



Global Wind Power Outlook

Steve Sawyer, Secretary General ReVision 2012, Tokyo *9 March 2012*



C0 Members

DANISH WIND

INDUSTRY ASSOCIATION

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GWEC - Uniting the global wind industry and its representative associations

German WindEnergy

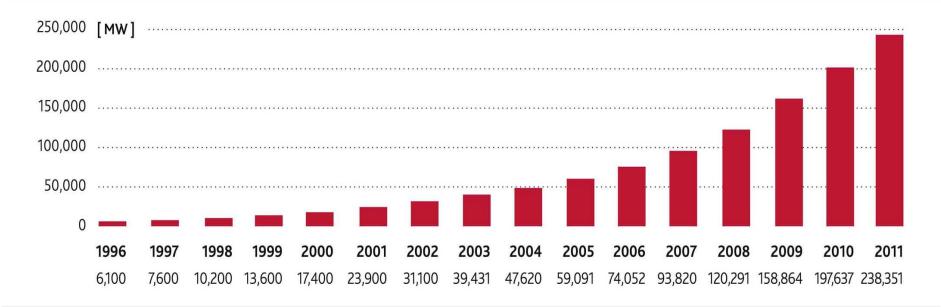
Association (BWE)

EWEA



2011 growth: 20.9%

GLOBAL CUMULATIVE INSTALLED WIND CAPACITY 1996-2011

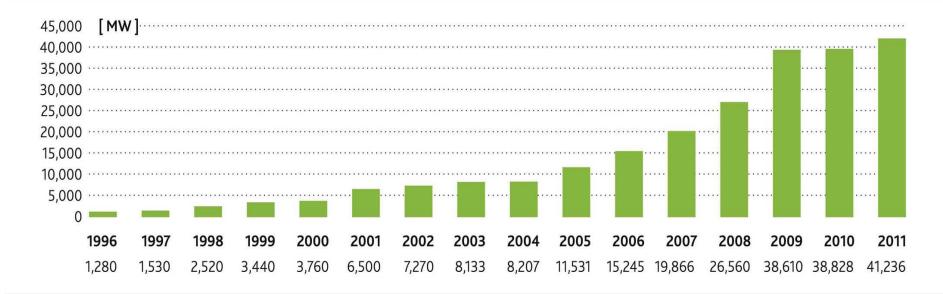


15 yr avg growth: 27.8%



2011 growth: 6%

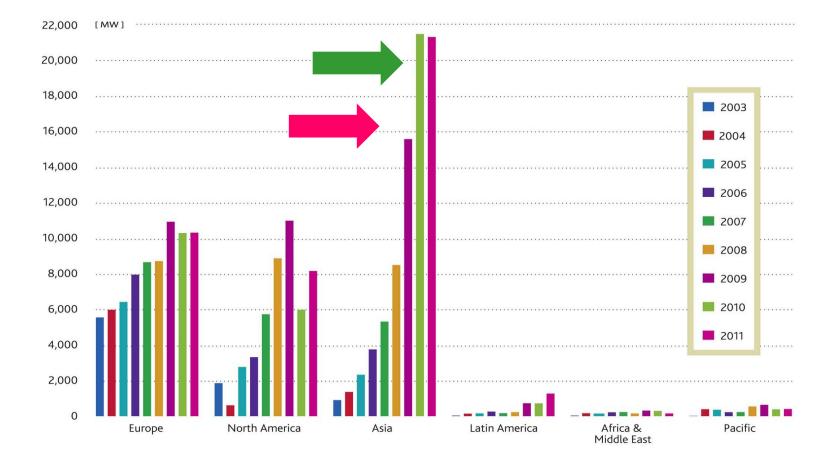
GLOBAL ANNUAL INSTALLED WIND CAPACITY 1996-2011



15 yr avg growth: 29.2%

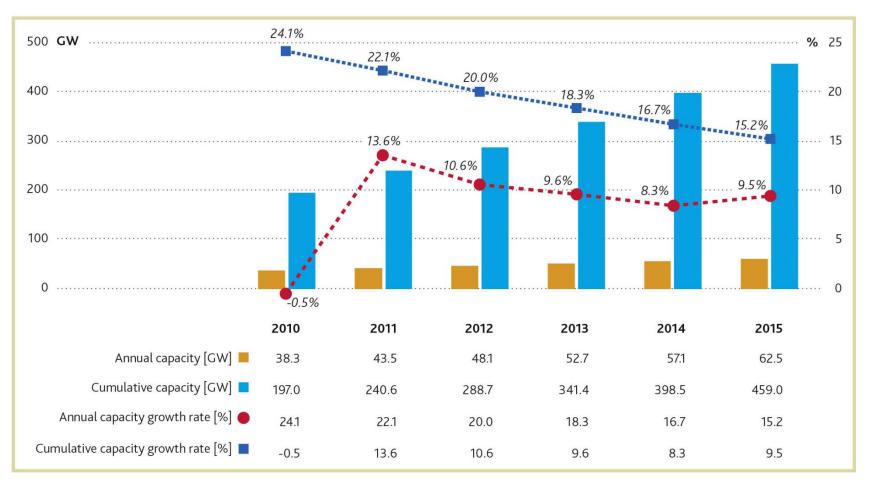


ANNUAL INSTALLED CAPACITY BY REGION 2003-2011





MARKET FORECAST 2011-2015





Offshore development

~ 4100 MW Global cumulative capacity end 2011: <2% of total installed wind power capacity

~1,000 MW 2011 Market ~2.5% of annual wind power market

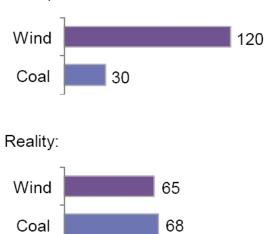
2020: ~70 GW <10% cumulative capacity



Challenges (1)

Perceptions

LEVELIZED COSTS: BEST NEW WIND VS NEW COAL (\$/MWh)



Perception:

- New coal must cover cost of capital
- New coal requires advanced pollution control
- Wind turbines back to 2005 prices, but now perform much better
- Wind bankability has driven down cost of capital
- · Coal suffers from carbon price risk

Source: Bloomberg New Energy Finance



Beijing | Brussels | London

ENERGINET DIC

Challenges (2)

Integration/transformation

Coherent and flexible energy systems 50% of electricity demand energy Electricity Electric vehicles Transportation Electric Doilers Heat pumps electricity Gas & Oil other sectors **District Heating**



New Markets

Latin America: Brazil leading, followed by Mexico, Chile, Uruguay and others;

Africa: Morocco and Egypt; now Kenya, followed by Tanzania and Ethiopia. South Africa now beginning

Asia: Mongolia, Viet Nam, Thailand, Sri Lanka. Japan?



Conclusions

- Asian market driving global growth
- European market solid for now
- North America uncertain and volatile
- Hopeful signs in Latin America, Africa
- Downward price pressure continues
- Trade barriers/new protectionism?
- International commodity price volatility returns with economic recovery
- Market drivers all still in place, and increasingly prominent: energy security; cost stability; macroeconomic security; local economic development and job creation; local environment and climate



Thank you!

For more information:

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