

# US-China Clean Energy Cooperation

## *Cross-Cutting Issues*



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# Recent Headlines

- 7/20/10
  - IEA pronounces China world's largest energy consumer
  - China rejects claims; calls IEA data unreliable
- 7/22/10
  - U.S. Senate pronounces climate bill dead
  - China announces plan to begin domestic carbon trading
- 8/15/10
  - China passes Japan to become second largest economy
- 9/4/10
  - U.S. unemployment worse than similar industrial nations
- 9/8/10
  - China named most attractive place to invest in renewable energy by Ernst & Young
- 9/9/10
  - United Steelworkers file Section 301 Petition against China's Green Technology Practices

# Focus on Three Cross-Cutting Issues

## 1. Implementation

- Following through on our agreements

## 2. Competition

- Market access and trade

## 3. Climate

- Climate  $\leftrightarrow$  energy
- Domestic  $\leftrightarrow$  international
- Bilateral  $\leftrightarrow$  multilateral

# Implementation

- U.S.-China Strategic and Economic Dialogue
- Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment
- Climate Change Policy Dialogue
- Memorandum of Cooperation to Build Capacity to Address Climate Change
- U.S.-China Joint Commission on Commerce and Trade
- U.S.-China Clean Energy Research Centers
- U.S.-China Electric Vehicles Initiative
- U.S.-China Energy Efficiency Action Plan
- U.S.-China Renewable Energy Partnership
- 21st Century Coal Cooperation
- Shale Gas Resource Initiative
- U.S.-China Energy Cooperation Program (ECP)
- U.S.-China Energy Efficiency Forum
- U.S.-China Renewable Energy Forum
- U.S.-China Advanced Biofuels Forum

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- 2 out of 3 announced for U.S. side, \$25 mill of USG funds for U.S. side. Chinese consortium unknown; mandate: R&D? &D? &D?

# Competition

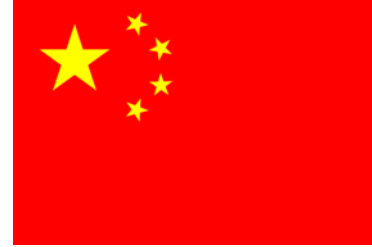


- International trade
  - Chinese imports to the US
- US market access in China
  - Preference for Chinese manufacturers
  - Unfair subsidies

