Northwestern | PAULA M. TRIENENS INSTITUTE FOR SUSTAINABILITY AND ENERGY

SIX PILLARS OF DECARBONIZATION

DEPLOY

energy to decarbonize industries

PILLAR THESIS

New sustainable energy sources, fuels, and storage are needed to lower industrial emissions, particularly in difficult-to-decarbonize sectors. The Deploy Decarbonization Working Group will convene stakeholders quarterly to address critical questions in research and commercial scalability, producing insight to guide the future direction of the pillar.

PILLAR CO-LEADS

Professor Sossina Haile
Expertise: Clean hydrogen, fuel cells, and solar energy

Professor Jennifer Dunn
Expertise: Hydrogen economy, lifecycle analysis, and critical minerals

AREA OF FOCUS

Northwestern will help create a new regime of sustainable energy and processes by focusing on clean hydrogen production, use, and storage.

INTERDISCIPLINARY EXPERTISE

Interdisciplinary faculty areas of expertise include:

Catalysis | Clean hydrogen production | Electrochemistry | Fuel cells | Gas separation, transport, and storage
Hydrogen use for industry | Life cycle analysis

Faculty collaborators have been recognized for their academic excellence through awards and affiliations:

- National Academy of Engineering
- American Academy of Arts & Sciences
- U.S. Department of Energy Clean Hydrogen Program Leader
- Northwestern University Center Director
- Clarivate Highly Cited Researchers

NORTHWESTERN'S WORLD-CLASS EXCELLENCE

- Northwestern is a major partner on $1B DOE Hydrogen Hub, a national effort to develop the hydrogen fuel economy
- Northwestern has secured over $10M in NSF funding for hydrogen-related research
- Northwestern leads a $10M DOE Energy Frontier Research Center (EFRC) focused on developing hydrogen-based energy technologies
- Northwestern has 250+ publications in the areas of hydrogen production, catalysis, and materials for storage with over 18,500 citations in the past decade

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