



International Partnership
for Hydrogen and Fuel Cells
in the Economy

United States Update

41st IPHE Steering Committee Meeting

19 - 20 March 2024

New Delhi, India

Announcements / New Initiatives *United States*

Initiatives and Policies

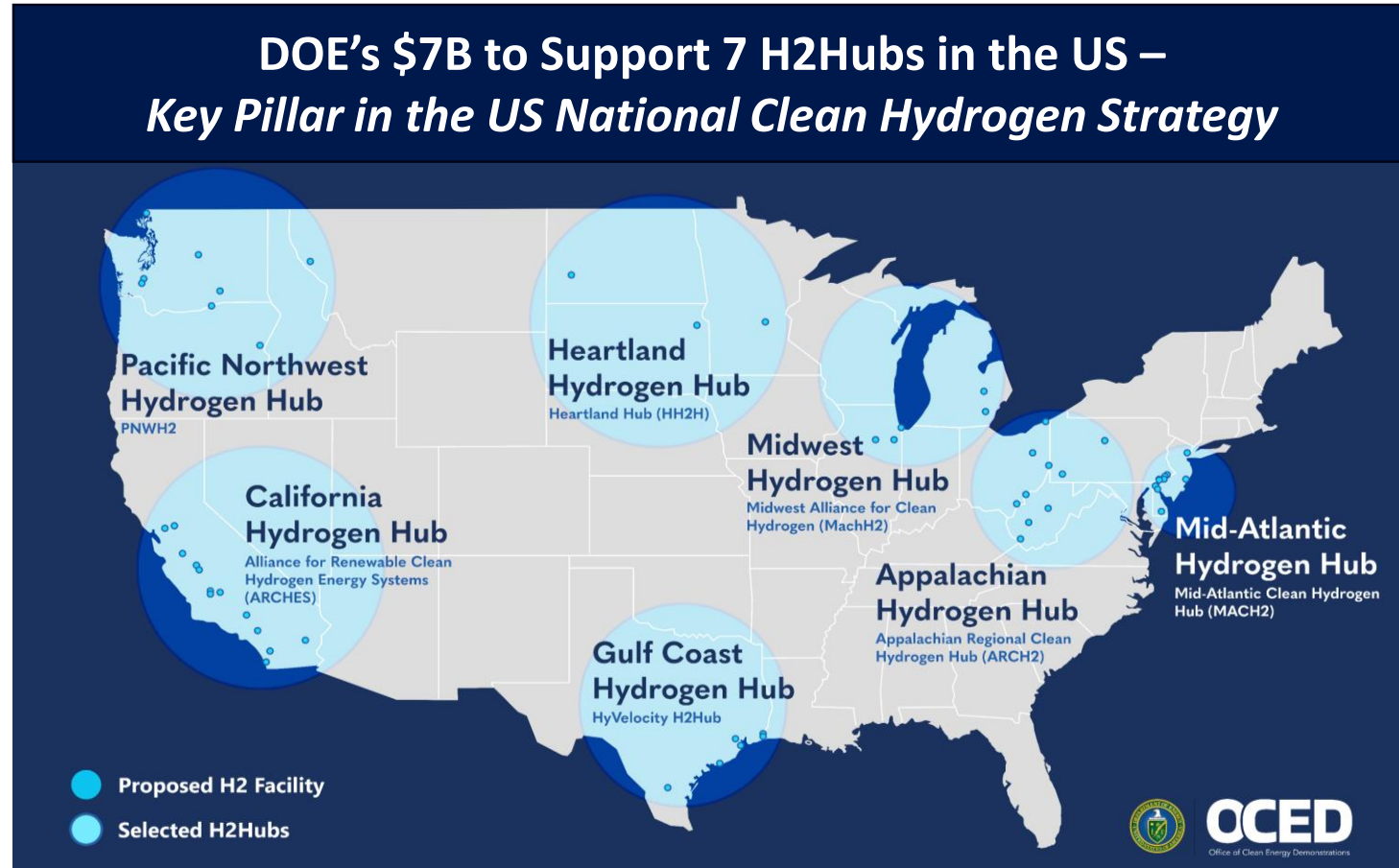
- Released notice for proposed rulemaking on clean hydrogen tax credit (45V)

New RDD&D Activities – Examples

- Over \$8B from for hydrogen RDD&D, including:
 - \$7B for 7 H2Hubs to accelerate deployment and market lift off
 - \$750M for 52 projects across 24 states including electrolyzer and fuel cell manufacturing activities
 - \$59M to advance medium and heavy transportation, address permitting and siting challenges, and improve community engagement

Collaborations







- US joined more than 30 countries in **declaration of intent on mutual recognition for hydrogen certification** at COP in Dubai in December



Oct 2023 - DOE selected 7 regional clean hydrogen hubs to receive \$7B in Bipartisan Infrastructure Law funding

United States – Profile March 2024

Status of Deployments

-  **>500 MW**
Backup Power
-  **>60,000**
Forklifts
-  **>3.7 GW**
Electrolyzers
-  **~80 – 150**
Fuel Cell Buses
-  **~50**
H₂ Retail Stations
-  **>18,000**
Fuel Cell Cars

Leading Government Initiatives



IRA Hydrogen Incentives Examples

- Clean Hydrogen Production Tax Credit (up to \$3/kg) and up to 30% Investment Tax Credit
- Tax credit of up to 100K/30% of the cost of alternative fuel refueling property.
- 30% credit for commercial FCEVs 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)

US Whole of Government Approach to H2 (HIT)

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**. Funding announced includes:

- **\$7B for H2Hubs**
- **\$750 M** RD&D efforts for electrolysis, manufacturing, and recycling

FY23 DOE Hydrogen Program: ~\$418M

Deployment Goals

- **100% clean electricity grid by 2035**
- **Net-zero emissions by 2050**
- **50-52% emissions reductions by 2030**
- **Clean hydrogen production: 10 MMT by 2030; 20 MMT by 2040; 50 MMT by 2050**



H2 Demo projects to enable at scale deployment and support climate goals



Examples of Lessons Learned and Impact *United States*



Program initiative, policy, regulation, or mandate	Lessons Learned/Outcomes
<p>Formation of the Hydrogen Interagency Taskforce (HIT)</p>	<ul style="list-style-type: none"> • Executing a National Strategy requires close coordination and collaboration across the government. • HIT highlights a whole-of-government approach bringing together US federal government agencies to accelerate progress towards the <i>US National Clean Hydrogen Strategy</i> and coordinate on key topics including: <ul style="list-style-type: none"> • Supply & Demand at Scale • Infrastructure • Siting, Permitting • Workforce, Equity and Justice • HIT approach builds stronger, more collaborative relationships across the federal agencies working on H2 which can help to accelerate H2 technology deployment and lift off in the US.



Thank you



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