



International Partnership  
for Hydrogen and Fuel Cells  
in the Economy

## *United States* Update

35<sup>th</sup> IPHE Steering Committee Meeting

22 – 23 June 2021

Virtual Meeting

# Announcements / New Initiatives *United States*

- **Investments/Funding/Policies/Initiatives**

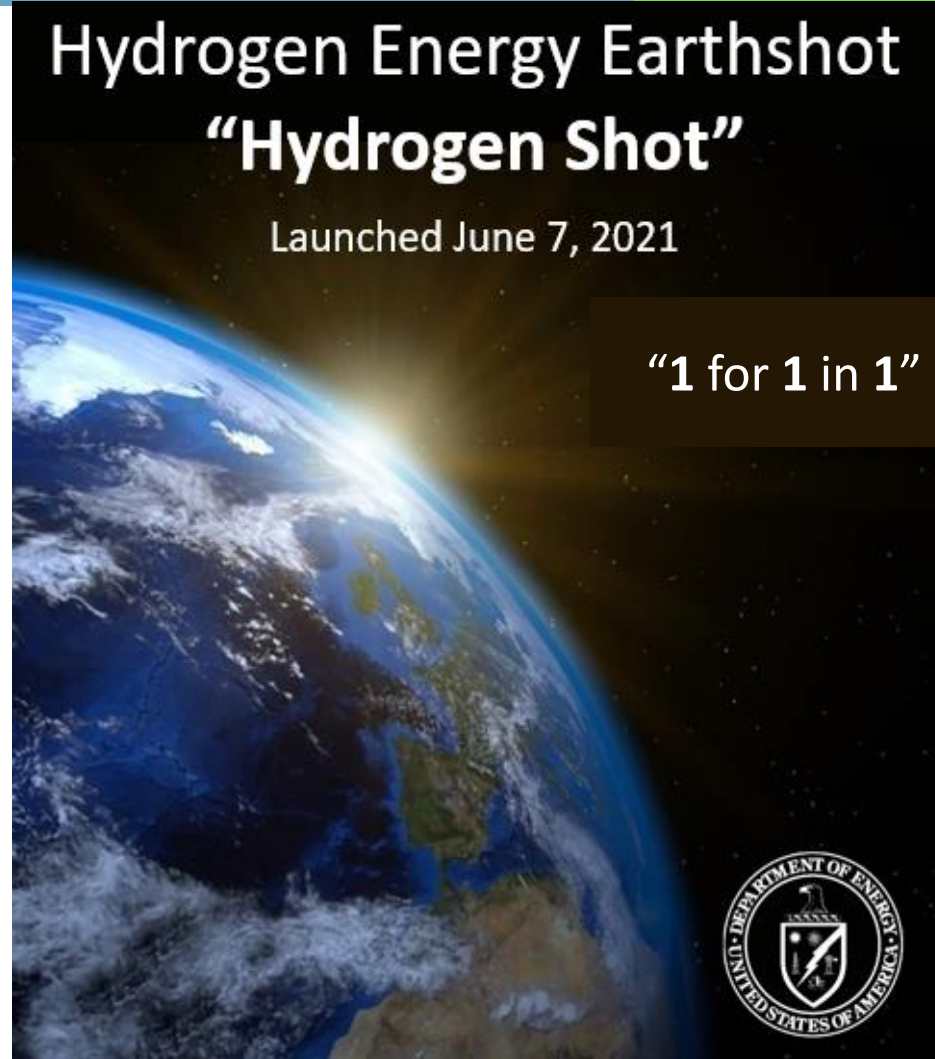
- DOE announced Energy Earthshots Initiative, including “Hydrogen Shot” to cut the cost of clean hydrogen by 80% to **\$1 for 1 kilogram in one decade (“1 1 1”)**.
- **Over \$90 million in solicitations for FY 2021 for hydrogen** as well as fuel cells, turbines and related technologies
- **\$400 million in the President’s Fiscal Year FY 2022** budget request for hydrogen across DOE offices

- **New RD&D and/or Deployment Activities**

- New fuel cell and hydrogen R&D targets on heavy duty transportation and to align with Hydrogen Shot, builds off November 2020 Program Plan
- **H2@Scale demos continue** in California, Texas, Missouri and Washington. New nuclear, fossil/waste+CCS, and turbine projects announced.

