KeyState to Zero

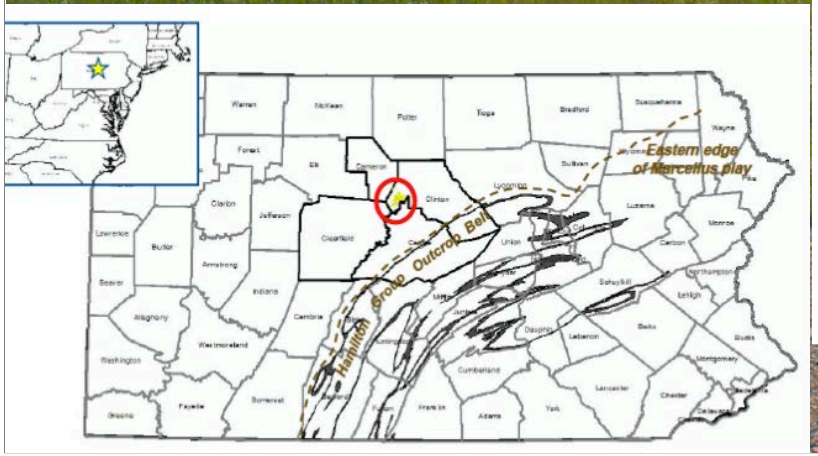
Integrating
Onsite Natural Gas Production and
Onsite Natural Gas Synthesis with
Onsite Carbon Capture Use and Storage

'Laboratory at Scale'

VALUE PROPOSITION

#1 - VERTICALLY INTEGRATED GAS FEEDSTOCK
#2 - PROXIMITY TO BLUE OCEAN MARKETS
#3 - ONSITE CARBON SEQUESTRATION

Displacing
Higher-Cost-Higher-Carbon Products
with Lower-Cost-Lower-Carbon Products



KeyState Natural Gas Synthesis & CCUS

Clinton County, Pa. > $410,000,000

Low-Carbon Products:
CO2 Emissions Reduced by 90+%
- Blue Hydrogen
- Blue Ammonia

Emissions Reduction Products:
- Diesel Exhaust Treatment (DEF)
- Power Plant Exhaust Treatment (NH3)

CO2 Use & Stored
- Used In DEF Production = 170,000 tpy
- Permanent Sequestration = above 300,000 tpy

Natural Gas Used
9,000,000 + mmbtu per year
180,000,000 mmbtu over 20 years

CO2/H2 Storage Asset
7,000 acres, contiguous, 1 owner

Pennsylvania's
Next Energy Revolution

KeyState
CCS Hub

‘Laboratory at Scale’

