

# MODERN MARKETS FOR NEW TECHNOLOGY

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## Power Sector Transformation

Technological innovation finally makes it possible to decarbonize the electricity sector. How can utility regulations be updated to ensure a reliable, affordable, and clean power system?

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**COST CROSSOVER**

**FLEXIBILITY IS KEY**

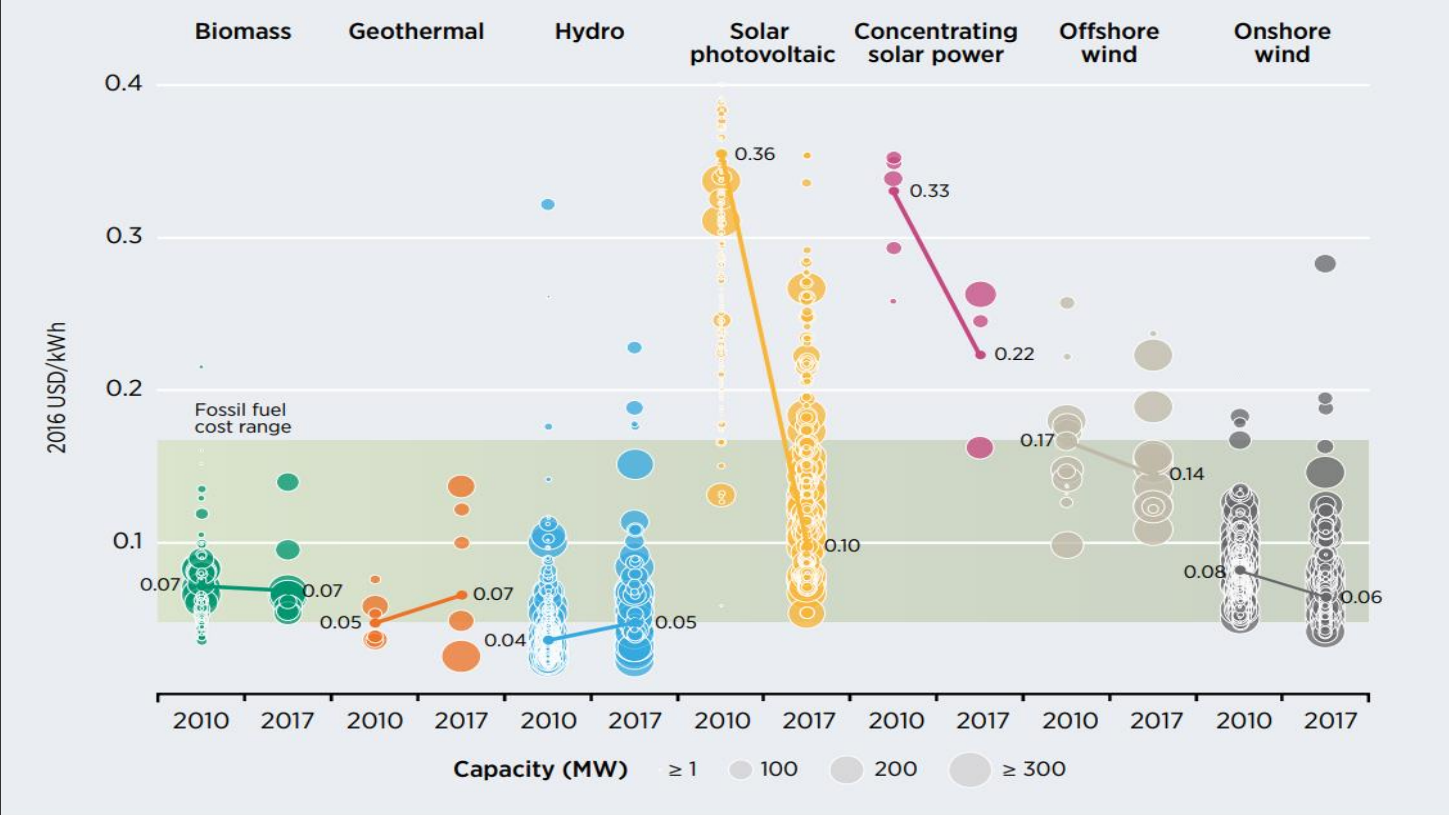
**BEYOND CAPACITY**

**COST CROSSOVER**

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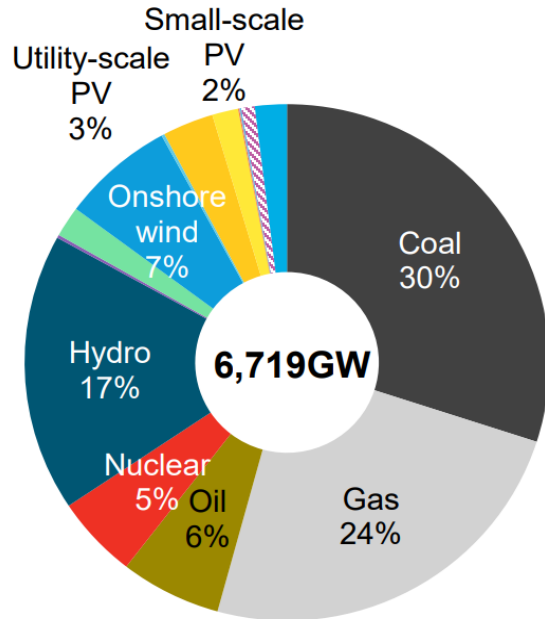
# CHEAP RENEWABLES – PROFOUND IMPACTS



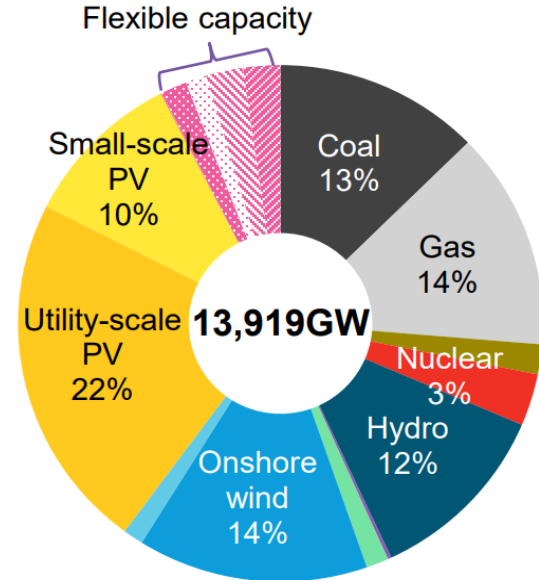
Source: IRENA Renewable Cost Database.

