



IBERDROLA
RENEWABLES

Wind Development Overview – Site Selection Process

**BLM Renewable Energy Summit
Las Vegas, Nevada
September 1, 2009**

IBERDROLA Renewables Today: The worldwide leader⁽¹⁾. . .



#1 Worldwide: Presence in 19 Countries ⁽¹⁾

Europe	_____	#1
Spain	_____	#1
United Kingdom	_____	#1
United States	_____	#2

#1 in the Pipeline ⁽²⁾

NOTES

(1) Proforma Scottish Power

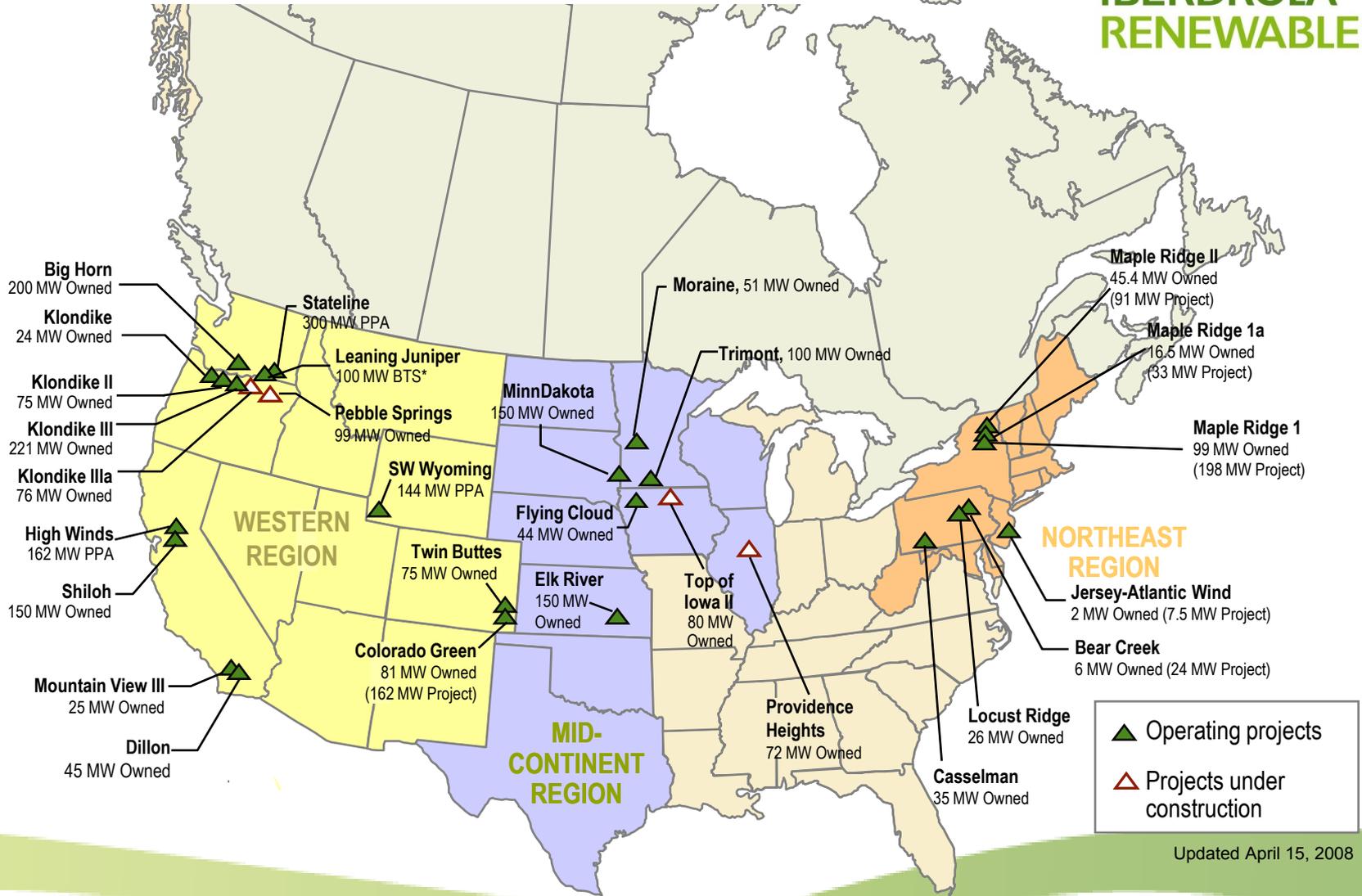
(2) Based on pipelines announced to the markets by competitors

... that has built a global brand with an active presence in renewable energy in 19 countries.



