



International Partnership  
for Hydrogen and Fuel Cells  
in the Economy

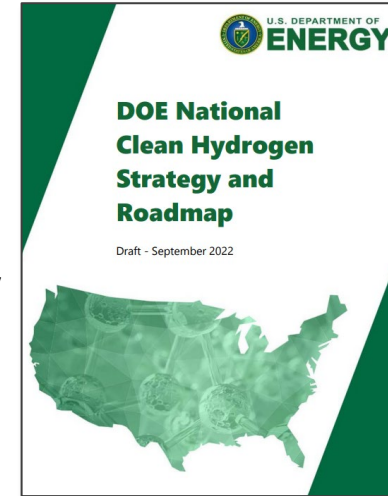
## *United States Update*

38<sup>th</sup> IPHE Steering Committee Meeting  
29 – 30 November 2022  
San José, Costa Rica

# Announcements / New Initiatives *United States*

## Investments/Funding/Policies/Initiatives

- Draft National Clean Hydrogen Strategy and Roadmap released for public feedback
- Draft Guidance for a Clean Hydrogen Production Standard (CHPS)
- Tax Incentives for clean hydrogen production (up to \$3/kg)
- Increasing diversity, equity, inclusion, and accessibility (DEIA) and addressing energy and environmental justice (EEJ)
- Several DOE offices announced funding for hydrogen technologies



Opportunity for clean hydrogen

- 10 MMT/yr by 2030
- 20 MMT/yr by 2040
- 50 MMT/yr by 2050

## New RDD&D Activities - Examples

- \$7 billion announced for 6 to 10 regional clean hydrogen hubs
- Foundational Science for Carbon-Neutral H2 Technologies roundtable report released
- \$1.5 million awarded to five university-led projects at minority serving institutions

## Key Collaborations

- Winners announced for Hydrogen Business Case Prize and Hydrogen Shot Incubator Prize (Phase 1)
- Winners announced for H2 Twin Cities Initiative – includes cities in the U.S., Japan, and the U.K.
- \$504 million loan guarantee for world’s largest clean hydrogen energy storage facility in Utah and \$1B for pyrolysis project in Nebraska
- Multiple international collaborations across IPHE, CEM, MI, IEA, and Bilaterals



Secretary Jennifer Granholm  
@SecGranholm

With the Bipartisan Infrastructure Law + the Inflation Reduction Act, we can work together to slash carbon emissions, tackle the climate crisis, & create JOBS for all in a [#CleanEnergyFuture](#).

Join me in celebrating [#NationalHydrogenDay](#): [energy.gov/eere/fuelcells...](https://energy.gov/eere/fuelcells)



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# Examples of Lessons Learned and Impact *United States*

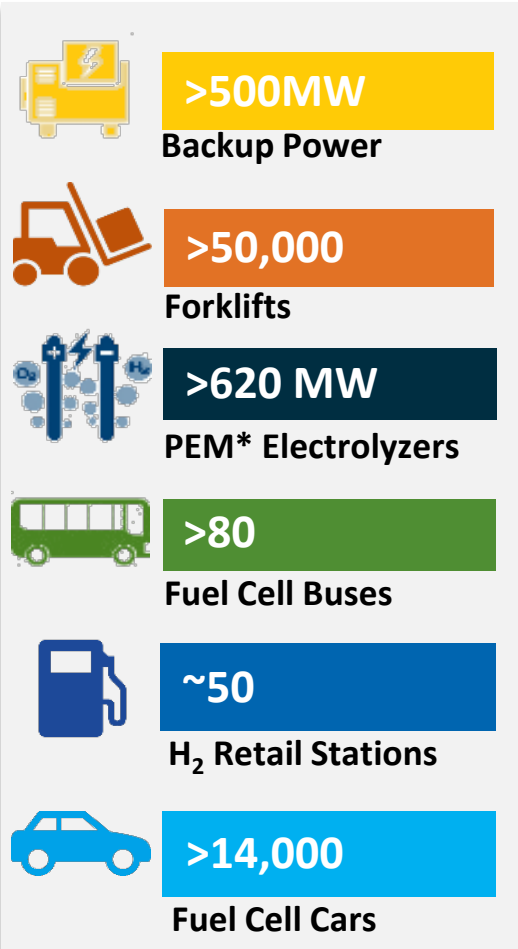


Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
<p>Funding Opportunity Announcements (FOAs) and addressing community benefits.</p> <p>Received feedback through multiple stakeholder engagement efforts such as listening sessions, workshops, and Requests for Information (RFIs).</p>	<ul style="list-style-type: none"> <li>• Released guidance on creating a Community Benefits Plan as part of DOE FOAs, including for H2Hubs                             <ul style="list-style-type: none"> <li>• Sections include:                                     <ul style="list-style-type: none"> <li>• Community and Labor Engagement</li> <li>• Investing in Workforce</li> <li>• Diversity, Equity, Inclusion, and Accessibility (DEIA)</li> <li>• Justice40 Initiative</li> </ul> </li> </ul> </li> <li>• When incorporated comprehensively, these will help ensure broadly shared prosperity in the clean energy transition</li> </ul>



# United States – Profile November 2022

## Status of Deployments



## Leading Government Initiatives



### Hydrogen

#### IRA Hydrogen Incentives

Clean Hydrogen Production Tax Credit (up to \$3/kg) and up to 30% Investment Tax Credit

Tax credit of 30% of the cost of alternative fuel refueling property placed in service before 2033.

30% credit for commercial FCEVs through 2032 and \$7,500 credit for new FCEV purchases.

#### Justice40 Initiative

40% of benefits from federal investments to disadvantaged communities (EJ40)

#### Diversity, Equity, Inclusion, and Accessibility (DEIA)

## Goals or Focus Areas

#### Clean Hydrogen

\$1/kg production  
\$2/kg delivery  
\$9/kWh storage

#### Electrolyzers

\$150/kW  
73% efficiency  
80K hrs durability

#### Fuel Cells (HD)

\$80/kW  
25K hrs durability

#### Enable J40 Priorities, DEIA

## Funding

Bipartisan Infrastructure Law includes **\$9.5B for Clean Hydrogen** - Signed Nov 15, 2021

- **\$7B** call for proposals for **H2Hubs**

**Fiscal Year (FY)2023 Request for DOE Hydrogen Program: ~\$400M**

## Deployment Goals

- **100% clean electricity grid by 2035**
- **Net-zero emissions by 2050**
- **50-52% emissions reductions by 2030**

**Activities include at least 4 regional clean H2 Hubs** H2 Demo projects to enable at scale deployment and support climate goals



# Thank you



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