

Wind Energy Production and Renewable Energy Tax Credits

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Outline of Remarks

- ▶ Description and Brief History of Iowa's Credits
- ▶ Analysis of Iowa's Renewable Energy and Wind Energy Production Credits
- ▶ Growth of Renewable Energy In Iowa
- ▶ Summary

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
- ▶ After approval, credit received for 10 years
- ▶ 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, 2018
- ▶ After approval, credit received for 10 years
- ▶ Limited to 363 MW for wind projects and 63 MW for other renewable energy projects
 - ▶ 10 MW is reserved for solar facilities
- ▶ Eligibility of individual wind projects is limited 2.5 MW per owner

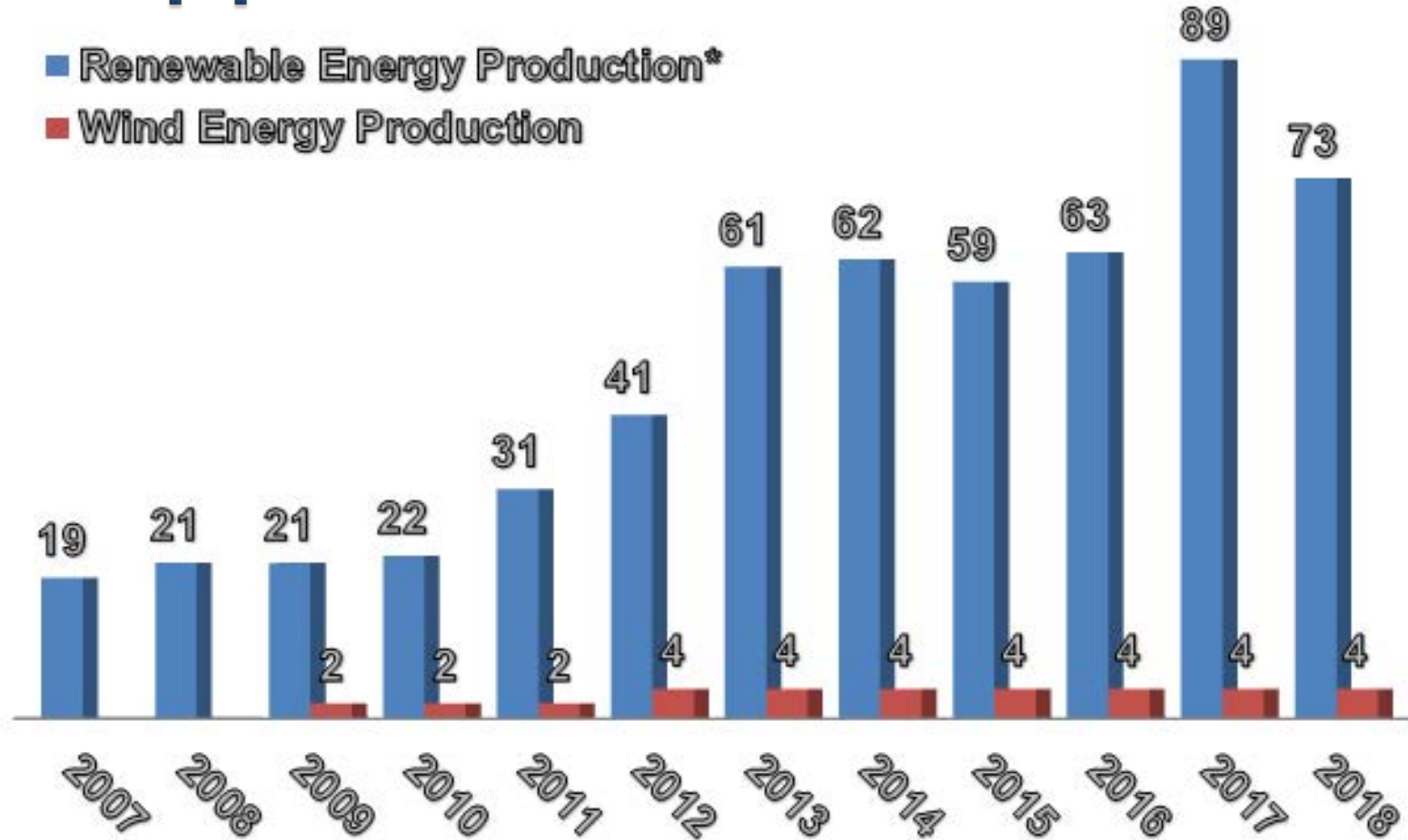
Common Characteristics of Both Programs

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

Important Issues Identified in Research on Renewable Energy

- ▶ High fixed costs; relatively 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



