



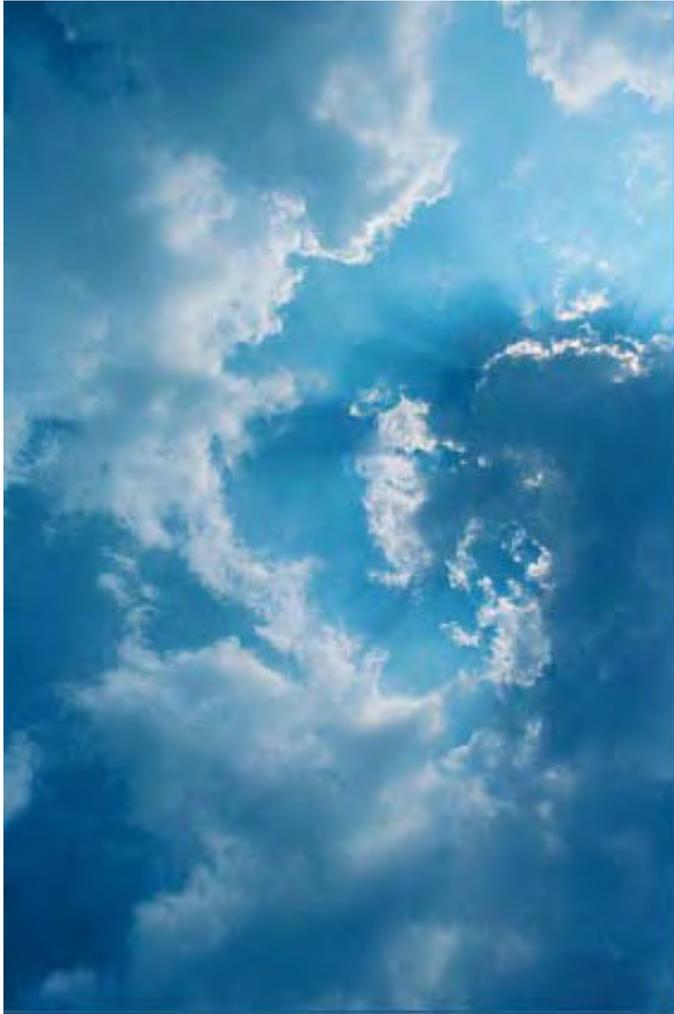
***Building a Trusted  
Environmental Markets  
Infrastructure***

Tom Lewis  
Chairman & CEO  
APX Inc.



# Agenda

- Introduction
- Life of Renewable Energy Credit
- Life of a White Tag (Energy Efficiency)
- Carbon Markets
- Keys to Success
- Demonstration



## ***Life of Renewable Energy Credit:***

*How New England , Mid-Atlantic, Texas,  
and the Western States (Launch 2007)  
Manage the Regions' Environmental  
Commodities*

John Melby

Senior Vice President

APX Inc.



