

Public Workshop to Discuss Potential LCFS Rulemaking Items

Industrial Strategies Division

October 24, 2016
Sacramento, CA

California Environmental Protection Agency
 **Air Resources Board**

Outline

- Pathway Processing Update
- Rulemaking items:
 - Expanded regulatory scope
 - Updated LCFS rulemaking timeline
 - Public Process
- Mandatory third-party verification white paper
- Environmental Justice Advisory Committee
- Open discussion

Pathway Processing Update

Pathways Certified through Q3 2016

| Application Type | T1 Re-cert | T2 Re-cert | T1 New | T2 New | Total |
|---|------------|------------|------------|-----------|------------|
| Ethanol | | | | | |
| <i>Submitted</i> | 76 | 16 | 115 | 14 | 221 |
| <i>Consolidated/Rejected/Withdrawn/ Deleted</i> | 3 | 6 | 64 | 14 | 87 |
| <i>Certified</i> | 73 | 10 | 51 | 0 | 134 |
| Biodiesel/Renewable Diesel | | | | | |
| <i>Submitted</i> | 46 | 3 | 64 | 7 | 120 |
| <i>Consolidated/Rejected/Withdrawn/ Deleted</i> | 19 | 2 | 44 | 5 | 70 |
| <i>Certified</i> | 27 | 1 | 20 | 2 | 50 |
| RNG/NG and Others | | | | | |
| <i>Submitted</i> | 66 | 13 | 12 | 2 | 93 |
| <i>Consolidated/Rejected/Withdrawn/ Deleted</i> | 16 | 2 | 3 | 2 | 23 |
| <i>Certified</i> | 50 | 11 | 9 | 0 | 70 |
| | | | | | |
| TOTAL Submissions | 188 | 32 | 191 | 23 | 434 |
| TOTAL Certifications | 150 | 22 | 80 | 2 | 254 |

Post Re-certification Update

- Method 1 pathways expire on Dec. 31, 2016
- All legacy Method 2A/2B pathways not recertified will also expire on Dec. 31, 2016
- 164 applications were submitted between Feb. 1 and Sept. 30, 2016
- Will expedite applications for next-generation low carbon fuels (i.e., cellulosic, hydrogen, etc.)
- Incomplete pathway applications will be rejected

Rulemaking Items

Climate Change Legislation and Scoping Plan

- Passage of SB 32 (Pavley) and AB 197 (Garcia)
 - 40% below 1990 emissions by 2030
- Preliminary modeling indicates that low carbon fuels will continue to play a key role in achieving the 2030 GHG Scoping Plan target
- Today we will explain how the setting of post-2020 LCFS targets relates to the Scoping Plan process

Review the Scoping Plan Concept Paper. June 17, 2016. Available at:
<https://www.arb.ca.gov/cc/scopingplan/meetings/meetings.htm>

Expanded Rulemaking Scope

LCFS Post-2020 Targets + Verification Program

- Previously planned to complete the verification rulemaking in 2018 and set post-2020 targets the following year in a separate rulemaking.
- Now proposing to fold the verification topic into the broader rulemaking in order to gain administrative efficiency and provide additional public process.

