

A photograph of a large industrial facility, likely a refinery or chemical plant, at dusk. The sky is a deep blue, and the facility's lights are glowing. In the foreground, there is a dark, rocky field. The facility features several tall distillation columns, large storage tanks, and a complex network of pipes and structural steel. The overall scene conveys a sense of industrial scale and activity.

Climate Finance

April 2023

Levelized Cost Calculator for Green H_2 / NH_3

A

Costing

Unit Economics of H₂

Green Hydrogen

Unit Economics of Green Hydrogen

Item	Units	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Per Unit Revenue	US\$ per Kg	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22
Total Revenue	US\$ per Kg	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22

1 Target EIRR of 15%

Costs											
Electricity	US\$ per Kg	2.92	2.94	2.97	3.00	3.03	3.06	3.09	3.12	3.15	3.19
O&M	US\$ per Kg	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
DM Water	US\$ per Kg	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.20
Other Opex	US\$ per Kg	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Total Costs	US\$ per Kg	3.27	3.28	3.32	3.35	3.38	3.42	3.45	3.49	3.52	3.56

2 INR 4.50 Busbar – Escl. Due to Degradation

3 1.60 per Kg

EBIDTA	US\$ per Kg	0.95	0.94	0.91	0.87	0.84	0.80	0.77	0.74	0.70	0.66
Gross Margin	%	23%	22%	21%	21%	20%	19%	18%	17%	17%	16%

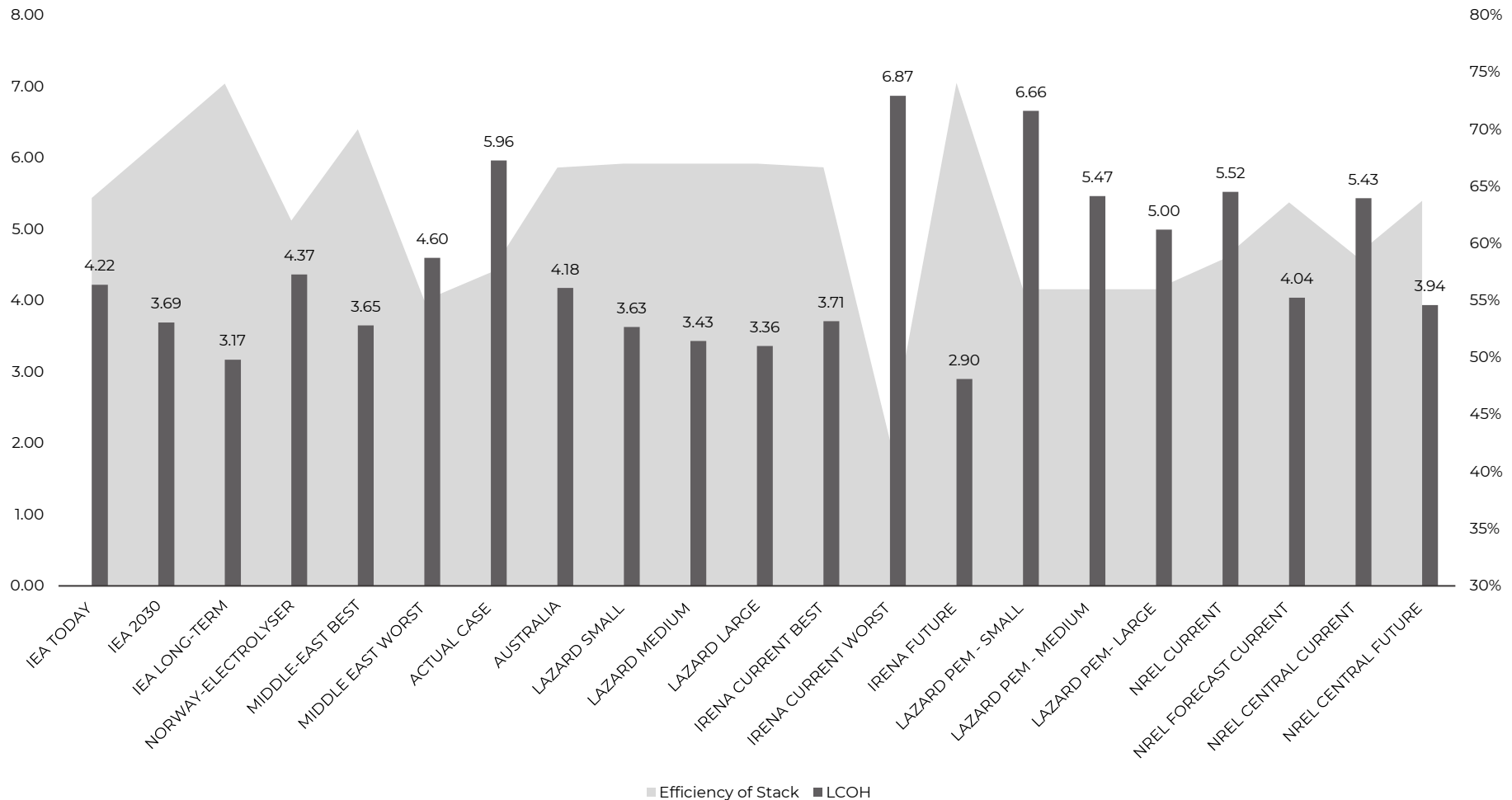
4 Declining due to Cost Escalation at 5%