# Agenda

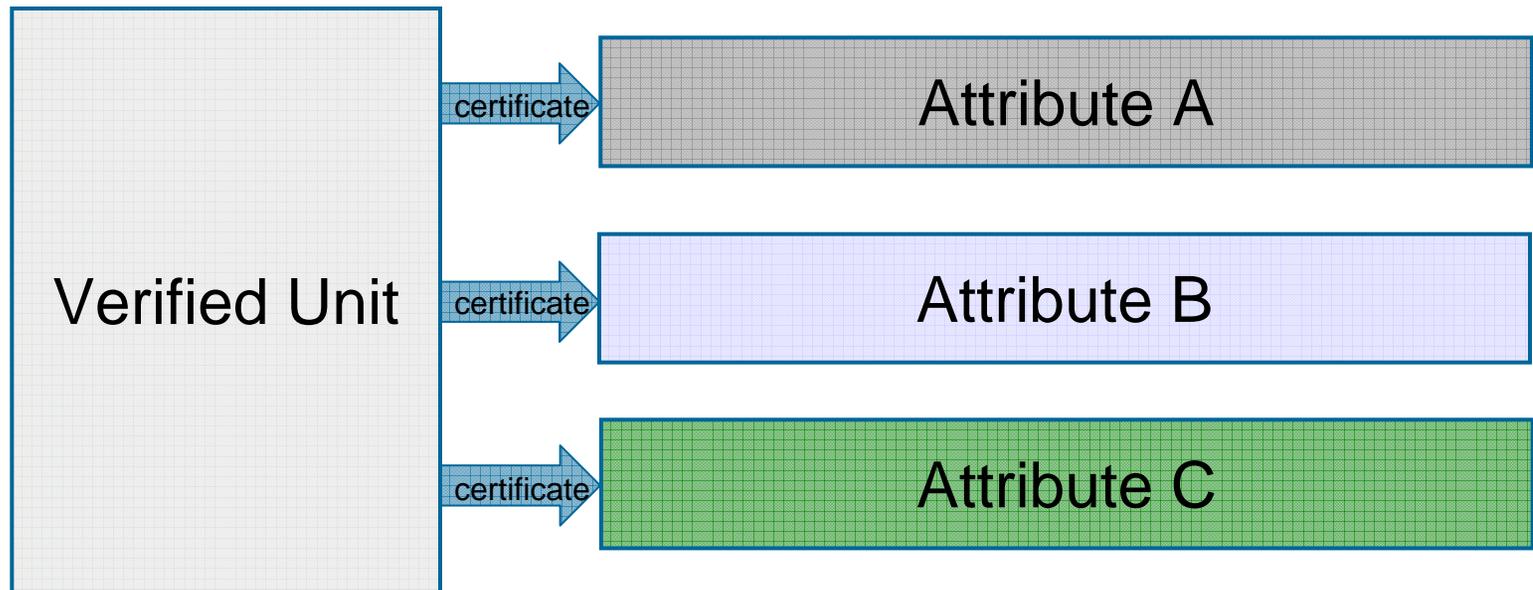
- Primer on “Mechanics”
- Review of Regional REC Markets



# About APX

- Provider of **web-based infrastructure** for environmental & energy markets
- Enables effective policy implementation
- 10 years in the business

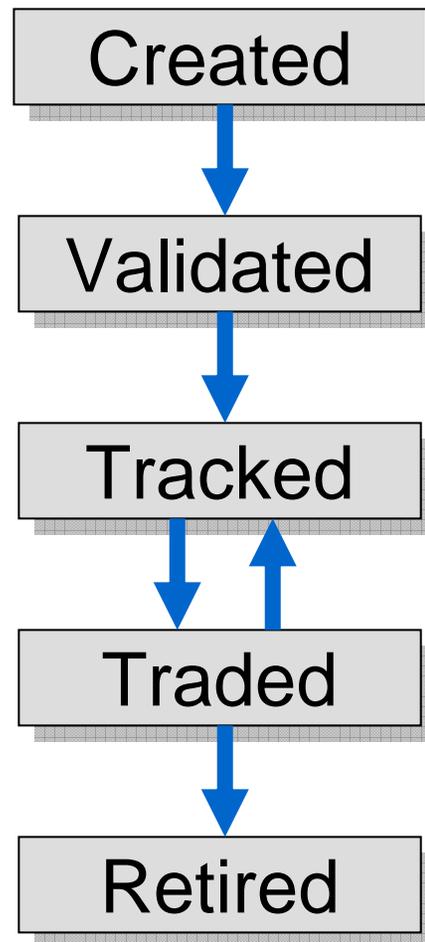
# Certificate-Based Accounting Verification Methodology



