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Overview: DER Trends and Opportunities in Asia

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Outline

- What makes DERs unique?
- How can DERs enable the sustainable energy transition in Asia?
- What are the roadblocks to DER deployment in Asia?
- Where do we go from here?

Distributed Energy Resources

What are DERs?

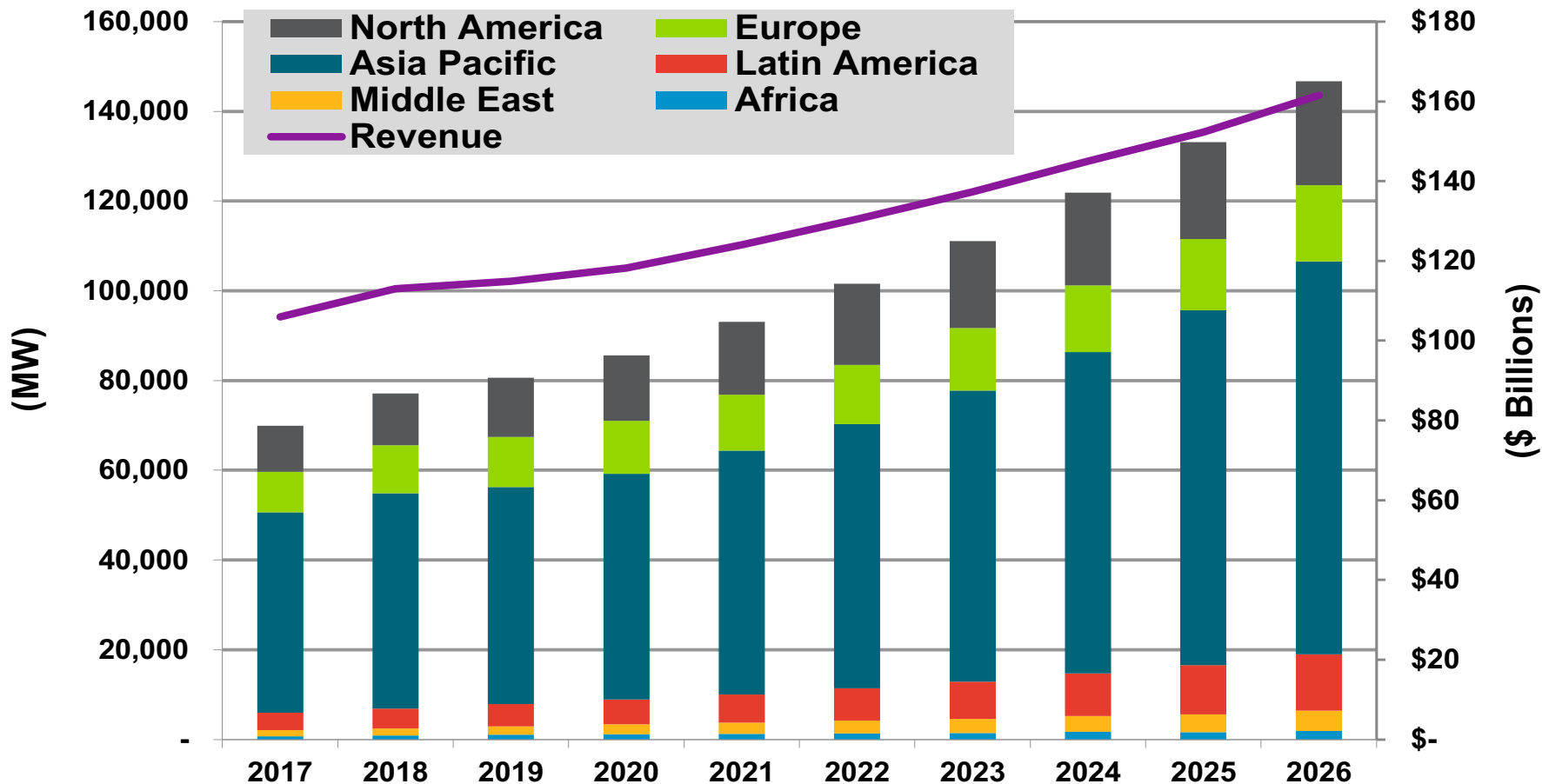
- Behind-the-meter
- Interconnected to the distribution system
- Often owned and operated by customer

Wide array of technologies:

- Rooftop PV
- EVs
- Energy storage
- Distributed wind
- Demand response
- Energy efficiency

