Wind Energy Production and Renewable Energy Tax Credits

Tax Expenditure Committee – December 3, 2014

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Research and Analysis Division
Iowa Department of Revenue

Outline of Remarks

- Introduction and Brief History
- Tax Credits for Wind and Renewable Energy in Other States and Research
- Analysis of Iowa's Tax Credits
- Economic Considerations

Wind Energy Production Tax Credit

- Iowa Code Chapter 476B
- $0.01 per kilowatt-hour of electricity sold or generated for on-site consumption
- Facility must be between 2 MW and 30 MW
- Facilities placed in service by July 1, 2012
- No new facilities can be approved under this program
- Limited to a total of 50 MW capacity

Renewable Energy Tax Credit

- Iowa Code Chapter 476C
  - $0.015 per kWh of electricity
  - $4.50 per MMBTU of methane or other biogas to generate electricity
  - $4.50 per MMBTU of heat for a commercial purpose
  - $1.44 per Mcf of hydrogen fuel
- Facilities placed in service by January 1, 2017
- Limited to 363 MW for wind projects and 53 MW for other renewable energy projects
- Individual non-wind projects are limited to eligibility for 10 MW or its equivalent
- Eligibility of individual wind projects is limited 2.5 MW per owner

Common Characteristics of Both Programs

- Enacted in 2005
  - Wind Energy Production Tax Credits first awarded in 2009
  - Renewable Energy Tax Credits first awarded in 2007
- Credits available to each applicant for 10 years
- Nonrefundable
- Carryforward 7 years
- Transferable
  - Wind Energy Production transfers unlimited
  - Renewable Energy may be transferred only once

Tax Incentives for Renewable Energy Around the United States

- 45 states and D.C. offer some form of tax incentive for renewable energy or energy efficiency
- In 15 states tax credits support large scale production or investment in renewable energy or alternative energy
- 6 states offer production tax credits, which are allocated based on production; i.e., per kWh
- Federal Renewable Electricity Production Tax Credit (PTC) expired January 1, 2014

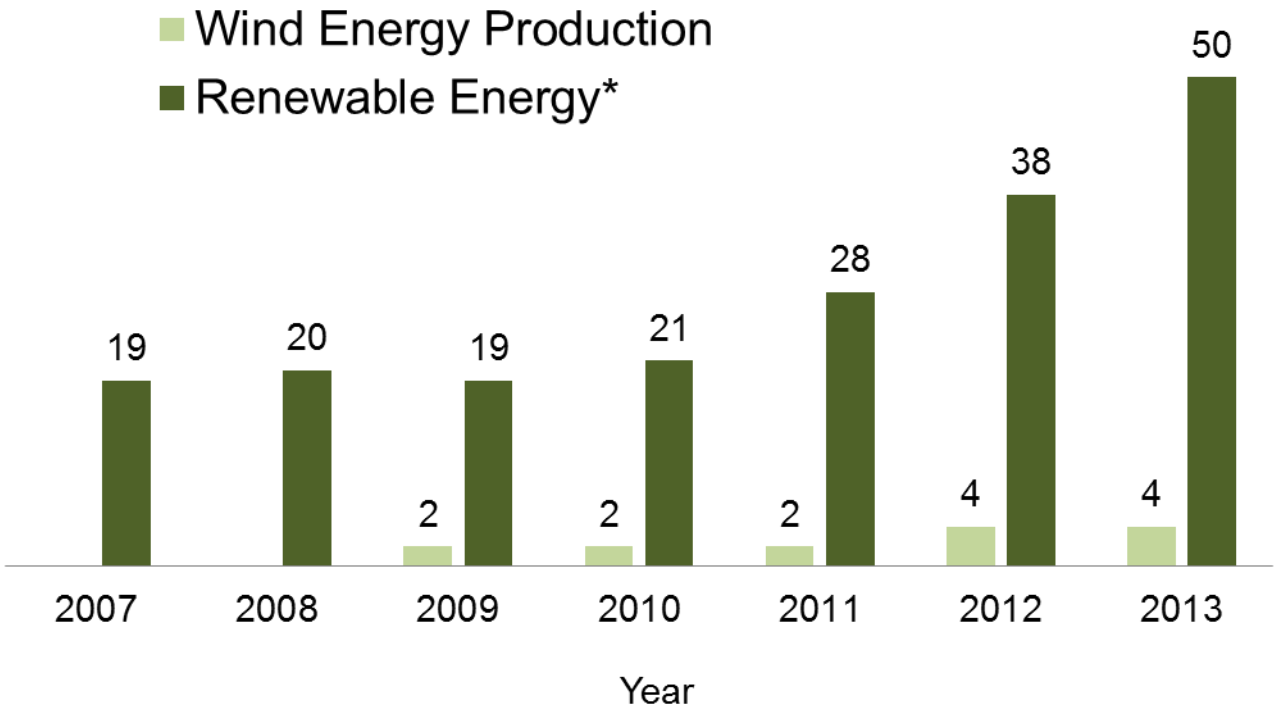
Renewable Energy Production Tax Credits Across the States

- AZ, FL, IA, MD, NM, OK
- Program awards are limited in various ways
- Rates vary by
  - Generator's year of service
  - Form of energy
- Three states' credits are refundable
- Three states' credits are nonrefundable with carryforward ranging from 5-7 years
- Only Iowa credits are transferable

