TERKAR®
CAPITAL

Green Hydrogen Industry

Working Capital Management & Financing Guide

Green Hydrogen - Overview (2026)

5 MMT	**₹19,744 Cr**	**₹8 Lakh Cr**	**$3.5 – $5.0**	**25.17%**
2030 TARGET	MISSION OUTLAY	INVESTMENT	LCOH PER KG	CAGR

- **Strategic Hubs:** Gujarat, Odisha, and AP hubs co-locating production and exports.
- **"SIGHT" Program:** Strategic Interventions funding manufacturing and production.
- **Hard-to-Abate:** Demand from Refineries, Fertilizers, and Steel plants.
- **Export Ambition:** Positioning as primary exporter of Green Ammonia to EU & East Asia.
- **Tech Evolution:** Rise of Solid Oxide Electrolyzers (SOEC) in 2026.

Operational Process Flow

1. **RE Integration**
   Sourcing dedicated Solar/Wind power • Grid banking or off-grid hybrid setup.

2. **Water Treatment**
   Desalination (coastal) • Deionization for ultra-high-purity water input.

3. **Electrolysis (Core)**
   Splitting water into H_2 and O_2 using renewable electricity • Thermal management.

4. **Processing**
   Moisture removal • Compression (350-700 bar) or liquefaction for storage.

5. **Distribution**
   Pipeline blending • Trailers • Transformation into Green Ammonia for export.

Key Resources & Inputs

Renewable Energy

Dedicated capacity (~125 GW) required to meet 2030 targets.

Electrolyzers

The core engine: Alkaline, PEM, or SOEC technology stacks.

Purity Water

Deionized water accounts for 60-70% of non-power OpEx costs.

Catalysts

Platinum-group metals, Iridium, and specialized Nafion membranes.

Human Capital

Electrochemical engineers and high-pressure safety specialists.

Infrastructure

Storage tanks and high-pressure distribution logistics.

Service Deliverables & Revenue

Hydrogen Sales

Direct sales to industrial offtakers like Refineries and Steel plants.

Green Ammonia

Export-ready derivatives for global shipping and fertilizer markets.

Oxygen Sales

High-purity byproduct (O2) for medical and industrial applications.

Carbon Credits

Monetizing verifiable emission reductions in global markets.

Working Capital Cycle Analysis

30–60 Days
INVENTORY (SPARES/WATER)

60–120 Days
ACCOUNTS RECEIVABLE

15–45 Days
ACCOUNTS PAYABLE

The Cash Gap: 45 to 90 Days

Driven by the high cost of RE-banking and lag in SIGHT subsidy disbursements. Financing this gap is critical for operational stability.

Current Asset Composition

- **Trade Receivables:** 50-60%
- **Subsidy Receivables:** SIGHT Incentives
- **Inventory:** Hydrogen & Spares
- **Cash for OpEx:** High Buffer for RE

Common Mistakes to Avoid

Underestimating Water Quality
Using substandard water reduces electrolyzer membrane life by up to 50%.

Over-reliance on Single RE
Failing to use solar-wind hybrids leads to low capacity utilization factors.

Ignoring By-product Revenue
Not monetizing Oxygen generation can improve economics by 5-10%.

Weak Offtake Contracts
Missing "Take-or-Pay" clauses makes the entire project unbankable.

Standard Operating Metrics

Metric	Industry Standard (2026)
LCOH (Levelized Cost)	\$3.5 - \$5.0 / kg
System Efficiency	65% - 75% (LHV)
Power Consumption	50 - 55 kWh per kg of H_2
Gross Margin	30% - 50% (High value-add)
Target Utilization	> 70% (Hybrid RE dependent)

Revenue Realization Periods

Best Practice: Utilize Offtake-linked Factoring to bridge realization lags.

Industry Threats & Challenges

Cost Gap

Grey Hydrogen remains significantly cheaper without carbon taxes.

Logistics

Lack of dedicated pipelines leads to high delivered costs via trailers.

Tech Risk

Rapid evolution makes hardware obsolete within 5-7 years.

Supply Chain

Global shortage of Iridium and high-purity Nickel for stacks.

How Terkar Capital Can Help

SIGHT Discounting

Immediate liquidity against confirmed government incentives.

Project Debt

Arranging ₹100 Cr to ₹2,000 Cr+ for integrated plants.

Equipment Finance

Specialized loans for electrolyzers and high-pressure tanks.

Unsecured WC

Up to ₹5 Cr for managing RE-banking and water procurement.

Green Bonds

Advisory for raising low-cost international ESG capital.

ESG Compliance

Navigating the complex global taxonomy for green finance.

TERKAR®
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Partner with Terkar Capital

Financing the Molecule of the Future for a Net-Zero India

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