

# Attribution Analysis for RPS Programs: Challenges Encountered Evaluating New York's RPS

*Presented by  
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*Photo of Maple Ridge Wind  
Farm, Lewis County, New  
York*

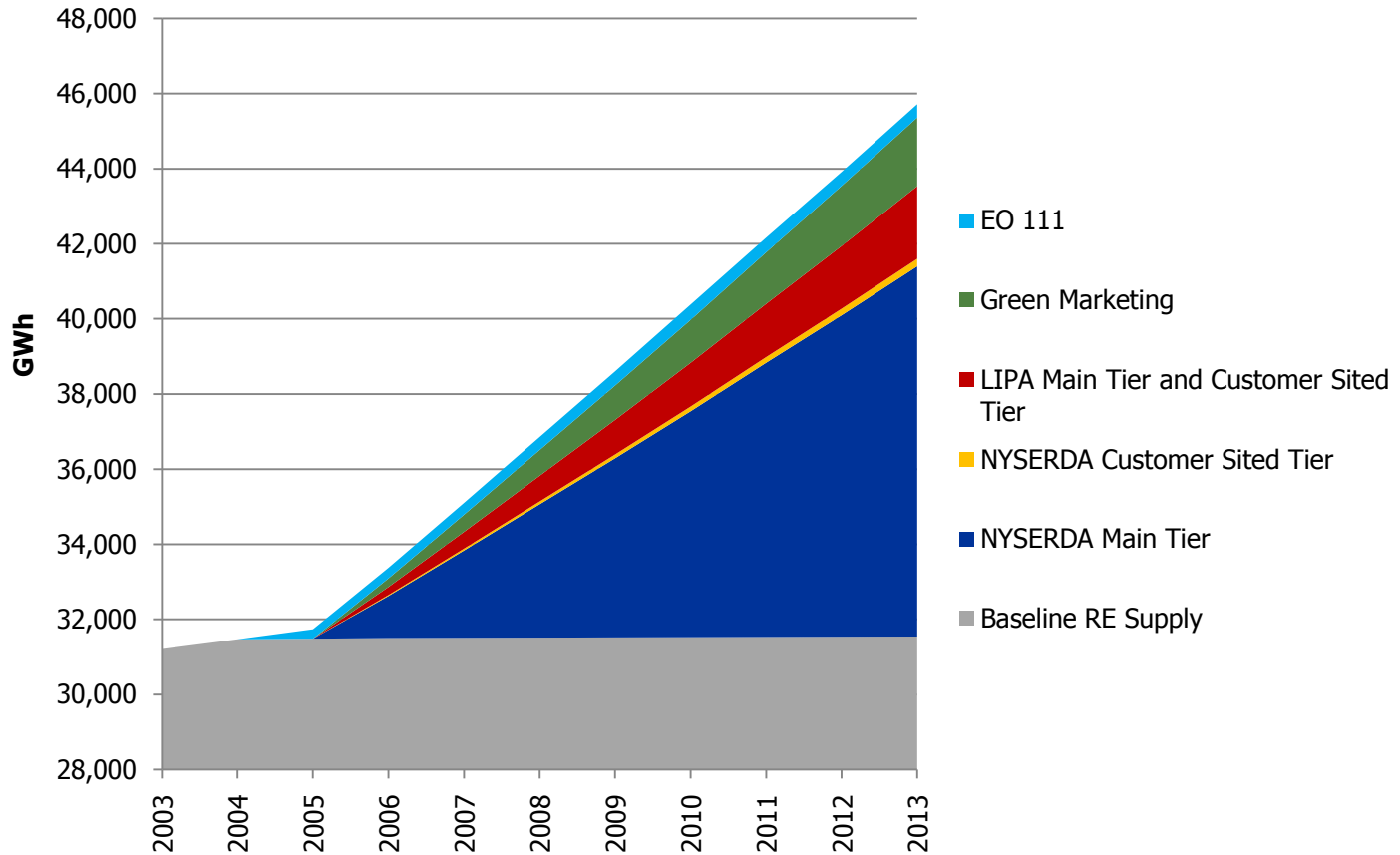
# Overview of Presentation

- New York RPS Program Background
- Attribution Methods and Challenges
  - > General methods and challenges
  - > New York-specific methods and challenges
- Results
- Implications for Evaluation of Other Renewable Energy Programs and Policies
- Conclusion

# New York RPS Program Background

- Unique structure: program administered by New York State Energy Research and Development Authority (NYSERDA)
- Main Tier and Customer-Sited Tiers
- Main Tier: Developers secure long-term REC contracts through competitive solicitations
- Evaluation examined results of 3 Main Tier solicitations (2005 – 2008)

