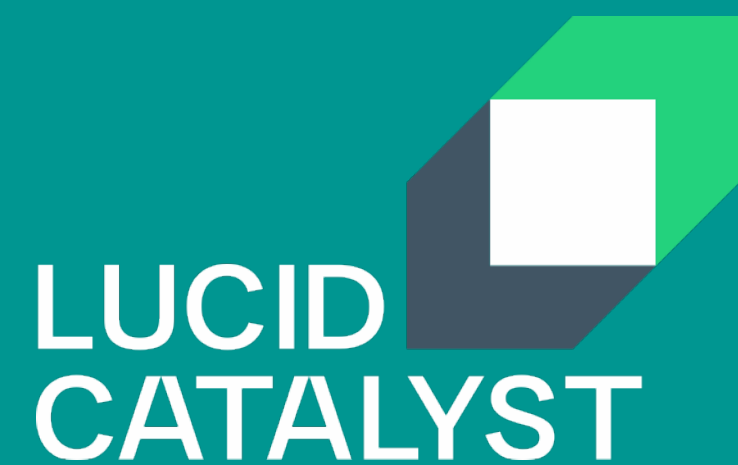


Global Scale Clean Power, Fuels and Water: How to Achieve Costs, Speed and Scale

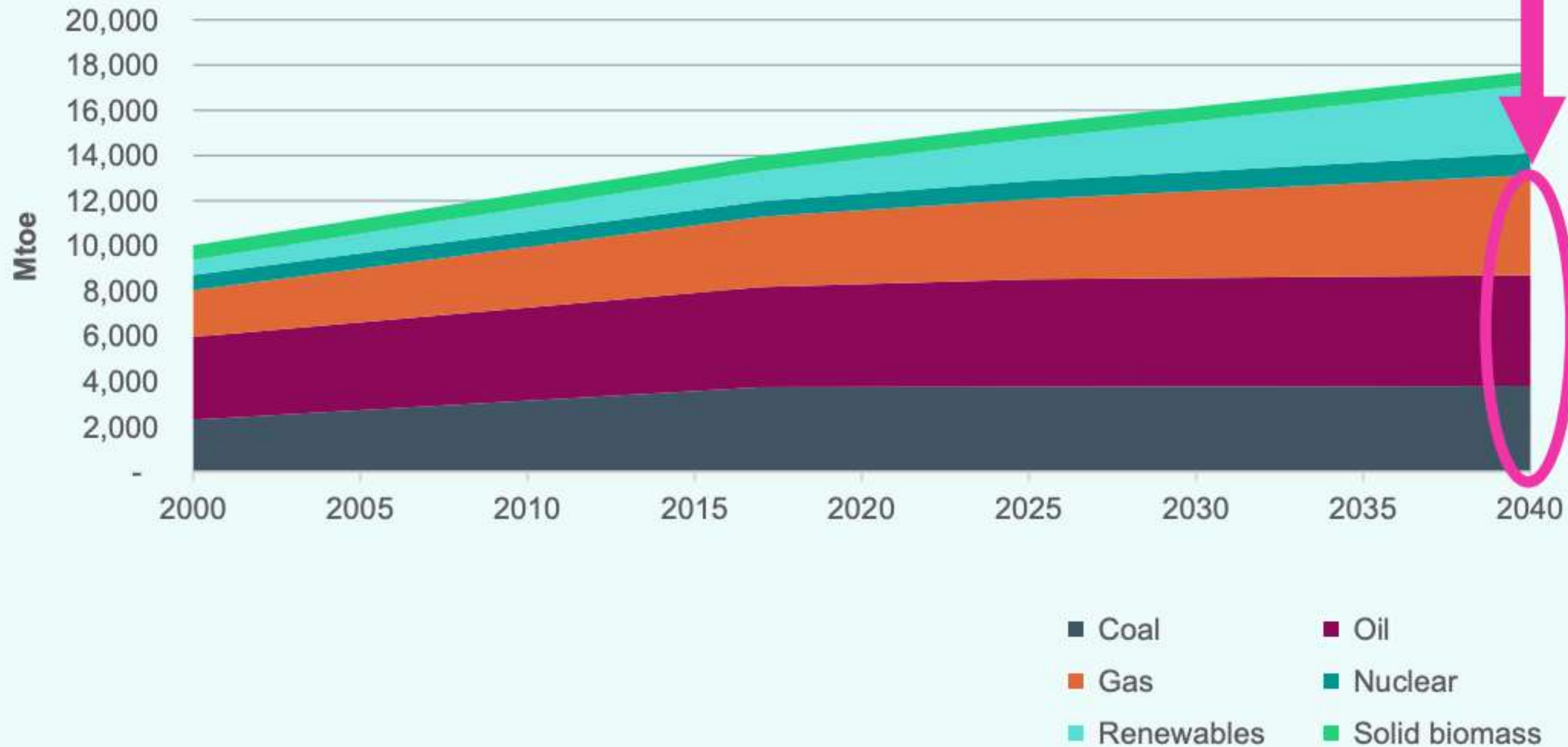
IAEA Floating Nuclear Power Plant(FNPP)
Symposium



