

Northeast Hydrogen Infrastructure Development Initiative

**Hydrogen and Fuel Cell Technical
Advisory Committee (HTAC)**

November 15, 2012

Washington DC

Northeast Hydrogen Infrastructure Development Initiative

Goals:

- Development of Hydrogen Infrastructure
- Deployment of Fuel Cell Electric Vehicles

Outcomes:

- Reduce dependency on foreign oil
- Increase the use of domestic fuel
- Enhance environmental profile
- Promote technical innovation
- Increase economic opportunities for US Companies

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Stakeholders

- Automakers
- Hydrogen Producers and Distributors
- Government and Non-Governmental Organizations
- Original Equipment Manufacturers

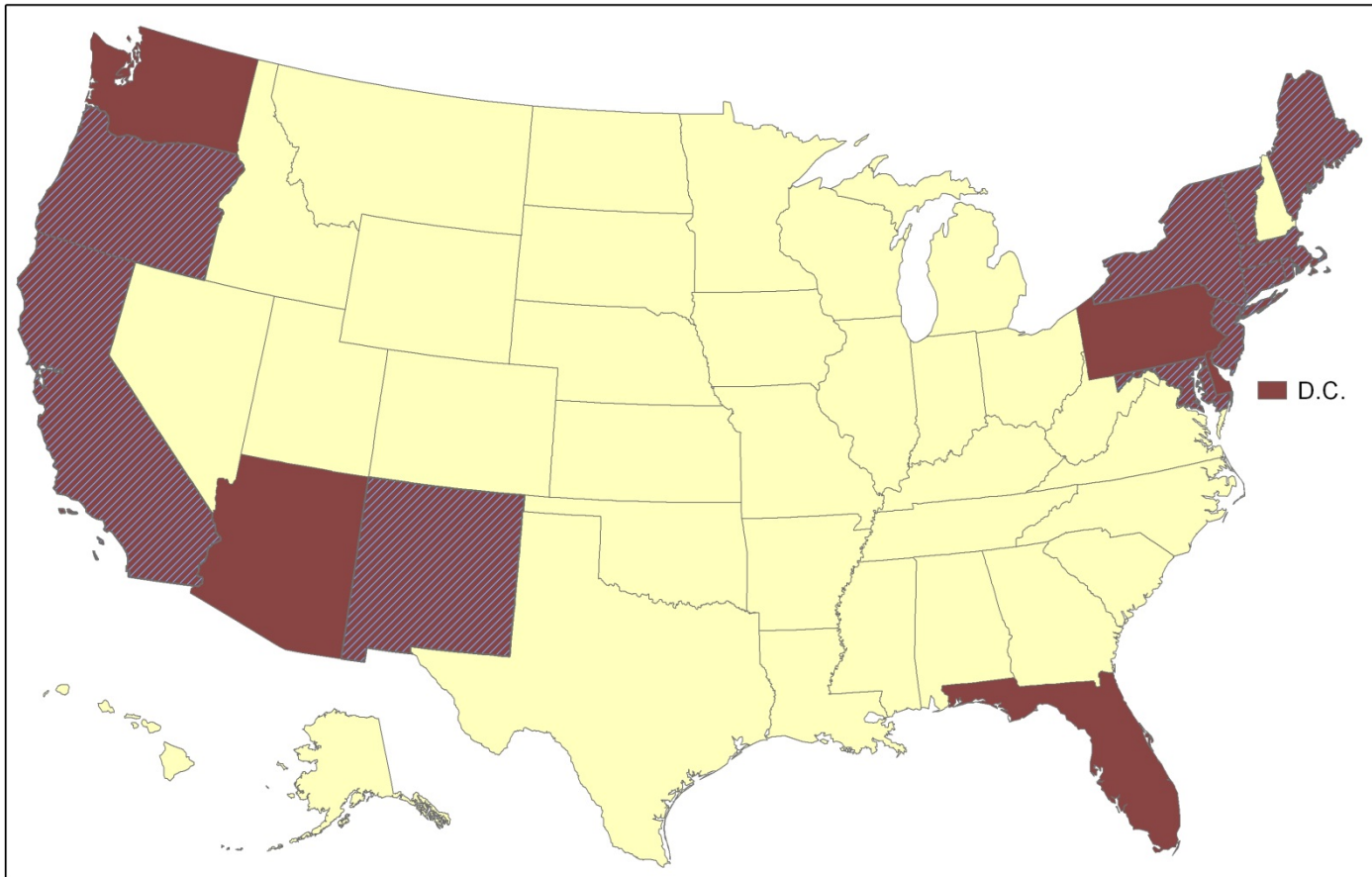
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**The U.S. Department of Energy is supporting the
Northeast Initiative through the National
Renewable Energy Laboratory:**

