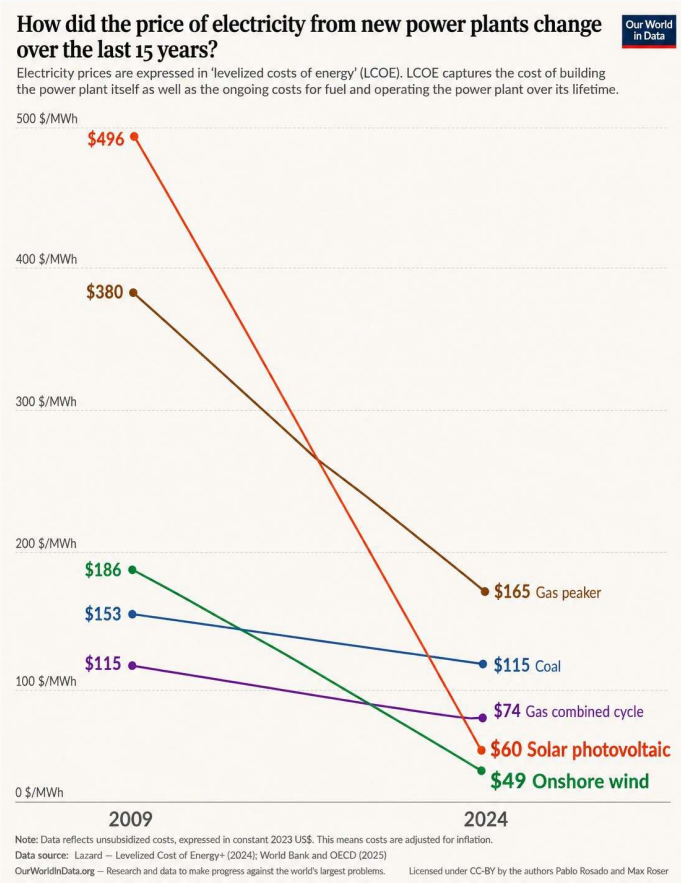
ONE POWER USA

Vivek Pathak

The Energy Holdup

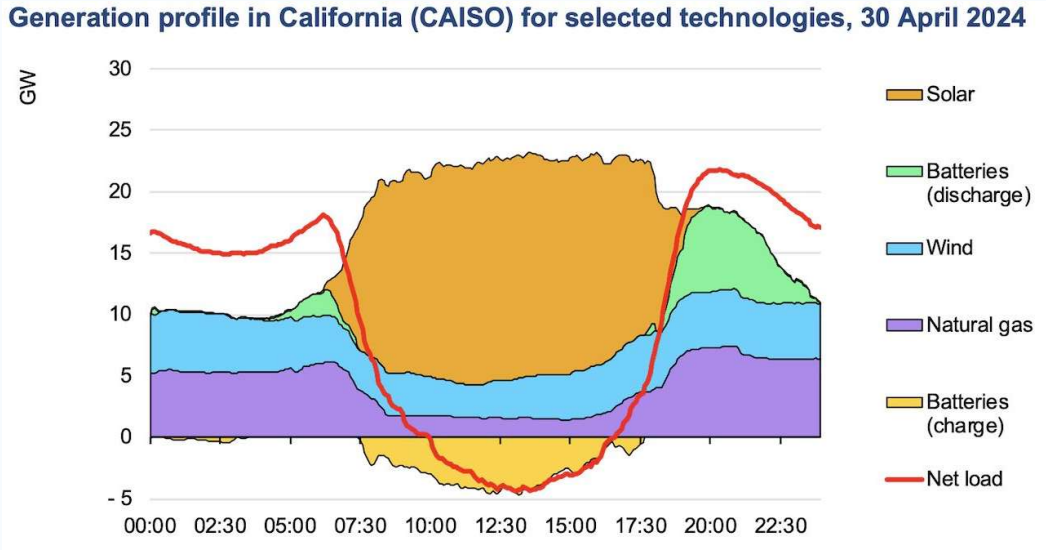


Renewable Energy Revolution

- **10x cheaper** over last 15 years, declining further.
- **93% of new supply** in 2026 is renewable.
- Modular design enables rapid deployment within **1-3 years**.

The Mismatch Bottleneck

- **Stalled** at the when/where mismatch.
- Battery storage is costly and limited to **1-2 hrs** vs 6-12 hrs required.
- Moving power requires a slow **5-15 year** Grid upgrade cycle.



