API's Perspective on the

Low-Carbon Fuel Standard

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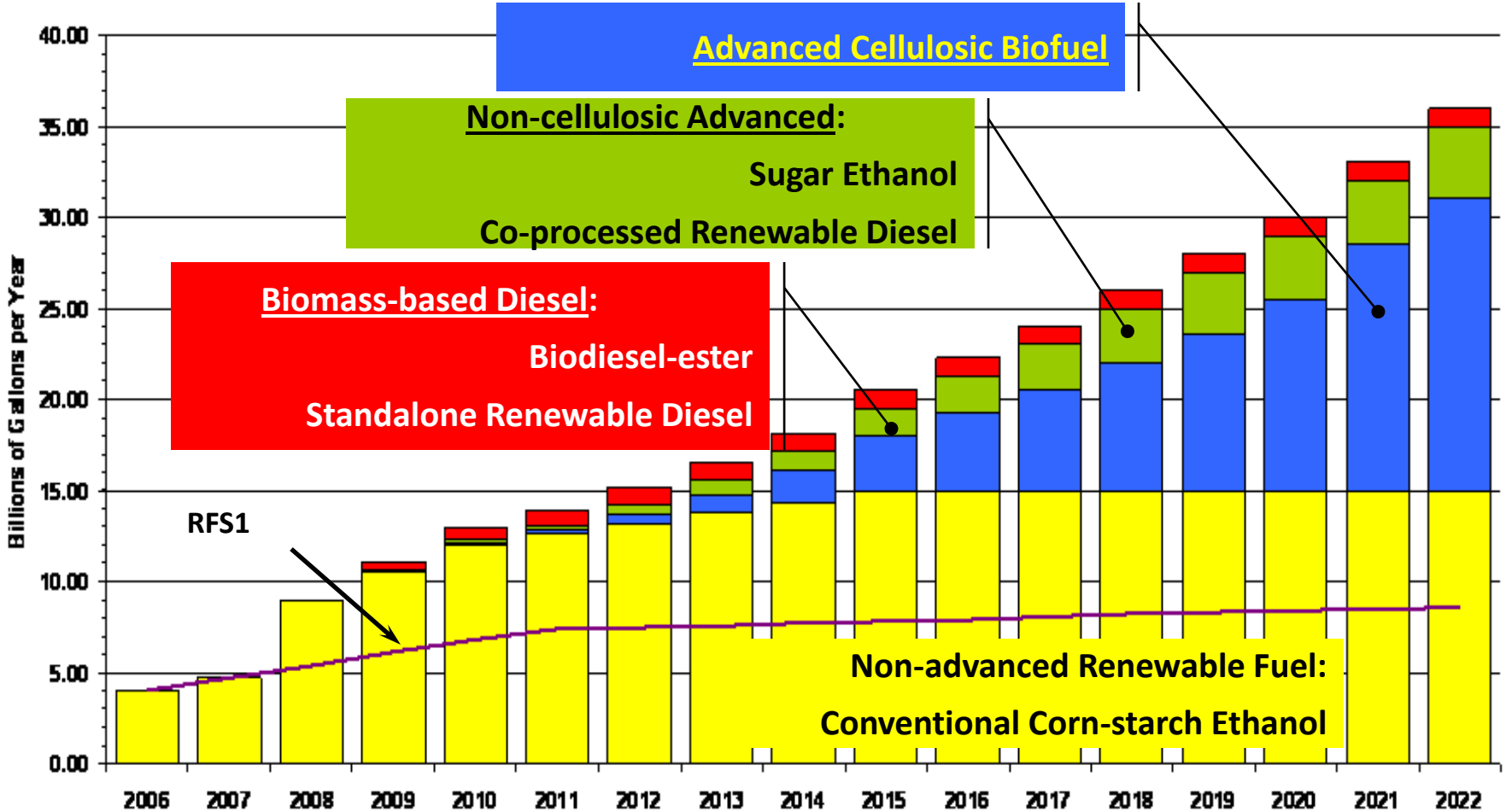
API Biofuels Overview

- **Given the current and projected worldwide energy demand, The U.S. needs *all* sources of commercially viable energy, as well as a greater commitment to energy efficiency and energy conservation**
  - **Biofuels, including ethanol are an important resource**
- **Almost 80% of all gasoline now produced in the U.S. includes ethanol**
- **Our companies have long been pioneers in developing alternatives and expanding our utilization of existing sources of energy**
- **We are opposed to the imposition of a low-carbon fuel standard (LCFS) in addition to the existing renewable fuel standard (RFS)**
- **A patchwork of state-by-state low-carbon fuel standards beyond the national RFS create additional boutique fuels that will likely interfere with the flexibility that Congress provided in the national RFS program**

EISA Renewable Fuel Standard (2007-2022)



50% GHG | 50% GHG | 60% GHG | 20% GHG*

*For new construction only. Existing corn-based ethanol facilities have no reduction Requirement.