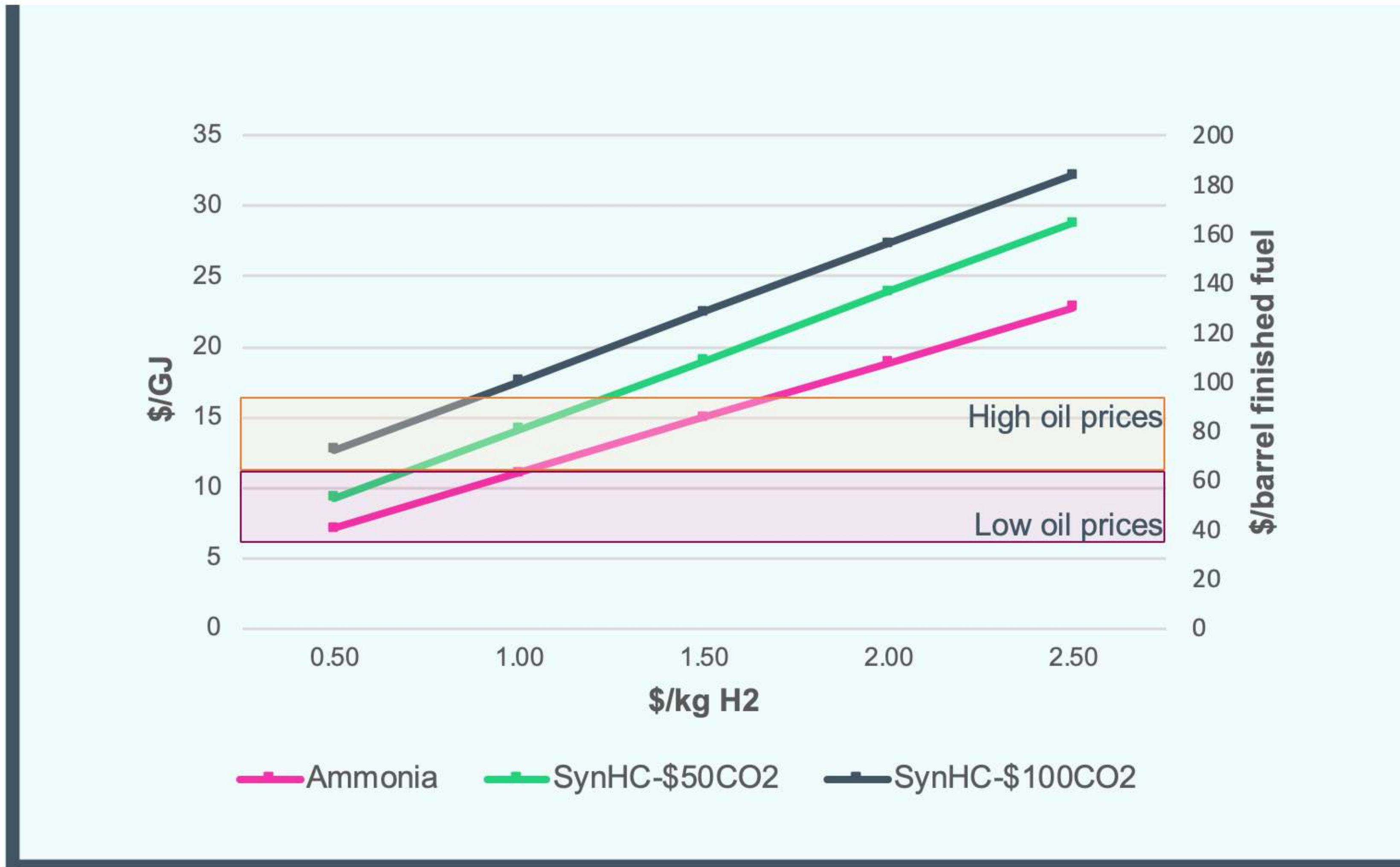
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November 2023

Scale: Oil use alone is >100 million barrels per day



Cost: Oil Price “Guardrails” of the Hydrogen Economy (\$0.50-\$1.50/kg)



UAE Land Requirement to Produce 5 Million Barrels of Oil Equivalent (BOE) of Zero Carbon Fuel from Nuclear or Solar

