

Proposed Framework for the LCFS Monitoring and Verification Program

March 8, 2016
Sacramento, CA

California Environmental Protection Agency
 **Air Resources Board**

Outline



- Background
- Existing GHG Verification Programs
- Proposed Oversight Structure
- Potential Scope of Monitoring and Verification
- Current Activities
- Rulemaking Schedule
- Next Steps

Key Messages From This Morning

- LCFS is transforming the transportation fuels pool
- LCFS is establishing a robust and dynamic credit market
- LCFS includes international fuel importers

Now is the time for Monitoring and Verification

3

Why is ARB Interested in LCFS Monitoring, Reporting and Verification?

- Program integrity and durability
- Safeguard against fraud
- Buyer confidence within LCFS credit market
- Pathway evaluation process efficiency
- Pathway carbon accounting and reporting accuracy
- Reporting consistency among pathway recipients
- Synergy with other ARB climate change programs



4

Examples of Regulatory Programs

- **Cap-and-Trade Mandatory Reporting Regulation (MRR) Verification**
 - Mandatory third-party verification program
 - MRR requires verification of GHG emissions data reports by ARB-accredited verification body
- **Cap-and-Trade Offset Verification Program**
 - Mandatory third-party verification
 - Cap-and-Trade Regulation requires third-party verification of all GHG emission reductions or removal enhancements
- **U.S. EPA Renewable Fuels Standard (RFS) Quality Assurance Program (QAP)**
 - Voluntary third-party assurance program
 - Renewable fuel production audits and RIN verification conducted by independent third-parties via quality assurance plans (QAPs)

5

Examples of Voluntary Programs

- **Climate Action Reserve (Reserve) Verification**
 - Mandatory third-party verification
 - Reserve requires verification by an ISO-accredited and Reserve-approved verification body
- **Forest Stewardship Council (FSC) Certification**
 - Mandatory third-party certification
 - Forest managers/owners seeking FSC Certification hire accredited certification body to conduct process audits

6

Key Considerations for LCFS Monitoring and Verification

- LCFS carbon accounting based on complete life cycle analysis (LCA)
- Fuel carbon intensity (CI, gCO₂e/MJ) - Calculated using the CA-GREET2.0 model
- Large amounts of low CI fuels imported to CA
- CI values adjusted for indirect land use change (iLUC) impacts
- Market-based program in the fuel sector
- Considering chemical analysis to determine feedstock/fuel properties

7

How Does Monitoring and Verification Affect LCFS Credits?

- Ensure data quality when determining CIs and verifying accuracy
- Maintains current "Buyer Beware" policy
- Supports ARB auditing
- Greater transparency for the credit market improves confidence

8

Proposed Oversight Structure

- ARB Accreditation Oversight
- Verification Body Requirements
- Individual Verifier Requirements

9

ARB Accreditation – Proposed

- Verification bodies and individual verifiers must apply to ARB for accreditation prior to program participation
 - Ensures qualified and impartial verification services
- Considering recognition of International Accreditation bodies; Subject to International Accreditation Forum requirements
- LCFS accreditation requirements informed by model systems such as MRR, ANSI, ASI

10

Verification Body – Proposed Requirements

- Must be preapproved by ARB
- Must meet strict conflict of interest (COI) requirements
- Must conform to International Standards – ISO 14064-2, ISO 14064-3, ISO 14065, EN 16214-4, ISO 17025
- Verification services to be conducted by qualified team – Lead verifier, feedstock/fuel specific verifier, financial transactions expert, and independent reviewer
- Require professional liability insurance
- Must notify ARB of verification plan before conducting verifications – Approval of COI, Notice of Verification Services
- Subject to ARB audits

11

Individual Verifier – Proposed Requirements

- Must be accredited to perform LCFS Verifications
- Subject to assessment of material misstatement
- Subject to competency assessment (e.g., minimum requirements, number of years of experience, proper training)
- Service requests must come from ARB approved Verification Body
- Subject to ARB audits

12

Potential Scope of LCFS Monitoring and Verification

- Carbon Intensity
Third-party validation of fuel pathway application CI
Monitoring and third-party verification of approved CI values
- Fuel Volumes
Third-party monitoring and verification of fuel volumes produced and reported
- LCFS Credit Transactions
ARB verification of credit transactions

