REGISTRIES & REPORTING

PARTNERSHIP FOR MARKET READINESS

MRV TRAINING WORKSHOP

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◆ Key Concepts, Options and Trade-offs

- ▪ Roles of registries in MRV programs
- ▪ Best practices for reporting registries
- ▪ Potential uses of IT systems in MRV programs
- ▪ Choosing the right system for the context

◆ Input from experts

- ▪ Design of the Registry Systems
- ▪ Business Framework of Carbon Asset Registry
- ▪ Business Framework of Carbon Reporting Registry

◆ Summary

◆ GHG registries typically serve one or both of the following functions (1/2):

◆ **Carbon Asset Registry**: used for

- tracking the ownership and transfer of carbon assets (allowances, credits, etc) which are the units used in a carbon market mechanism

- the allocation or issuance of units into the owners' accounts

- the compliance mechanism where units are "surrendered" to the program administrator
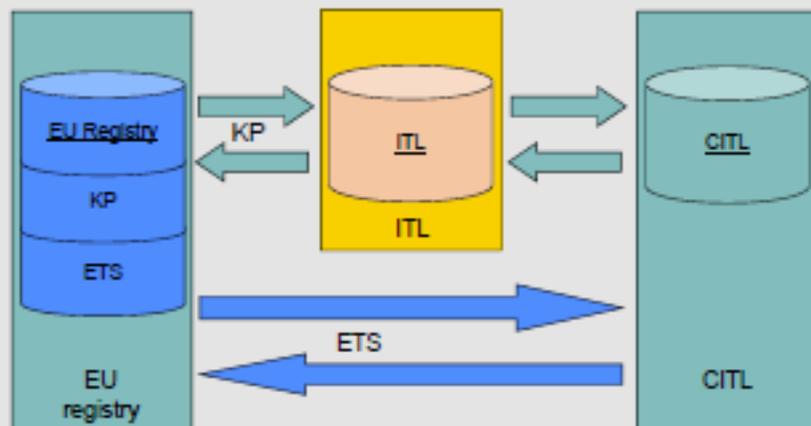
Example of a Carbon Asset Registry: EU ETS

Architecture of the EU ETS Registry System
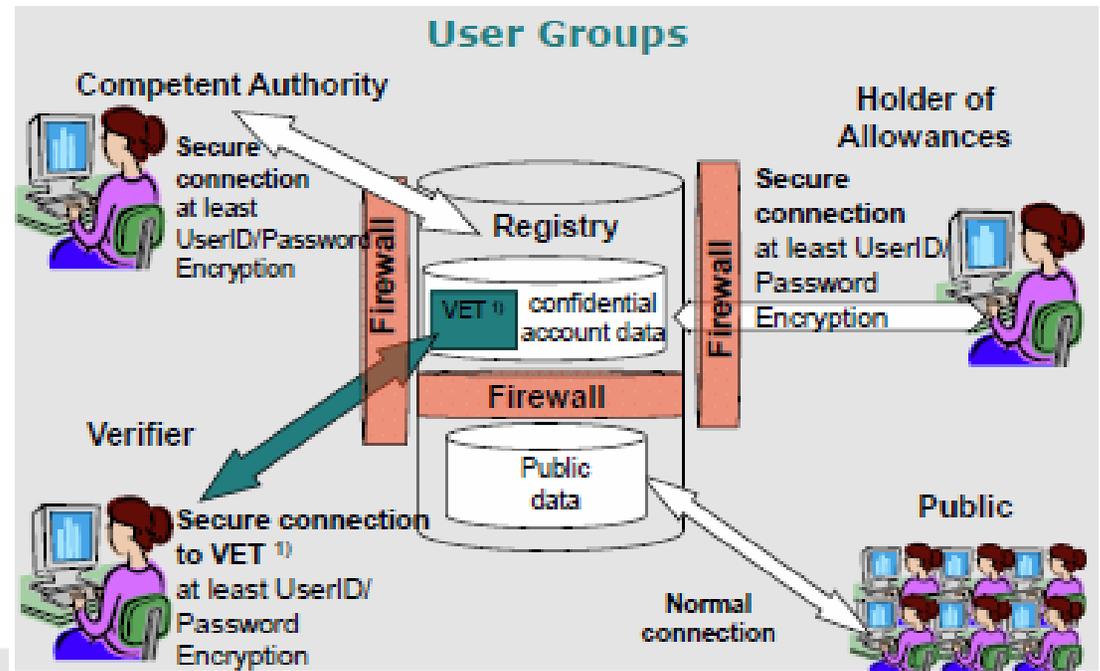
◆ GHG registries typically serve one or both of the following functions (2/2)

