



emerging energy research

Asia Pacific Wind Energy Advisory  
全球风能研究

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## Global Wind's Third Pillar of Growth: 全球风能的第三个增长点

*China Emerges as Market Leader*  
*中国将成为市场主导*

**China WindPower 2008**  
**2008 北京国际风能大会**

**31 October 2008**  
**Beijing, China**

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## Global Wind's Third Pillar of Growth Overview

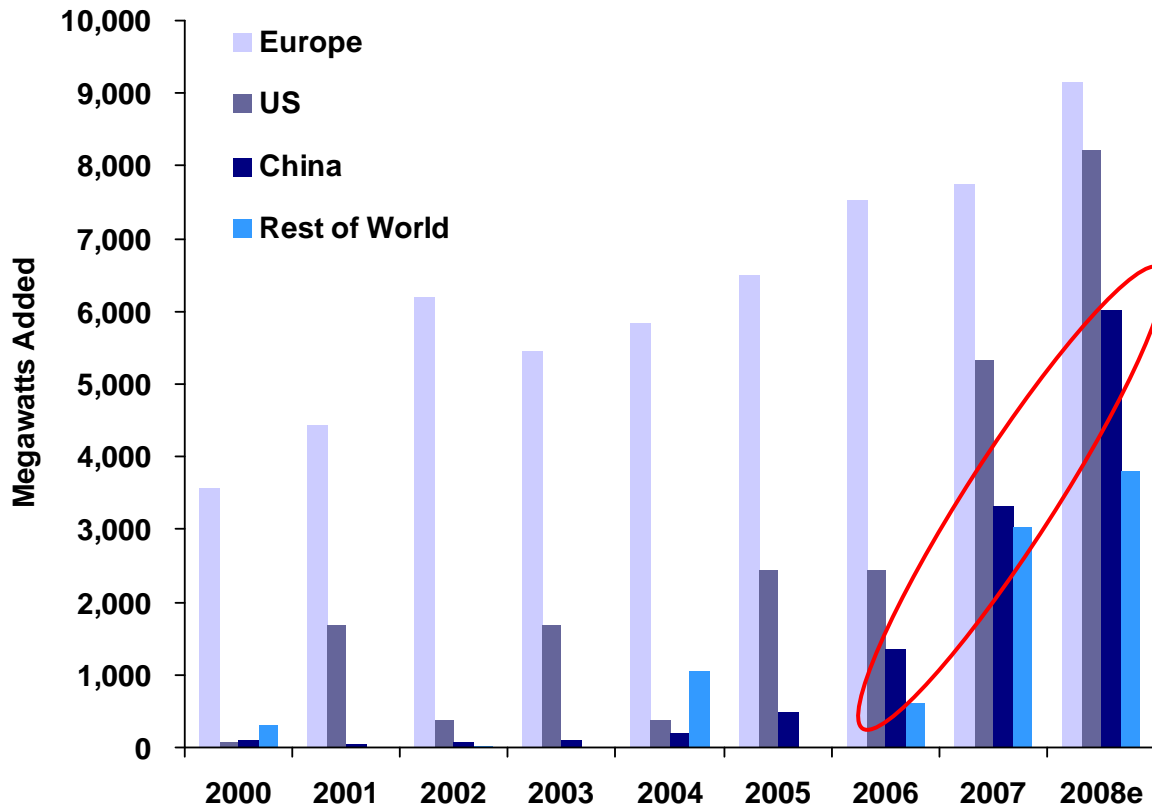
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- **China is firmly establishing its place in the global wind market after rapidly emerging in the last three years**
- **In terms of both wind asset ownership and turbine supply, Chinese players entered the global market in 2007**
- **An influx of foreign players coupled with China's near-term growth prospects points to the market's strategic importance as a global growth engine going forward**