*One Unit = One Certificate (Regardless of Value)*



# Lifecycle of the Environmental Commodity



*“The Bank & the Mint”*



# Texas RECs

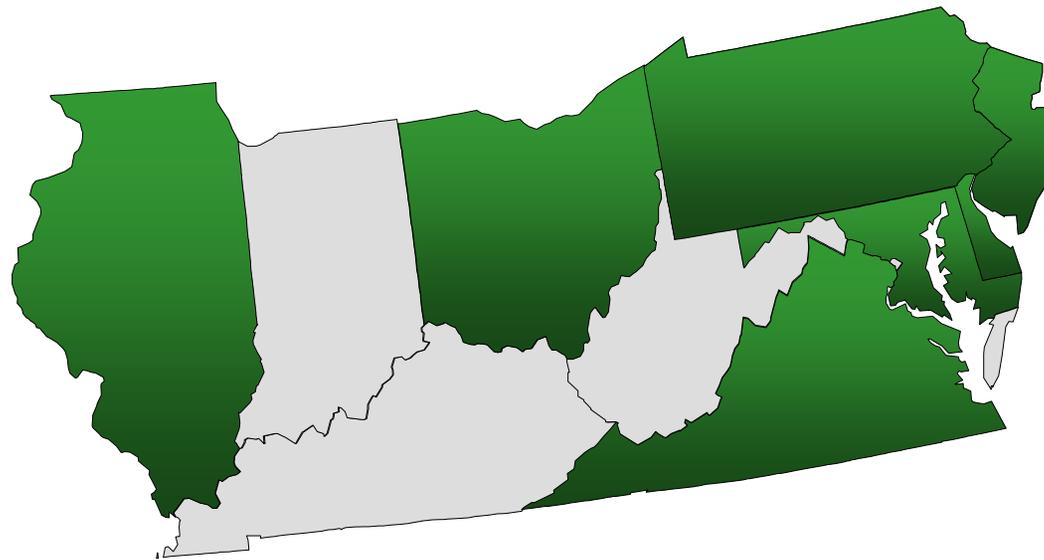




# NEPOOL GIS



# PJM GATS





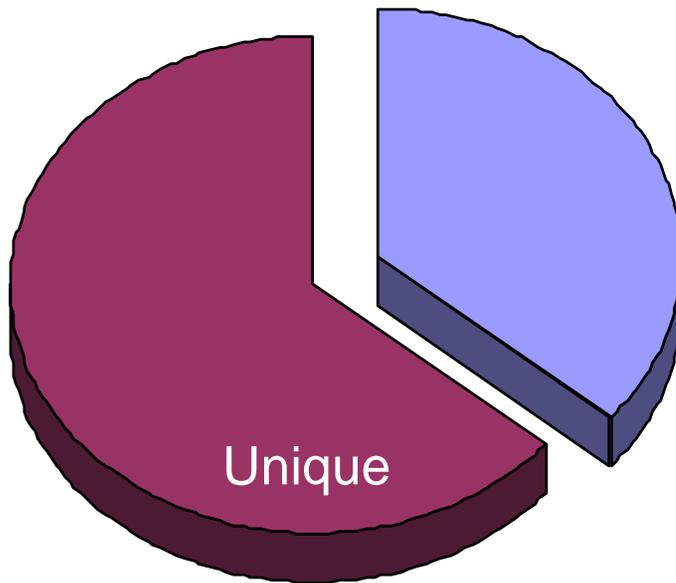
