



**KENTUCKY STATE CLIMATE ACTION PLAN
TRANSPORTATION AND LAND USE
TECHNICAL WORKING GROUP
DRAFT Summary of TLU TWG Teleconference #11
November 18th, 2010**

Attendance List

(See end of document)

Background documents:

(All posted at <http://kyclimatechange.us/TLU.cfm>)

- Meeting Notice and Agenda for Call #11
 - PowerPoint Presentation for Teleconference #11
 - KY TLU Call 10 Meeting Summary - *DRAFT*
 - KY TLU Updated POD
 - Final TLU Analysis Methods Memorandum
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Discussion items and key issues:

This was the eleventh conference call of the TLU TWG.

1. Lewison Lem called the meeting to order. Judy Mueller completed the roll call. Lewison Lem reviewed the agenda and goals of the meeting, stating that the main agenda item is to review the quantitative analyses conducted on TLU policy options TLU-1, TLU-3A, TLU-3B/4, TLU-5, TLU-7, TLU-8, TLU-9 and TLU-11.

Henry Jackson mentioned that an informal group is coming up with draft changes for the TLU combined section and asked if this could be reviewed. Jesse Mayes replied that more revision should be done first, and that the TLU 2 and TLU 6 groups have met with Millie Ellis and John Lyons and talked about cleaning up discrepancies and adding omissions. A finished document is not yet available. Lewison Lem suggested that it be included in the agenda for the next meeting.

2. Judy Mueller began discussion of TLU-7, Parking Management and Ride Sharing. The goal of this strategy is to boost the number of carpool and vanpool participants by 75 percent by 2030 from the 2005 baseline. The EPA COMMUTER Model was used and analysis was performed on individual cities in Kentucky. The results of each quantification factor can be found in the Summary Table of Results on page 47 of the POD. Summary results for the TLU options also appear on the first page of the POD. In the year 2020 the analysis estimates a GHG reduction of .204 million metric tons of carbon dioxide

equivalent (MMtCO₂e), and a .345 (MMtCO₂e) reduction in 2030. Overall the cumulative emission reductions from 2011 to 2030 are 4.032 (MMtCO₂e). The net present value is a savings of \$2,327 million and the cost effectiveness per ton is \$554 saved per ton. The energy savings from 2011 to 2030 are 335 million gallons of fuel.

Geoffrey Hobin asked about net present value and asked for clarification on the units. Judy Mueller stated that \$2,327 million would be saved from 2011 to 2030. Lewison Lem said that the cost savings come from less fuel being used and well as savings on vehicle operating costs. The negative value of the numbers in the summary table indicates savings in the form of a negative net cost. In response to a question about what the increase in ridership by 2020 would be, Lewison Lem commented that a linear ramp-up occurred so it would be roughly half, or 37.5 percent above the 2005 baseline. Trips reduced through carpooling were assumed to be taken away from single occupancy vehicles, but not from transit.

Geoffrey Hobin asked why 2005 vehicle operating cost numbers were used when AAA has published 2009 numbers. He stated that the vehicle operating cost per mile is greater in 2009 than 2005. Lewison Lem replied that consistency and standardization were important factors in the analysis and some data points couldn't be found past 2005. Jesse Mayes asked what differences would occur with 2005 dollars being used. Lewison Lem replied that 2005 dollars can be adjusted to later years with relative ease. Rami Chami of Jack Faucett Associates said the most recent available data was used but 2005 was chosen as a unit of measurement for the analysis team.

There were no additional questions or comments regarding TLU-7.

3. Judy Mueller began discussion of TLU-1, Bike and Pedestrian Comprehensive Plan and Infrastructure Development. The goal for analysis was to increase walking and bike to 1 percent of person miles traveled in 2020 and 1.5% percent by 2030. The EPA Commuter model was used to complete the analysis of TLU-1. The quantification results can be found in the summary table on page 16 of the POD. In the year 2020 the analysis estimates GHG reductions of .055 (MMtCO₂e) and a .087 (MMtCO₂e) reduction in 2030. The overall cumulative emission reduction from 2011 to 2030 amounts to 1.049 (MMtCO₂e). The net present value is negative \$618 million and the cost effectiveness per ton is negative \$1,118. The energy savings from 2011 to 2030 are 87 million gallons of fuel.

