

INSIGHTS FROM A DEVELOPER

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RES Americas Inc.

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U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy

Tribal Energy Program

AGENDA

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- **INTRODUCTION AND RES OVERVIEW**

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- **GROWTH OF THE WIND INDUSTRY IN THE US**

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- **CHALLENGES CURRENTLY FACING THE INDUSTRY**

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- **WHERE WE ARE HEADED**

ABOUT - RES Americas Inc.

Leader in wind power development and construction

- Established in US in 1997 in Tehachapi, CA; UK parent active in wind since 1982
- 3,946 MW of completed construction (approx. 11% of installed wind capacity in US)
 - RES Americas developed nearly half of the projects it has constructed (1,702 MW out of 3,946 MW)
- 2,981 MW construction backlog including 952 MW currently under construction
- Currently own and operate 2 wind farms in TX representing 245 MW of capacity
- HQ in Broomfield, regional offices in Austin, Portland, Minneapolis and Montreal
- 390 employees across US and Canada

Integrated business model: Develop, Construct, Own & Operate

Flexible development opens doors with utilities and IPP

Robust 12 GW wind and solar pipeline

Strong management team with proven track record



Deal Activity in last 1 year

Project	Size (MW)	Deal Size (\$M)
Talbot	99	\$285
Greenwich	99	\$273
Cedar Point	252	\$496
Crossroads	227.5	\$451
Total	677.5	\$1,505