1. Market Adoption Regions
2. Fuel Cell Electric Vehicle (FCEV) Deployment Rates
3. Station Placement Requirements
4. Deployment Dynamics
5. Cost Analysis



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States That Adopted California Motor Vehicle Standards



Sources:
California Air Resources Board
Center for Climate and Energy Solutions
Clean Cars Campaign
Alternative Fuels Data Center

10/22/2012

 Has Adopted California Vehicle Standards
 Has Adopted California ZEV Standards

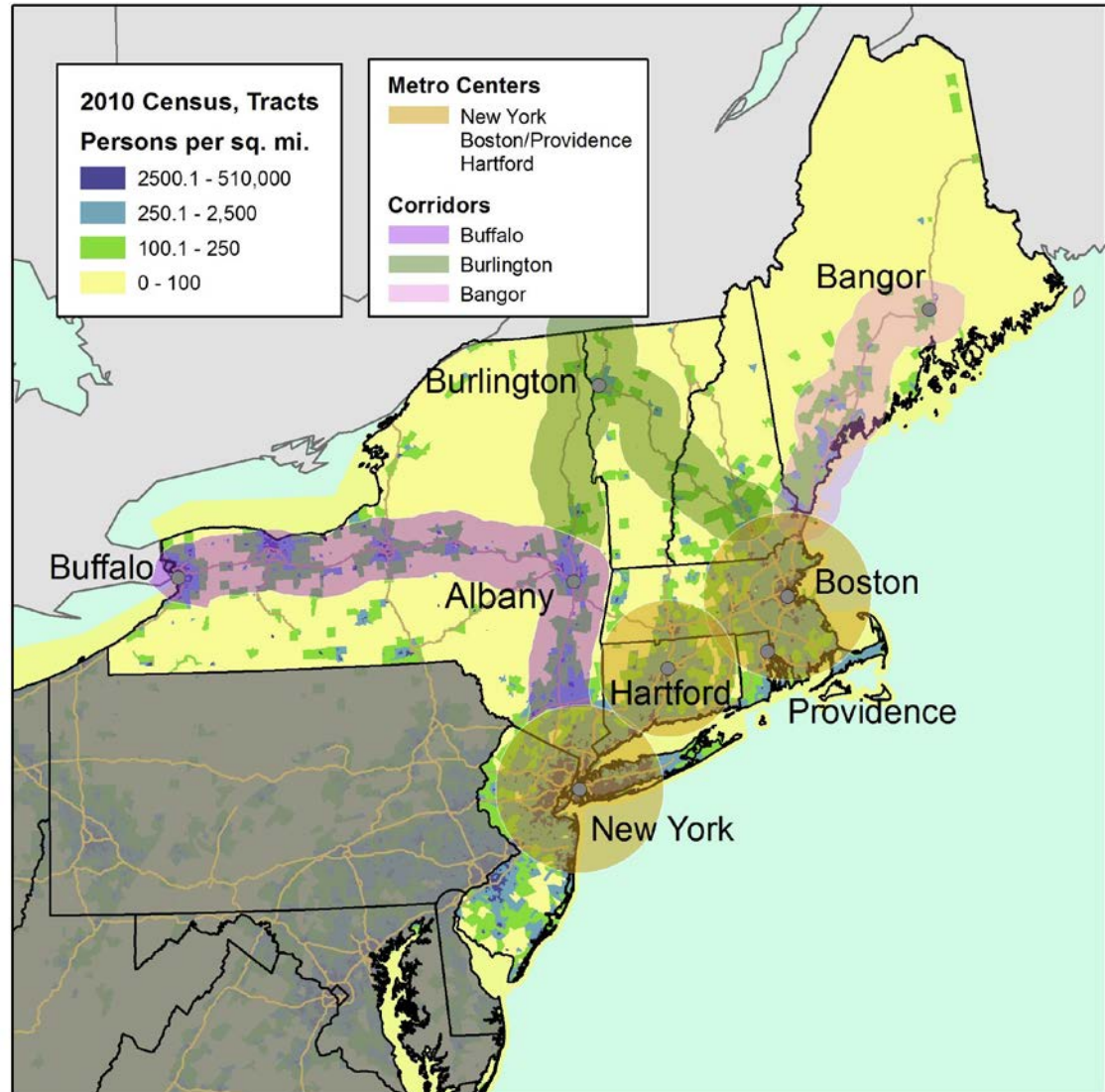
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Preliminary