Distributed PV Growth Forecasted to Expand Rapidly

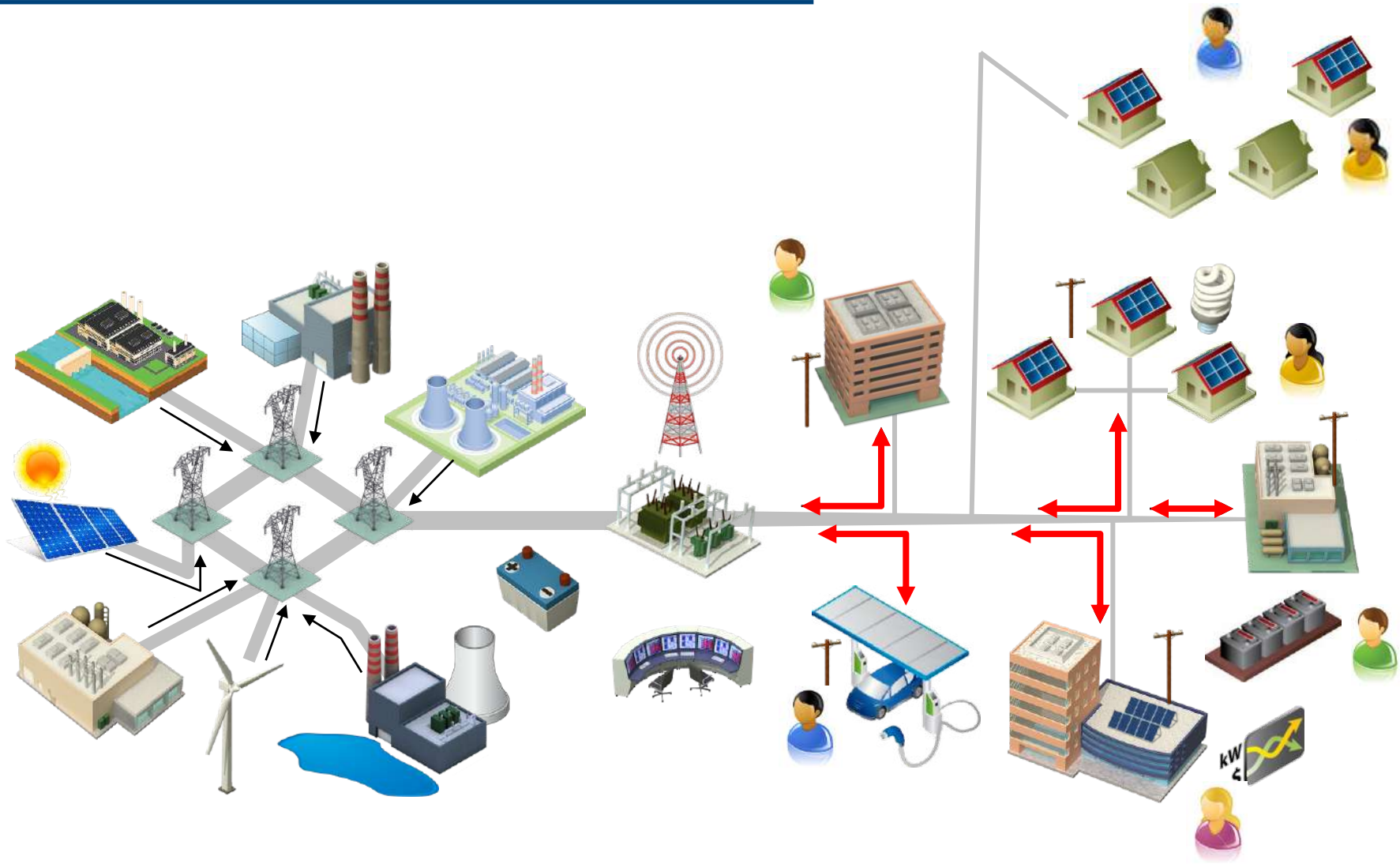
Annual Solar PV Installed Capacity and Revenue by Region, World Markets: 2017-2026