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EISA RFS Lifecycle GHG Reduction Categories

- Establishes lifecycle GHG reduction requirements for each renewable:
  - Existing corn-based ethanol facilities have no reduction requirement
  - At least 20% for new corn-based fuel production
  - At least 50% for "advanced biofuel"
  - At least 60% for "cellulosic biofuel"
  - At least 50% for "bio-based diesel"
- EPA has limited authority to reduce lifecycle reduction requirements
  - Can reduce each standard up to 10%
  - Proposed to reduce advanced biofuels standard to 40 or 44%
- Lifecycle GHG emission baseline is 2005
- EISA requires that "significant emissions from land use changes" be included in lifecycle GHG emission estimates

Low-Carbon Fuel Standard – Overview

- **Congress has already acted and expressed its preference with respect to setting fuel standards by including an RFS that will accomplish significant GHG reductions, through the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007 (EISA)**
  - **We are opposed to the imposition of a LCFS in addition to the existing RFS. EPA and states should avoid the duplicative requirements of overlaying a LCFS on top of the existing RFS2 program**
- **A state LCFS is unnecessary as the federal RFS2 already has a component that requires the use of fuels with specific low GHG emission levels**
  - **The RFS2 is technology forcing and a state LCFS will not result in any more advanced biofuels than the very aggressive mandates in the RFS**
- **A LCFS would likely conflict with and complicate the regulatory requirements under the RFS**

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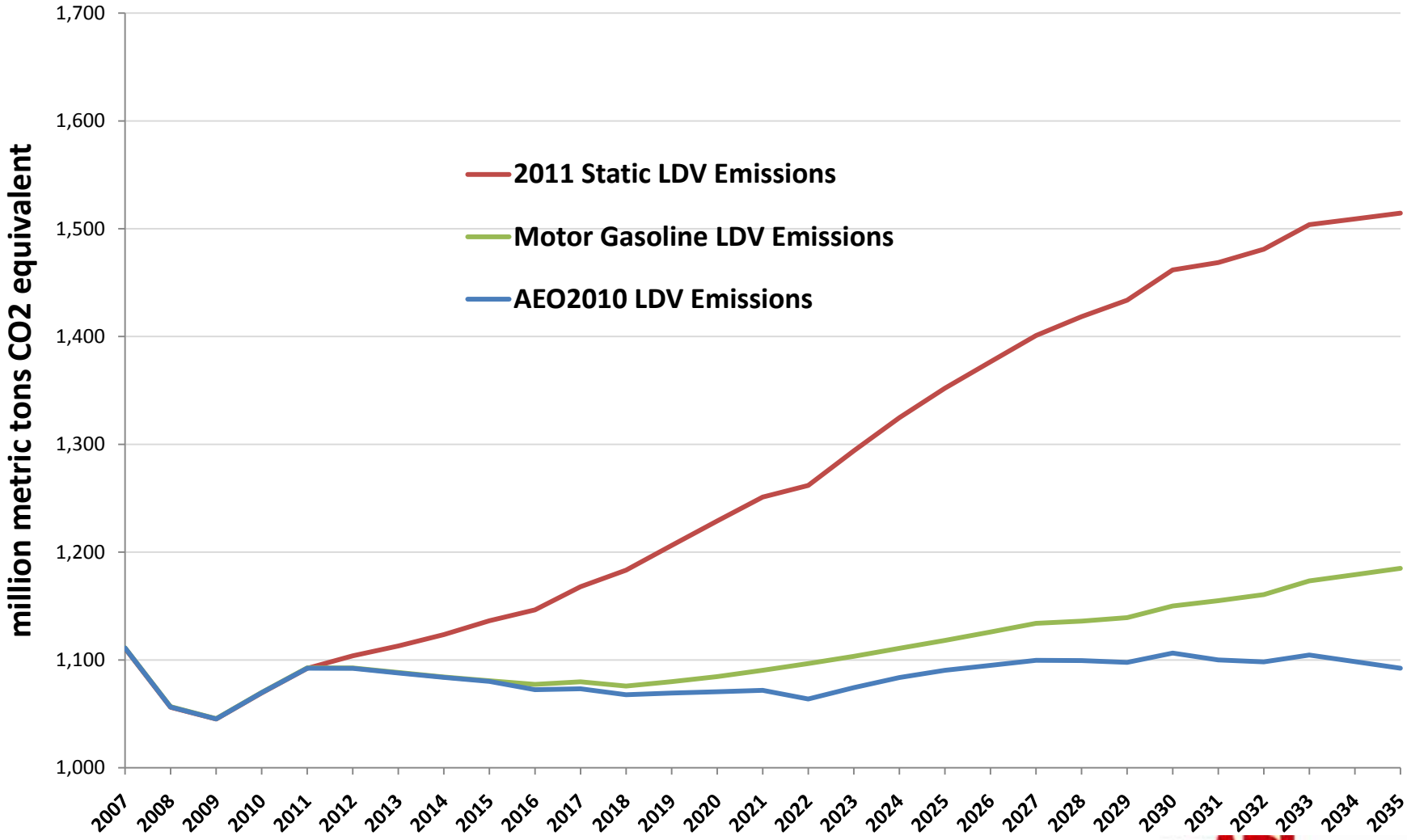
Tran. Emissions are Reduced Through Federal Programs