# WREGIS

plus Canadian  
Provinces

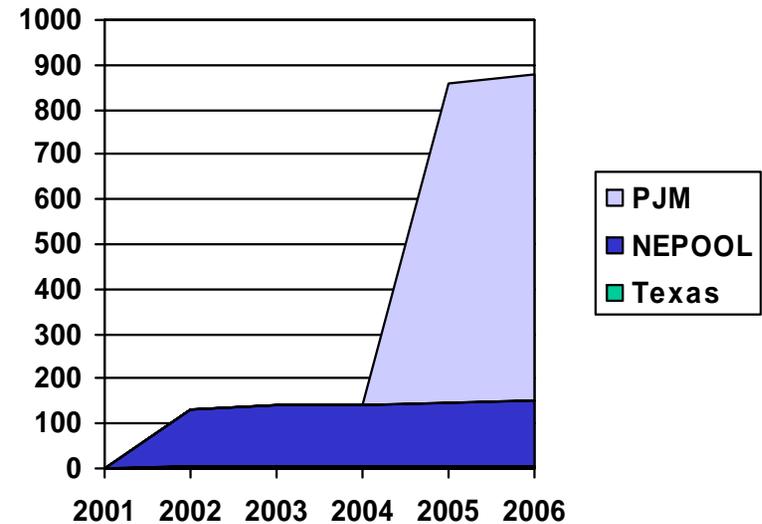


plus  
Baja Norte

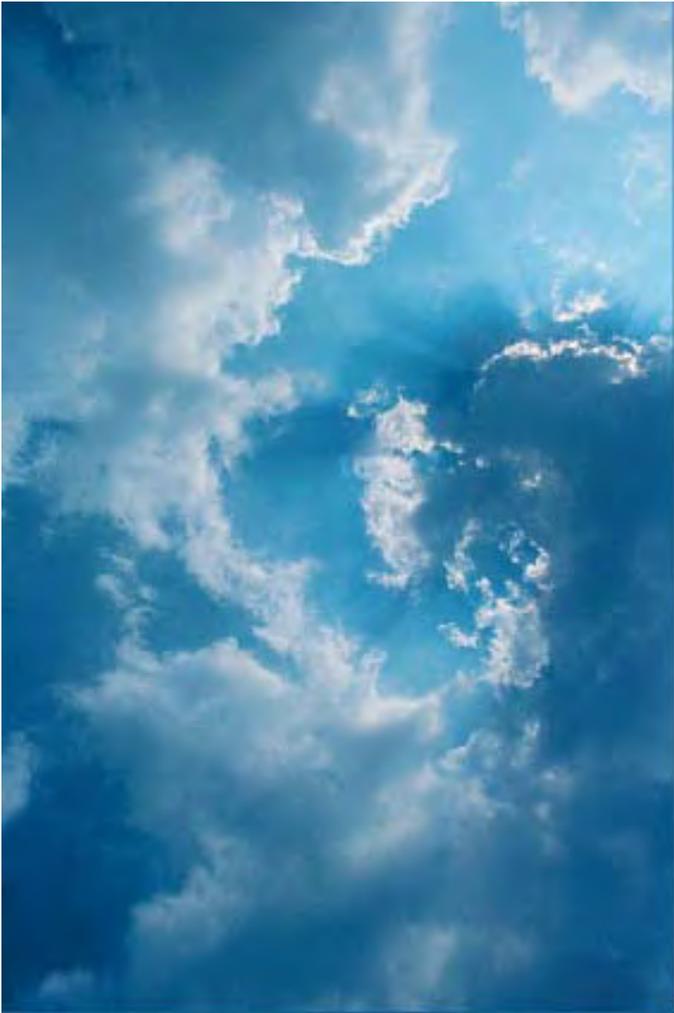
# Environmental Markets are Growing Rapidly (PJM, NEPOOL, ERCOT)