AGENDA



- **INTRODUCTION AND RES OVERVIEW**



- **GROWTH OF THE WIND INDUSTRY IN THE US**



- **CHALLENGES CURRENTLY FACING THE INDUSTRY**



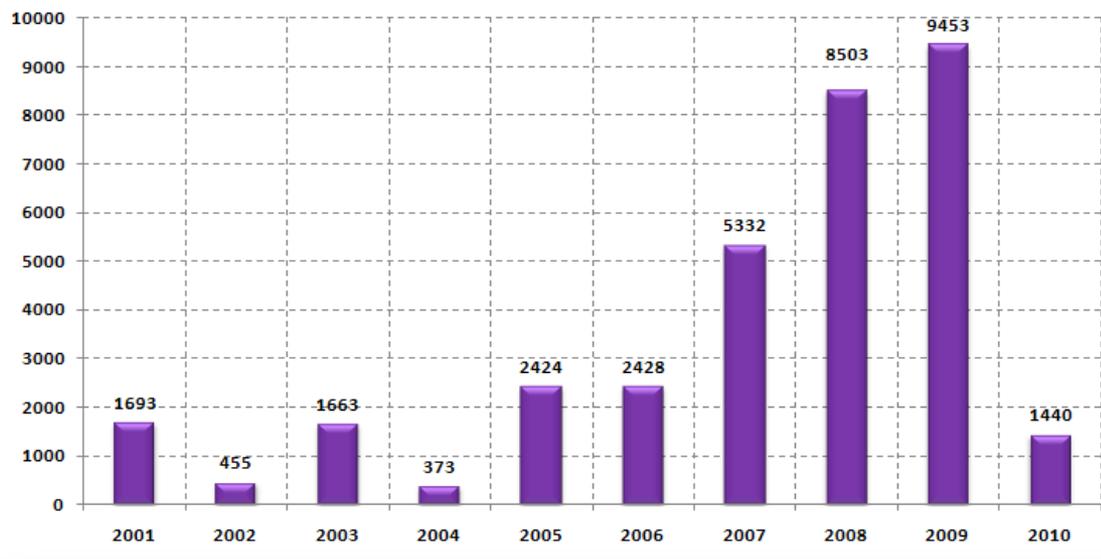
- **WHERE WE ARE HEADED**

ANNUAL GROWTH IN THE WIND INDUSTRY

Wind Energy Installed 2001 - 2010

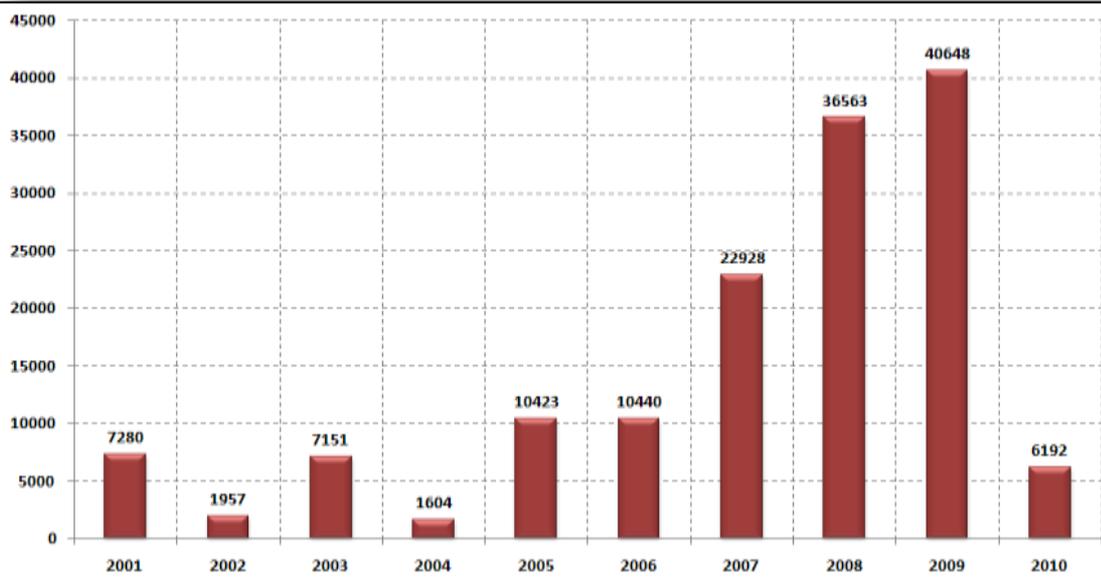
US Wind Industry in 2009 broke all previous records by installing 9453 MW of new capacity .

As of June 30, 2010, 1440 MW of Wind Capacity had been installed with 6000 MW under construction



