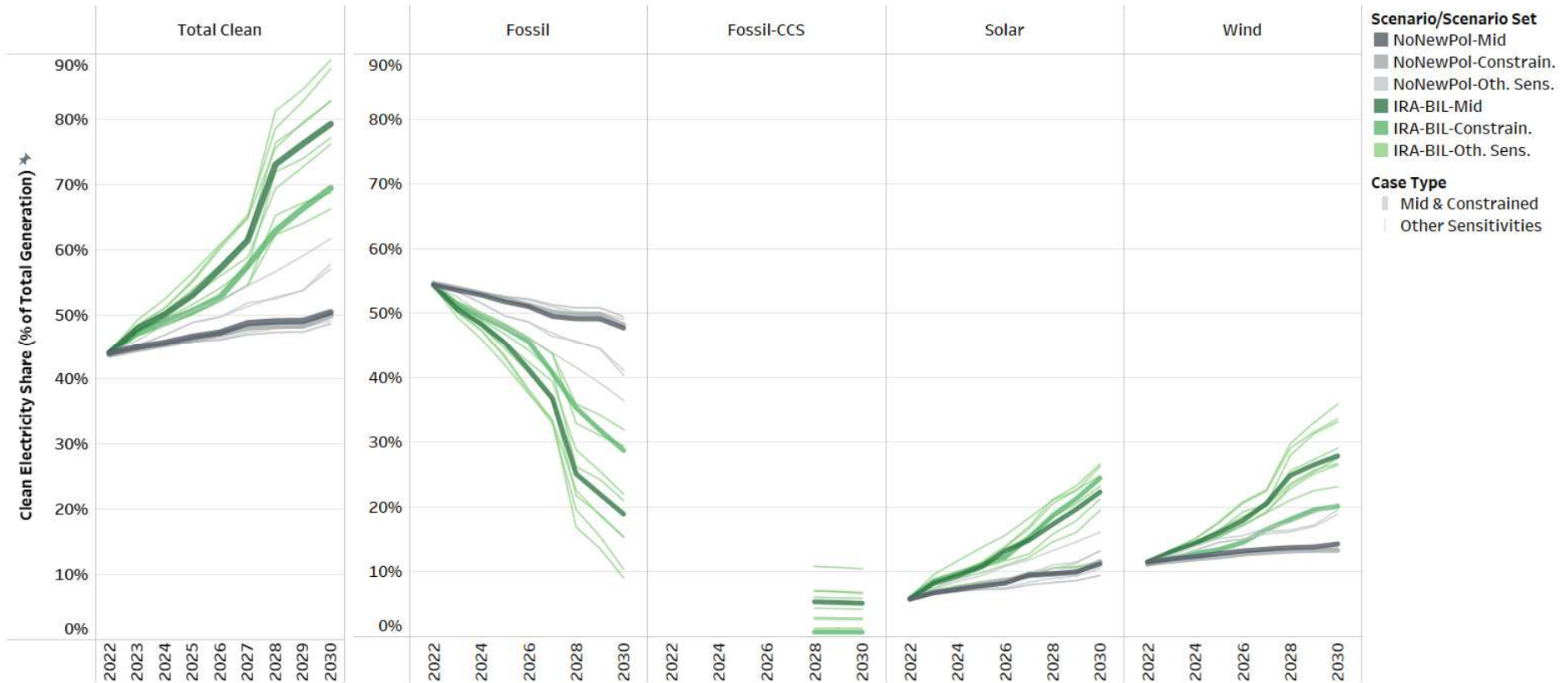




# Policy, Technology Innovation and Partnerships for Advancing Renewable Energy Solutions

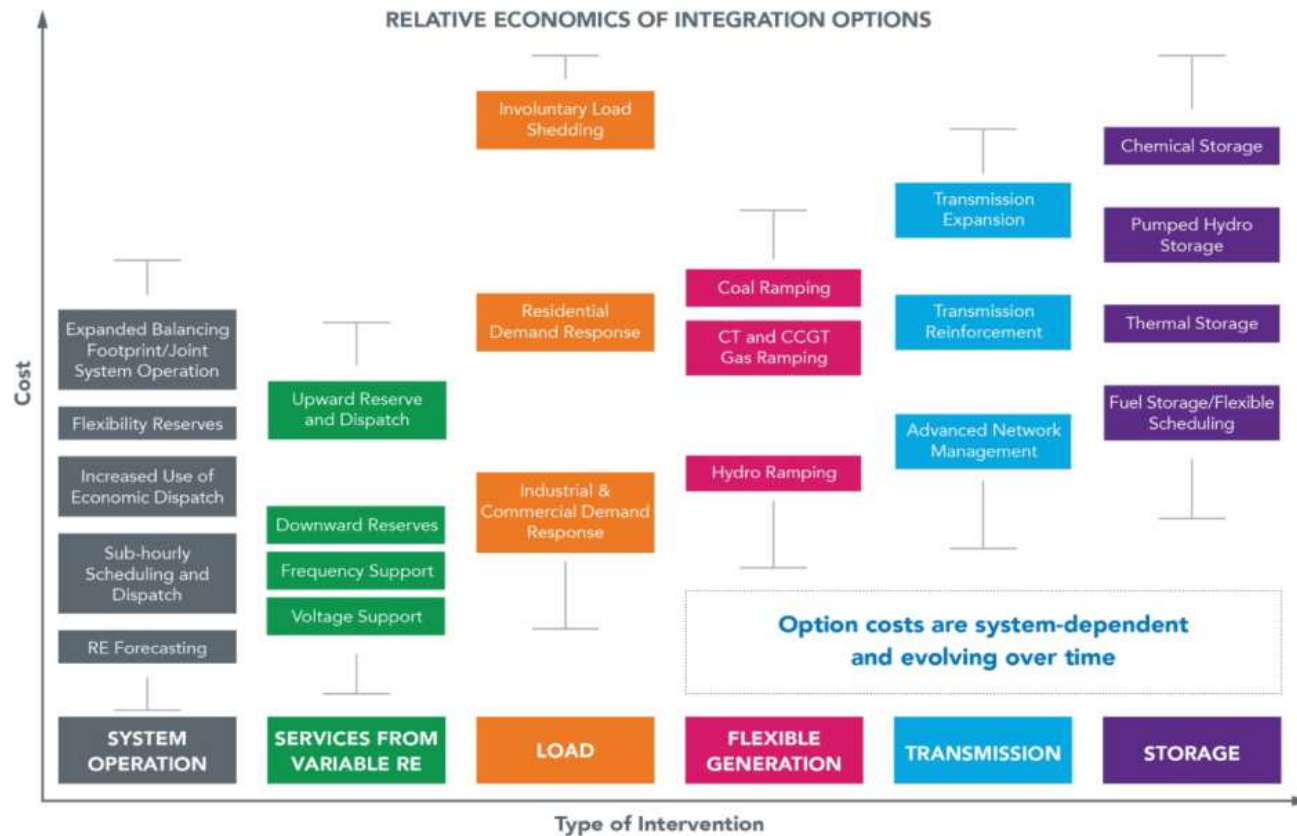
Dr. Douglas J. Arent  
Executive Director, Strategic Public Private Partnerships  
ICEF, October 2023

# BIL Potential Impacts in the US: Clean electricity share of total generation increases to 66%-89% across sensitivities by 2030



<https://www.nrel.gov/docs/fy23osti/85242.pdf>

# Possible Solutions for Dealing with VRE Integration Challenges



## Solutions:

- Utilize geographic diversity
- Better VRE Forecasting
- Better dispatching of entire generation fleet
- Increase sharing among balancing authority areas
- VRE providing grid services
- Coordinate flexible loads (active demand response)
- Utilize flexible conventional generation
- Transmission management and expansion
- Curtail excess VRE production
- Electrical storage
- Interact with other energy carriers



An aerial photograph of a city skyline at sunset. The sky is a mix of orange, yellow, and dark blue. The city is densely packed with buildings, many of which are illuminated with lights. The text is overlaid in the center of the image.

**Complex Interconnected Energy Economies**  
That require us to:  
*Innovate Differently, Implement Differently...*  
*Through Partnerships*





Thank you.

[www.nrel.gov](http://www.nrel.gov)

<https://www.nrel.gov/docs/fy23osti/85242.pdf>

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