Important Issues Identified in Research on Renewable Energy

- High fixed costs; low operational and maintenance costs
  - Variable and intermittent nature of wind
  - High costs for system integration and redundancy
  - Technological considerations
    - Storage
    - Transmission
- Incentives are necessary to achieve optimum investment

Number of Operational Projects Approved for Tax Credits



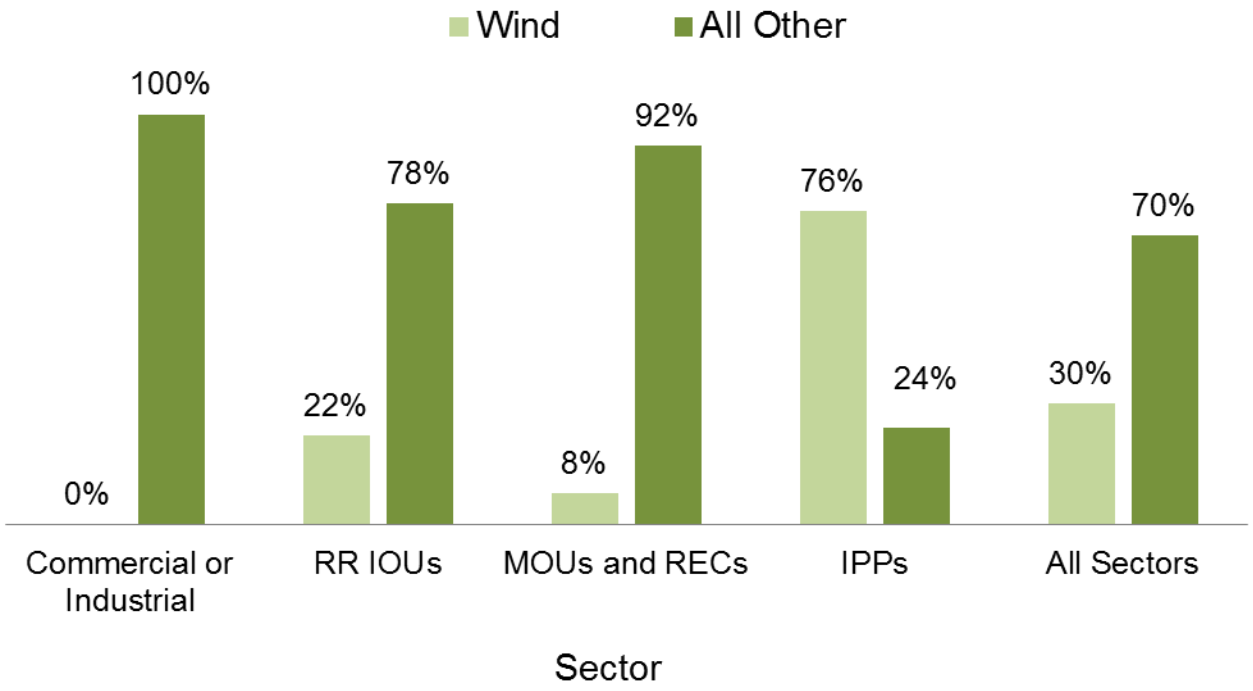
Source: Iowa Department of Revenue

* Renewable Energy projects include wind and non-wind projects

Electric Power Industry Sectors

- Utilities
  - Rate-Regulated Investor Owned Utilities (IOUs)
  - Municipally Owned Utilities (MOUs)
  - Rural Electric Cooperatives (RECs)
- Independent Power Producers
- Commercial and Industrial Generators

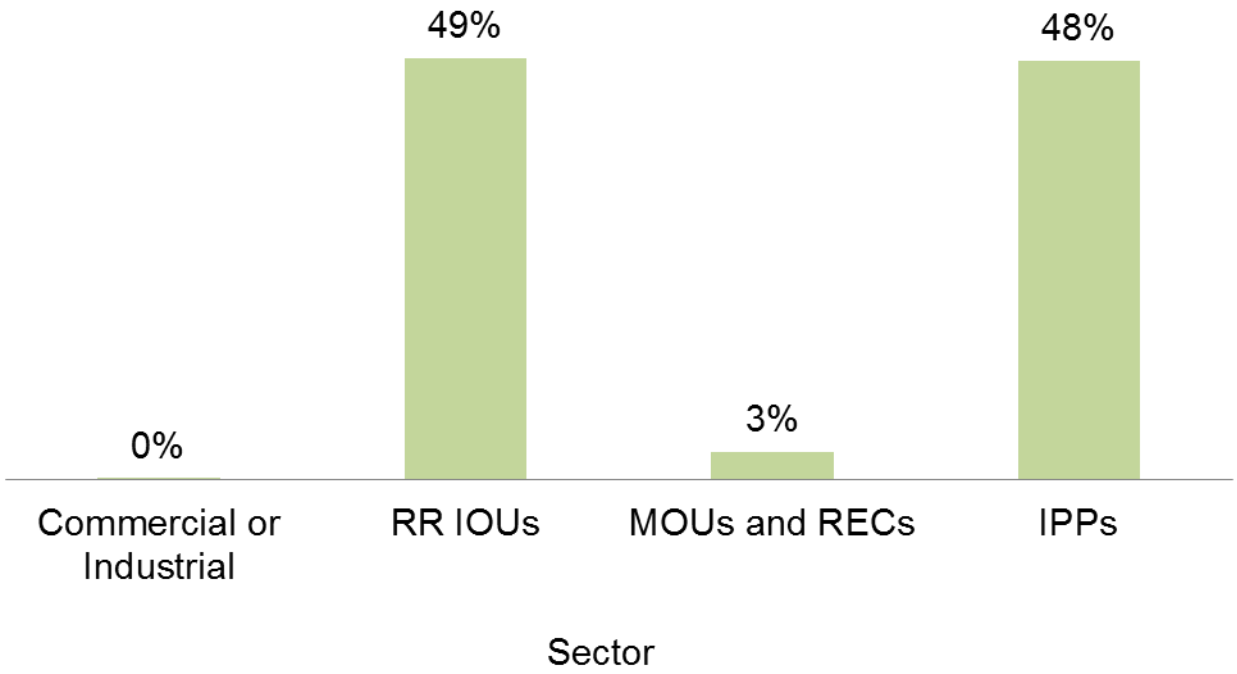
Percent of Generating Capacity by Energy Source Within Each Sector in Iowa, 2012