◆ **Carbon Reporting Registry**: used for

- collecting, storing and checking of reported information

- supporting QA/QC and verification activities

- identifying cases of regulatory non-compliance

- allowing the tracking of emissions and activity data from program participants over time

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◆ Best practices for reporting registries:

- ▪ Easy uploading into the registry's interface
- ▪ Security, confidentiality and access controls
- ▪ QA/QC, verification, consolidation operations
- ▪ Compliance with the various reporting cycles
- ▪ Everyone knows how to use the systems
- ▪ Aligned with "e-government" initiatives
- ▪ Uses standard data exchange protocols
- ▪ Allows for easy transfer of data when the program's IT systems are changed/upgraded

◆ Options for how IT systems can be used beyond just being a reporting registry:

- Tracking of which program participants have provided data, reports and other information

- Emails to program participants about deadlines, requirements, changes and updates

- Automated consolidation, quality checks, and analysis of emissions data and other information

- Work flow support for internal operations

  - registration of facilities, processing of reports, information requests, managing deadlines

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◆ The context for the MRV program will drive decisions on what system is best:

- Number of participants (ie. 50 or 5,000)
- "e-government" initiatives in the jurisdiction
- Use of online systems by program participants
- Program administrator's in-house IT capabilities
- Availability, cost and quality of IT providers
- Data confidentiality requirements
- Plans to consolidate with other systems in the future (e.g., regional shifting to national)

◆ Tang Jin, Sino-Carbon

◆ Topics to be covered:

- Identifying basic business requirements of the registry systems

- Designing the business framework according to the business requirements

- Identifying the relationship between the registry system and other relevant systems

- Determining the requirements for data exchange interfaces of the registry systems

◆ Estimating the amount of business for the registry systems

◆ Determining the requirements of performance for the registry system based on the amount of business

◆ Analysing the security requirements of the registry systems

◆ Determining the security level of the registry system according to those security requirements

◆Determining the software architecture of the registry systems according to the requirements of the registry systems

◆Determining the proper technologies for implementing the registry systems according to the limit of budget and construction time

◆ Determining the network structure of the registry systems

◆ Determining the hardware to be utilized for the registry systems

◆ Arranging account types according to the management structure of the ETS system

◆ Determining the transfer rules of carbon assets in consideration of the relevant rules of the ETS system

◆ Determining the structure of roles and privileges

◆ Determining the type of assets to be processed

◆Determining the allowance creation and allocation process

◆Determining the import process for carbon credits

◆ Practices

- Single-level management accounts *versus* multi-level management accounts

- Two registries for allowances and CCERs *versus* one consolidated registry for both allowances and CCERs

- Single account representative *versus* multiple account representatives

◆Practices

- Transfer without confirmation *versus* transfer with confirmation

- With trading account *versus* without trading account

- Allowing trading platform to control holding accounts directly *versus* utilizing trading platform account

◆Practices

- Accessing the emissions data stored in carbon reporting system *versus* manually importing the emissions data to the carbon asset registry

- Independent transaction log *versus* transaction log within the carbon asset registry system

- Single-level management account privileges *versus* multiple-level management account privileges

- Determining the forms for data emissions that need to be included in the carbon reporting registry

- Designing the electronic data forms for the emissions and activity data to be entered online according to relevant MRV guidelines

◆Determining the type of users for the carbon reporting registry according the management structure of the ETS system

◆Determining the business procedure of the carbon reporting registry according the management structure of the ETS system

◆ Determining the rules for the enterprises to report the emissions data

◆ Determining the requirements of the granularity of retaining the data provided by an enterprise

◆Practices

- With third party verifier support *versus* without third party verifier support

- Retaining all the modifications performed during a form filling process *versus* Abandoning all the modifications performed during a form filling process

- Single form filling process *versus* multiple form filling processes

◆Practices

- Determined time window for filling the forms *versus* being able to fill the forms any time before the form filling deadline

◆ GHG Registries have two distinct functions:

- ▪ Reporting registry: for facility-level MRV
- ▪ Carbon asset registry: for carbon markets

◆ Best practices in reporting registries include access control, data standards, and ease-of-use

◆ IT systems can also support many tasks of the MRV program administrator

◆ The best system for a particular MRV program will depend on the context

◆How is a reporting registry different to a carbon asset registry?

◆Can IT systems help with managing deadlines and tracking who has reported?

◆What are the trade-offs when making decisions on systems for MRV programs?

◆ Both are database applications with online interfaces, but different functions (slide 4)

◆ Yes, but this is not usually part of a registry

◆ Trade-offs include (not a complete list):

- Upfront cost vs ongoing labour and system cost

- Suitability of "off-the-shelf" solutions

- Developing an integrated system vs having a collection of systems that do different things

- Ability to use outside providers vs need to design-build-deploy with in-house IT people

Thank You

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