

Renewable Energy Technologies & Markets

Regulatory Update

NJ Clean Energy Conference

Andrew Kolchins
Evolution Markets Inc.



September 27, 2007

Evolution Markets Overview



***Evolution Markets is the
Intersection of Environment, Energy, and Finance™***

**Complete Financial Services for Green Markets and
Clean Energy Sector**

Market Execution Services

Structured Transactions

Merchant Banking

World's Largest Environmental Brokerage

More than 70 Professionals Worldwide

More than \$50 billion in Transactions

**Global Offices in New York – London – San Francisco –
Calgary**

The Markets We Serve



- **Environmental Markets**

- Renewable Energy Credits
- GHG Credits/Allowances
- SO₂ Emissions Allowances
- NO_x Emissions Allowances
- Emissions Reduction Credits
- Houston/Galveston NO_x Allowances
- RECLAIM (Los Angeles NO_x and SO_x)
- Weather Derivatives

- **Energy Markets**

- OTC Physical Coal
- OTC Coal Derivatives
- Green Power
- Natural Gas
- Nuclear Fuels

Evolution Markets Commitment to Renewable Markets



RECs brokerage since 2002

REC brokerage, green power contracts, financial services

Compliance RECs (Northeast/Texas) from New York

Voluntary RECs (Nationwide) and Western Compliance RECs from San Francisco

Market's only Green-e approved broker

Market's most honored brokerage



Environmental Finance Magazine Customer Survey
Best Renewables Broker-North America
(2006, 2005, 2004, 2003)



RISK MANAGEMENT • TRADING • FINANCE

energy risk

Energy Risk Annual Rankings
Best Broker-North America Environmental Markets
(2006, 2004)



