



U.S. DEPARTMENT OF
ENERGY

Hydrogen Production and Delivery Program Element

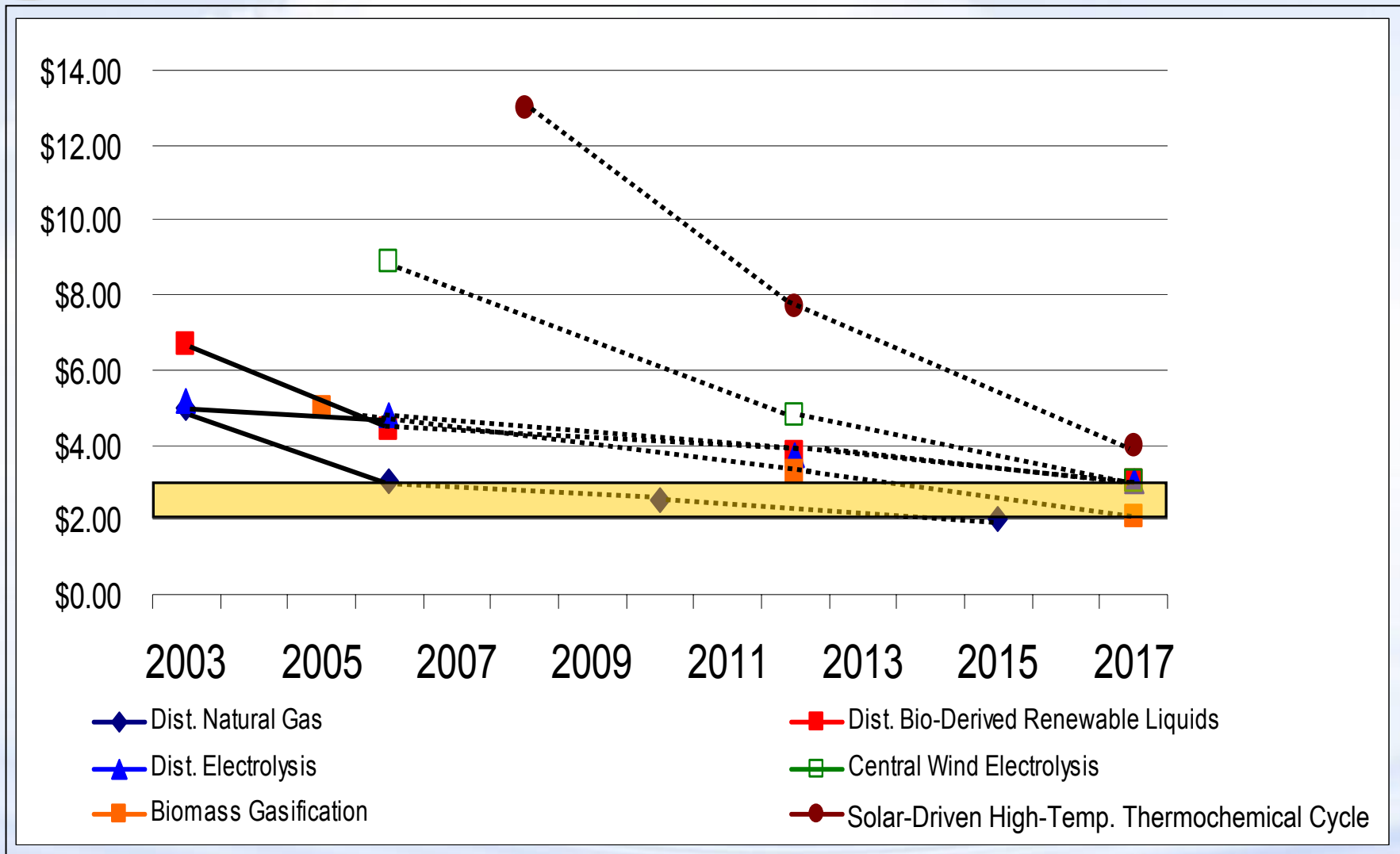
Roxanne Garland

**2007 DOE Hydrogen Program
Merit Review and Peer Evaluation Meeting**

May 15, 2007



Production Pathways & Targets (EERE)