Based on Current IEA Assumptions

Levelized Costs of H₂

Green Hydrogen

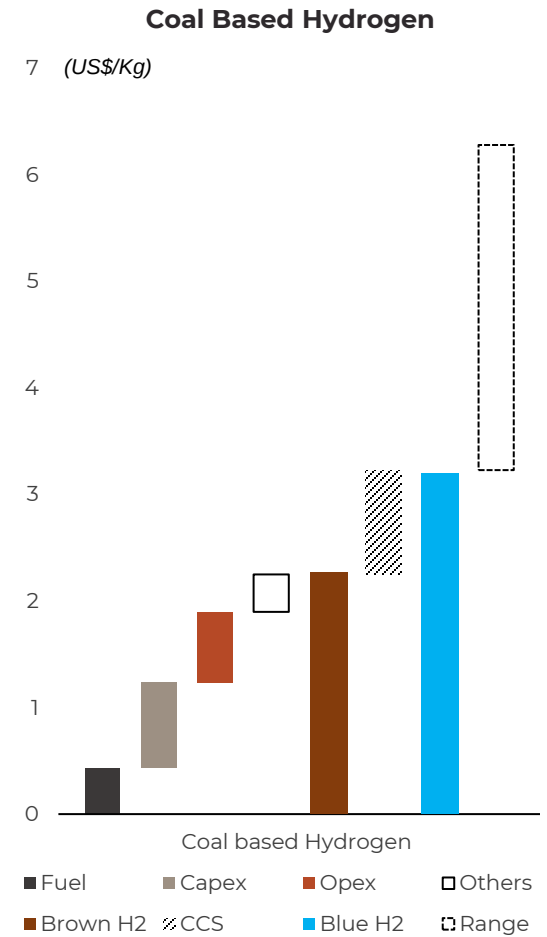
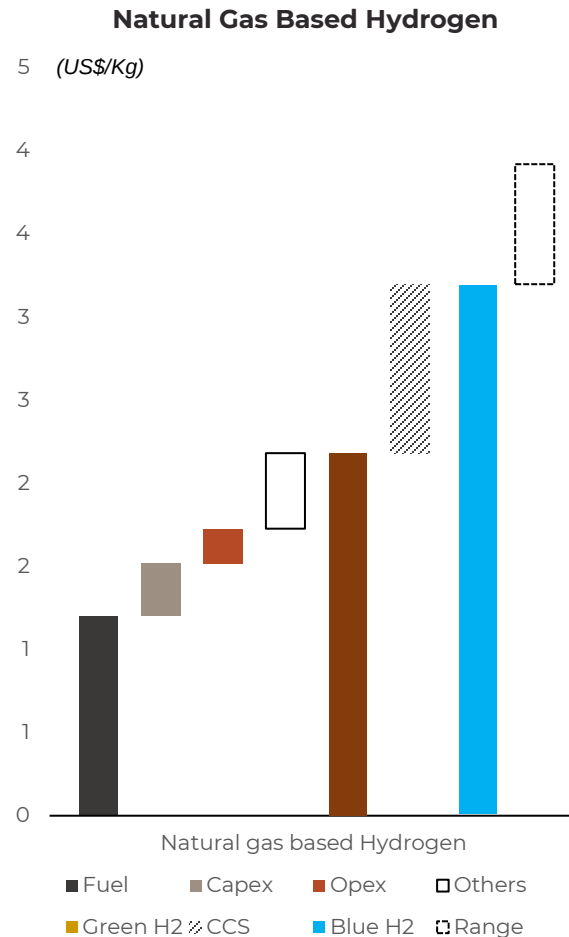
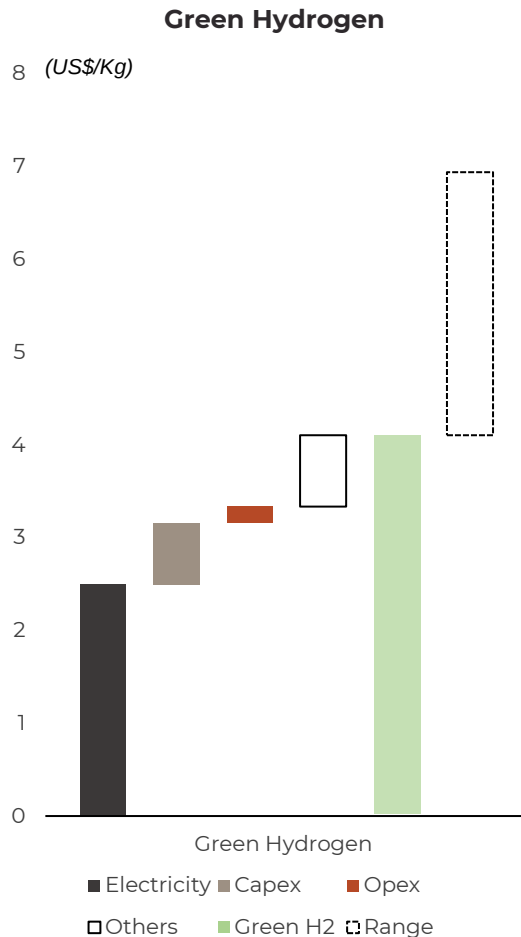
Green Hydrogen's LCOH (Per Kg/H₂)