Source: Company data as of June 30, 2007, Proforma Scottish Power

North American Wind Assets

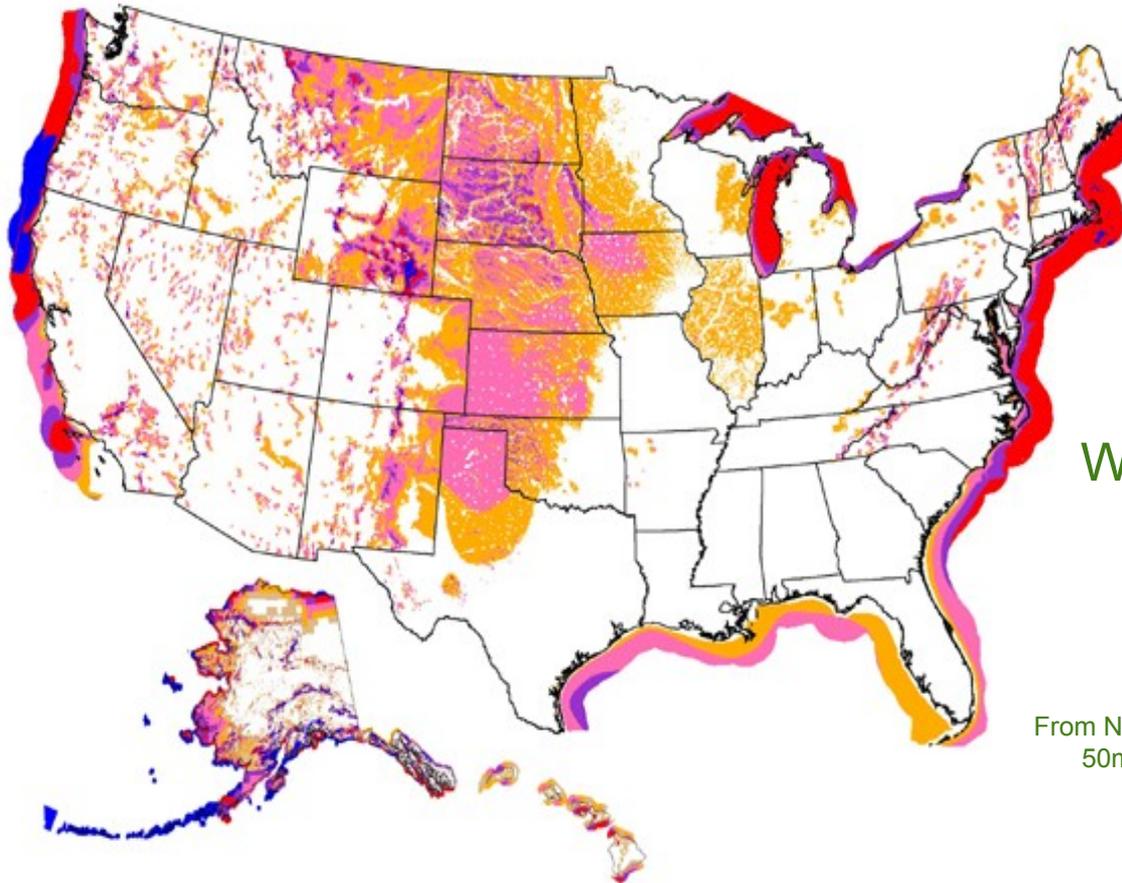


Wind Energy Developer Checklist

- Developable wind resource
- Site Control – Leases, Rights-of-Way, Land Purchases
- Permits – Local, State, Federal
- Interconnection
- Power Purchaser – PPAs or market
- Site engineering that demonstrates constructability
- Community Support
- Financing

