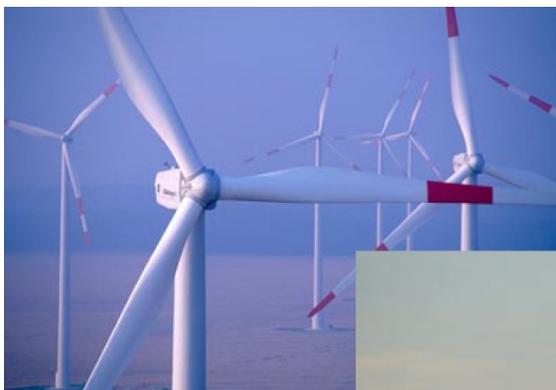


March 12, 2007



## ▶ Overview

- ▶ FORESIGHT INTRO
- ▶ WIND INDUSTRY GROWTH
- ▶ WIND ECONOMICS & DRIVERS
- ▶ DEVELOPMENT PROCESS
- ▶ SITE ASSESSMENT



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## ▶ Foresight Intro

- ▶ Foresight Energy Company is a leading renewable energy consulting group founded 1996
- ▶ Consulting clients include:
  - EPRI
  - Utilities and Power Marketers
  - Wind and other renewable project developers
  - California Energy Commission – RPS development and deployment
- ▶ Formed Foresight Wind Energy, LLC in 2002 to directly pursue wind project development
  - Focus on US Southwest market and California
  - 120 MW of Foresight wind projects planned for construction in 2007
  - An additional 1,800 MW of wind projects under development
  - Partnered with many tribes including Hopi, Navajo, and Pueblo of Laguna