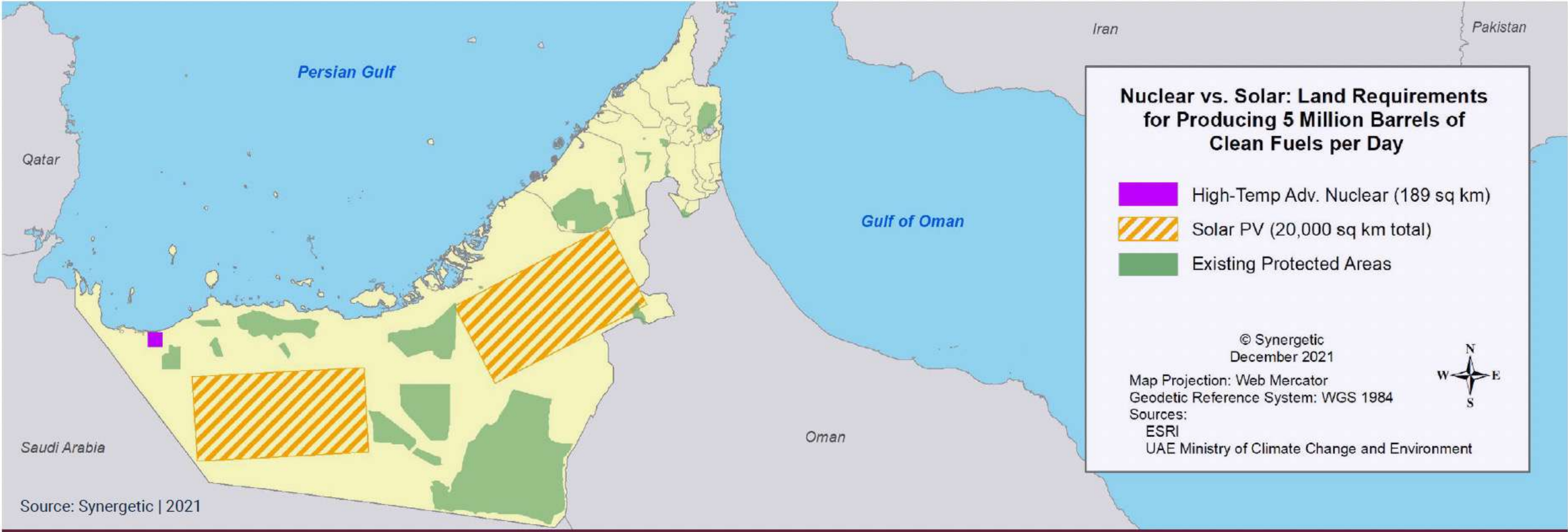
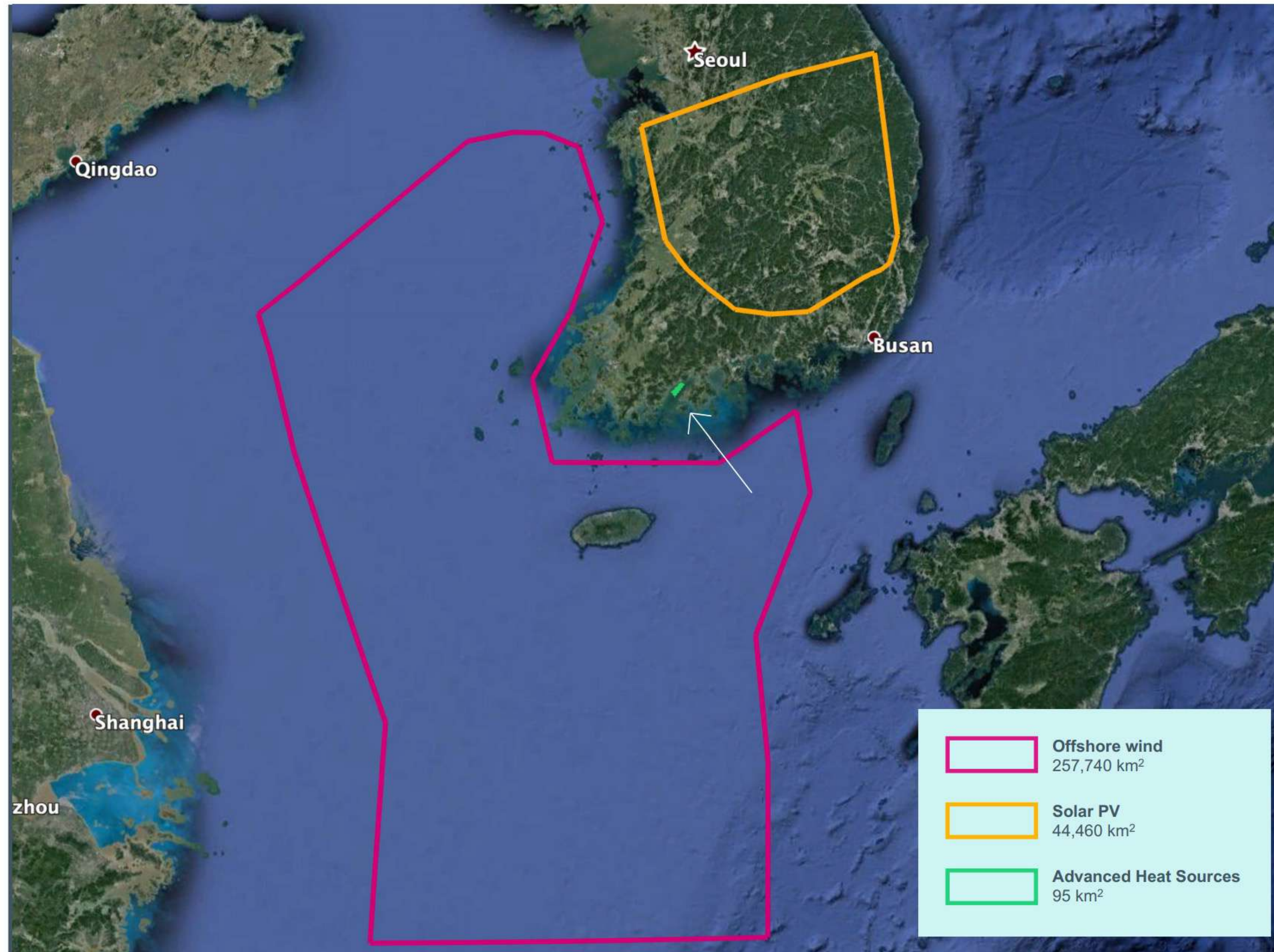


Figure 5. Energy density: geographic area required for \$350 million per day of zero-carbon fuels

