



**NC SUSTAINABLE  
ENERGY ASSOCIATION**

# **Clean Energy Market Activity in the Outer Banks and North Carolina**

Ivan Urlaub, Executive Director  
Outer Banks Chamber of Commerce  
Energy Forum Membership Luncheon  
Nags Head, NC  
January 28, 2015



# NCSEA Mission Statement

*The NC Sustainable Energy Association  
drives policy and market development  
to create clean energy jobs,  
economic opportunities and  
affordable energy  
to benefit all of North Carolina*



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# Stats for the Outer Banks Chamber

## • Dare County

- Small wind and solar installations, and at least 4 LEED and 3 Energy Star certified buildings, and 2 electric vehicle charging stations
- 8 clean energy companies (Dr. Energy Saver OBX, Outer Banks Heating & Cooling, Costin Creations, LLC and 5 more)
- 63 clean energy FTEs & \$6.35M in clean energy revenues in 2015
- sectors: almost entirely energy efficiency and geothermal

## • Currituck County

- Small wind and solar installations, at least 2 Energy Star certified buildings, 1 LPG filling station and 1 electric vehicle charging station.
- 3 firms (All Seasons Heating & Cooling, Inc, Norris Mechanical, OBX Energy Efficiency)
- 16 FTEs & \$750K in revenues in 2015
- sectors: almost entirely energy efficiency and geothermal



# Amazon 'Desert Wind' Project



Source: Craig Poff, Director, Business Development, Iberdrola Renewables.

Photo: Turbines arriving to the Port of Wilmington for the Iberdrola Desert Wind project in Pasquotank and Perquimans County

## Local Benefits

- The project will pay a total of **\$520,000/year to Pasquotank and Perquimans counties**, making it **the largest taxpayer in each county**. That number will increase each year.
- The project will pay **\$624,000/year to landowners** and it will increase each year.
- Approximately **250 workers over 18-month construction period**. Local companies such as restaurants, hotels, gas stations, hardware stores, equipment rentals, gravel companies, engineers, etc. are hard at work supplying materials and services to the construction effort.
- The completed wind farm will require approximately **14 permanent on-site jobs** in operations and maintenance of the facility.