## ► Sizes and Applications



- Small ( $\leq 10$  kW)**
- Homes
  - Farms
  - Remote Application

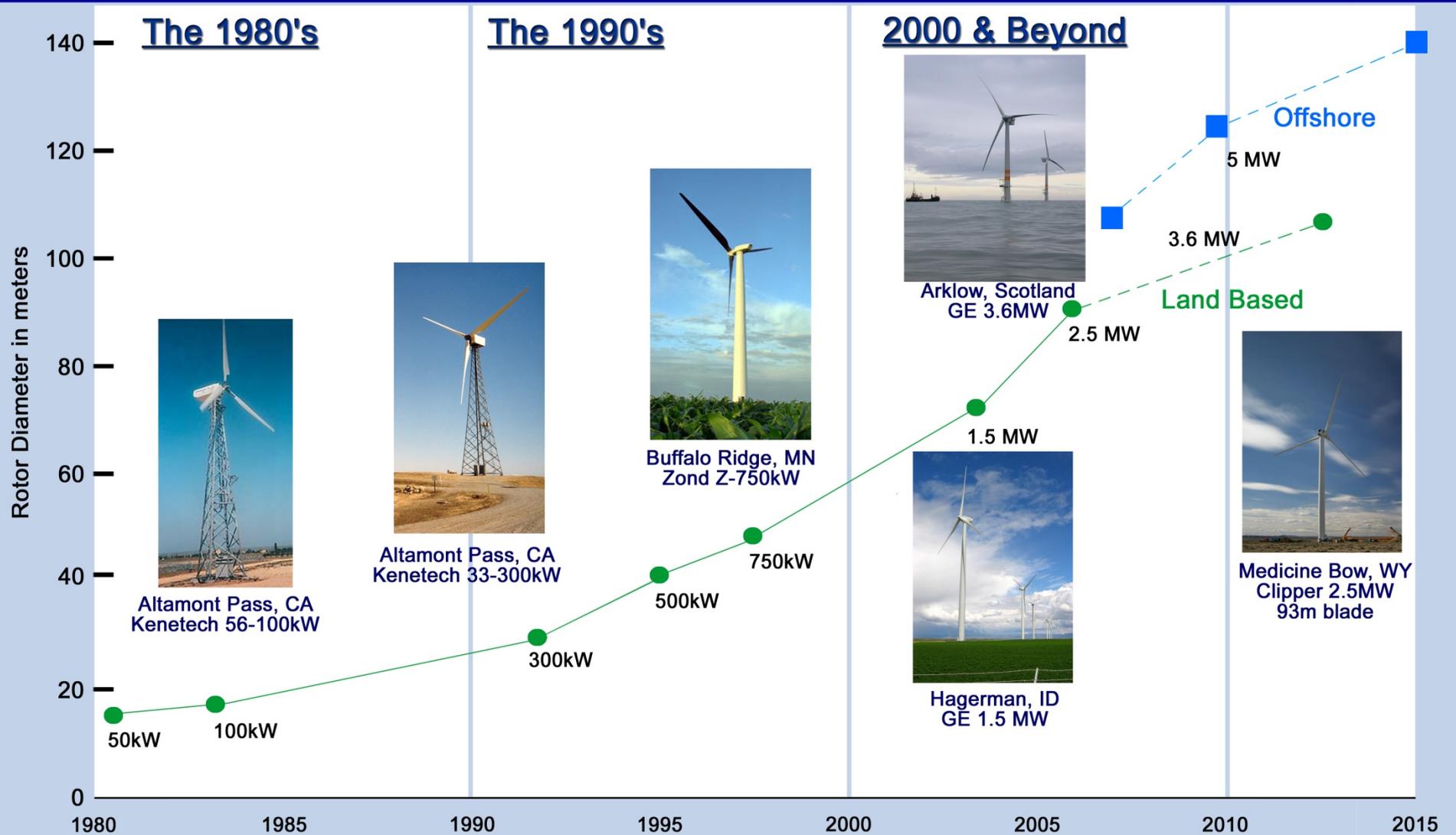


- Intermediate  
(10-250 kW)**
- Village Power
  - Hybrid Systems
