



# **Global Wind Power Outlook**

***Steve Sawyer, Secretary General***

**ReVision 2012, Tokyo**

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## C0 Members



GE Energy



## C2 Members



MANAGING RISK



GL Garrad Hassan



KENERSYS

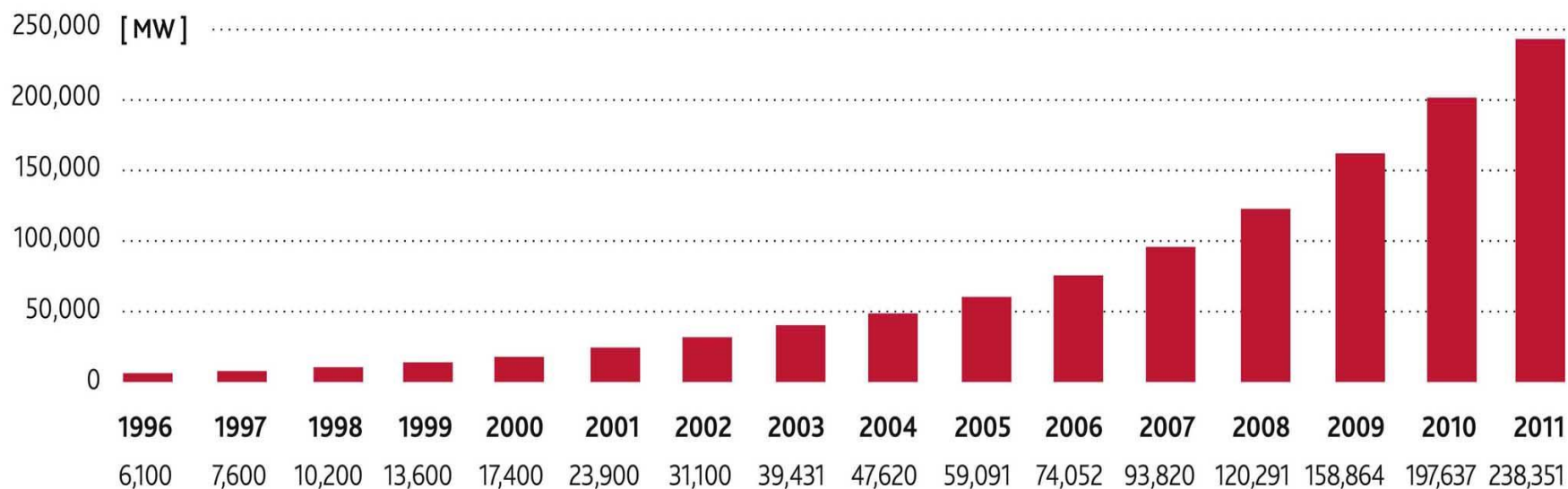


## Associations



**2011 growth: 20.9%**

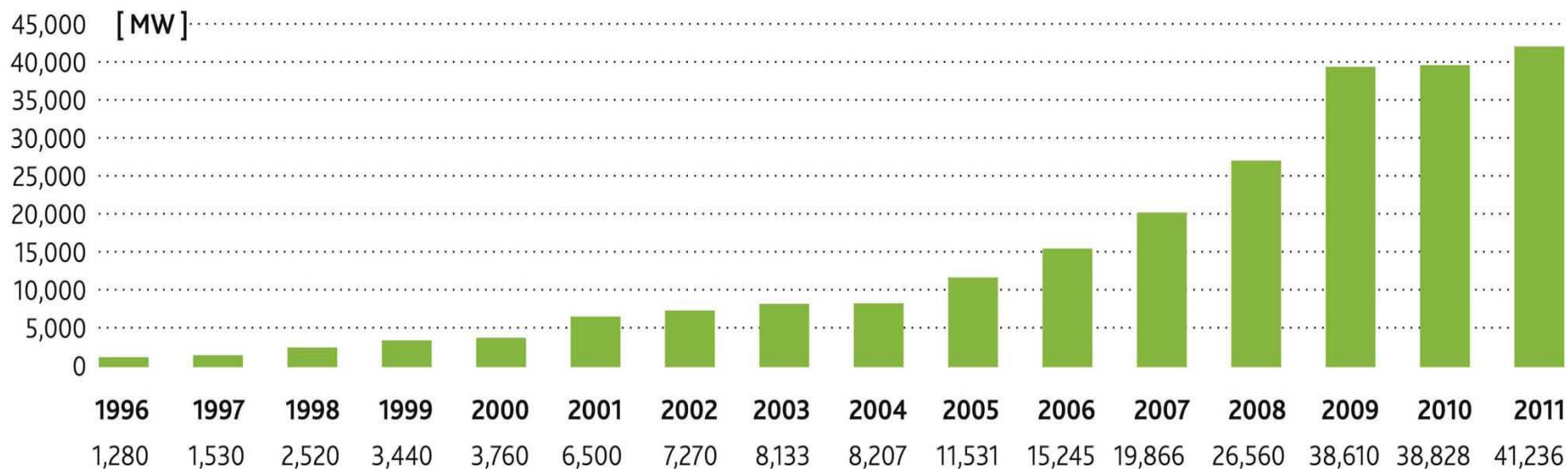
**GLOBAL CUMULATIVE INSTALLED WIND CAPACITY 1996-2011**