# Economic and Rate Impact Analysis of Clean Energy Development in North Carolina

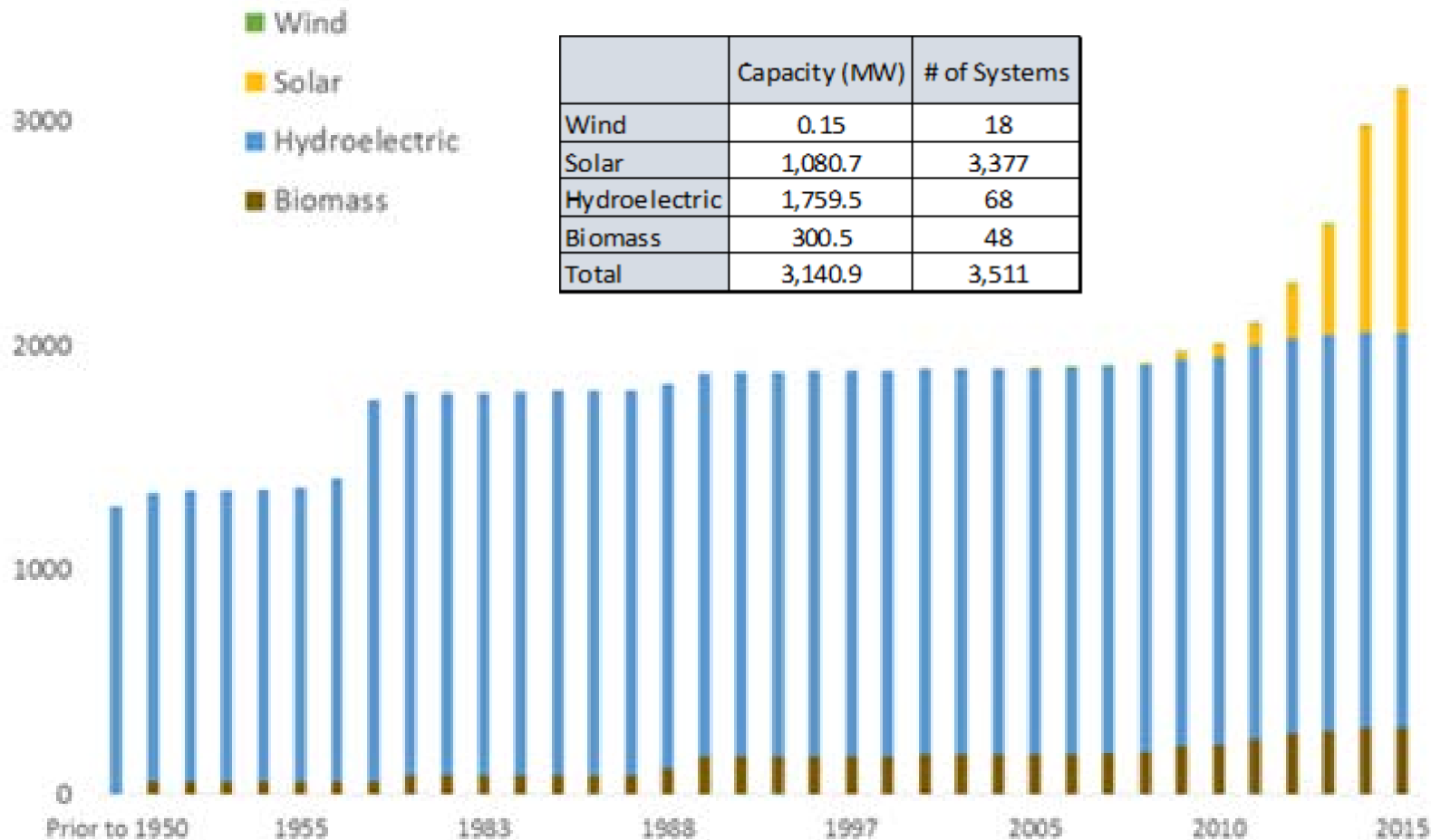


The report's key findings include:

- The **total economic impact in North Carolina** from clean energy (renewable energy and energy efficiency) project development from 2007 - 2014 is **\$6.3 billion**.
- Over \$2.6 billion invested in renewable energy projects since 2008. **Nearly 75% in Tier 1 and Tier 2 Counties.**
- State incentives for projects constructed between 2007 and 2014 are estimated to be \$182.6 million, generating an estimated \$280.7 million in positive state and local government fiscal impacts.



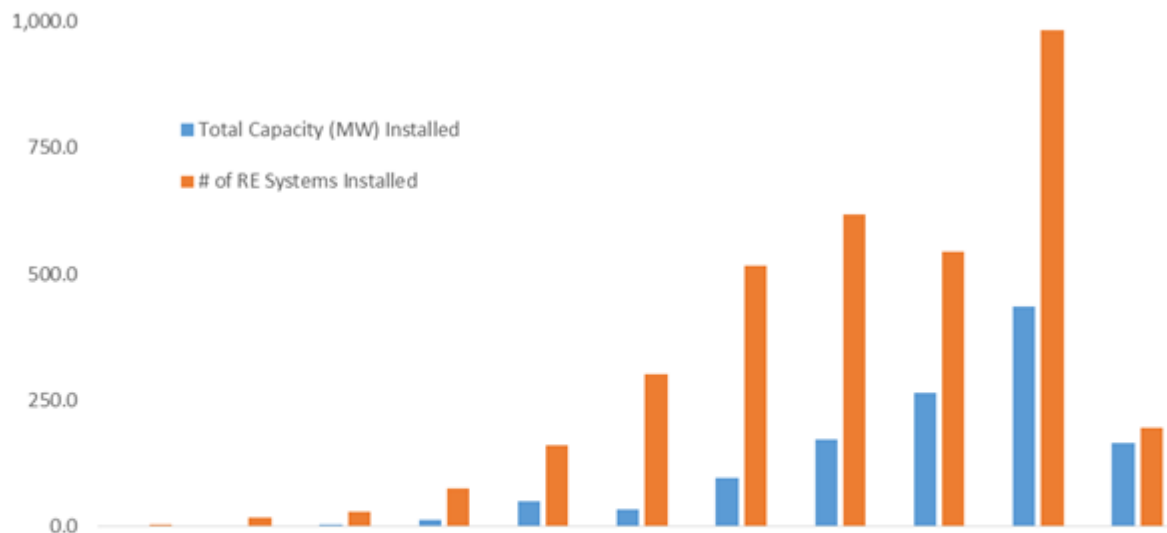
# Installation of Renewable System by Resource Type