  - Distributed Power



- Large (660 kW - 2+MW)**
- Central Station Wind Farms
    - Distributed Power
    - Community Wind

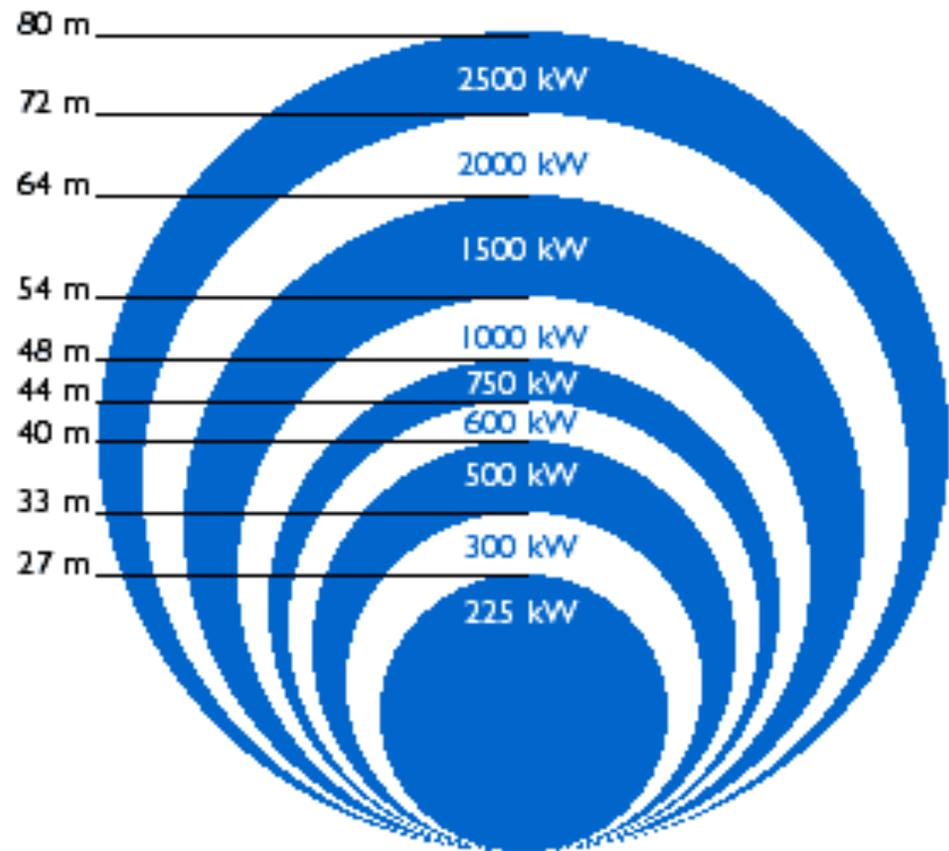
# Evolution of U.S. Commercial Wind Technology