Source: U.S. Energy Information Administration

- Wind accounted for 22 percent of capacity of rate-regulated utilities
- For IPPs, 76 percent of capacity was based on wind
- Wind accounted for 30 percent of all generating capacity in Iowa; this was the highest in the nation

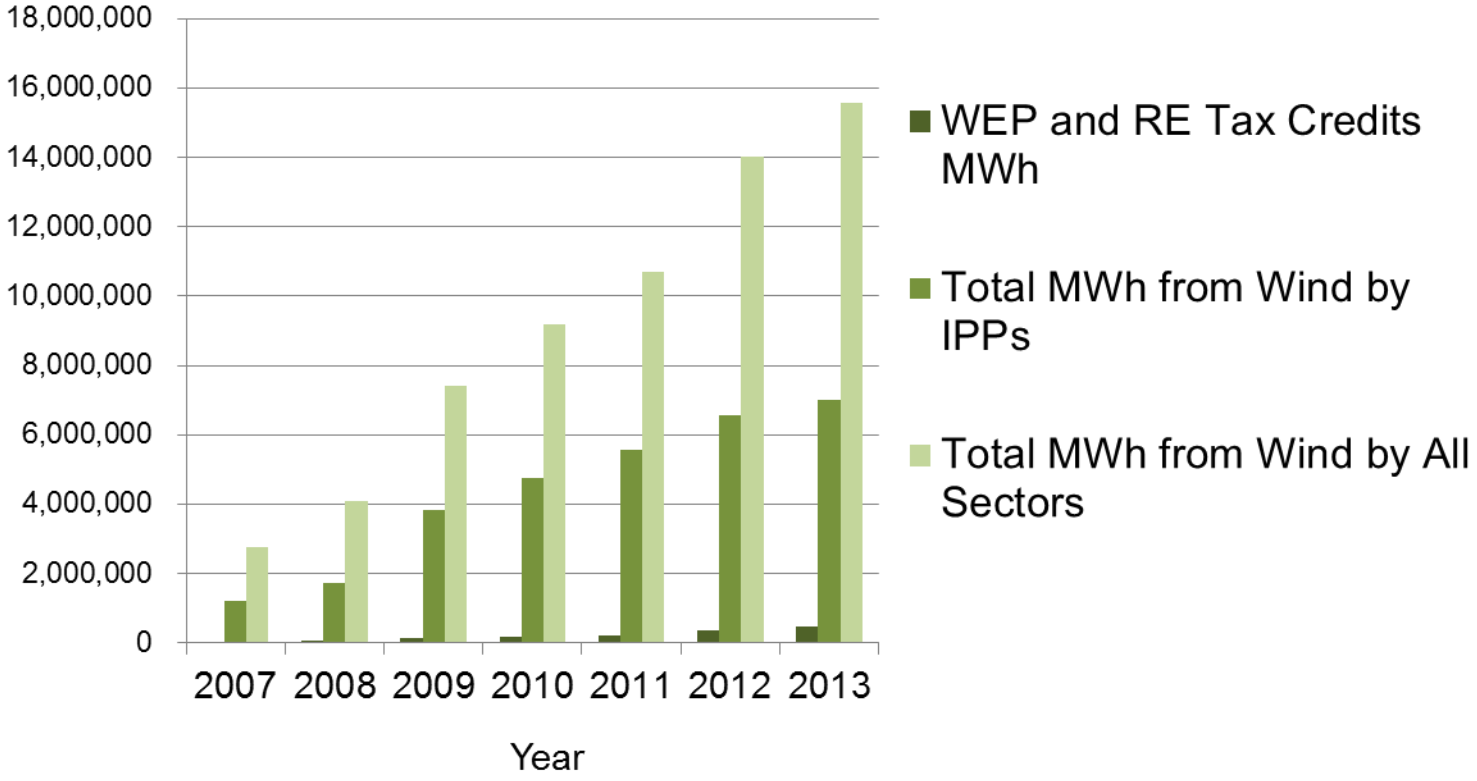
Share of Wind Energy Capacity by Sector in Iowa, 2012



