

# 18<sup>th</sup> Annual Washington Energy Policy Conference

U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy



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# Increase in Natural Disasters

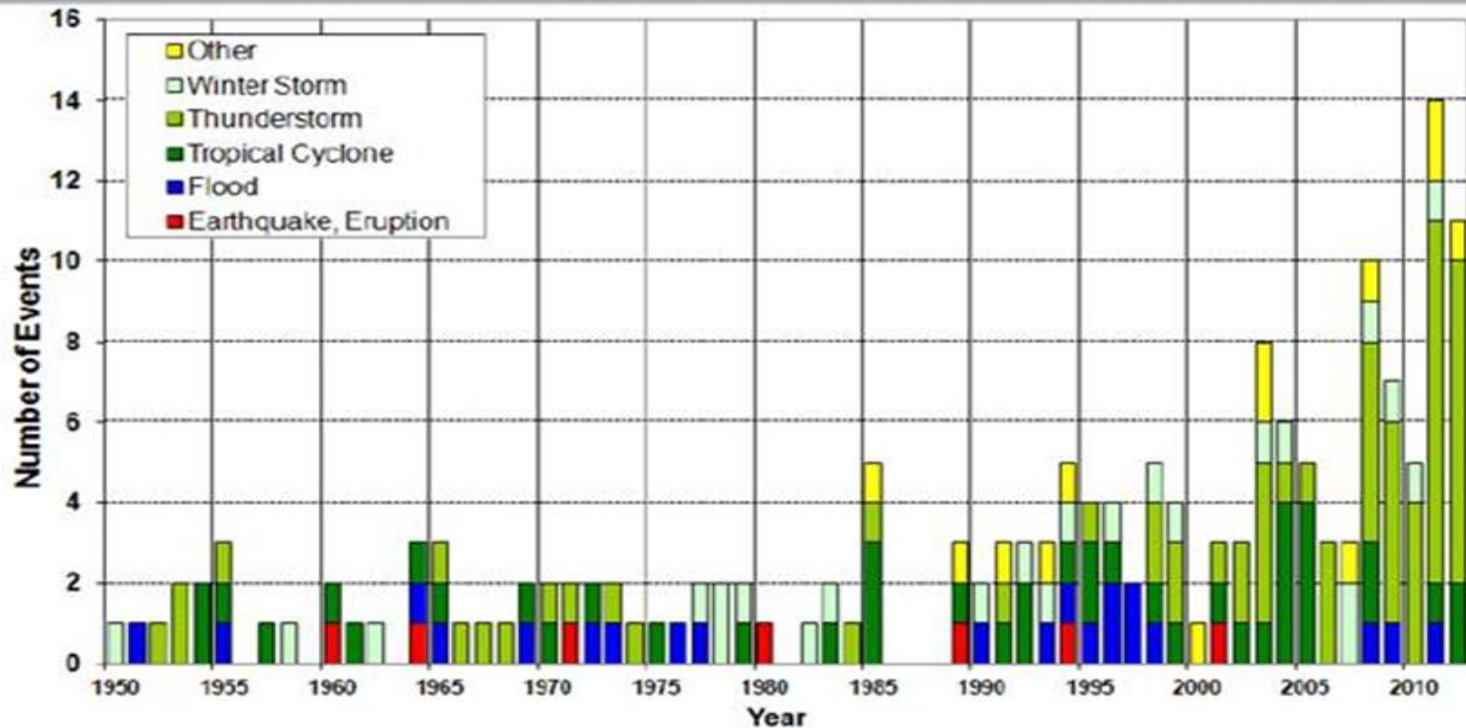
US Natural Catastrophe Update

## Significant Natural Catastrophes, 1950 – 2012

Number of Events (\$1 billion economic loss and/or 50 fatalities)



Eleven significant natural catastrophes occurred in the United States in 2012.