* Renewable Energy projects include wind and non-wind projects

Source: Iowa Department of Revenue

Electric Power Industry Sectors

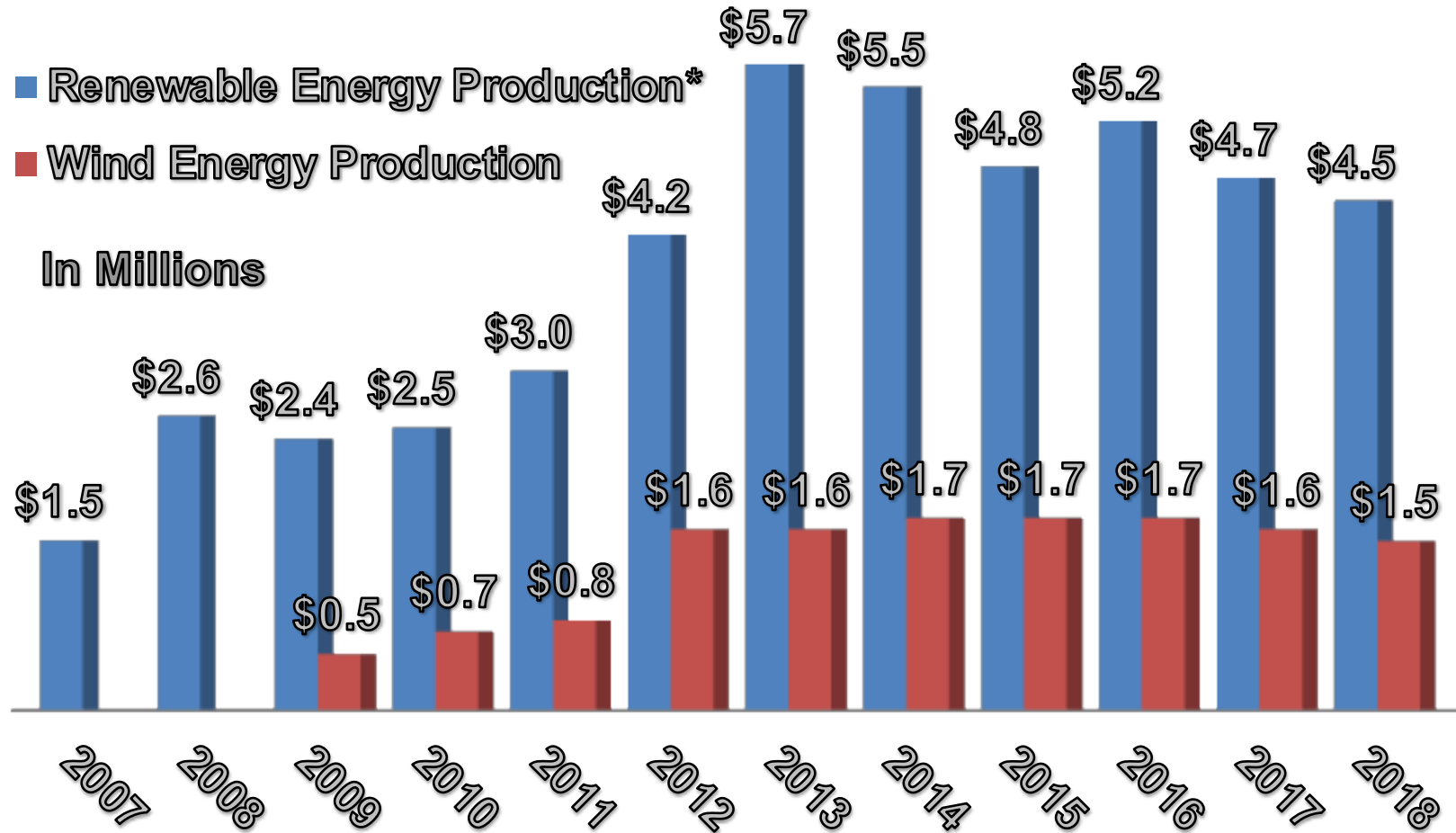
▶ Utilities

- Rate-Regulated Investor Owned Utilities (IOUs)
- Municipally Owned Utilities (MOUs)
- Rural Electric Cooperatives (RECs)