# Installation of Renewable Energy System



	Prior to 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*	Total
Total Capacity (MW) Installed	1,898.6	0.6	3.0	4.4	12.5	51.5	35.3	95.6	172.1	264.9	435.8	166.7	3,140.9
# of RE Systems Installed	63	5	18	30	75	162	301	517	617	545	983	195	3511

\*Data through August 2015





# Relevant Clean Energy Insights

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Allison Eckley  
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Robert "Tate" Rust  
Jeremiah Carey

## Understanding the Impact of Electric Choices on North Carolina Residential Electricity Rates and Bills

Previous Bill Amount	Payments	New Charges	Adjustments	Amount Due
		\$187.04		\$187.04

Rate Schedule Description	Amount Due
1,000 kWh - Residential Service	
State Tax	
<b>Amount Due</b>	<b>\$187.04</b>



May 2015

JULY 2015

## North Carolina's Geothermal Industry Uncovering Impact and Opportunities



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SEPTEMBER 2015

## Batteries Not Included

Identifying and Approaching Barriers to Batteries on the Grid



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# Economic and Rate Impact Analysis of Clean Energy Development in North Carolina

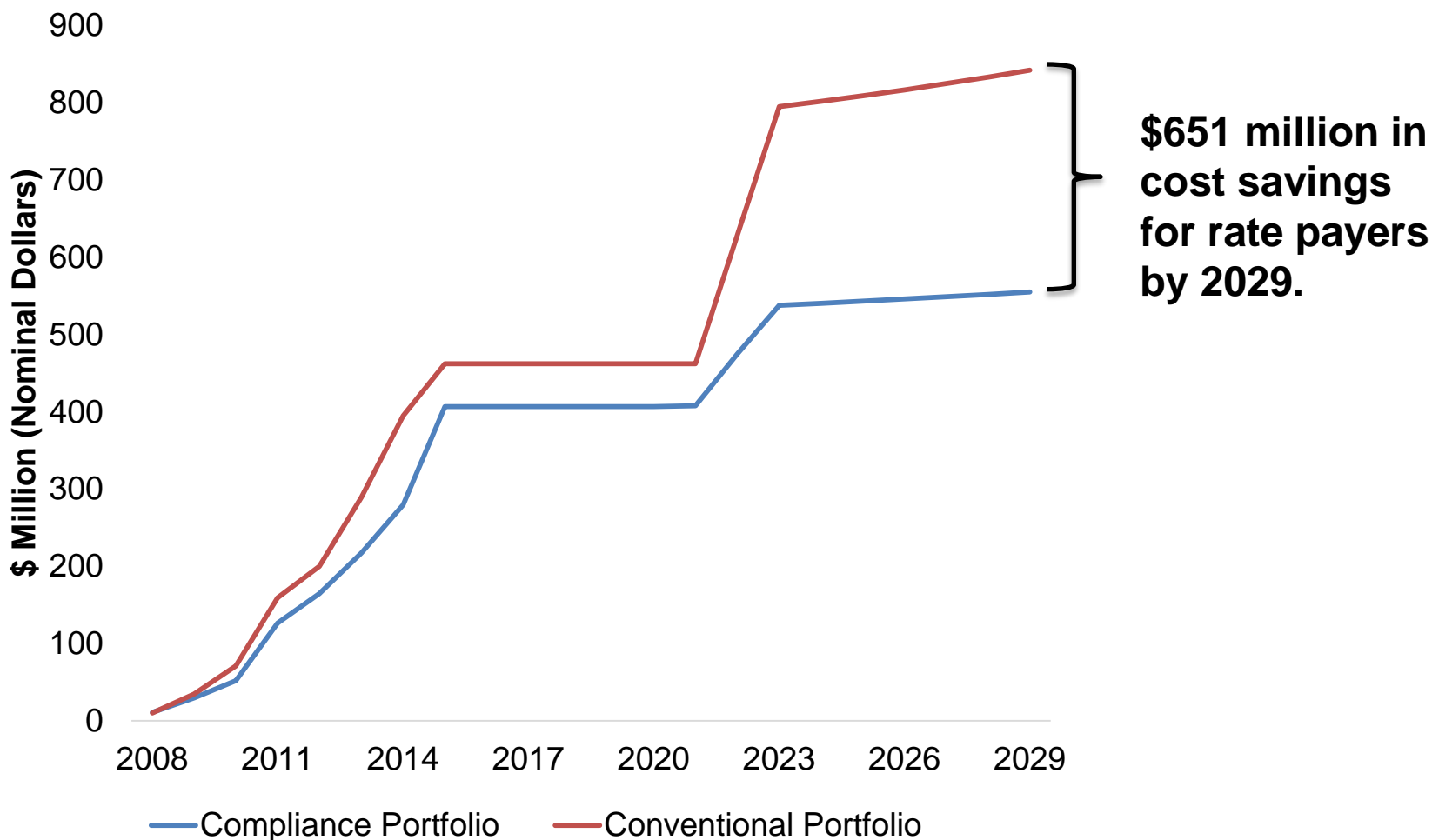


The report's key findings include:

- **Electricity costs are expected to be lower than they would have been had North Carolina continued to only use existing, conventional generation sources.** Integrating renewable energy and energy efficiency into North Carolina's electricity portfolio to comply with the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) will result in \$651 million in cost savings for ratepayers between 2008 and 2029.