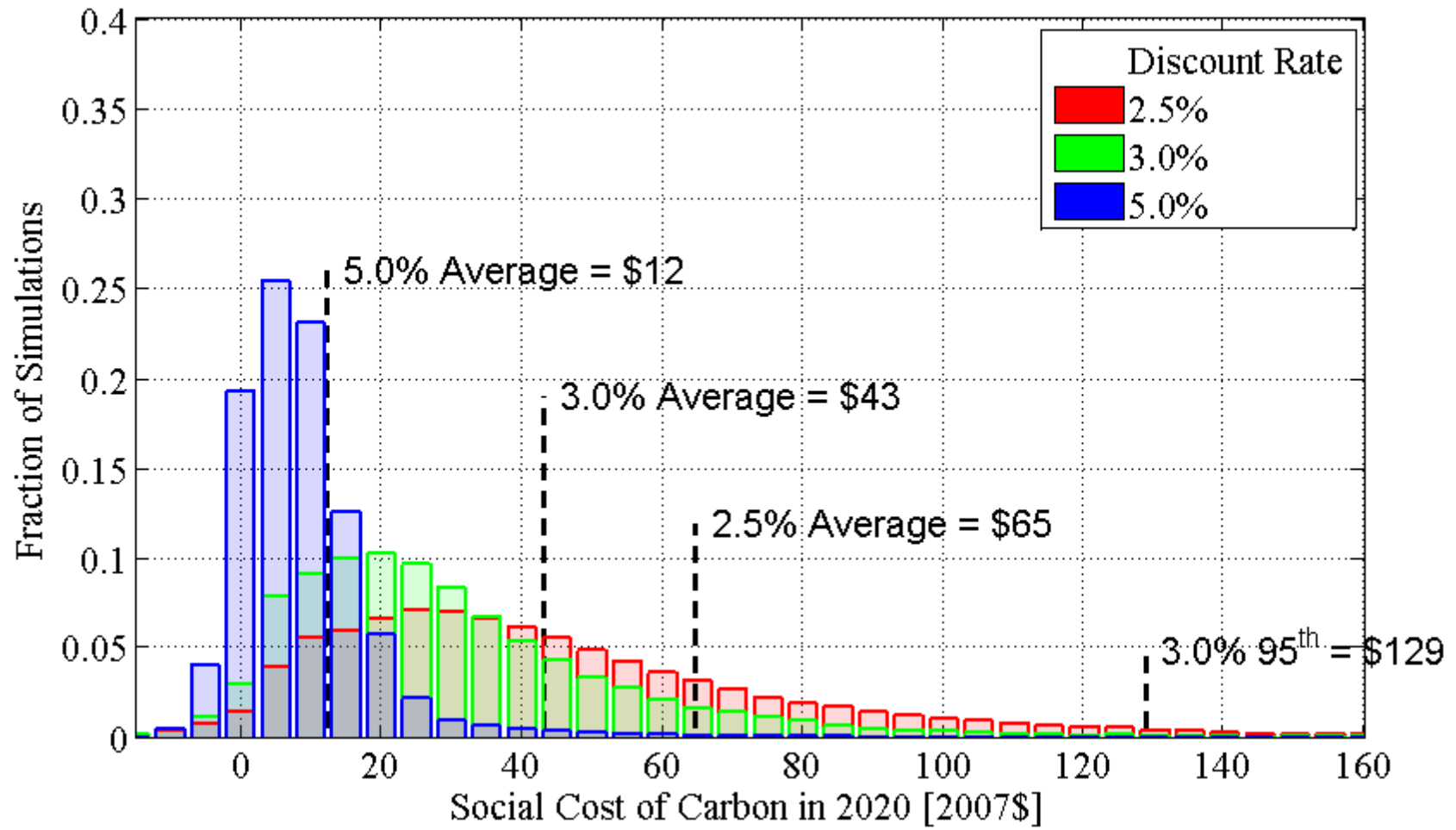
Sources: MR NatCatSERVICE

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# Distribution of Social Cost of Carbon Estimate for 2020

(in 2007\$/metric ton of CO<sub>2</sub>)



Source: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866



# Climate Action Plan

**“When our children’s children look us in the eye and ask if we did all we could to leave them a safer, more stable world, with new sources of energy, I want us to be able to say yes, we did.”**