▶ Independent Power Producers

▶ Commercial and Industrial Generators

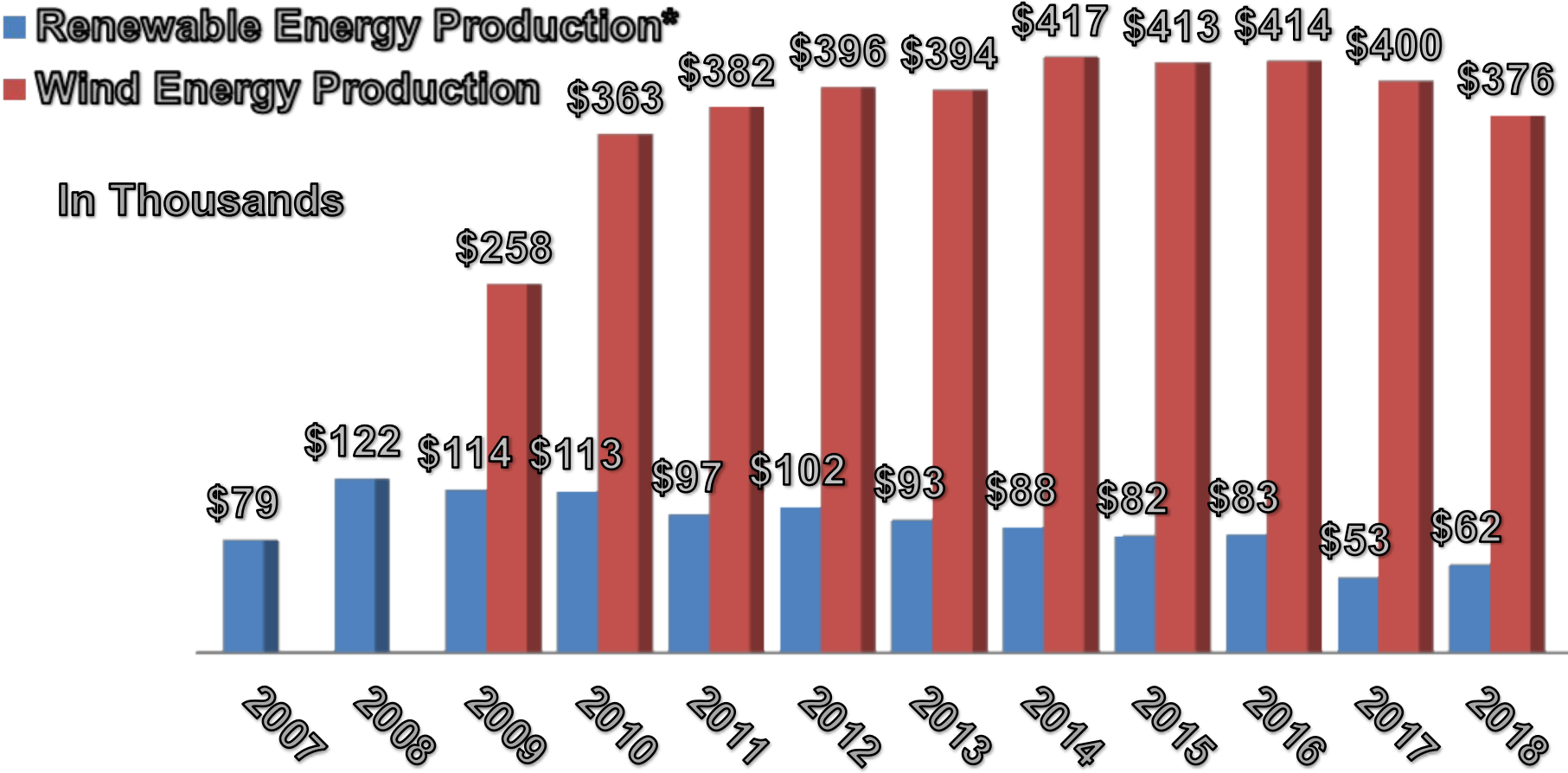
Total Tax Credit Awards



* Renewable Energy projects include wind and non-wind projects

Source: Iowa Department of Revenue

Average Program Award



