EPRI-IETA Joint Symposium on Complementary Policies

San Francisco, CA

April 16, 2013

com·ple·men·ta·ry

(of two or more different things) Combining in such a way as to enhance or emphasize each other's qualities.

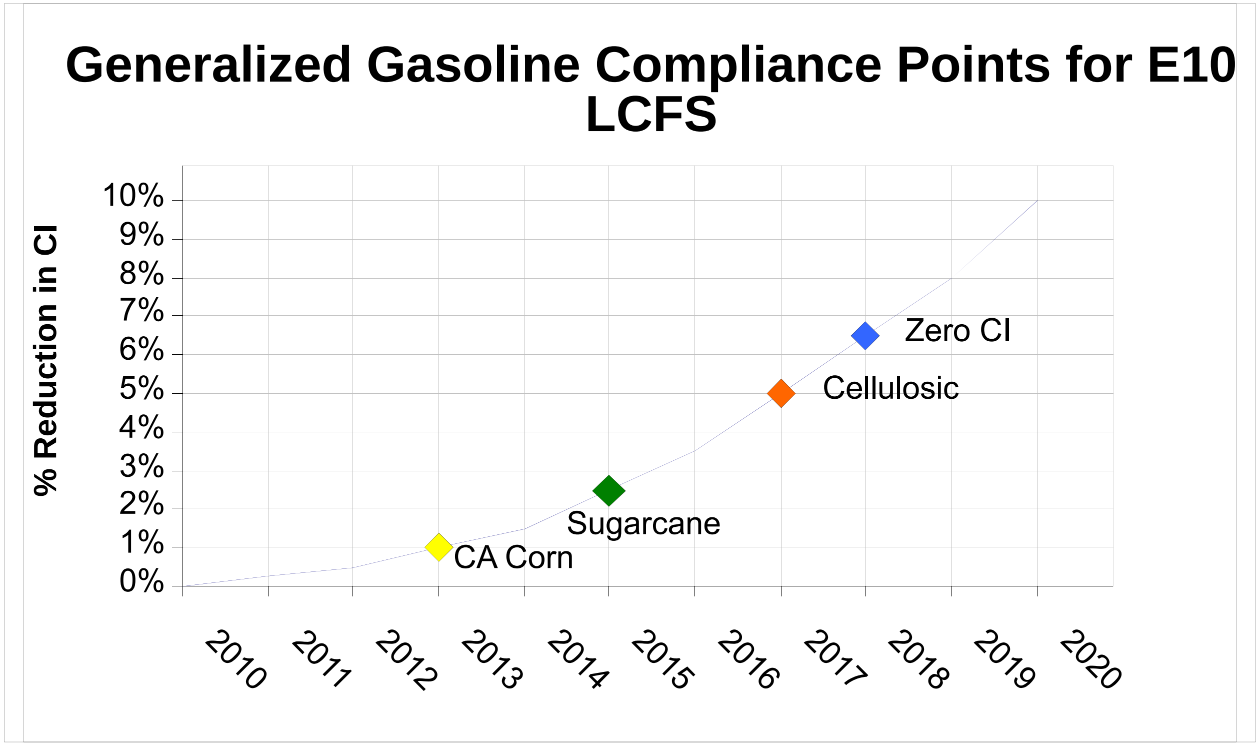
In General, Complementary Policies Should…

- Directly address demonstrated market failures
- Be targeted
- Be transitional
- Not simply raise the price of carbon on a specific source or sector
- Have a clear objective
- Not suffer from mission creep

General Flaws in LCFS

- lack of fuel neutrality
- picking winners
- Unclear objective (emission reductions or innovation?)
- misalignment of obligations, incentives, rewards
- mission creep
- Is infeasible within the 2015/2016 timeframe - because of the lack of availability of fuels

