The US Pathways Project:

Local Planning and Federal Support for Low Carbon Infrastructure in the United States

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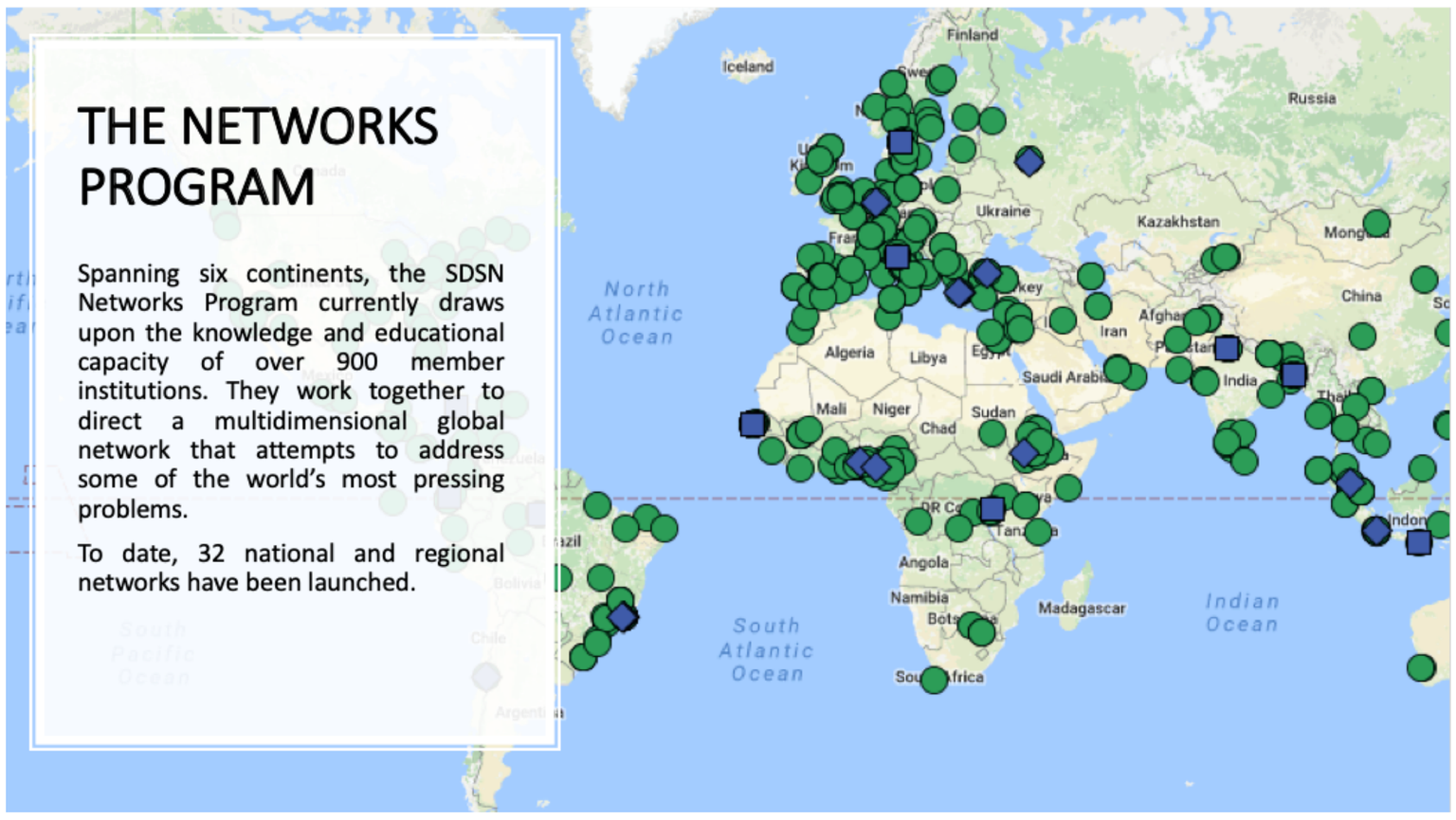
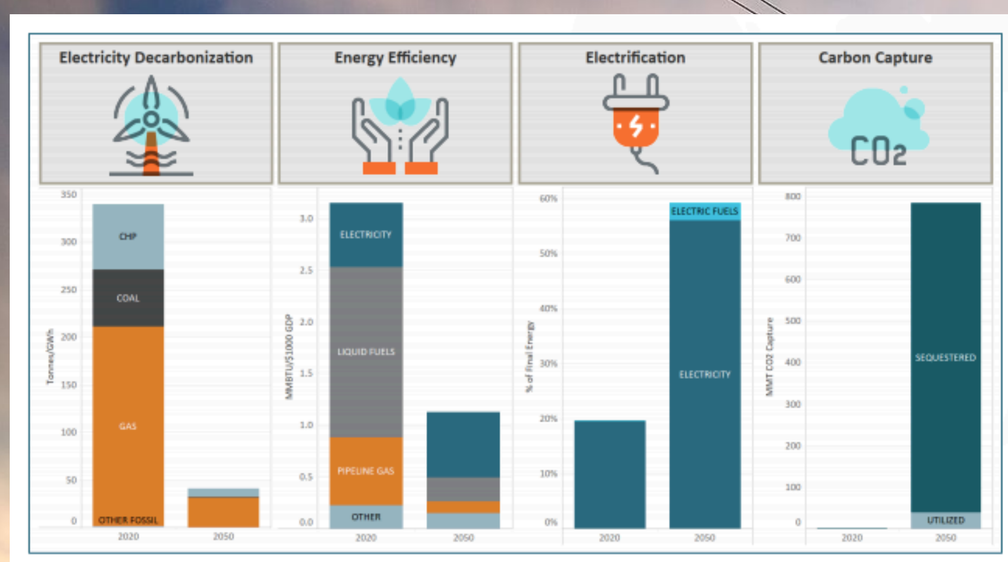
Background