# New York RPS Targets



Source: Summit Blue Consulting based on RPS targets specified in PSC Order, 9/04

# General Attribution Methods and Challenges

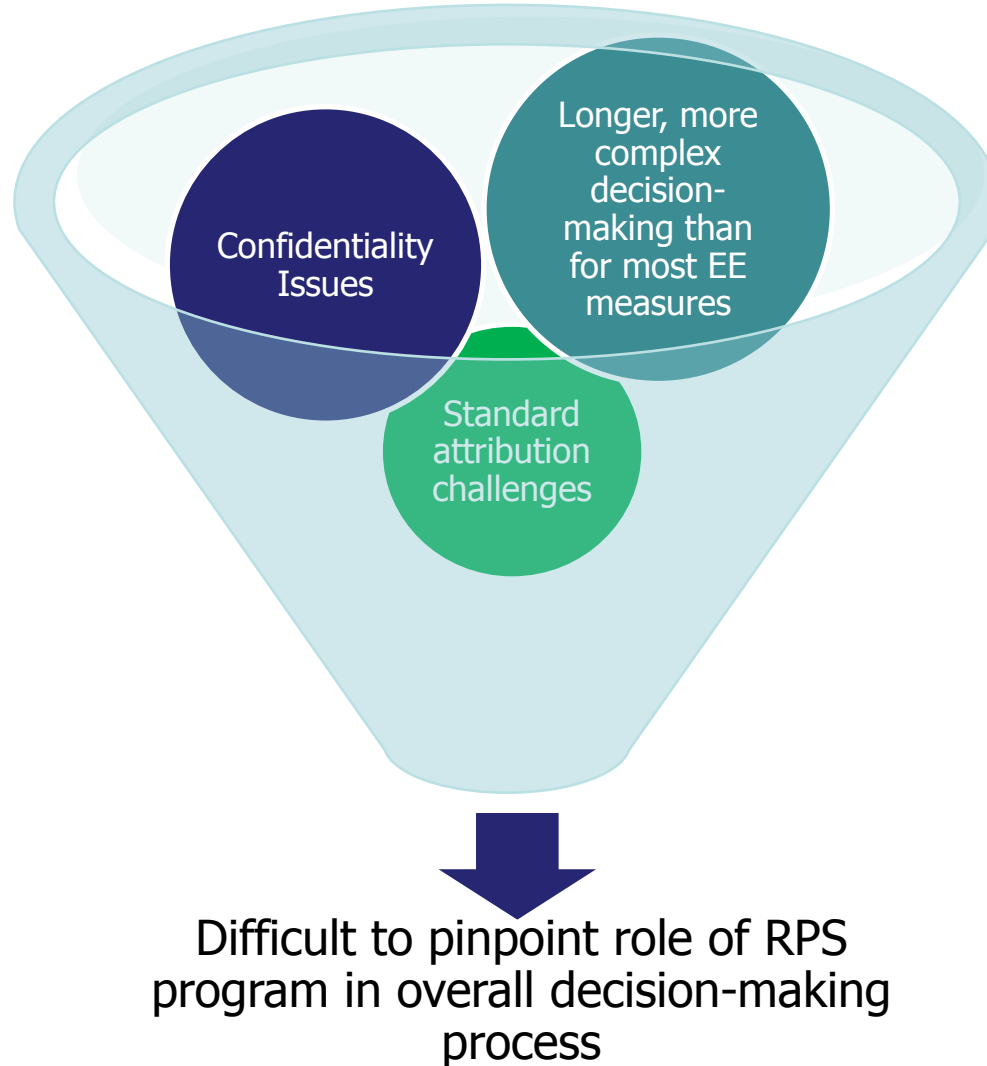
*Net-to-Gross Ratio = 1 – Free Ridership + Spillover*

- **Free Ridership:** impacts that would have occurred in absence of program
- **Spillover:** impacts not counted directly by program, but that occur as a result of program
- Econometric and self-report survey-based methods typically used
  - > Weaknesses: practical / logistical, biases

# New York-Specific Methods and Challenges

- Self-report survey-based method used.
  - > 90 market stakeholders interviewed overall
  - > Attribution: 18 developer interviews
- Key Limitations:
  - > Attribution questions a small part of in-depth interviews covering *all* evaluation topics
  - > Small evaluation budget
- Definitions used for this study:
  - > Free ridership = RE generation that would occur in absence of RPS
  - > Spillover = RE generation from RPS-supported projects that was not sold to the RPS

# Free Ridership: Challenges



# Methods Used

- Analyzed Program Influence Rather than Estimating Net-to-Gross Ratio
  - > No free ridership value estimated
  - > Assigned “program influence scores” for each participating developer
  - > Scores sorted by technology
- Spillover: conservative value used
  - > Amount of generation from projects under contract that is *not* sold to RPS program