## Global Wind's Third Pillar of Growth

# Wind's Strong Recent Growth Positions the Technology in the Mainstream

### Total Annual MW Added

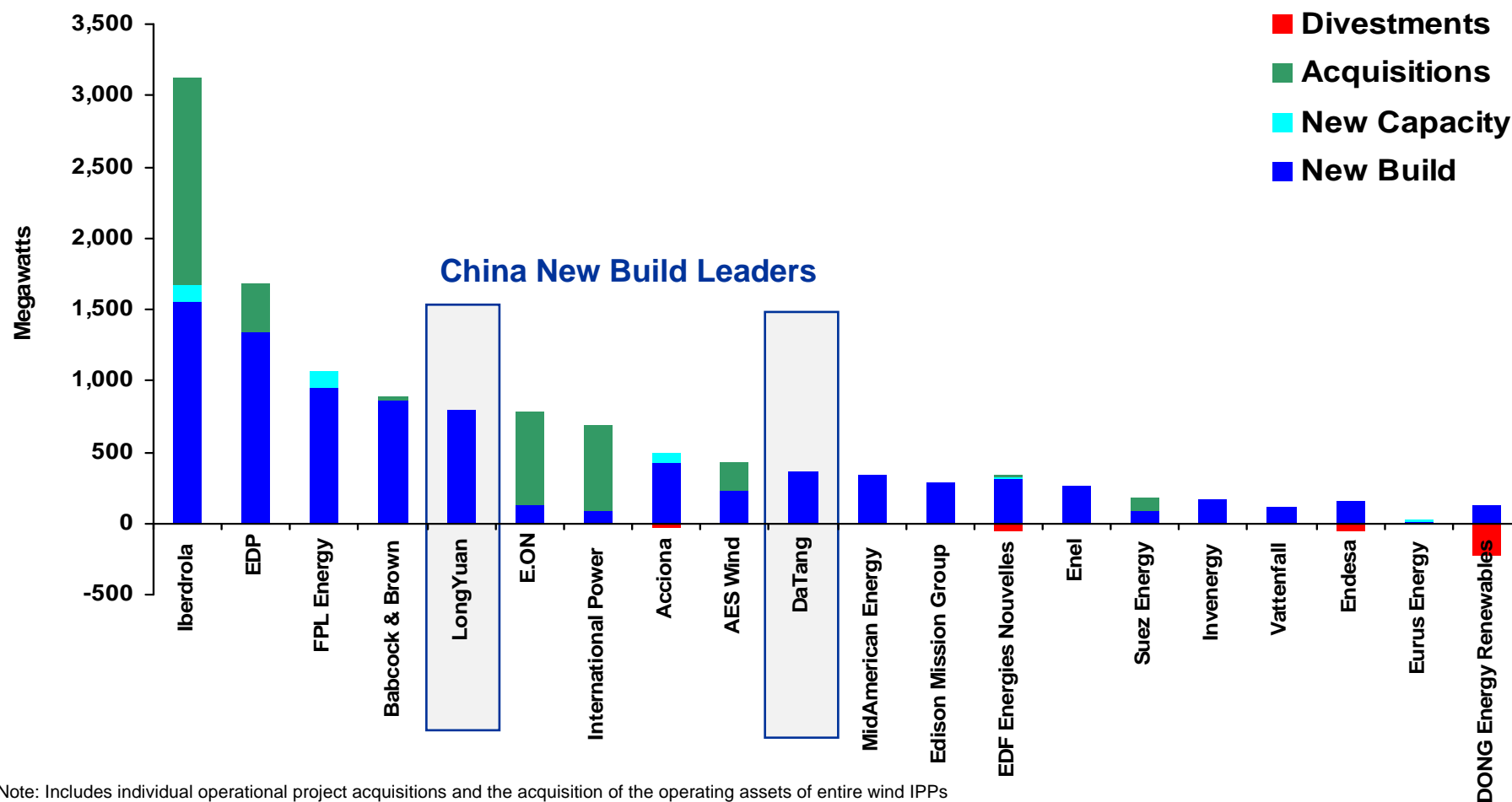


- ✓ Solid shift from Europe to the US and China for continued market growth
- ✓ In the US, over 25% of new generation capacity is wind
- ✓ Strong regional diversification as China passes the 6 GW mark in 2008
- ✓ Increasing regulatory support and improving equipment supply options is bolstering market globalization

*The global wind market has surged in 2008, led by strong growth in the US and China*

