AB 118 Sustainability Working Group Meeting: Sustainability Framework Elements

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AGENDA

I. Sustainability Framework Overview – CEC Staff
   - Regulations, Thresholds, Characteristics and Criteria

II. Water Sustainability & LCFS – UC Berkeley

III. Case Studies in Context of AB 118 Sustainability Framework

UC Davis Strategies

California Renewable

Pacific Ethanol

SunBioenergy

IV. Open Discussion & Next Steps

Implementing Draft Sustainability Regulations

- Sustainability goals shall guide commission
  - Promote sustainable alternative fuels
  - Do not adversely affect natural resources
- Commission shall establish:
  - Environmental performance measures to serve as screening thresholds
  - Project evaluation criteria to rank furtherance of sustainability goals and incentivize alternative fuel production practices

Program Update

- AB 118 Draft Regulations
  - Thank You for Stakeholder Comments
  - Substantial Revisions October 30
  - Submitted to Office of Administrative Law on Dec. 2 with additional minor revisions
- Investment Plan
- Solicitation

Energy Commission Approach

- Initial focus on bioenergy crops and biomass resources due to controversy over natural resource impacts and land use effects
  - Will eventually address other fuel pathways with environmental effects
- Initial California focus
  - Statutory direction
  - Assuming sustainability means environmental performance beyond regulatory standards, need to develop new concepts to implement
- National-Level Sustainability Definitions and Criteria
  - Track work from federal agencies and national working groups
- International Certification of Sustainable Production
  - Staff tracking main international programs
  - No assessment work yet

What Sustainability Factors Will We Consider in Full Fuel-Cycle Analysis 2

Environmental and Ecological Factors		
GHG Emissions	Energy Use	State & Federal Lands
Criteria & Toxic Emissions	Biodiversity	Land Use Changes
Water Use	Ecosystems & Habitats	
Waste Water Discharge	Forest Cover	
Economic Factors		
Economic Development Benefits	Costs to Developers for Certification and AB 118 Application Preparation	
Social Factors		
Public Health Effects	Environmental Justice / Disproportionate Effects to Disadvantaged Populations	

Sustainability Aspects of Other Transportation Sectors

- Electricity as a vehicle fuel
- Natural gas as a vehicle fuel
- Forest biomass
- Vehicle construction and deconstruction
- Improved environmental performance of vehicle manufacturing processes
- Electric batteries

Proposed Integrated Framework for Sustainability Assessment for AB118

- AB 118 is an Incentive Program Based on Public Money:
  - Set High Standards for Sustainability
  - Identify and Promote Transportation-Related GHG-Reduction Projects that are Exemplary in Sustainability and Environmental Performance
  - Support Projects that Can Serve as National and International Models

4 Elements of Sustainability Framework

1. **Investment Plan**
   - Funding Priorities for Projects that Meet Program Goals
   - Funding for Sustainability Research
2. **Minimum Environmental Performance Measures**
   - Eligibility Thresholds = Screening System
   - Based on AB 118 Statutory Language
3. **Sustainability Goals in Regulations**
4. **Sustainability Characteristics / Evaluation Criteria**
   - Will become Evaluation Criteria

Four Proposed Minimum Environmental Thresholds

1 – Consistency with State Climate Change Policy and LCFS

Strong preference to projects with greatest potential to substantially reduce transportation-related greenhouse gas emissions

- Greatest preference to projects that exceed 10% reduction target from petroleum baseline
- Projects exceeding petroleum baseline on LCA basis not eligible (AQIP Anti-Backsliding Regulations)
- Information or plan on how GHGs reduced at each phase of production / distribution pathway

2 – Avoid Impacts to Natural Resources

- For projects subject to CEQA:
  - Demonstrate compliance with all applicable laws
  - Mitigate all potential significant adverse effects to state natural resources to non-significant levels
- For projects not subject to CEQA with potential to affect state natural resources:
  - Sufficient information to assess natural resource issues
- Implement applicable Best Management Practices from natural resource and pollution control agencies

3 – Maintain Ambient Air Quality Standards (ARB AQIP Anti-Backsliding Regulations)

- Compliance with all applicable laws and regulations
- Evaluate local health impacts consistent with state environmental justice standards
- Compliance with California New Source Review
  - BACT
  - Purchase any offsets required by local Air District
- Comply with additional mitigation strategies from Air Districts, including Env Justice

4 – Protect Water Supply & Water Quality

- Secure all required permits for point and nonpoint source discharge
- Compliance with Energy Commission Water Policy
  - Fresh water use only if alternative water supplies or cooling technologies:
    - Environmentally undesirable or economically unsound
  - Zero Liquid Discharge for wastewater, unless
    - Environmentally undesirable or economically unsound
- For projects with nonpoint source discharge – irrigated agriculture
  - Compliance with Irrigated Agricultural Waiver -

13 Proposed Sustainability Characteristics and Evaluation Criteria:

Scoring System to Assess Attainment of Sustainability Goals Defined in Regulations

Goal 1 – Substantial Reductions of Greenhouse Gas Emissions to Meet California's 2020 and 2050 Targets

- Characteristic 1: High preference given to projects with greatest potential to substantially reduce greenhouse gas emissions
  - Question: Is life-cycle scale GHG emissions data available that conforms to LCFS Methods 1 or 2?

Goal 2 – Natural Resource Protection and Promotion of Superior Environmental Performance

- Characteristic 2: Projects that maximize use of waste stream materials as feedstock
- Characteristic 3: Projects that use natural resources more efficiently and create less environmental damage than existing practices
- Characteristic 4: Use of forest biomass feedstocks that do not diminish forest ecological values and are consistent with forest restoration and fire management objectives

Goal 2 – Natural Resource Protection and Promotion of Superior Environmental Performance

- Characteristic 5: Purpose-grown energy crops that demonstrate Best Management Practices Plan for cultivation and processing
- Characteristic 6: Encourage development and production of sustainable biofuels uniquely suited to California's climate, water and natural resource constraints
- Characteristic 7: Minimize environmental impacts by using existing agricultural lands
  - CRP lands subject to close review

Goal 2 – Natural Resource Protection and Promotion of Superior Environmental Performance

- Characteristic 8: Recognize projects that create benefits to the state's natural resources or promote amelioration of degraded resources

- Characteristic 9: Recognize projects that use renewable energy and/or cogeneration in production, processing, and distribution phases.

Goal 3 – Certification of Sustainable Production Practices

- Characteristic 10: Recognize projects that include a commitment to produce or procure fuels made with Best-Available, Most Sustainable methods and practices
  - Applicable to infrastructure projects
- Characteristic 11: Promote the development of domestically and internationally-recognized sustainability certification systems for alternative fuels

Goal 4 – Minimize Risk of Unanticipated Environmental, Social or Economic Consequences

- Characteristic 12: Recognize projects that avoid disproportionate impacts to public health and the environment at large

- Characteristic 13: Maximize benefits to all Californians, particularly low-income and minority populations, by recognizing projects that create jobs and economic benefits for the state