Jobs Created 2001 - 2010

Its been estimated that approximately 4300 jobs are created per 1000 MW



Source: Renewable Energy Policy Project

AGENDA



- **INTRODUCTION AND RES OVERVIEW**



- **GROWTH OF THE WIND INDUSTRY IN THE US**



- **CHALLENGES CURRENTLY FACING THE INDUSTRY**

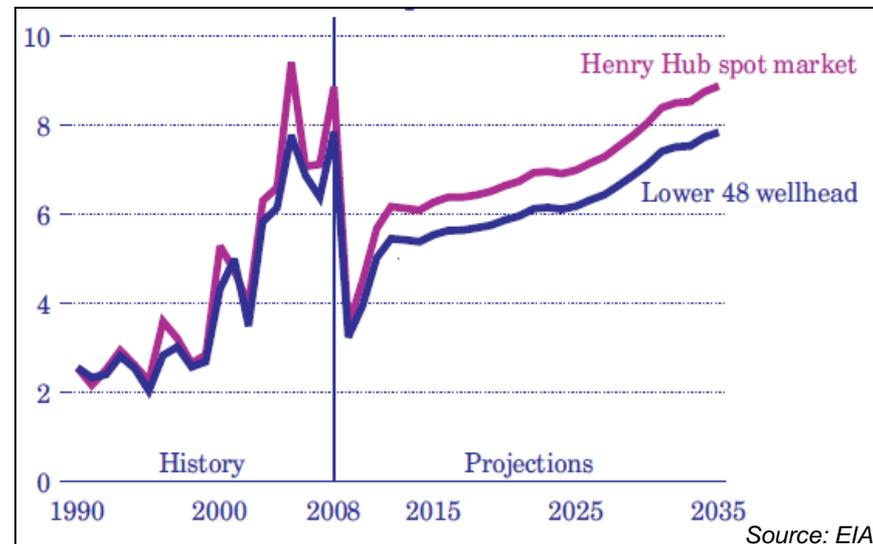


- **WHERE WE ARE HEADED**

LACK OF POWER OFF-TAKE

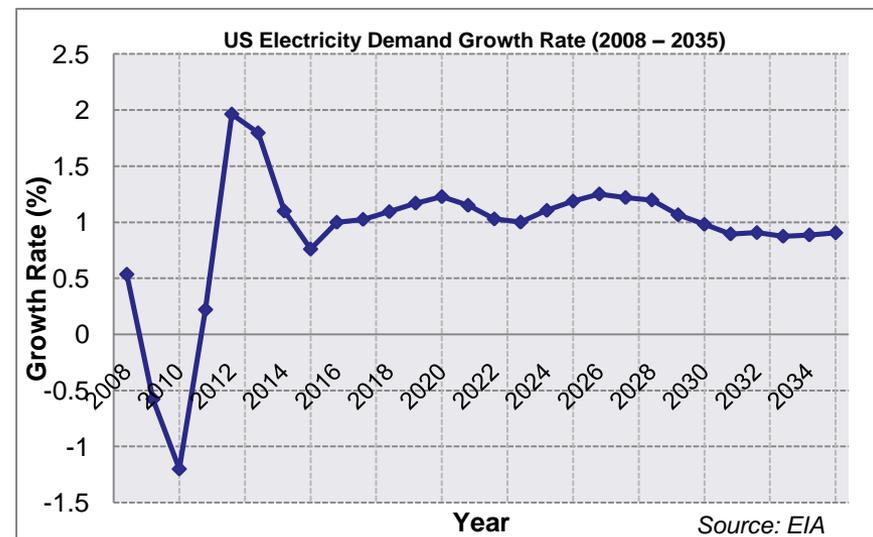
Low Natural Gas Prices

- Shale Gas to provide largest source of growth in US natural gas supply
- Henry Hub NYMEX 12-month forward for Natural Gas drops from \$6/MMBtu in Jan 2010 to below \$5/MMBtu in May 2010