# Global Wind's Third Pillar of Growth

## Chinese Utilities Among Global Leaders

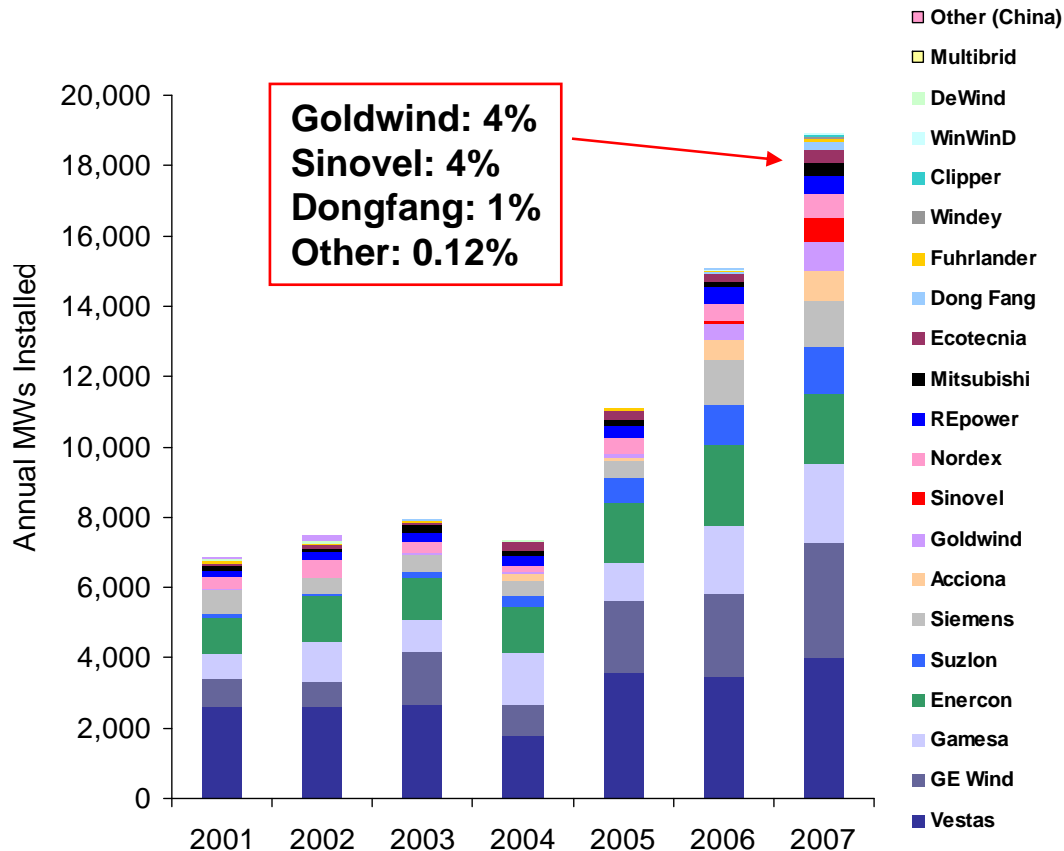


***Longyuan's and Datang's rapid growth places Chinese players among leading global wind asset owners***

# Global Wind's Third Pillar of Growth

## Chinese Suppliers Emerging on Global Stage

Global MW Installed by Supplier, Year-end 2007

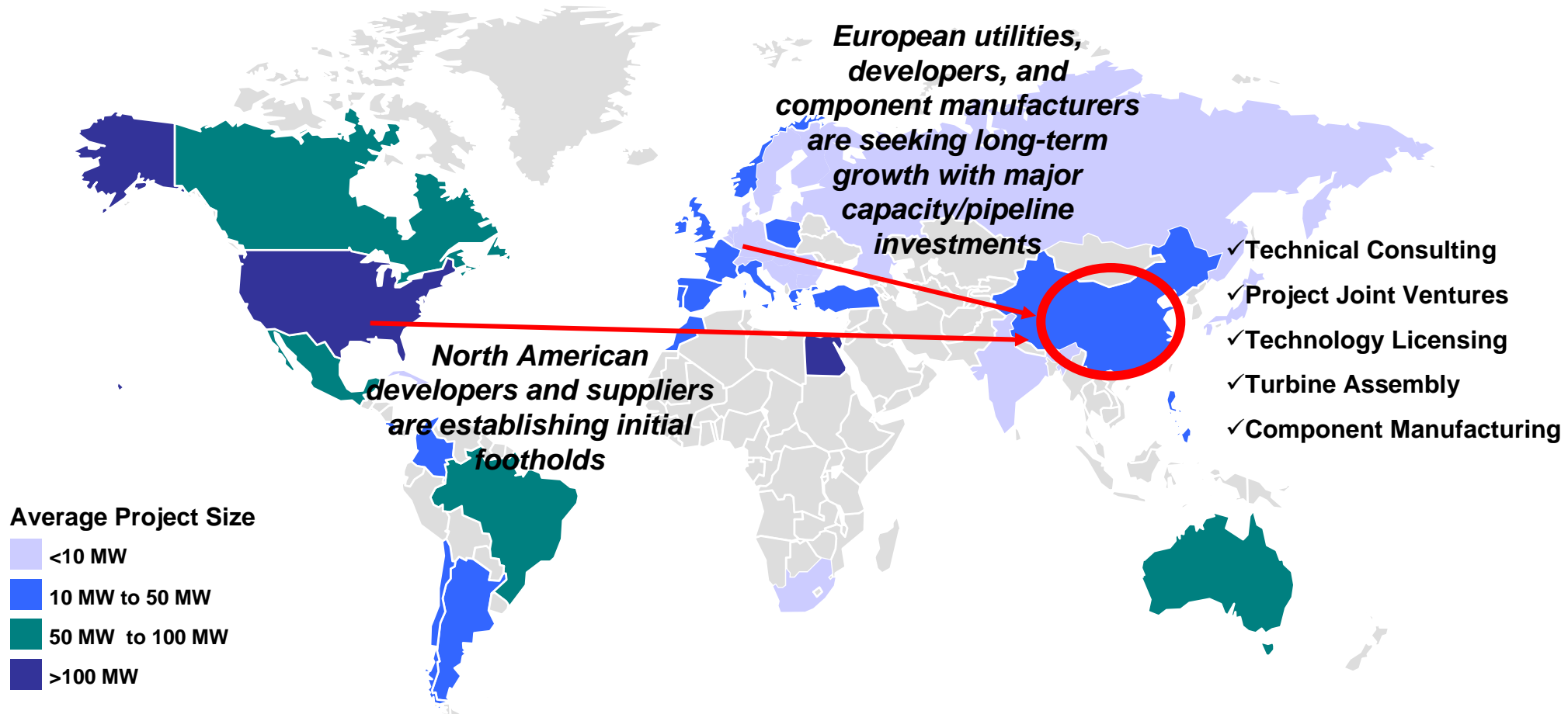


- ✓ Increasing focus on building order books in North America and Asia Pacific
- ✓ Proliferation of suppliers with multi-megawatt turbine portfolios
