Energy Efficiency Credits: RPS Programs

October 21, 2010
Darrell Sandlin
Director of Engineering Services
Clean Energy Markets
Energy Efficiency Certificates (EECs)

- Same concept as RECs
- Sold “unbundled” from the actual electricity saved
- Provide a buyer the contract right to “green” attributes
- Make it possible for anyone, anywhere to acquire clean, energy efficiency
- Create additional income stream for project owners
- Aka
  - Alternate Energy Certificates (AECs)
  - Tier II or Tier III RECs
  - White Tags
Generation Sources for EECs

- **Cogeneration / Trigeneration / Combined Heat & Power (CHP)**
  - Distributed Generation
  - Waste Heat Recovery

- **Technology Replacements**
  - HVAC systems (Chillers)
  - Lighting Retrofits
  - Variable Speed Drives (VSD)
  - Insulation

- **Operational Changes (ECMs)**
  - Temperature Set Points
  - Building Automation/Energy Management Systems
  - Remote controls and sensors
Key State Compliance Markets

- **Pennsylvania**
  - Alternative Energy Portfolio Standards Act of 2004
  - Regulated by PA PUC
  - Tier II resources Include Energy Efficiency + Waste Coal
  - Vastly Oversubscribed from Waste Coal resources
  - First CHP, Duquesne University, 5 MW, 2008, Nexant CEM

- **Connecticut**
  - 2006 DPUC promulgates rules for Class III Credits (EECs)
  - CHP, Waste Heat Recovery, CLM are eligible resources
  - CHP must be > 50% efficiency >20% thermal > 20% Electrical
  - Revenue quality metering
  - Require formal (Docket) M&V submission + P.E. review
  - 2007 – 1%, 08’ – 2%, 09’ – 3% & 10’ - 4%
  - ACP 31 $/MWh
Key State Compliance Markets

- **Massachusetts**
  - Alternative Portfolio Standards / Green Communities Act of 2008
  - Rules Promulgated in 2009 & Regulated by DOER
  - Primary focus - Environmental Emissions Reduction
  - CO2 rate < 890 Lbs/MWh from total fuel process cycle
  - Alternative Energy Credits (AECs)
  - Eligible technologies are CHP, Flywheel, Efficient Steam
  - In service date on or after January 1, 2008
  - Revenue Quality metering required all energy flows
  - M&V conducted by independent third party metering verifier
  - First CHP approved, Titleist, 2 MW – 2009 – Nexant CEM
Prospective National Market

- National Renewable Electric Standard (RES)
  - Senate Energy & Natural Resources Committee revised RES from S.1462, Sept 2010
  - Generation Sources are RE + EE
  - CHP is classified as Energy Efficiency (EEC)
  - Not to supersede State RPS programs
  - EECs may account for 26.67% of total RES requirements
  - Pre-compliance markets developing in advance
  - ACP for nonattainment 21 $/MWh, paid directly to the State
  - RES Requirements

  - 2012 ~ 2013 --------- 3.0% of retail sales
  - 2014 ~ 2016 --------- 6.0% of retail sales
  - 2017 ~ 2018 --------- 9.0% of retail sales
  - 2019 ~ 2020 --------- 12.0% of retail sales
  - 2021 ~ 2039 --------- 15.0% of retail sales
Conclusion

Darrell Sandlin, CEM, CMVP
Director Engineering Services,
Clean Energy Markets
Nexant, Inc.
1805 Old Alabama Road, Suite 315
Roswell, GA 30076
P - 678.954.8153
C - 404.966.2237
F - 678.954.8157
www.nexant.com
Dsandlin@nexant.com