Memorandum

To: Bill Peters and Cory Ann Wind | Oregon DEQ

From: Philip Sheehy and Jeff Rosenfeld

Date: November 2016

Re: Task 2: Draft Assumptions for the Updated 2014 Compliance Scenarios

---

Background

The objective of Task 2 of ICF's contract with Oregon DEQ is to update the 2014 illustrative compliance scenarios, develop new 2017 illustrative compliance scenarios to represent compliance for 2016-2025, and create a Scenario Adjustment Tool (SAT) so DEQ can perform minor periodic update to the scenarios. This memorandum identifies the draft assumptions for updating the 2014 illustrative compliance scenarios.

Outline of Draft Assumptions

ICF's draft assumptions for the updated 2014 illustrative compliance scenarios include following components:

- **Be based on the previous Scenarios 1 and 2 with a B5 baseline**
  - **Scenario 1 – Advanced vehicle technology**: Reflects a market that is more dependent on advanced vehicle technologies including electricity and natural gas.
  - **Scenario 2 – Higher Biofuel Blending**: Increased reliance on biofuel blending and blending of lower carbon biofuels.
- **Use the same fuel types and volumes as originally assumed in the 2014 analysis**
  - In the 2014 analysis, ICF made estimates on available fuel types and volumes and ICF will use these same types and volumes for updating the analysis
  - ICF will update the Oregon VISION model with recent vehicle fleet purchase data using ODOT registration data for calendar years 2014 and 2015. This will help update the projected baseline fuel consumption and alternative fuel consumption.
  - ICF will utilize data from DEQ Clean Fuels Program (CFP) and EIA for biodiesel and ethanol volumes and feedstock types to understand the current use of biofuels and feedstocks.
- **Incorporate the most recent carbon intensity values used in the CFP**

- ICF will update the 2014 illustrative scenarios with the CFP approved carbon intensity values for the different fuel types. ICF will maintain the carbon intensities in the 2014 analysis for fuels that do not yet have approved CFP carbon intensities. The table below identifies the fuels and feedstocks that were included in the 2014 illustrative compliance scenarios.

Biofuels for Blending		Advanced Fuel/Vehicle Technology
• Midwest corn ethanol	• Soybean biodiesel	• Electricity
• Oregon corn ethanol	• Waste grease biodiesel	• Fossil compressed natural gas
• Low CI corn ethanol	• Canola biodiesel	• Fossil liquefied natural gas
• Sugarcane ethanol	• Corn oil biodiesel	• Renewable compressed natural gas
• Cellulosic ethanol	• Tallow renewable diesel	• Renewable liquefied natural gas
	• Waste oil renewable diesel	

ICF will document the updated data sources including fuel volumes and feedstock types from DEQ and EIA, ODOT vehicle registration data, and CFP carbon intensities. Once the carbon intensities and fleet characteristics have been updated, the VISION model will be used to quantify the annual credit and deficit balance at the end of each year. ICF will extract the annual credit and deficit generations, the annual carryover balance, and GHG reductions through 2025.