Delivery Goals and Objectives

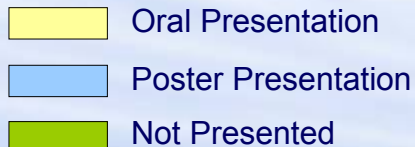
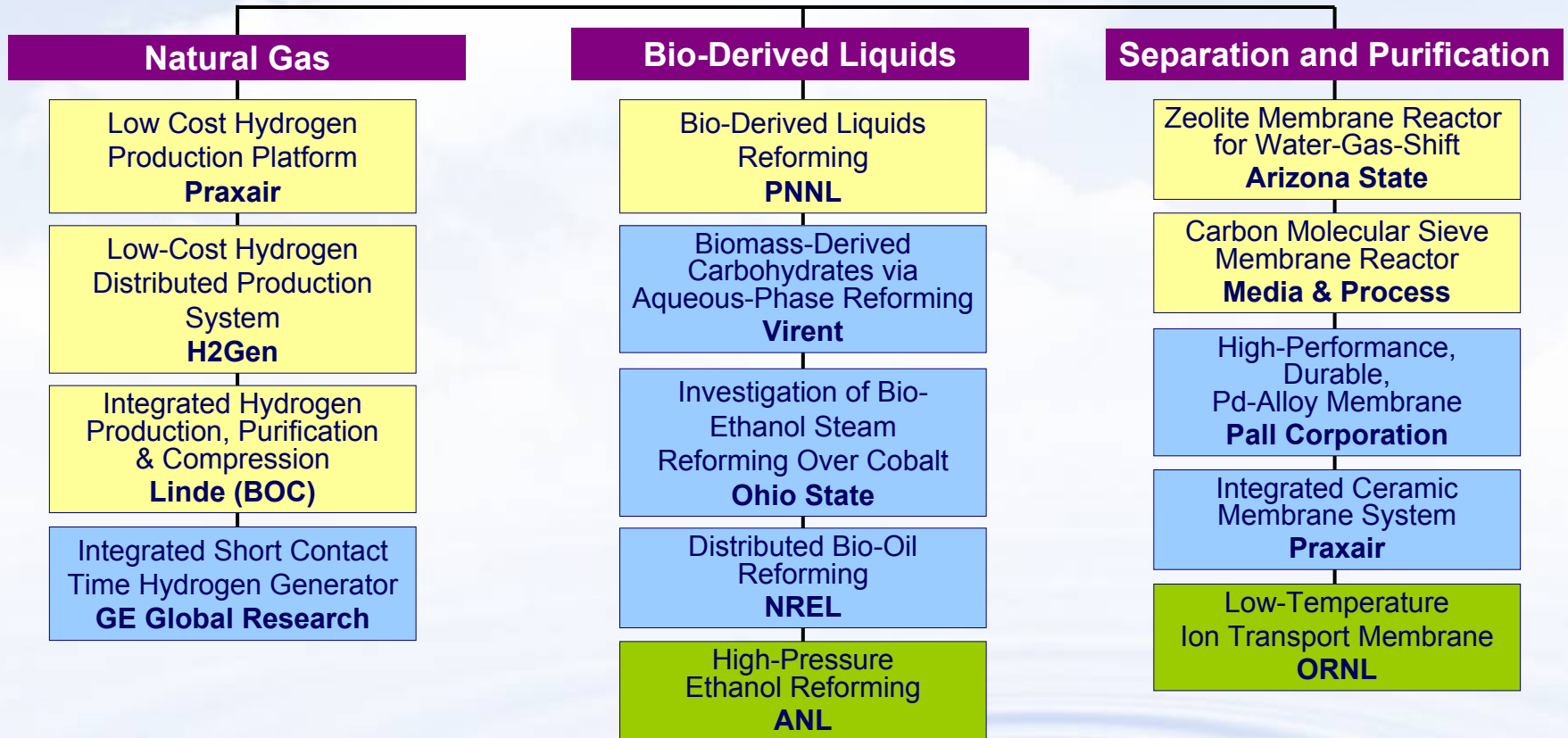
By 2017, develop technologies to reduce the cost of hydrogen delivery from the point of production to the point of use in vehicles or stationary power units to <\$1.00/kg of hydrogen

- By 2007, define the criteria for a cost-effective and energy-efficient hydrogen delivery infrastructure.
- By 2010, develop technologies to reduce the cost of compression, storage, and dispensing at refueling stations and stationary power sites to <\$0.80/kg of hydrogen. By 2015, reduce this cost to <\$0.40/kg.
- By 2012, develop technologies to reduce the cost of hydrogen delivery from central and semi-central production facilities to the gate of refueling stations and other end users to <\$0.90/kg of hydrogen. By 2017, reduce this cost to <\$0.60/kg.