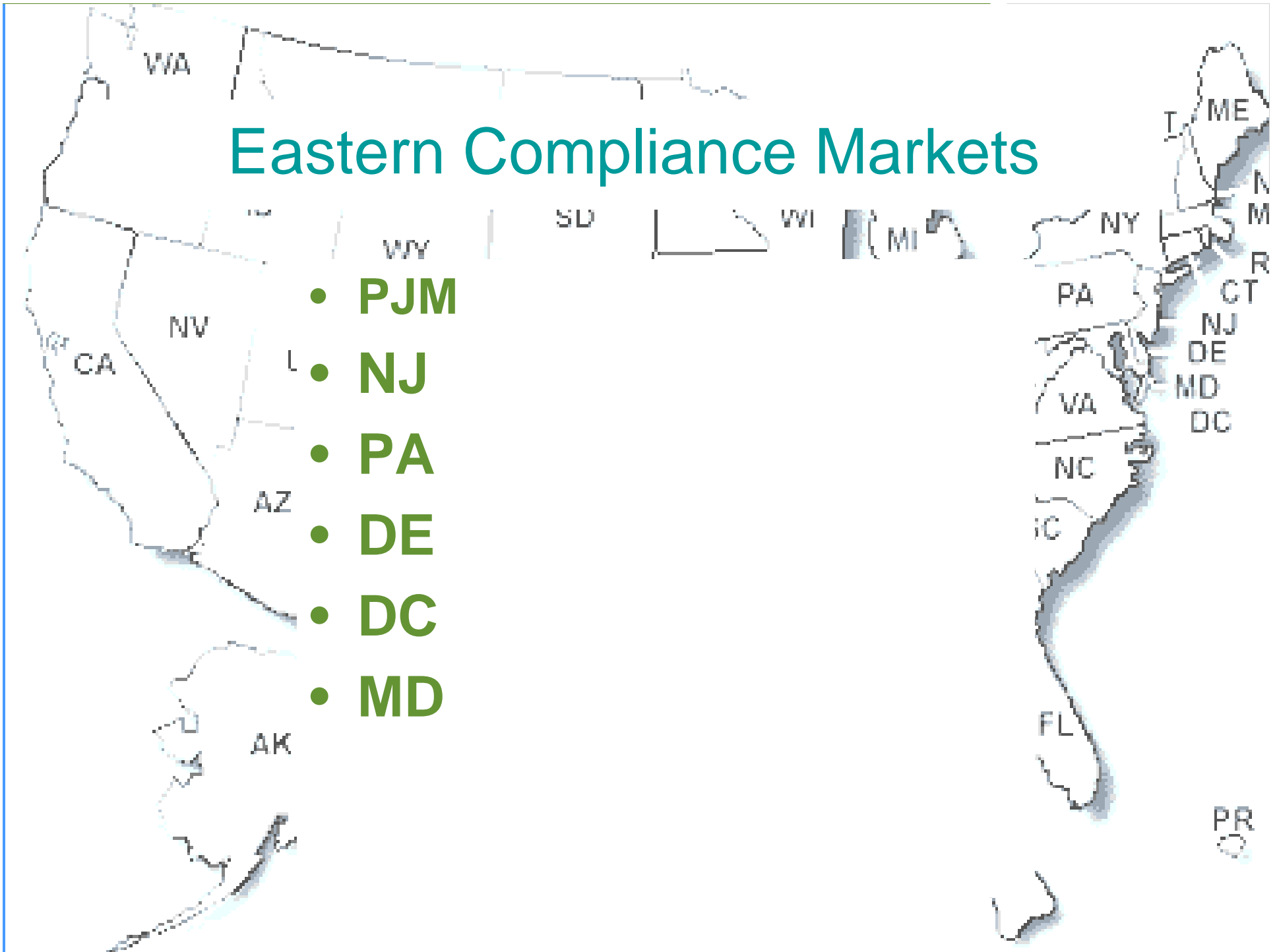
Energy Business

Silver Award Winner 2005
Renewable Energy

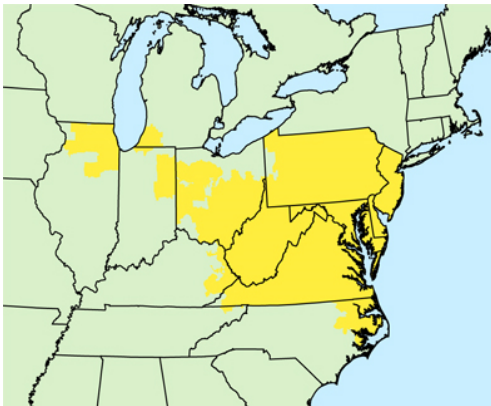
 *The Intersection of Environment,
Energy and Finance.*

Eastern Compliance Markets

- PJM
- NJ
- PA
- DE
- DC
- MD



PJM Overview



- **NJ the most active compliance market**
- **PA has passed RPS – begins in RY 2007 (but not for everyone)**
- **MD RPS began calendar 2006**
- **DE recently amended**
- **D.C. to begin in calendar 2007**

PJM Snapshot: New Jersey



- **NJ was the first compliance market in PJM**
- **Runs on Reporting Year (Jun 1, 2007-May 31, 2008)**
- **Retail Load determined by BGS Auction (February)**
- **LSE's have a 3 month window to true-up compliance (Aug31)**
- **Delivery of RECs into PJM GATS (simplified transactions) or thru NJ Clean Energy Website (Solar and BTM)**

PJM Snapshot: New Jersey (cont.)



- **8/22/2007 NJ BPU announces Request for Action order to address shortfall in NJ Class 1 marketplace for RY 2007**
- **9/21/2007 Is the NJ Stakeholder meeting to address this shortfall**
- **What was learned?**
 - Many reasons for apparent shortfall
 - A market shortfall DOES NOT MEAN THE MARKET IS BROKEN
 - Agreed that there is a grey area in the RPS pertaining to PJM Settlement/PJM Generated Power
- **By Dec 1, 2007 a decision has to be made**

PJM Snapshot: New Jersey (cont.)



- **NJ is still widely accepted to be the top REC market in the US**
- **Regulatory Certainty has allowed a significant amount of large scale wind to be developed**
- **Long term deals and merchant generators add to a diverse REC market in the state of NJ**
- **You do not have to be located inside the State of New Jersey to qualify for the RPS**
- **Most liquid and active unbundled REC market**



PJM Snapshot: New Jersey (cont.)



- **Solar Pilot Program – BPU has approved major changes to solar program (8/12/2007)**
- **Rebates will no longer be available and SACP will increase. 2009 SACP will be \$711. This SACP decreases annually each year for the next eight years.**
- **2010 - \$693, 2011 - \$675, 2012 - \$658, 2013 - \$641, 2014 - \$625, 2015 - \$609, 2016 on forward - \$594**
- **Market should not just run to the SACP... Long term deals are the key**
- **Projects are able to sell RECs for 15 years after commercial operation date.**
- **SRECs will have 2 year lifespan (year of generation plus one year)**

PJM Snapshot: New Jersey (cont.)