Reference Ranges

Green Hydrogen

Reference Ranges for Green Hydrogen

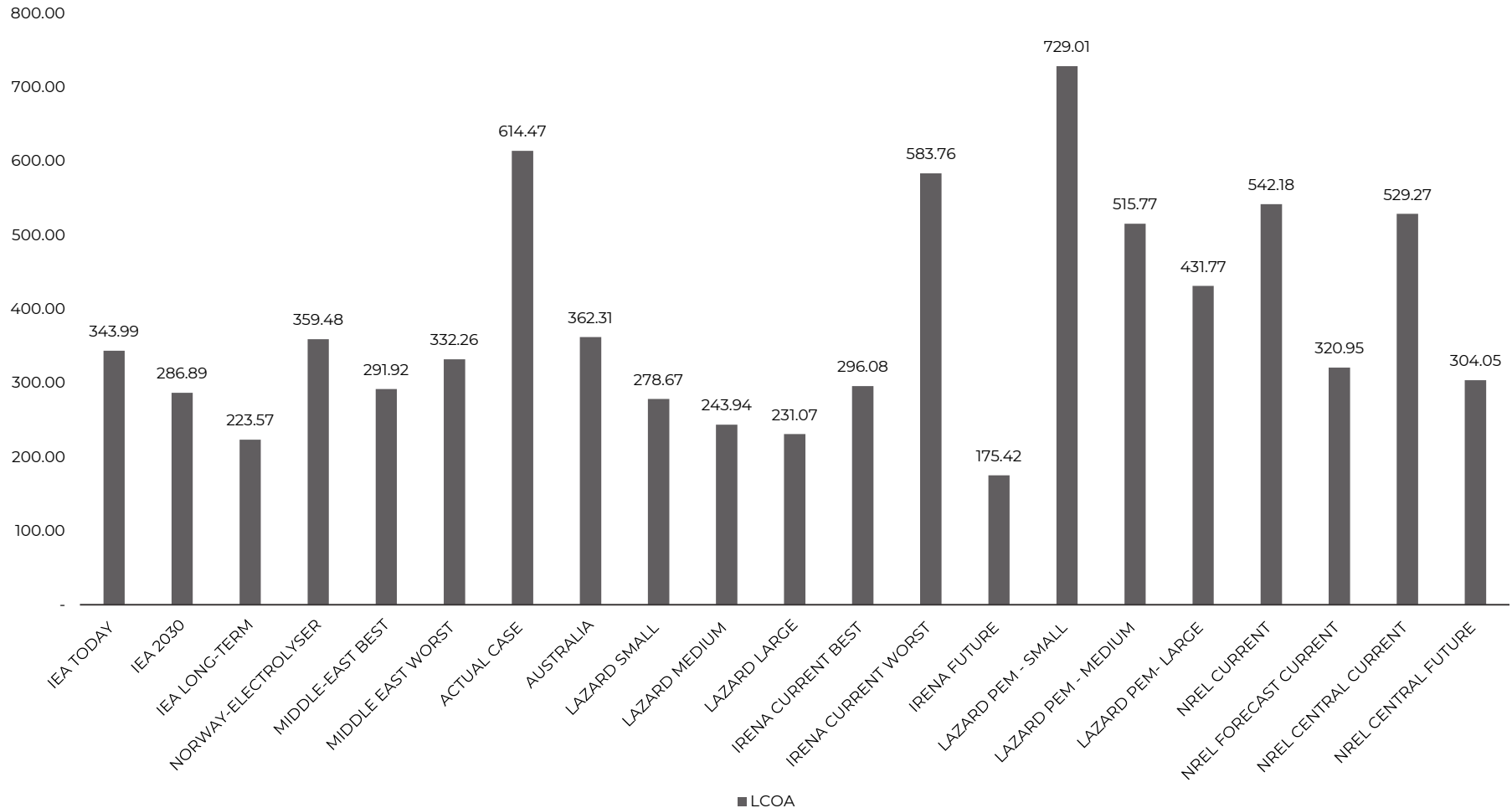


Source: Niti Aayog

Levelized Costs of NH₃

Green Ammonia

Green Ammonia's LCOH (Per Ton/NH₃)



B

Sensitivities

Variable Sensitivities of H₂

Green Hydrogen

Key Drivers – Effect of Change in Variables on Project NPV

Hydrogen Variable Sensitivities (~IEA Estimates)

