California Environmental Protection Agency

Air Resources Board

# PROPOSED AMENDMENTS TO THE LOW CARBON FUEL STANDARD

Public Hearing
December 16, 2011

## *Overview*

- Proposed Amendments
  - High Carbon Intensity Crude Oil
  - Regulated Party for Electricity
  - Other Improvements and Clarifications
- Proposed 15-Day Changes
- Staff Recommendations

## *Proposal Developed in Open Process*

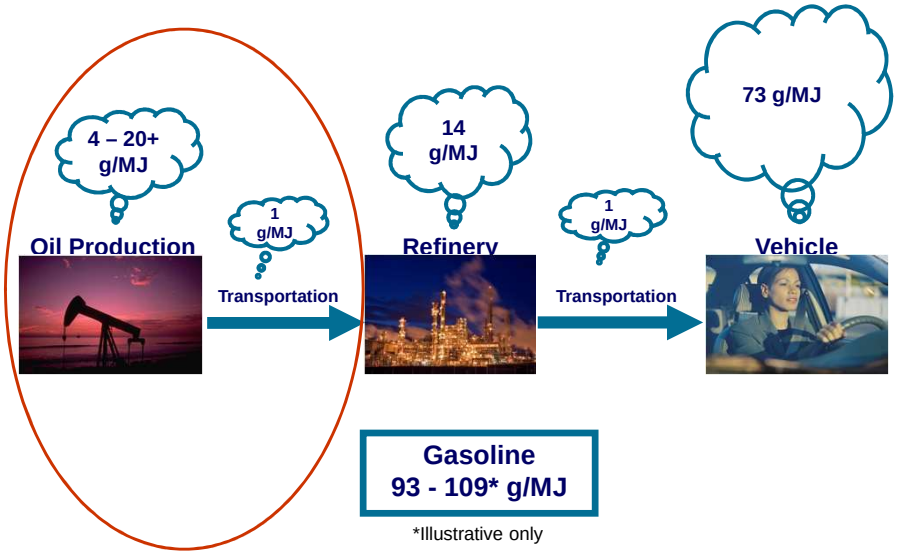
- Proposed amendments based on:
  - First year evaluation of rule implementation
  - Consultation with other agencies (CEC, PUC)
  - Stakeholder input
  - Board direction from previous Resolutions
- Extensive public process, including input from formal Advisory Panel



## *What is a High CI Crude Oil?*

- Some crude oils take substantially more energy to produce than others
- These crude oils are referred to as high carbon intensity crude oils
- Energy intensive crude oils can represent 20% of total lifecycle analysis

## Example Petroleum Lifecycle Analysis




*Illustrative only



## Current Crude Oil Provisions: Includes High-CI Crude Provisions

- Existing regulation grandfathers 2006 crude slate, including most high-CI crude oils
- Fuel providers must account for using any non-grandfathered high-CI crude oils
- Use of these non-grandfathered high CI crude oils generate additional deficits
- These additional deficits must be offset

## *Current Crude Oil Provisions:*
## *Issues with Current Regulation*

- Crude slate changed from 2006 to 2009
- More non-grandfathered high-CI crudes used than anticipated
- Even if total volume of high-CI crudes remains unchanged, refiners may incur large deficits
- Refiners must then offset deficits



## *Proposed Crude Oil Provisions:*
## *Guiding Principles for Amendments*

- Preserve program benefits
- Ensure more equitable treatment of high intensity crudes
- Improve accounting of GHG emissions from production/transport of crude oil
- Promote innovation
- Avoid/limit incentives to shuffle crude

## *Proposed Crude Oil Provisions: Several Alternatives Considered*

Staff identified six different approaches:

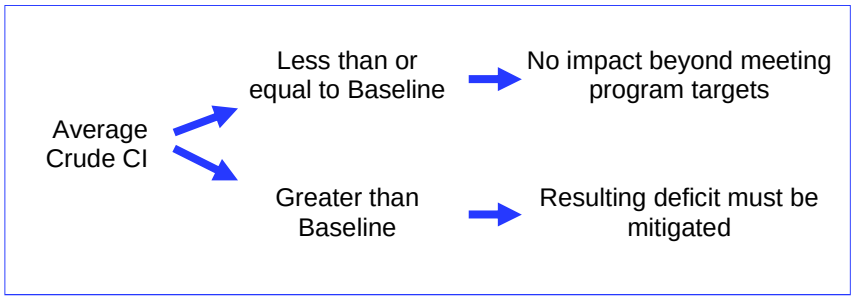
1. Current Approach with Modifications
2. **California Average Approach**
3. Company Specific Approach
4. Hybrid Approach
5. Worldwide Average Approach
6. No Differentiation



## *Proposed Crude Oil Provisions: Staff Proposes California Average*

- Calculates State average CI each year
- Provides incentives for reducing crude CI
- CA Average Approach begins 2013