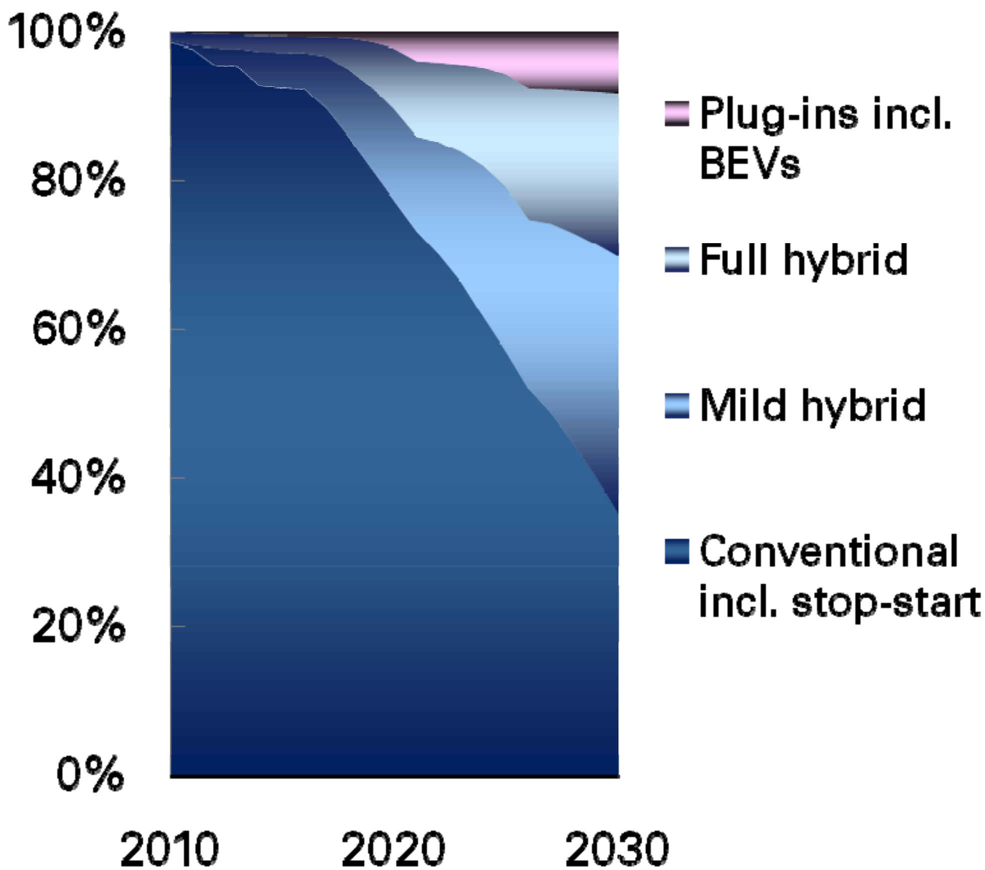
Gasoline Blending – E10



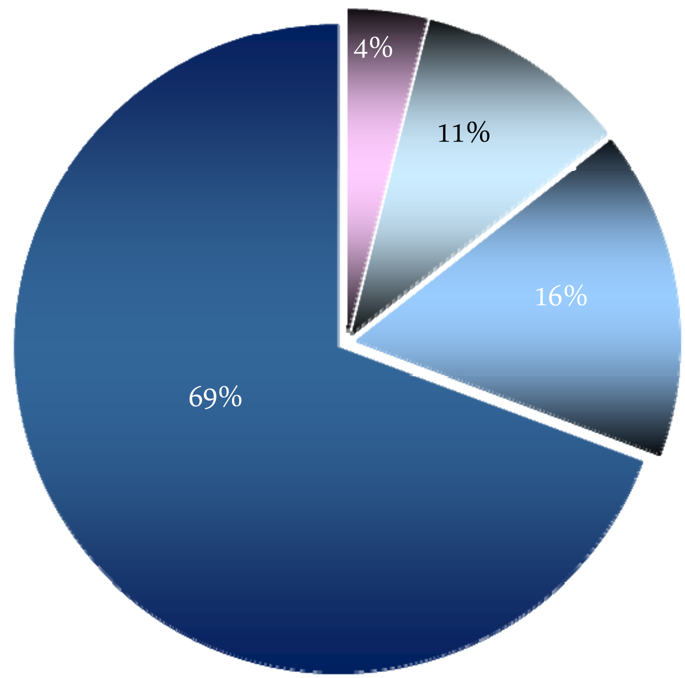
- With a 10% blendwall, the following feedstocks will allow the compliance of the gasoline CI reduction schedule until
  - California Corn 2013
  - Sugarcane 2015
  - Cellulosic 2017
  - Zero CI ethanol 2018
- Approximately 1.5 billion gal/yr is required to achieve a 10% blend.

