Evaluating the Potential for Sector-Based Offset Credits in California’s Cap-and-Trade Program

California Air Resources Board
October 28, 2015
Workshop Materials and Submitting Comments

- Presentation is posted at: http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm
- Staff white paper and background material are available at: http://www.arb.ca.gov/cc/capandtrade/sectorbasedoffsets/sectorbasedoffsets.htm
- Written comments on the workshop and white paper may be submitted until 5 pm (Pacific Time) on Monday, November 16, 2015: http://www.arb.ca.gov/lispub/comm/bclist.php
- During this workshop, e-mail questions to: auditorium@calepa.ca.gov
Workshop Agenda

10:00am – 12:00pm
- Morning Presentation
  - Opening Remarks
  - Overview of white paper topics
  - Introduction to the Under 2 MOU

1:00pm - 2:30pm
- GCF Jurisdictions and Community Leaders Discussion
  - GCF government representatives
  - Indigenous and local community leaders

2:30pm - 3:30pm
- Monitoring, Reporting, and Verification
  - Presentation by Dr. Greg Asner
  - Discussion

3:30pm – 4:00pm
- Potential next steps
Outline of Morning Presentation

I. Review of Cap-and-Trade Program to date
II. Background on Sector-Based Offset Crediting
III. California’s interest in tropical forest sector
IV. California work to date
V. What other jurisdictions and organizations are doing
VI. Overview of REDD Offset Working Group Recommendations
VII. Potential next steps
VIII. Under 2 MOU
IX. Discussion (Q&A)
Cap-and-Trade Program to date (1)

- Reporting and verification of emissions and product data since 2008
- First compliance period (2013 and 2014 emissions) surrender deadline is on Nov. 2
  - Second compliance period commenced on Jan. 1, 2015 with inclusion of transportation fuels and natural gas
- 12 auctions conducted to date
  - 8 California only
  - 4 joint auctions with Québec
- ~ $2.9 billion auction proceeds to the State to be invested in programs to reduce GHG emissions in California
- Successful linkage with Québec
Cap-and-Trade Program to date (2)

- Robust domestic offsets program
  - 6 approved domestic compliance offset protocols
  - ~30 million offsets issued so far
  - Includes 17 million+ U.S. forest offset credits
  - Sufficient to meet 8% limit for first compliance period
- Partnering with policymakers around the world to share best practices on climate measures, including carbon pricing, and to leverage larger-scale reductions
International Engagement

California Agreements with States and Regions throughout the World

North America
- United States
  - Connecticut
  - Illinois
  - Massachusetts
  - Maryland
  - New York
  - Oregon
  - Rhode Island
  - Vermont
  - Washington
  - Wisconsin
- Pacific Coast Collaborative
  - British Columbia
  - Oregon
  - Washington
- Quebec and California
- Cap-and-Trade Linkage
  - Quebec

South America
- Brazil
- State of Acre
- Chile
- Peru

Asia
- China
  - National Development & Reform Commission
  - Ministry of Environment
  - Beijing
  - Chongqing
  - Guangdong
  - Inner Mongolia
  - Jiangsu
  - Shanghai
  - Zhangjiang
  - Shenzhen
- Middle East
  - Israel
- South Korea

California Air Resources Board
Sector-based Offset Credit Program – Jurisdiction-wide crediting program in subnational jurisdiction in developing country

- GHG emission reductions measured across a whole sector within a jurisdiction’s geographic boundary, rather than within a single project boundary.
- Cap-and-Trade Regulation allows sector-based offset credits issued by approved sector-based offset credit programs for compliance if the Board finds they meet rigorous criteria.
- Criteria for sector-based offset credits are the same as for domestic project-based offset credits.

- Real, quantifiable, verifiable, quantifiable, permanent, enforcement, additional (AB 32 and Cap-and-Trade Regulation)
Background on Sector-Based Offset Crediting (2)

Benefits:

- Developing jurisdiction-wide, sector-based program incentivizes low-emissions planning throughout jurisdiction (helps mitigate emissions leakage)
- Jurisdiction-wide planning may lead to reductions in other sectors within jurisdiction
- Crediting begins after meeting sectoral performance standard, ensuring additionality
- Cost-containment for California covered entities within existing 8% offset quantitative usage limit

Sector-based offset limit:

- 1st & 2nd Compliance Periods—2% of total obligation
- 3rd Compliance Period—4% of total obligation
Why the tropical forestry sector?