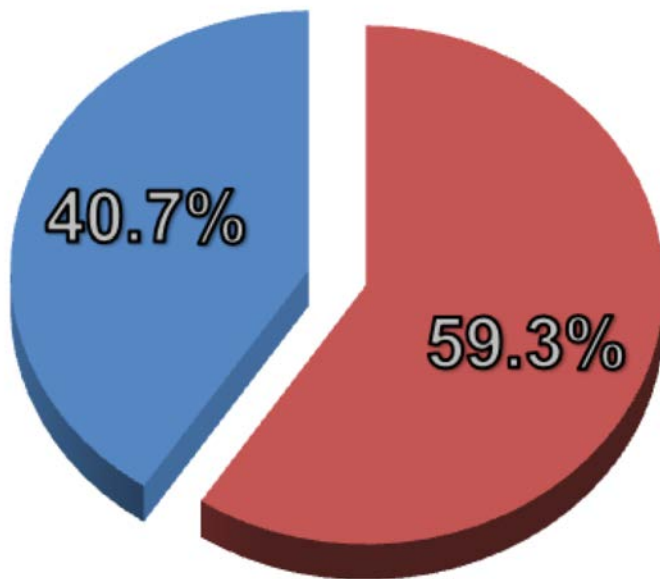
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Source: Iowa Department of Revenue

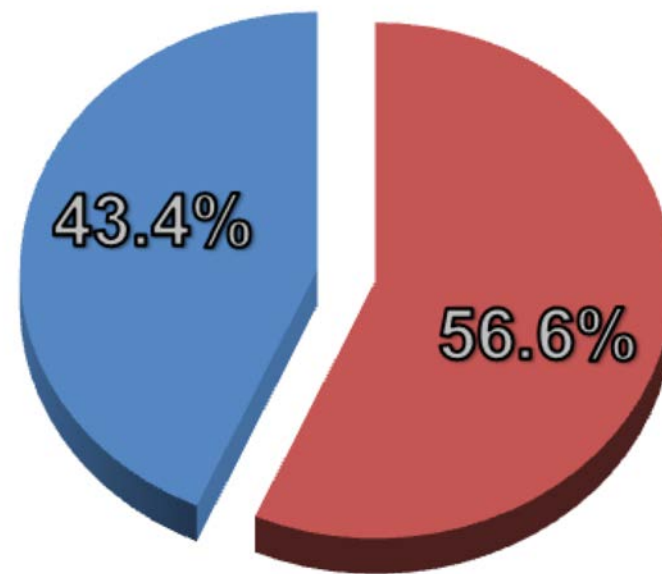
Recipients and Awards by Residence Wind Energy Production Tax Credit

