



Troutman Sanders
Bringing Renewables to Wall Street
**Tackling the Challenges to Investing in
Renewable Technologies**

Renewables... Sustainable High Growth?

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Market Drivers for Renewables

1. Regulatory Mandates – Renewable Portfolio Standards

- Political one-upmanship
- Cost thresholds
- Average rate impact limits

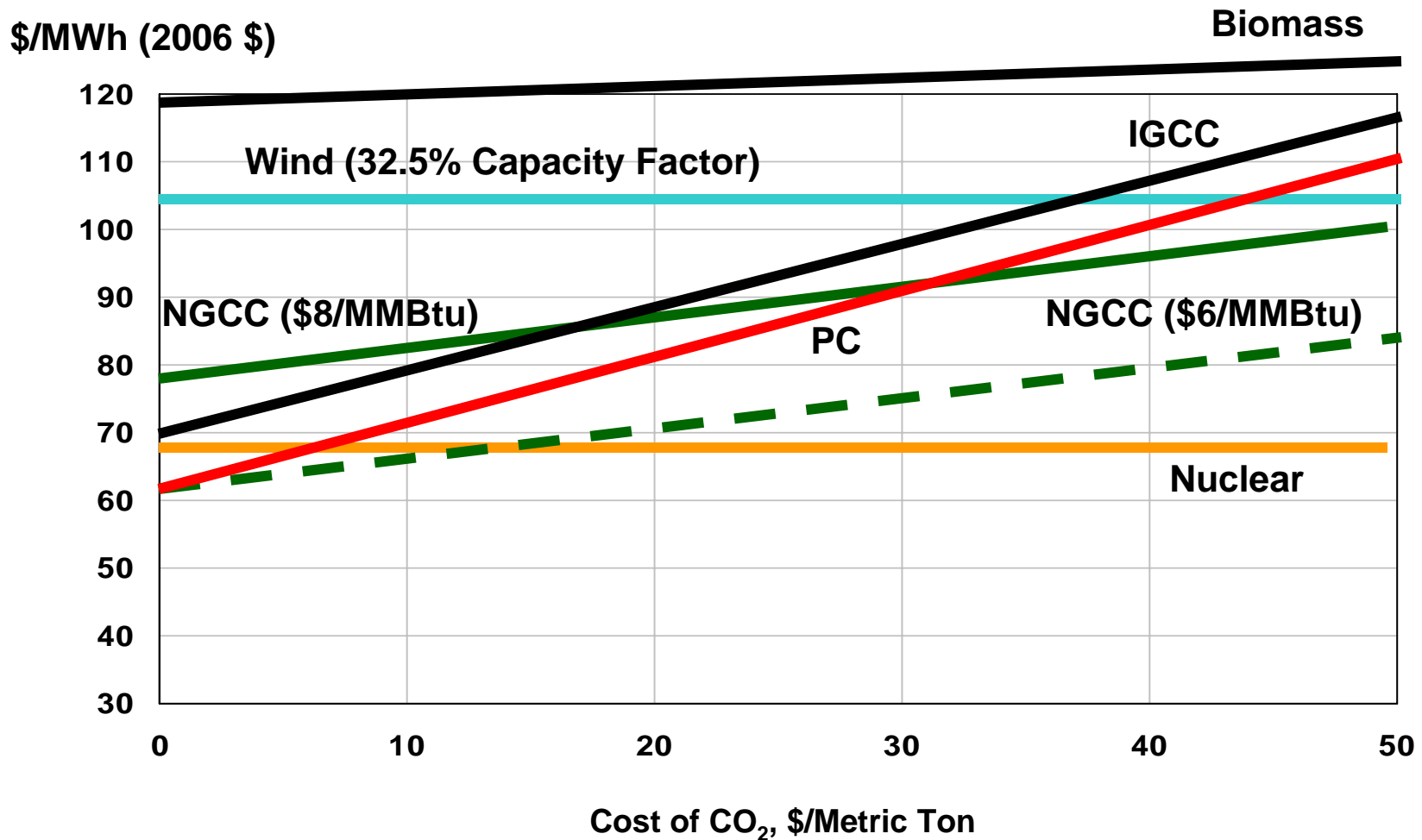
2. Customer Demand

- Renewable retail tariffs
- Wholesale RECs
- Self-sufficiency

3. Future Cost of Carbon

4. Resource Diversity

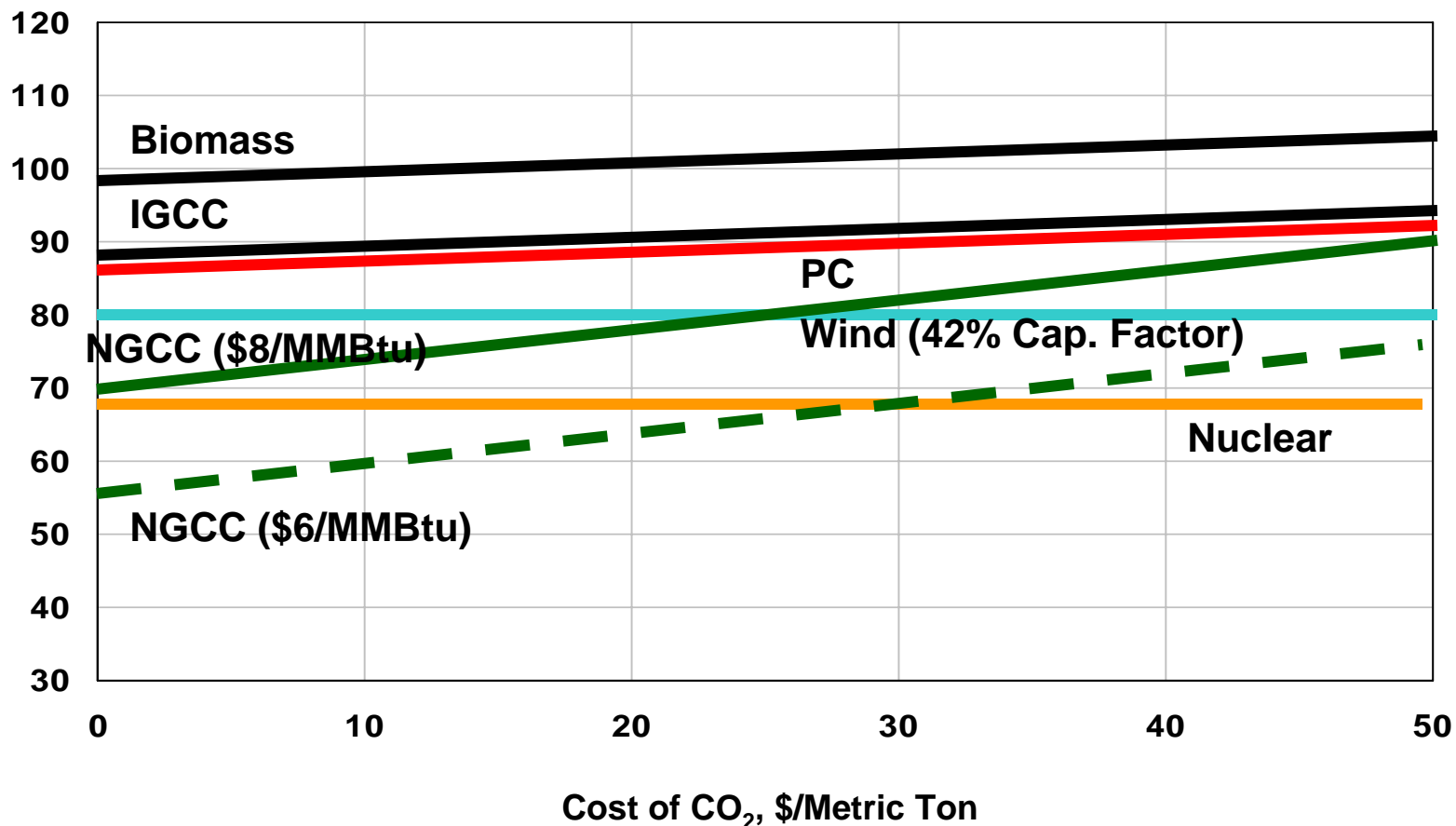
Comparative Costs of New Generation (2010-2015)



Source: EPRI October 2007

Comparative Costs of New Generation (2020-2025)