Highest population density

Metro Centers

- New York City
- Boston/Providence
- Hartford

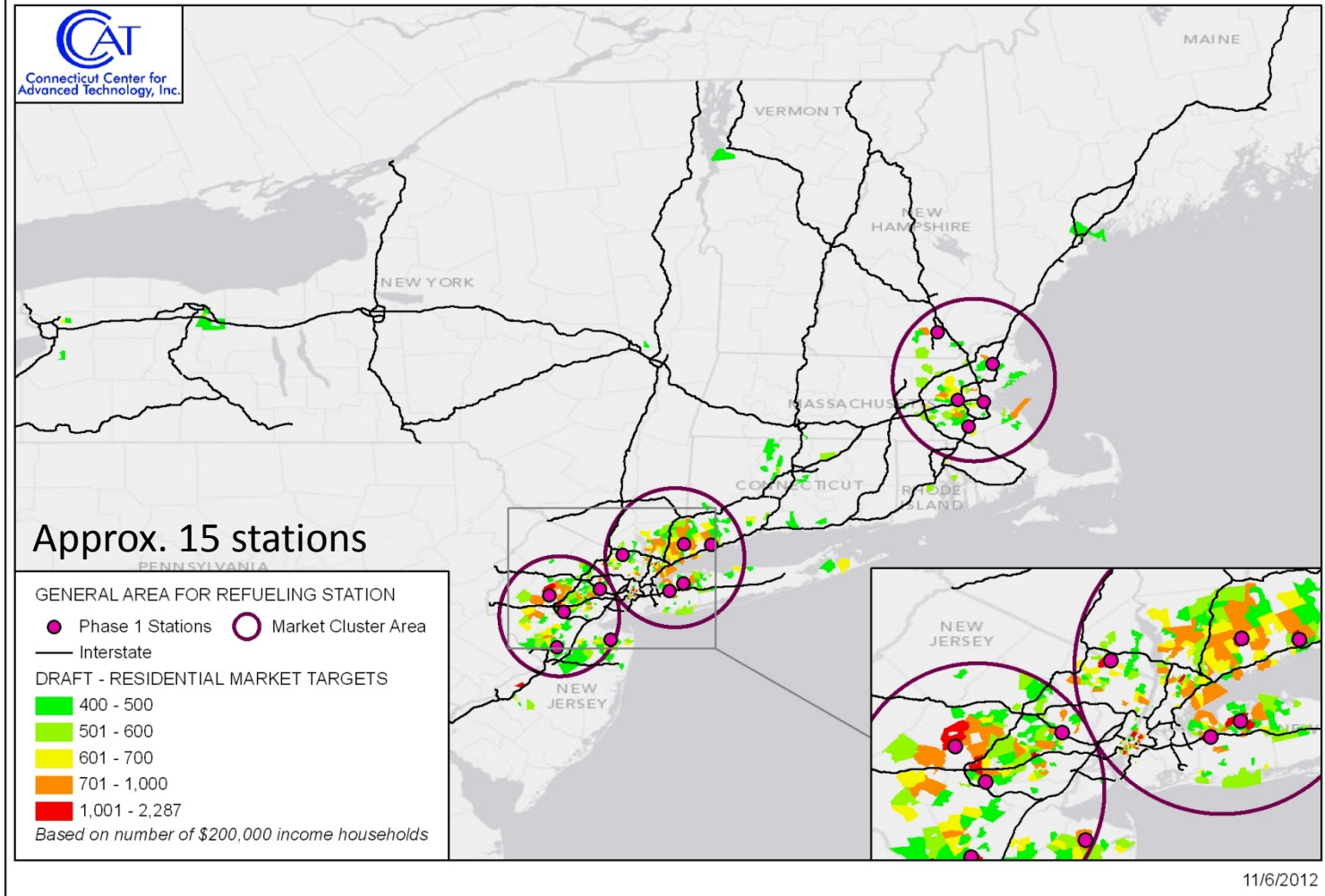


Source: Metrics for a Northeast Corridor Hydrogen Roadmap: Preliminary Results, NREL, November 7, 2012

