

U.S. Biofuels Supply in the Annual Energy Outlook



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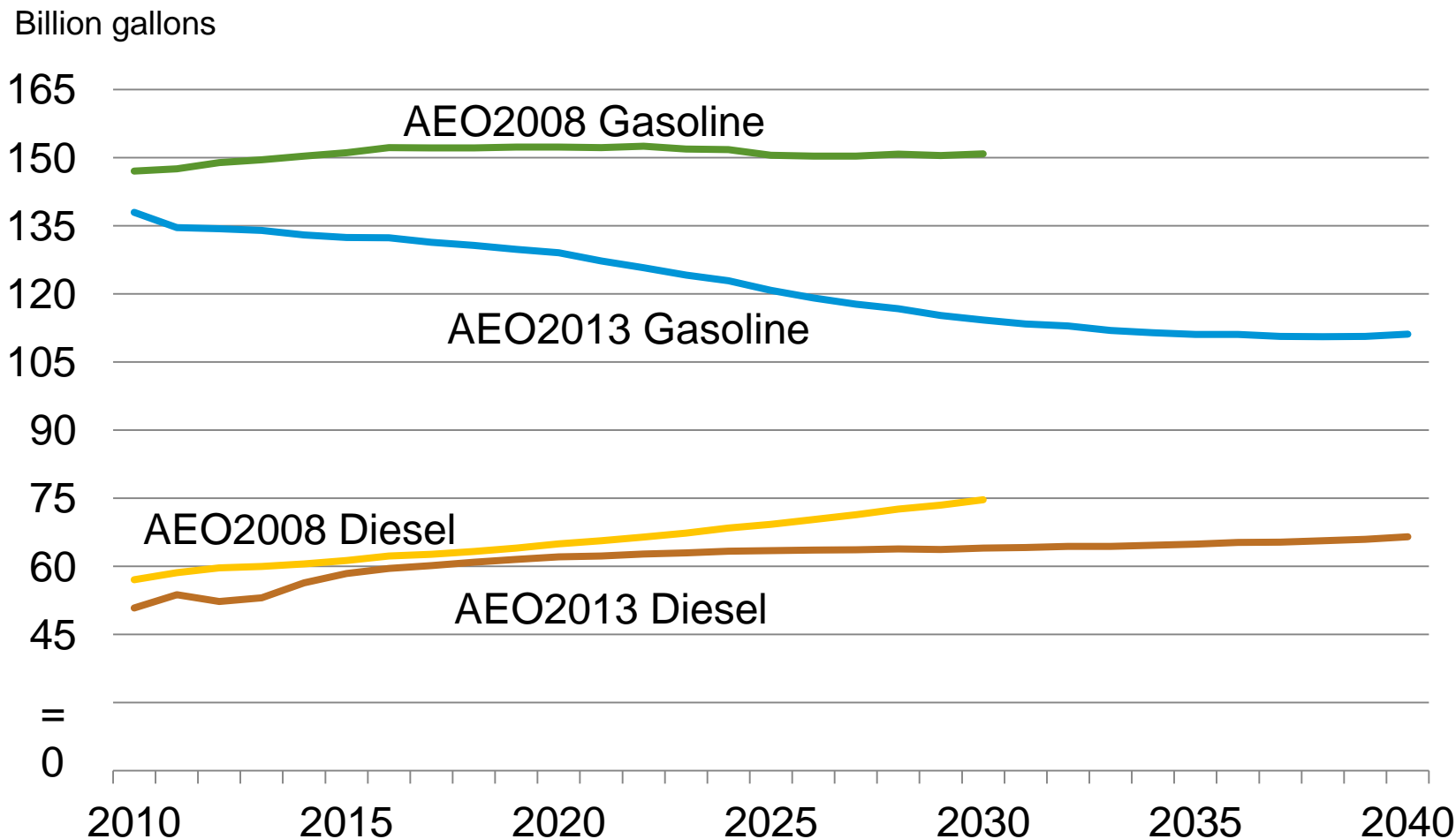
Presentation Outline

- Biofuels regulation
- Projected renewable content of liquid fuels
- NEMS agricultural commodity modeling

The biofuels sector is moving from subsidies to consumption standards.