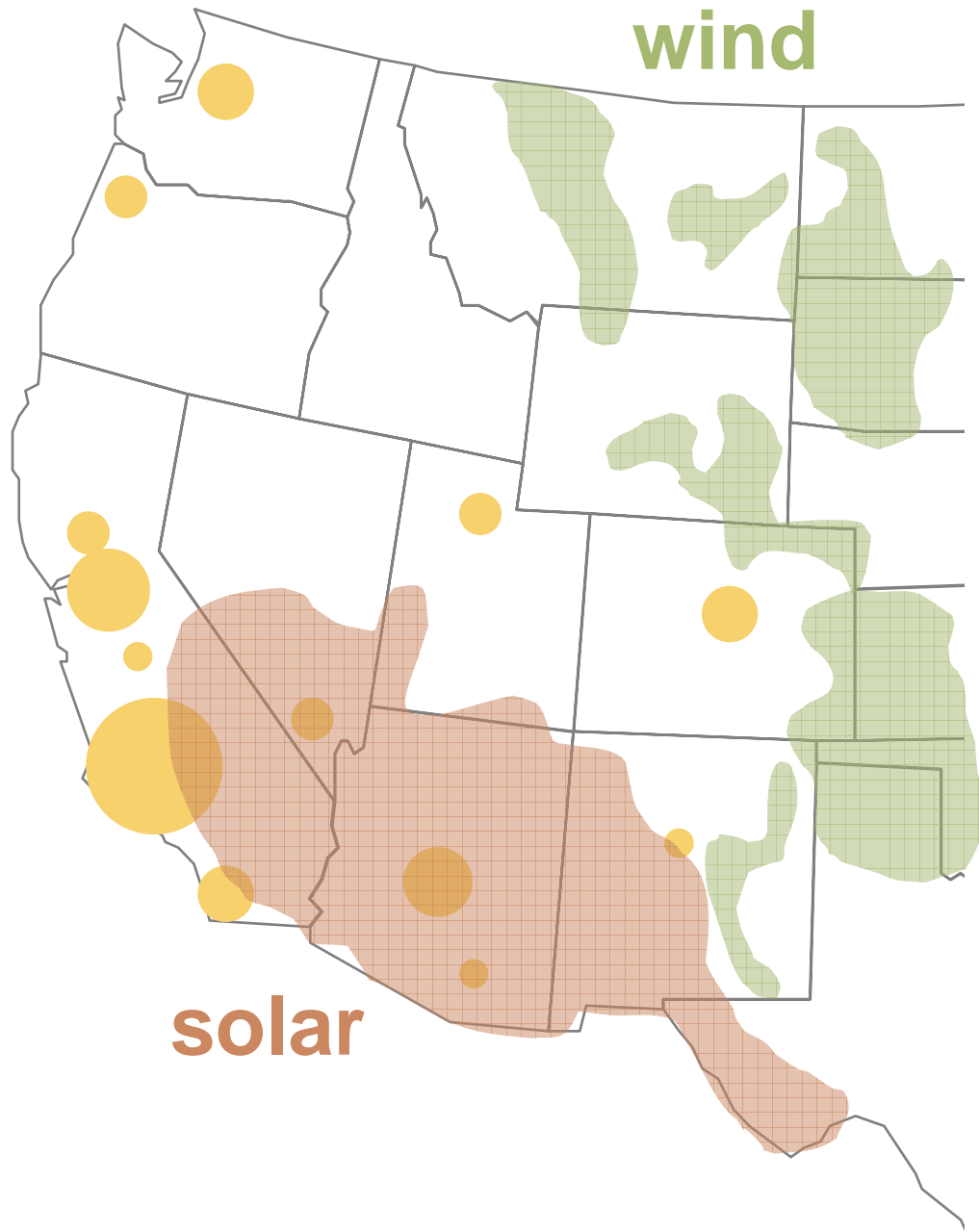
\$/MWh (2006 \$)