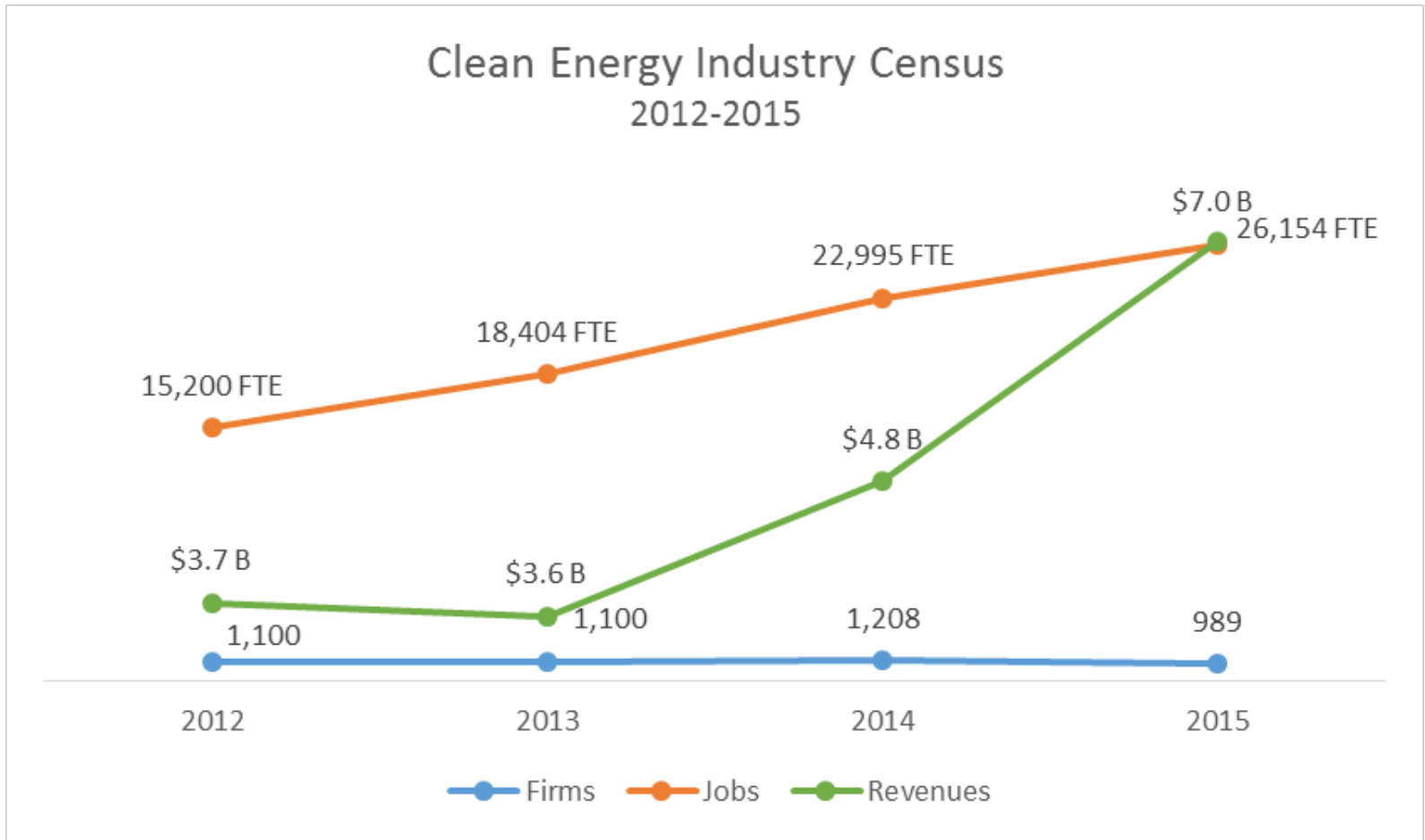


### Figure 3-3. Cost of Compliance Portfolio Compared with Conventional Portfolio





# NC Industry Census, 2012-15





## NC Clean Energy Firms by Sector

Energy Efficiency  
726 Firms



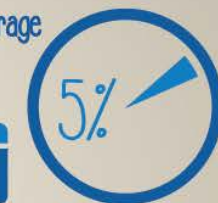
Wind  
85 Firms



Smart Grid  
75 Firms



Energy Storage  
91 Firms



Biomass/Biofuels  
