Skystream Markets, Inc.

REC Trading: An Evolving Commodity Market

National Summit on RPS

CleanEnergy
States Alliance

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Introduction to Skystream Markets

Skystream Markets runs and operates over-the-counter trading markets for environmental commodities with the mission of creating better price transparency, efficiency, and liquidity.

**Markets**
- US Environmental / Renewable Energy Markets
- Focus on Renewable Energy Certificates (RECs)
- Active in the RIN and RGGI Allowances Markets

**Services**
- Electronic Markets
- Voice Brokerage Services / Cap Intro
- Research & Data

**Advantages**
- Skystream Never Trades For Its Own Account
- Hybrid Model Combining Brokerage And Electronic Platform
- Marketplace Developed With Direct Trader Feedback
REC Markets: From Theory to Practice to Evolution

Market Theory
- Price Signals
- Compliance Flexibility
- Cost-Effectiveness

Markets In Practice
- Fluctuating REC Prices
- Most Working As Designed
- Open for Business

Market Evolution
- Expanding Market Infrastructure
- Improving Market Standardization
- Diversifying Market Participants

# of Standards: 30+
# of REC Classes: 80+
# of Tradable RECs: 40+
# of Active Markets: 20+
REC Trading Explained

**Compliance Buyers**

- Seek to purchase REC supply in the spot and forward markets to demonstrate RPS compliance

**Producers**

- Look to market conditions / price signals and use REC sales to finance, develop, and operate renewable energy projects

**US REC Market Participants**

- **Buyers**
  - Load Serving Entities
  - Utilities
  - Power Marketers

- **Sellers**
  - Renewable Power Producers
  - Utilities
  - Power Marketers
  - Project Developers
  - Corporations

- **Market Makers**
  - Energy Trading Companies
  - Investment Banks
  - Hedge Funds
  - Aggregators

**Market Makers**

- Use balance sheet and market information to trade RECs and provide liquidity to the market
## Evolving REC Transaction Channels & Products

Tools for participants in the primary and secondary REC markets...

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<th>Transaction Channels</th>
<th>Transaction Products</th>
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<td>• Bilateral (Direct) Trading</td>
<td>• Bundled / Unbundled</td>
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<td>• Traditional Voice Brokers</td>
<td>• Spot Market</td>
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<td>• Electronic Trading</td>
<td>• Forward Market (Outrights &amp; Strips)</td>
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<tr>
<td>• Exchanges</td>
<td>• Futures Contracts / Options Contracts</td>
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<td>• RFPs / Auctions</td>
<td>• Spread Trading</td>
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<td>• Registry Bulletin Boards</td>
<td>• Structured Transactions</td>
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REC Pricing & Trading Trends

- **Price Volatility**
  - Sign of functioning mechanisms / healthy markets

- **Exchanges & Electronic Trading:**
  - Growing volumes and open interest; decreasing transaction costs

- **Traditional Voice Brokerage:**
  - More markets and products being quoted

Source: Skystream Markets, ICE
Tradable REC Markets Contribute to RPS Success

✓ Price Signals
  • Provide real-time price signals and information to market participants
  • Allow for improved activity tracking, reporting, and decision making

✓ Compliance Flexibility
  • Provide more options to comply with RPS policies and lower cost
  • Turn RPS policies into a revenue opportunity via the REC incentive

✓ Cost-effectiveness
  • Allocate resources to the most efficient renewable energy projects
  • Complement power market restructuring and other renewable policies
  • Growing market infrastructure and transaction products leading to better functioning markets and broader participation from the renewable energy and financial communities
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