# Competition

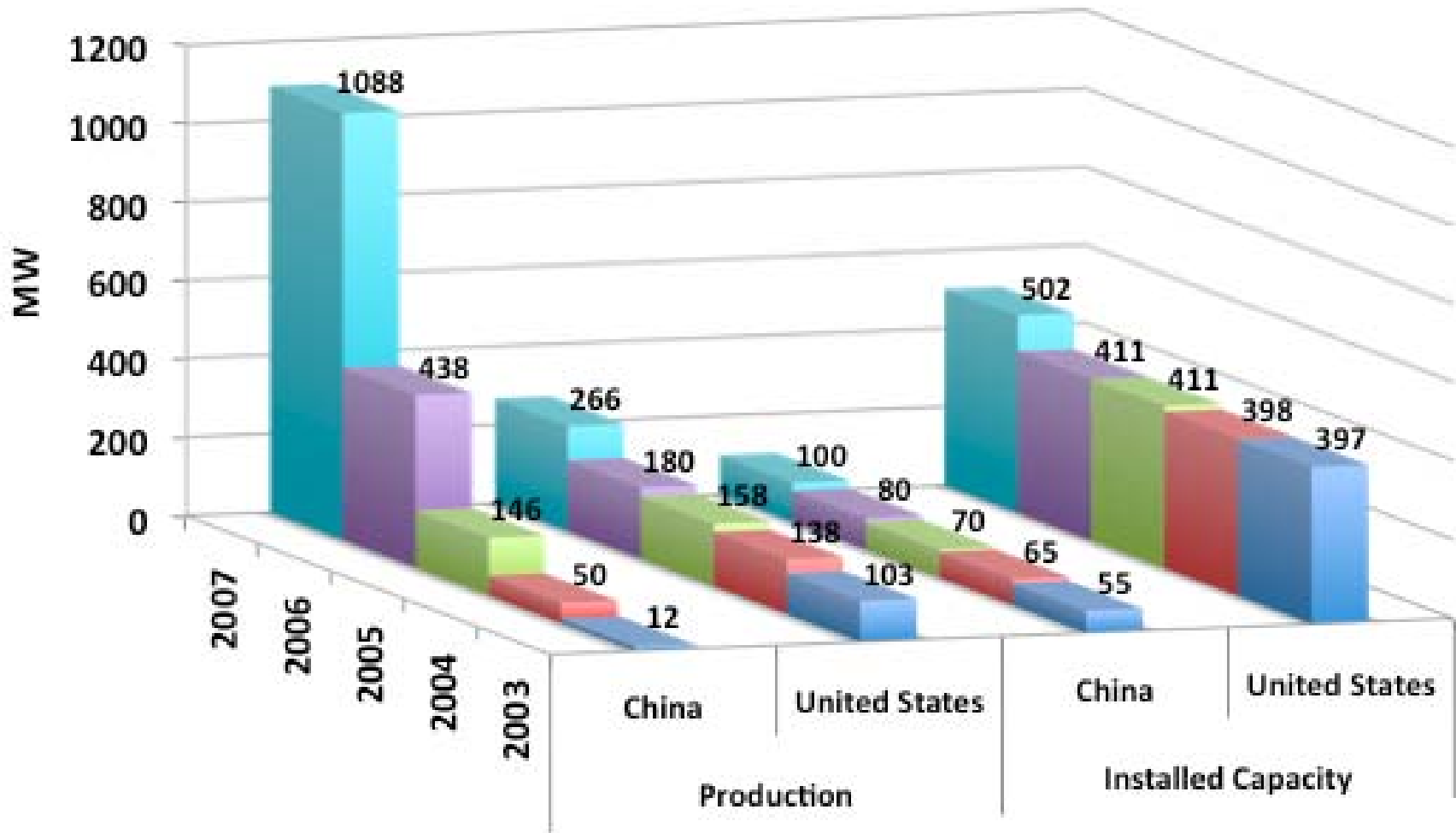


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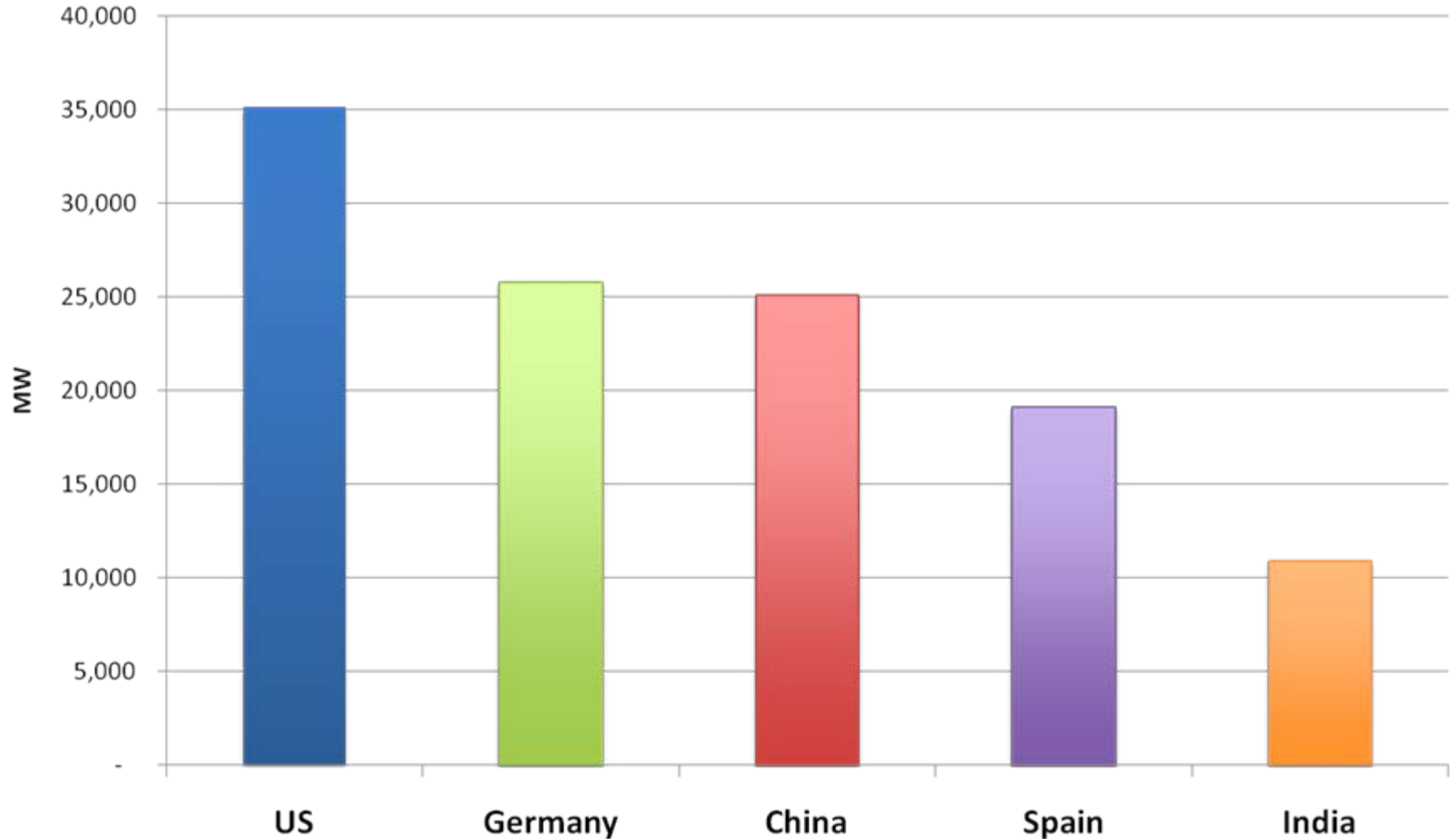
- International trade
  - Competing with US/EU manufacturers in other markets
- Market access in the US
  - Preference for US manufacturers
  - Concerns about technology performance