■ Iowa ■ Non-Iowa

Recipients



Awards

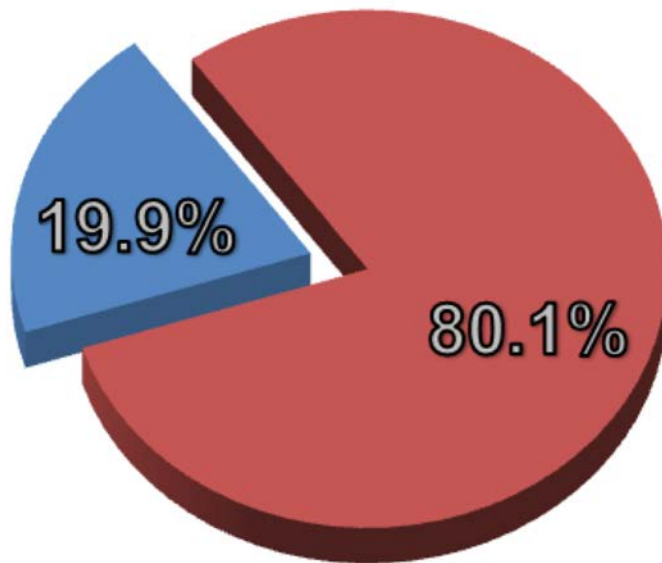


Source: Iowa Department of Revenue

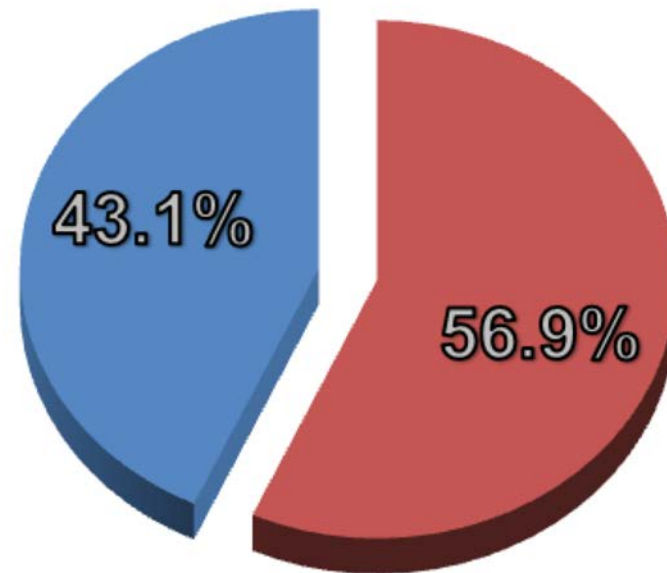
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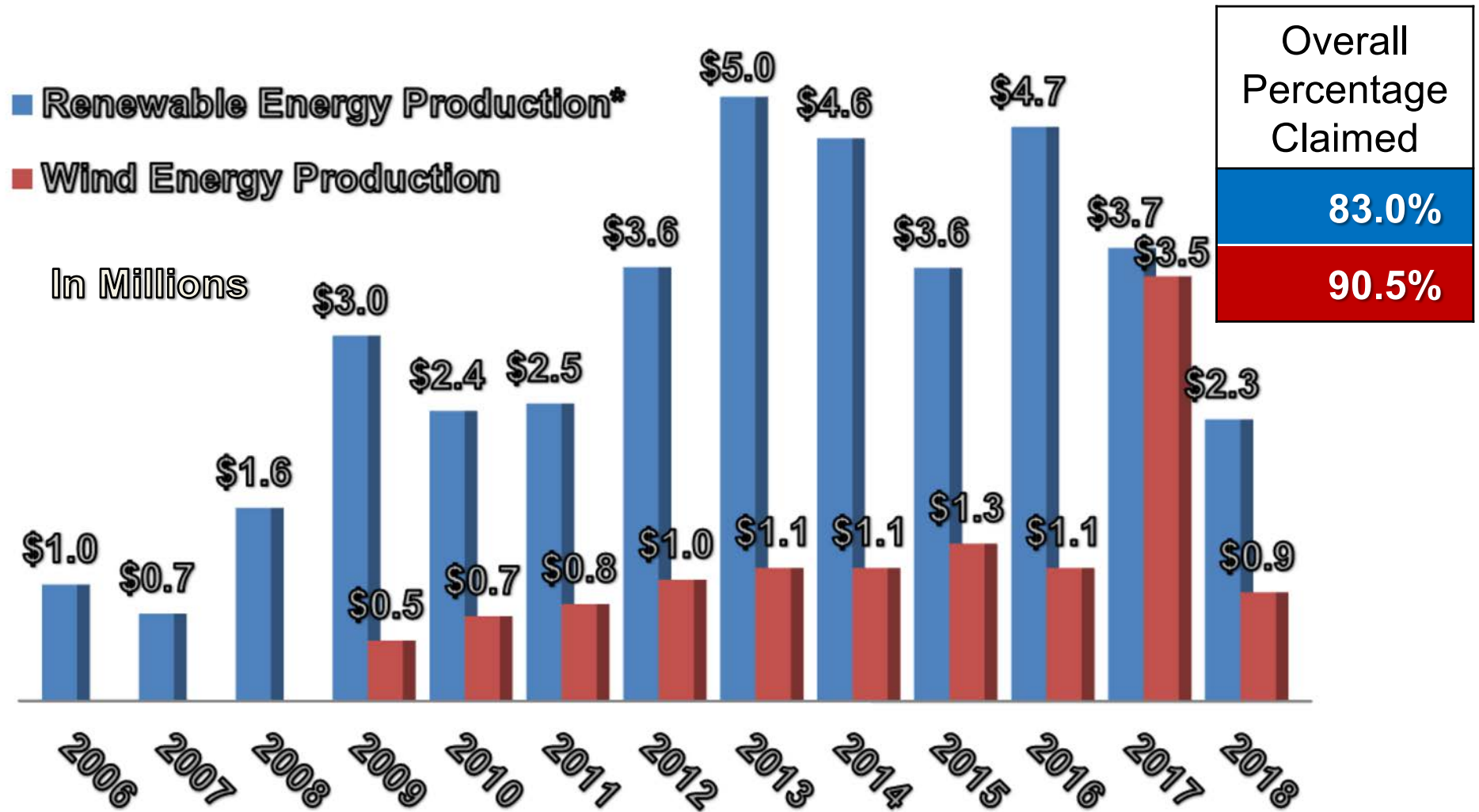
Source: Iowa Department of Revenue