- Henry Hub Natural Gas price for October MTD \$3.62
- US net imports of natural gas expected to decline from 13% in 2008 to 8% in 2035



Declining Electricity Demand

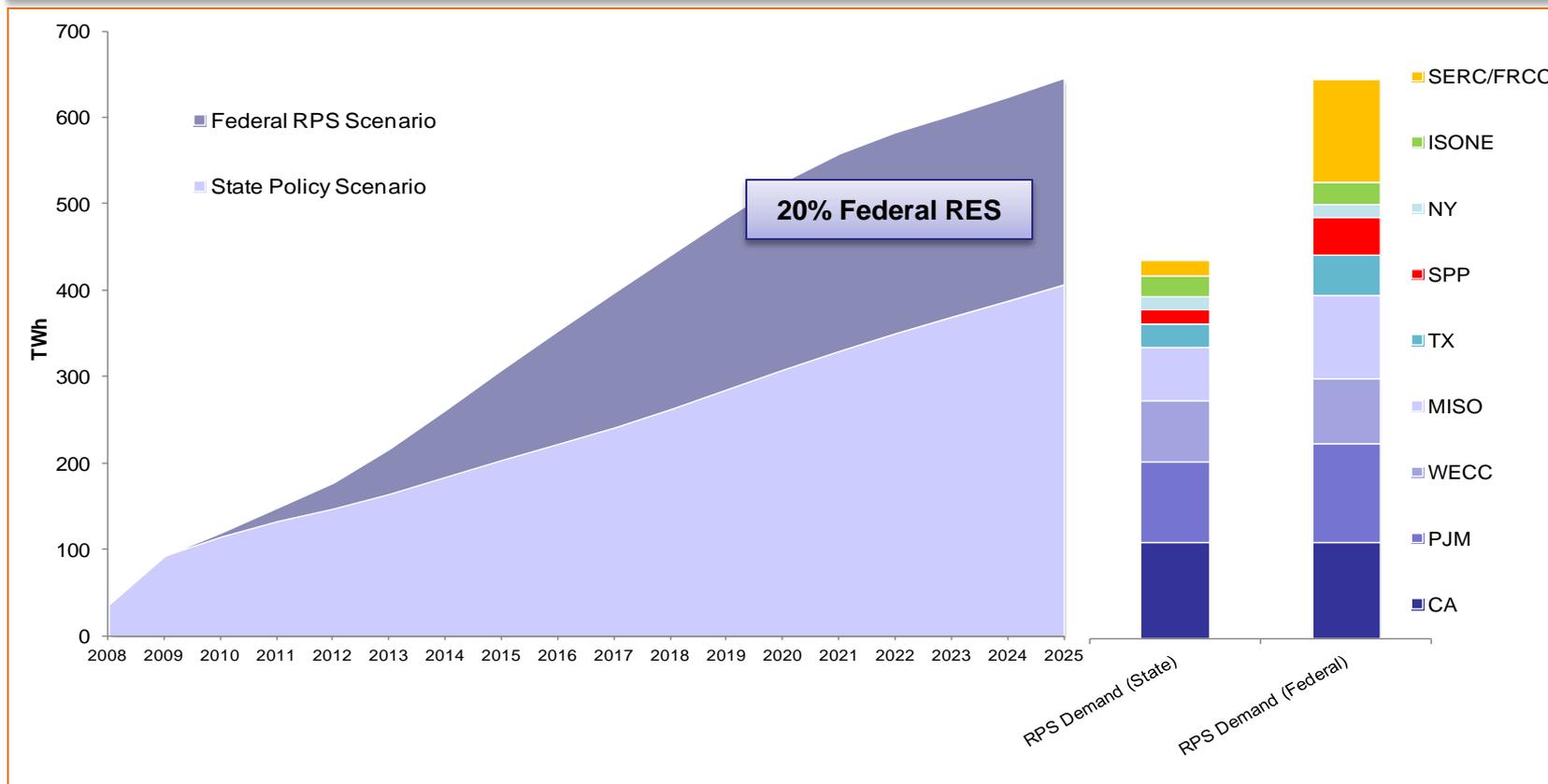
- Electricity Demand increased by
 - 9.8% per annum in the 1950's
 - 2.4% per annum in the 1990's
- Projected Electricity Demand Growth Rate from 2009 to 2035 = 1% per annum
- Note: Industrial Electricity Demand projected to drastically slow down from 2009 to 2035 (3%) as a result of efficiency gains and slow growth in industrial production