106 Firms



Geothermal  
182 Firms



Solar  
350 Firms



Other  
20 Firms



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26,154

FULL TIME JOBS

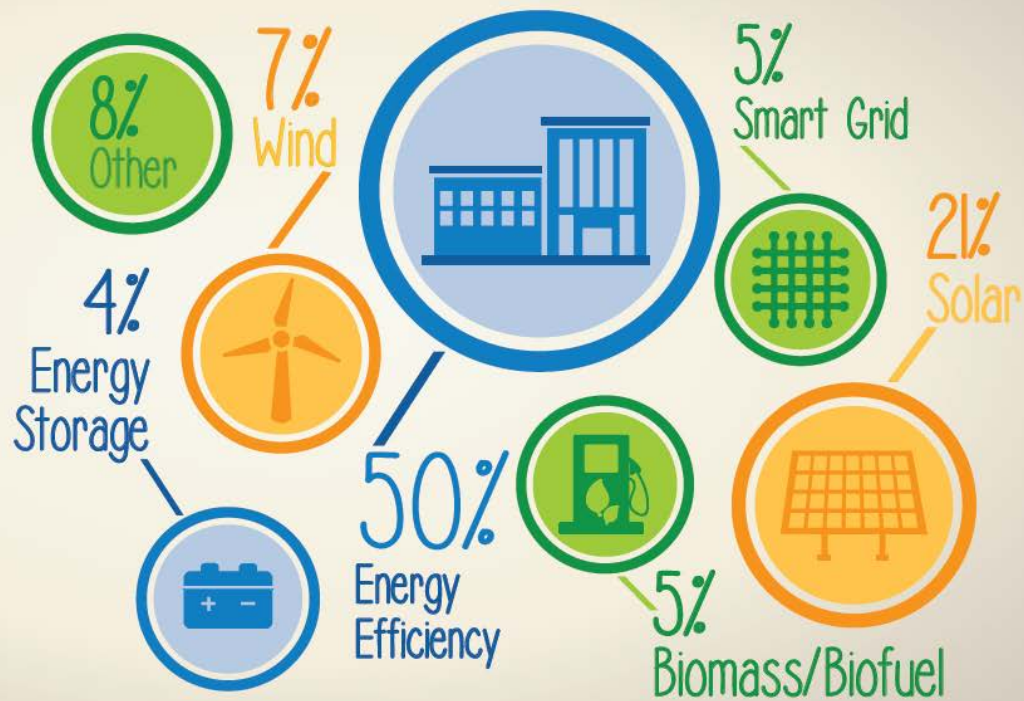


3,159 Jobs Added  
Last Year





## NC Clean Energy Employment by Sector



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\$7  
BILLION  
in NC Revenue