625 Total Account Holders



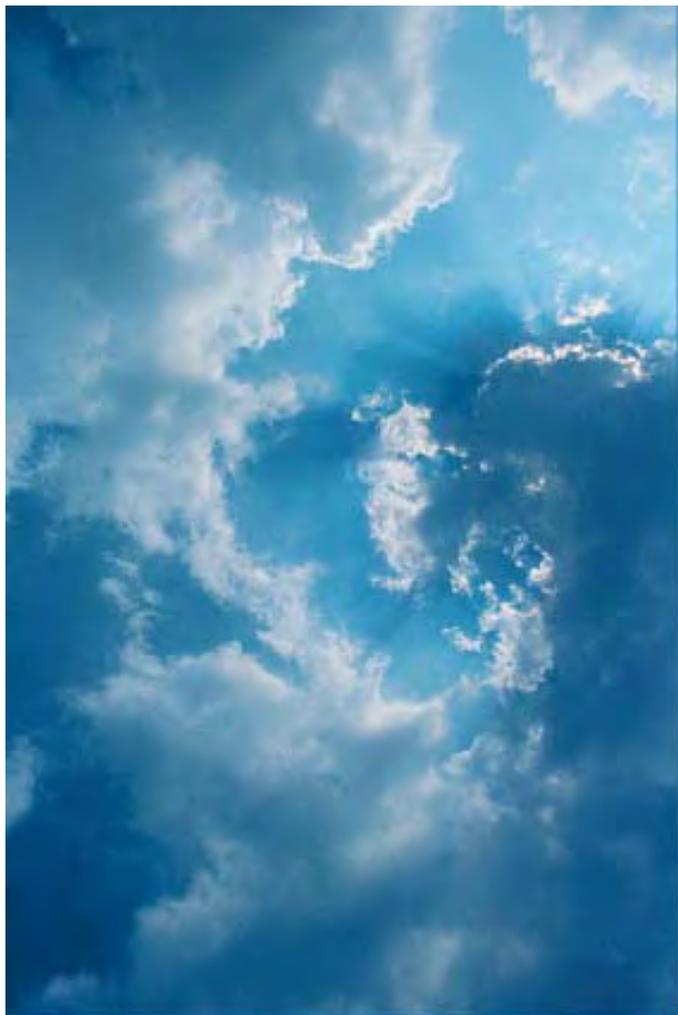
More than a Billion Certificates



## ***Life of a White Tag:***

*How Energy Efficiency Markets are  
Operating in the United States Today*

Mel Jones  
President & CEO  
Sterling Planet



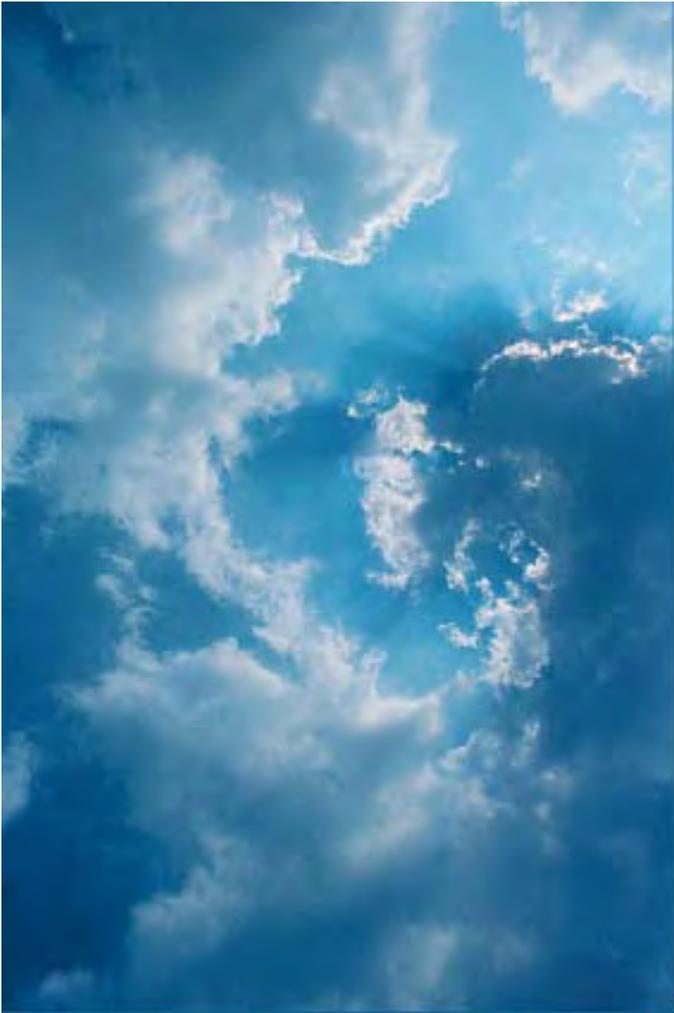
## ***Carbon Markets:***

*Creating an Efficient and Effective  
Marketplace*

Martin Whitaker

Director

MissionPoint Capital



***Keys to Success:***

*Infrastructure, Market Neutrality, and  
Synergies*

John Melby

Senior Vice President

APX Inc.



# Success Factors

- **Integrity**
  - Environmental policy is faithfully implemented in the market system
  - Stakeholders must be confident that the attribute is actually available to the market – real and trusted
  - Market cannot allow a certificate to be sold more than once
- **Quality of Information**
  - Stakeholders have accurate information to manage their business
  - Information on supply and demand is readily available
  - Regulators have accurate and timely compliance information
- **Technologically Advanced**
  - Cost effective and efficient web-based management
