Industry Horizons: The Next Opportunities for Ethanol

Ethanol 2018: Emerging Issues Forum

April 12-13, Omaha, Nebraska

Douglas A. Durante
Executive Director
Clean Fuels Development Coalition, Durante Associates, Inc.
www.cleanfuelsdc.org

The World We live In--Energy Policy 2018 and Beyond

- Renewable Technologies de-emphasized and defunded
- All rules and federal programs predicated on carbon reduction/climate being eliminated
- Budget cuts, personnel cuts, entire program cuts, etc. etc.
- Preference for Oil, Coal, Nuclear
- The Value proposition for Renewable fuels & technologies is challenged:
  - Reduce use of fossil fuels
  - Lower Carbon emissions for Climate Change
- *Its as if the lessons learned of the past decades erased*

- Yet…….cities, states, Major corporations remain committed to lower carbon and renewables, maybe more so.

CFDC CLEAN FUELS DEVELOPMENT COALITION

How does Ethanol Grow in This Seemingly Conflicting Universe?

- Despite the anti carbon rhetoric, Fuel economy standards– ***measured by carbon reductions***– not going away.
- Internal Combustion Engines will remain primary propulsion technology, EVs simply not catching on at the rate expected
- Auto Industry needs higher Octane Fuels-- MLEBs checks the boxes of low carbon, high octane, & low cost
- Mobile Source Pollution remains a significant health hazard, incl. CO2 as determined by Supreme court

To Be a part of this, Ethanol/Renewables needs to continue to challenge age old prejudices and misinformation –we are still the good guys.

Oil Not Going Away, nor the Cars that Use It

- Average Life of a Vehicle is 11-13 years
- 268 MM Vehicles registered, 75 MM more than 1990
- 12 of the last 15 yrs new vehicle sales averaged 16-17 MM
- Even with a doubling of EV sales since 2013, only in this past year Evs surpassed 1% of new vehicles
- DOE projects minimum reductions in gasoline use by 2050- leaving gasoline demand around 100 billion gallons
- California Dreaming?
- 14.5 mm cars registered, 2MM added annually
- 2030 EV Target of 40% = 800K, remaining 60% = 1.2 MM ICE's
  - Over the next 12 years CA adding 14.5 MM Vehicles needing gasoline
  - At current gasoline use of 15 BGPY, that still leaves 9BGPY of gasoline that needs to be cleaned up, de-carbonized, and replaced in those ICEs
  - GREET, USDA Other models show corn ethanol at 50% < ghg

Getting this Low Carbon, High Octane Fuel In to Those ICE's

- Role for both Conventional Vehicles and FFVs
- High Octane Fuels Needed For Future Cars– DOE Est. 80% of ICE's to be turbo or high compression by 2030
- Current Octane Components the Most Toxic & Carbon Intensive -- BTX
- EPA has Failed to Regulate /Reduce Toxics Under CAA
- Ethanol Best Option for Octane. E30 = 100 RON/94AKI
- MLEBs of 25-40% Open the Whole Playbook for Compression changes, CO2 reduction, and BTEX/Aromatic Reductions
- New CAFÉ Rules May Open the Door to above
- Build on Lead, Tobacco, Other slow turns of the wheel
- We have ID'd Roadblocks to ICE Fuel Market—all regulatory

Conclusion:

- Ethanol and Biofuels are inherently better than petroleum, but the two can work together
- High Octane, Low Carbon, & Renewable remain value propositions with health, economic and energy security benefits that have been lost in the noise of low oil prices
- Autos and Fuel Need to be looked at as an integrated system
- The bio-refinery vision of producing fuel, food, chemicals & other products needs to be taught to this Congress and the Public.

Thank You.

CFDC CLEAN FUELS DEVELOPMENT COALITION 30
1988 - 2018
Celebrating 30 years

What Keeps Us Up At Night?

- RFS– RINS, RVP, Waivers, RVOs, POO, Buckets, off Ramps, Caps, Law Suits, ILUC, Sunset/2022
- CAFÉ & Green House Gas Requirements
- Low Carbon Fuel Standards
- Octane -- E15, E25, E30, E85
- Labeling
- Health Issues –Ozone, Toxics, *Clean* Octane
- EPA Modeling– MOVEs, Lifecycle,
- Infrastructure—Pumps, Tanks
- Auto Industry– Warranties, Support, the Republic of California
- Threat of EVs
- FFVs and Prorated Incentives
- Exports or Oversupply
- Marketing Ethanol or Fuel Standards that contain ethanol