Timing has been delayed by 2 years due to Congressional Earmarks and limited appropriations (except refueling site delivery).

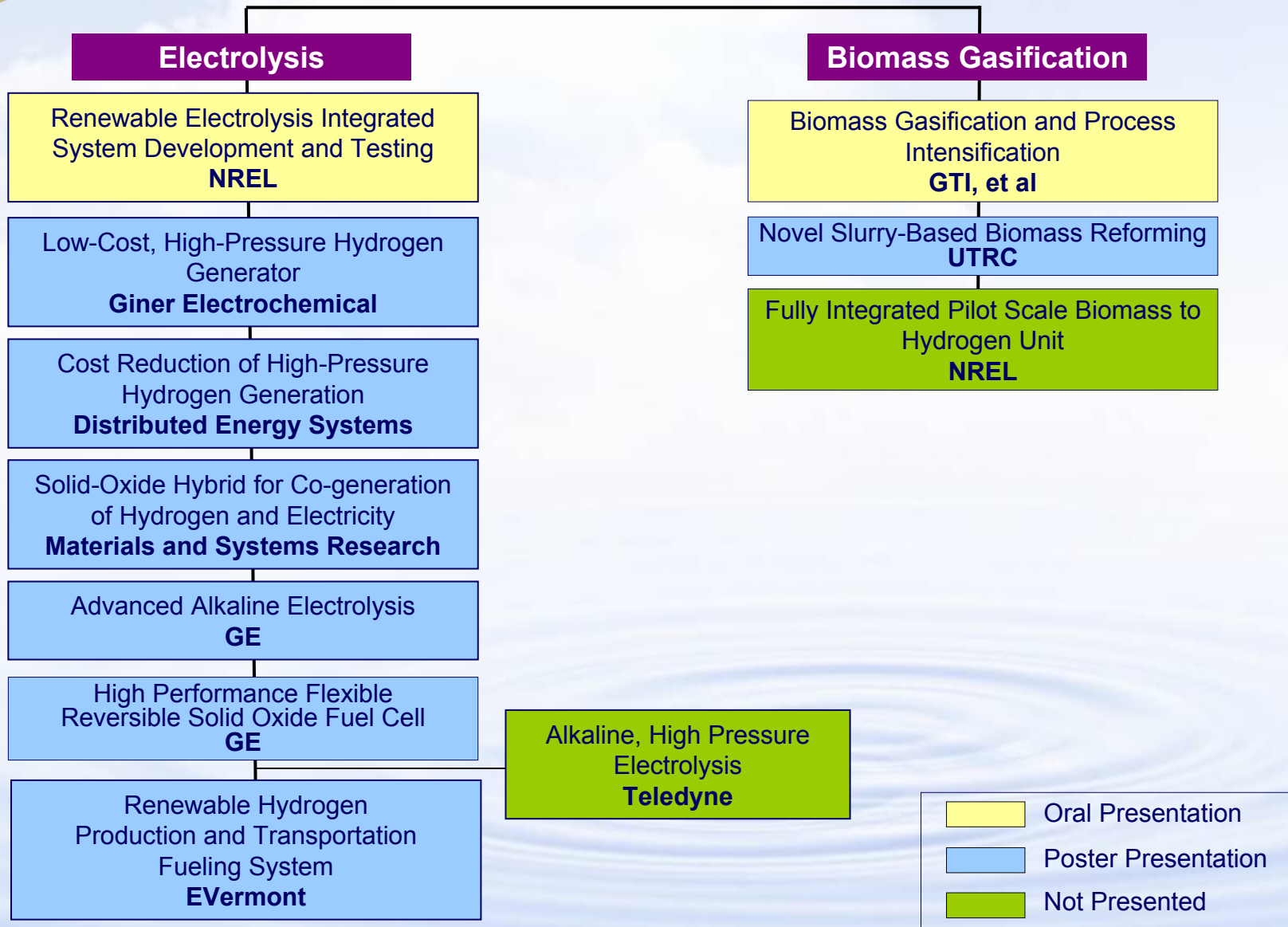


Distributed Reforming Hydrogen Production Pathway Projects



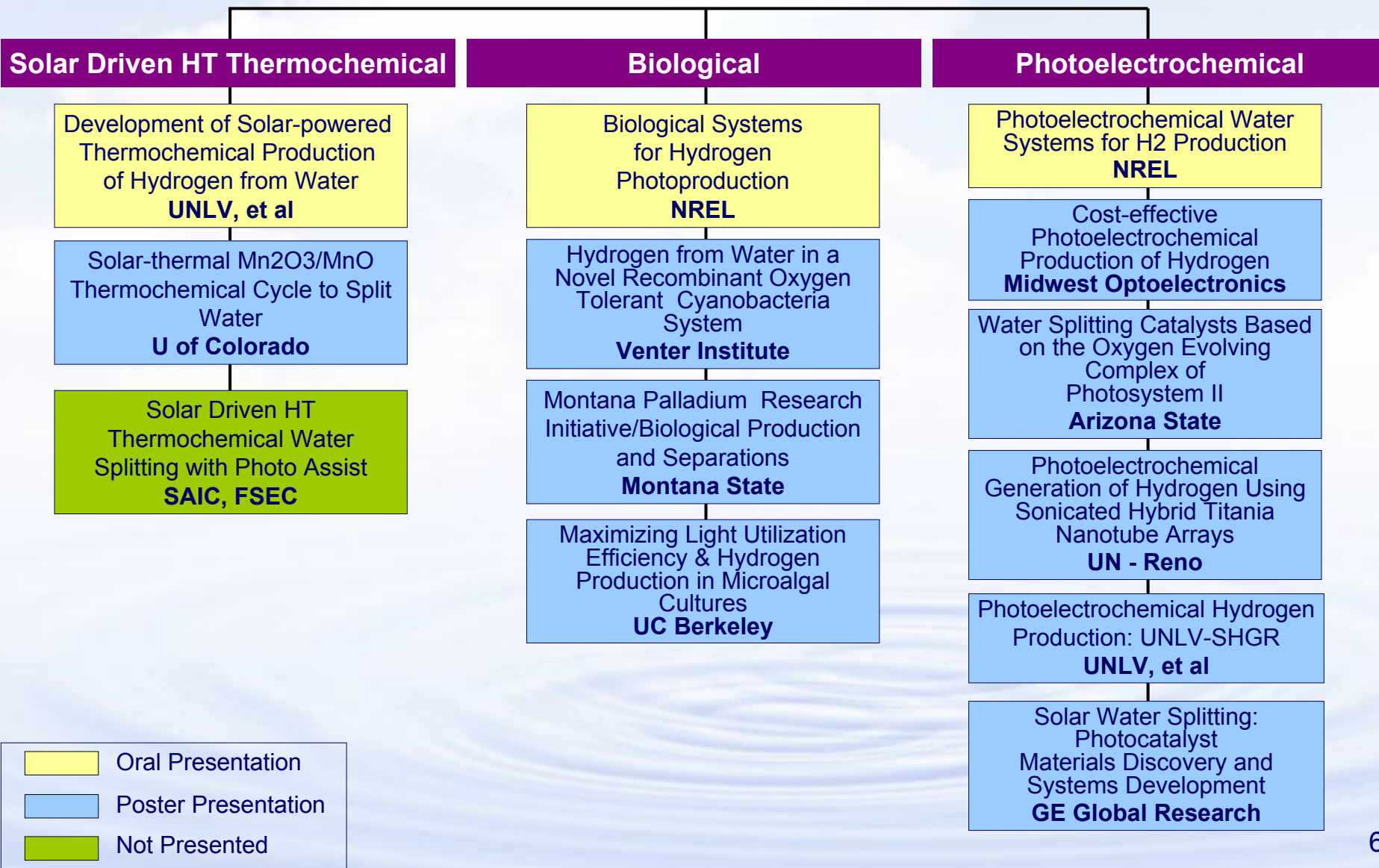