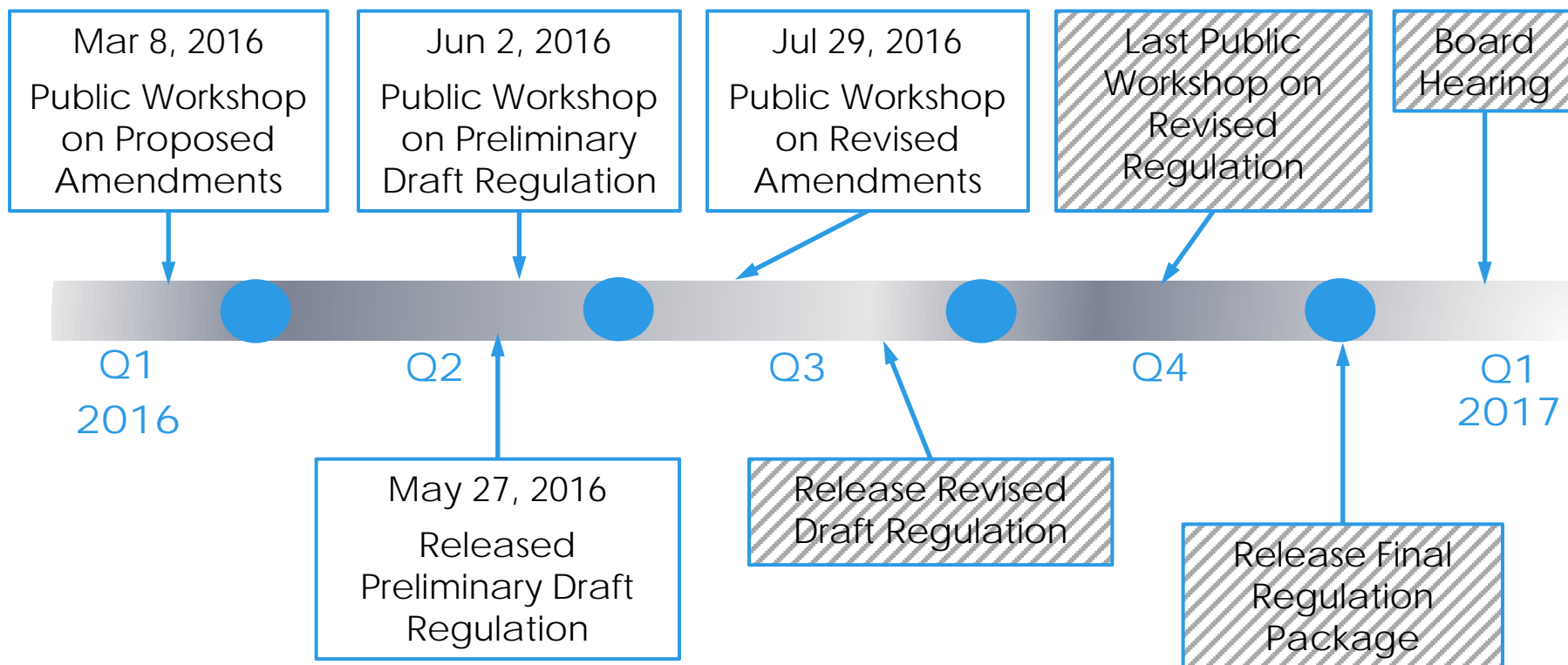
Expanded Rulemaking Scope

Amendments to be considered include:

- Post-2020 targets
- Third party verification
- Recognition of alternative jet fuels
- Updates to CI models
- Other program improvements including those previously presented in 2016