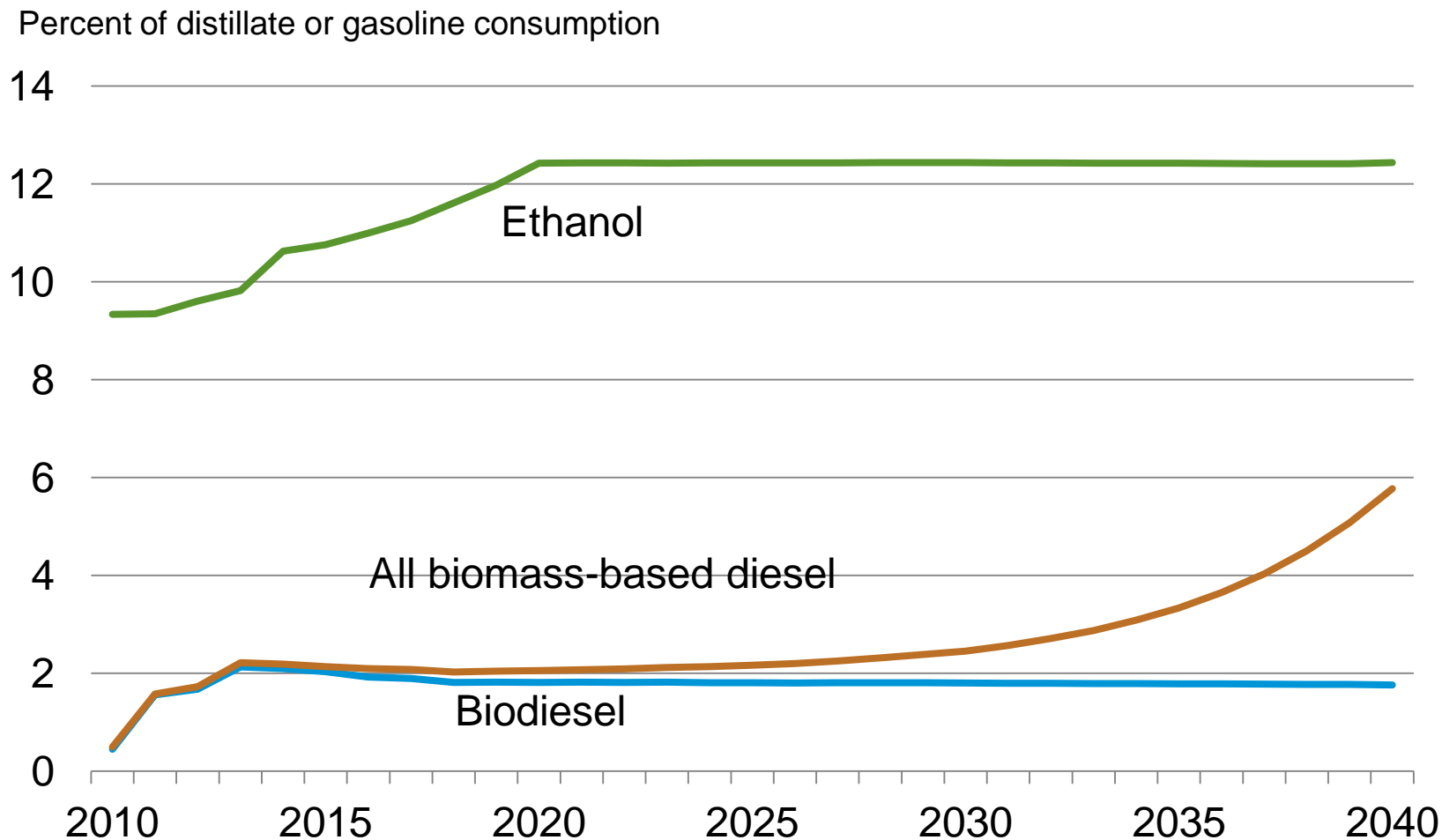
- Three Federal tax incentives expired at the end of 2011
 - Ethanol blending tax credit (45 cents per gallon)
 - Biodiesel blending tax credit (\$1 per gallon)
 - Ethanol import tariff (54 cents per gallon)
- Two incentives were extended at the end 2012
 - The biodiesel credit was reinstated for 2013 and made retroactive to 2012.
 - Cellulosic biofuels tax credit (\$1.01 per gallon) was extended.
- Renewable Fuels Standard
 - Enacted with Energy Policy Act of 2005 (RFS) and expanded by the Energy Independence and Security Act of 2007 (RFS2)
- California enacted its Low Carbon Fuel Standard (LCFS)
 - State policy to reduce greenhouse gas emissions from motor vehicles.
- EPA granted approval in January 2011 for the use of gasoline blended with 15 percent ethanol (E15)

Reduction in the levels of liquid fuels consumption over the last 5 years imply that higher ethanol blends are needed sooner.



Source: Annual Energy Outlook 2008 Reference Case and 2013 Early Release

AEO2013 projects that higher ethanol blends will be marketed. The renewable portion of distillate fuel, however, can expand without major changes to product specifications.



