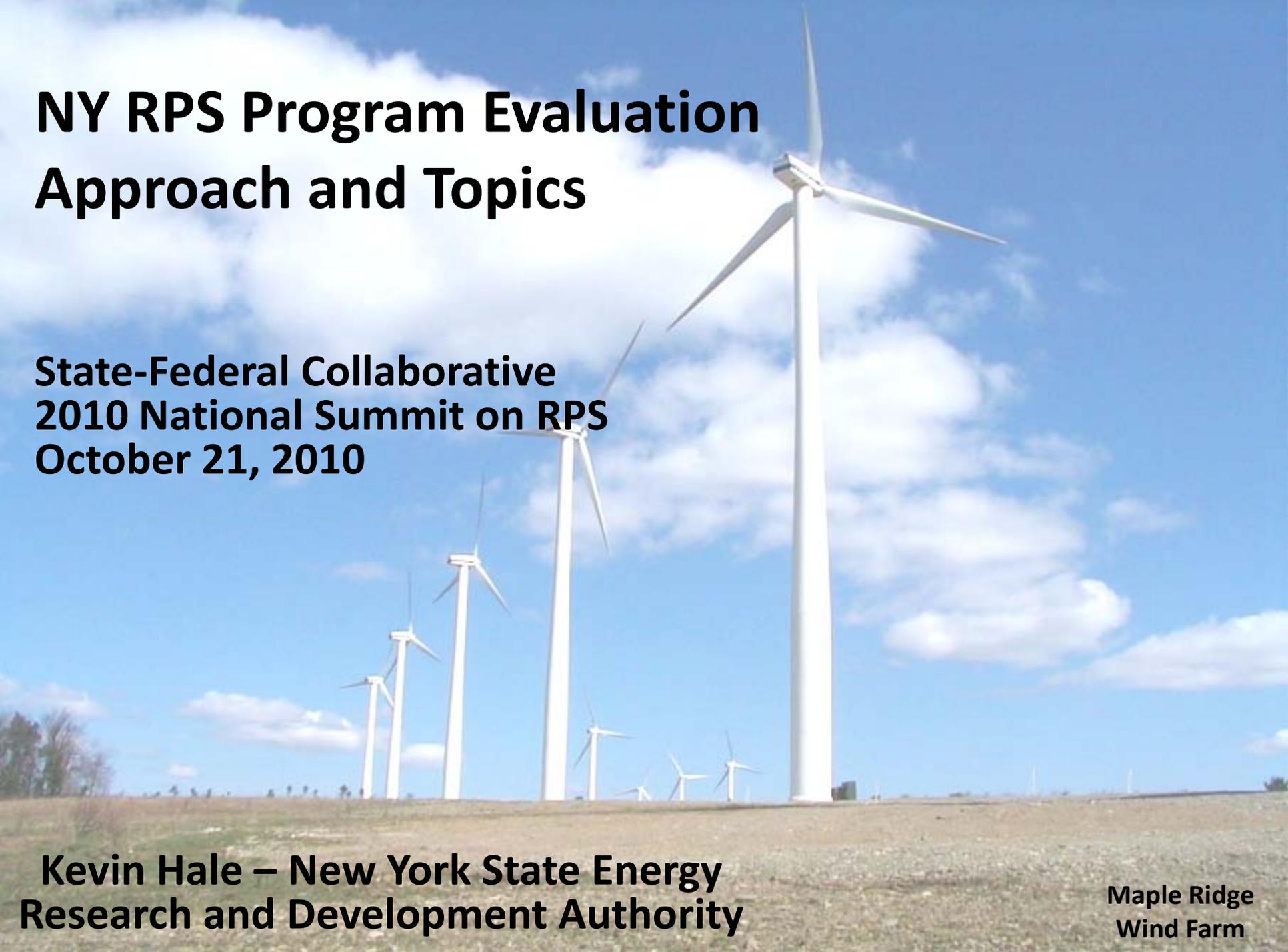


# **NY RPS Program Evaluation Approach and Topics**



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**Maple Ridge  
Wind Farm**

# Renewable Portfolio Standard

- Goal: 30% of the power consumed in the state to come from renewable sources by 2015
  - From the 2003 baseline of ~ 19.3%
- RPS was originally adopted in 2004 as a policy to:
  - Stimulate economic development, improve the environment, and pursue energy independence
- Public Service Commission is responsible for regulations, NYSERDA acts as the “Central Administrator”
- **Utilities are not subject to compliance**
- Approximately \$3 billion in funding from a charge on retail power bills



