

Energy & Process Technology Portfolio Guide

Seven-sector overview of technology pathways, feedstocks, products, equipment, performance metrics, licensors, OEMs, producers and EPC contractors

OIL & GAS / LNG • REFINING • PETROCHEMICAL & CHEMICALS • COAL • NUCLEAR POWER • RENEWABLE POWER • STRATEGIC METALS



2026 Edition | Screening and Decision-Support Reference

For portfolio evaluation, technology selection, independent technical assurance, or project-specific support, contact Gulf LNG Solutions at Info@gulflngsolutions.com.

Table of Contents

No.	Sector / subsection	Page
Front matter	Important notice and disclaimer	2
Front matter	How to read the metrics	3
Front matter	Executive portfolio map and summary matrix	4–7
Front matter	How Gulf LNG Solutions can support owners and project teams	8
1.	Oil & Gas / LNG	12
1.1	Upstream production and central processing	12
1.2	Gas sweetening, dehydration and mercury removal	13
1.3	NGL recovery and fractionation	14
1.4	Gas transmission and storage	15
1.5	Large-scale LNG liquefaction	16
1.6	Small- and mid-scale LNG / modular LNG	17
1.7	LNG storage, loading and receiving/regasification	18
1.8	Market-participant matrices	19–20
2.	Refining	21
2.1	Crude distillation and vacuum distillation	22
2.2	Fluid catalytic cracking and gas concentration	23
2.3	Hydrocracking and residue conversion	24
2.4	Hydrotreating and fuel desulfurization	25
2.5	Catalytic reforming, isomerization and aromatics upgrading	26
2.6	Alkylation and oxygenates	27
2.7	Delayed coking, visbreaking and solvent deasphalting	28
2.8	Market-participant matrices	29–30

Primary sectors use whole numbers; technology families and matrices use hierarchical subsection numbers.

Table of Contents — continued

No.	Sector / subsection	Page
3.	Petrochemical & Chemicals	31
3.1	Steam cracking and primary recovery	32
3.2	C4/butadiene and pyrolysis-gasoline recovery	33
3.3	Propane dehydrogenation and olefin conversion	34
3.4	Polyethylene and polypropylene	35
3.5	Ethylene oxide and glycols	36
3.6	EDC, VCM and PVC	37
3.7	Styrenics and synthetic rubber	38
3.8	Aromatics: extraction, PX and PTA/PET chain	39
3.9	Cumene, phenol, acetone and derivatives	40
3.10	Syngas, hydrogen, ammonia and methanol	41
3.11	Market-participant matrices	42–43
4.	Coal	44
4.1	Coal preparation, handling and combustion power	45
4.2	Coal gasification and syngas cleanup	46
4.3	IGCC power	47
4.4	Coal-to-liquids and Fischer-Tropsch	48
4.5	Coal-to-methanol, MTO and SNG	49
4.6	Market-participant matrices	50–51
5.	Nuclear Power	52
5.1	Light-water reactors: PWR and BWR	53
5.2	Small modular and advanced reactors	54
5.3	Fuel cycle, spent fuel and decommissioning	55
5.4	Market-participant matrices	56–57

Primary sectors use whole numbers; technology families and matrices use hierarchical subsection numbers.

Table of Contents — continued

No.	Sector / subsection	Page
6.	Renewable Power	58
6.1	Solar photovoltaic power	59
6.2	Onshore and offshore wind	60
6.3	Hydroelectric and pumped storage	61
6.4	Geothermal power	62
6.5	Concentrating solar power	63
6.6	Green hydrogen and power-to-X	64
6.7	Battery energy storage and grid integration	65
6.8	Market-participant matrices	66–67
7.	Strategic Metals	68
7.1	Lithium carbonate and lithium hydroxide refining	69
7.2	Lithium iron phosphate cathode materials	70
7.3	NMC sulfate, precursor and cathode materials	71
7.4	Electrolyte salts and carbonate solvents	72
7.5	PVDF binders and graphite/silicon anode materials	73
7.6	Aluminum and copper battery current collectors	74
7.7	Market-participant matrices	75–76
8.	Portfolio Exclusions & Future Considerations	77
9.	Public sources and further diligence	78–79

Primary sectors use whole numbers; technology families and matrices use hierarchical subsection numbers.