New Jersey REC Demand Forecast						
Year	Solar		Class I		Class II	
	RPS	MWh	RPS	MWh	RPS	MWh
2006/2007*	0.0393%	32,095	2.037%	1,663,541	2.50%	2,041,656
2007/2008	0.0817%	67,869	2.924%	2,428,993	2.50%	2,076,772
2008/2009	0.1600%	135,200	3.840%	3,244,789	2.50%	2,112,493
2009/2010	0.2210%	189,956	4.685%	4,026,903	2.50%	2,148,828
2010/2011	0.305%	266,666	5.492%	4,801,738	2.50%	2,185,788
2011/2012	0.394%	350,405	6.320%	5,620,712	2.50%	2,223,383
* Based on a 2003 baseline and using a growth rate extrapolated from EIA data						



PJM Snapshot: Pennsylvania



- PA has the newest compliance market in PJM
- RPS passed in November 2004, 2007 will be first compliance year (but several utilities exempt until 2009-2010)
- Regs are still not final (delivery issues are the biggest)
- RPS target: 18% by 2021
- **Alternative Compliance Payment: \$45/MWh (Tiers I & II)**
- **Prices: too early to tell, but likely to follow NJ REC prices?**
- **Supply & Demand: RPS rules not final. Qualifying generation resources likely to be located anywhere in PJM service territory or deliver into PJM grid**





PJM Snapshot: Pennsylvania (cont.)

Pennsylvania REC Demand Forecast*						
Year	Solar PV		Tier I (Incl. Solar PV)		Tier II	
	RPS	MWh	RPS	MWh	RPS	MWh
1 June 2006 - 31 May 2007*	0.0013%	1,925	1.50%	30,000	4.20%	6,217,689
2007/2008	0.0013%	1,956	1.50%	90,000	4.20%	6,319,473
2008/2009	0.0013%	1,988	2.00%	300,000	4.20%	6,422,923
2009/2010	0.0013%	2,021	2.50%	3,00,000	4.20%	6,528,066
2010/2011	0.0203%	32,069	3.00%	5,000,000	6.20%	9,794,421
2003 baseline / using a growth rate extrapolated from EIA data						
* Bulk of PA load is not covered by RPS until 2010/201, thus, earlier numbers overestimate demand						





PJM Snapshot: Maryland



- **RPS passed in May 2004, 2006 will be first compliance year**
- **RPS target: (Tier I): 7.5% by 2014 ...SB 595 will increase current percentages and add a solar set-aside (when signed by Gov. O'Malley)**
- **Alternative Compliance: Tier I - \$20; Tier II - \$15/MWh**
- **Prices: Tier 1 \$1.00-\$2.00; Tier 2 \$0.50 - \$1.50**
- **Supply & Demand: Market is Oversupplied due to MD allowing wide geographic availability and 3-yr bankability**
- **Rule change in the works to add a solar set aside...Tier 1 pricing will not be affected**





PJM Snapshot: Maryland

Maryland REC Demand Forecast				
Year	Tier I		Tier II	
	RPS	MWh	RPS	MWh
2006*	1.00%	776,396	2.50%	1,940,990
2007	1.00%	798,912	2.50%	1,997,279
2008	2.00%	1,644,160	2.50%	2,055,200
2009	2.00%	1,691,841	2.50%	2,114,801
2010	3.00%	2,611,356	2.50%	2,176,130
2011	3.00%	2,687,085	2.50%	2,239,238

* Based on a 2003 baseline and using a growth rate extrapolated from EIA data



Voted Top Renewables Broker – North America

12/06 Environmental Finance Customer Survey

EVOLUTION MARKETS INC.

10 Bank Street – 4th Floor

White Plains, NY 10606

914-323-0255 Tel

914-328-3701 Fax

EVOLUTION MARKETS INC.

425 Market Street, Suite 2209

San Francisco, CA 94105

415-955-0561 Tel

415-955-2612 Fax

Andrew Kolchins – Director, Renewable Energy market
akolchins@evomarkets.com