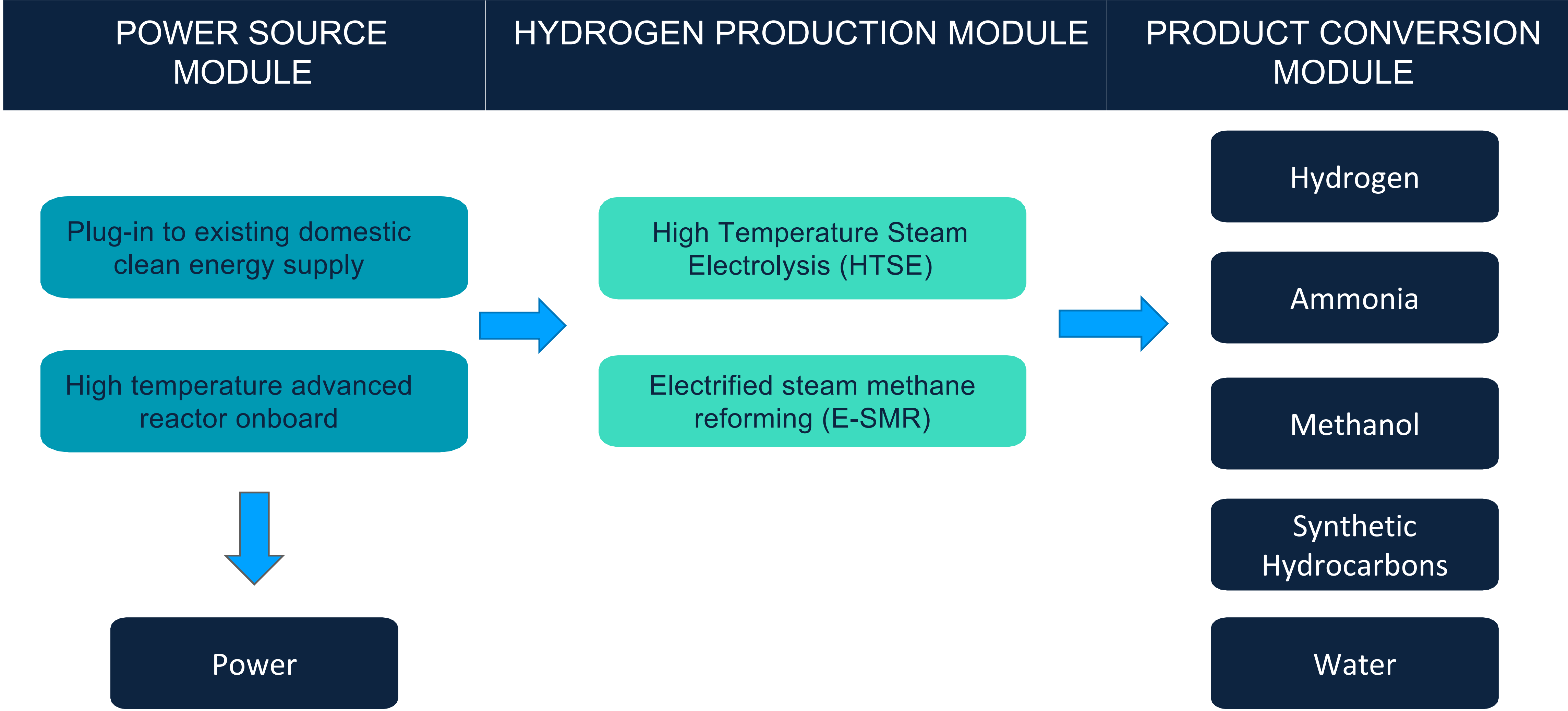
The extent of UAE Land Requirement to Produce ADNOC’s 2030 target 5 Million Barrels of Oil per day – if instead this were Zero Carbon Fuel produced from Solar PV (the striped yellow) or from Nuclear (the purple square)

Comparing area required to replace South Korea's current oil consumption with hydrogen generated from either wind, solar, or advanced heat sources

