

# National Commission on Innovation & Competitiveness Frontiers

## Key Takeaways from 2024 Working Groups



### Working Group 2

## The Future of Sustainability: Accelerating Innovation in Clean Energy Technology

### Session 3: March 5<sup>th</sup>, 2024

*This Working Group session focused on the issues and opportunities facing clean energy at the state and local level.*

#### I. KEY THEMES

*Working Group discussion identified several key themes during this session:*

- 1) **Addressing the concentrated costs of the clean energy transition** through targeted supports for fossil fuel communities.
- 2) **Improving understanding of the opportunities associated with energy transitions**, among both local officials and community members.
- 3) **Balancing specialization and diversification** in the allocation of resources and design of policy approaches.
- 4) **Driving and directing the deployment of private capital**, including through targeted federal policy actions.
- 5) **Finding cross-cutting policy solutions that will address barriers to clean energy deployment**, rather than only searching for narrowly scoped policy solutions.

#### II. PRELIMINARY IDEAS & POTENTIAL RECOMMENDATIONS

##### Addressing the concentrated costs of the clean energy transition

- While the benefits of the clean energy transition are dispersed, the costs are often concentrated heavily in fossil fuel communities. These communities are in critical need of adjustment services to relieve burden and reduce resistance to the energy transition – especially in regulated markets like the Southeast.

- Better anticipate ancillary transition costs and proactively combat concentrated, negative effects. For example, plant closures displace workers and necessitate job training and other workforce programs, which is often anticipated. However, mitigating the adverse effect of plant closure on tax revenue, which spills into schools and other social services, requires proactive efforts which are currently not being undertaken.

### **Improving understanding of the opportunities associated with energy transitions**

- Provide communities with relevant and locally-tailored value propositions for the clean energy transition. Reduced cost of electricity, enhanced resiliency to disruptions, etc. is a more compelling justification than the ‘green mandate’ amongst most communities, especially rural ones.
- As communities undergo energy transitions (e.g., plant closures), local officials need to engage in forward-thinking planning to design a future for the locality. However, most local officials don’t fully understand the opportunities stemming from new technologies like clean hydrogen; these leaders need robust education on the opportunities available to their community and how to best leverage them.

### **Balancing specialization and diversification**

- There is a tension in innovation policy between specialization – concentrating resources in a few programs across select technology areas – and diversification – establishing multiple vehicles to advance innovation across a wide variety of technology pathways. Striking the right balance is necessary to innovate with both speed and flexibility.
- Clearer differentiation of federal, state, and local duties will make the web of innovation programs more effective. Federal officials should avoid minutia and focus on overarching or cross-cutting areas. Meanwhile, officials from the bottom-up should focus on information sharing and regional tailoring. Actors like universities can serve as the two-way channels between these differentiated layers.
- Identify certain technologies and/or technology areas to dominate rather than unsuccessfully attempting to dominate everything. By directing a significant amount of effort and capital at a particular area of focus (e.g., fusion energy), the U.S. could “own” that technology and gain a longstanding advantage.
- As manufacturing decarbonizes in many industries (e.g., chemical manufacturing), it will become increasingly decentralized. This decentralization provides an opportunity for regions to specialize and develop niche industrial clusters.

### **Driving and directing the deployment of private capital**

- The scale of private capital, especially in clean energy, has the potential to drive transformative change. Guiding this capital, including through federal policy levers, can drive transformation much quicker than federal investments. While investment should not over-index into any one technology, accelerating and directing deployment of private capital remains an important policy objective.
- Consider appropriate federal policy levers to drive increased deployment of private capital and direct funding to critical technology areas. Policy levers could include programs to de-risk large-scale investments with time horizons too long for private actors, creating one-stop permitting processes to increase certainty, and pairing supply-side policies with demand-side incentives.
- Focus on creating demand-side policies and incentives for nascent and emerging clean energy markets. Existing policy has systemically favored supply creation, creating a significant gap in demand – addressing this gap will accelerate market development and catalyze the deployment of further capital.
- The largest challenges facing energy transition are increasingly becoming “chicken and egg” business model challenges, including risk sharing, commercial certainty, and institutional constraints. Innovative business models (e.g., take-or-pay agreements, demand aggregation, etc.) are needed to solve these challenges and encourage the private sector to fully engage in the energy transition.

### **Finding cross-cutting policy solutions**

- Aging demographics, manufacturing decline, school funding, and other community-based issues all affect clean energy, but are also critical for other areas of innovation policy. Cross-cutting, holistic policy solutions will be the most effective and efficient way to achieving goals across a range of innovation issues.
- It is difficult to predict the demands and contours of the energy economy, making “green exemption” solutions difficult to design and implement in practice. Instead, policymakers should focus on cross-cutting actions that make sense within and beyond the clean energy context.