The UN Sustainable Development Solutions Network (SDSN) has been operating since 2012 under the auspices of the UN Secretary-General. SDSN mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement. We aim to accelerate joint learning and promote integrated approaches that address the interconnected economic, social, and environmental challenges confronting the world. SDSN works closely with United Nations agencies, multilateral financing institutions, the private sector, and civil society.



Research Question

What energy pathways are available to decarbonize the US?



Energy decarbonization rests on the four principal strategies ("four pillars") shown in Figure ES2: (1) electricity decarbonization, the reduction in emissions intensity of electricity generation by about 90% below today's level by 2050; (2) energy efficiency, the reduction in energy required to provide energy services such as heating and transportation, by about 60% below today's level; (3) electrification, converting end-uses like transportation and heating from fossils fuels to low-carbon electricity, so that electricity triples its share from 20% of current end uses to 60% in 2050; and (4) carbon capture, the capture of otherwise CO_2 that would otherwise be emitted from power plants and industrial facilities, plus direct air capture, rising from nearly zero today to as much as 800 million metric tons in 2050 in some scenarios. The captured carbon may be sequestered or may be utilized in making synthetic renewable fuels.

Current workstreams:

Regional Decarbonization Pathways Report
Midwest Study
Lead: Jamil Farbes, Evolved Energy Research
Southeast Study
Lead: Gabe Kwok, Evolved Energy Research
White Paper:
Chapter 1 - Deep Decarbonization in the US: A Jurisdictional Perspective
Lead: Jim Williams, University of San Francisco and Ryan Jones, Evolved Energy Research
Chapter 2 - Geospatial Analysis and Planning
Lead: Grace Wu, The Nature Conservancy and NCEAS
Chapter 3 - Historical Precedents
Lead: Rawley Loken, E3
Chapter 4 - Jobs in a Low Carbon Energy System
Lead: Erin Mayfield, Princeton University
Chapter 5 - R&D for Deep Decarbonization
Lead: Michael Ginsberg, Columbia University

Get Involved:

1.Consult with an author...

2. Provide research or a study...

3. Become an SDSN Member...

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