Policy and technology enable efficiency improvements…

Passenger car sales by type



Global vehicle fleet in 2030



LCFS Impact on Cap and Trade Compliance for Refiners

Take Gasoline Compliance for Example…

- Interaction between the 2 policies is not straight forward – to say the least
- It depends on which pathway is used to comply and how that pathway is used.
- Generally speaking, LCFS compliance has little direct impact on cap and trade compliance
- For compliance with biofuels at a 10% blend (ie E10) – no impact with this scenario – meaning LCFS compliance does not help c/t compliance
- For use of a compliance pathway other than biofuel – even more complex – though LCFS compliance unlikely to provide cap and trade compliance
- Actual overlap may only occur with gasoline displacement above E10
- Increased cost of fuel from LCFS will reduce demand – that <u>will</u> impact Cap and Trade compliance.

Complementary Policy?

- Enhance? Emphasize?
- Because there is little or no overlap, compliance programs are for the most part independent and unrelated.
- This also means impact of these policies on consumers is compounding, not complementary
- LCFS reductions will happen mostly outside the program – ie outside the state, the emissions inventory and the cap.
- In that way, LCFS reductions are like really bad offsets – they happen outside the program but will raise rather than lower the cost of compliance.

LCFS Impact on Cap and Trade from a Practical and Political Perspective…

- The 2015/2016 collision of fuels policies and the cumulative impact on fuels markets could have an enormous impact on compliance and longevity of both programs.
- These policies will also likely has a significant impact on the refining industry in the state.
- Significant regulatory changes will have to occur. The uncertainty over what these changes will be are impacting compliance plans – and investments.
- Stable, predictable, realistic, feasible, sustainable policy is what is needed.

What will the LCFS and Cap and Trade Cost?

LCFS

- CARB says: "*will result in an overall savings in the State, as much as $11 billion from 2010 -2020'" – Staff Report 3/5/09. p. 229*
- *However, CARB now looking to limit price increase – Perhaps to $.30/gal?*
- *BCG says: $0.33 - $1.06 per gallon*
- *CRA says:* excluding complementary policies (including the LCFS) reduces AB 32 program costs by 50%

Cap and Trade for Fuels

- Depends on the cost of allowances
- 9 cents per gallon for every $10 of allowance cost
- So, a $30 allowance price = 27 cents/gal

Concluding Thoughts - LCFS

- The LCFS is unlikely to deliver the emission reductions attributed to it (15 MMT).
- Availability of fuels and vehicles is a problem.
- The LCFS will fail to deliver the emission reductions not because of industry's attempts to fix or replace it – but because it is infeasible.
- Now is the time to acknowledge that and adjust the AB32 program accordingly.

Going forward on fuels

Instead, AB32 should:

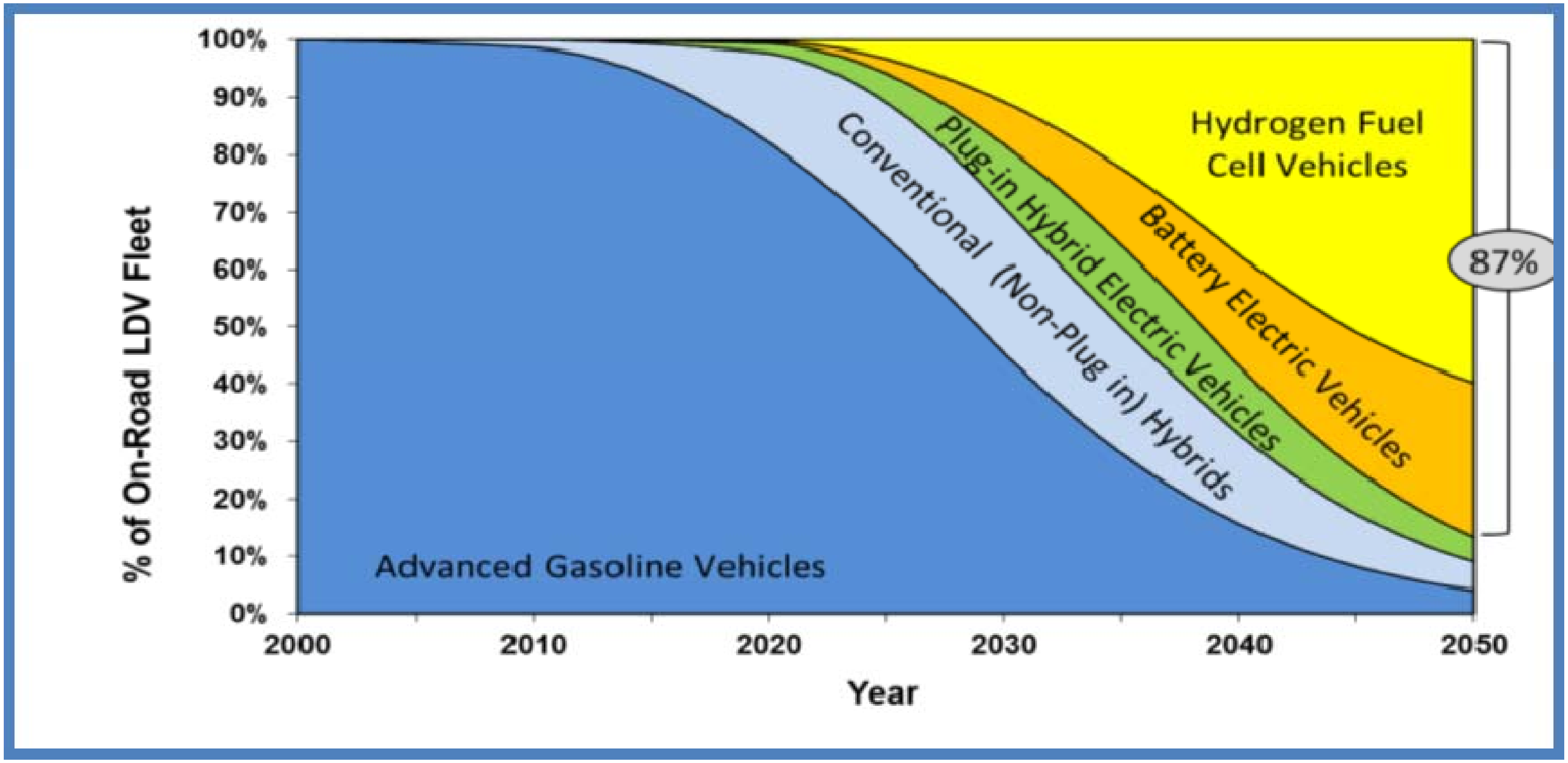
- Let the cap and trade program deliver lowest cost solutions
- Allow the RFS to encourage innovation and deliver reductions in liquid fuels using largely existing infrastructure
- Use other programs to incentivize deployment of non liquid fuels – programs directed at those with a stake in these fuels/vehicles

Concluding Thoughts – Cap and Trade

- Cap and Trade should be the backbone of AB32 – not a backstop
- Policymakers should be sensitive to maintaining support from business and consumers
- Protect participants from trade exposure
- Seek lowest cost solutions - Offsets
- Let the market work: Holding limits, annual surrender, use of vintage, etc
- Avoid market distortions – if Mrs. Smith gets a rebate check for use of her electric stove, Mrs. Jones should get one too for her gas stove – same for electric vs. gasoline vehicle.
- California business and consumers are going to pay a high price in order to satisfy CARB's desire to prescribe which and how emissions are reduced

Thank You!

Nearly all vehicles need to be zero emission by 2050



Source: CARB

Testimony of Alberto Ayala and Richard Corey
Senate Transportation and Housing Committee, March 19, 2013