  - Capable of very high data volumes, with 24/7 support
  - A level playing field for all stakeholders



# Regional Market Systems

*Existing Markets are Moving Beyond “RECs”*

- New Environmental Commodities
  - Energy Efficiency & Conservation Certificates – CT
- Tracking All Generation, not just Renewables
  - NEPOOL, PJM
- Tracking Emissions
  - PJM GATS – CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>
  - NEPOOL: CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, PM, VOCs, Hg
- Handling Forward Transfers
  - NEPOOL, WREGIS



# A View for GHG Market Success

*Extrapolating from today's Mandatory REC Markets, success will require three strong tiers...*

## ***Roles***

### **Policy Level**

(rules for allowances/credits/offsets)

- Regulators (State & Federal)
- NGOs

### **Regional Infrastructure Level**

(commodity creation, serializing, verifying, tracking)

- Certifiers & Verifiers
- Registries
- Technology & Services Providers

### **Transaction Level**

(bilateral trades, exchanges, brokering, marketing)

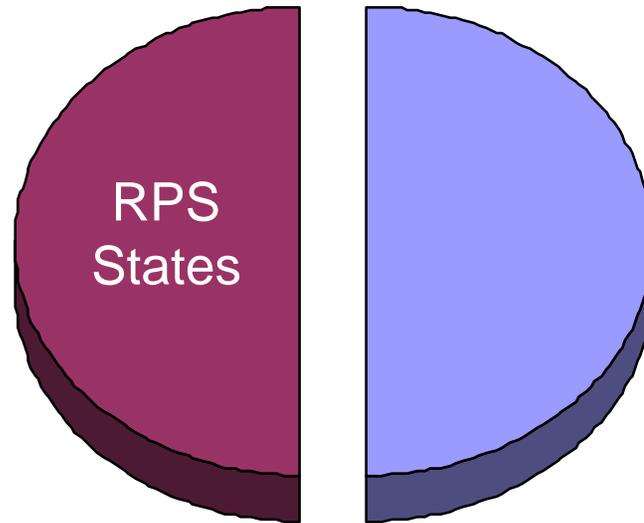
- Brokers and Marketers
- Private Buying Networks
- Commodity Exchanges
- Bilateral Transactions