Electrolysis and Biomass Gasification Projects



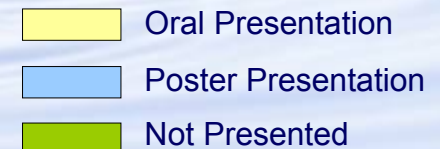


Longer Term Pathway Projects



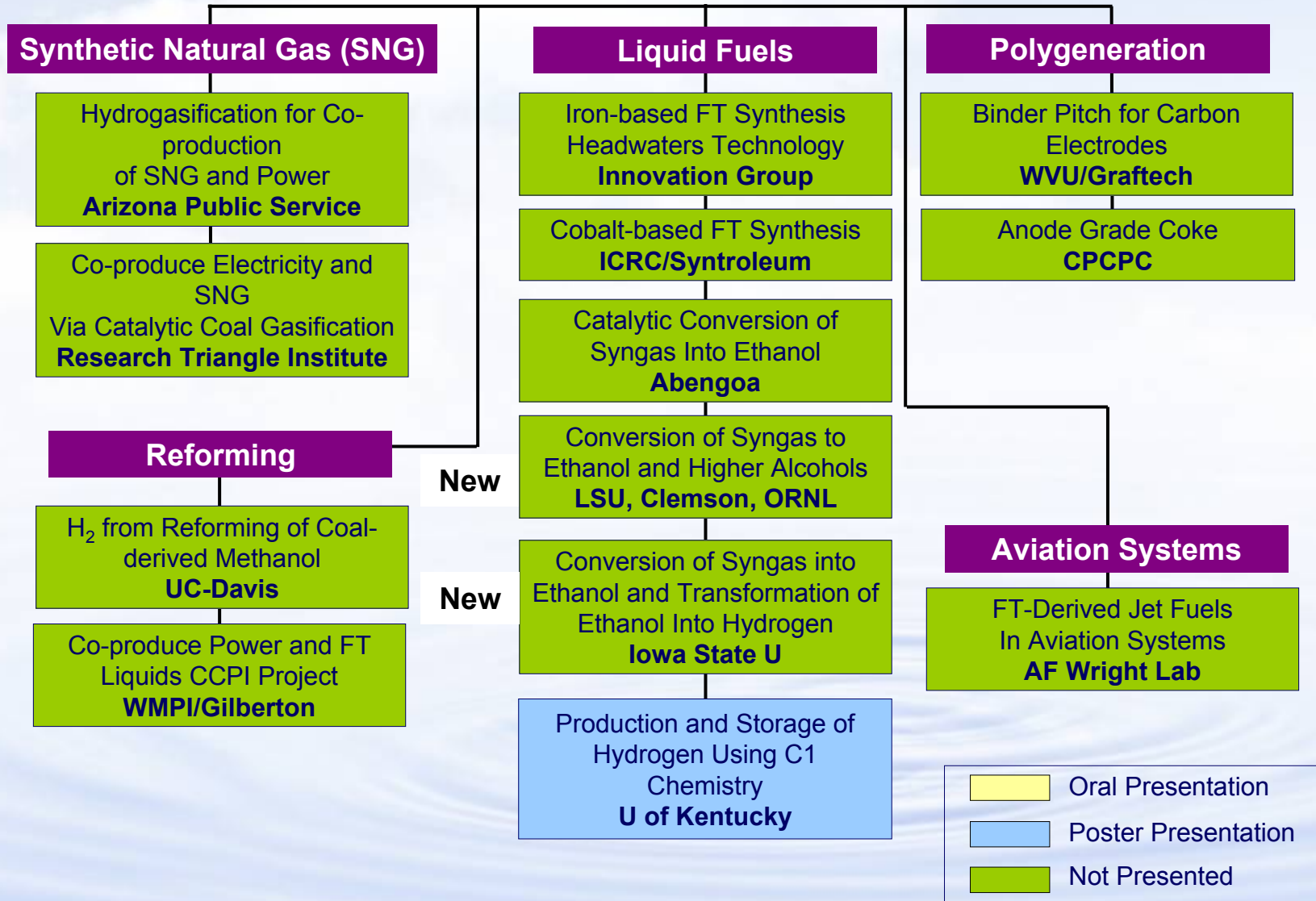


