



U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy

# 20% Wind Energy by 2030

## Chapter 6: Wind Power Markets

Summary Slides

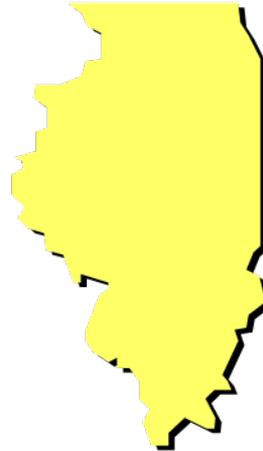
# State renewable energy incentives

## ▲ Renewable portfolio standards (RPS)

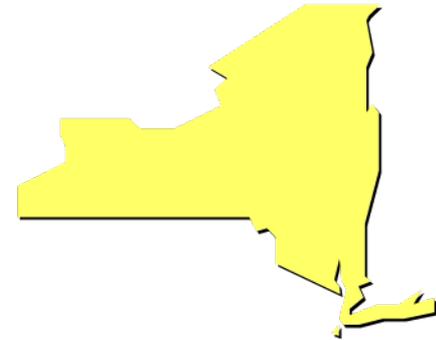
- 25 states and the District of Columbia
- Current **RPS = 55 GW** of new renewable energy capacity by 2020



▲ California: 20% by 2017



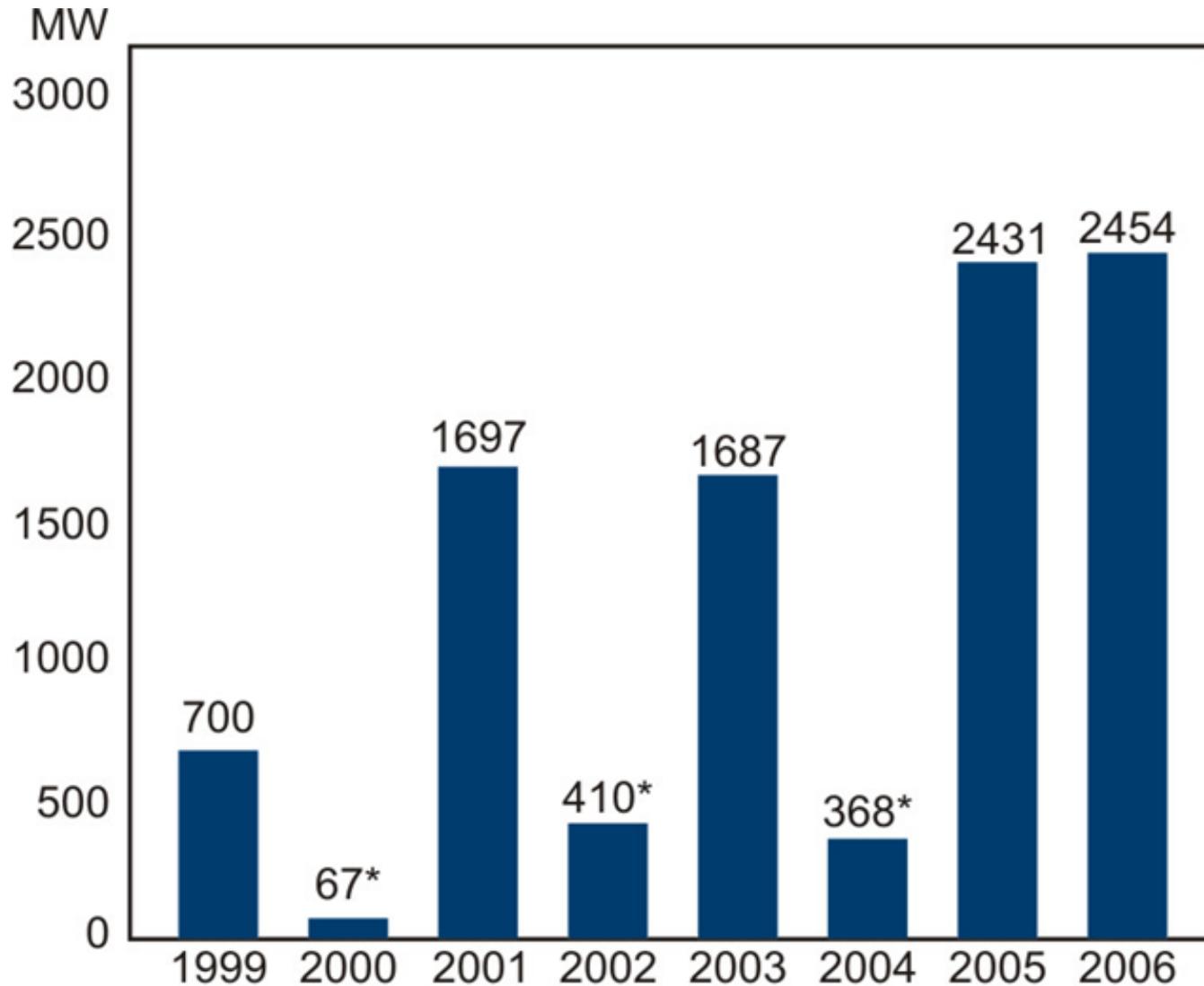
▲ Illinois: 15% by 2012



▲ New York: 25% by 2013



# Growth slowed during years when the production tax credit expired



\*Years without Federal production tax credit (2000, 2002, 2004)

# Wind power applications

## ✦ Utility-scale

- Represents 90% of all wind power generated in the U.S.

## ✦ Community-owned

- Typically 500 kW or greater
- Strengthens communities by broadening local tax bases and generating new income
- Galvanizes support for wind energy



Photo courtesy of NREL

## ✦ Small wind

- Typically smaller than 100 kW
- Often can sell unused electricity back to the grid

## ✦ Off-grid home and farm/ranch systems

- Challenges include zoning, lack of financial incentives, and turbine availability

- ▲ Managing the stakeholder process:
  - State and local siting guidelines needed
  - Developer, state, local, and community groups should collaborate on design of stakeholder outreach
  - Identify stakeholders early in the process
  - Assess concerns and requirements of stakeholders
  - Begin early with stakeholder engagement and build trust



# Wind project developers must accommodate market features

## ✦ Policy-driven/compliance markets

- Compliance markets play an important role in supporting the development of wind energy

## ✦ Voluntary or green power markets

- Voluntary markets also play a key role in supporting new wind. Renewable energy credit markets might be able to support wind energy in regions that have no compliance market
- More than 500,000 electricity customers purchase green power products

## ✦ Air quality/emissions markets

- Carbon dioxide trading programs are currently under serious consideration

*To bring wind energy to customers nationwide, wind project developers must accommodate local and regional market features.*