## ▶ Wind Economics

**POWER =  $\frac{1}{2}$  \* (power coefficient \* air density \* rotor swept area \* wind speed<sup>3</sup>)**

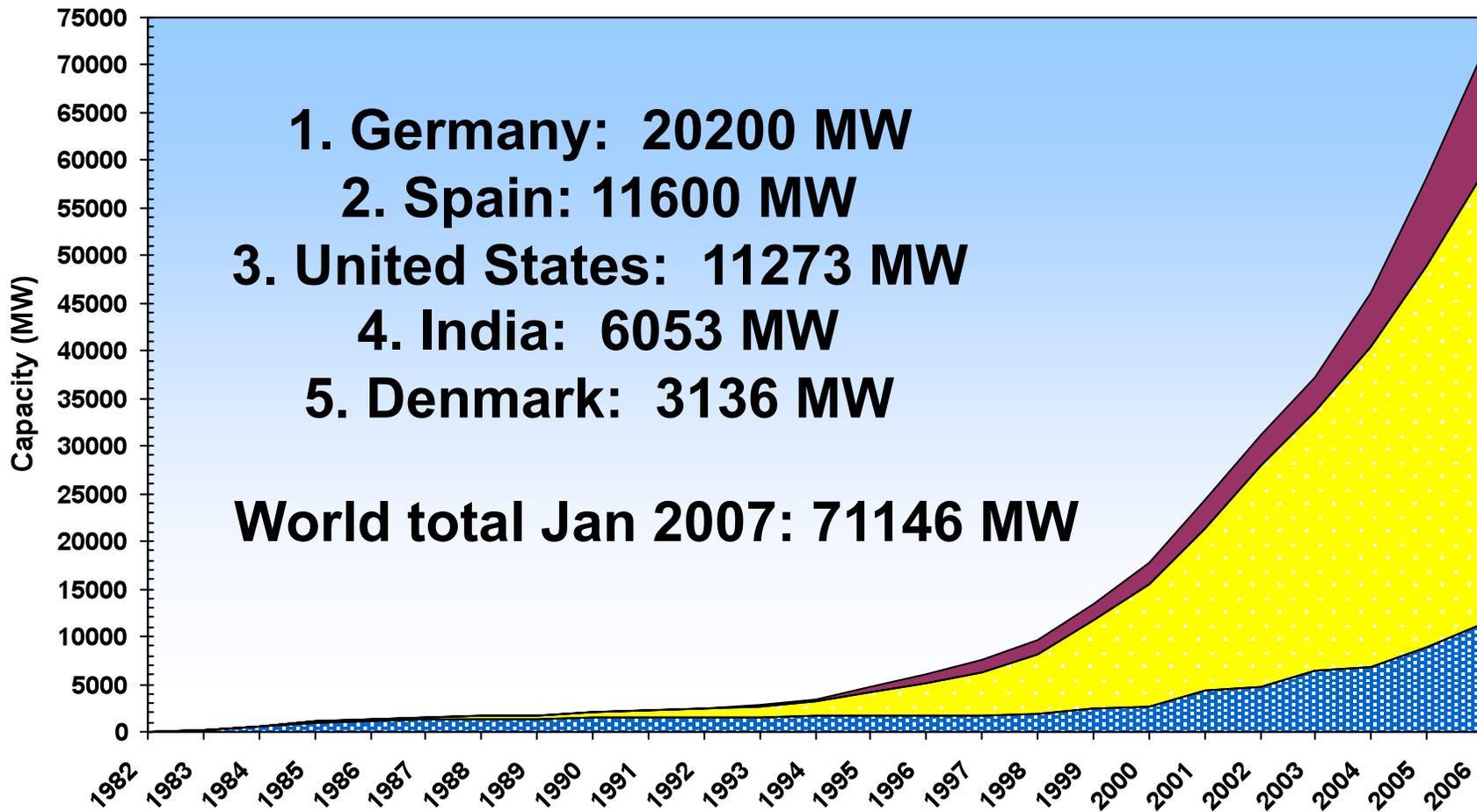
- ▶ SHEAR = wind speed
- ▶ SCALE = swept area