# THIS COST CROSSOVER WILL REMAKE THE ELECTRICITY SECTOR

Global cumulative installed capacity:  
2016



Global cumulative installed capacity:  
2040



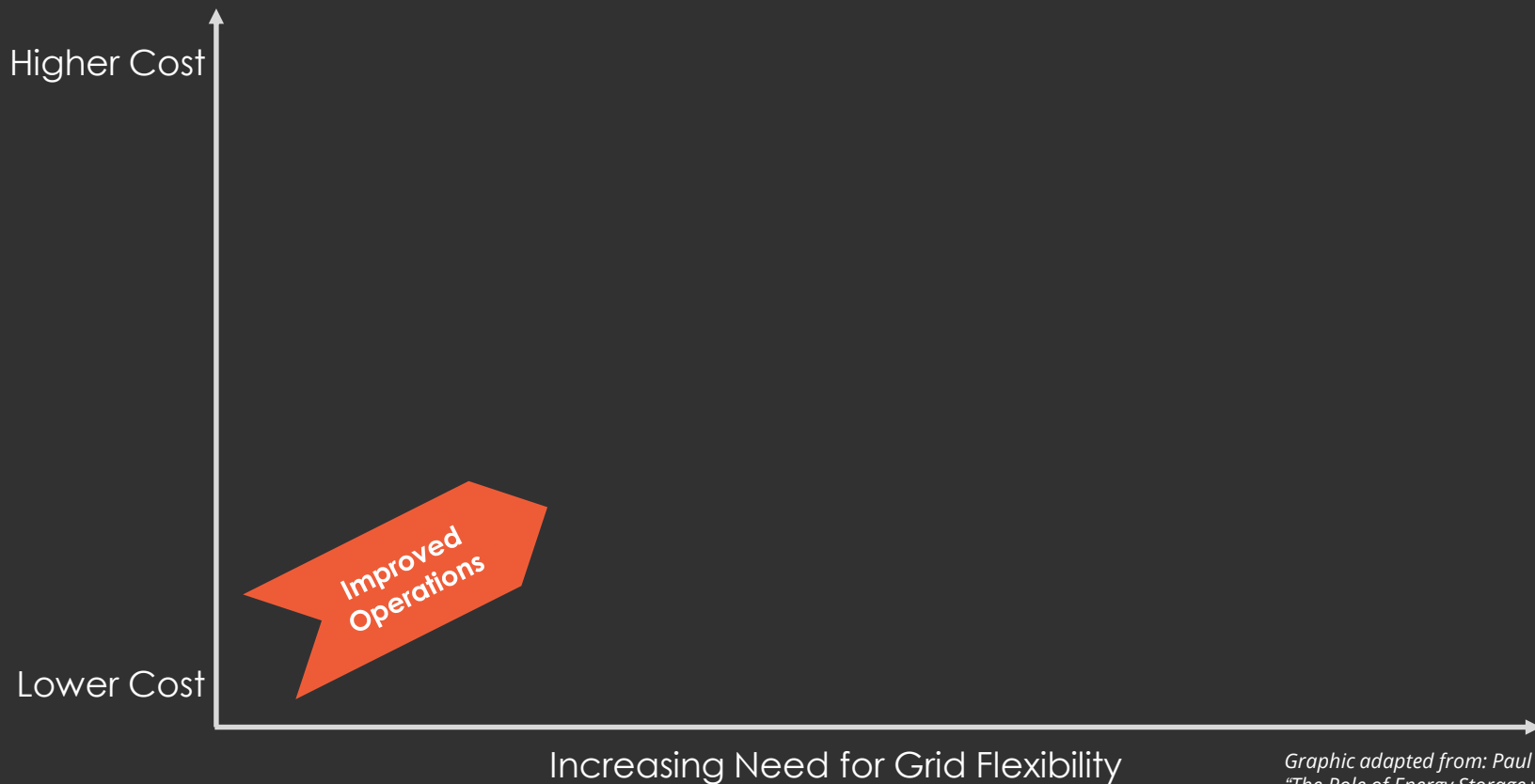
Source: Bloomberg New Energy Finance, *NEO 2017*