Awards Transfers

WEP and RE Tax Credits

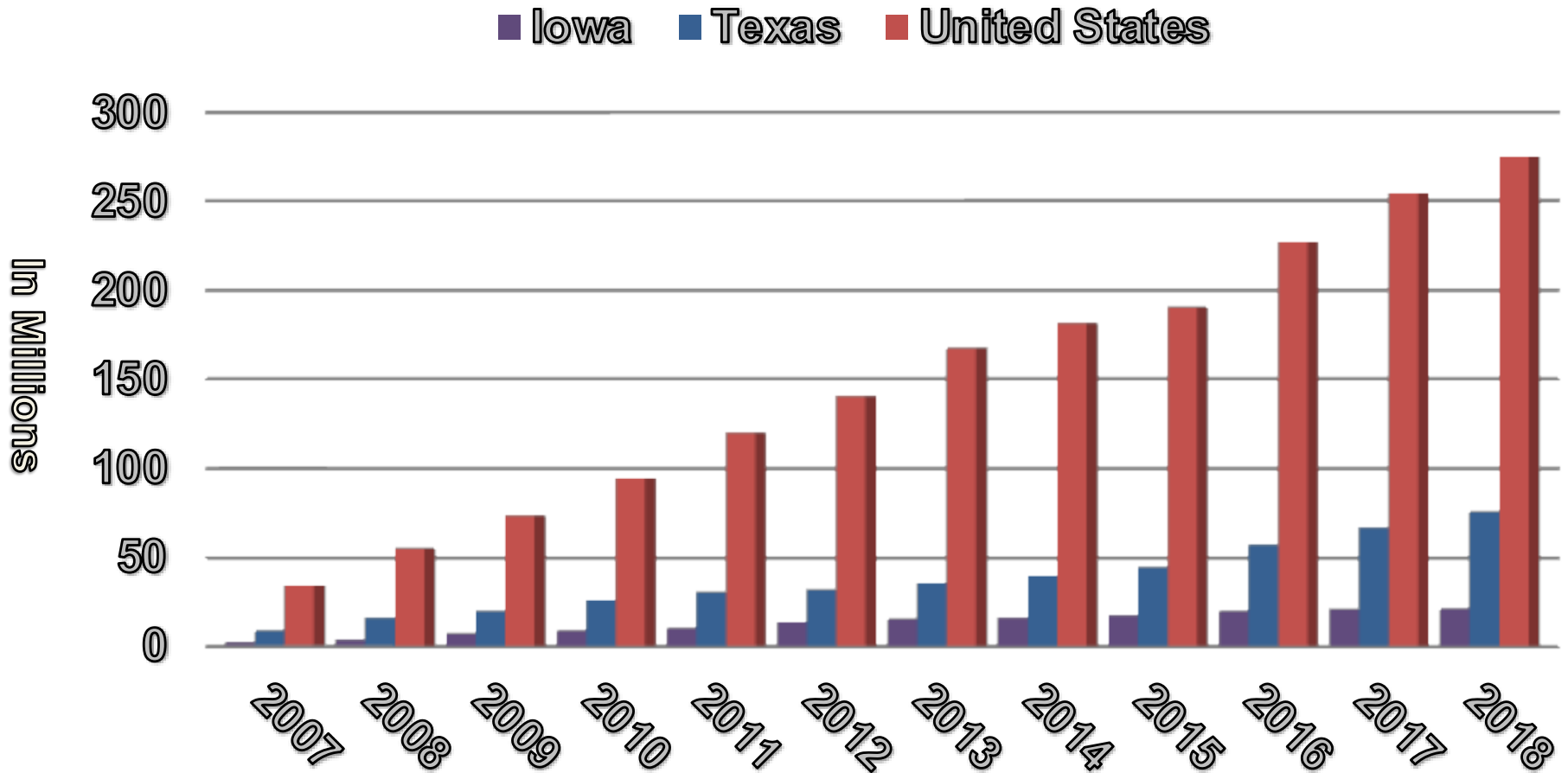
- 99.9% of all WEP credits have been transferred
- Average monetary consideration exchanged for WEP Credit is 95 cents on the dollar
- 86.5% of all RE credits have been transferred
- Average monetary consideration exchanged for RE Credit is 93 cents on the dollar