© 1998 [www.WINDPOWER.org](http://www.WINDPOWER.org)

▶ **People Want Renewable Energy!**

**Total Installed Wind Capacity**



**FOF**

Source: WindPower Monthly



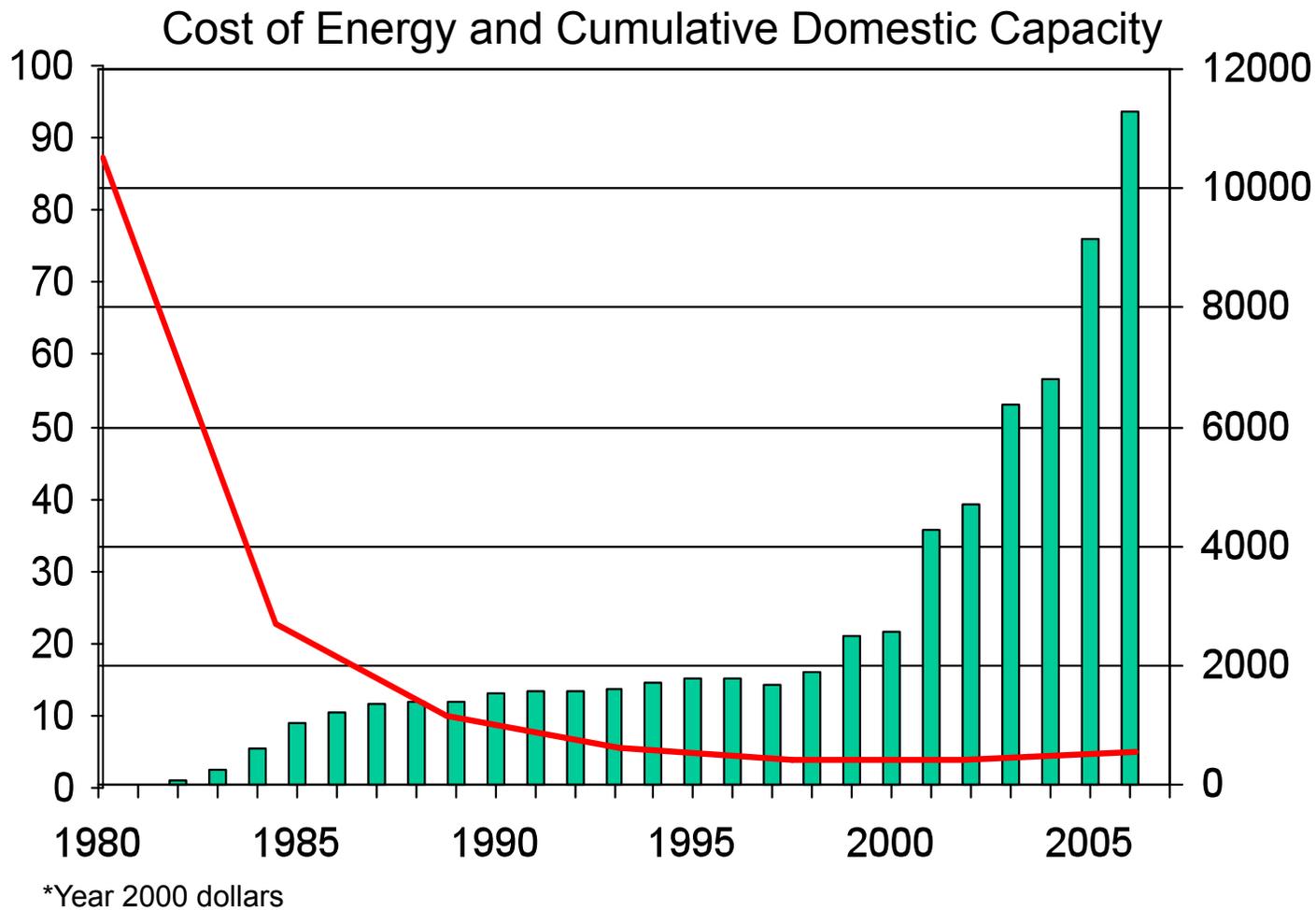


