

# CA - PMM

**Project Name:** Cap and Trade Tracking System

**OCIO Project #:**

**Department:** California Air resources Board

**Revision Date:** 10/12/10

## Concept Statement

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### Description

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#### **Brief description of the proposed project:**

The ARB proposes to implement a solution to provide ARB with the functional tools and tracking methods necessary to facilitate a market-based (cap-and-trade) program which achieves greenhouse gas reductions, as directed by Assembly Bill 32: The Global Warming Solutions Act of 2006. The proposed solution will provide cap-and-trade program participants with self-service capabilities to manage their obligations and interactions under the cap-and-trade regulation. The CCTMTS will also use automated business rules to validate data and determine compliance with the cap-and-trade regulation. More specifically, the project would obtain contractor services to support the design, build, and operation of a California Cap-and-Trade Market Tracking System. The primary purpose of the tracking system is complement cap-and-trade program administration, market oversight, and overall program operation. The tracking system would track ownership of credits from their creation by ARB through their surrender at compliance. The system will also connect to other supporting program enterprise systems.

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### Need Statement

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#### **High Level Functional Requirements:**

The system must support registration of all credits, including allowances issued by California and offsets approved for use in California; serve as repository for documentation of all transfers between owners; link to a credit auction platform and to exchange market platforms or financial clearinghouses; settle credit surrender obligations by linking to emissions reporting and verification systems. The system must be Internet accessible and maximize the use of "e-government" tools for the regulated industry and ARB staff.

#### **What is Driving This Need?**

Assembly Bill 32, The Global Warming Solutions Act of 2006 mandated GHG emission reductions and directed ARB to implement market based compliance mechanisms, among other mechanisms, by January 1, 2012 that would achieve these emission reductions. The AB 32 Scoping Plan identified a regional cap-and-trade program as the market based mechanism to achieve GHG emission reductions. The tracking system, a vital component of the cap-and-trade program, would establish the infrastructure needed in order to meet the direction of AB 32 and the Scoping Plan.

#### **Risk to the Organization if This Work is Not Done:**

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ARB would have to postpone the full operation of the cap and trade program or restrict trades of credits to bilateral trades approved by ARB and manually recorded. Without an ownership record of compliance instruments and an automated system to process the high volumes of cap-and-trade transactions, ARB would be non-compliant with the mandates of AB 32.

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### Benefit Statement

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#### Intangible Benefits

**Process Improvements** (describe the nature of the process improvement):

The tracking system will help to alleviate unnecessary and impractical processes and risk surrounding implementation of the cap-and-trade program (i.e. registration, account creation, compliance instrument management, transaction processing, etc...). Unleveraged manual processing of daily trades and changes in instrument ownership and account information for example, would result in countless staff, inefficient use of resources and exposure to manual processing risks such as reporting errors that may otherwise be mitigated with system controls.

Other areas will also aid in the reduction of time needed to implement the cap-and-trade program. For example, PTSD is developing three functions which interact with the tracking system: emissions reporting, verification, and offset approval. Enforcement Division is committed to enforcing the regulations governing these functions without a comprehensive system organizing the data needed to support that commitment.

**Other Intangible Benefits:**

ARB will have met the requirements of AB 32 and the Scoping Plan in a timely manner. ARB will also be in a position to influence the outcome of the development of the regional carbon market in the Western Climate Initiative, rather than having to negotiate over proposals developed by other jurisdictions.

#### Tangible Benefits

**Revenue Generation** (describe how revenue will be generated):

N/A

**Cost Savings** (describe how cost will be reduced):

The proposed system would not greatly reduce the costs of existing functions, but would avoid costs associated with functions to which ARB is committed in the future. Cost savings and/or cost avoidance (see next box) will be fully explored and quantified in the FSR.

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**Cost Avoidance** (describe the cost and how avoided):  
 ARB's costs would be lower with the proposed system than if it had to manually conduct credit issuance, auction, transfer of ownership, surrender compliance, emissions reporting, verification, offset approval, and general enforcement. The details will be determined in the FSR.

**Risk Avoidance** (describe the risk and how avoided):  
 The proposed system would reduce the possibility of accounting errors or delays in credit ownership compared with manual entry of trades. The [proposed system would facilitate more frequent trades, including those taking place on existing exchange platforms, thus reducing participants' costs and the risks associated with less liquid markets.

**Improved Services:**  
 The project mainly improves proposed, not current, services. The improvements in all related services will be fully explored in the aforementioned FSR.

### Consistency

"No" Responses 		Rationale	Action Required
Enterprise Architecture	Yes		
Business Plan	Yes		
Strategic Plan	Yes		

### Impact to Other Agencies

#### Nature of Impact to Other Agencies

**Agency:** California Environmental Protection Agency  
*Describe the nature of the impact:*  
 The project will support Cal/EPA's efforts to improve the environment generally and specifically to improve air quality and to reduce global climate change.