https://cleantechnica.com

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Enabling Power to Hydrogen

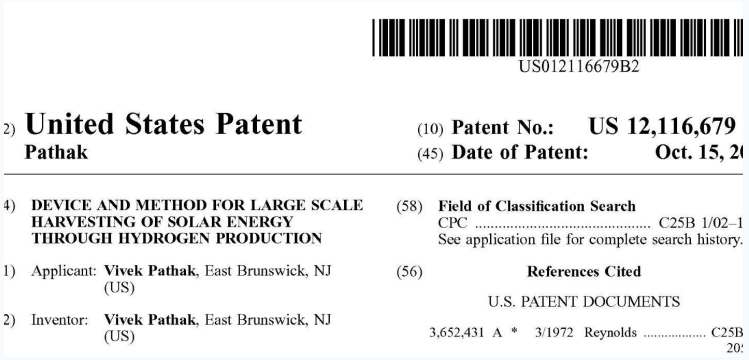
Hydrogen Solution

- Cost effective, long-duration power storage.
- **1/20 cheaper** than battery storage.
- Multiple use cases: energy, chemicals. heavy industry, transportation

Why One Power USA

- Patented **low-cost, high-pressure** electrolyzer technology.
- **1/10 cheaper**
- Solves generation and transport cost barriers.

WITH TECHNICAL SUPPORT OF: UMASS LOWELL



US012116679B2

(12) **United States Patent**
Pathak

(10) **Patent No.: US 12,116,679**
(45) **Date of Patent: Oct. 15, 2**

(54) **DEVICE AND METHOD FOR LARGE SCALE HARVESTING OF SOLAR ENERGY THROUGH HYDROGEN PRODUCTION**

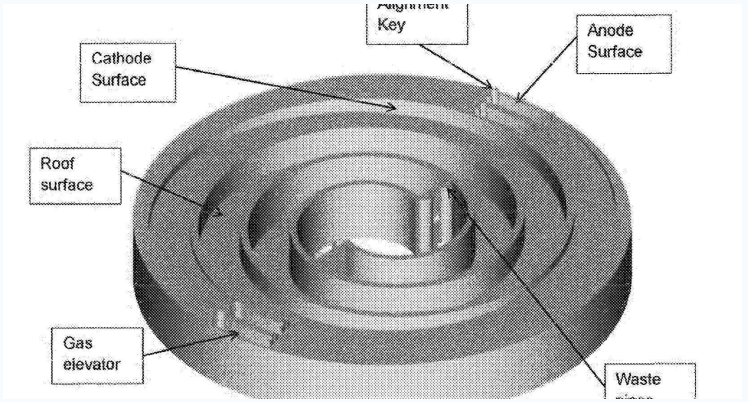
(71) Applicant: **Vivek Pathak**, East Brunswick, NJ (US)

(72) Inventor: **Vivek Pathak**, East Brunswick, NJ (US)

(58) **Field of Classification Search**
CPC C25B 1/02–1
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS

3,652,431 A * 3/1972 Reynolds C25B 20:



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The Green Hydrogen Value Chain

Low cost Hydrogen unlocks renewable power.

1. Power Source

RENEWABLE GENERATION

4¢ / kWh

• Lowest-cost electricity: solar & wind

Electrolyzer →

2. Green Hydrogen

STORED HYDROGEN

$2 / kg

Alternative:

- Current Green Hydrogen at **$5/kg production + $5-$10/kg transportation**
- **From natural gas: price volatility and supply cost**

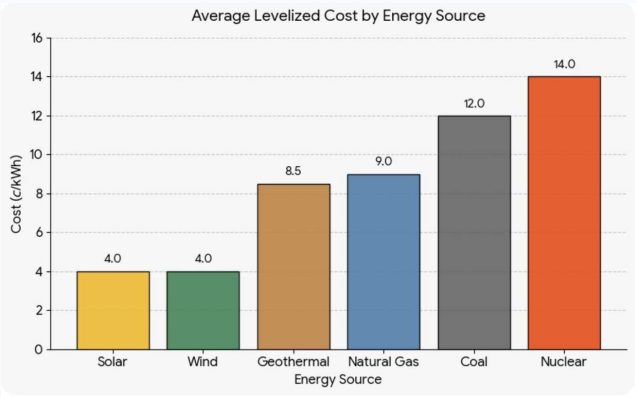
Fuel Cell →

3. Final Delivery

DISPATCHABLE POWER

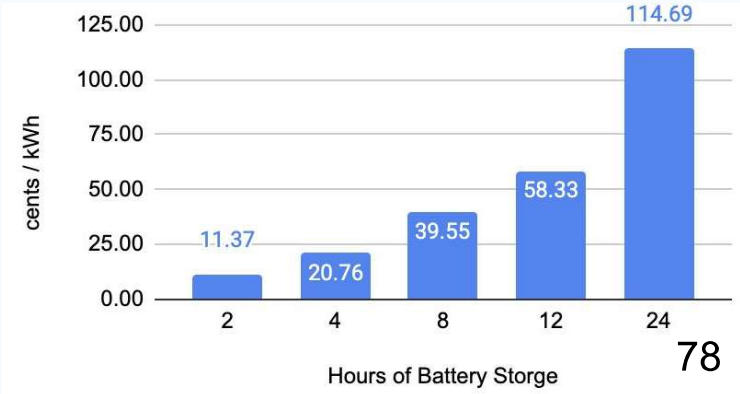
< 15¢ / kWh

• Cost with battery **21¢/kWh at 4 hour capacity**





Gray Hydrogen
Process optimization through high pressure Hydrogen



Market Segments & Opportunities

🎯 Strategic Path: Beachhead deployments provide reliability data & production scaling opportunity.

