



North Carolina Sustainable Energy Association Education - Public Policy - Economic Development

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SUMMARY: **Analysis of the Economic Impact of the North Carolina Renewable Energy and Energy Efficiency Portfolio Standard**

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BACKGROUND

The North Carolina Sustainable Energy Association (NCSEA) commissioned the La Capra Associates to update their technical report “Analysis of a Renewable Portfolio Standard for the State of North Carolina,” which was released in December 2006. The updated analysis examines the economic impact of the North Carolina Renewable Energy and Energy Efficiency Portfolio Standard (REPS), which was passed into law in August 2007.¹ More specifically, the new report examines the impact of the REPS requirement on employment in three of the four compliance years: 2012, 2018, and 2021.

This summary document presents a simplified version of the results found in the updated technical report. Employment gains and losses, which were reported as “job-years” in the technical report, have been converted to “number of jobs” by assuming 20 job-years to be equal to one full-time equivalent job.

Similar to the technical report, employment gains and losses are categorized by resource and activity. In addition, employment data is aggregated in two distinct approaches:

- **Renewable Energy and Energy Efficiency Totals** – These figures represent the cumulative capacity, generation and number of direct, indirect, and induced jobs required to meet the REPS mandate in each compliance year. These figures are important when considering the future composition of the renewable energy and energy efficiency industry.
- **Total Net Job Gain** – This figure represents the net gain of jobs after accounting for jobs loss due to a decrease in the growth of conventional energy and changes in electric rates. This figure is important when considering the overall impact of REPS requirements.

For the full technical report, please visit NCSEA’s website at www.energync.org/greenjobs.

¹ North Carolina General Assembly, Session Law 2007-397. In March 2008, the North Carolina Utilities Commission completed its first rulemaking for REPS compliance. Electric utilities signed their first renewable energy contracts to comply with the REPS Law in early Summer 2008.

RESULTS

Compliance Year 2012 – Cumulative Employment Gains/Losses

Resource	MW Capacity	Total MWh	Construction Jobs	Operation & Maintenance Jobs	Fuel-Related Jobs	Total Jobs
Wind Energy	324	866,411	47	59	0	106
Biomass - Co-fire and Wood	180	1,182,600	11	17	319	348
Landfill Gas	50	350,400	12	65	0	77
Poultry Litter	22	170,000	11	16	0	26
Hog Waste	15	96,608	25	38	0	62
Solar (PV)	58	101,692	234	23	0	258
Energy Efficiency	--	--	--	--	--	88
Renewable Energy & Energy Efficiency	649	2,767,711	340	218	319	965
Impact on Growth of Conventional Energy	-433	- 790,809	-96	-56	0	-152
Impact from Rate Change	--	--	--	--	--	-44
Total Net Job Gain	--	--	--	--	--	769

Note: Due to rounding, figures may not add to totals shown.

Compliance Year 2018 – Cumulative Employment Gains/Losses

Resource	MW Capacity	Total MWh	Construction Jobs	Operation & Maintenance Jobs	Fuel-Related Jobs	Total Jobs
Wind Energy	1,230	3,286,314	179	229	0	408
Biomass - Co-fire and Wood	623	4,414,081	151	216	1,235	1,602
Landfill Gas	150	1,051,200	37	194	0	231
Poultry Litter	114	900,000	56	83	0	139
Hog Waste	47	305,992	78	119	0	197
Solar (PV)	184	322,097	742	74	0	816
Energy Efficiency	--	--	--	--	--	300
Renewable Energy & Energy Efficiency	2,347	10,279,684	1,243	915	1,235	3,692
Impact on Growth of Conventional Energy	-1,451	- 11,462,898	-823	-449	0	-1,272
Impact from Rate Change	--	--	--	--	--	-198
Total Net Job Gain	--	--	--	--	--	2,223

Note: Due to rounding, figures may not add to totals shown.

Compliance Year 2021 – Cumulative Employment Gains/Losses

Resource	MW Capacity	Total MWh	Construction Jobs	Operation & Maintenance Jobs	Fuel-Related Jobs	Total Jobs
Wind Energy	1,421	3,795,719	206	264	0	470
Biomass - Co-fire and Wood	623	4,414,081	151	216	1,235	1,602
Landfill Gas	150	1,051,200	37	194	0	231
Poultry Litter	114	900,000	56	83	0	139
Hog Waste	49	322,230	82	125	0	208
Solar (PV)	194	339,190	781	78	0	859
Energy Efficiency	--	--	--	--	--	525
Renewable Energy & Energy Efficiency	2,550	10,822,420	1,314	960	1,235	4,034
Impact on Growth of Conventional Energy	-2,020	- 14,481,375	-1,145	-626	0	-1,771
Impact from Rate Change	--	--	--	--	--	-214
Total Net Job Gain	--	--	--	--	--	2,049

Note: Due to rounding, figures may not add to totals shown.

By limiting the scope of this jobs study to the creation of direct, indirect and induced jobs to be created by utility compliance with the 2007 REPS law, this study excludes all other market activities that will also drive net job creation across North Carolina. Within the conservative limited scope of this study, by 2021 an estimated 4,030 new renewable energy and energy efficiency jobs will be created through utility compliance with the North Carolina REPS Law. In the earlier milestone years of 2012 and 2018, a total of at least 965 and 3,692 will have been created through compliance with the REPS Law.

The *North Carolina Renewable Energy and Energy Efficiency Industry Census 2008*² finds 6,470 jobs are currently supported by North Carolina's energy efficiency and renewable energy markets across 64 counties prior to the first electric utility renewable energy contracts entered into for compliance with the REPS Law.

The industry census of existing industry jobs in combination with this analysis, which studies baseline projection for job creation through compliance with North Carolina's REPS Law, indicates North Carolina will be home to at least 7,435 jobs by year 2012, 10,162 jobs by year 2018, and 10,500 jobs by year 2021 in the industry. Because this jobs study is narrowly limited to energy efficiency implemented by electric utilities, a majority of the jobs likely to be created through public and private energy efficiency measures through 2021 are not captured in this study. Similarly, numerous other government performance contracting and efficiency requirements are not captured such as Session Law 2007-546 (S668, Energy Savings in State Buildings), as well as significant market spillover effects from REPS compliance efforts and other regulatory improvements.

CONCLUSION

The combination of these two studies provide the most conservative possible baseline estimate of current and future employment in the North Carolina renewable energy and energy efficiency industries through 2021. Actual job creation is expected to be several times larger than the 10,162 jobs projected by 2018.

² Quinlan, P. and Turiansky, A. North Carolina Renewable Energy and Energy Efficiency Industry Census 2008. Raleigh, NC. North Carolina Sustainable Energy Association. November 2008.