Source: Annual Energy Outlook 2013 Early Release

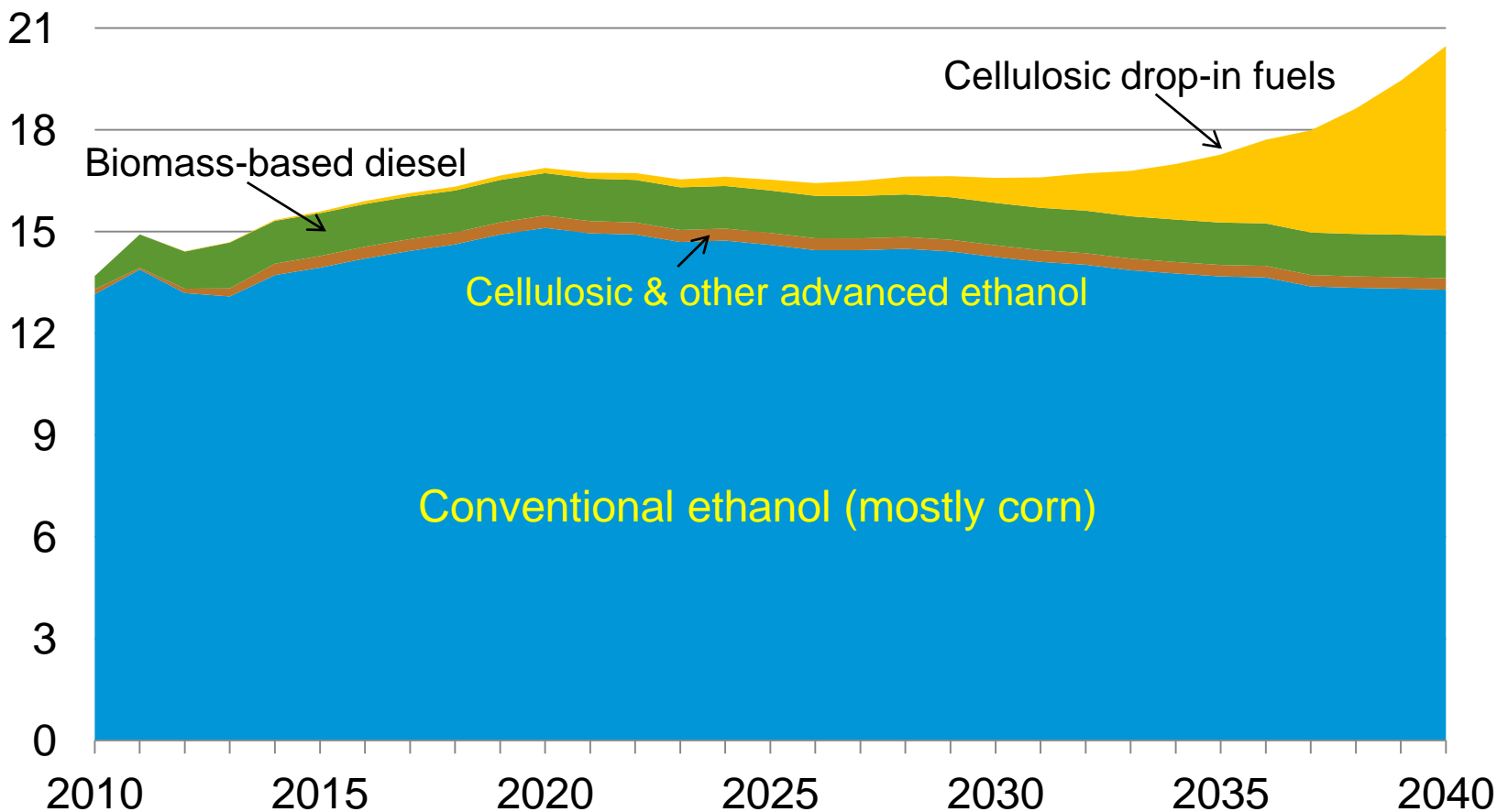
EIA models the supply of agricultural commodities used for energy production.

- Domestic agricultural commodities included in NEMS:
 - Corn for ethanol
 - Soybean oil and other vegetable oils for biomass-based diesel
 - Animal fats for biomass-based diesel
 - Cellulosic biomass for ethanol and drop-in fuels
- Corn, vegetable oil, and animal fats are modeled as exogenous supply curves.
 - Based on the Department of Agriculture baseline
 - Price responses of producers and competing purchasers of each commodity are built into each supply curve
- Cellulosic biomass is endogenous to NEMS.
 - Represents competition for material between electricity generators and the liquid fuels sector
 - Based on the POLYSYS model

Corn ethanol remains the largest component of U.S. biofuels production throughout the AEO2013 projection.

Biofuels production

Billion gallons



Source: Annual Energy Outlook 2013 early release

For more information

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