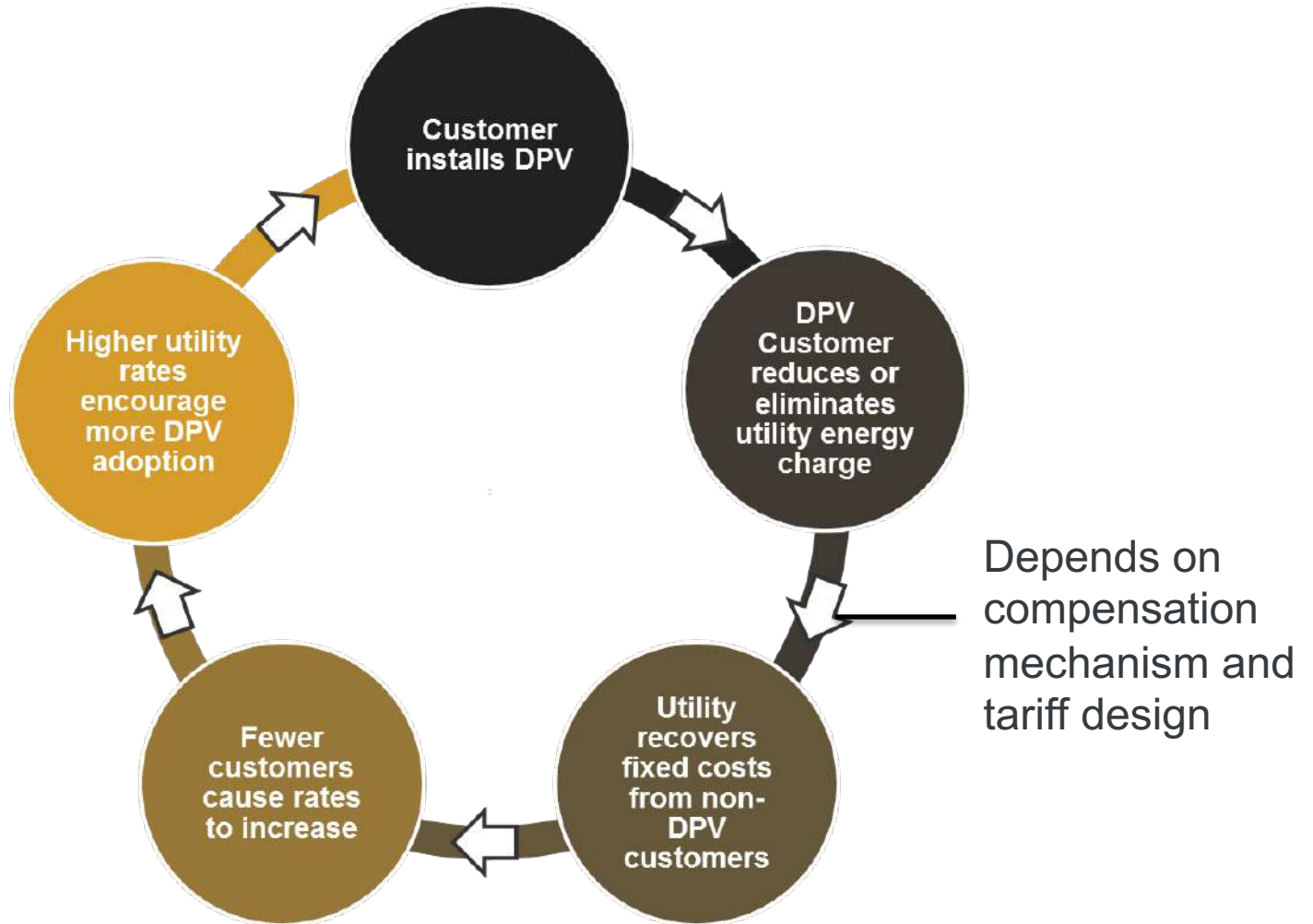
Source: Navigant Research, 2017. "Market Data: Global Distributed Solar PV"



DERs are Shifting the Generation Landscape



DERs Can Disrupt Utility Business Models



Adapted From: *Impact of Alternative Electricity Rate Structures on Solar and Non-solar Customer Bills*. NREL 2015. USA.