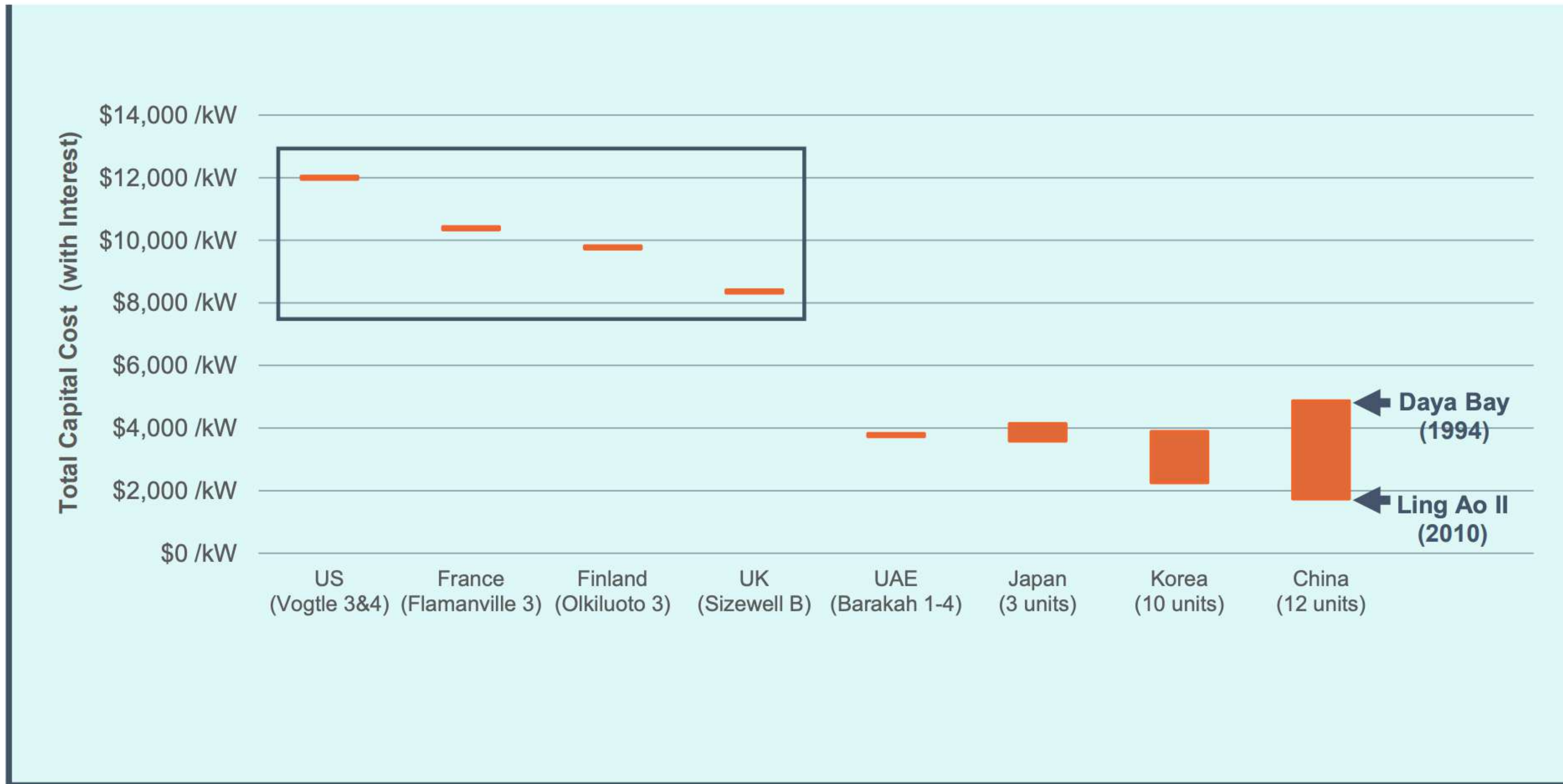


Each colored outline represents the total area that would be required for the siting of each type of resource if it were to be the only one used to generate enough hydrogen to replace current oil consumption in South Korea.

Clean Power, Hydrogen, and Synfuels Production Options

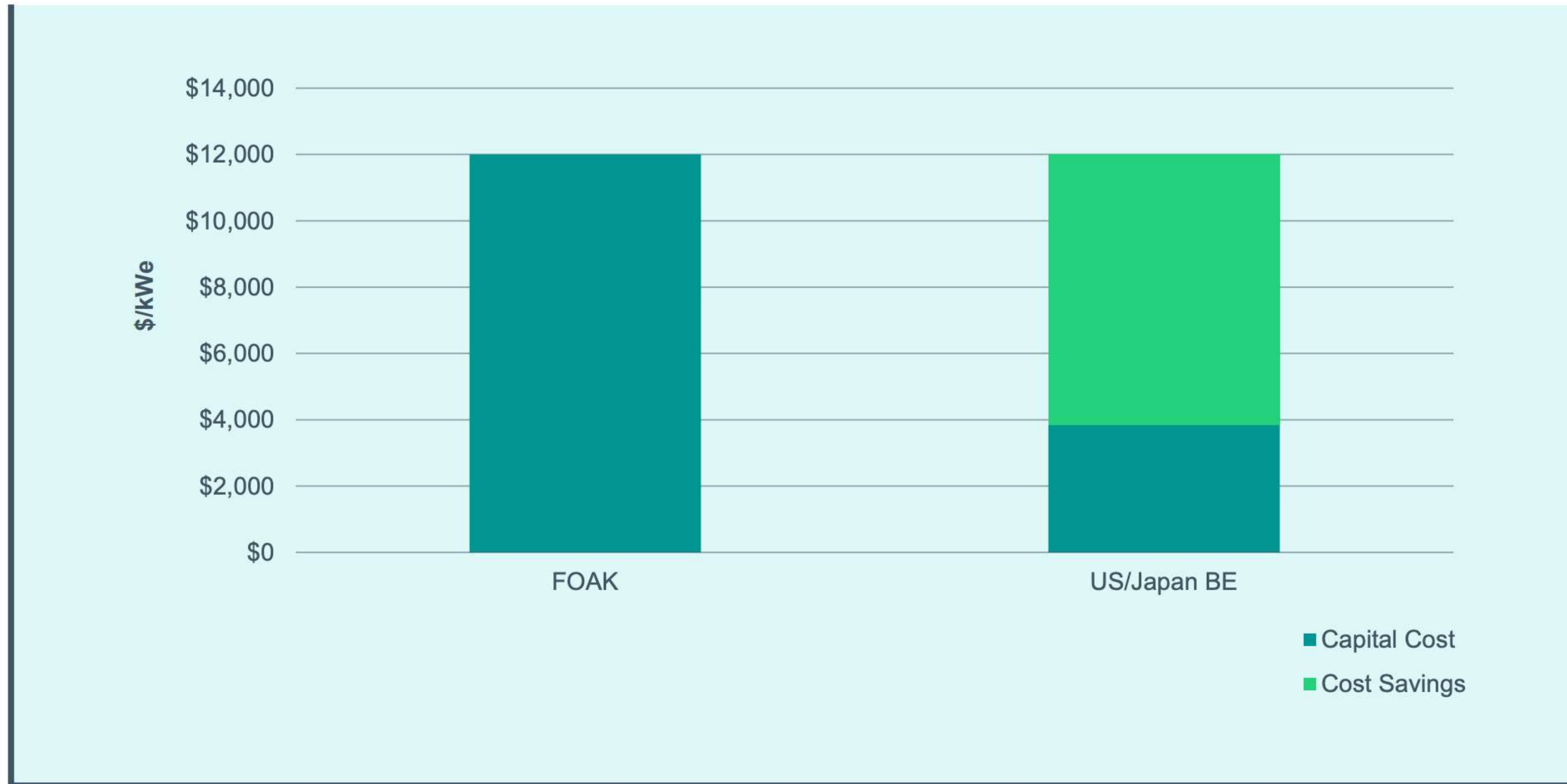


Costs of recent nuclear plants



Source: [LucidCatalyst](#), Eric Ingersoll, Kirsty Gogan, et al., "The ETI Nuclear Cost Drivers Project: Full Technical Report," September 2020.