Source: U.S. Energy Information Administration

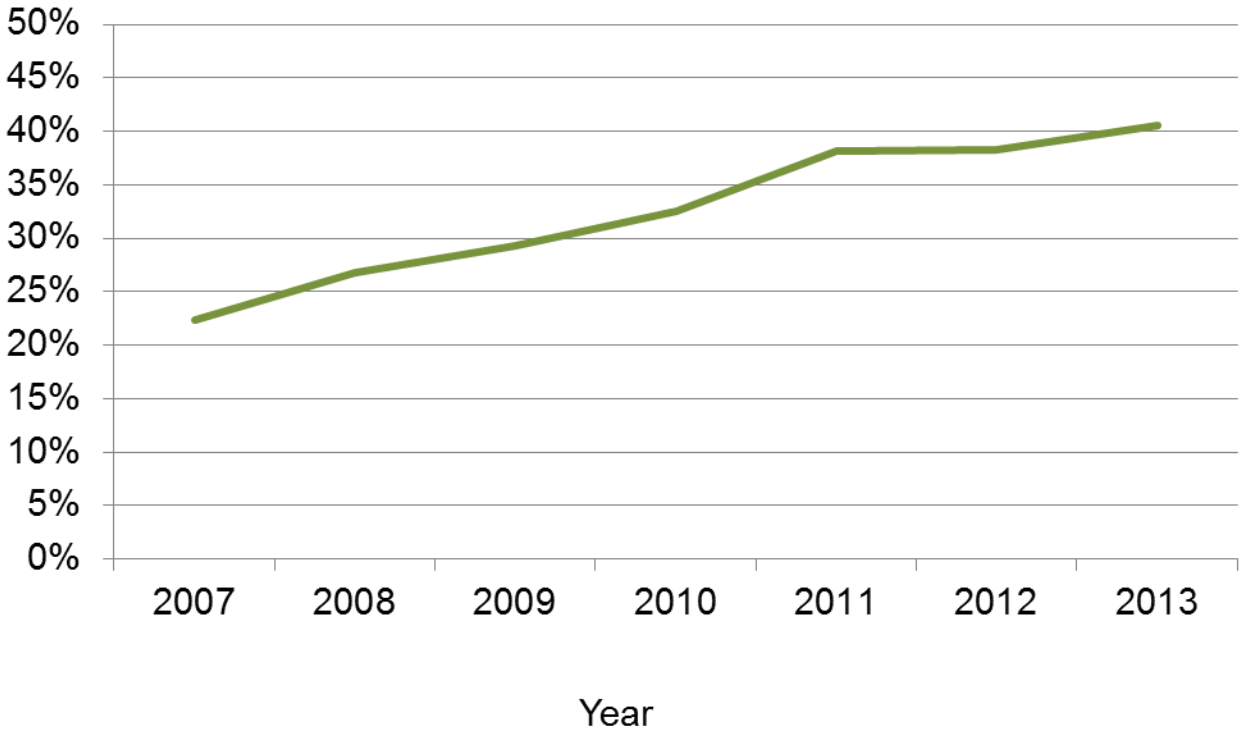
- Rate-regulated utilities accounted for 49 percent of wind energy capacity
- Independent power producers accounted for 48 percent of wind energy capacity

MWh from Wind
Credited Amounts Compared to Totals



Source: Iowa Department of Revenue

Median Wind Project Generation Efficiency



Source: Iowa Department of Revenue

Includes wind projects approved for both Wind Energy Production and Renewable Energy Tax Credits