**Basic Approach**



## Proposed Crude Oil Provisions: CA Average Approach Achieves Benefits

- Properly accounts for GHG emissions
- Maintains lifecycle foundation of LCFS
- Simplifies approach for addressing crudes
- Applies same accounting method to all crudes
- Continues refinery access to all crudes
- Provides refiners greater flexibility to manage crude slates



## Proposed Crude Oil Provisions: Support for No Differentiation Approach

- Oil companies support approach that does not differentiate between crude oils
- Proponent Rationale:
  - Eliminates crude shuffling
  - Simplifies current regulation
  - Refocuses true intent of program – development of low carbon, alternative fuels
- Staff's view - Does not align with guiding principles to:
  - Account for lifecycle emissions
  - Promote innovation

## Proposed Crude Oil Provisions: Support for Hybrid Approach

- Environmental groups support refinery-specific accounting
- Proponent Rationale:
  - Assign deficits to responsible party
  - Align responsibility with performance
  - Improve fairness
- Staff's view - May be viable option
  - More analysis necessary



## Summary of High CI Provisions

- Existing regulation needs revisions
- Various options considered
- California Average Approach – best amendment option

## *Current Electricity Regulated Parties: Role of EV Credits in the Program*

- Electricity already meets the LCFS 2020 standard
- Electricity providers can opt into program to generate credits
- Existing regulation has language that defines what entity can claim credits



## *Current Electricity Regulated Parties: Staff Review of EV Provisions*

- Establish clear criteria for awarding credits for EV charging
- Clarify who is eligible to receive credits
- Include fleet owners and employers as eligible to receive credits

## *Current Electricity Regulated Parties: Principles for Proposed Amendments*

- Award credits to those taking action to encourage deployment of EVs
- Return credit value to EV customers
- Maximize number of program credits
- Keep credit process simple
- Reward innovation



## *Proposed Electricity Regulated Parties: Alternatives Considered*

- Utilities as regulated parties for all EV charging
- EV service providers as regulated parties for residences and public charging stations served

## *Proposed Electricity Regulated Parties: Utilities Best for Home Charging*

- Staff proposing that utilities be designated as the regulated party for residences
- Utilities are in the best position to:
  - Return credit value through lower electricity rates -- strong EV market driver
  - Offer rate options that encourage off-peak charging
  - Provide public education on EV benefits



## *Proposed Electricity Regulated Parties: Service Providers Best for Public Charging*

- Staff proposing that service providers be designated regulated parties for public charging
- Service Providers:
  - Establish the public charging network
  - Advance technological innovation

## *Proposed Electricity Regulated Parties: Fleet/Business Owners Best for Onsite Charging*

- Fleet owners as regulated party for fleet charging
  - Foster EV market growth
- Employers as regulated party for private access business charging
  - Foster EV market growth by providing employee EV education and convenient charging access



## *Proposed Electricity Regulated Parties: Stakeholder Concerns*

- Most contested issue is with residential charging credits
  - Utilities
  - EV service providers
- Differing views on who best serves EV customers

## Proposed Electricity Regulated Parties: Summary

- Staff identified the entity most appropriate for encouraging electricity use
- Utilities are best positioned to provide lower electricity rates
- EV service providers are best positioned for public access charging
- Employers and fleet owners are best positioned for private and fleet charging



## Other Proposed Amendments

- Carbon intensity determination
  - Convert rulemaking process to EO certification
  - Streamline approval process
  - Update Energy Economy Ratios
- Credit trading provisions
  - Specify transaction process
  - Establish credit trading
  - Publish key market information

## Other Proposed Amendments (cont.)

- Applicability
  - Allow more fuel providers to participate
  - Establish clear opt-in and opt-out provisions
- Reporting
  - Simplify requirements
- Others
  - Specify default CI values
  - New and revised definitions



## Environmental Impact Analysis

- No significant adverse impacts
  - Amendments mostly administrative
  - Amendments help improve implementation
- Substantive changes in GHG emission reductions are not anticipated

## *Economic Impact Analysis*

- Overall positive economic impact on regulated parties
  - Additional credits into LCFS credit market
  - Reduction of compliance costs
- Expect no fiscal impacts on federal, State, or local governments



## *Proposed 15-Day Changes*

- Update baseline to 2010
- Revise target schedule
- Update crude CI calculation methodologies

## *Proposed 15-Day Changes (cont.)*

- Add provision to assign regulated party for EV battery switching stations
- Consider allowing credit transactions where buyer/seller remain unknown to each other
- Add public comment period in Method 2A/2B certification process
- Update Lookup Table from Feb. 2011 EO hearing
- Add/update additional definitions



## *Next Steps on Amendments*

- If approved, work with stakeholders on 15-day changes
- Continue indirect land-use change analysis
- Explore provision for low energy-use refineries
- Evaluate credits for electric mass transit
- Return to the Board in 2012

## *Staff Recommendation*

Approve for adoption the proposed amendments and 15-day changes