LACK OF POWER OFF-TAKE DUE TO A LACK OF FEDERAL RENEWABLE ELECTRICITY STANDARD (RES)

FEDERAL RES CAN CREATE AN ADDITIONAL RENEWABLE ENERGY DEMAND OF ABOUT 200 TWh by 2025

Effect of Federal RES on Renewable Energy Demand



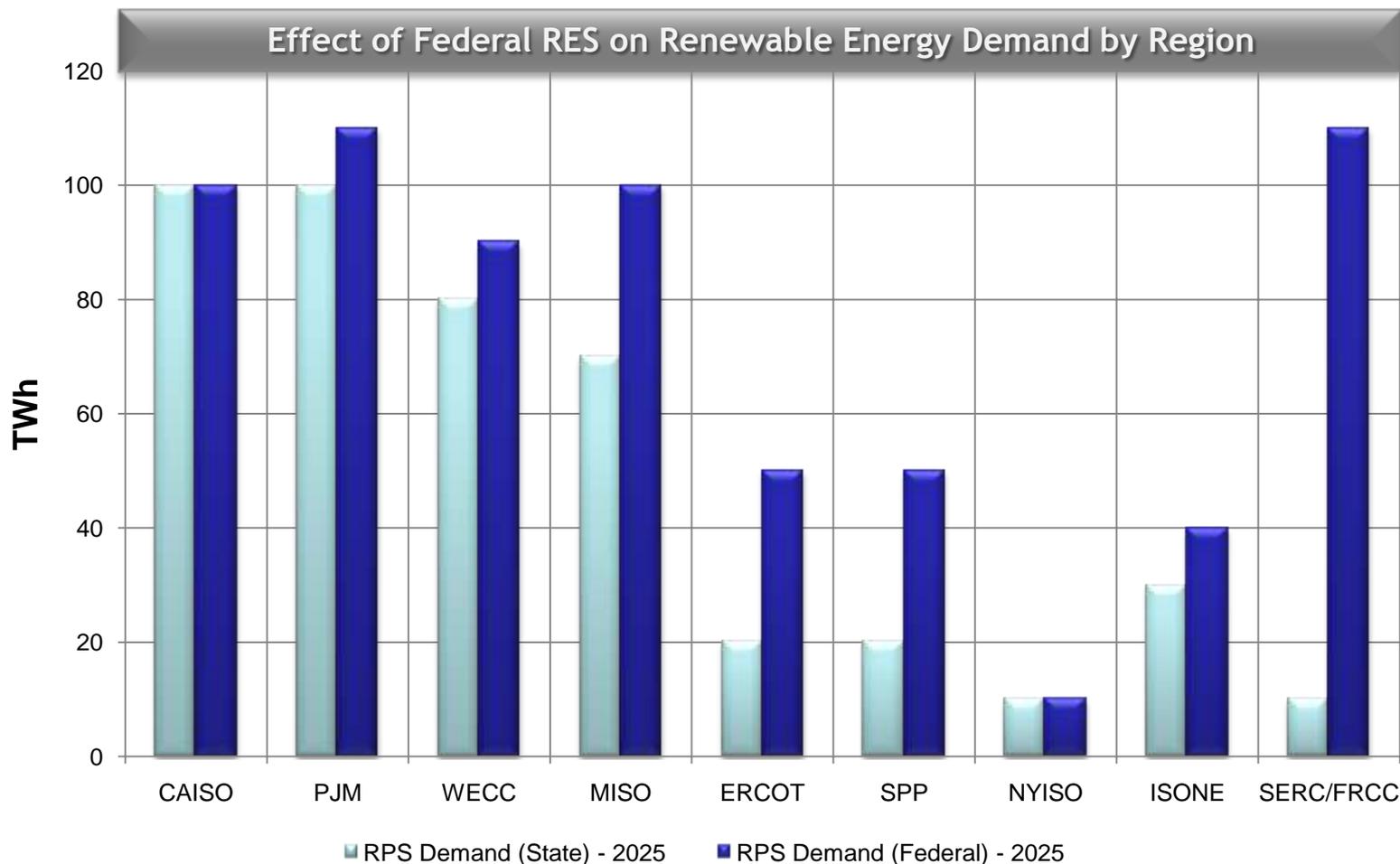
200 TWh \approx 65,000 MW of Installed Capacity (@ Capacity Factor 35%)