NSF I-Corps Hub
Northeast Region

OFFICE OF INNOVATION

Beachhead 01

Off-Grid High Altitude Heating

SOM: **$125M Urgent** (<3y)

Perfect for remote deployments with no grid access (e.g., Ladakh, India).

Beachhead 02

Hydrogen for Green Ammonia

SOM: **$5B Horizon** (over 7y)

Supplying chemical feedstock provides opportunity for technology maturation and scaling.

Scale Target

Utility Power Storage

☀ SOLAR • 💨 WIND • 💻 DATA CENTERS

The Hurdle: Certification and Reliability Data

Must overcome this hurdle to unlock utility-scale adoption.

Hydrogen Value Proposition

Enables highly economical, long-duration storage. Costs scale with kW instead of kWh, making renewable storage competitive.

$250B Market

2,500 GW Stalled in queues - IEA 2025

ONE POWER
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Plan & Funding Requirement

Funding Strategy

🎯 Beachhead Markets

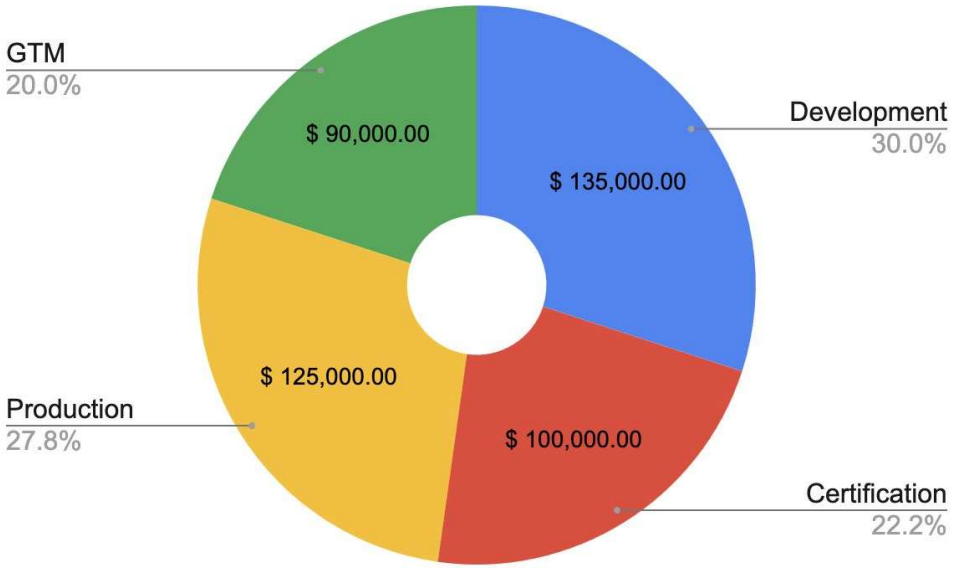
• Multiple use cases: Green Hydrogen for chemical, cement, steel, glass works, & off-grid heating.

• **Allocation: $450K for 15-month pilot phase and certification.**

⚡ Power Storage (Scale Target)

• Produce & store Hydrogen at peak generation for Solar farms, Wind farms, and Data Centers.

Use of Funds Breakdown
$450K Pilot & Certification



Leadership Team

World-class expertise spanning aerospace engineering, hardware design, and business scaling.

USA



Vivek Pathak

Founder & CEO

- 0-1 experience launching & scaling deep-tech startups in NY
- B.Tech Aerospace (IITB)
- MBA Finance (NYU Stern)
- PhD Computer Science (Rutgers)

USA



Mahendra Bhagwat

Scientific Advisor

- Expert in cutting edge mechanical & aerospace at US Army
- B.Tech Aerospace (IITB)
- PhD Aerospace (University of Maryland)

INDIA



Prasad Phatak

Engineering Head

- Expert in complex industrial design, maintenance & heavy ops
- B.Tech Mechanical (IITB)
- M.Tech Mechanical (IITB)

INDIA



Amit Kumar

Head of Business Dev

- Serial entrepreneur & highly driven deep-technology enthusiast
- B.Tech (IIT Kanpur)
- MBA (IIM Lucknow)

PROUD ALUMNI OF:

RUTGERS · NYU STERN · UNIVERSITY OF MARYLAND · IIM LUCKNOW

ONE POWER USA

Startup: One Power USA

https://iitstartups.org/us-demoday-cohort-15/

ONE POWER USA delivers a breakthrough 80% Green Hydrogen cost reduction, and is raising capital for certification, production and customer pilots targeting Green Hydrogen and Power Stor[illegible] markets

SCAN

https://zfrmz.com/p19jyuetieRIM6wRPsfF



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