ALL of the above

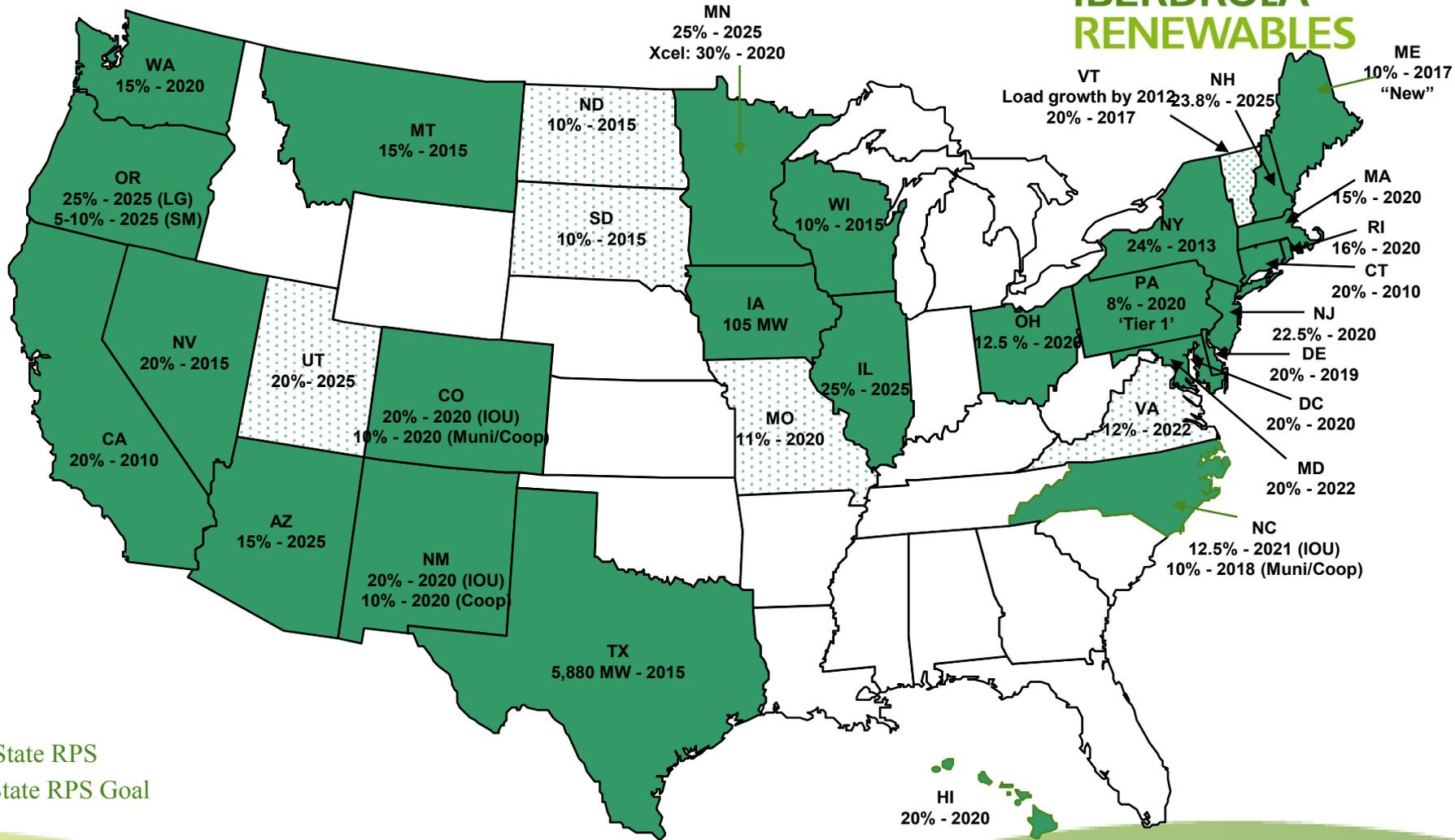
U.S. Wind Map



Where to begin?