Spier Falls Hydro

# Program Design

- Main Tier – Large grid connected power plants
  - NYSERDA purchases renewable energy attributes (aka RECs) only; in a technology agnostic manner
  - Energy must be delivered to NYISO/used to serve retail load
  - Fixed-price REC contracts of up to 10 years
  - Prices are set competitively via Request for Proposals (“RFPs”); Evaluation based on 70% price 30% expected economic benefits
- Customer Sited Tier – Smaller behind the meter systems
  - Combination of upfront grants and performance incentives



Maple Ridge Wind Farm

# Evaluation Approach

- March 2009 program evaluation was managed by NYSERDA's Energy Analysis group and conducted by independent contractors.
  - KEMA and Summit Blue
- Evaluation scope focused on (1) Impact and Process, and (2) Market Conditions assessment. Elements included:
  - Program implementation and achievements
  - Cost effectiveness and benefit/cost analyses
  - Impacts on the energy system and economy
  - Regulatory/policy structure – new efficiency policy, RGGI, etc.
- Evaluation was limited to program progress and data as of January 31, 2009
- Close interaction with program administrators and Public Service Commission staff

# Evaluation Approach

- Primary and secondary data collection was important to gather a diverse set of program perspectives, learn from similar experiences, and to leverage existing data sources
- Data sources included program regulations, solicitations, contracts, performance reports, and financial data
- In-depth telephone interviews with 92 key stakeholders
  - Participating and non-participating developers, financial community, IOUs, NYISO, installers, green marketers, NYSERDA staff, and RPS administrators in other states, etc.
- External data sources such as economic benefits studies, regional REC price data, and RPS program regulations from other states were also used



Higley Hydro Station

# Evaluation Topics

- Pre and Post RPS market assessment
  - Renewable supply, presence and level of activity of developers and investors, technology installation and service base
  - Attribution assessment: The degree to which the RPS has been responsible for attracting renewable developers to NY
- Solicitation process and contract mechanisms
  - RFP design, bid scoring and selection
  - Contract security, use of suspensions, 10 year contract term, energy delivery requirement
- Factors affecting REC prices
  - Energy prices, permitting, ISO interconnection, etc.
  - Comparison of REC prices to other states
- Costs/Benefits

# Evaluation Topics – Economic Benefits

**Data Source:** NYSERDA collects data on direct economic benefits through bid proposals

- Long and short term jobs
- Property taxes and payments to municipalities
- Land leases and in-state biomass fuel purchases
- In-state purchases and consumption of goods

**Analysis Approach:** 2005 through 2034 time period; covered development through 20 year operational period

**Direct Benefits:** KEMA verified data for accuracy and creditability; extrapolated data from 1<sup>st</sup> three solicitations out to fully achieving the RPS goal

**Total Benefits:** KEMA then ran the direct economic benefits through an IMPLAN model to determine total effects; direct and indirect (multiplier effects)

# Evaluation Topics – Economic Benefits

## Analysis Outputs:

- 1) The direct benefits for the 1st three solicitations and two fully achieved RPS scenarios (25% by 2013 and 30% by 2015):
  - Total benefits; total per MW and MWh produced, total by resource type and county, job years, job impacts by industry, etc.
- 2) Total benefits from the program (direct and indirect) for two program scenarios: (25% by 2013 and 30% by 2015)
  - By resource type, job impacts by industry, short term vs. long term impacts, etc.
- 3) Other:
  - Cost/benefit ratio including price suppression and environmental benefits
  - Comparison of findings with similar studies and data
  - Recommendations on how to improve data acquisition and use

# Evaluation Topics – Energy Price Effects

**Objective:** Summit Blue analyzed the impacts of the 1<sup>st</sup> three solicitations on electricity prices

**Two stages:** 1) historical regression analysis for 2005-2007 to establish relationship between electric prices and market drivers such as load and gas prices. 2) Forecast of market prices and market drivers in the year 2010

**Drivers:**

- Gas prices
- Load
- Reserve margin
- Renewable energy generation (has the effect of reducing load)

**Findings:** Compared the assumptions and results to two studies conducted by the NYS Department of Public Service (2004 and 2008 studies)

**Program details can be found at:**

**<http://www.nyserda.org/rps/index.asp>**

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