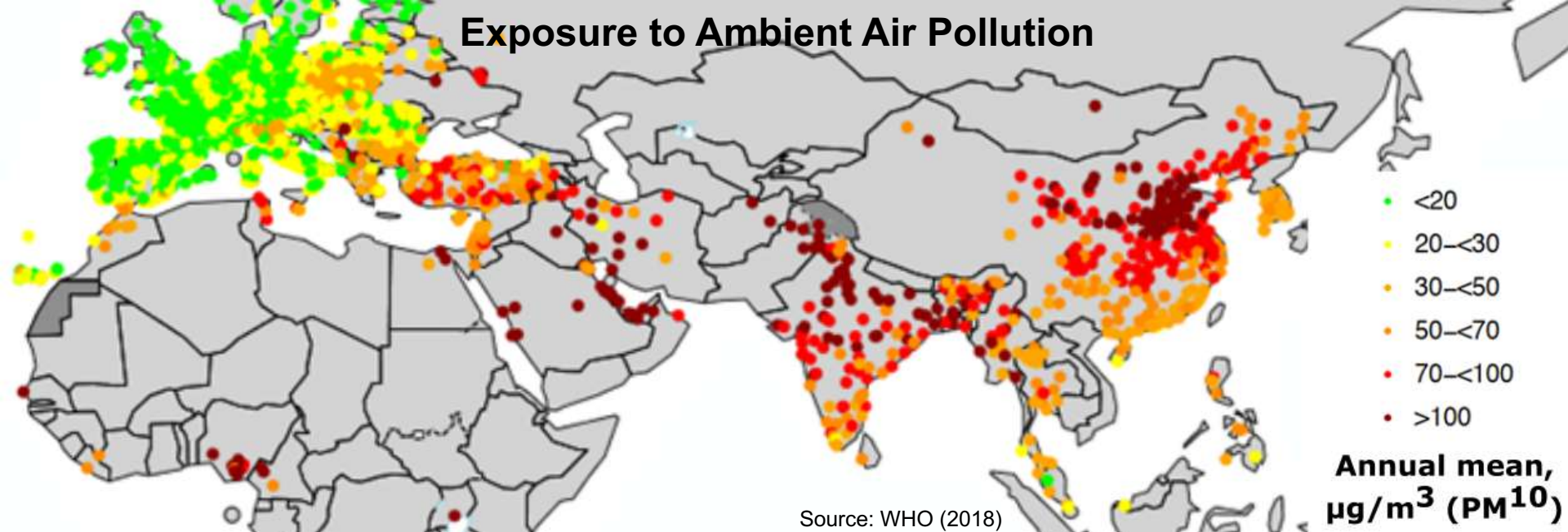


Source: Capital District Clean Community

Creation of Cross Sector Opportunities

- Transportation
- Buildings
- Agriculture
- Resilience
- Critical Facilities

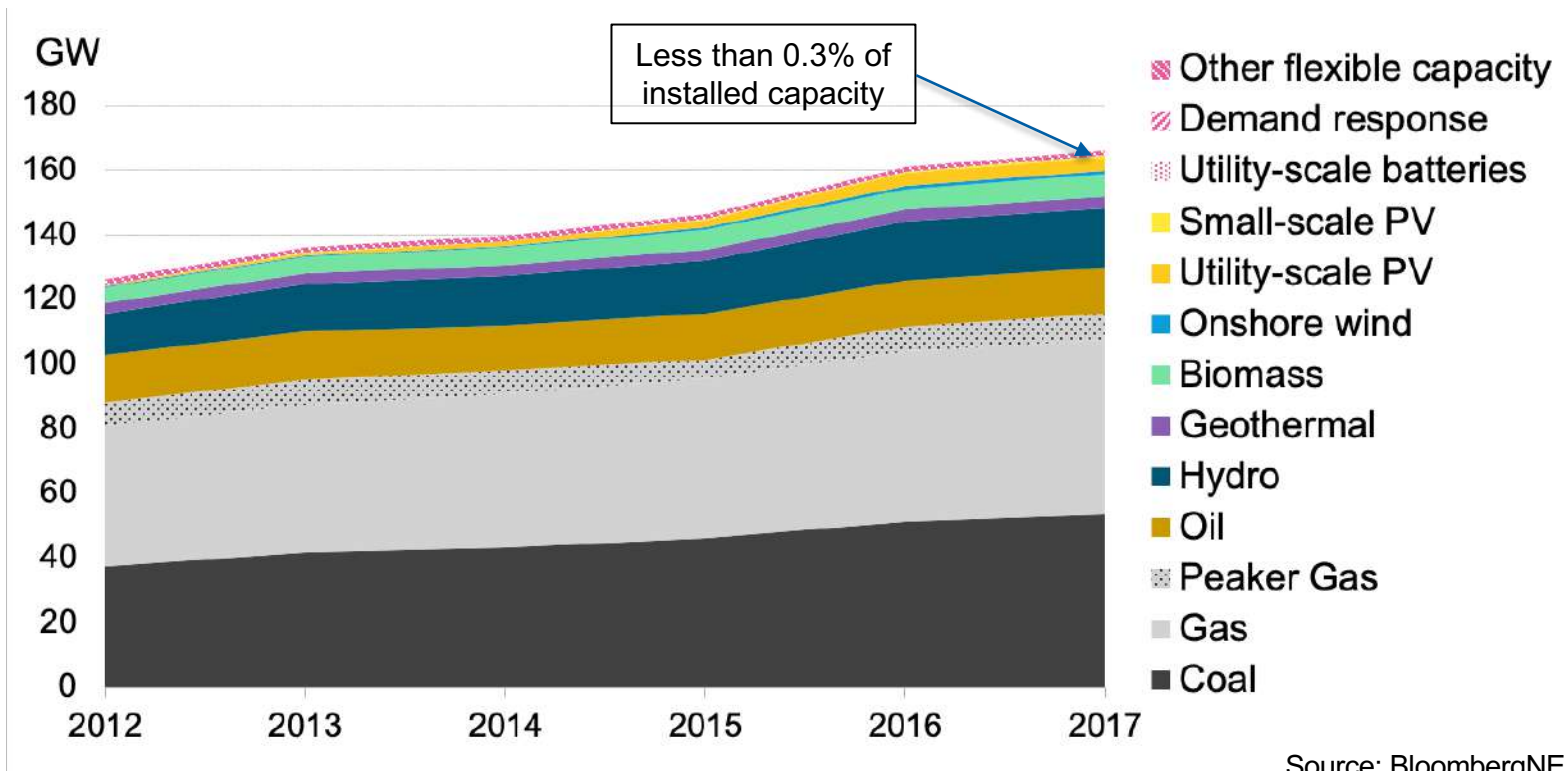
Exposure to Ambient Air Pollution



DERs Enabling the Sustainable Energy Transition in Asia

- Clean power sector
- Clean mobility, air quality, and health
- Opportunity to address equity issues
- Economic development

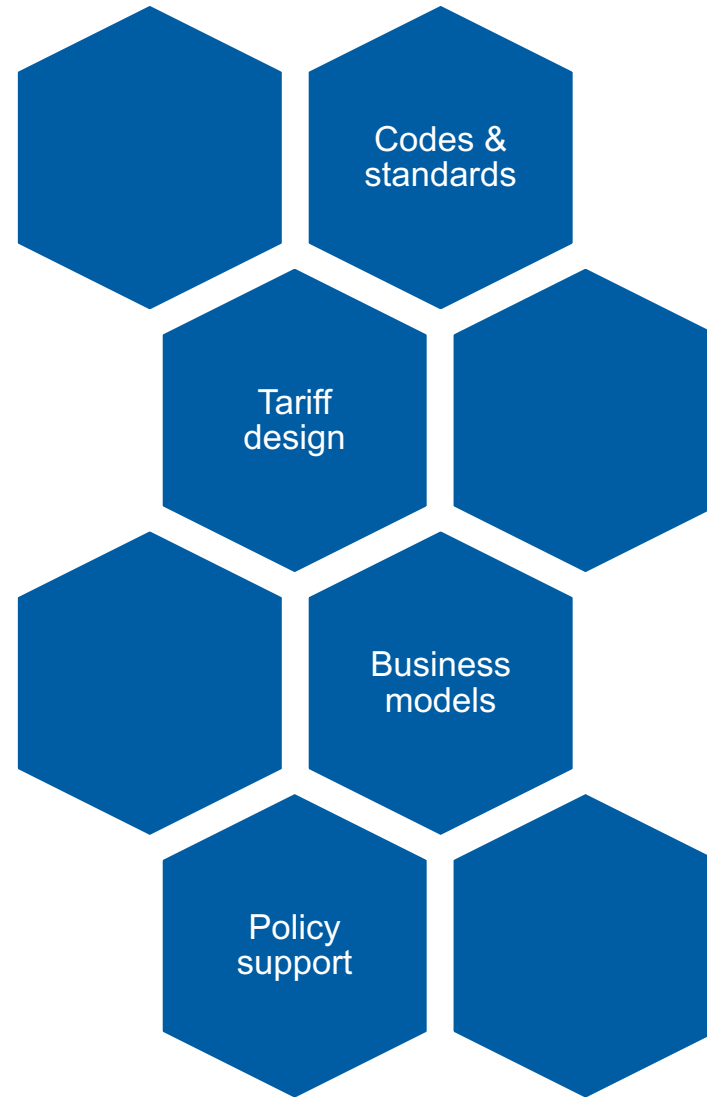
Roadblocks to DER in Asia



- Lack of enabling policies and incentives
- Perceived threat by utilities
- Lack of financing
- Steep learning curve

Building Blocks to Enable DER Deployment

- Removing regulatory barriers
- Updated planning and operational practices
- Peer learning and knowledge exchange



Closing thoughts



Source: Green Mountain Power, Stafford Hill

Thank you!

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www.Greeningthegrid.org



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