Coal Hydrogen Central Production Pathway Projects



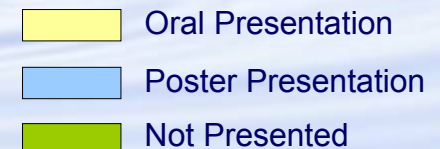
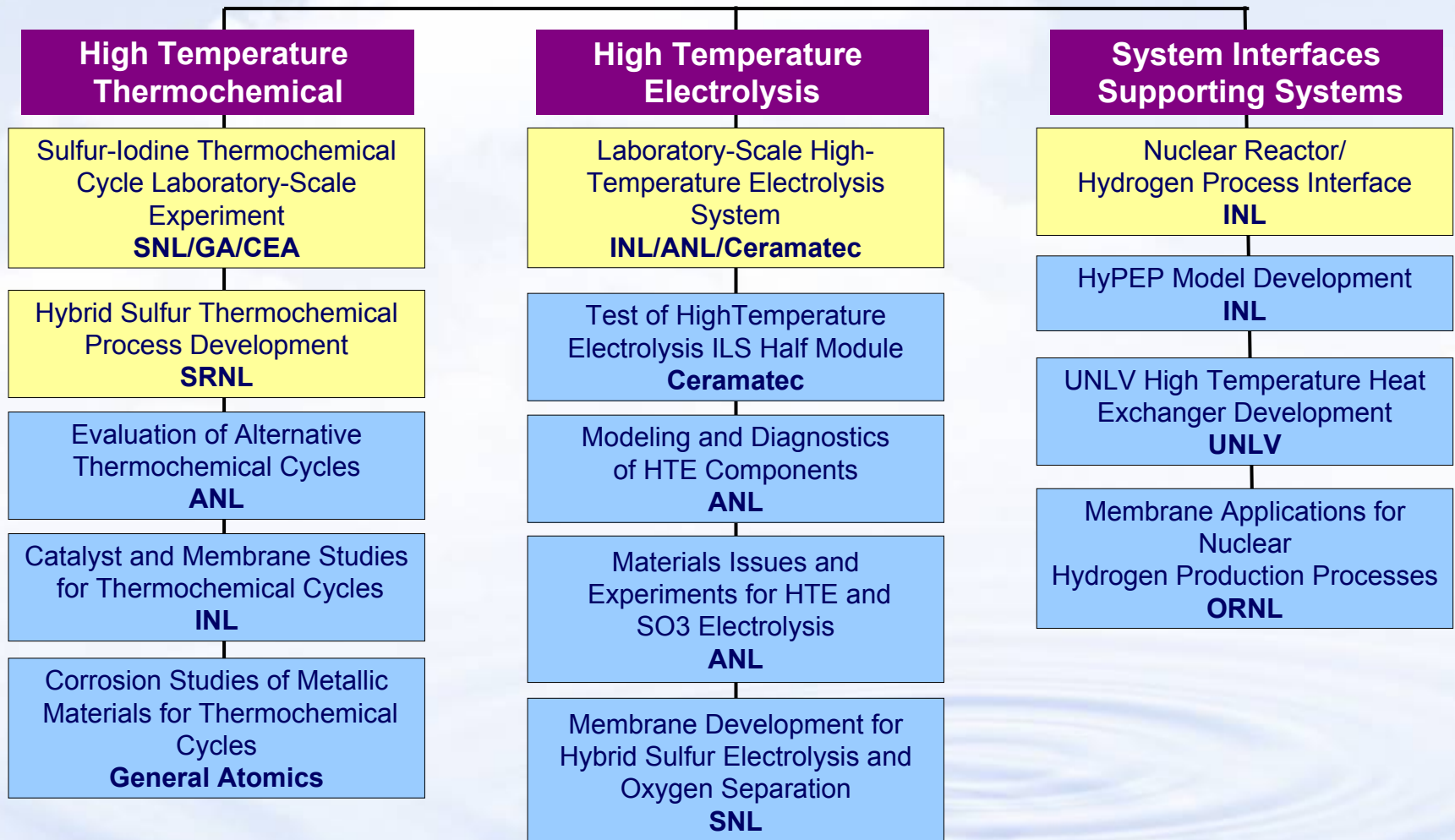