- *Barack Obama, 2014 State of the Union*



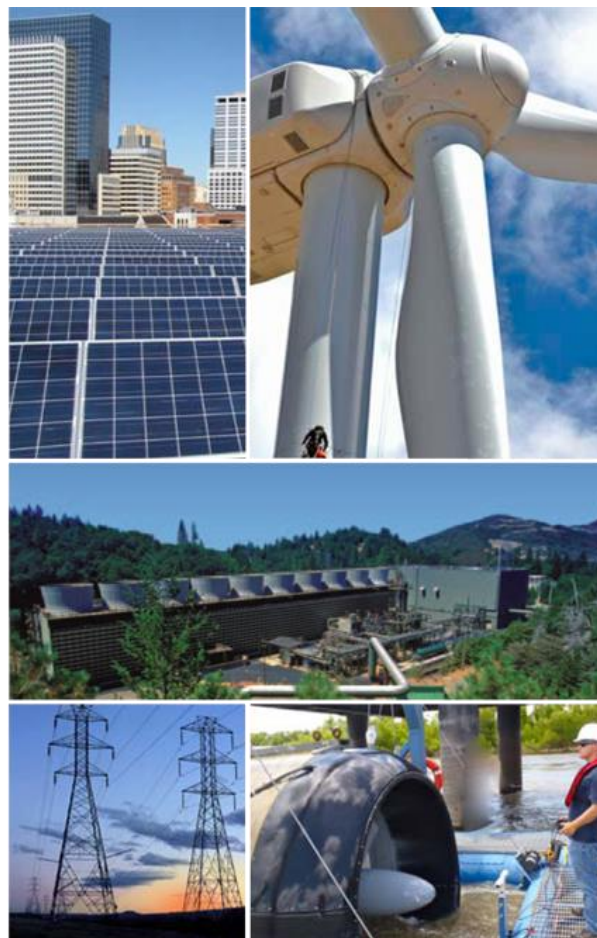
# Sustainable

## TRANSPORTATION



# Renewable

## ELECTRICITY GENERATION

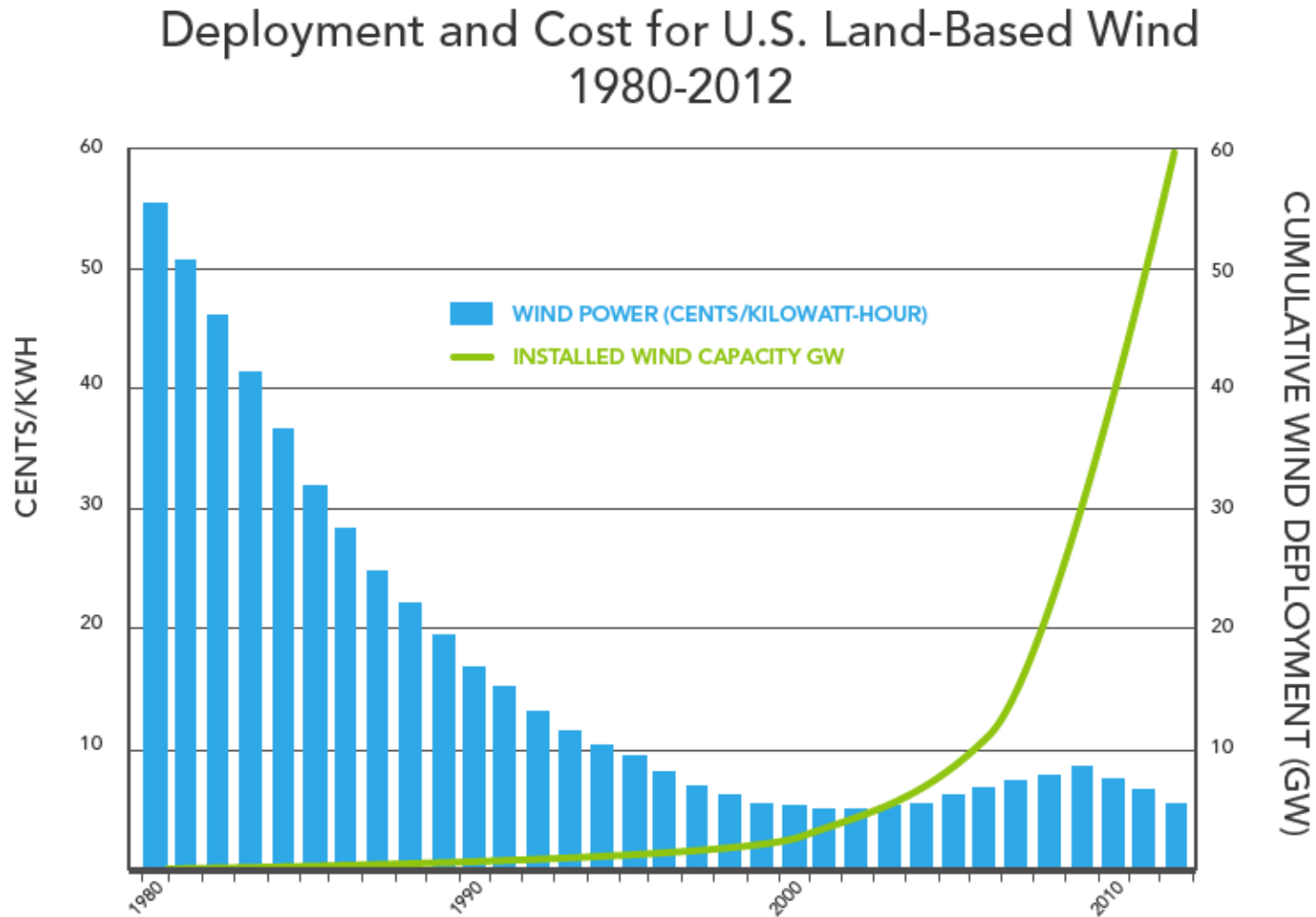


# Energy Saving

## HOMES, BUILDINGS, & MANUFACTURING

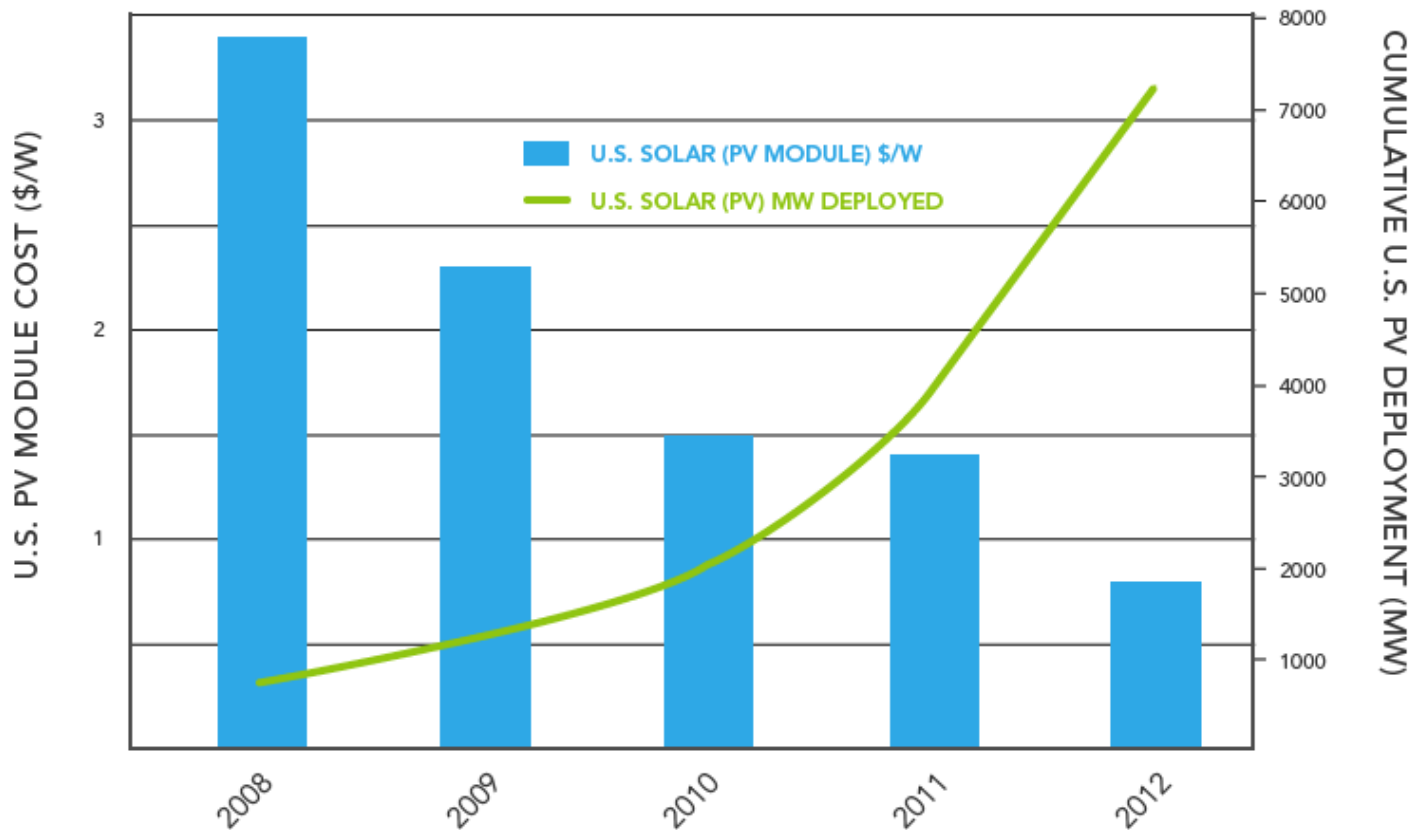