# Solar PV: Production and Utilization

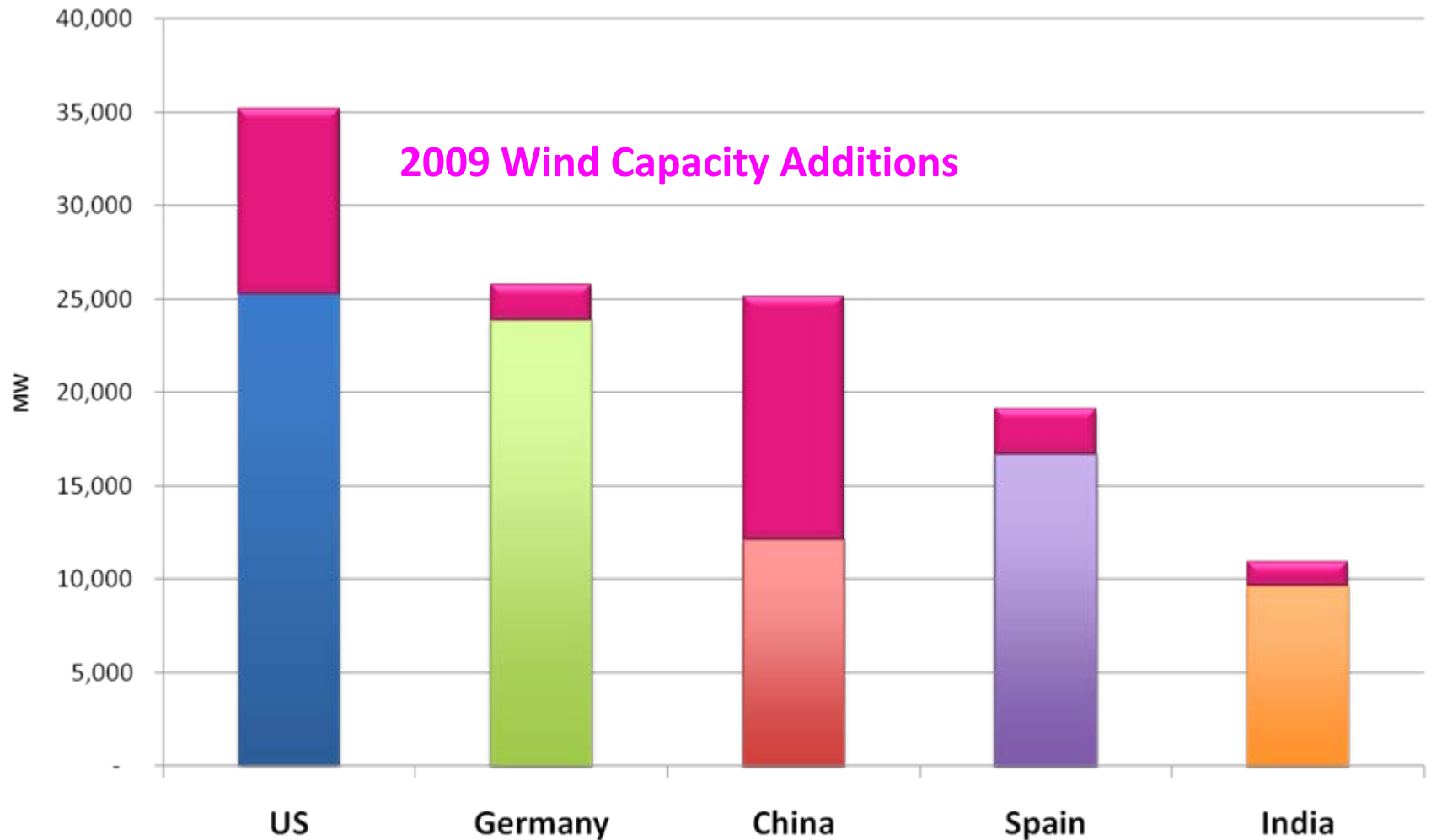




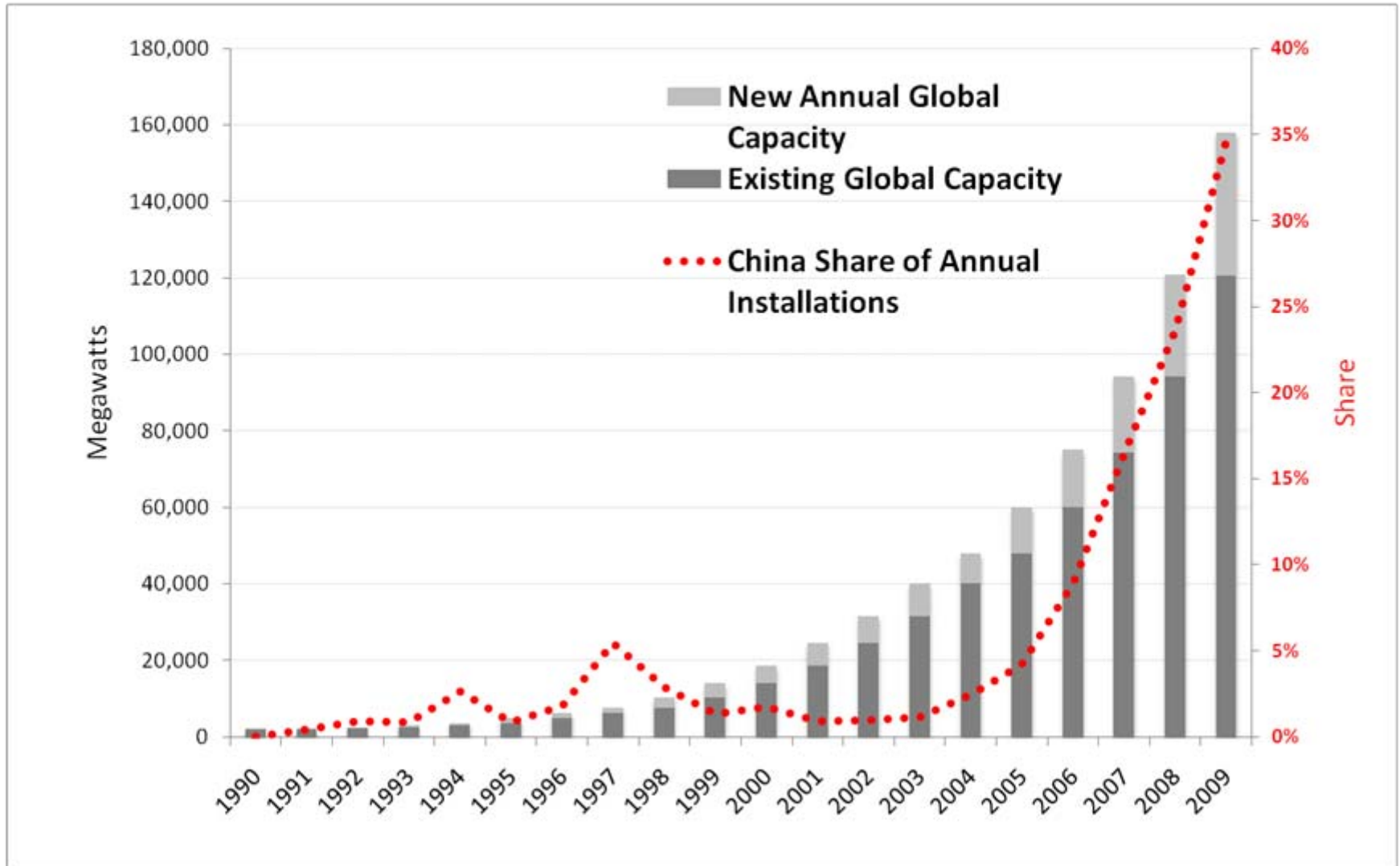
# Top 5 Countries for Wind Power Capacity