300,000 tpy

Onsite CO2 Sequestration

Integration of Natural Gas Extraction & CO2 Sequestration

Single Source … to Cluster … to Hub

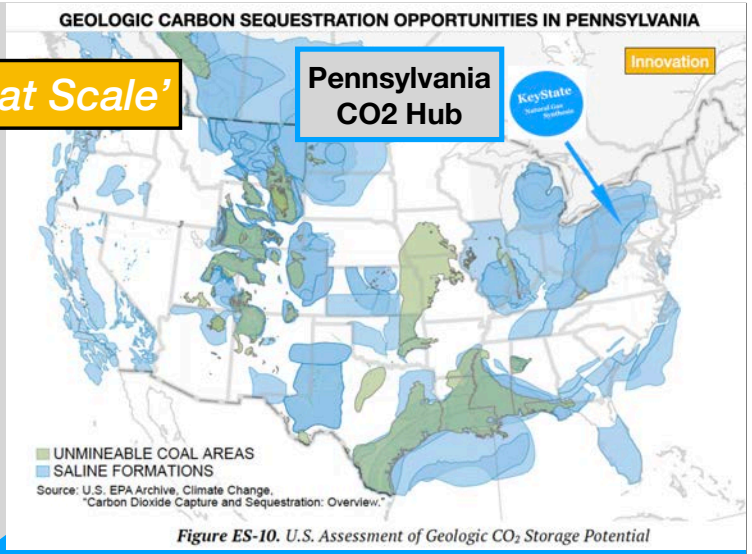
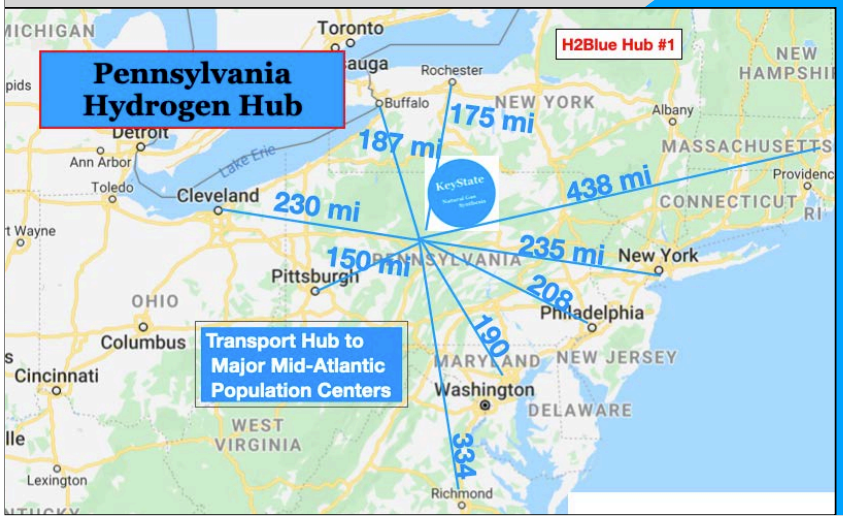