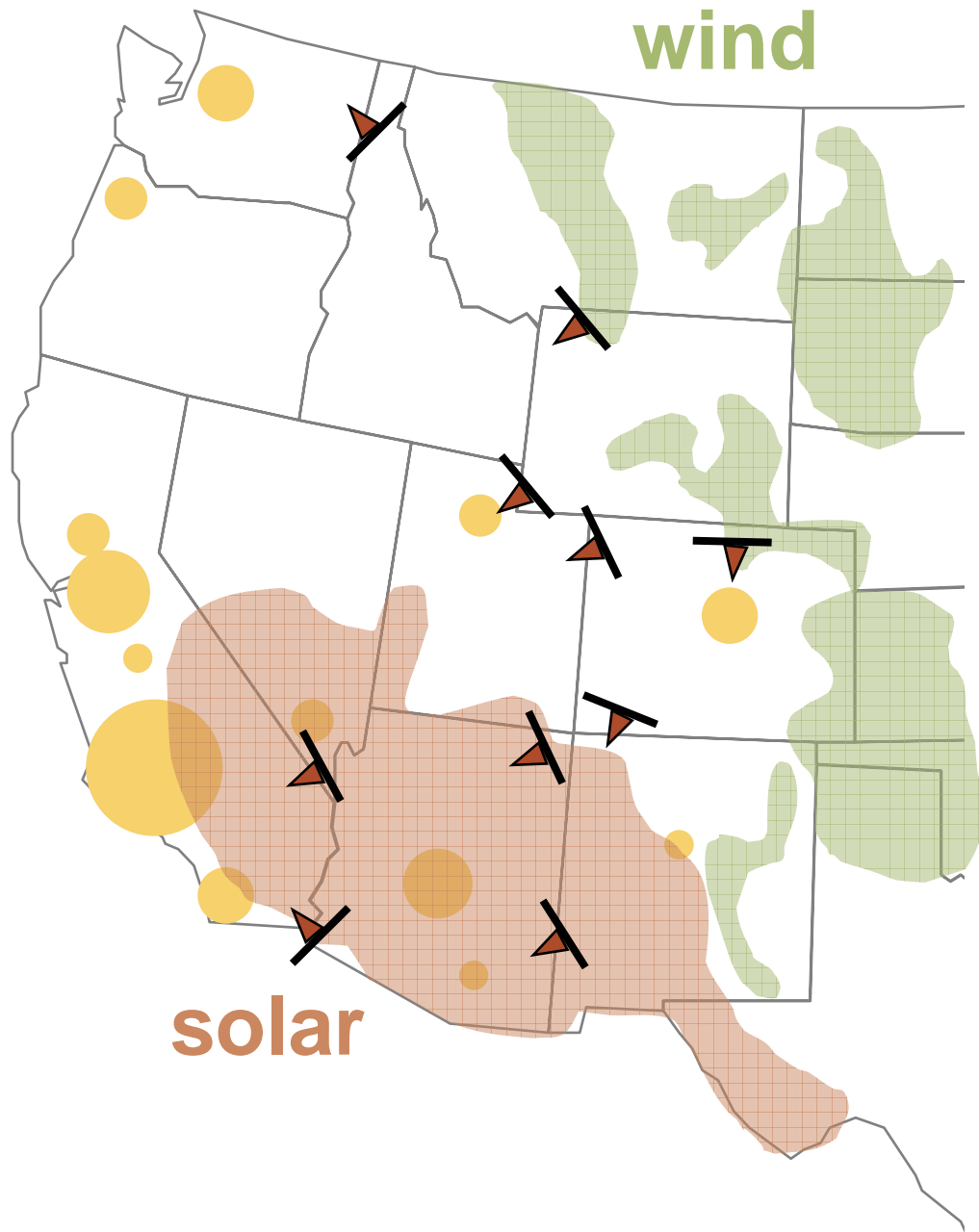
Source: EPRI October 2007

Challenges to High Renewables Growth

- **Cost Relative to Alternatives/Technology Curve**
- **Security of Tax Incentives**
 - PTC
 - ITC
- **Location, Location, Location**
- **Intermittency and Cost of Storage**
 - CAES
 - Batteries
 - PHEV
- **Grid-wide Markets versus “Wealth Transfer”**



The richest and most economical supplies of solar and wind energy are mostly distant from load centers.



Transmission constraints limit access to these economical renewable resources.

PNMR's Recent Renewables Experience

- **2002: 3rd largest wind farm in the world**
 - No RPS, great investment
- **2004: Residential Rooftop Solar Program**
 - 30% ITC/ 13¢ REC/ 8¢ power offset
- **2005: 50MW Biomass Facility Contracted**
- **2006: PV Array Installation**

PNMR's Renewables In 2008

- **Expand rooftop solar program to include commercial**
- **130 to 280 MW concentrating solar RFP**
- **Open renewable RFP**
- **Distribution feeder project with solar and storage**
- **Green Grid Initiative**

Meeting demand and reducing CO₂ will require a portfolio of technologies.