Cost reduction from first-of-a-kind (FOAK) to program build



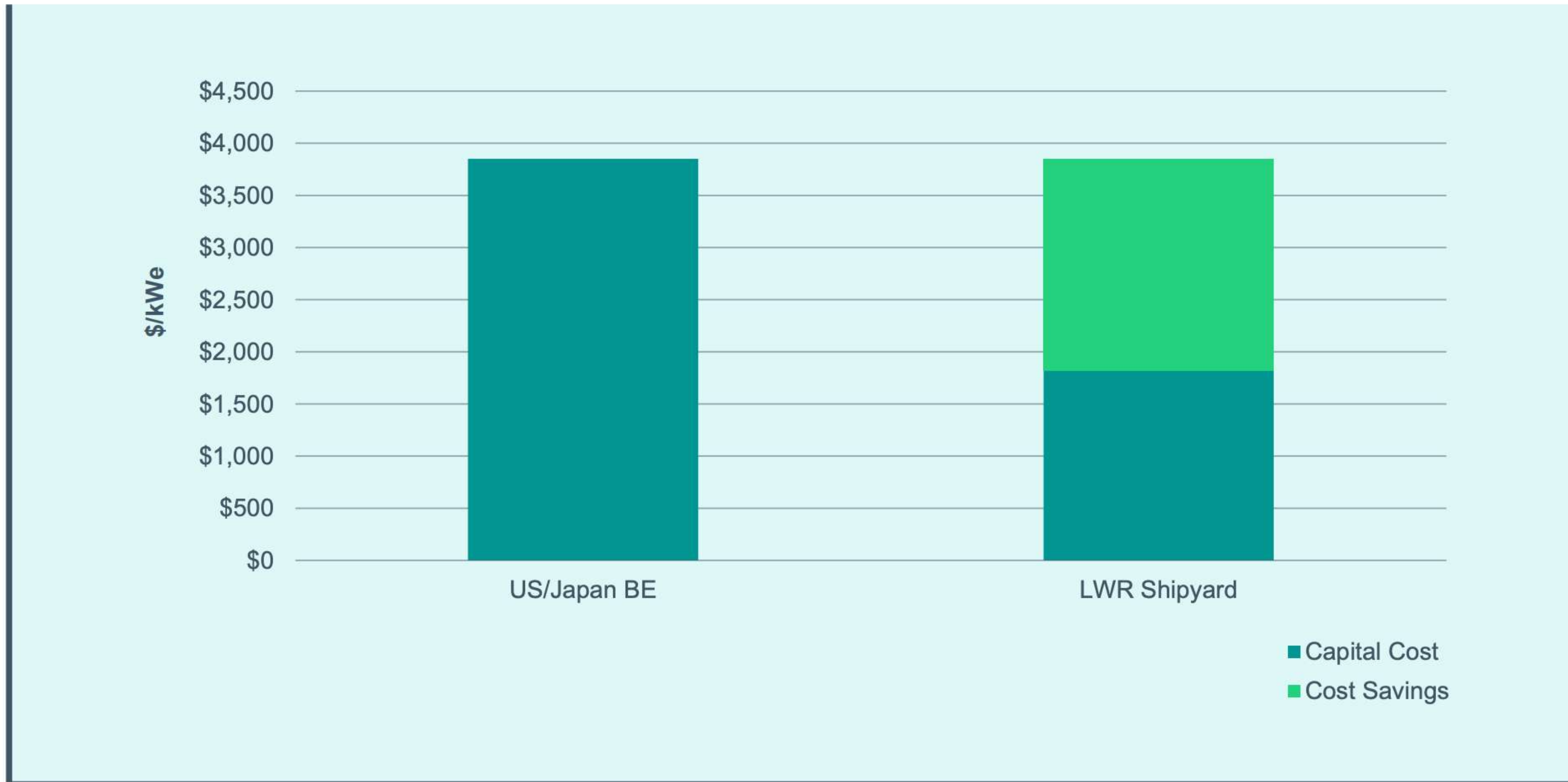


Modular blocks are added to an FPSO under construction in a dry dock.

FPSO for Power, Hydrogen-Fuels, Desalination



Moving from Projects to Products



Evolution of cost reduction from first-of-a-kind construction projects to mass manufactured products