## ▶ Drivers for Wind Power

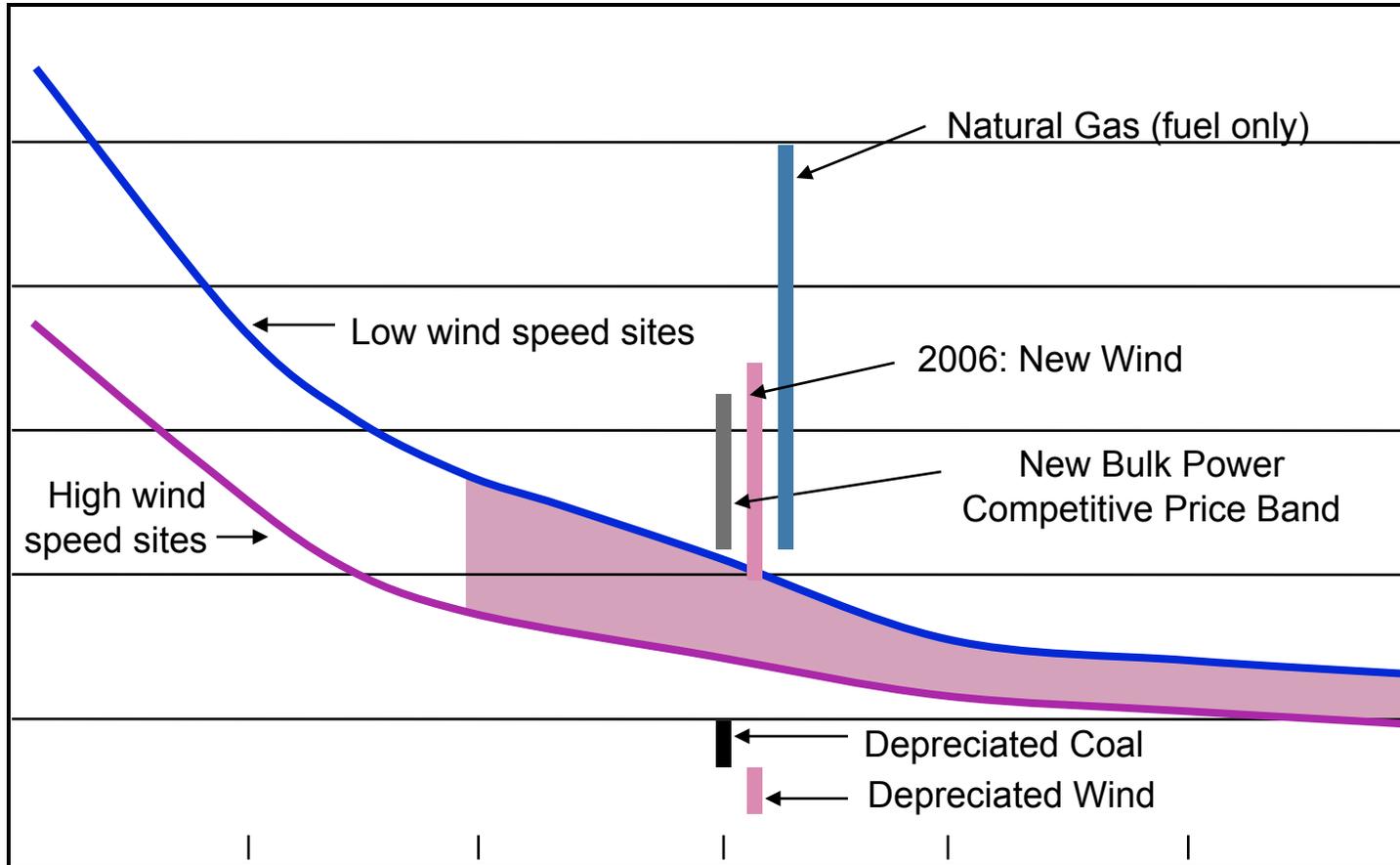
- ▶ Declining Wind Costs
- ▶ Fuel Price Uncertainty
- ▶ Federal and State Policies
- ▶ Economic Development
- ▶ Green Power
- ▶ Energy Security