Public Activities to Date

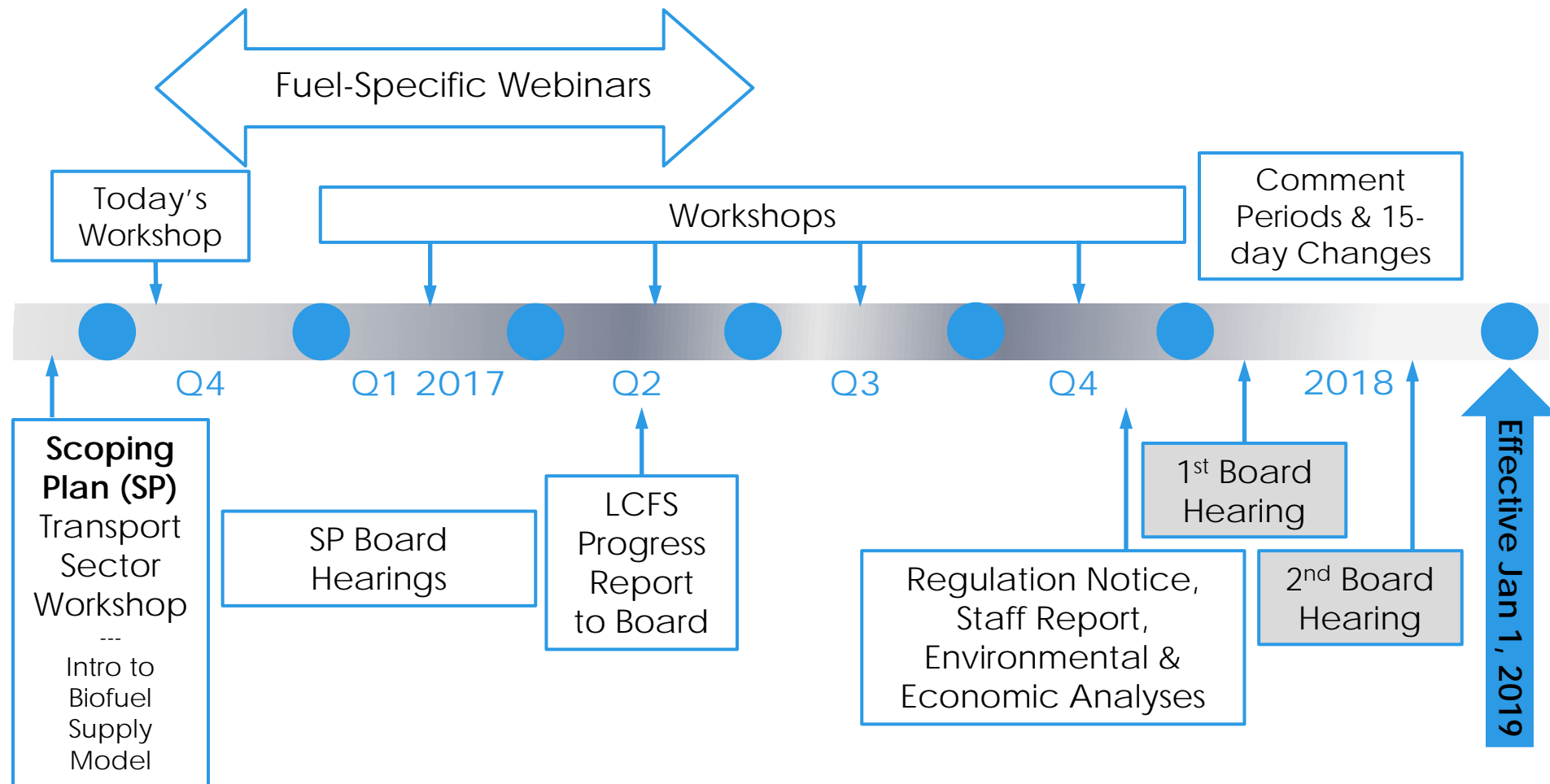
on Verification and Amendments



Presented at prior LCFS Public Workshop July 29, 2016

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

Expanded Rulemaking Timeline



Public Process

Quarterly Workshops

- Workshops will focus on major program-related topics including:
 - Presentation of model updates;
 - Consideration of alternative jet fuel;
 - Identification of high-impact CI inputs;
 - Summaries of webinars and verification-related proposals; and
 - Consideration of post-2020 targets.
- Staff will present new provisions as they are developed over the coming year, post proposed regulatory text for discussion and feedback, and share findings of new/updated models.

Public Process (continued)

Fuel-Specific Webinars

- Focus on verification requirements & related changes to pathway application and evaluation (CI determination), and reporting.
- Open to all but intended to stimulate a focused discussion and solicit input from stakeholders to inform development of the proposed verification program.
- A fuel-specific discussion paper will be released prior to each webinar.

Fuel-Specific Webinar Schedule

- First four webinars tentatively scheduled.

| Topic/Fuel Type | Proposed Date |
|----------------------------|---------------|
| Electricity and Hydrogen | Nov 17 |
| Natural Gas and Biomethane | Nov 18 |
| Verification Bodies | Dec 9 |
| Co-Processing Workgroup | Dec 13 |

- Two webinars are anticipated for each fuel.
- Next series to begin in January 2017.

