



Smart Clean Coal Initiative

The Smart Clean Coal Initiative is an effort to modernize coal-based energy infrastructure by integrating smart technologies, carbon reduction strategies, and inclusive workforce transformation. Rooted in environmental responsibility and economic revitalization, this initiative supports a just energy transition in coal-reliant regions while contributing to grid reliability, emissions goals, and emerging clean energy markets.

Through strategic collaboration with federal agencies, educational institutions, and industry leaders, the initiative will deploy advanced clean coal technologies—such as carbon capture, coal-to-hydrogen conversion, and AI-enabled plant optimization—and retrain the workforce through SMART Learning Environments designed for real-world application and stackable skill acquisition.



The One Big Beautiful Bill Act, signed into law in July 2025, reshaped U.S. energy policy—especially in favor of fossil fuels like coal, oil, and gas.

Overview of the "Beautiful Bill" and Clean Coal Policy



Coal Industry Boost: The bill mandates leasing of at least *4 million additional acres* of federal land for coal mining. It also **reduces coal royalty rates** from 12.5% to 8%, making coal extraction more financially attractive.

Advanced Manufacturing Credits: Clean coal technologies, including metallurgical coal used in steel production, now qualify for **expanded tax incentives** under the bill.

Permitting & Regulatory Relief: The legislation streamlines environmental reviews and accelerates permitting for coal operations, limiting review timelines to 12 months.

Carbon Capture Incentives: The bill enhances tax credits for carbon capture and storage (CCS), encouraging coal producers to adopt emissions-reducing technologies.

Coal revival: The bill is seen as a major win for coal-producing states, with lawmakers calling it a return to “energy independence”



Smart Clean Coal Initiative

Technology Modernization & Infrastructure Upgrade

Retrofit coal plants with Carbon Capture, Utilization & Storage (CCUS) systems.

Pilot coal-to-hydrogen and coal-to-graphene conversion facilities.

Embed IoT and AI systems to enable predictive maintenance and emissions tracking.

Deploy hybrid grids integrating renewables with modernized coal assets.





Workforce Training & Transition

Launch regionally tailored SMART Learning Environments for displaced workers and students.

Develop micro-credential pathways in carbon management, hydrogen production, smart grid operations, and clean energy logistics.

Partner with community colleges, technical schools, and federal workforce programs for co-designed certification modules and practicums



Community & Economic Revitalization

Create Community Energy Innovation Hubs to engage the public and showcase technologies.

Fund applied research projects via partnerships with DOE, NSF, and innovation clusters.

Support entrepreneurship and tech incubation tied to coal-to-product conversion industries





Coordination & International Exchange

Align with federal resilience and infrastructure investment programs.

Establish transnational collaboration networks through SMART Community Exchange for technology transfer and shared workforce mobility.





Anticipated Outcomes



Impact Area

Emissions Reduction
Workforce Retrained
Innovation Pilots
Clean Coal Innovation Exchanges

Target Goal

Drop in CO₂ at retrofitted facilities
Across energy & tech sectors
Test, prove, commercialize
Community learning & resilience



Join Us in Transforming America's Coal Energy Future

Together, we're modernizing coal-based infrastructure with smart technologies, powerful carbon-reduction solutions, and inclusive workforce innovation. Be part of the transition that builds cleaner energy, economic resilience, and community empowerment.

Power the Future—Join the Smart Clean Coal Movement

We're reimagining coal energy through innovation: AI-driven upgrades, carbon capture, and training pathways that leave no worker behind. Help us scale clean, smart coal systems that support sustainable progress.

Step Into the Smart Energy Transition

Join us in modernizing coal-based infrastructure—fusing advanced tech, decarbonization strategies, and workforce upskilling for a resilient, equitable energy future.