Total Tax Credit Awards

Renewable Energy Tax Credit*

Source: Iowa Department of Revenue

* Renewable Energy projects include wind and non-wind projects

Average Program Award

Renewable Energy Tax Credit*

Source: Iowa Department of Revenue

* Renewable Energy projects include wind and non-wind projects

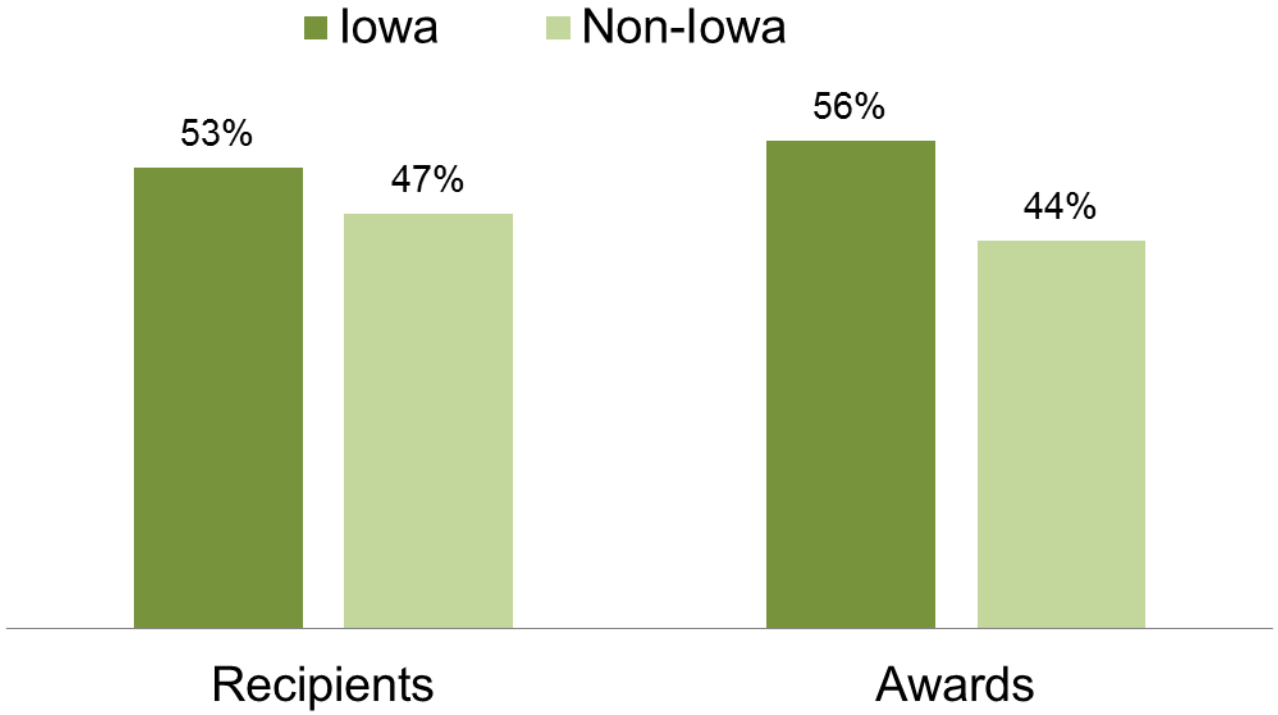
Tax Credit Awards
Wind Energy Production Tax Credit