Figure ES-10. U.S. Assessment of Geologic CO_2 Storage Potential

NO CCS, = NO BLUE H2



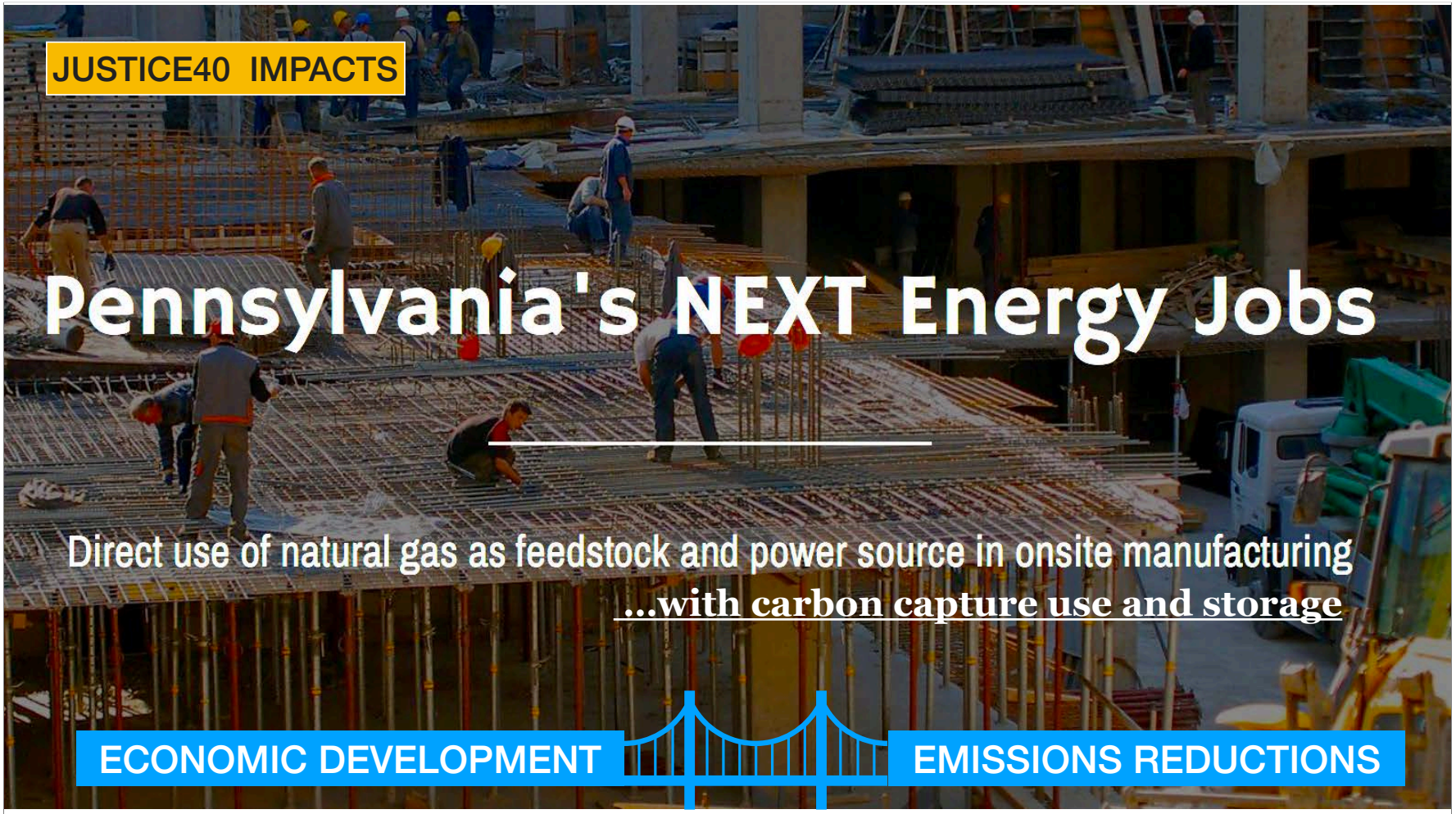
150 tpd Blue Hydrogen

50 tpd for HFCT Market
Displacing 15m gpy of Diesel

245 tpd Blue Ammonia

90%-95% Reduction in CO2

KeyState
H2Blue Hub



800 Construction & Permanent Jobs
+ Indirect + Induced Jobs
www.pamanufacturers.org/nepanatgas

KeyState

JUSTICE40 IMPACTS

Independent Study Economic Impact Gas Synthesis Plant in Clinton Co.

DURING CONSTRUCTION

Total economic output: construction of natural gas synthesis plants combined

Location	*Labor Income*	*Value Added*	*Total Economic Output*
Clinton County	$137,977,974.67	$180,842,342.55	$364,962,192.10

Total jobs related to construction of natural gas synthesis plant combined

Location	*Direct*	*Indirect*	*Induced*	*Total*
Clinton County	800	78	143	1,021

DURING OPERATIONS

Total economic output: combined-permanent jobs from natural gas synthesis plant

Location	*Labor Income*	*Value Added*	*Total Economic Output*
Clinton County	$83,009,918.22	$118,909,211.18	$260,995,083.52

Total jobs related to completion of natural gas synthesis plant (combined-permanent)