**15 yr avg growth: 27.8%**

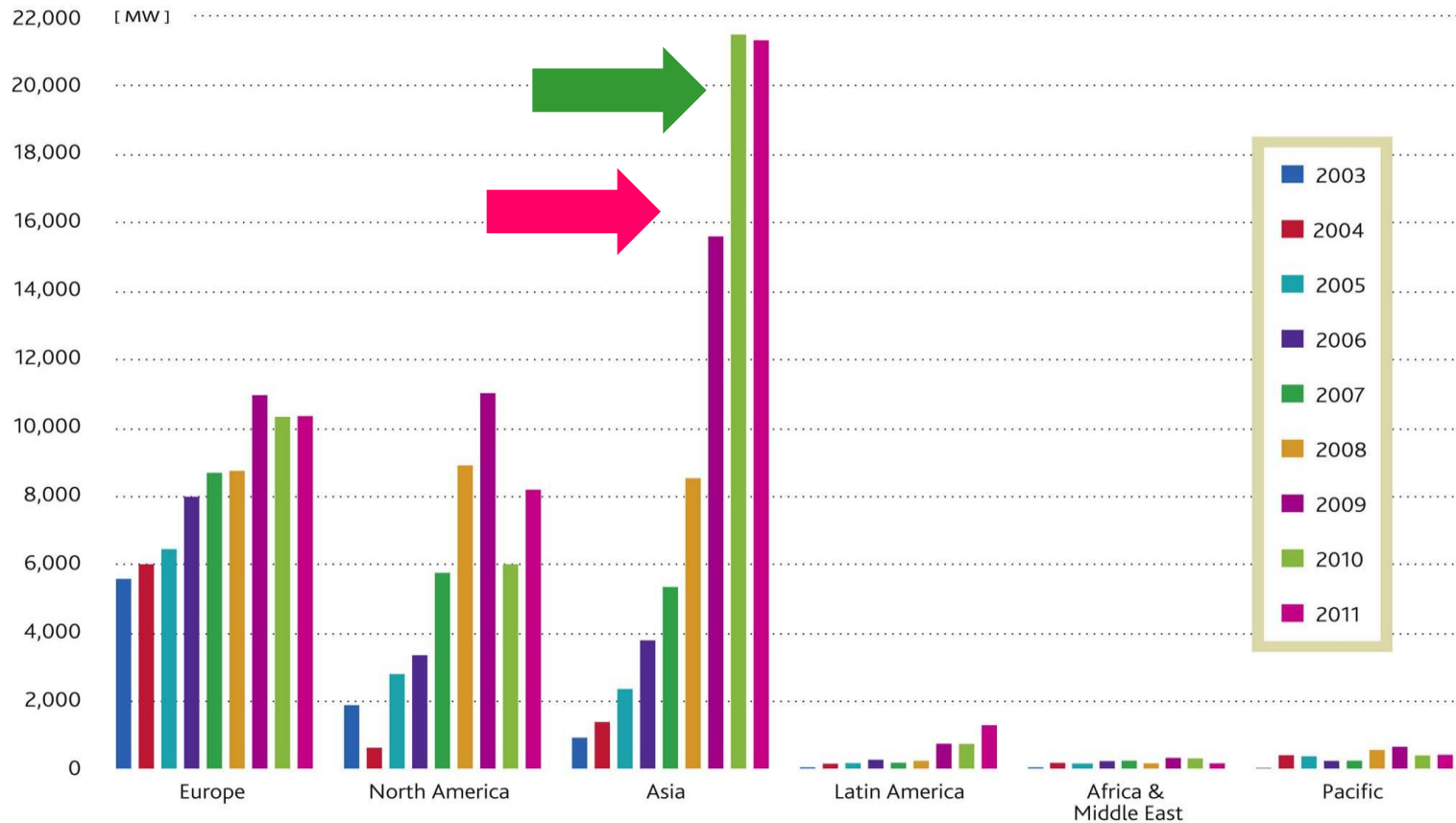
**2011 growth: 6%**

**GLOBAL ANNUAL INSTALLED WIND CAPACITY 1996-2011**

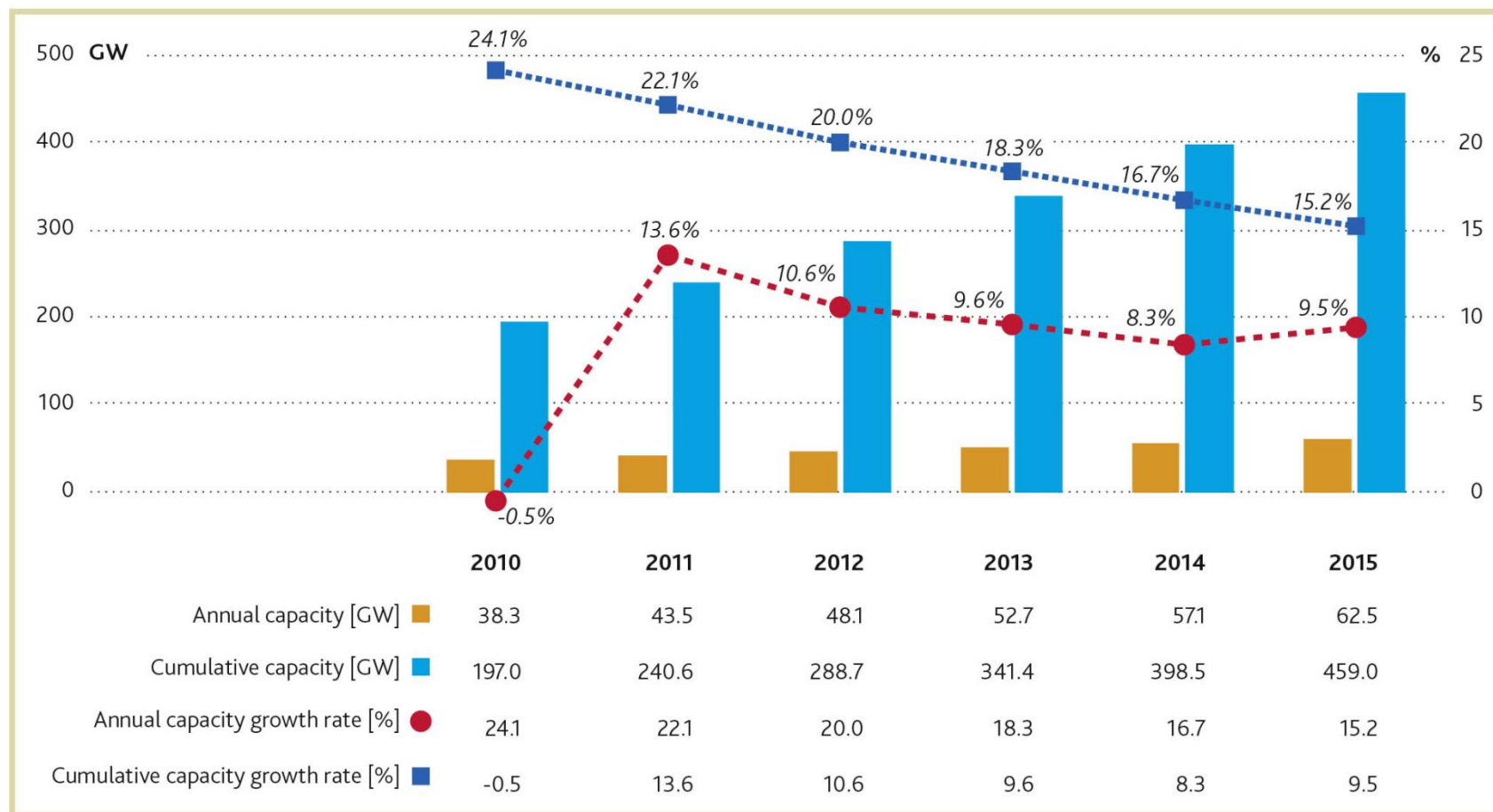


**15 yr avg growth: 29.2%**

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*

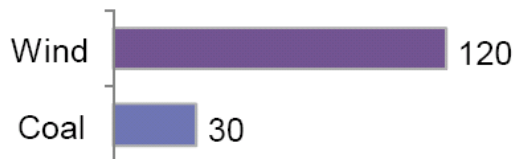