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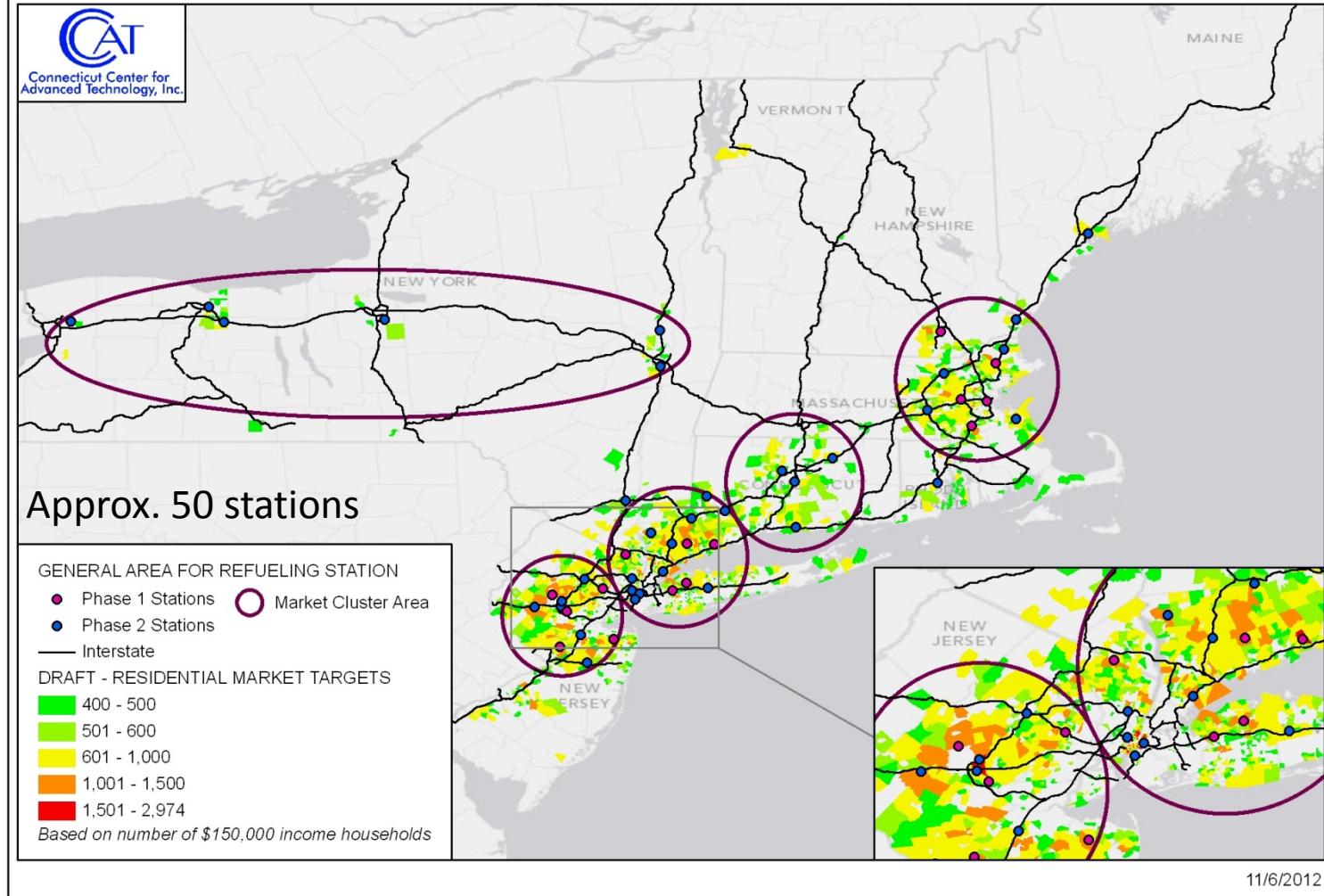
Hydrogen Refueling Stations - Residential Market Segment

