

California Environmental Protection Agency



Air Resources Board

***Low Carbon Fuel Standard
LUC Workshop***

September 14, 2011

Agenda

- Presentation by Wally Tyner on GTAP model revisions and revised land conversion estimates
- Comments/Questions
- Presentation by Holly Gibbs on carbon stock estimates
- Presentation by Rich Plevin on emission factor model
- Comments/Questions
- Presentation by ARB staff on sensitivity of LUC CI to model structure and parameter changes
- Comments/Questions

Timeline

- September 14 – LUC Workshop
- September 28 – Comments due
- Early October – LUC Workshop
- October 18 – Staff report due to OAL
- October 31 – Staff report released, beginning of 45-day comment period
- December 15 – Board Hearing

Presentations

- Wally Tyner
- Holly Gibbs
- Rich Plevin

Model Revisions – Reviewed by EWG

- Incorporation of cropland pasture in US and Brazil
- Improved treatment of DDGS
- Modified model structure for livestock sector
- Revised productivity ratios for new cropland (TEM)
- Adopt a consistent model version and inputs for all fuel pathways
- Updated energy sector elasticity values

New Model Revisions Under Review

- Update to GTAP 7 database
- Improved treatment of soy meal, oil, and biodiesel
- Endogenous yield adjustment for cropland pasture
- Increased flexibility of crop switching

Additional Modeling Issues Under Review

- More comprehensive/spatially explicit set of EFs
- Revised yield response to price
- Revised demand response to price (reduced food consumption credit)

Sensitivity Results

	Corn	Soy	Sugar
Food constant - developing	+24	+29	+44
Yield-price: 0.25 to 0.10	+32	+36	+25
Crop transformation: -0.75 to -0.5	-4	-16	-26
CP yield adjustment included	-20	-32	-31

- All values are percent changes in carbon intensity
- Sensitivity values are preliminary
- GTAP model and EF model are still under review

Comments

- Submit comments by September 28, 2011
- Where possible, please include reference to published studies and data in your comments
- Please separate comments into two categories:
 - Those related to these short-term model revisions
 - Those related to longer-term modeling changes

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Thank You