From NREL.
50m

RPS Markets



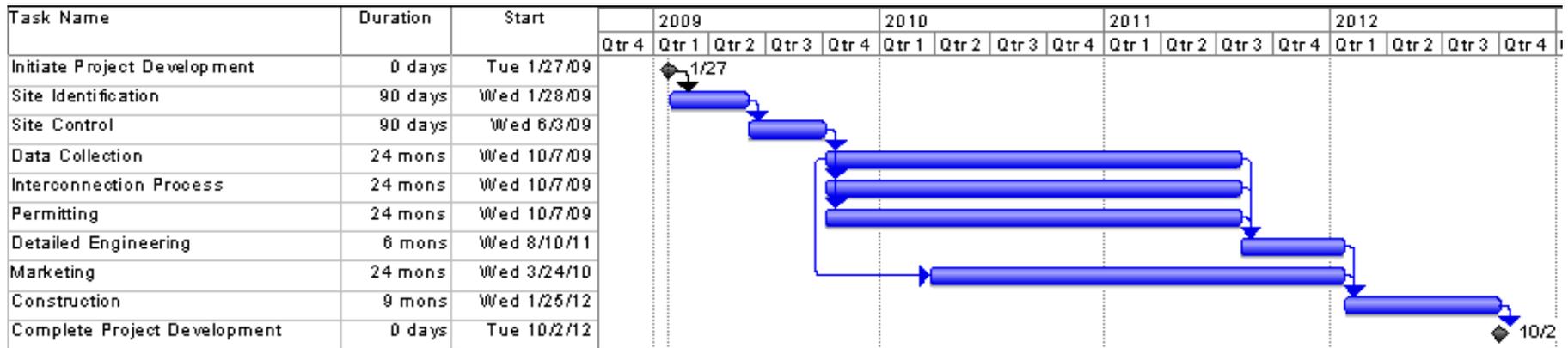
State RPS
 State RPS Goal

26 States + D.C.

6 States with nonbinding goals

Updated July 2008

Basic Development Schedule



Wind Data Collection

- Install 1-3 met towers in representative locations; # of towers depends on size of project area and topographic complexity
- If available, correlate to nearby long-term reference data point
- After 6-12 months of data collection, create initial turbine layout and add towers within planned corridors
- Deploy SODAR to validate wind shear at certain sites



Met Towers

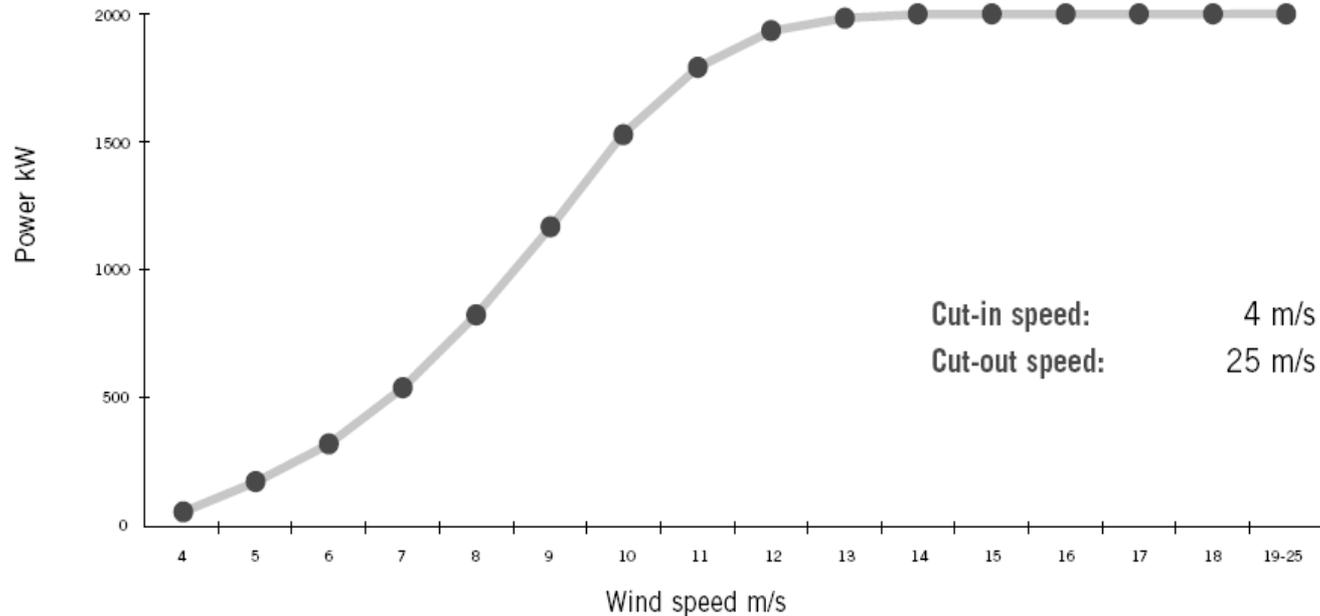


SODAR



Wind Turbines - G87 Power Curve

- Cut-in speed: 9 mph
- 97% Rated-power: 27 mph
- Cut-out speed: 56 mph



Wind Project Siting Considerations

- Real Estate
 - Must be deemed consistent with existing land use
 - Obtain priority right via agreement (whether public or private)
- Permitting
 - No environmental fatal flaws
 - FAA and military clearances
 - Local, State, Federal – know the jurisdictions and governance
- Interconnection
 - FERC-established queue process (LGIP) takes time and money
 - Distance to nearest lines + cost of upgrades = interconnectability
- Constructability
 - Need road access with reasonable grade
 - Geotechnical assessments for foundations and collection system
 - Adequate land area for laydown at proposed turbine locations



Questions?

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