COST CROSSOVER

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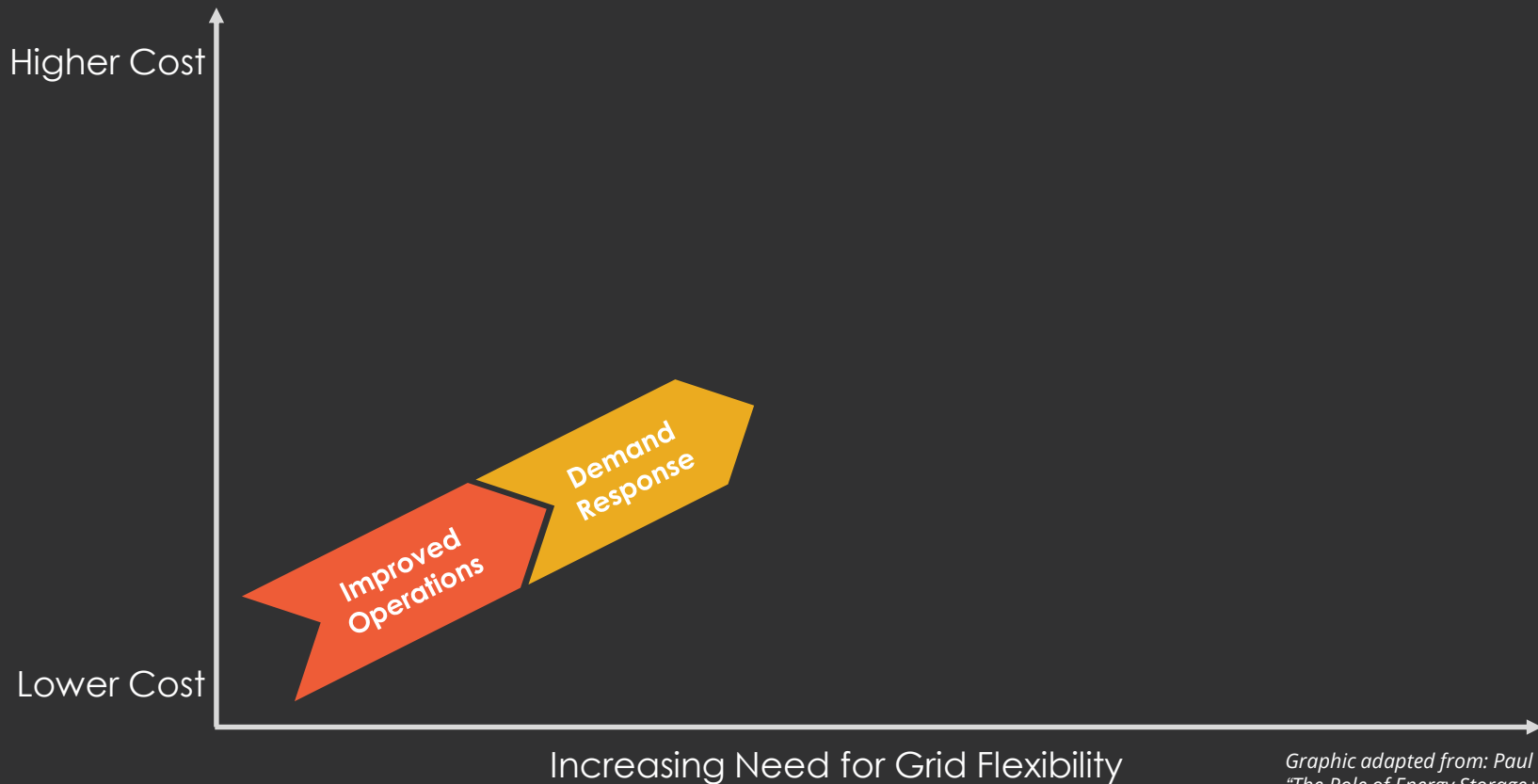
# MANY SOURCES OF GRID FLEXIBILITY



*Graphic adapted from: Paul Denholm et al., "The Role of Energy Storage with Renewable Electricity Generation" (NREL, January 2010).*