Tax Credit Claim Amounts



Source: Iowa Department of Revenue

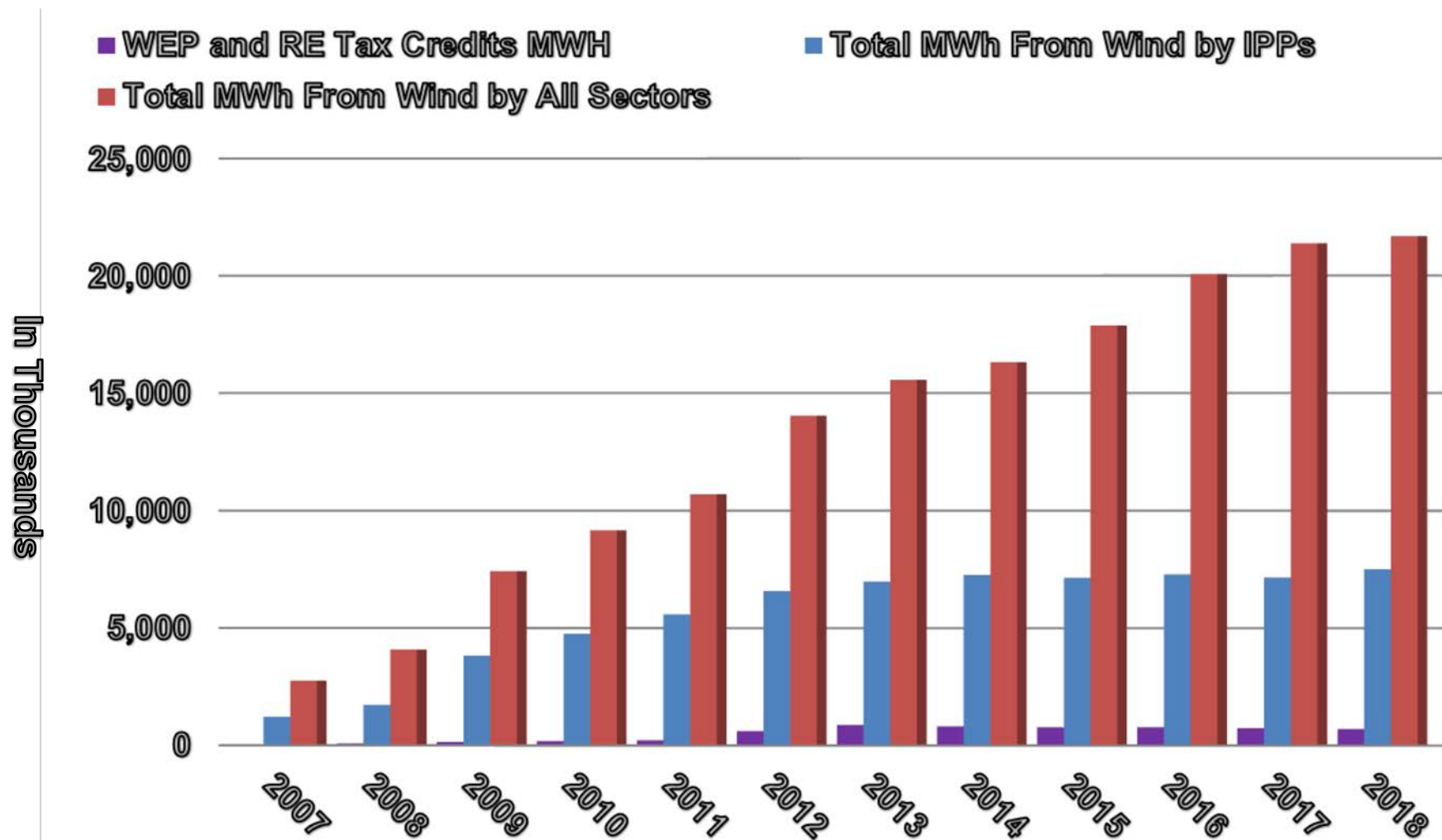
Net Generated Wind All Sectors



Source: U.S. Energy Information Administration

MWh from Wind

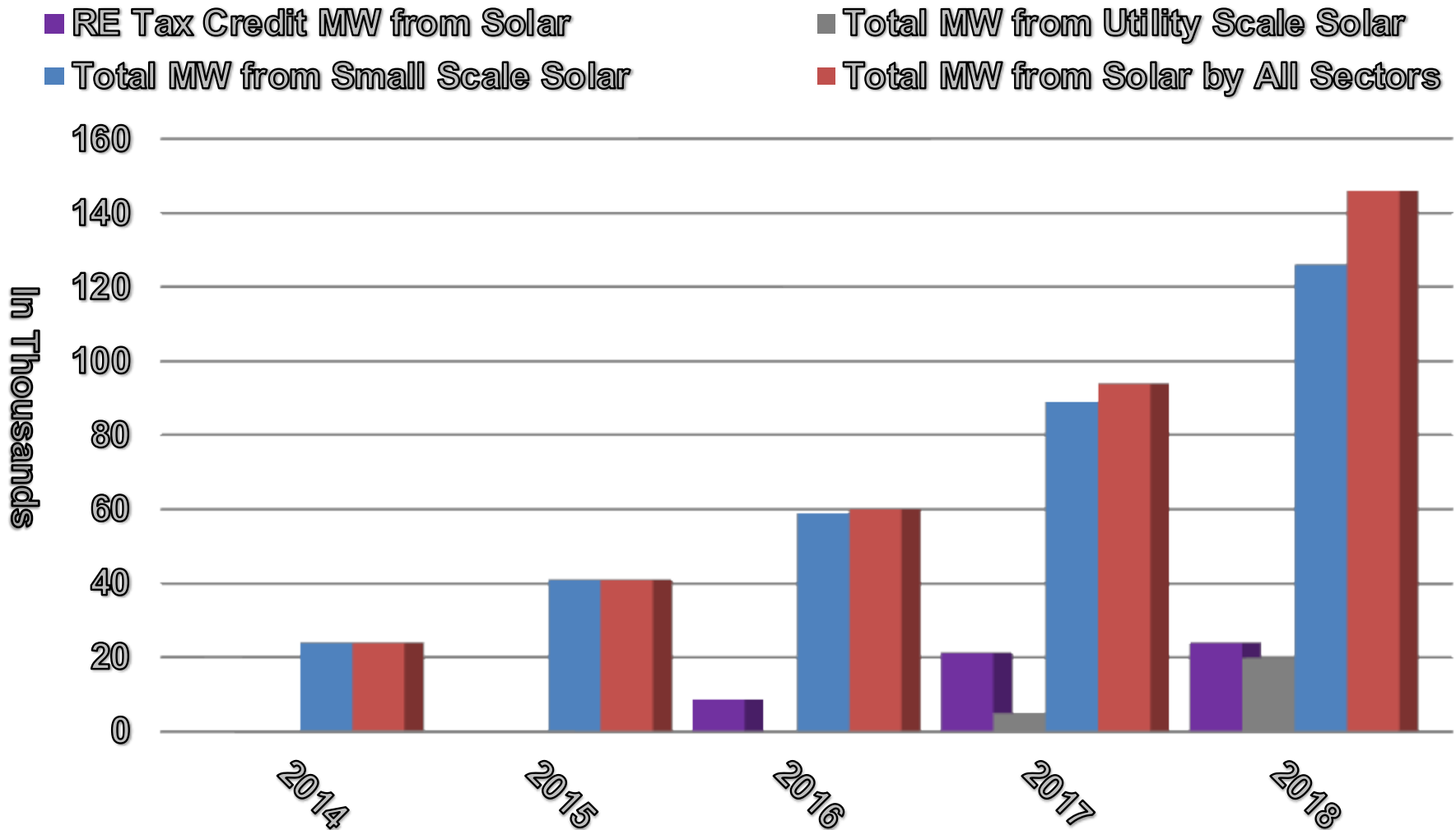
Incentivized Amounts Compared to Totals



Sources: Iowa Department of Revenue and U.S. Energy Information Administration

MWh from Solar

Incentivized Amounts Compared to Totals



Sources: Iowa Department of Revenue and U.S. Energy Information Administration

Summary

- ▶ Although the Wind Energy Production Tax Credit and the Renewable Energy Tax Credit are awarded for energy that is generated and sold, State financial incentives, including tax credits, are used to offset these upfront costs.
- ▶ Credit Transfer Market has been strong for these two credits.
- ▶ Wind Energy Incentives directed to Small Scale Wind Producers resulted in minimal share of incentivized MWh produced compared to total wind energy production in Iowa.
- ▶ Solar Energy Incentives directed to all eligible producers resulted in a larger share of incentivized MWh produced compared to total solar energy production in Iowa.

Questions?