AMMONIA FPSO



12k BOE/d
1.2 GWe

Ammonia Production Platform

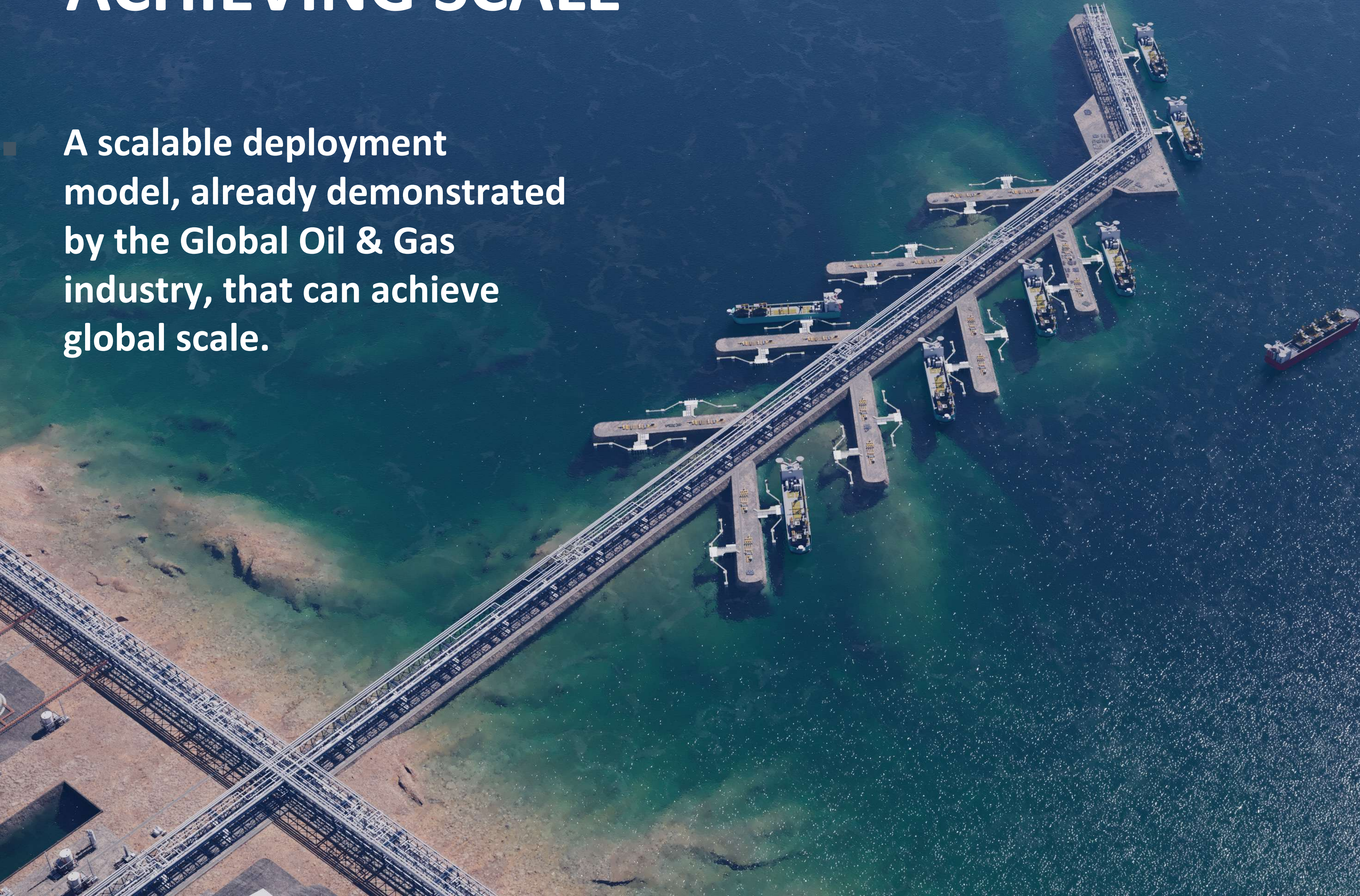
200k boe/d



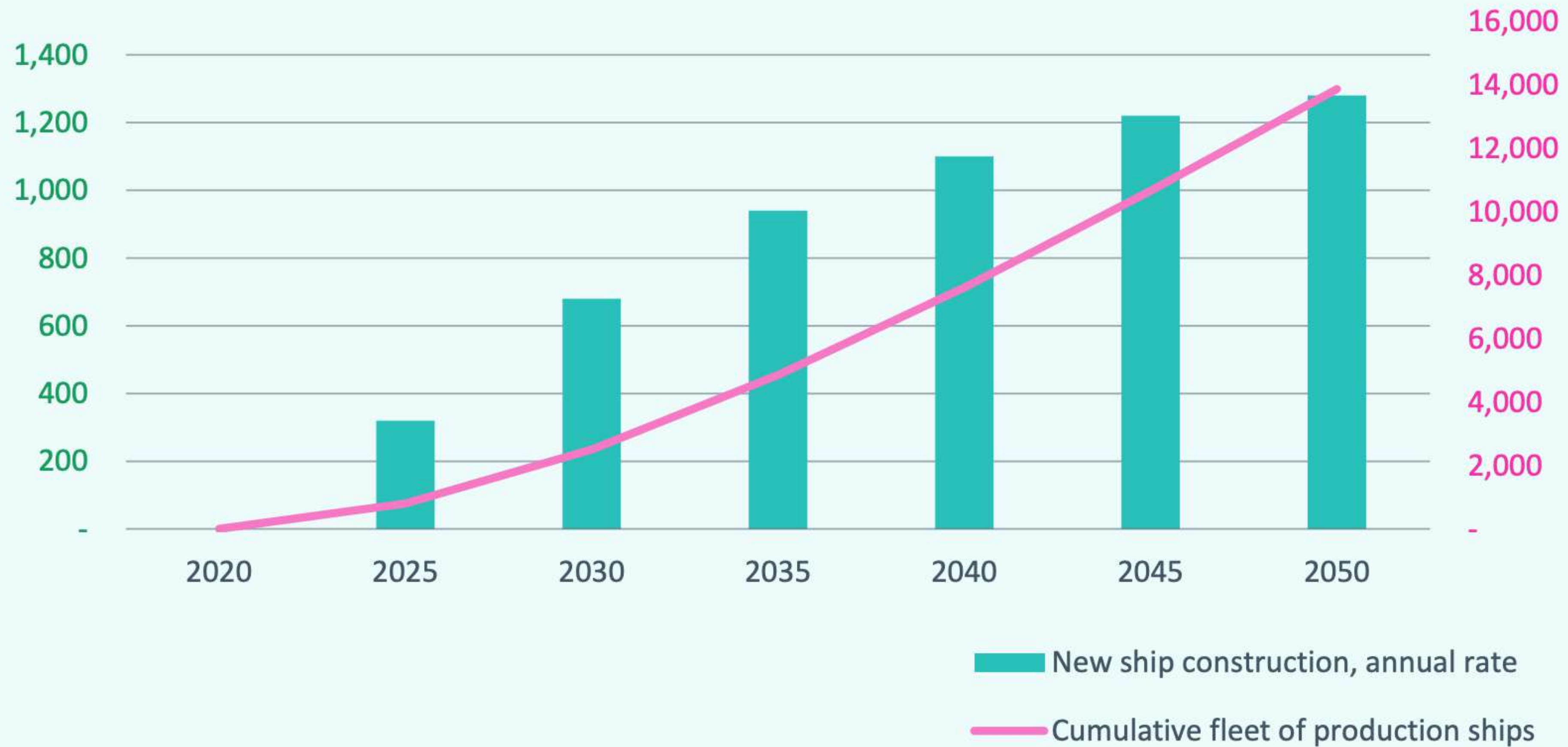
Fleet of FPSOs Docked at a Multi-Platform Production Facility