- ✓ Production capacity hub moving from Europe to other continents
- ✓ Chinese suppliers emerging in the top 10 (9% of total megawatts installed in 2007)

**Over the last three years, turbine supply has evolved from a five player to a 15 player market, with an explosion in new investments as demand soars**

# Global Wind's Third Pillar of Growth

## Players Flocking to China's Scaling Project Opportunities

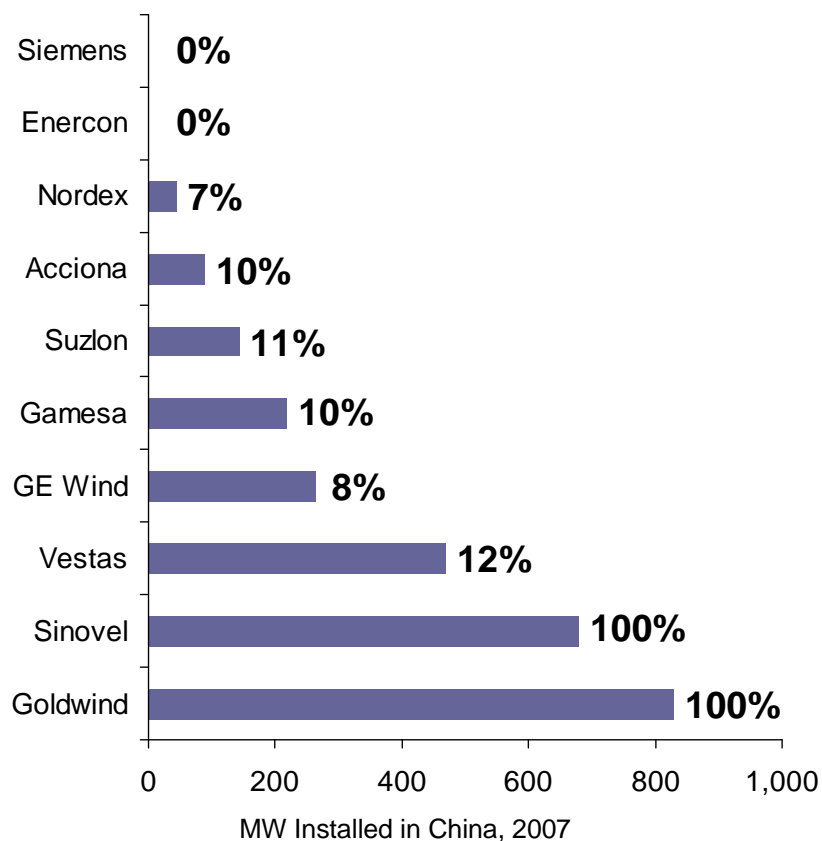


***European and North American players are seeking to tap into China's long-term, large-scale growth prospects with multiple investments***