Source: US RPS Markets and Utility Strategies: 2010-2025 (May 2010)

LACK OF POWER OFF-TAKE DUE TO A LACK OF FEDERAL RES

20% FEDERAL RES CAN CREATE AN ADDITIONAL RENEWABLE ENERGY DEMAND OF ABOUT 200 TWh by 2025

200 TWh \approx 65,000 MW of Installed Capacity (@ Capacity Factor 35%)



MATURING WIND INDUSTRY

“Low Hanging Fruit” Already Harvested

1. **Many sites with good wind resources and proximity to transmission are already secured**
2. **On-Shore Development efforts now being focused on more remote sites which pose challenges like:**
 1. Lack of Transmission Capacity
 2. Distance from Load/Demand
 3. Environmental and Permitting Challenges

Steep Monetary Requirements to Bid Projects

1. **Capital requirements during development**
2. **Credit support requirements relating to interconnection, PPA security and turbine deposits**
3. **Interconnection Cost - \$75 - \$250k (100 MW)**
4. **PPA Security - \$75 - \$100/KW**
5. **Turbine Deposit - \$11.2 M (100 MW)**

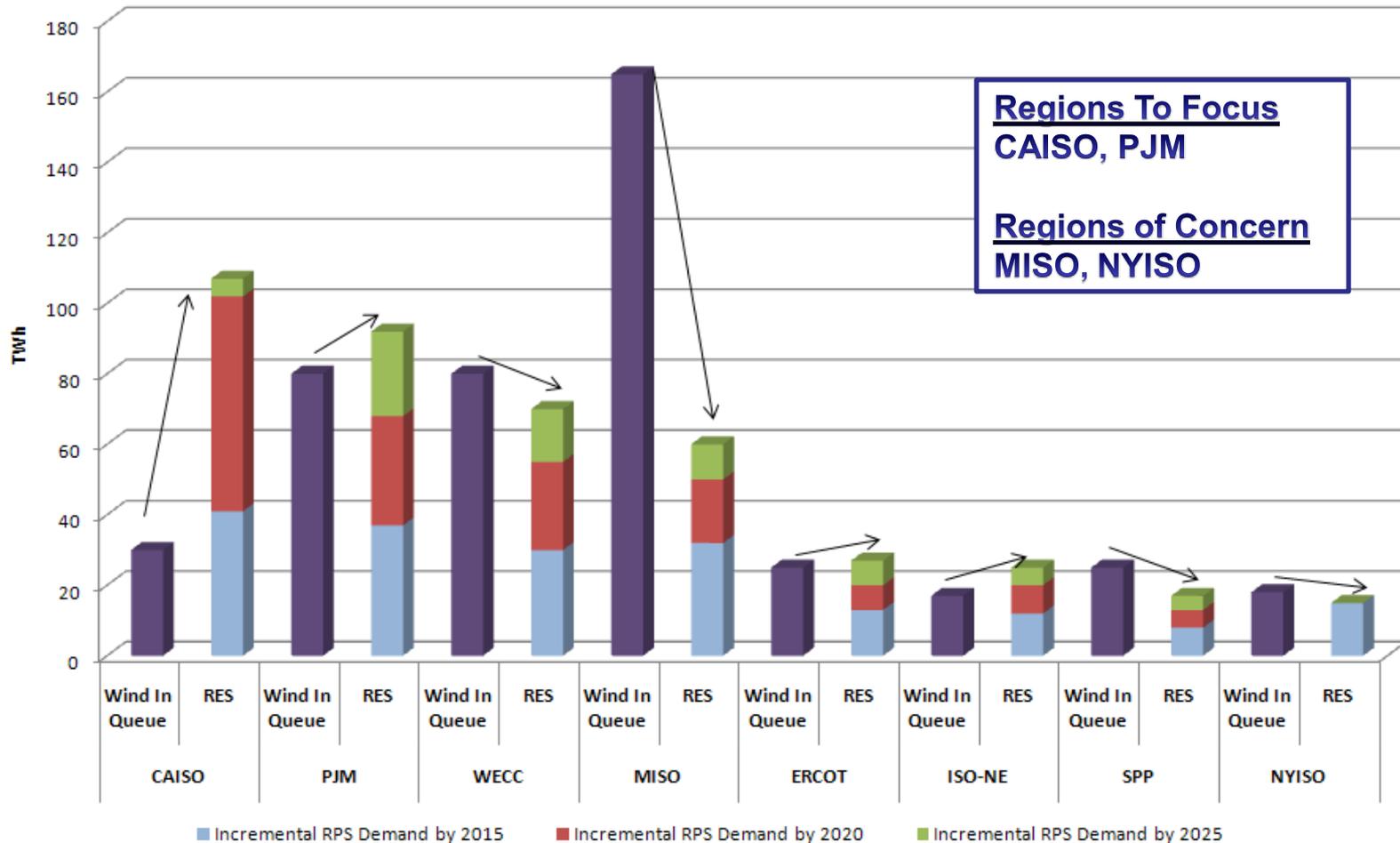
Transmission Challenges

Greatest Barrier to Wind Energy Development Challenges Exist due to:

1. **Fragmented Transmission Ownership**
 - I. Transmission investment characterized by very significant economies of scale
 - II. This ownership structure discourages investment
2. **Complex Regulatory Framework**
 - I. Separation of ownership and control of assets
 - II. A project may cross multiple borders. Lack of consistency deterrent to investment
3. **Siting Obstacles**
 - I. Local opposition delays permitting and siting of transmission lines
 - II. Permitting, siting, and construction can take up to ten years

INTENSE COMPETITION AMONG EXISTING PLAYERS

Development Pipeline in Various Regions vs. RES Demand



Source: US RPS Markets and Utility Strategies: 2010-2025 (May 2010)

INTENSE COMPETITION AMONG EXISTING PLAYERS

INDUSTRY CONSOLIDATION HAPPENING AS INDUSTRY FUNDAMENTALS FAVOR LARGE PLAYERS

Large Balance Sheet Players Provide the Following Advantages

- ❑ Access to cheap capital
- ❑ Lower the capital cost of the project by not earning development fee and a construction margin
- ❑ More negotiation power with turbine suppliers
- ❑ Ability to diversify assets
- ❑ Attract best industry talent to establish an experienced development team
- ❑ Ability to develop in-house specialties in wind resource assessment, permitting, transmission etc.
- ❑ Ability to more effectively participate in transmission pooling arrangements

Power Purchasing Utilities are Favoring Large Balance Sheet Players as they Provide More Security

AGENDA

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- **INTRODUCTION AND RES OVERVIEW**

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- **GROWTH OF THE WIND INDUSTRY IN THE US**