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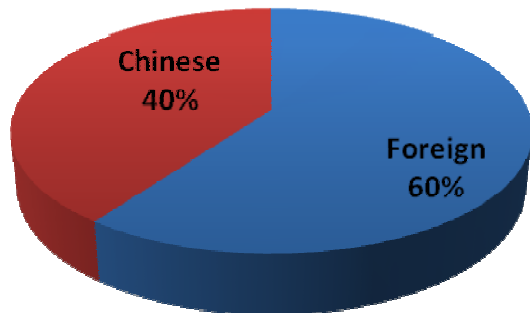
# China's Role in Global Wind Power Additions



# Wind Turbine Sales by Manufacturer in China

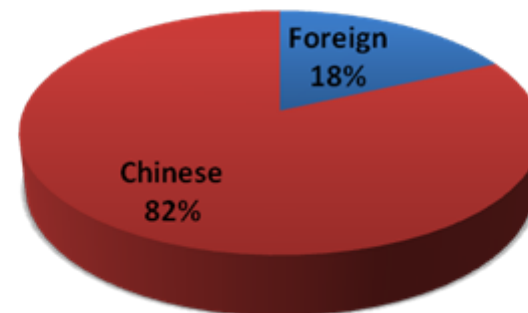
**Chinese Market Shares 2006**

**1,337 MW total**

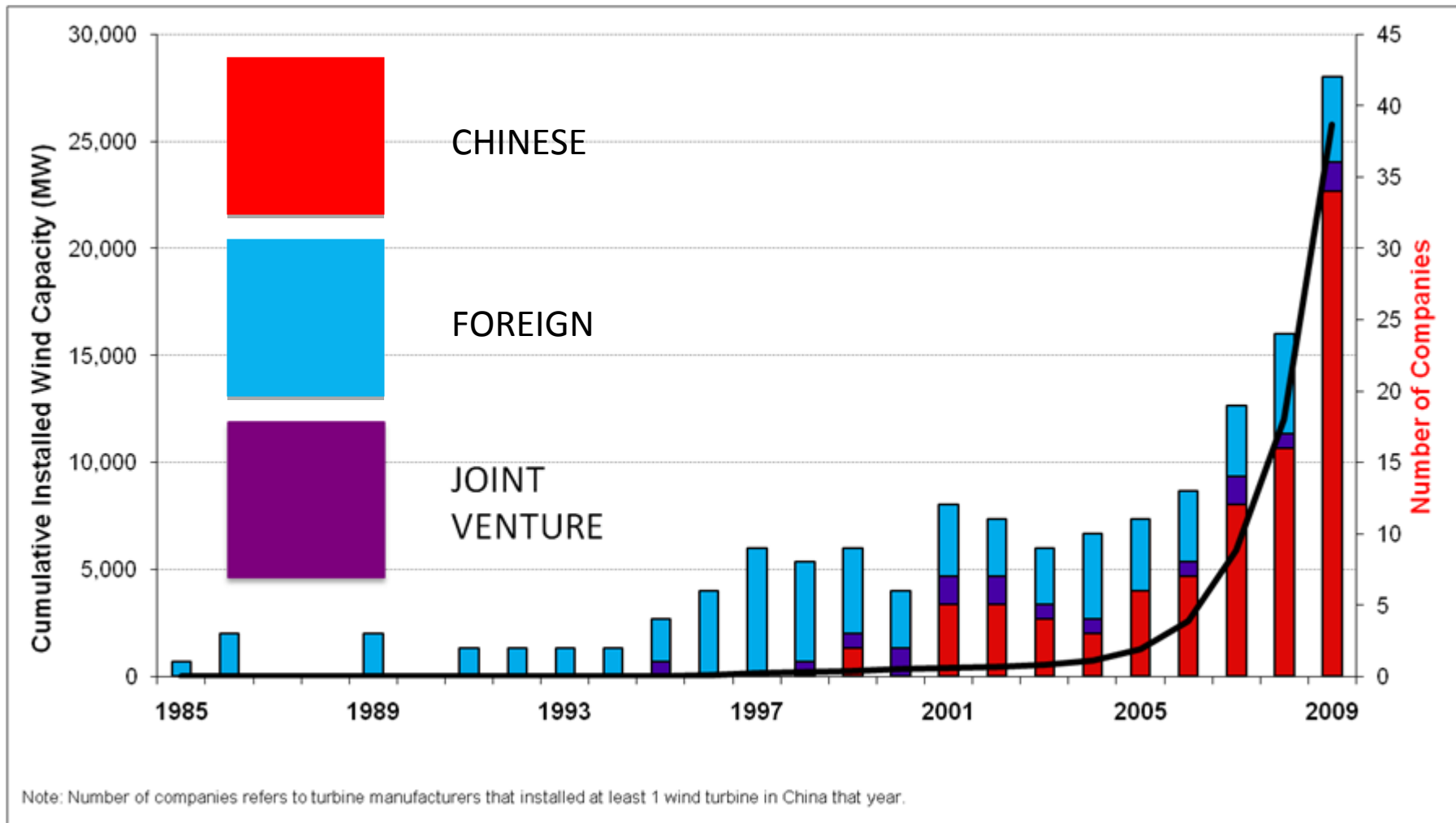


**Chinese Market Shares 2009**