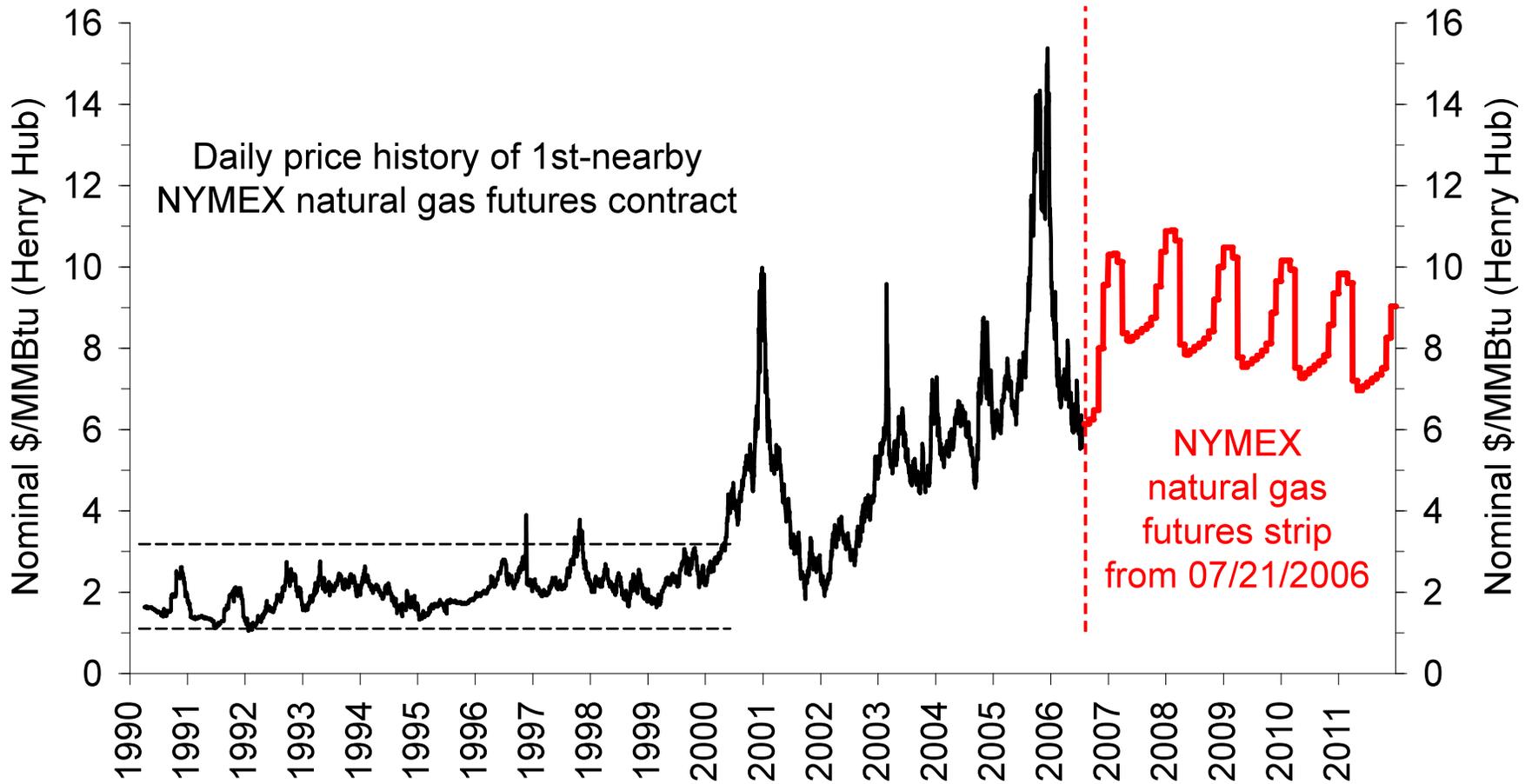
► Capacity & Cost Trends



## ▶ Wind Cost of Energy



▶ Natural Gas – Historic Prices



Source: LBNL

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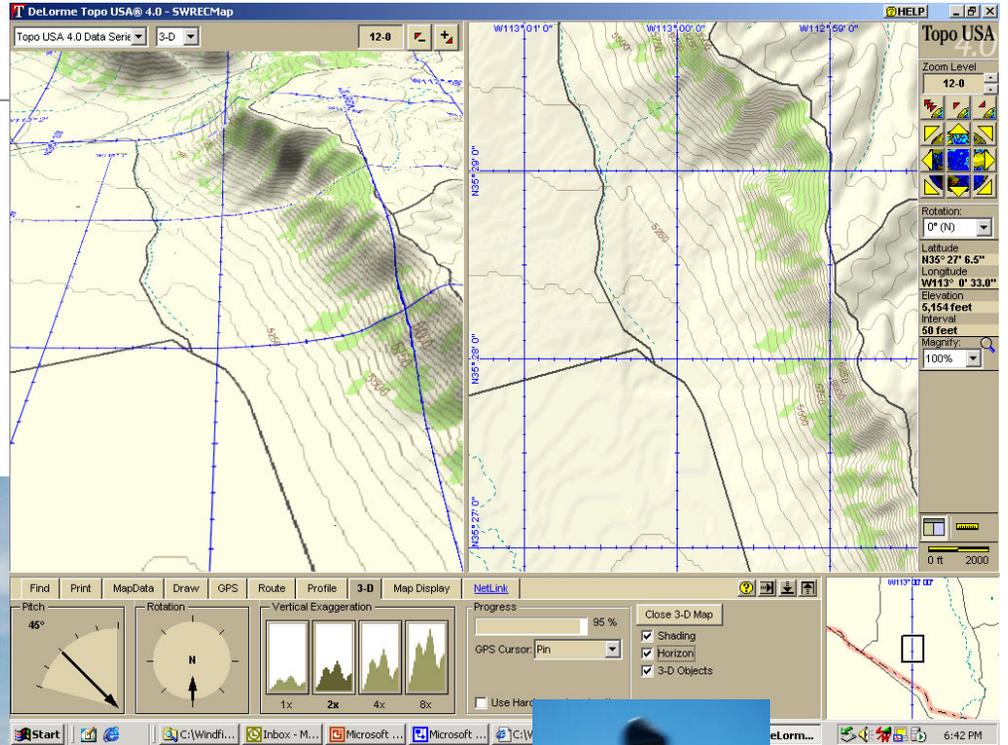
▶ **Development Process**

