

## LCOH Assumptions (Enapter AEM Electrolysers)

### CAPEX Values

Year	Year	Unit Cost
2022	AEM EL 4.0	€ 8,000
2023	AEM Multicore	€ 900,000
2025	Single-core electrolyser	€ 2,500
	Multi-core electrolyser	€ 550,000

### OPEX Values

	Value	Units
Electricity cost	0 - 0.05	€/kWh
Purified water cost	1.88	€/m <sup>3</sup>
Insurance cost	1	% of CAPEX / annum
Insurance cost escalation	1	% / annum
Operations and maintenance (O&M)	1.5	% of CAPEX / annum
Discount rate	9.73	%

### Technical Values

	Multi-core electrolyser		Single-core electrolyser	
	2023	2025	2022	2025
Power consumption	1008 kW		2.4 kW	
Production rate	210 Nm <sup>3</sup> /h		0.5 Nm <sup>3</sup> /h	
Nominal power consumption (beginning of life)	4.8 kWh/Nm <sup>3</sup>			
System life	20 years			
Stack operating lifetime	>35,000 h	>50,000 h	>35,000 h	>50,000 h
Load factor	98%			
Water consumption	190 L/h	190 L/h	0.4 L/h	0.4 L/h

### Grey & Blue Hydrogen Price Points

	Value
Grey & Blue hydrogen production cost range	1-4 EUR/kg <sup>1</sup>
Commercial price of grey Hhydrogen at refueling station	>9.85 EUR/kg <sup>2</sup>
Cost of hydrogen refuelling station infrastructure	5 EUR/kg <sup>3</sup>

<sup>1</sup> Min-Max range of values reported by [IEA](#), [IRENA](#), [United States DOE](#), [KPMG](#), [Goldman Sachs](#)

<sup>2</sup> Selling price at hydrogen refueling stations; Germany (9.85 EUR/kg), UK (16.55 EUR/kg) by [S&P Global Commodity Insights](#)

<sup>3</sup> Hydrogen refueling station capital and operation costs by the [International Council of Clean Transportation \(icct\)](#)

LCOH Results										
Year		Electricity cost	Units	Total	CAPEX	Electricity Cost	Water Cost	O&M Cost	Stack Replace.	Insurance
2023	Multi-core electrolyser	€0.50/kWh	€/kg	<b>3.94</b>	0.64	2.67	0.02	0.08	0.47	0.06
		€0.03/kWh	€/kg	<b>2.87</b>	0.64	1.60	0.02	0.08	0.47	0.06
		€0/kWh	€/kg	<b>1.27</b>	0.64	0.00	0.02	0.08	0.47	0.06
2025	Multi-core electrolyser	€0.05/kWh	€/kg	<b>3.33</b>	0.39	2.67	0.02	0.05	0.16	0.04
		€0.03/kWh	€/kg	<b>2.26</b>	0.39	1.60	0.02	0.05	0.16	0.04
		€0/kWh	€/kg	<b>0.66</b>	0.39	0.00	0.02	0.05	0.16	0.04
2022	Single-core electrolyser	€0.05/kWh	€/kg	<b>6.08</b>	2.39	2.67	0.02	0.31	0.47	0.22
		€0.03/kWh	€/kg	<b>5.01</b>	2.39	1.60	0.02	0.31	0.47	0.22
		€0/kWh	€/kg	<b>3.41</b>	2.39	0.00	0.02	0.31	0.47	0.22
2025	Single-core electrolyser	€0.05/kWh	€/kg	<b>3.76</b>	0.75	2.67	0.02	0.10	0.16	0.07
		€0.03/kWh	€/kg	<b>2.69</b>	0.75	1.60	0.02	0.10	0.16	0.07
		€0/kWh	€/kg	<b>1.09</b>	0.75	0.00	0.02	0.10	0.16	0.07