2009 – 2013

Total Tax Credit Awards	$5,166,306
Average Tax Credit Award	$358,647

Source: Iowa Department of Revenue

Recipients and Awards by Residence

Wind Energy Production Tax Credit
2013



Source: Iowa Department of Revenue

Recipients and Awards by Residence

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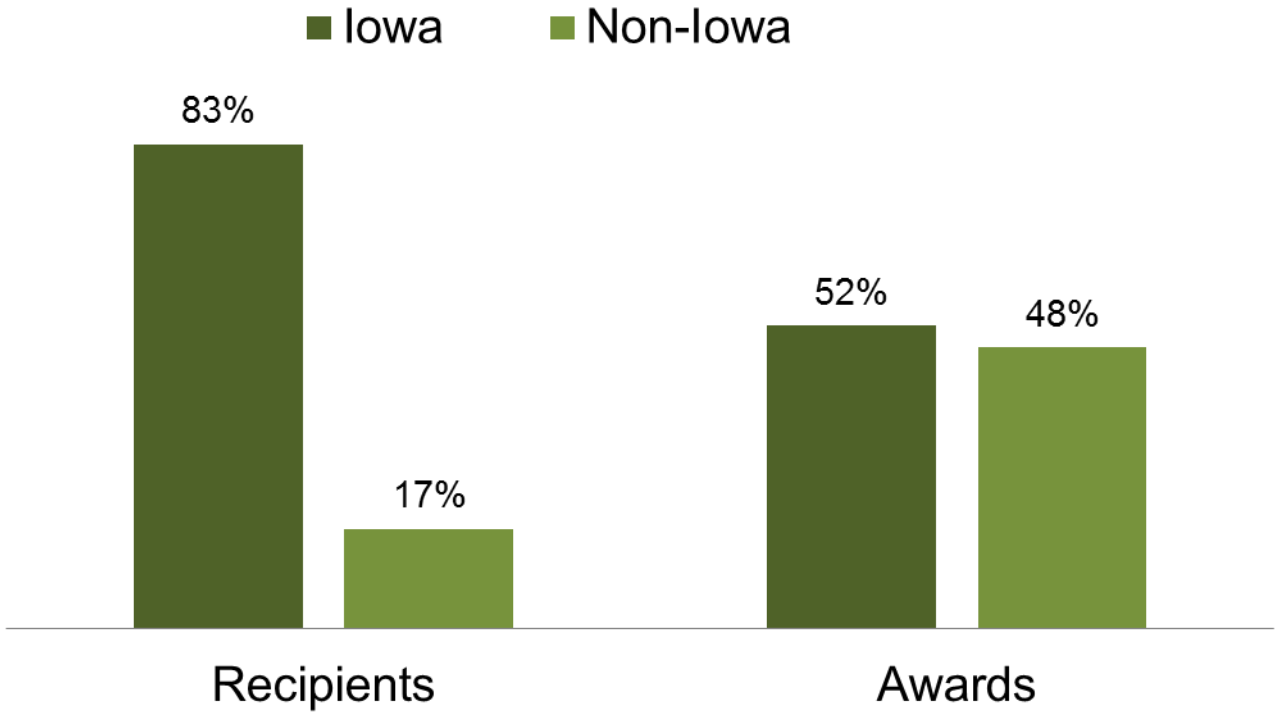
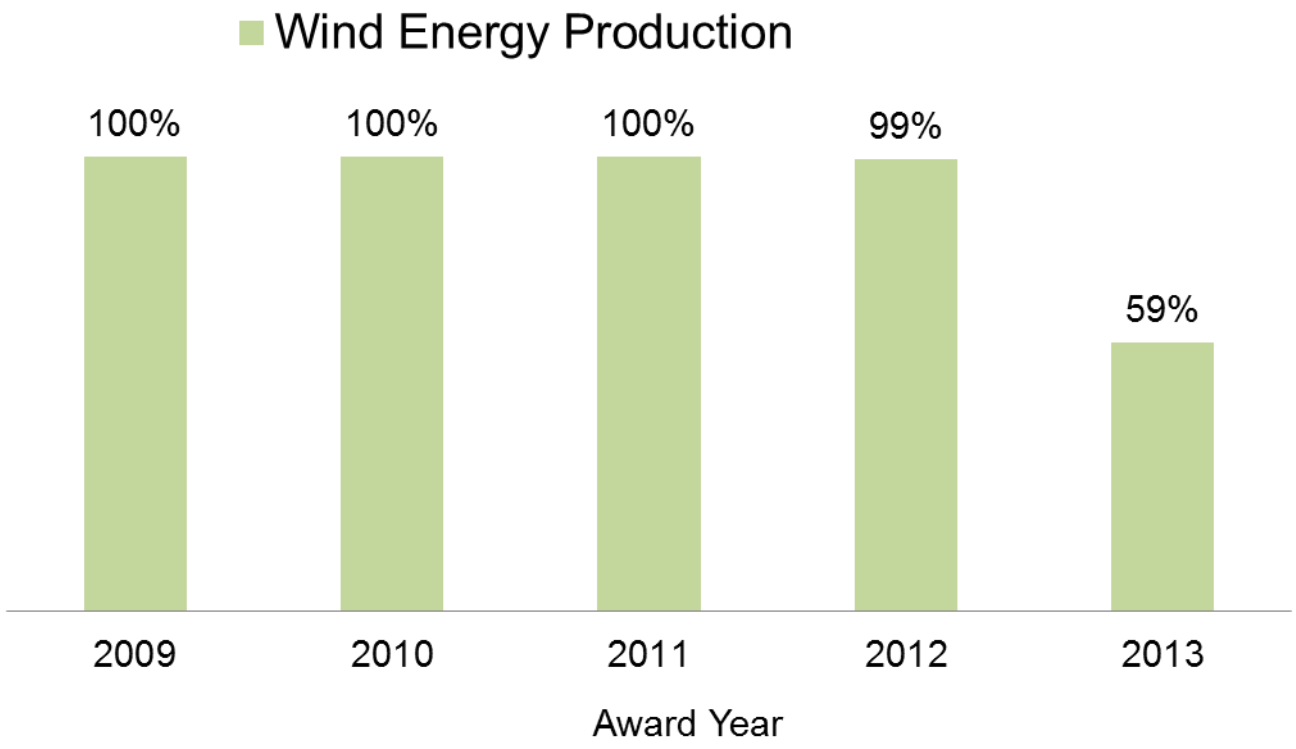