- Focus: Reducing Emissions from Deforestation and Forest Degradation (REDD) Programs
- Addresses significant portion of global emissions (roughly 11%-14%)
- Tropical forest sector is a heavily studied sector
- California program already includes domestic forestry offsets
- Multiple co-benefits, including:
  - Link to California precipitation
  - Biodiversity
  - Forest-dependent community livelihoods
  - Water management
  - Soil conservation
Why is California interested in REDD?

- AB 32 calls for California to take leadership role in environmental policy
- International recognition that climate change cannot be addressed with without addressing deforestation, including tropical deforestation
- Many co-benefits of reducing deforestation
  - Benefits to preserving California’s forests
  - Research indicates link between tropical deforestation and reduced California precipitation
- Important for cost-containment for Cap-and-Trade covered entities
- Cost-effective mitigation mechanism
- Engages developing countries in low-carbon growth
- Called out in 2008 AB 32 Scoping Plan and again in 2014 First Update to the AB 32 Scoping Plan
Cap-and-Trade Cost-Containment

- ARB has issued sufficient offsets to meet the 8% limit in the first compliance period
- Potential shortfall of offsets for second compliance period with existing compliance offset protocols
- Predicted shortfall of offsets for the third compliance period
- Challenge to identify eligible domestic offset project types
- Lack of sufficient offsets could increase offset prices and allowance prices – increased cost of compliance with Cap-and-Trade
Current REDD work in California

Governors’ Climate and Forests Task Force (GCF)

- Formed in 2008
- Information and best practice exchange between 29 subnational jurisdictions to date
- Each jurisdiction is enacting legal structures to improve forest management
- Annual meetings to share experiences between members who are developing jurisdiction-level REDD programs
- Rio Branco Declaration – goal of 80% reduction in tropical deforestation by 2020, contingent on financing
Current REDD work in California (2)

- MOU signed with Acre, Brazil and Chiapas, Mexico
  - Established in 2010
  - Established REDD Offset Working Group (ROW)
  - Assessment of technical design and implementation nuances of programs in Acre and Chiapas
  - Technical and policy experts worked for two years to develop set of recommendations for California, Acre, and Chiapas
  - Recommendations presented in July 2013
  - Recommendations are assessed in ARB staff white paper
Current REDD work in California (3)

- Ongoing engagement with U.S. Department of State
  - Federal climate negotiators welcome California’s REDD work
  - Continued coordination to facilitate shared understanding and discussions with other jurisdictions
  - USAID has consulted with California regarding that agency’s efforts on REDD
Regulatory Requirements for Sector-Based Offset Crediting Programs

- Cap-and-Trade Regulation includes placeholder provisions for sector-based crediting, and for REDD
- Sections 95991-95995
  - Sector plan
  - Transparent MRV system
  - Transparent performance metric system
  - Offsets are real, quantifiable, permanent, verifiable, enforceable, and additional
  - Public participation and consultation required in the program design process
  - If jurisdiction allows nested projects, projects must fit within program accounting and include additional project-level MRV requirements
What are other jurisdictions doing? (1)

United States of America
- Spends ~$130 million per year on REDD readiness/capacity building
- Financing vehicles through State Department / USAID
  - Ex: USAID’s BIOREDD+ program works with Afro-Colombian and indigenous communities in developing REDD programs in Colombia
  - Ex.: Support for the Governors’ Climate and Forests Task Force Fund (GCF Fund)

Kingdom of Norway
- Norway’s International Climate and Forest Initiative supports the development of REDD around the world with $517 million per year
  - $1 billion for Brazil’s Amazon Fund
  - $1 billion results-based payments over a decade to Indonesia
  - Support for the GCF and the GCF Fund
What are other jurisdictions doing? (2)

Germany
- Proof-of-concept of sector-based offsets through first performance-based payment for a jurisdiction-wide, sector-based program
  - Acre delivered and retired 8 million tons of CO$_2$e for €19 million from the German Development Bank KfW

