

National Commission on Innovation & Competitiveness Frontiers

Key Takeaways from Phase 2 Working Groups



Working Group 2

The Future of Sustainability: Accelerating Innovation in Clean Energy Technology

Session 1: September 14th, 2023

I. KEY THEMES

Working Group discussion identified several key themes during the first session:

- 1) **Emphasizing flexibility as a guiding principle for policy design and implementation.** Flexible approaches will be key to capitalizing on recent federal investments and designing effective new policies.
- 2) **Strategically target funding and support to nascent technologies and to accelerate demand.** Nascent and emerging technologies will need strategic funding support.
- 3) **Recognizing the unique role of state and local government** in the development and deployment of clean energy technology, particularly regarding supporting infrastructure.
- 4) **Building a strong clean energy workforce** across a wide variety of industries and communities.
- 5) **Creating a robust market of end users for emerging technologies.** Efforts to create and expand markets must happen concurrently with technology deployment to scale clean energy technologies.
- 6) **Speeding supply chain transformation** across industries to achieve widescale decarbonization.

II. PRELIMINARY IDEAS & POTENTIAL RECOMMENDATIONS

Emphasizing flexibility as a guiding principle for policy design and implementation

- Design IRA tax credit guidance to allow organizations of varying sizes, technical approaches, and maturity levels to access funding support; consider adopting a “phase-

in” approach (similar to the EU) to allow development on nascent industries before more stringent requirements apply.

- Engage with the IRS and other relevant implementing agencies to ensure that guidance on tax credit access and administration aligns with the current state of the relevant sector.
- Uphold flexibility as a long-term standard when designing and implementing policy; allow a variety of technical and market approaches when enacting policy supports for specific technologies and sectors.

Strategically target funding and support to nascent technologies and to accelerate demand.

- As the IRA helps deploy a massive influx of capital, identifying and clarifying where demand signals are strongest will be crucial. Federal funding should be targeted to help amplify those signals and direct capital strategically.
- Consider creating a non-profit green bank to fund ambitious projects, de-risk valuable technologies, and amplify demand signals in accordance with a nationally coordinated strategy.

Recognizing the unique role of state and local government

- Many of the barriers to accelerated deployment of clean energy technologies involve building the supporting infrastructure for the energy transition, including transmission and distribution, energy generation, and mineral extraction and refining. Given that state and local governments control parts of the process for siting and permitting infrastructure, they play a unique role in clean energy deployment.
- Provide education to state and local governments on the necessary tools and steps to developing clean energy ecosystems (e.g., Hydrogen Hubs); establish formal capacity building and knowledge sharing programs between federal, state, and local entities through the Department of Energy.
- Provide additional guidance and education to state and local governments on the transferability of IRA tax credits as a mechanism for accessing additional funding for clean energy development and deployment.
- Establish a central authority in each state to coordinate and streamline requests for permitting and the use of new technologies and materials to simplify public-private engagement.

- Reconsider stringent building codes and inflexible zoning policies to incentivize the use of innovative and sustainable building materials and to streamline siting and development of valuable projects.

Building a strong clean energy workforce

- Build regional partnerships between industry, community organizations, labor groups, and educational institutions to address workforce gaps in critical industries; emphasize the importance of community engagement in partnerships.
- Acknowledge workforce development as both a tool and a goal for communities; workforce programs can be a vehicle of personal socioeconomic mobility, as well as a driver of industry and community economic success.
- Evaluate and diagnose the large workforce gaps unique to the clean energy transition in industries such as critical minerals, construction, and manufacturing. Adjust the scope and intensity of workforce development efforts accordingly.
- Retain and expand the federal workforce to accelerate bottleneck process; for example, additional technical expertise and staffing could accelerate permitting timelines.

Creating a robust market of end users for emerging technologies

- Pursue market expansion policies concurrently with the development of emerging technologies to ensure commercial viability and unfettered growth once nascent industries reach technical maturity.
- Anticipate barriers to widescale deployment of emerging technologies and proactively pursue innovation in science and technology and development of supporting infrastructure; for example, deployment of hydrogen energy at scale and speed will require proactive investments in supporting infrastructure (e.g., fueling stations) and additional technology (e.g., novel manufacturing processes).
- Recognize ecosystem-building benefits of early-stage investment in deployment catalysts.

Speeding supply chain transformation

- OEMs and upstream suppliers are often a bottleneck to decarbonizing products and integrating new technologies in manufacturing processes; decarbonizing sectors such as steel will help reduce downstream emissions.

- Invest in facilities to elongate product lifespan and recycle existing materials to reduce overall emissions; design products and manufacturing processes that anticipate re-use, refurbishing, and recycling.
- Consider creation of a new partnership to connect members of supply chains and strategically push for technology implementation, using White House and Department of Commerce programs as models.