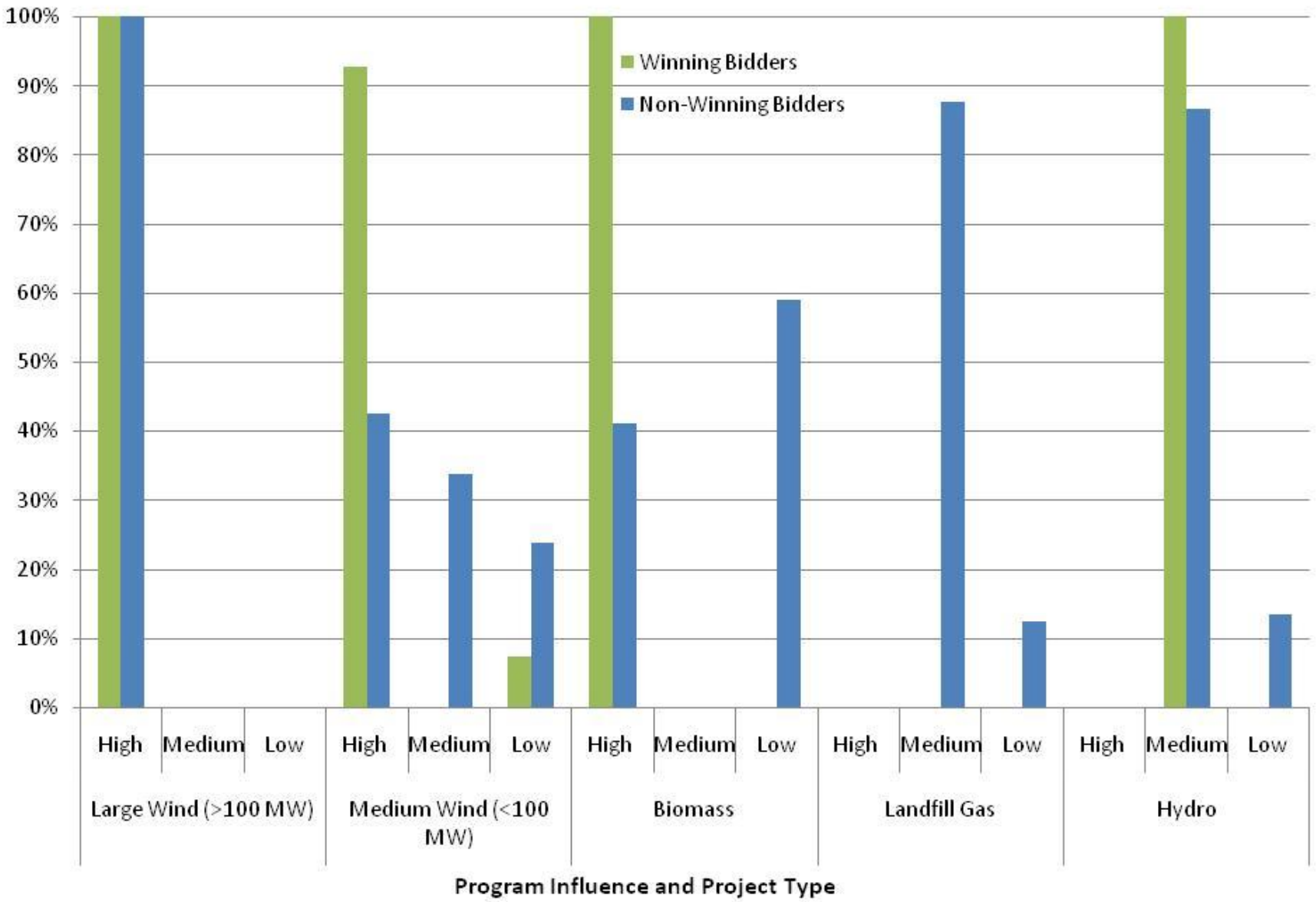
## Program Influence Scores Grouped Into:

- High
- Medium
- Low

# Key Findings

- RPS a fundamental driver for RE development activity.
  - > Among winning bidders:
    - Most influential for large wind & biomass projects
    - Hydro projects only moderately influenced
  - > Non-winning projects also heavily influenced
- Program responsible for generation over and above that counted toward RPS compliance.
  - > Facilities with REC contracts producing on average 19% more RECs than they are selling to NYSERDA.
  - > Many large projects selling RECs to other markets. Use NY RPS as financial anchor to get project built.

Percentage of Generation



# Program Influence Results



# Realization of Wind Potential: NY v. Other States Without RPS

	New York	Kansas	Nebraska	Wyoming	Oklahoma	Idaho
Rank in US for development potential	15	3	6	7	8	13
Development potential (MW)	7,080	121,900	99,100	85,200	82,700	8,290
Wind capacity (MW existing)	707	465	73	349	689	75
Wind capacity (MW under construction)	589	549	81	109	19	71
<b>Realization of development potential</b> <i>(ratio of development potential to capacity, both existing + under construction)</i>	<b>18%</b>	<b>1%</b>	<b>0%</b>	<b>1%</b>	<b>1%</b>	<b>2%</b>
Source: AWEA						

# Implications for Evaluation of Other Programs and Policies

- Growth in RE program activity occurring
- Attribution methods used for EE programs readily transferrable to RE programs with small-scale, customer-sited projects, large # of participants
- Programs focusing on larger project development will have more difficulty applying standard EE attribution methods. Challenges due to:
  - > Small sample sizes,
  - > Long, complex decision-making processes

# Conclusion

- Traditional attribution analysis not conducted due to unique factors.
- Instead, analyzed “program influence” more generally.
- Program spillover also estimated.
- RPS program a key driver behind large-scale RE generation in NY.
- Evaluators:
  - Recognize additional attention / resources may be needed for attribution analysis of programs funding large-scale RE.
  - Collaborate to identify best practices.

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