United Kingdom
- Deforestation is a priority – over £500 million allocated to REDD+ programs

Brazil
- Largest share of tropical forests of any country in the world
- Committed to reducing deforestation rate
- Developing National REDD strategy
What are other jurisdictions doing? (3)

Peru
- Deforestation is #1 source of GHG emissions in Peru
- Goal: Zero net deforestation by 2021
- National Forest Strategy includes REDD as important contributor to emissions reductions

Mexico
- Developing National REDD Strategy
- REDD early action in five states: Jalisco, Chiapas, Campeche, Yucatan, Quintana Roo

Many Others
- Dozens of tropical forest countries are progressing towards REDD Readiness
- Subnational efforts, including GCF jurisdictions
What are other organizations doing? (1)

United Nations

- UN-REDD program being implemented by the FAO, UNDP, and UNEP
  - Over 60 partner countries, fully-funded national REDD+ readiness programs in 23 countries
  - REDD+ readiness generally refers to initial capacity building
- UNFCCC adopted the Warsaw Framework for REDD+, providing guidelines for different aspects of REDD, from carbon accounting to social safeguards
- COP 21 in Paris may include final approval of REDD+ guidelines developed throughout UNFCCC process
What are other organizations doing? (2)

**World Bank**

- **Forest Carbon Partnership Facility (FCPF)** – Partnership of 47 developing countries.
  - Disbursed $850 million for REDD readiness and performance-based payments
- **Forest Investment Program (FIP)** – Collaboration between World Bank, African Development Bank, Inter-American Development Bank, Asian Development Bank, and the European Bank for Reconstruction & Development
  - $785 million supporting REDD+ implementation
  - Includes $50 million Dedicated Grant Mechanism for Indigenous Peoples and Local Communities
What are other organizations doing? (3)

**REDD Offset Buyers**
- Market has shown comfort with REDD credits
  - $64.1 million spent by voluntary buyers purchasing REDD credits from Amazon basin in 2013.
  - $15.4 million spent purchasing East African sourced REDD credits
  - Total of ~25 million REDD credits transacted in 2013


**Civil Society – NGOs and Communities**
- Many non-governmental organizations have initiated work with communities on REDD projects, REDD programs, and other work
- Indigenous peoples and other communities have begun developing standards and programs for implementing REDD initiatives
- Communities are working with subnational and national governments to ensure these standards are included in larger scale REDD programs
Why is California leadership needed now?

Capacity Building → Compliance

- “REDD Readiness” funding common to many of those organizations
- Important initiatives have begun, but there still exists an ambition and financing gap to longer-term design and implementation
- Next-Step: Recognition in Compliance Markets
Why is California leadership needed now?

- California is well-positioned:
  - Existing Cap-and-Trade Program
  - Historic engagement in this sector
  - Predicted offset shortfall, so a need within California’s program
  - Already includes international offset credits (e.g., offsets issued by Québec)
  - Can set robust standards others will follow
  - Overall climate leadership – recent example being the Under 2 MOU
ROW Recommendations (1)

ROW Recommendations published in 2013 examined three questions:

1) What mechanisms are required for California to recognize international REDD-based emission offsets for compliance purposes?
   • What does California need?

2) What policy considerations should a sectoral REDD program address for California to recognize the REDD-based offsets for compliance purposes?
   • What do the partner jurisdictions need?

3) How should carbon removals from forests be measured?
   • How does crediting work?
ROW Recommendations (2)

➢ Policy Considerations

• Require robust community engagement and social safeguards, such as
  ➢ United Nations, REDD+ Social & Environmental Standards
  ➢ Include transparency & grievance process

• Effective government enforcement and oversight
  ➢ Buffer/insurance mechanism in case of unintentional reversal
  ➢ 3rd party verifiers with robust conflict of interest policies
  ➢ Maintain buyer liability in California program

• Legal framework
  ➢ Linkage agreement in the same manner as with Québec (e.g., follow SB 1018 requirements)
ROW Recommendations (3)

- Technical Considerations
  - Setting forest inventory baselines/reference level
    - Satellite/remote sensing mapping systems and on-the-ground inventory measures
    - Base on 10-year historic average
  - Tracking system/registry
    - Separate registry for partner jurisdictions
    - California and partner jurisdiction to collaborate on registry design
  - Ensuring real reductions
    - Leakage management mechanisms
    - Robust monitoring, reporting, verification
    - Solid accounting framework
Public Participation and Consultation in the Program Design Process