# Trend 1: Cross Market Transactions Grow

Fewer Boundaries

## Trend 2: Number of RPS States Keeps Growing





# Trend 3: New Environmental Commodities are Emerging

## Energy Efficiency



# Trend 4: Environmental Commodities as groups of Attributes

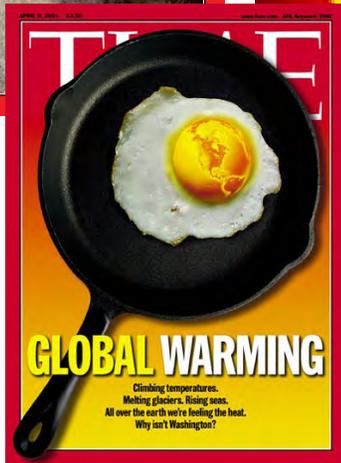
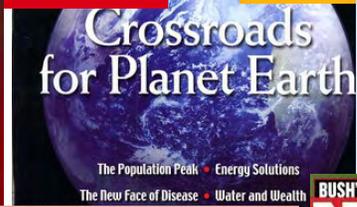
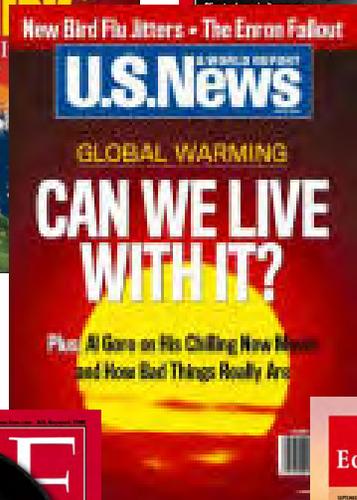
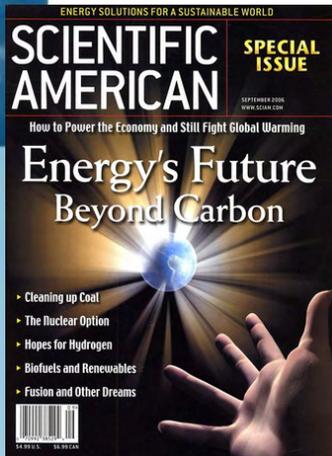
RECs and Energy Efficiency  
as **metric tons**



## Trend 5: Regions will continue to build on existing market infrastructure

*Available today:*

- Tracking all generation and all fuels
- Tracking emissions
- Tracking energy efficiency certificates
- Creation and retirement of certificates
- Compliance reporting
- Tracking CO<sub>2</sub>e allocations and credits?





# Markets require **integrity** in Environmental Commodities

***On the trading of environmental attributes:***

“If there is an ambiguity, nobody wants to trade it. Brokers don’t want to mess with it. There are a lot of other opportunities out there.”

