The Registry: How carbon is stored on a registry and how it functions

Andy Kruger \ Gangnam-Gu, Seoul \ 27 September 2013
Markit is a leading, global financial information services company. We provide independent data, valuations and trade processing across all asset classes in order to enhance transparency, reduce risk and improve operational efficiency. Our client base includes the most significant institutional participants in the financial marketplace.

- **2003**
  - Year founded
- **3,000+**
  - Employees
- **3,000+**
  - Institutional clients
- **20**
  - Global locations
Registry and auction; recognized experts

Registry
1,015
Clients and hosted accounts

79
Countries in which clients and hosted accounts are located

855
Projects listed

150 million
Credits listed

19
Environmental standards listed

44 million
Credits retired

Auctions
Clients include WCI and California; second largest world carbon market

Awards
Environmental Registry

- An online registry hosted by Markit enabling account holders and governments to manage environmental projects, issuances, transfers and retirements

- Markit’s integrated environmental platform provides end-to-end management of environmental portfolios and full support for existing and emerging environmental programmes and markets

Environmental Auction Platform

- As environmental markets become more market driven, the ability to set prices for allowances via transparent market mechanisms is critical

- Markit’s independent auction platform for environmental assets can be adapted to fit different rule sets and any type of environmental assets
Emissions trading market infrastructure
Components of ETS

- Registry/Allowance Allocation
- Emissions Database
- Trade/Reconciliation

Emissions Trading System
Emission trading systems

Government Environmental Policy
- Legislation
- Environmental Program design and implementation
- Stakeholder engagement
- Marketplace oversight

Environmental Reporting Database
- Market participant accounts
- Environmental reporting web interface and database
- Electronic customized emissions calculations
- Ongoing emissions input/output interface

Environmental Allowance and Credit Registry
- Markit participant accounts
- Electronic issuance
- Electronic transfers
- Electronic transfers and retirements
- Secure holdings
- Online public views

Environmental Market Trading Platforms
- Electronic matching of buyers of sellers
- Electronic clearing
- Electronic settlement
- Online price and volume information

Public and Stakeholders
- Stakeholder engagement and public comment
- Policy and documentation
- Volume and price reporting
- Environmental reporting
- Allowance and Credit documentation and public views

Key
- Infrastructure
- Program development and participants
Role of registry infrastructure in the building blocks of the ETS
What is a Registry?

In its simplest form, a Registry is:
- Online tool to track environmental credits (offsets and allowances) through their lifecycle
- Can be used for emissions, energy, etc.

A registry comprises:
- Technology – integrated online database comprising the Registry with a well designed interface, with ease of use for multiple parties
- Terms & Conditions – rules governing behaviour of parties using the Registry
- Maintenance and Operations – review of documentation, support of users and oversight of technology

Important registry elements:
- A Registry must provide the above capabilities with robust security, transparency, and integration, derived from a proven, existing infrastructure
Core functionality

Basic registry design

- Account opening
- Allowance and offset issuance
- Serial numbers
- Allowance and offset transfer and retirement
- Customizable reports (e.g., user, operations, regulator, emissions, etc.)
- Real time public transparency
A well-designed ETS Registry deliver:

- **Transparency and efficiency**
  - Demonstrates origination and brings confidence to the creation of the credit & allowance
  - Fully searchable Public View with full market visibility of projects & allowances, documentation and issuances/listings
  - Credit tracking throughout lifecycle
  - Reporting at a jurisdictional through to individual accounts
  - Regulator approval capability (accounts, issuances, transfers, surrendering)
  - Data outputs can be used to support reporting and transparency

- **Trust and confidence**
  - “Know Your Client” checks before account opening
  - Tailored Registry procedures applicable to each program
  - Regulator approval capability (accounts, issuances, transfers, retirements and cancellations)
  - Several levels of security, complying to international regulatory standards

- **Maximum participation**
  - Connectivity and integration with auction and trading platforms when volumes increase
## Registry overview