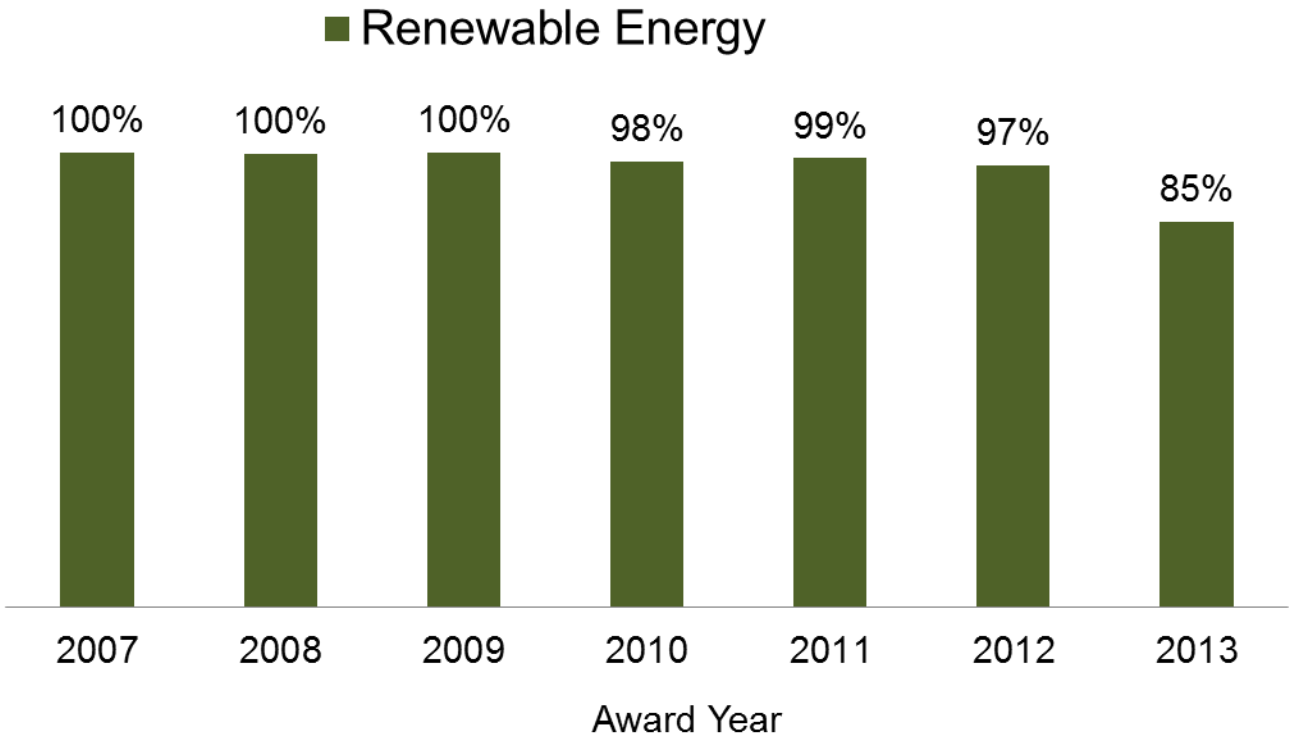
Source: Iowa Department of Revenue

Percentage of Awards Transferred



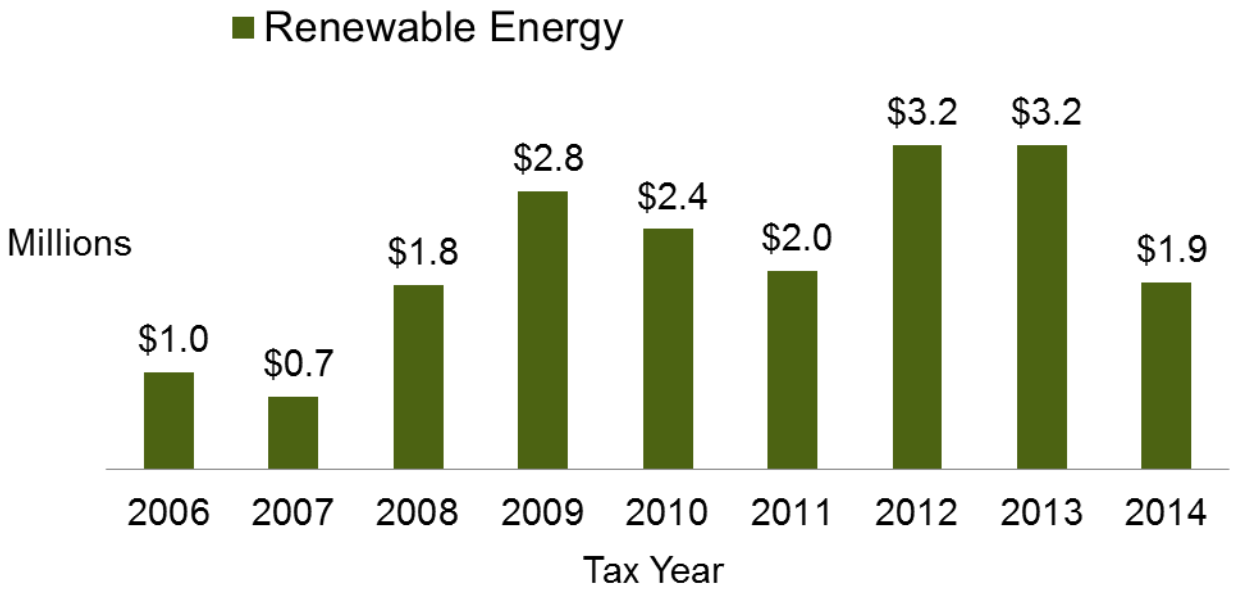
Source: Iowa Department of Revenue

Percentage of Awards Transferred



Source: Iowa Department of Revenue

Tax Credit Claim Amounts

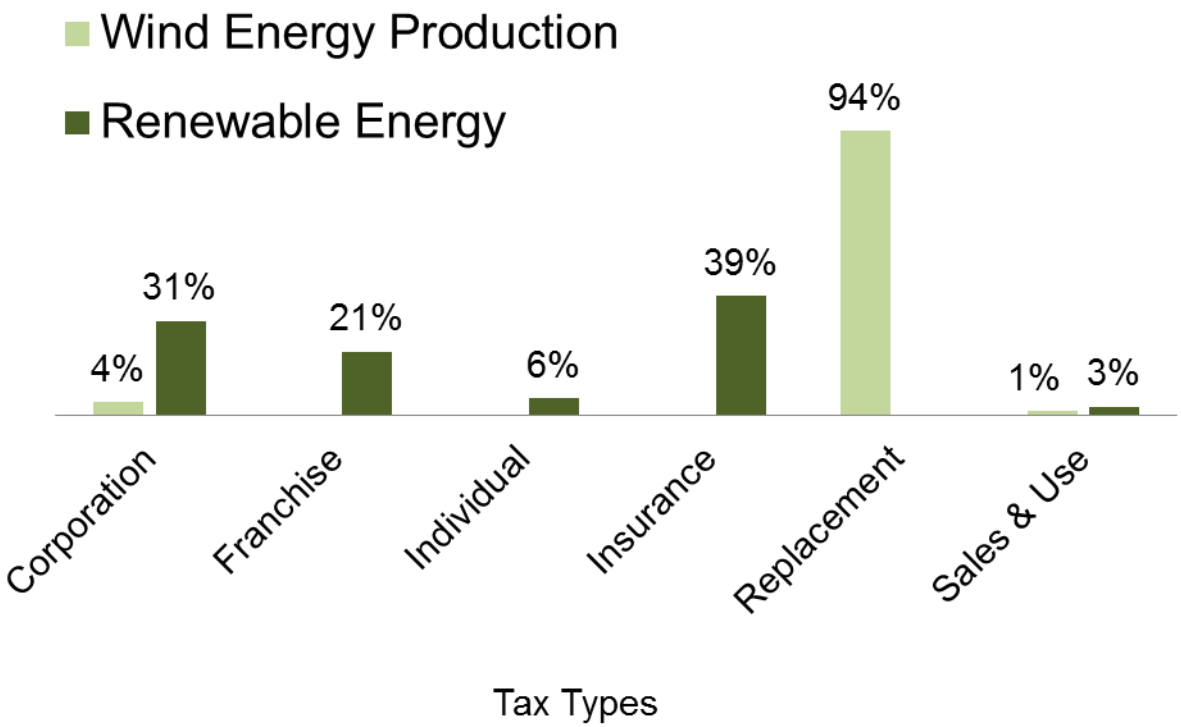


Total Claim Amounts (Millions)

Wind Energy Production Tax Credit	**$3.80**
Renewable Energy Tax Credit	**$18.96**

Source: Iowa Department of Revenue

Tax Credit Claims by Tax Type



Source: Iowa Department of Revenue

Wind Development and Property Tax

Special Assessment Schedule