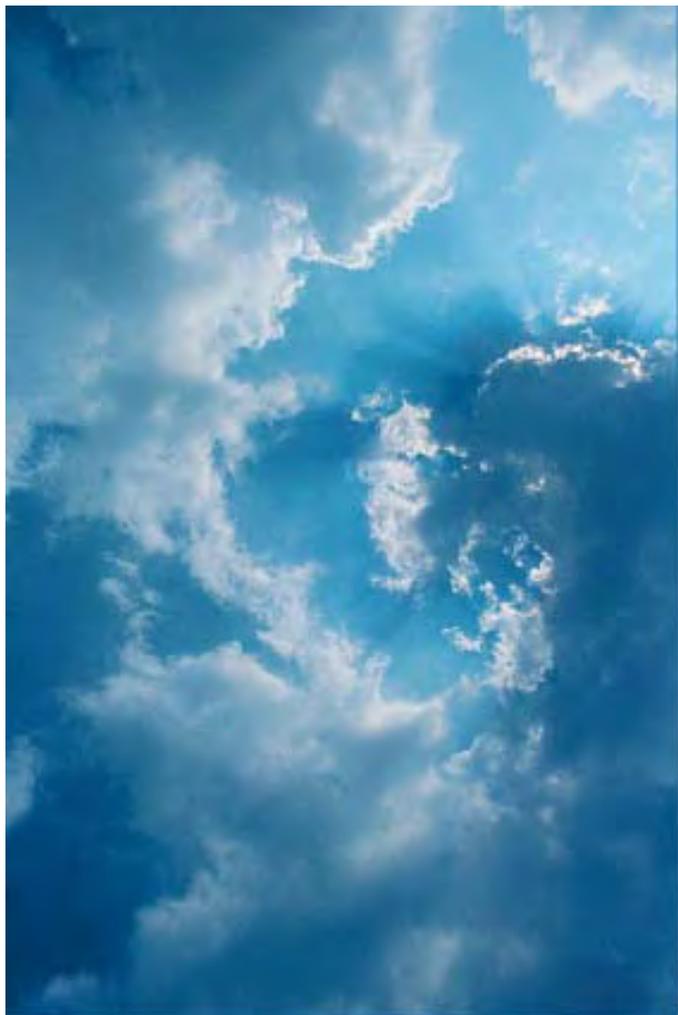
***Jeffrey Fort***

***Sonnenschein Nath & Rosenthal LLP  
Environmental Trading Congress 2006***

“Integrity is the linchpin to both public and investor confidence,” the emissions-trading pioneer Dan Dudek told me. “Without integrity, investors won’t commit serious capital either to generate the supply of reductions necessary for trading or to buy the reductions in the first place.”

***Jeff Goodell***

***WSJ “Capital Pollution Solution?”  
July 30, 2006***



## ***Demonstration:***

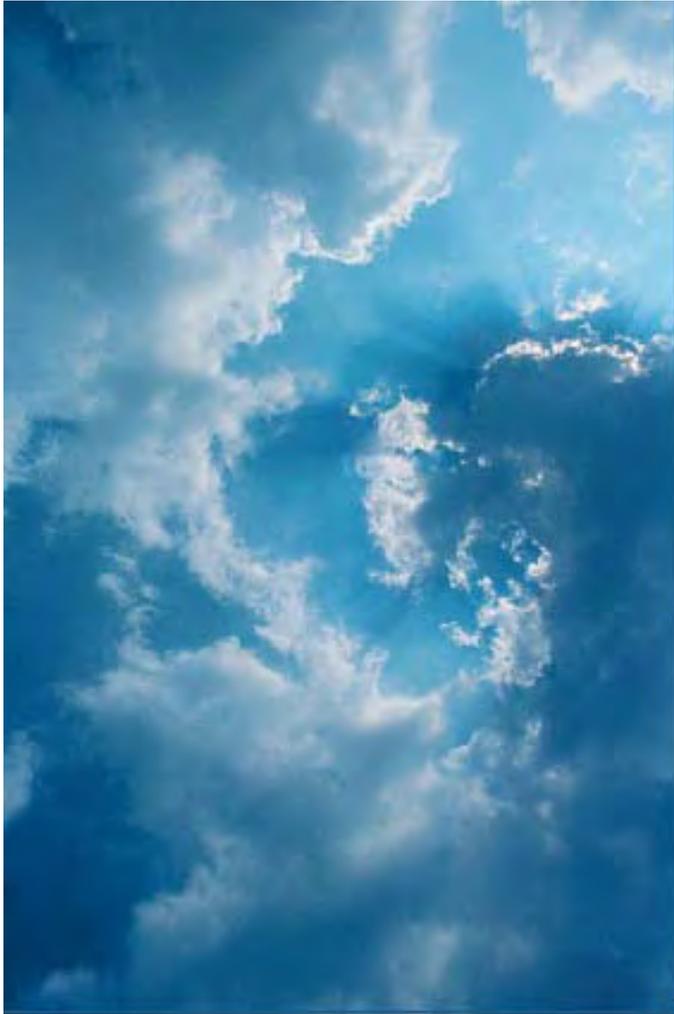
***APX Environmental Market Depository<sup>TM</sup>***

***Manages NEPOOL, PJM, ERCOT, and  
WREGIS (launch 2007)***

**Sakis Asteriadis**

Senior Director

APX Inc.



***Thank You***

**APX ([apx.com](http://apx.com))**

**Sterling Planet ([sterlingplanet.com](http://sterlingplanet.com))**

**MissionPoint Capital ([missionpointcapital.com](http://missionpointcapital.com))**