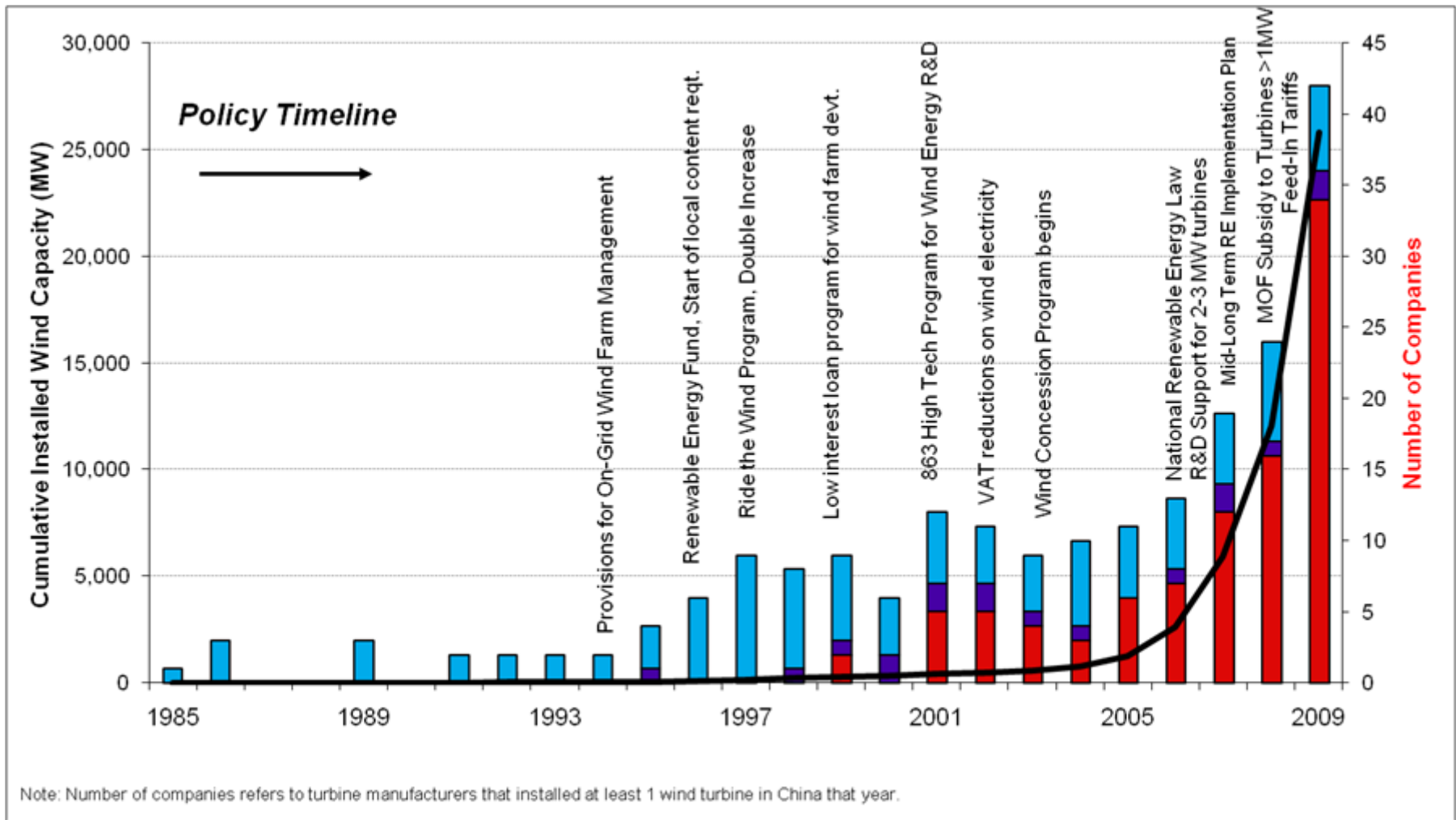
**13,800 MW total**



# Companies in the Chinese Wind Market

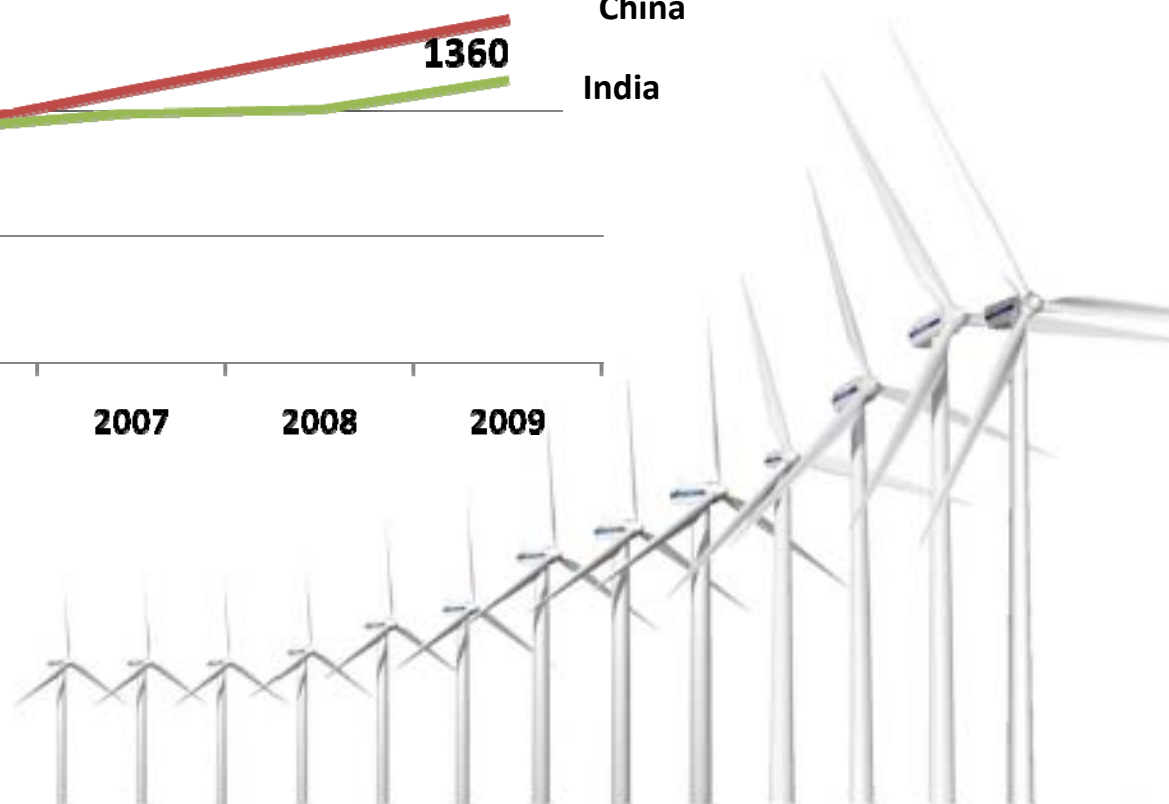
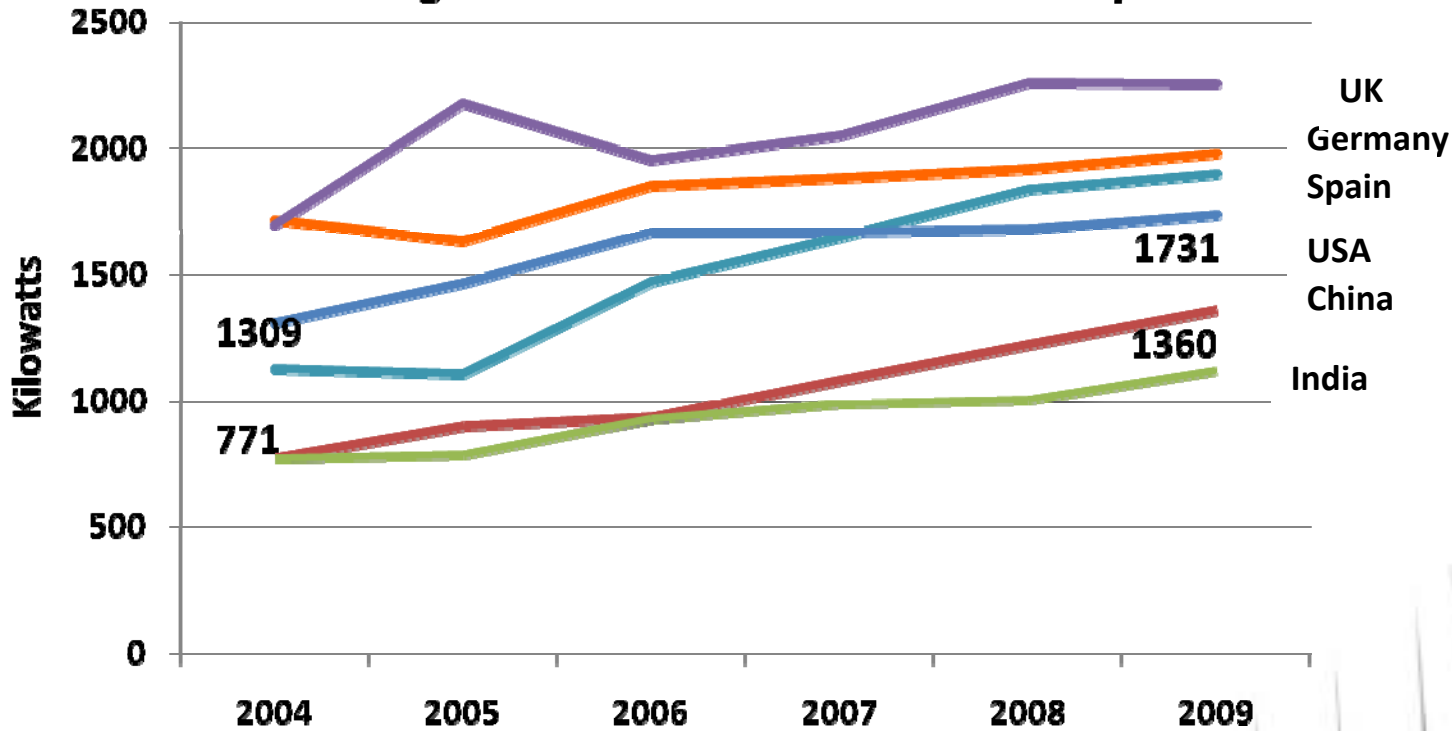