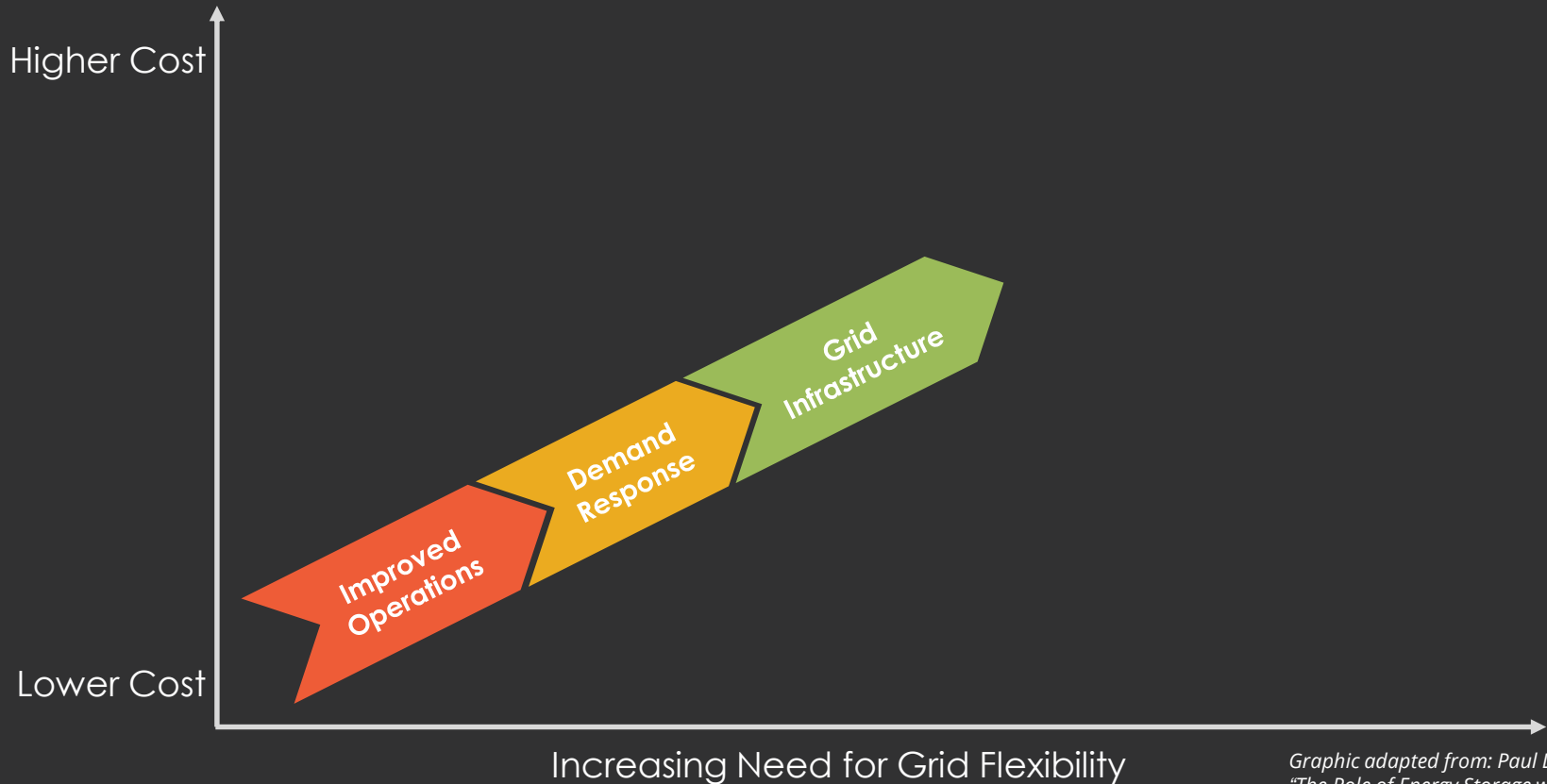


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