- Public participation in the design of the program
- Already required in California
- Required public process for any potential partner
- Research also shows that community involvement and buy-in is necessary for functional program
- ROW recommends two possible standard systems to ensure social and environmental benefits are included in the public participation, design, and implementation of a program:
  - REDD+ SES Initiative
  - UN-REDD/Forest Carbon Partnership Facility
Timing (1)

- 8% offset supply for first compliance period was met
  - Enough offset credits for 8% usage limit in 2013-2014
- Domestic Compliance Offset Protocol Review Process document notes that offset protocols must be beyond what is already required by law/regulation
  - Most emissions in California are already regulated
- ARB is striving for new domestic protocols that meet the regulatory criteria, but challenge is most emissions already regulated
- Result: offset supply expected to be insufficient to allow use of 8% quantitative usage limit in third compliance period
Timing (2)

- Years-long public policy process in California
- Cap-and-Trade Program is already planned through 2020, with work beginning to design post-2020 program
  - Third compliance period is 2018-2020
  - If sector-based crediting provisions are included in upcoming regulatory amendment package, amendments must be complete by Fall of 2017 to be effective in 2018
  - ~ 1.5 years to conduct stakeholder workshops, develop draft regulation language, conduct linkage findings, hold Board hearings, and finalize regulatory language
Timing (3)

- California helped found the GCF over 7 years ago
- Sub-national momentum is at a crucial point
  - Capacity building – REDD readiness has advanced tremendously
  - But, financing needed beyond mere capacity building
  - Next step requires broader-scale implementation and investment
  - Recognition in a market program could leverage such changes
  - Opportunity to set standards others will be able to use
- Part of California’s strategy for COP 21 in Paris is climate leadership
  - >20% of the Under 2 MOU signatories are GCF members
- Potential to leverage substantial emissions reductions
Past concerns include

- Some commenters have expressed preference for limiting emissions reductions to California
  - Offsets are only eligible for use up to 8% of an entity’s compliance obligation
  - Difficult to approve new domestic offset protocols - most emissions already being regulated in California
  - 100% of Cap-and-Trade proceeds spent on reducing GHG emissions in California
  - Many existing programs to address GHG emissions, as well as criteria and toxic air pollutants in California
  - Section 38564 of AB 32 specifically calls for California to consult with other jurisdictions to facilitate the development of integrated, cost-effective, international GHG reduction programs
Past concerns include

- Some commenters expressed concerns that REDD projects negatively impact rights of local people
  - Public participation and consultation at the local level is a regulatory requirement
  - California is only considering sector-based crediting programs at the jurisdiction scale – not one-off projects
  - ROW recommends using best-practice safeguard standards like REDD+SES or the UN-REDD program’s Social and Environmental Principles and Criteria

- Some commenters concerned about reversal
  - Similar to our domestic forestry protocol; manage risk through buffer pool, large jurisdiction, “own effort” provisions
Support for additional California action

Signatories to Letter Urging California to Adopt Sector-Based Offsets from Forest Conservation

Code REDD 2013 (www.coderedd.org)
Programs most ready for inclusion (1)

- All GCF partners are at varying stages of design & implementation
- Acre, Brazil
  - Advanced policy
    - SISA law – first operational legal/institutional framework for jurisdictional REDD
    - Social Safeguards – Indigenous rights to resource use, public participation by indigenous/local groups
    - Forest-dependent communities benefit from carbon revenue
  - Advanced technical considerations
    - Deforestation reference level and target level established
    - Carbon registry already operating (issuance, tracking, and retirement of credits)
    - German development bank bridge financing aiding to continue program until carbon revenue begins
Programs most ready for inclusion (2)

- All GCF partners are at varying stages of design & implementation

- Advanced programs
  - Brazilian states of Mato Grosso, Amazonas, and Para
  - Mexican states, engaging with national government
  - Highlights of these and other GCF states/regions will be discussed in the afternoon session
Potential Next Steps