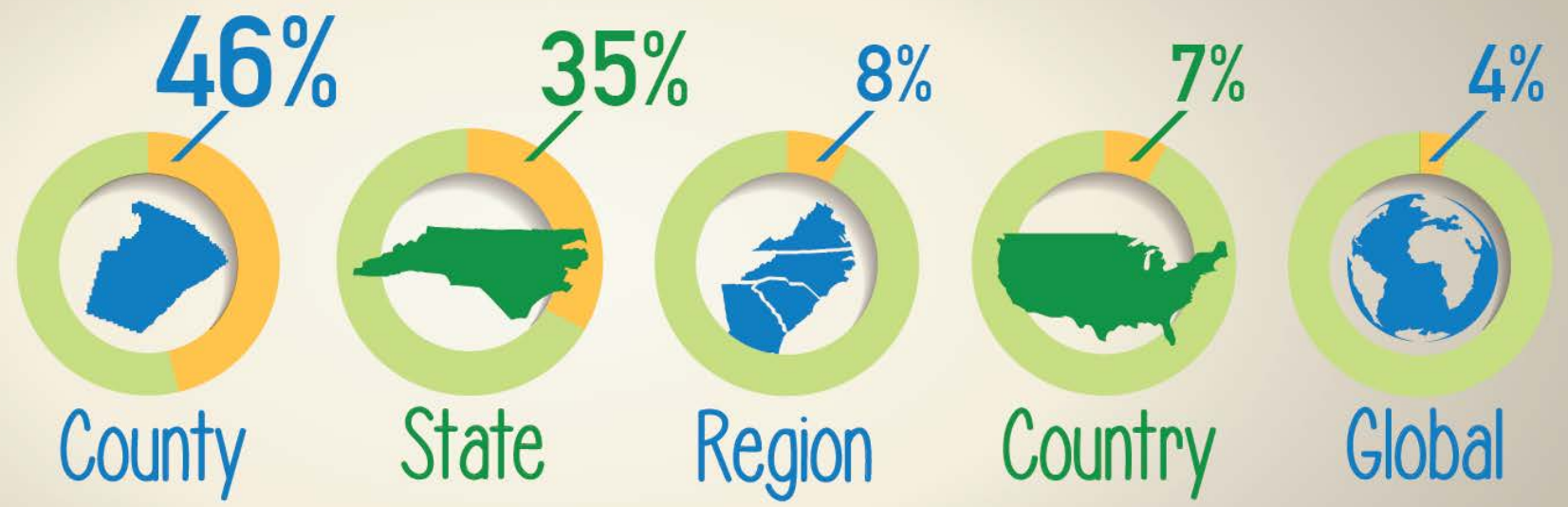
45% increase  
since 2014



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## 2015 Destination Markets

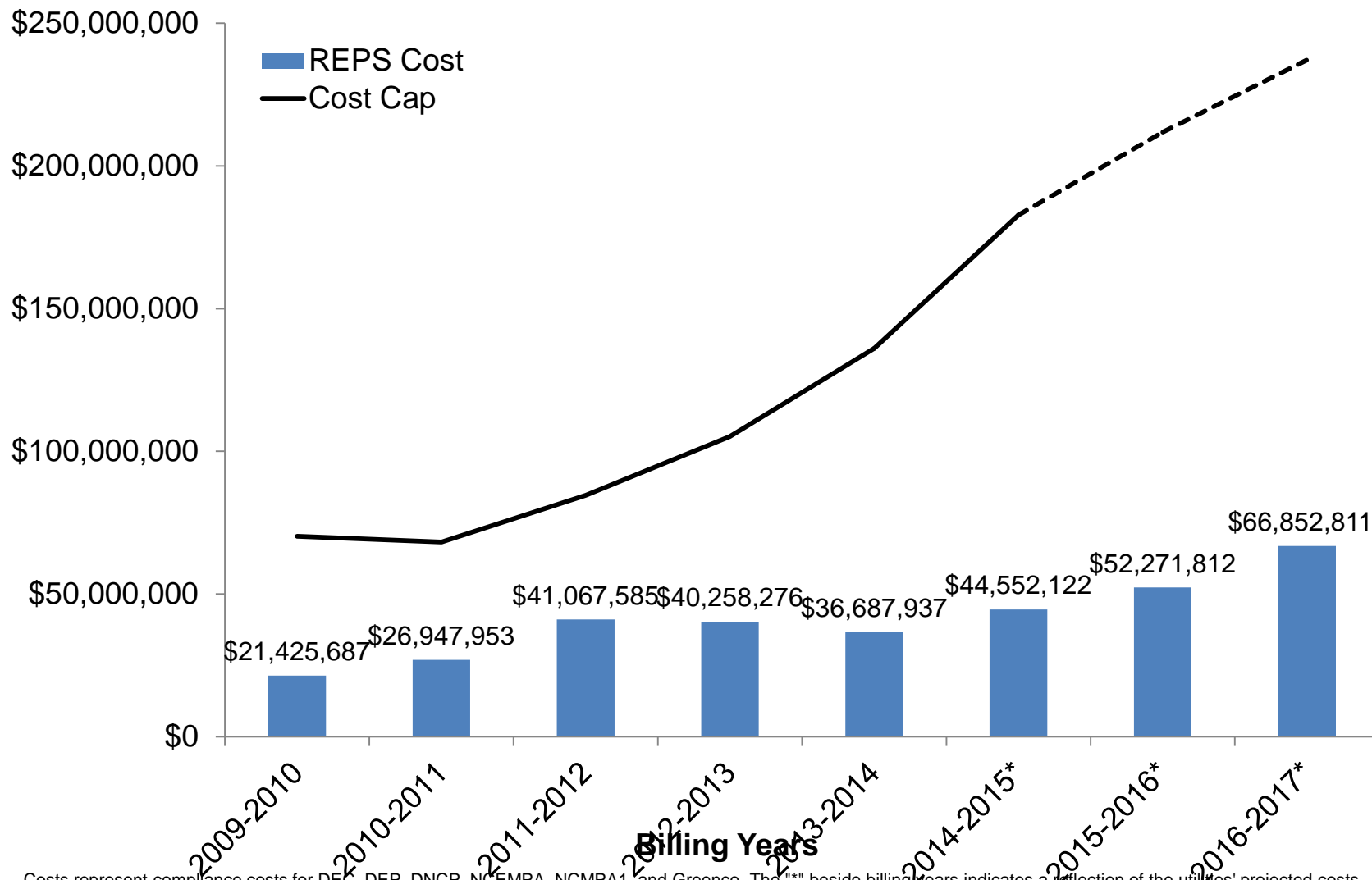




# REPS Cost Recovery

## Total Cost of the North Carolina REPS

Source: NC Utilities Commission REPS Compliance Plan and REPS Compliance Report Dockets



Costs represent compliance costs for DEC, DEP, DNCP, NCEMPA, NCMPA1, and Greenco. The "\*" beside billing years indicates a reflection of the utilities' projected costs in their REPS Compliance Plans.



# 2015 NC General Assembly Long Session Recap

<u>Clean Energy Issue</u>	<u>Related Bill #s</u>	<u>Outcome</u>
Changes to the REPS	H681, H760, H332	All vehicles stalled, still alive
Renewable Energy Investment Tax Credit	Budget	Will sunset, 12/31/15
Safe Harbor for Renewable Energy Investment Tax Credit	S372	Law
Third Party Sales of Electricity	H245	No movement, eligible for consideration in 2016
Property Assessed Clean Energy (PACE) enabling legislation	S284	Law
Property Tax Abatement	H681, H760	No change to existing policy
Capacity Cost Payments	H681, H760, H332	No change to existing policy
Standard Contract for Qualifying Facilities	H681, H760, H332	No change to existing policy
University Energy Centers	Budget	Partially defunded