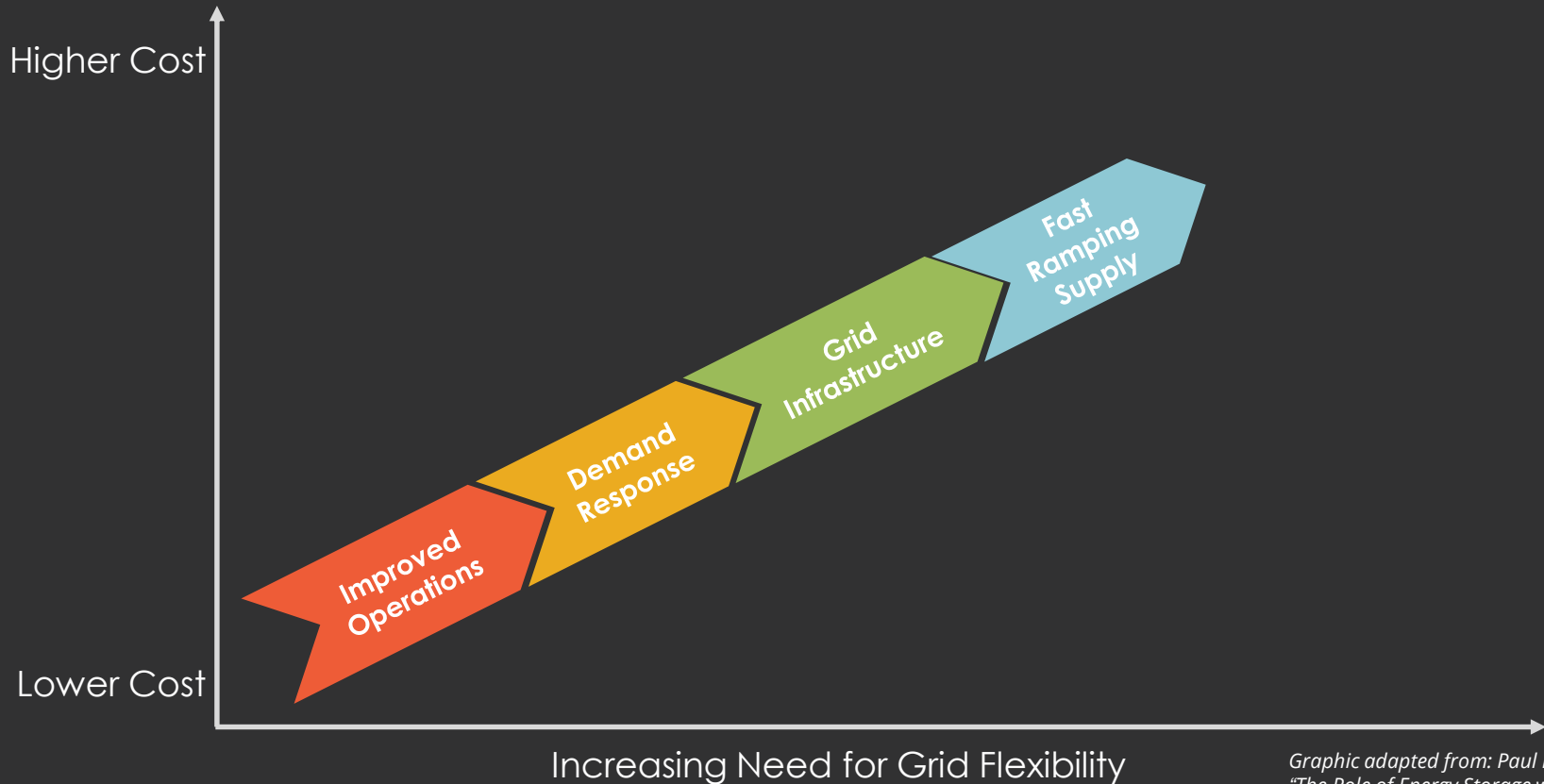
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