13

Carbon Intensity

- Audit of LCA parameters (facility location, process configuration, energy use, feedstocks, co-products, transportation distance, finished fuel) by ARB-accredited third-party verifiers to ensure accuracy of CI value
- **Validation:** Initial audit to confirm certification of fuel pathway
- **Verification:** Periodic verification of certified CI
- **Monitoring:** Ongoing monitoring of certified fuel pathway and CI

Feedback Questions/Considerations

- *What substantiating information is needed to confirm accuracy of user defined inputs?*
- *Should staff consider enhanced transparency of documentation (chain of custody of feedstock, fuel, co-products, etc.)?*
- *How to ensure international consistency?*
- *When should verifications occur?*

14

Fuel Volume

- Audit of fuel volumes by ARB-accredited third-party verifiers to ensure accuracy of reported information
 - Reported volumes – Production volume per feedstock, amount of fuel produced for CA, amount of fuel sold to CA
 - Facility operations and production capacity
- **Monitoring and Verification:** Periodic monitoring and verification of fuel volumes

Feedback Questions/Considerations

- *What substantiating information is needed to confirm accuracy of reported fuel volumes?*
- *Is there a need for greater transparency of documentation (chain of custody)?*
- *Any additional considerations for imported fuels?*
- *How to ensure international consistency?*

15

LCFS Credit Transactions

- ARB monitoring and oversight of credit transactions to ensure accuracy of credit transfer agreements to safeguard integrity of LCFS credit market
 - Credit transfers between parties – Agreement and facilitation between seller, buyer, third-party broker
 - Credit market reconciliations

16

Current ARB Activities

- Conduct site visits to fuel production facilities
- Evaluating need for analytical test methods to support verification audits
- Developing detailed internal verification audit protocols
- Evaluating standard data management practices of fuel producers
- Ascertain the typical business transaction documents required to confirm accurate CI value quantification
- Coordinating with other ARB climate change verification systems

17

Transparency

- Staff proposal to consider need for greater documentation transparency
 - Feedstock transfer documents
 - Co-product disposition
- Staff considering appropriate level of monitoring and verification public disclosure
 - Trade secrets
 - Confidential business information

18

Contact Information

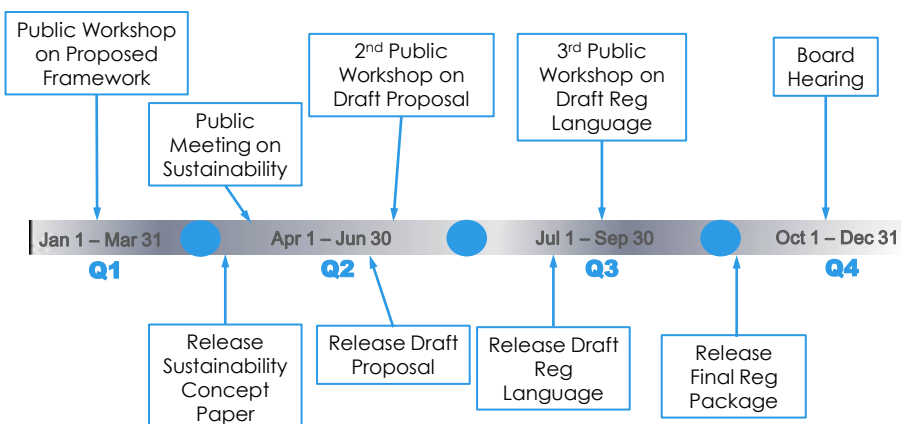
Jim Aguila, Chief, Program Planning and Management Branch
Jim.Aguila@arb.ca.gov
 (916) 322-8283

Aubrey Gonzalez, Acting Manager
Aubrey.Gonzalez@arb.ca.gov
 (916) 324-3334

Ursula Lai, Lead Staff, Verification
Ursula.Lai@arb.ca.gov
 (916) 323-2790

19

Rulemaking Timeline



20

Next Steps

- Solicit comments
- Review comments and evaluate information received
- Develop Monitoring and Verification proposal
- Present Monitoring and Verification proposal at next workshop

21

More Information

Presentation may be found at

http://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/lcfs_meetings.htm

Please send feedback to Ursula Lai at

Ursula.Lai@arb.ca.gov

Feedback requested by

March 22, 2016

22

Questions?

THANK YOU

23