# Deployment and Cost for U.S. Land-Based Wind

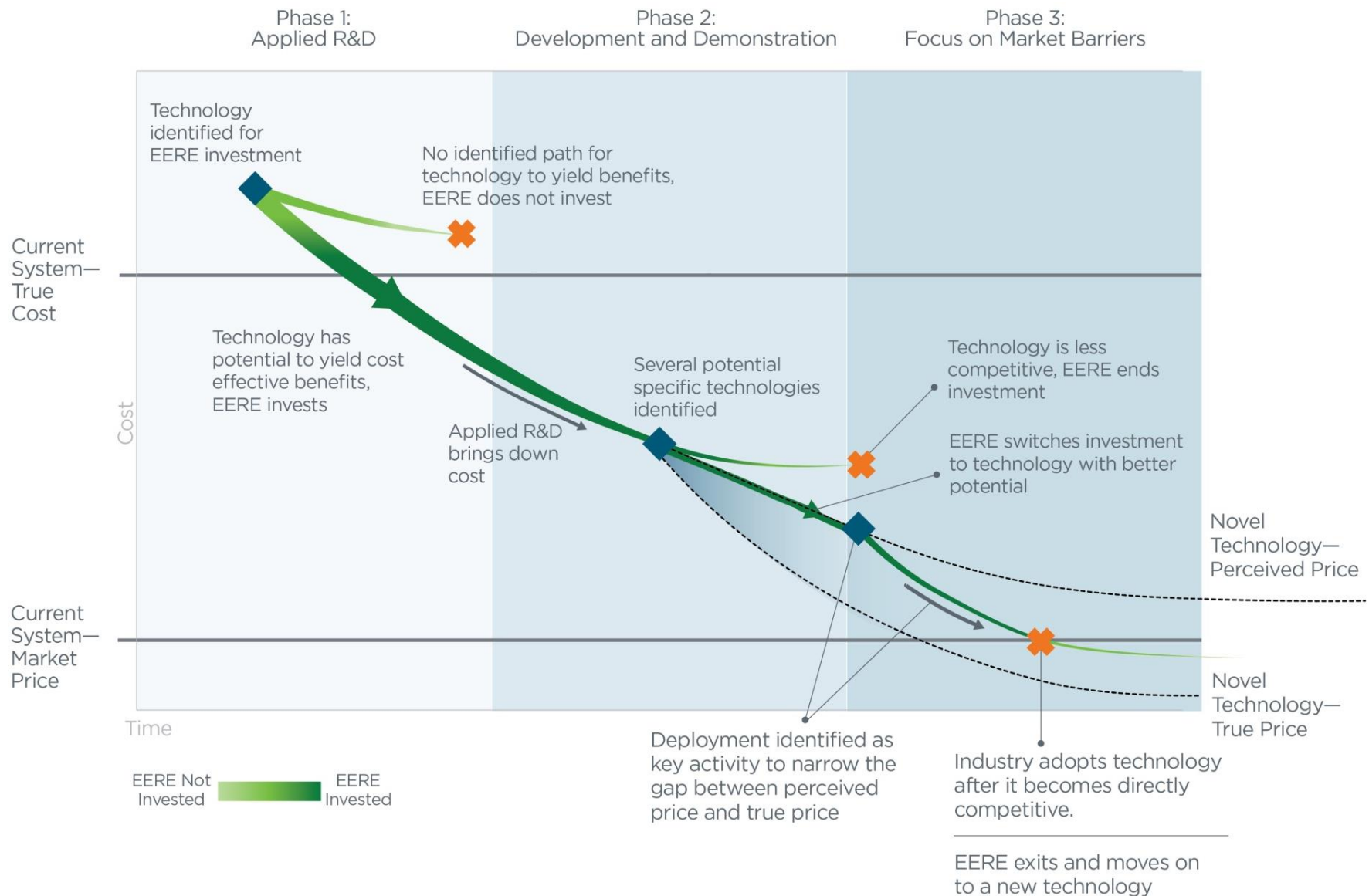


# Deployment and Cost for Solar PV Modules

U.S. Deployment and Cost for Solar PV Modules  
2008-2012



# EERE Investment Pathways



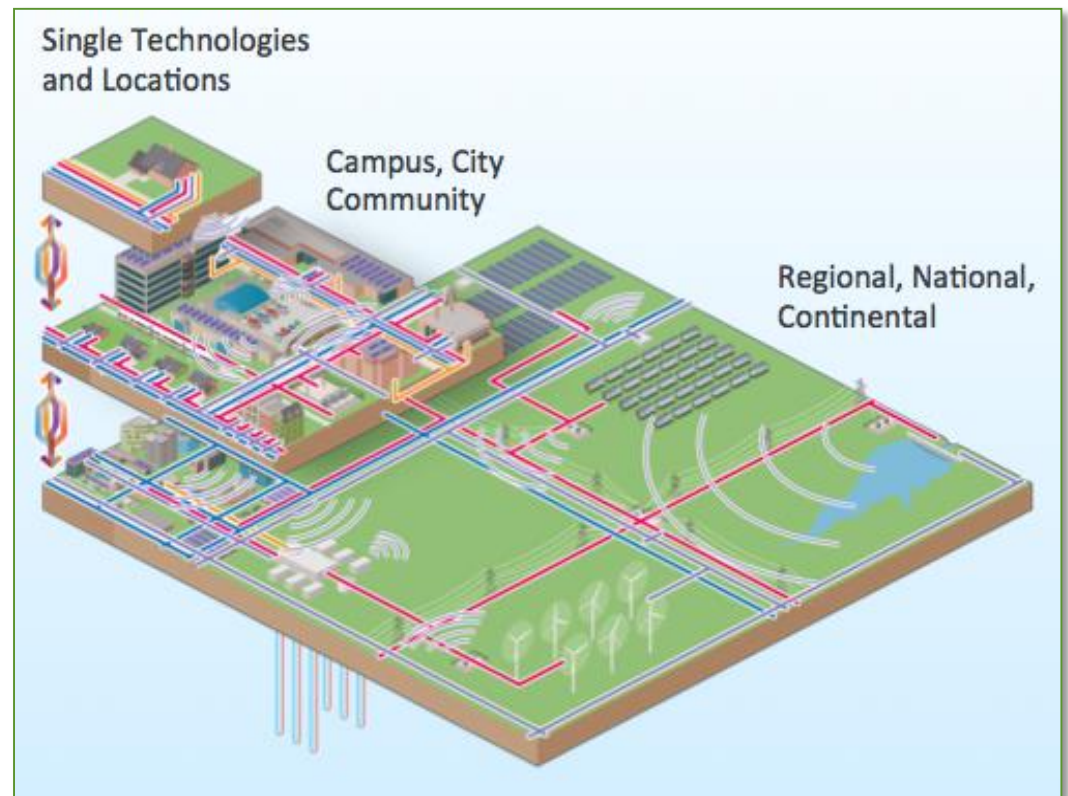


# Grid Integration Initiative

## Technologies for a more flexible, resilient, and dynamic distribution system

### Multi-Program Initiative: Solar, Buildings and Vehicles

- Systems optimization
- High resolution data
- Data analytics/tools
- Sensors
- Control systems
- Owner economics
- Protection and restoration



# NREL - Energy Systems Integration Facility

**Rooftop PV & Wind**



**Energy Storage Lab**  
Residential, Community  
& Grid Battery Storage,  
Flywheels & Thermal

**Smart Power Lab**  
Buildings & Loads



**Energy Systems  
Integration Lab**  
Fuel Cells, Electrolyzers

Outdoor Test Area



**Outdoor Test Area**  
EVs, Power Transformers

**Power Systems  
Integration Lab**  
PV Simulator



# Thank You!

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