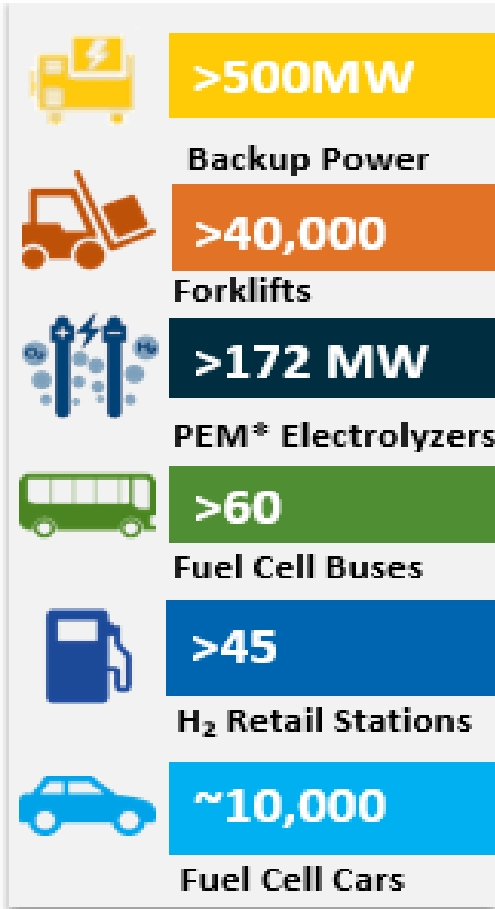
- **Key Collaborations**

- **DOE Under Secretary’s Science and Energy Tech Team on hydrogen formed.**
- **Houston joined H2 Ports initiative** as part of Hydrogen Clean Energy Ministerial.
- **Growing number of regional coalitions and partnerships** on hydrogen in the US
- **Regulatory map** published on cross-agency roles and gaps



# United States – Profile June 2021

## Status of Deployments

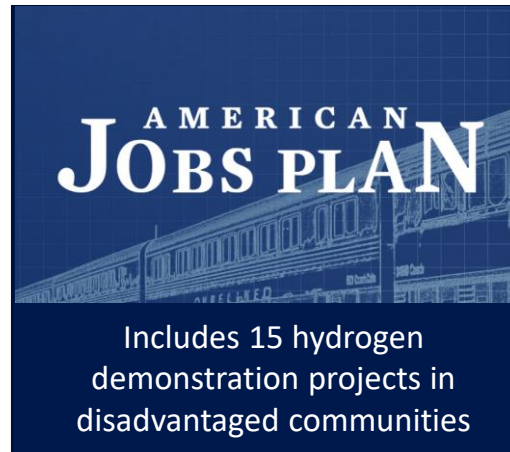


\*Polymer electrolyte membrane

## Leading Government Initiatives



Hydrogen



**Justice40 Initiative**  
40% of benefits from federal investments to disadvantaged communities (EJ40)

**Diversity, Equity and Inclusion (DEI)**

## Goals or Focus Areas- Examples

<p><b>Clean Hydrogen</b></p> <p>\$1/kg production \$2/kg delivery \$9/kWh storage</p>	<p><b>Electrolyzers</b></p> <p>\$150/kW 73% efficiency 80K hrs durability</p>
<p><b>Fuel Cells (HD)</b></p> <p>\$80/kW 25K hrs durability</p>	<p><b>Enable EJ40 Priorities, DEI</b></p>

## Deployment Goals

- 100% clean electricity grid by 2035
- Net-zero emissions by 2050



H<sub>2</sub> Demo projects to enable at scale deployment and support climate goals

## Funding

\$400 million in the President's request (FY22) for hydrogen activities across DOE



# Example of Lessons Learned and Impact *United States*

<b>Program initiative, policy, regulation or mandate</b>	<b>Lessons Learned/Outcomes</b>
<p><b>Establishing stakeholder and community engagement to enable most effective government-led technology acceleration efforts</b></p>	<p>Getting buy-in from communities, including environmental justice and DEI (diversity, equity, inclusion) stakeholders early on is critical to the success of clean energy projects.</p> <p>The DOE Hydrogen Energy Earthshot Initiative will include a series of events to engage stakeholders and the community to identify paths to achieve progress equitably. As part of its launch, DOE released a Request for Information as a first step to engage relevant stakeholders in identifying specific hydrogen demonstrations, including locations, that can help lower the cost of hydrogen while providing benefits to disadvantaged communities.</p>



# Thank you



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