1) Stakeholder workshops and technical meetings over the next year
   - Seeking written comments on ARB staff white paper
   - This exploration phase could be informed by California universities, GCF partner jurisdictions, and the U.S. federal government
   - Opportunity to work through technical and policy issues with stakeholders
   - Would include engagement and input from ARB’s Environmental Justice Advisory Committee, as well as other technical experts and interested stakeholders
Potential Next Steps

- Topics for follow-on technical meetings and workshops could include:
  - Reference levels and acceptable uncertainty ranges
  - Addressing emissions leakage and reversals
  - Quantification and verification standards
  - Ensuring enforceability
  - Addressing additionality
  - Standards for registries
  - Ensuring robust social and environmental standards (e.g., safeguards)
Potential Next Steps

2) Continued coordination with partners
   • Through the GCF, continue to engage subnational jurisdictions on REDD
   • Continue to work with Québec and Ontario regarding any potential regulatory changes
   • Continue coordinating with U.S. Department of State to facilitate shared understanding and discussions with other jurisdictions
Potential Next Steps

3) Administrative Procedures Act Requirements

- 45-day notice of proposed rulemaking
- Regulatory text and staff report, including relevant analyses (i.e., CEQA)
- Written comments from the public
- Staff presentation
- Board hearing(s)
4) SB 1018 Governor Linkage Findings

- Jurisdiction’s program must be equivalently stringent with enforceability and no liability for California
- Similar type of review as Québec linkage
Summary

- We cannot fully address climate change without addressing emissions from deforestation of tropical forests.
- GCF jurisdiction partners are developing robust programs.
- California recognition can set high standards and leverage further emissions reductions and co-benefits.
- Limited domestic offset protocols because most emissions in California already regulated.
- Offset credit shortfall predicted beginning in 2018.
- Sector-based offset crediting provisions already exist in the Cap-and-Trade Regulation.
- Continue to engage on technical design elements.
  - Submit comments on white paper.
Subnational Global Climate Leadership Memorandum of Understanding

October 28, 2015
Under 2 MOU Basics

- Initiative of California and Baden-Württemberg to bring together subnational governments willing to make ambitious long-term climate commitments aligned with goal of limiting warming to 2°C
  - Reduce GHG emissions 80-95% below 1990 levels by 2050, and/or
  - Limit GHG emissions to 2 tons per capita by 2050
- Builds momentum and collaboration amongst subnationals ahead of COP21, and encourages greater national ambition in the negotiations
- Builds on other California partnerships, such as GCF’s Rio Branco Declaration and the ZEV Alliance
Signatories also commit to...

- Setting midterm targets needed to support long-term reduction goals
- Sharing technology, scientific research, and best practices
- Coordinating on issues of interest including:
  - Energy
  - Transportation
  - Natural resource protection
  - Technology
  - Short-lived climate pollutants
- Working towards consistent monitoring, reporting, and verification of emissions
Why subnationals?

- 50-80% of the mitigation and adaptation actions necessary to tackle climate change will be implemented at the subnational or local levels of governance (UNDP)
- Responsible for the development and implementation of policies that have the most impact on climate change
  - e.g. air quality; transportation; energy and energy efficiency; the built environment; natural lands; technology innovation, development, and transfer
- Laboratories for policy innovations later adopted at the national and even international level
- Critical link in the vertical integration of climate policies between national and local governments
49 governments
34 states/provinces/regions have signed; 2 have endorsed
8 cities have signed; 1 has endorsed
4 nations have endorsed
499 million people
$14.7 trillion GDP
Under 2 MOU and Forests

- 10 MOU signatories are also GCF members
- The MOU calls on parties to work together to reduce emissions from natural resources sectors
- Tropical deforestation accounts for 11% - 14% of global emissions
  - Cannot address climate change without addressing tropical deforestation
Additional Information

- California Cap-and-Trade Program webpage:
  http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm

- International Sector-Based Offset Crediting webpage:
  http://www.arb.ca.gov/cc/capandtrade/sectorbasedoffsets/sectorbasedoffsets.htm

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Comments and Questions
Lunch Break

Afternoon schedule (begin at 1pm):
- GCF Jurisdiction and Community Leader Discussion
- Monitoring, Reporting, and Verification
- Recap of potential next steps