Location	*Direct*	*Indirect*	*Induced*	*Total*
Clinton County	150	144	232	526

http://www.pamanufacturers.org/NEPAnatgas

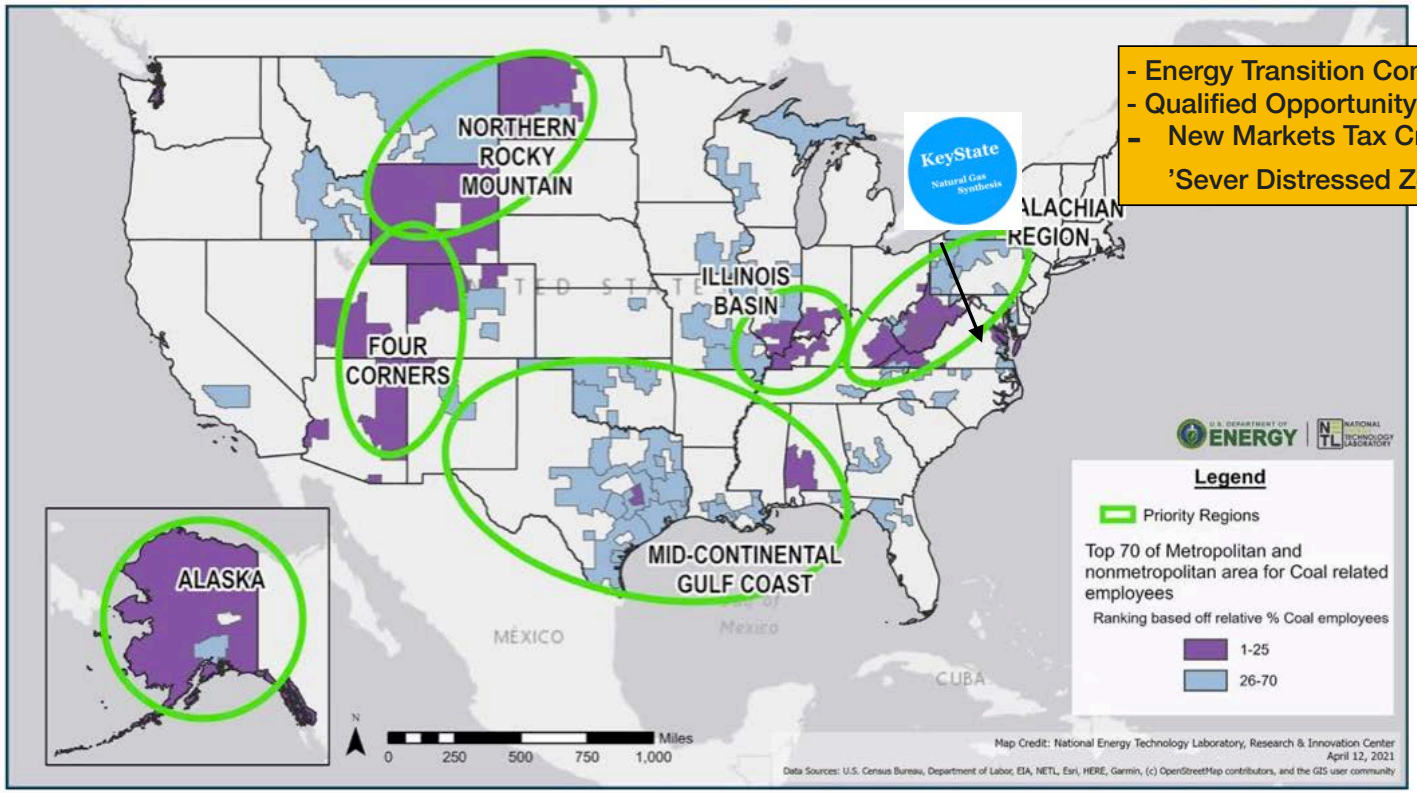
- **Major Rural Economic Impact**
- **Multi-County Impact**
- **The New Energy Jobs**
- **Industry Breakthrough**
- **Manufacturing Breakthrough**

KeyState

Presidential Executive Order 14008 Sec. 218

'...Coal and Power Plant Communities and Economic Revitalization'.

INITIAL REPORT TO THE PRESIDENT ON EMPOWERING WORKERS THROUGH REVITALIZING ENERGY COMMUNITIES



https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

Figure 2. Shading highlights BLS metro and non-metro areas that are communities vulnerable to impacts from coal-specific job losses.

ECONOMIC DEVELOPMENT EMISSIONS REDUCTIONS

KeyState

OBSTICALES TO H2 HUB DEVELOPMENT: R&D

#1. R&D

The 'Achilles Heel' of H2 for HFCV
= Cost of Transport

COST

$1 to make H2
$1 to liquefy H2

#2 DOE LPO Policy

'We take technology risk, but do not take market risk'

#3 EPA Policy

'3 years for Class 6 Permit Approval'

#4 FEDERAL & STATE POLICY

H2 Blending

H2 & RNG Parity in Pipeline Blending

Blue H2 + Green H2 + BECCS in CI Score

KeyState