Mandatory Third-Party Verification White Paper

Verification Program Development in 2016

- Provided three conceptual verification proposals for workshops in March, June, July
- Stakeholder feedback helpful
- Additional fuel-specific staff work and stakeholder discussions needed

Stakeholder Feedback – Verification

- General support for third-party verification
- Request more ARB guidance with fuel-specific error risk and detailed audit requirements
- Consider efficiencies from harmonization with existing verification and certification programs
- Seek cost-reducing strategies

Verification Program Objective and Guiding Principles

Objective: ensure integrity in the LCFS credit market through assurance of GHG reduction claims

Principles:

- ARB maintains oversight and control over LCFS
- Seek continual improvement in detection, prevention, and correction of errors or fraud.
- Pursue cost reducing strategies while maintaining rigor.
- Policy consistency with other ARB verification programs.
- Consider unique attributes of fuel carbon intensities and fuels marketing structure.

Terminology and Core Concepts (1)

Verification of Reported Information- applies to assurance that reported information is true or conforms to required procedures

- *e.g., Verification that Q-RINs generated are appropriately categorized and match the renewable fuel volumes produced*

Product Certification- generally applies to assurance that a product meets a particular specification or standard

- *e.g., Batch X of fuel is certified (has an associated certificate number) as a renewable fuel under EU RED requirements*

Certified Fuel Pathway CI- deemed “certified” by ARB Executive Officer to indicate that pathway evaluation is complete, accurate and permissible to use in the generation of LCFS credits—follows applicant attestation.

- *Not a product certification as in EU RED*

Terminology and Core Concepts (2)

- “**Conflict of interest**” is a situation in which a person or body is unable to or potentially unable to render an impartial verification statement of a potential client’s report to ARB, or objectivity in performing verification services is or might be otherwise compromised
- ARB staff are considering
 - verification body rotation requirement,
 - look-back period for review of incompatible activities by verification bodies and individual verifiers,
 - list of specifically prohibited services/activities that are considered incompatible, and
 - mitigations for allowed professional and personal relationships.

Terminology and Core Concepts (3)

- **“Level of assurance”** is specified to establish the level of detail that a verifier designs into their verification plan and sampling plan to determine if there are any material errors, omissions, or misrepresentations (reasonable vs. limited)
- **“Material misstatement”** would be defined as a discrepancy, omission, misreporting, or aggregation of the three, that leads a verification team to believe that a report contains errors resulting in an overstatement of credits generated or understatement of deficits generated greater than 5%
 - Threshold is not an error allowance—guides rigor of verifier sampling to minimize risk of an incorrect conclusion
- **“Measurement accuracy and missing data”** In MRR, all devices must be selected, installed, operated, and maintained to ensure measured value is within 5% of true value, procedures for data substitution; may consider same for LCFS

Terminology and Core Concepts (4)

- **“Accrediting body”** means an entity that has the authority to determine whether a verification body or certification body has demonstrated its competence to engage in verification or certification activities
- ARB acts as the accrediting body, deriving its authority from the State’s legislative and regulatory process
- ARB strives to continually improve its processes while maintaining consistency with international standards and may consider relationships with other accreditation bodies established under international standards

Verification Program Scope

- Periodic Verifications (including required site visit)
- Credits generated
 - Fuel pathway carbon intensities
 - Reported fuel quantities by fuel pathway code
- Deficits generated

Potential General LCFS Verification Requirements Based on CI Complexity

| | Lookup Table Pathways | Tier 1 Pathways | Tier 2 Pathways |
|--|--|---|---|
| CI Complexity Levels | Based on generic pathway description | Producer-specific CI(s) based on limited variables included in Tier 1 calculator | Producer-specific CI(s) based on variables available in full CA-GREET model |
| ARB Engineering Review During Application | No | Yes | Yes |
| Potential CI Process Updates | Table updates | Considering simplified calculators for each fuel-type built from CA-GREET model | Not Applicable- Must use full CA-GREET model |
| Potential Contents of Applicant's Compliance Risk Identification and Monitoring Plans | <ul style="list-style-type: none"> • Description and schematic of operations including meter locations • Data collection system description • Description of how reporting errors controlled, detected, and corrected | Plus, <ul style="list-style-type: none"> • Mass balance procedures • CI uncertainty based on sensitivity to expected variations in key user-defined inputs (key CI variables) | Plus, ARB-imposed application-specific CI monitoring requirements to substantiate low CI practices (if needed) |

