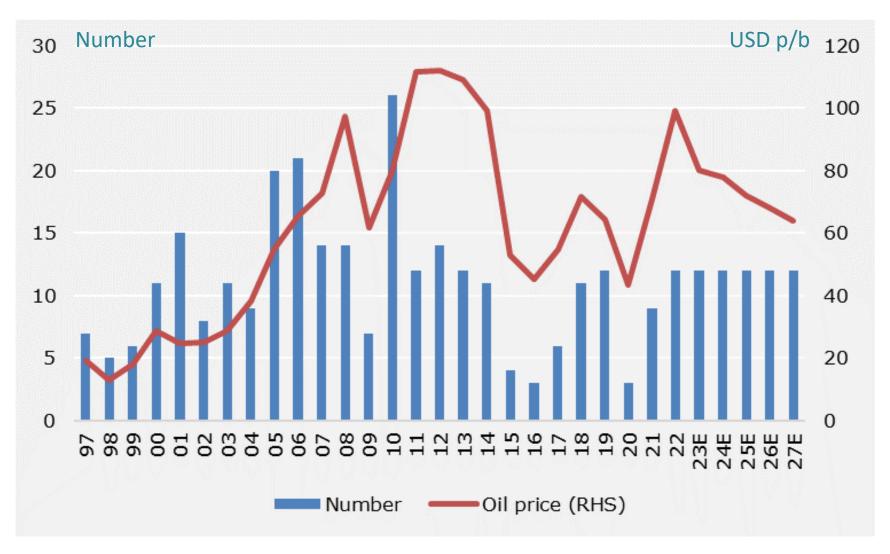
Source: Company reports, Marketscreener, Datastream, R.Brakenhoff

Installation: Order backlog rapidly rising



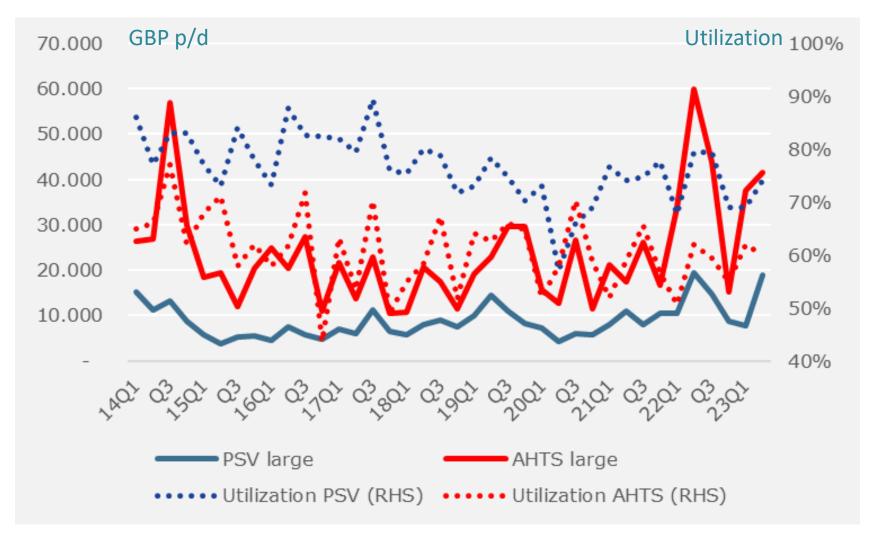
Source: Company reports

FPSO: Market remains strong



Source: Energy Maritime Associates, Datastream, R. Brakenhoff

Shipping: Recovery at last



Source: Shipbrokers.no; Please note: Spot rates at North Sea

Oil Services sector remains strong

	2014	2016	2018	2020	2022	2024E	2026E
Seismic	++/+		+		0	0	0
Drilling	++	0			-	0	0
Allround	+		-		+	++	++
Installation	+	+	0		-/0	0	+
FPSO	+		0/+	0	+	+	+
Shipping	+				0	+	+
Oil Services	++/+	0	-		0/+	+	+

Source: Richard Brakenhoff



Conclusions

Energy Transition

- Use of fossil fuels -79% between 2020-2050, but currently still rising
- Annual renewable installations *3 compared to last two years

Offshore Wind

- Offshore wind booming market globally, but ...
- Risks increasing, costs moving up instead of going down
- Loss making companies have to invest in capacity expansion

Oil Services

- Positive outlook in coming years, partly based on order backlogs
- Benefiting from Oil & Gas and Renewable Energy investments
- Last years limited capacity expansion and therefore rising margins

Questions?



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