### Issuance

![Issuance Details](image)

- **Account Name**: Demo Account A
- **Issuance Requested Date**: 31 Mar 2012
- **Issuance Date**: 31 Mar 2012
- **Project Name**: Demo Project 3
- **Status**: Active

### Monitoring Period

- **Start date**: 01/01/2011
- **End date**: 12/31/2011

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<th>Project Activity</th>
<th>Vintage Start</th>
<th>Vintage End</th>
<th>Quantity</th>
<th>Verifier*</th>
<th>Class*</th>
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<td>A.D. Williams Engineering..</td>
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**Registry overview**

![Markit Environmental Registry](image)

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<th>Project</th>
<th>Account</th>
<th>Vintage</th>
<th>Country</th>
<th>Unit</th>
<th>Measurement</th>
<th>Public Verifiable</th>
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Registry overview

Security
Hyundai Steel Waste Energy Cogeneration Project (ID: 1000000000072)

Account Holder

Description

The Hyundai Steel Waste Energy Recovery Co-generation Project is a 406 MW cogeneration plant at Hyundai Steel, which is developed by Hyundai Green power CO., Ltd. The project utilizes surplus waste gases including BFG (Blast Furnace Gas), COG (Coke Oven Gas) and LDG (Converter Gas) produced by Steel to generate electricity. The waste gases created by Steel are reused by the steel mill and the rest are consumed by the proposed project. Through this project, approximately 2,741,035 kWh electricity will be sent to power grid, and 1,285,000 ton steam will be produced and sent to Steel. Without the proposed project, the rest of waste gases are emitted to atmosphere after incineration, the electricity generated by the proposed project will be supplied by grid.

Documents

- Communications Agreement
- Project Design Description (POD)
- Project Proponent Registration Representation (PPRR)
- Validation Report
- Validation Statement

Units

<table>
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<tr>
<th>Category</th>
<th>Standard</th>
<th>Project Type</th>
<th>Certification</th>
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<td>Energy Industries - renewable/non-renewable sources</td>
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</table>
ETS allowance auctions

Provider should facilitate three key phases:
- Pre-auction
- Auction
- Post auction
Phase 1: Pre-Auction

Key steps

Communication and outreach

Training

Enrollment and eligibility
Auction overview

Welcome to the
GHG Allowance Auction & Reserve Sale Platform

Auctions and Reserve Sale Descriptions

This page is the entry point for information and access to the auction and reserve sale platform. The GHG allowance auction and allowance price containment reserve sales (reserve sales) are the mechanisms utilized by ARB to sell allowances within the California cap-and-trade program.

The clearing price and the total number of allowances purchased will be disclosed publicly after the auction or reserve sale on the results page. The disclosure of auction and reserve sale results allows for market transparency and price discovery.

About the Auctions and Reserve Sales

The GHG allowance auctions follow a sealed bid, single round, uniform price (lowest winning bid) format. Each bidder may submit multiple bids and bid schedules for current or future vintage allowances. Allowances from current and future vintages will be offered in separate auctions in lot sizes of 1,000 allowances (equal to 1,000 metric tons of GHG's). For each quarterly allowance auction, there is a reserve price or price floor. For the Allowance Price Containment Reserve (reserve sale), there are three pre-determined price tiers.
Phase 2: Auction

Key steps

Allowance limit established

Allowance amounts are defined

Bids submitted

Bidding activity is monitored
Phase 3: Post-auction

Key steps

--- Auction engine runs

--- Auction results generated and distributed

--- Settlement completed

--- Auction certified
Important lessons
Proven registry providers support market development by:

— Low cost, efficient solution
— Risk management
— Ensures the safety and security of allowances and offsets (financial assets)
— Facilitating efficient trading (compliance buyers and others)
— Support investment and increased liquidity and participation
Contact

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pools intelligence
surfaces information
enables transparency
builds platforms
provides access
scales volume
extends networks
& transforms business.
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