Verification White Paper – Additional Considerations

- ARB experience implementing accreditation and oversight of GHG verification programs
- Harmonization opportunities for verification of LCFS credit-generating fuels
- How might verification apply to LCFS credit-generating fuels?
 - Need for a fuel-specific approach to risk analysis for credit-generating fuels
- How might verification apply to LCFS deficit-generating fuels?

Harmonization Considerations (1)

Staff's proposal will seek opportunities to harmonize with other programs while:

- Maintaining ARB's compliance oversight and enforcement role with regulated parties
- Specifying requirements for verification services to reasonably assure LCFS credit validity, including fraud detection
- Achieving appropriate ARB oversight of third-party verification to ensure quality and consistency of verification services

Harmonization Considerations (2)

ARB verification program design features to be considered in the context of harmonization include:

- Validation/verification site visit timing and frequency coordinated with other regulatory cycles
- Recognition of feedstock or fuel product-type certifications under mandatory or voluntary certification schemes that meet ARB-specified criteria

Harmonization Considerations—Credit-Generating Fuels: U.S. EPA QAP (1)

- U.S. EPA reviews and approves Fuel-specific Quality Assurance Plans submitted by QAP Providers each year
- Maintains list of approved QAP providers
- Set requirements for professional expertise on QAP provider team
- Sets independence (conflict of interest) criteria, including avoiding appearance of conflict
- Requires Professional Liability (E&O) insurance

Harmonization Considerations—Credit-Generating Fuels: U.S. EPA QAP (2)

QAP reviews include key evidence also necessary under LCFS—staff will carefully evaluate QAP program audit procedures to determine commonalities and differences

Key evidence:

- Verification of feedstocks at the fuel production facility
- Verification that fuel volumes produced are consistent with amount of feedstocks processed
- Verification that RINs generated are appropriately categorized and match the fuel volumes produced
- Engineering Report every three years, sooner if production changes
- Requires two site visits annually, one if QAP provider includes remote monitoring

Harmonization Considerations – Credit-Generating Fuels: EU RED and Certification Schemes

Renewable fuel certifications under EU RED include key evidence also necessary under LCFS—staff will carefully evaluate most effective certification schemes to determine additional commonalities and differences

Key evidence:

- Full supply chain mass balance approach for renewable fuels
- Verification of feedstocks at the fuel production facility and upstream where needed
- Verification that fuel volumes produced are consistent with amount of feedstocks processed
- Production facility operations review including energy use, byproducts
- Site visit frequency not specified in EU RED, but at least one certification scheme (ISCC) requires annual on-site audits, more frequent if problems detected

Harmonization Considerations – Deficit-Generating Fuels: CARB MRR

- Scope of verification should include petroleum fuel volumes as well as refinery crude oil volumes by marketable crude name.
- As discussed in prior workshops,
 - One option for verification responsibility is to match the current initial point of obligation in the program for producers or importers and then also assure that downstream transactions are reported correctly.
 - A second option is to align the LCFS point of regulation with MRR and accept verified data under the MRR/Cap-and-Trade program for use in the LCFS program

Next Steps

- ARB staff are reviewing pathway QAPs under the RFS program to identify
 - audit sampling that would be common under both programs
 - additional audit sampling that may be needed under LCFS
- Help to address unique error risks present in individual alternative fuel supply chains
- Clarify differences and similarities between lifecycle GHG accounting in LCFS vs. EU RED, QAP
- Identify appropriate verification of alternative fuels that generate small quantities of credits

Feedback

- Feedback on Rulemaking Scope and Timeline, Webinar Schedule, and Verification White Paper is welcomed by November 21 (four weeks).

Questions?

Presentation available at:

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

Feedback should be sent to LCFSworkshop@arb.ca.gov
by November 21, 2016