# Global Wind's Third Pillar of Growth

## China Becoming Key Piece of Order Books

### China's Percentage of Annual Installations

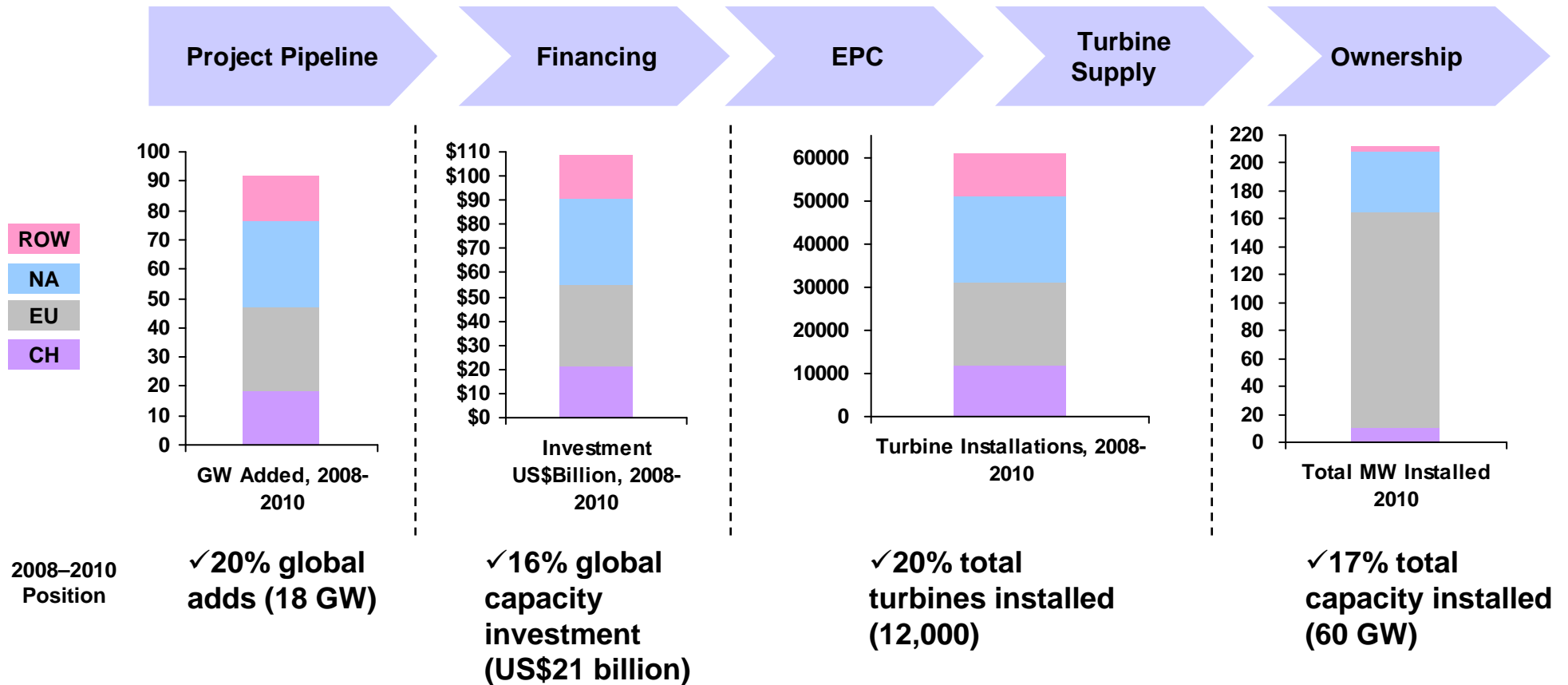


- ✓ Eight of top 10 global suppliers have a manufacturing presence in China
- ✓ China represents 10% or more of global installations for leading suppliers in 2007
- ✓ Chinese players targeting export opportunities in the near term

***For global turbine suppliers, China is rapidly evolving as a strategic market for long-term positioning***

# Global Wind's Third Pillar of Growth

## China has Emerged as a Leading Player on the Global Wind Value Chain



***From planned projects to operational capacity, China is on track to become the single largest market for wind power by 2011***



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