Assessment Year	Percentage of Net Acquisition Cost that Comprises Special Valuation
1st	0%
2nd	5%
3rd	10%
4th	15%
5th	20%
6th	25%
7th and Subsequent	30%

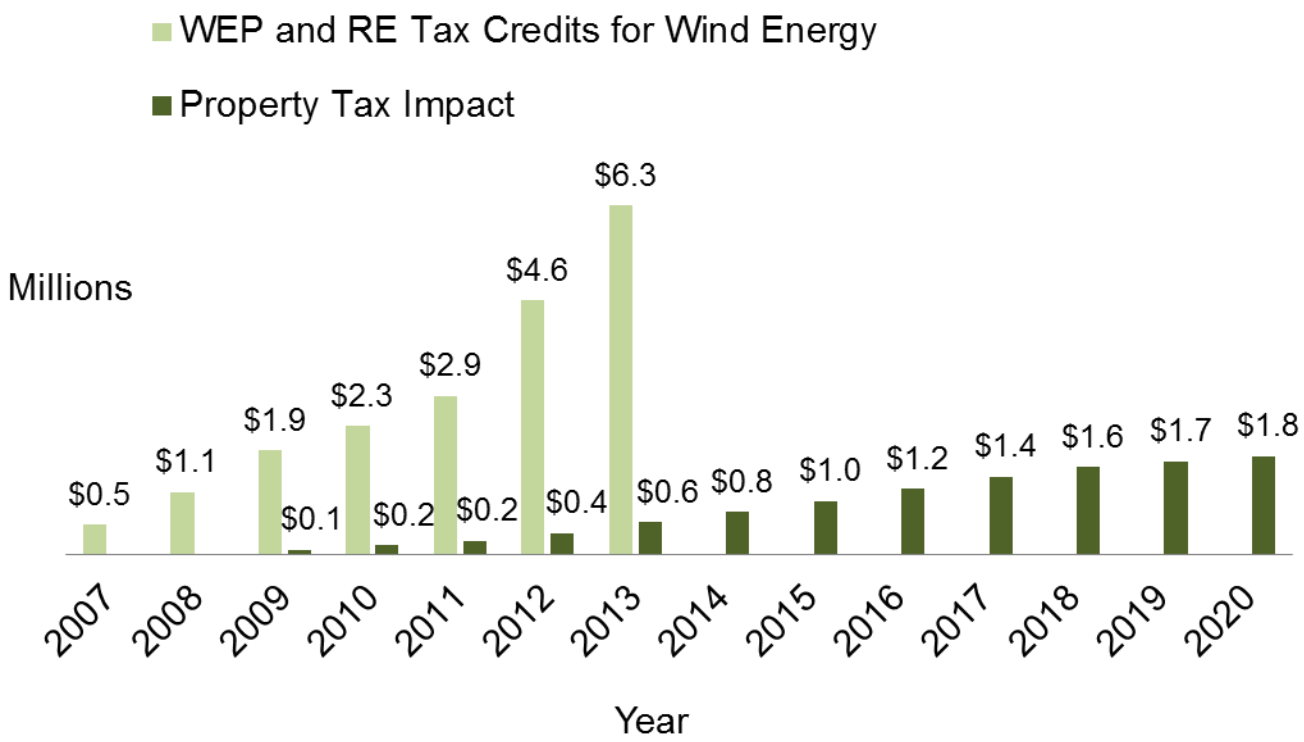
Source: Iowa Code Section 427B.26

Wind Development and Property Tax

Estimating Property Tax Impact of Tax Credit Projects

- Year Entering Service/Assessment Year
- Estimated MW Capacity
- Estimated Acquisition Cost per MW
- Estimated Applicable Property Tax Levy Rate
- Other Assumptions

Tax Credits for Wind Energy and Estimated Property Tax Impact Compared



Source: Iowa Department of Revenue

Questions?