# Companies in the Chinese Wind Market



# Wind Technology Leaders and Followers

Average size wind turbine installed each year



# Perceived Challenges to Cooperation

- ***We are competing with China to become a renewable energy technology leader***
  - They lead in production, but not in R&D or deployment
- ***If US companies cooperate with Chinese companies they will steal our technology and intellectual property***
  - Are many US companies already benefiting from cooperation with Chinese partners
- ***They cannot learn anything from us***
  - Serious challenges even in wind deployment in China
    - Very low capacity factors as a result of poor siting practices, O&M and lack of technology testing and certification facilities
- ***We have nothing to learn from them***
  - China is the only country pursuing GW-scale wind farm development
  - Similar transmission and integration issues as the US means they provide a valuable laboratory for learning



# Climate

- Climate policy related to clean energy but often separated in US-China policy discussions
- China is increasingly combining the two domestically
  - Energy intensity target has led to a carbon intensity target
    - Builds upon the systems in place
    - Will require a new system of GHG accounting
    - Additional climate policies to reduce emissions
  - Still major concerns over data quality; energy intensity target will likely not be achieved

# International Climate Negotiations


- US-China tensions often high, as in Copenhagen
- China sides with the G77 – lowest common denominator often sets the position
  - Most recent alliance with the BASIC countries; many are taking serious actions
- Next 2 rounds of negotiations not in Copenhagen or Bonn -- in Tianjin, China and Cancun, Mexico
  - Could alter dynamic
  - First ever UNFCCC negotiation hosted by China

# Climate, Energy and US-China Relations

- We face similar challenges
  - maintaining energy security
  - combating climate change
  - ensuring economic growth and prosperity

→ ***This can create opportunities for cooperation, or grounds for competition***
- We are entering a challenging time in US-China relations
  - ***Climate and energy cooperation may be one key area where we can advance – or further strain – the relationship***
- China and the United States are positioned to lead the global transformation to a sustainable, low carbon global economy
  - ***We play a key role in advancing technological understanding, reducing costs, and bringing immediate benefits to the global community***

## Contact Information



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