- According to EIA data (AEO2010), emissions from LDVs will increase by just 2% between 2010 and 2035, while VMT increases over 54%
  - Emissions are held in check by increased consumption of biofuels, in accordance with the RFS, and increases in LDV stock energy efficiency, which under the proposed CAFE standard will require new LDVs to reach a combined efficiency of 35 miles per gallon by 2016
- The following chart estimates the emissions from the RFS and CAFÉ as compared to the following scenario: assume that there were no improvements after 2011, that is, biofuels usage is frozen at the 10% level and there no CAFÉ improvement after 2011

Future GHG Emissions from Light-Duty Vehicles (LDV)



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LCFS – Implications and Design

- **Goes significantly beyond the RFS2 by requiring the replacement of a portion of the liquid transportation fuel market with alternative fuels including electricity**
  - **For the CARB LCFS, beyond first-generation biofuels usage in initial years and increased imports of sugar cane ethanol, oil industry may be required to buy credits from electric utility and also rely on technology breakthroughs in low carbon intensity biofuels in order to comply in later years**
- **State LCFS should be justified based on incremental cost-benefit impacts**
- **Regulations should be consistent, to the extent possible, with RFS regulations**
  - **Life-cycle assessments should be harmonized with other federal/state programs**

Why States Should not Adopt a LCFS

- RFS is technology forcing
  - State LCFS will simply compete for the same volumes resulting in "fuel shuffling" until low carbon fuels are widely available
- An additional state LCFS cannot make technology development go any faster than the existing federal RFS and CA LCFS programs
- Both CARB and NESCCAF have estimated that RFS2 reduces the average fuel carbon intensity of the gas fuel pool by approximately 3%. API's agrees with these estimates
- Additional state programs simply create more boutique fuels with all the consequent supply and distribution problems

Electric Vehicles = Key to LCFS Compliance

- **NESCCAF scenarios assume 3 to 6 million EVs and PHEVs in use in the NESCAUM states by 2020, representing 9 to 17 percent of the total light-duty vehicle fleet**
  - **"Scenarios assume penetration rated for both EVs and PHEVs that match or far exceed Toyota's hybrid sales trajectory for the entire fleet (all manufacturers) by 2020"**
- **CARB scenarios assume between 560,000 and 2 million advanced vehicles**
- **A July 2009 report from "clean technology" market intelligence firm Pike Research forecasts that by 2015 the U.S. will be the leading market for plug-in hybrid electric vehicles (PHEVs) in the world, with more than 610,000**
- **Hybrids currently comprise <3% of current new sales and <1% of the vehicle fleet after 10 years of sales**

Low Carbon Fuel Standard – State Programs

API believes that state LCFS programs are unnecessary, <u>BUT if states proceed, the state LCFS should be designed carefully</u>

- **Avoid placing obligations on fuel suppliers for technology changes over which they have no control (electric vehicles, flexible fuel vehicles, second generation biofuel commercialization, etc.)**
- **It is critically important that any LCFS program should be accompanied by periodic technology/feasibility reviews that allow for appropriate regulatory adjustments**
- **There should be adequate lead time for compliance**
- **Regulations should be consistent, to the extent possible, with the RFS2 regulations**

Questions?

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