ACHIEVING SCALE

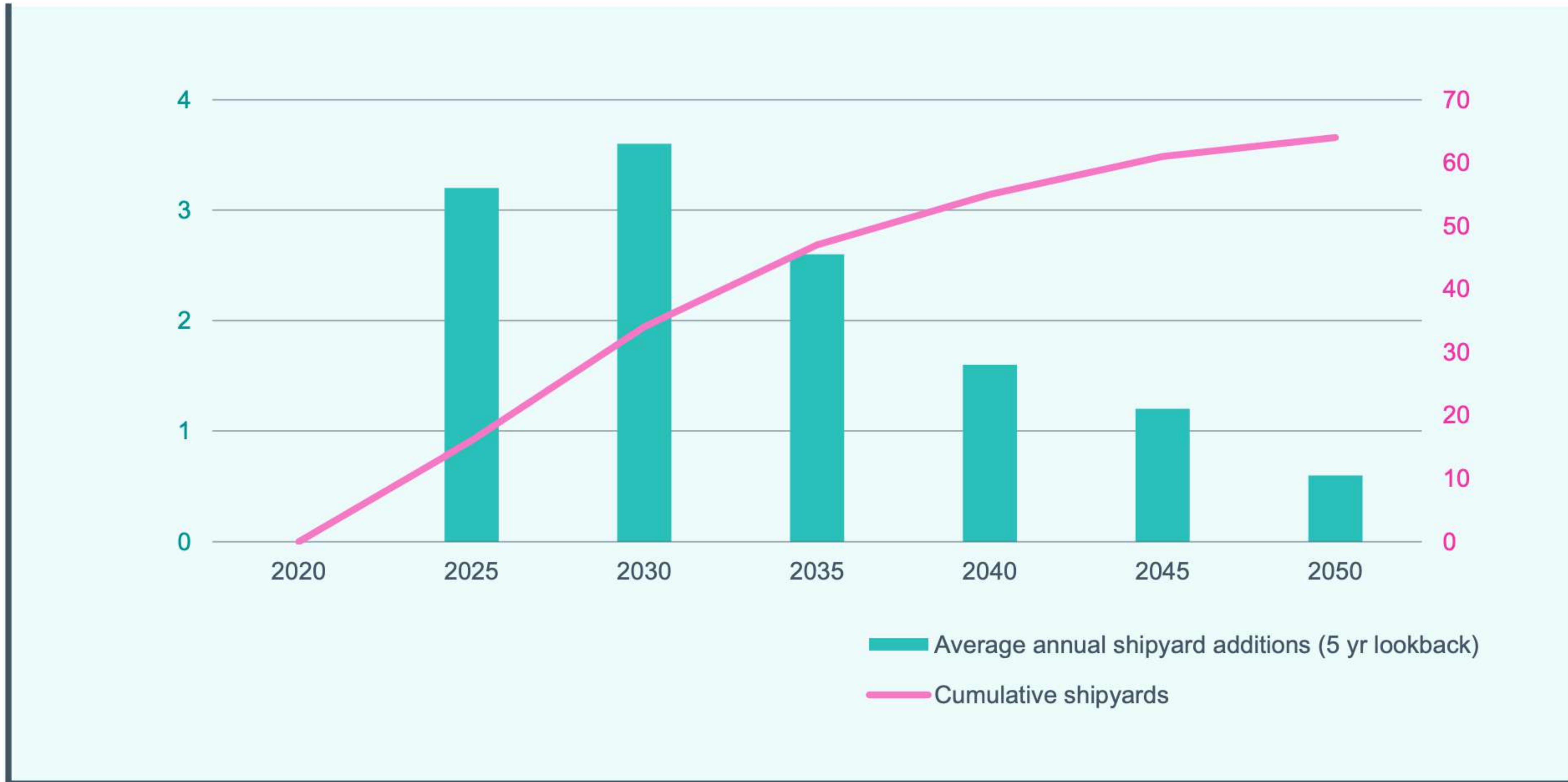
A scalable deployment model, already demonstrated by the Global Oil & Gas industry, that can achieve global scale.



Additions and cumulative production facilities



Shipyard starts and cumulative operating shipyards



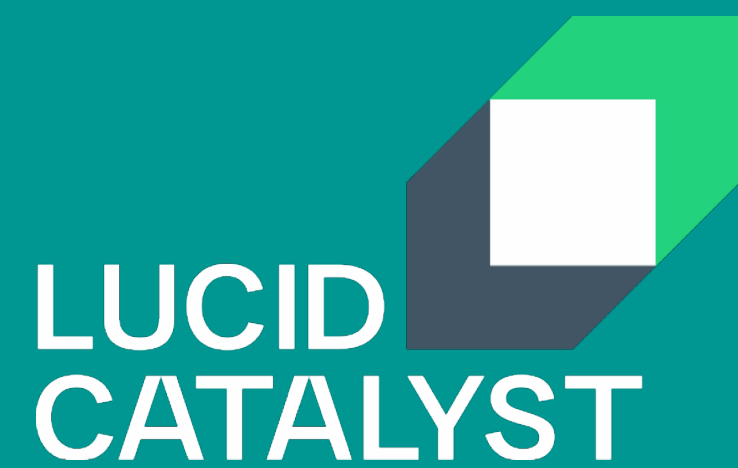
A VISION FOR NU-PRIMARY ENERGY



A scalable deployment model, already demonstrated by the Global Oil & Gas industry, that can achieve global scale.



LucidCatalyst delivers strategic thought leadership to enable rapid decarbonization and prosperity for all.



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