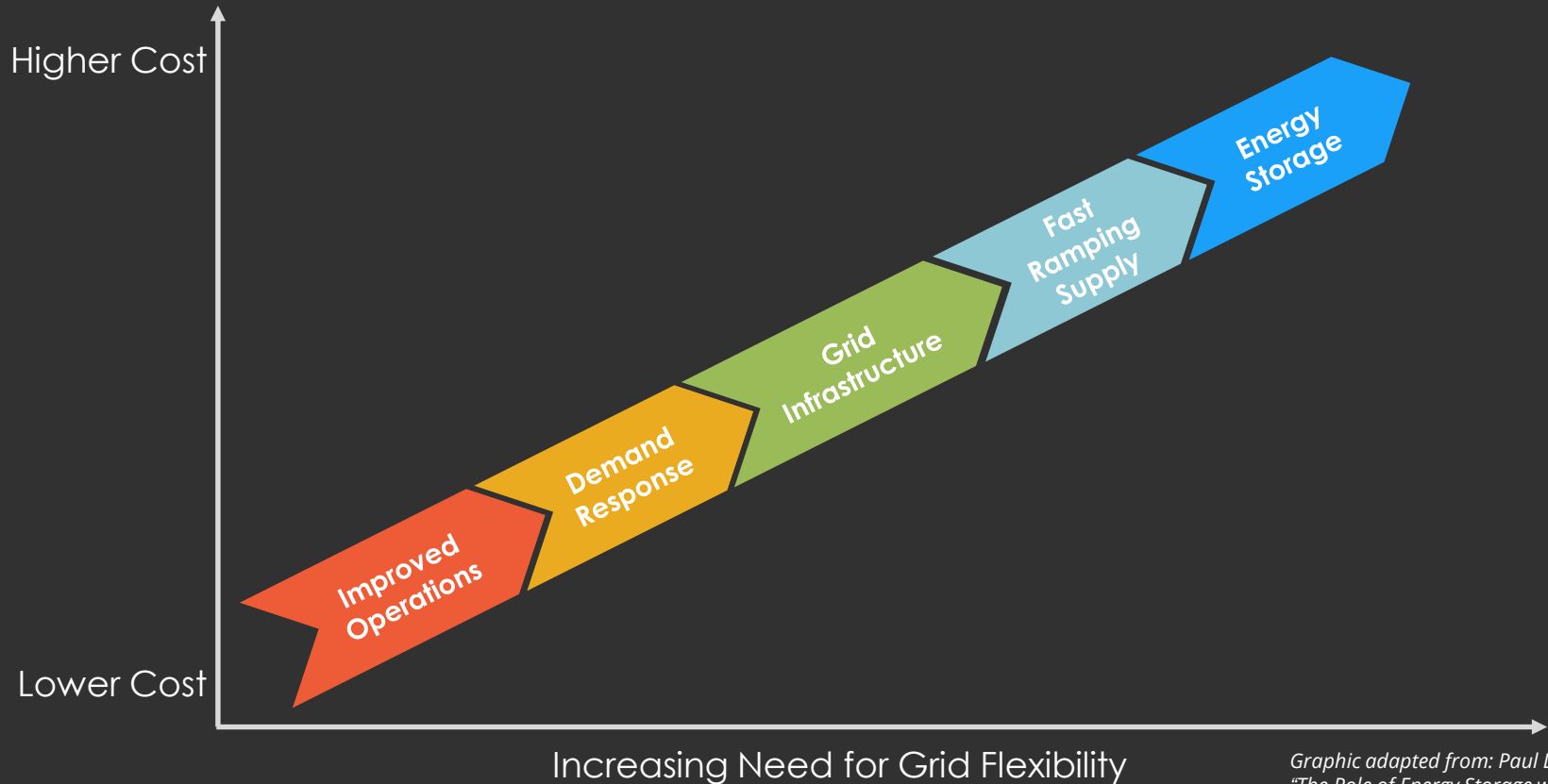
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