Coal Hydrogen Pathway Related Projects



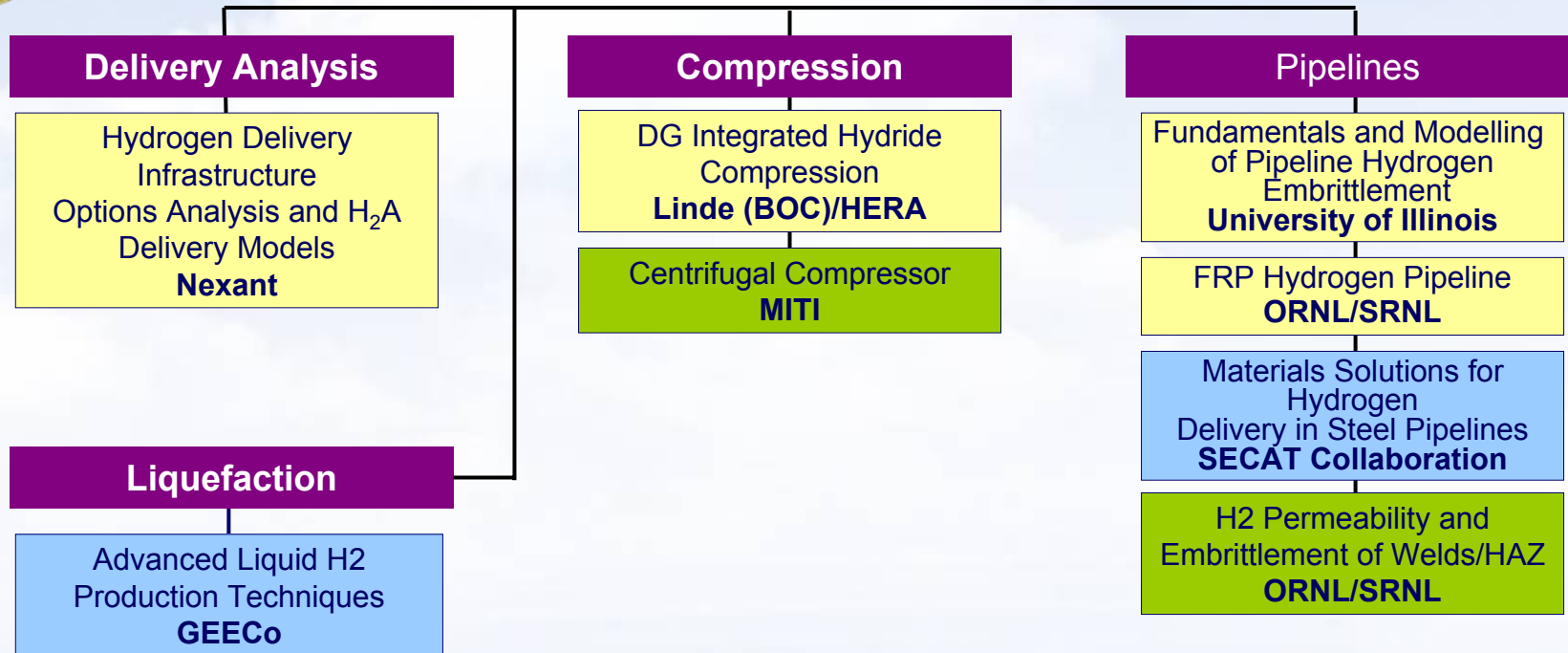


Nuclear Hydrogen Production Pathway Projects





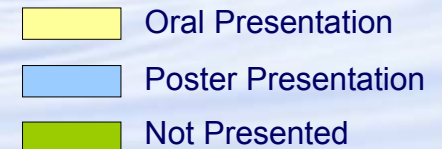
Hydrogen Delivery Projects



- Oral Presentation
- Poster Presentation
- Not Presented



Hydrogen Delivery Projects





Additional Projects/Crosscutting

- Photobiological Hydrogen Research, FIU
- Developing Improved Materials to Support the Hydrogen Economy, Edison Materials Tech Center
- Production of Hydrogen for Clean and Renewable Sources of Energy for Fuel Cell Vehicles, University of Toledo
- Adapting Planar Solid Oxide Fuel Cells for Distributed Power Generation, Ohio University
- Production, Fuel Cell, and Delivery Research, University of South Florida
- Ohio Distributed Hydrogen Project, Ohio University
- Generation and Solid Oxide Fuel Cell Carbon Source Sequestration in Northwest Indiana, NiSource