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**Agency:** California Resources Agency

*Describe the nature of the impact:*

The project will improve air quality and reduce global climate change which negatively impacts animals, plants and other organisms found in the natural environment for which the Resources Agency and its constituent departments have responsibility.

**Agency:**

*Describe the nature of the impact:*

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### Solution Alternatives

#### Alternative 1:

Leveraging the ARB's existing Greenhouse Gas Mandatory Reporting Tool (MRT) technical infrastructure and building out the MRT to meet the additional needs of the CCTMTS. MRT is an existing ARB system with some shared data and potential shared functionality with CCTMTS.

#### Technical Considerations for Alternative 1:

The advantage of this alternative is that it allows for greater enterprise and program integration and support between tracking system and the MRT application, including shared data elements and facility emissions reporting information. However, this alternative would likely be more costly. Also, changes to the GHG Emissions Reporting program and associated MRT may be misaligned with the CCTMTS program or result in unmet systems and project needs or objectives.

ROM Cost: \$3,700,000 to \$5,700,000

Note: high end of range must not exceed 200% of low end of range

#### Alternative 2:

Contract for development of a custom system incorporating all of ARB's design elements.

#### Technical Considerations for Alternative 2:

the advantage of this alternative is that it provides the greatest degree of technical flexibility to meeting ARB's strategic and project needs and provides for a system that can be built on common or standard technology platforms. It does not leverage economies of scale afforded existing "packaged" solutions for similar market based cap-and-trade programs or tracking tools. The disadvantage with this alternative include high project costs and project and technical risks not found with leveraging existing related program technologies. In addition, building the proposed system from the ground up will increase the risk of additional timeframe needed for implementation and thus threatening the AB 32 cap-and-trade regulatory timeline constraints.

ROM Cost: \$4,300,000 to \$6,300,000

Note: high end of range must not exceed 200% of low end of range

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**Alternative 3:**

Leveraging an existing emission market tracking software application (COTS), technical and operational infrastructure to meet the needs of the CCTMTS. This alternative would require little to no significant modification to meet ARB's project objectives. This would leverage existing marketplace technologies and/or services and associated economies of scale to return the highest reward for the cost.

**Technical Considerations for Alternative 3:**

This solution would consider hosting and services provided by an outside entity.

ROM Cost:	\$3,600,000	to	\$5,600,000	<b>Note: high end of range must not exceed 200% of low end of range</b>
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### Recommendation

**Comparison:**

Alternative 1	ROM Cost		Risk	
Build out MRT System Component	\$3,700,000	-	\$5,700,000	<i>Unmet system functionality and needs</i>
Alternative 2	ROM Cost		Risk	
Custom Developed System	\$4,300,000	-	\$6,300,000	<i>May be cost prohibitive and threaten project schedule</i>
Alternative 3	ROM Cost		Risk	
Leveraged Core MTS Dev and Maint.	\$3,600,000	-	\$5,600,000	<i>Solutions may not be fully "turn key" for full leveraging</i>

**Conclusions:**

1	The FSR will outline the cost of the solution vs. alternatives and recommend a course of action for the tracking system
2	Currently, Alternative 3 may provide the most cost effective solution to meet the project needs.
3	
4	

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**Recommendation:**

A recommendation cannot be made at this juncture however, Alternative 3 may provide the most cost effective solution to meet the project needs. After completing the feasibility study, ARB will be in a position to propose and defend a specific alternative.

### Project Approach *(if known)*

<b>System Complexity:</b>		System Business Hours: <i>(e.g., 24x7, 9am-5pm)</i> :		
Architecture	<input type="checkbox"/> Mainframe <input type="checkbox"/> Client Server <input type="checkbox"/> Web Based			Num. of New Databases:
Technology	<input type="checkbox"/> New <input type="checkbox"/> New to Staff <input type="checkbox"/> In-House Experience			Interfaces:
Implementation	<input type="checkbox"/> Central Site <input type="checkbox"/> Phased Roll-out			Num. of Sites:
M & O Support	<input type="checkbox"/> Contractor <input type="checkbox"/> Data Center <input type="checkbox"/> Project <input type="checkbox"/> In House			
<b>Procurement Approach:</b> A specific project approach is not known at this time. ARB will fully comply with all OCIO, DOF, DGS and other control agency directives in the development of system architecture and procurements that will be necessary.				Number of Procurements:
Open Procurement?		Delegated Procurement?		
Scope of Contract	<input type="checkbox"/> Development <input type="checkbox"/> Implementation <input type="checkbox"/> M & O <input type="checkbox"/> Other:			
Anticipated Length of Contract:		Years / extensions for years		