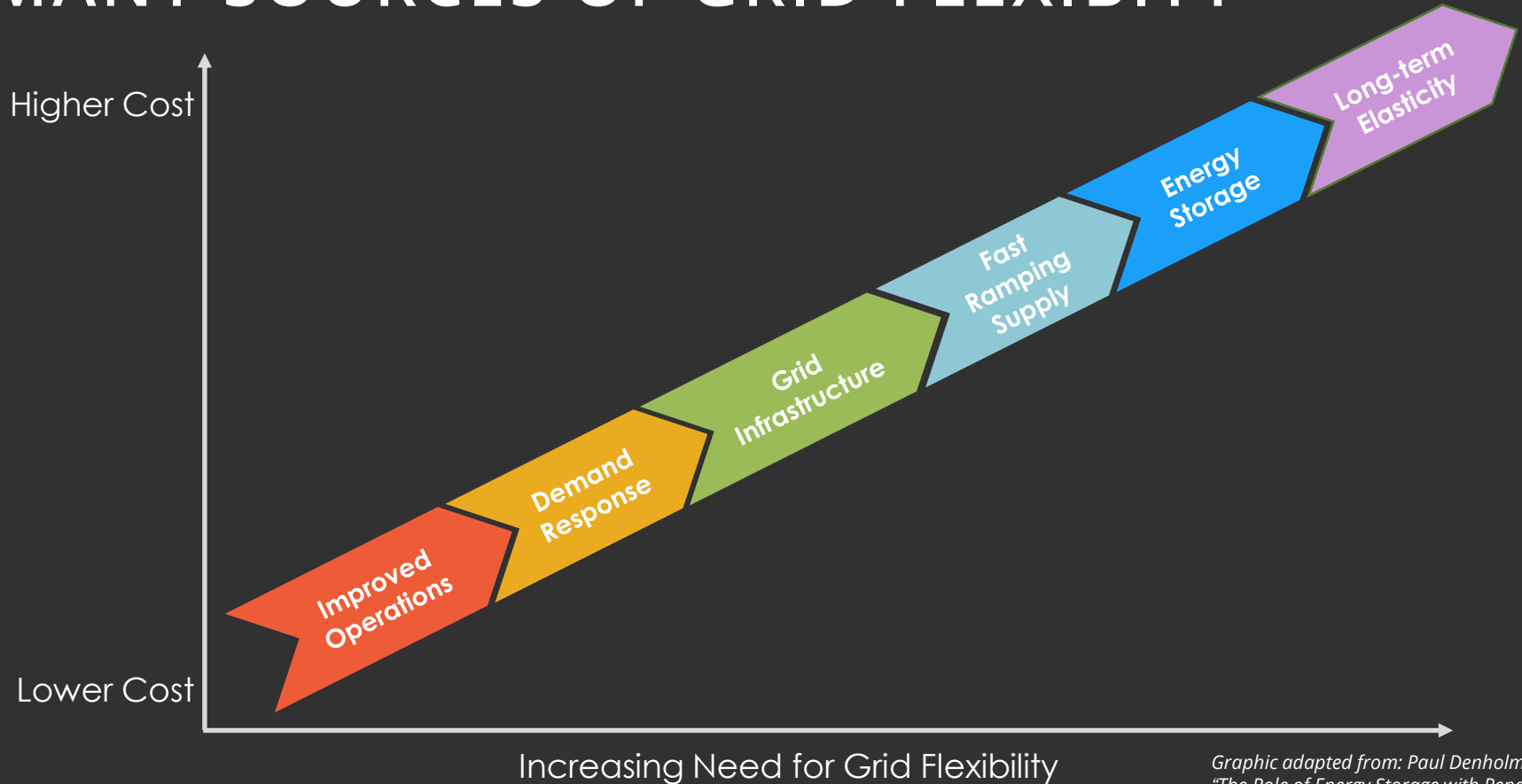
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COST CROSSOVER