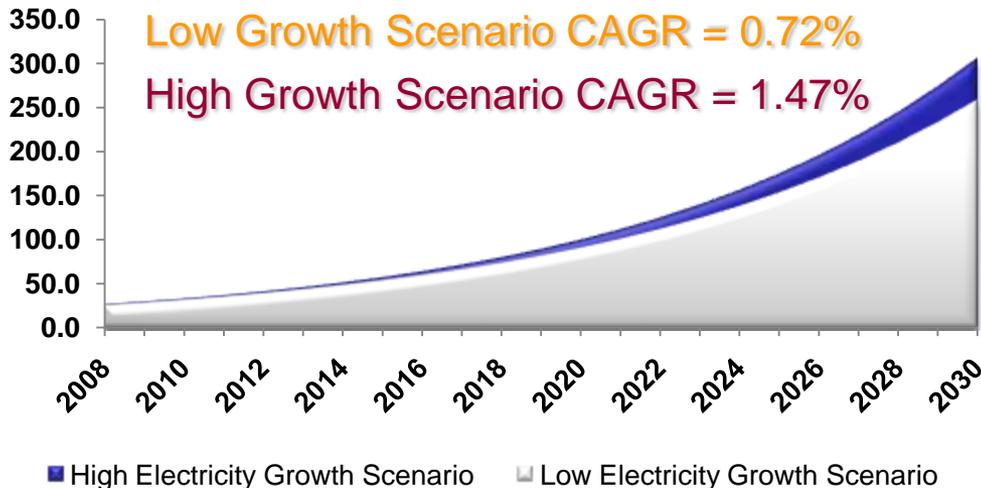
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- **CHALLENGES CURRENTLY FACING THE INDUSTRY**