Phase 1 - 3,500 Vehicles Served



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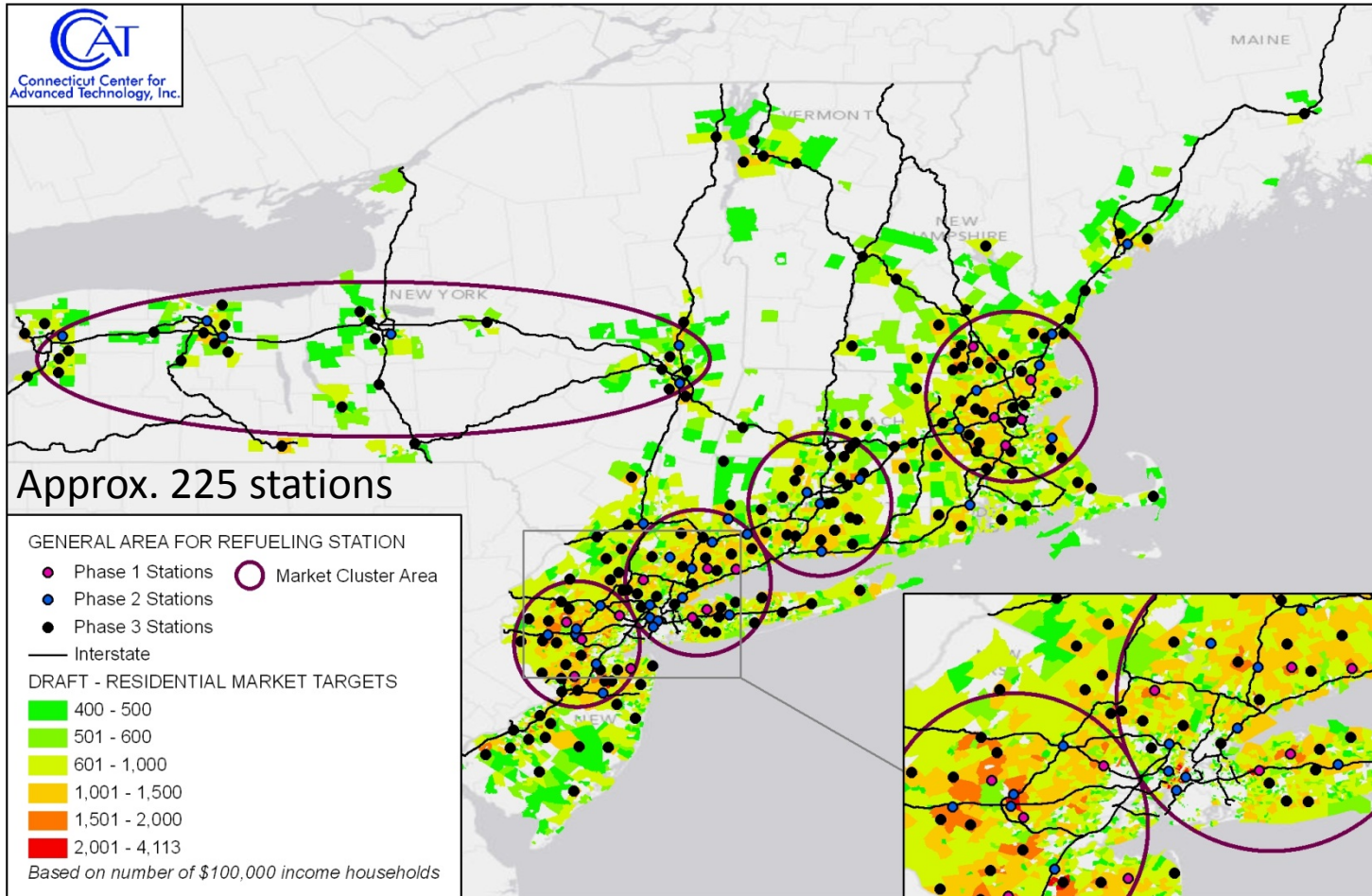
Hydrogen Refueling Stations - Residential Market Segment Phase 2 - 10,000 Vehicles Served



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Hydrogen Refueling Stations - Residential Market Segment

Phase 3 - 45,000 Vehicles Served



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Global Activity:

“Gas suppliers and oil companies say they will seek to build some 100 hydrogen supply stations at four major city areas [in Japan] to prepare for the launch of mass-produced hydrogen-powered fuel-cell vehicles in 2015” ...

The Japan Times Online, Jan. 2011

“Germany’s hydrogen refueling infrastructure [will be] expanded from the current 14 stations to a total of 50 sites by 2015, as research and development projects under the National Hydrogen and Fuel Cell Technology Innovation Programme (NIP).” ... FuelCellToday, June 2012

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Summary:

- **Activities:**

- Modeling and analysis
- Planning
- Industry coordination

- **Outcomes:**

- Regional deployment of FCEV and hydrogen infrastructure
- Reduced import and use of foreign oil
- Increased use of domestic fuel
- Technical innovation and economic development

- **Needs:**

- Federal guidance
- Administrative / technical support
- State engagement

Northeast Hydrogen Infrastructure Development Initiative

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