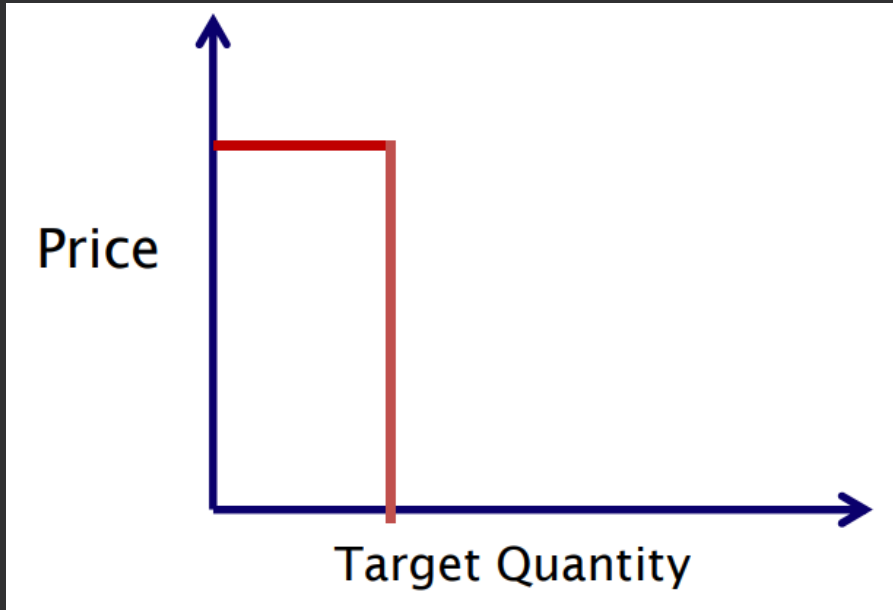
FLEXIBILITY IS KEY

BEYOND CAPACITY

24x7x365

MEGAWATTS

# STOP CLAPPING WITH ONE HAND





# RECAP

- ✓ Zero carbon power is undercutting fossils on price
- ✓ The result will be a tectonic shift in the power sector
- ✓ There are lots of sources of flexibility; be proactive
- ✓ Capacity is the wrong resource adequacy metric
- ✓ Improve planning; focus on capabilities

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# THANK YOU

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