- ▶ Site Selection
- ▶ Land Agreements
- ▶ Wind Assessment
- ▶ Environmental Review
- ▶ Economic Modeling
- ▶ Interconnection Studies
- ▶ Permitting
- ▶ Sales Agreements
- ▶ Financing
- ▶ Turbine Procurement
- ▶ Construction contracting

**Foresight Role - Early Stage Developer**  
**high- risk, multi-disciplinary**

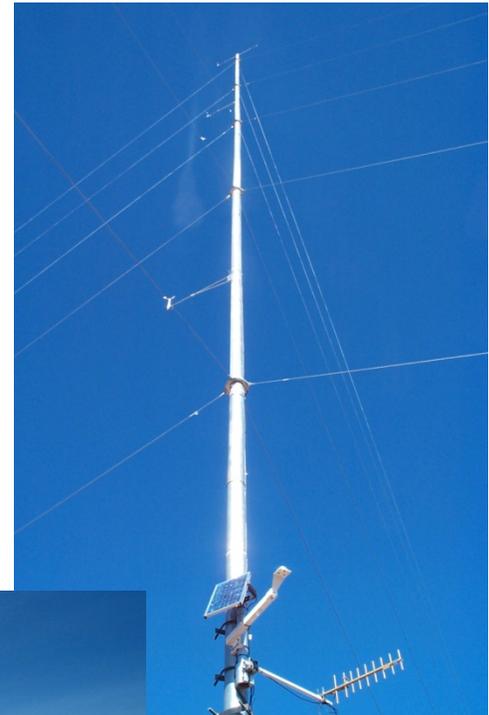
**Large Energy Company Role – Late Stage**  
**lower- risk, large capital required**

# Wind Assessment

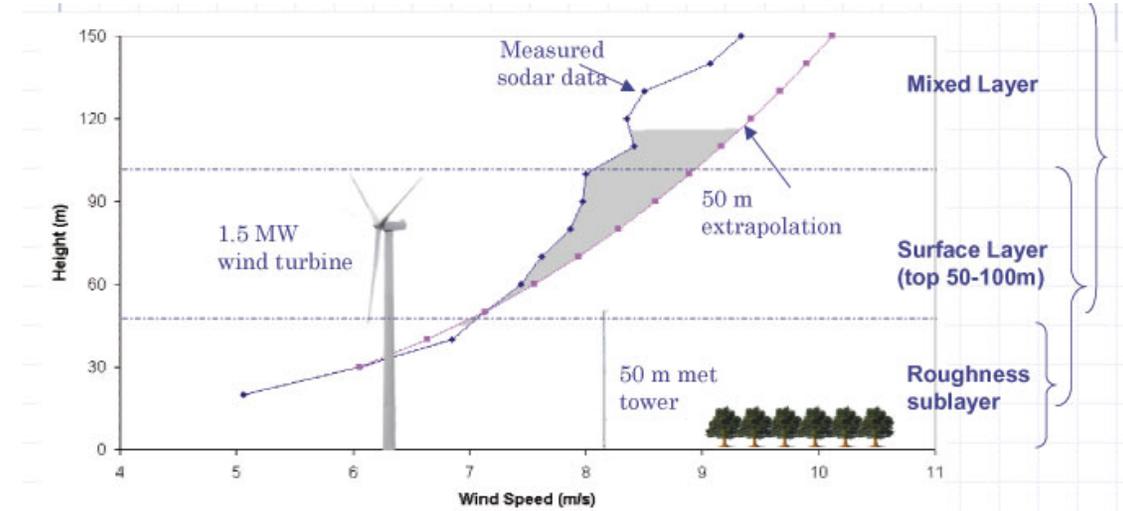


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▶ **Met tower assessment**



## ▶ Next Gen Assessment - SODAR



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## ▶ Contact Information

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