*2020: ~70 GW <10% cumulative capacity*

# Challenges (1)

## Perceptions

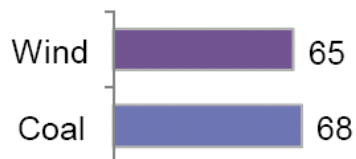
### LEVELIZED COSTS: BEST NEW WIND VS NEW COAL (\$/MWh)

Perception:



- New coal must cover cost of capital
- New coal requires advanced pollution control

Reality:

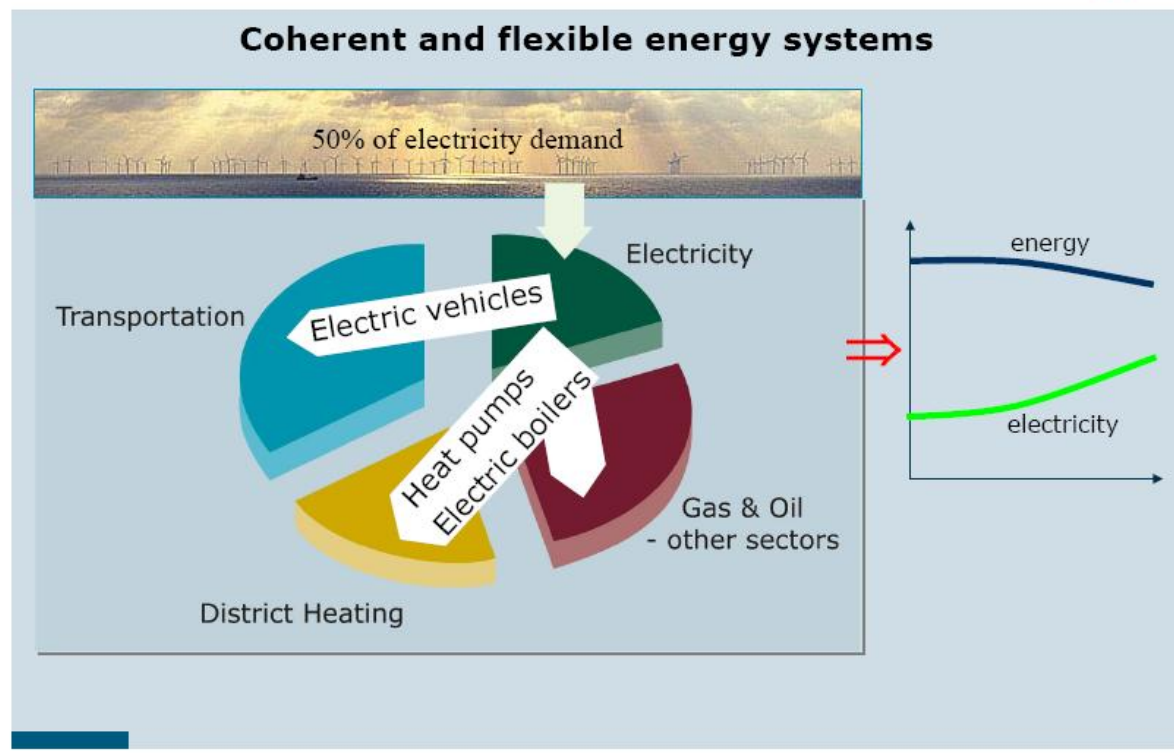


- Wind turbines back to 2005 prices, but now perform much better
- Wind bankability has driven down cost of capital
- Coal suffers from carbon price risk

## Challenges (2)

### Integration/transformation

ENERGINET/DK



## **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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