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- **WHERE WE ARE HEADED**

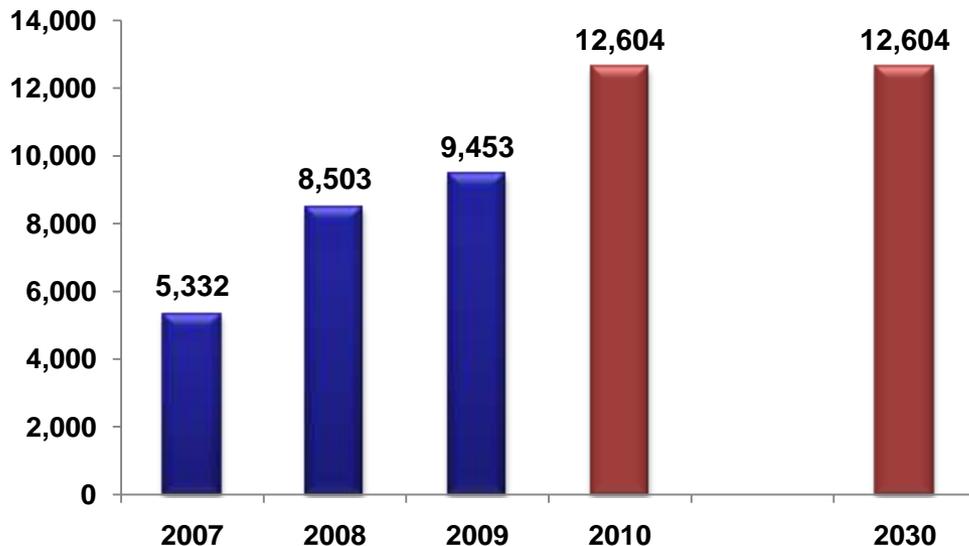
20 % by 2030



2030 Installed Capacity

- ❖ High growth scenario – 303 GW
- ❖ Low growth scenario – 257 GW

CAGR – 12%



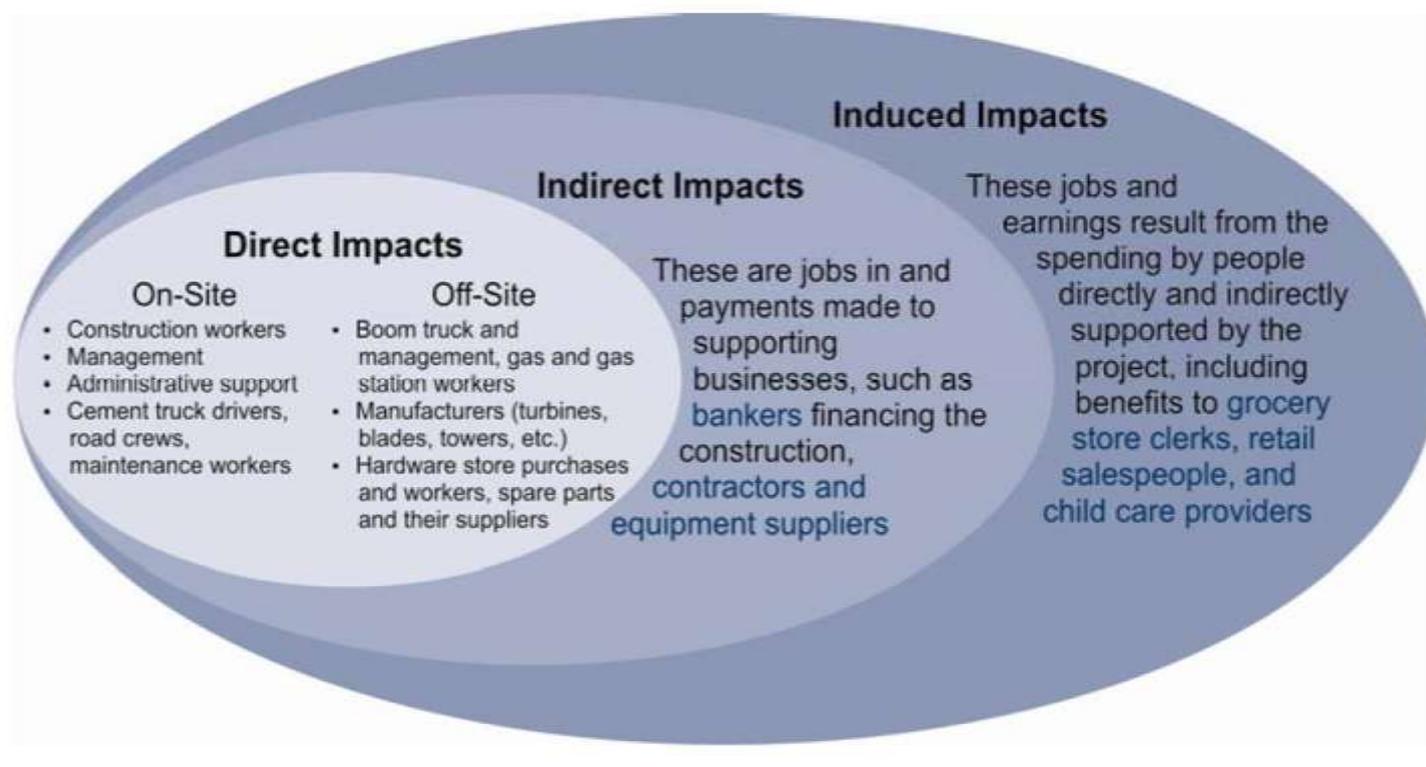
Target Annual Installation 2010 - 2030

Under high electricity growth scenario industry needs to build

12,604 MW/Year

20 % by 2030

Jobs Resulting from a Policy of 20% Wind by 2030

**Direct Impacts**

72,946

Indirect Impacts

66,035

Induced Impacts

119,774

TRIBAL DEVELOPMENT

Agreement Options

- ❖ Annual Lease Payments
- ❖ Royalty Payments
- ❖ Joint Venture
- ❖ Tribal Ownership

Developer Communication

- ❖ Technology Options
- ❖ Project Development Schedule
- ❖ Financing Requirements
- ❖ Provide Regular Updates
- ❖ Community Outreach
- ❖ Training Opportunities
- ❖ FT/PT Job Potential: Construction and Operations
- ❖ Economic Benefits
- ❖ Describe Risks and 'Fatal Flaw' Potential

Tribal Communication

- ❖ Educate Developer on Tribal Structure
- ❖ Preferred Deal Structure
- ❖ Dedicate a Tribal Point of Contact
- ❖ Tribe's Goals for Project
- ❖ Offer Cultural Sensitivity Training
- ❖ Tribe's Relationship with the BIA
- ❖ BIA Role in Prior Development Projects on the Reservation
- ❖ TERO
- ❖ Communicate Concerns!