Judy Mueller explained that this analysis included fuel savings and vehicle operating costs and program administration costs are comparatively low. Michael Bomford questioned how effective the program would be given an annual per city program administration budget of \$2,600. Michael Bomford and Judy Mueller will work to find local cost estimates of Bike and Pedestrian programs.

There were no additional questions or comments regarding TLU-1.

4. Rami Chami began discussion of TLU-3B/4, Transit Management and Infrastructure. The goal was to increase ridership, measured by transit passenger miles, by 100% against the 2010 baseline by 2020 and 150% against the baseline by 2030. The analysis measured displaced emissions from transit provision as recommended by the American Public Transportation Association. The JFA developed TARGET (Transit Associated Reduced Greenhouse Gas Emissions Tool) program was used for the analysis. Passenger revenue mile estimates were taken from the National Transit Database that is maintained by the Federal transit Administration. Quantification summaries can be found on page 37 of the POD. The

analysis predicts a 1.51 MMtCO₂e reduction in greenhouse gases between 2011 and 2030, a net present value cost of \$24 million (due to high capital costs of building and expanding transit systems), a cost-effectiveness of \$17 per ton of carbon dioxide, and an energy savings of 171 million gallons of fuel. The summary table can be found on page 37 of the POD.

Geoffrey Hobin asked if cost values associated with public transit had similar characteristics in other parts of the country. Lewison Lem replied that transit systems do not “pay for themselves” as readily as other strategies but enjoy a range of co-benefits. Geoffrey Hobin also asked what differences in the analysis would occur if, rather than using Cambridge Systematics’ numbers in the Moving Cooler report, the Urban Land Institute’s Growing Cooler report data and assumptions were used. The Growing Cooler report has cost-benefit ratios that are different from those in the Moving Cooler report. Lewison Lem replied that the two reports overlap in certain areas, particularly in the land use strategies. Henry Jackson asked about the goal to reduce VMT by 20 percent on page 33 of the POD and how that was determined. Lewison Lem replied that the language referred to an overall VMT goal across multiple strategies that were reconciled for the stand alone transit analysis. Geoffrey Hobin commented that the analysis starts at low levels and ridership increases reflect historic levels. Henry Jackson recommended standardizing VMT reduction goals across strategies and providing reference for the POD language. Lewison Lem explained that currently stand-alone analysis of each policy is being performed and a later integrated analysis should reconcile differing VMT and other goals.

There were no additional questions or comments regarding TLU-3B/4.

5. Rami Chami began discussion of TLU-3A, Transportation System Management. TSM aims to improve the flow of traffic through intelligent traffic systems (ITS), traffic light synchronization, and traffic calming measures such as traffic circles and islands. The goal was to reduce light vehicle VMT by 3.05% by 2030 using guidance from the U.S. DOT’s “Transportation’s Role in Reducing U.S. Greenhouse Gas Emissions” report. A ten year ramp-up was applied and calibrated to the Kentucky Inventory’s VMT estimate. The analysis estimates a 5.32 MMtCO₂e reduction by 2030, a net present cost value of negative \$1.07 billion, a cost effectiveness of negative \$201 per ton of carbon dioxide equivalent, and an energy savings of 604 million gallons of fuel. The Summary Table can be found on page 31 of the POD.

Geoffrey Hobin asked about the capital costs involved with TSM measures. Rami Chami replied that capital cost estimates came from an annual average of ITS project costs in the Kentucky budget between 2001 and 2007. Expected fuel savings and vehicle operations savings were also considered. In response to a question about realized savings on existing investments, Rami Chami said that no examples specific to Kentucky had been found. Jesse Mayes mentioned that TRIMARC and ARTIMIS have performed analyses on their systems and will provide these studies.

Michael Bomford asked how the stated goal of reducing VMT per capita by between 10 and 15 percent by 2030 through TSM policies becomes only a 3.05 percent emissions reduction by 2020. Rami Chami replied that the DOT report found that improvements in efficiency could reduce emissions by 3 to 6 percent from business as usual. Policies to reduce speed limits were factored out and a value of 3.05 percent potential reduction in GHG emissions from TSM strategies was developed. Lewison Lem added that the 3.05 percent emission reduction was calculated as part of the stand-alone TLU-3A policy and that the 6 percent reduction figure could be a goal for an integrated set of VMT reduction policies. Michael Bomford pointed out that the estimated GHG emission savings from the strategy are small compared to

the nearly 100 percent projected increase in VMT between 2010 and 2030. Lewison Lem commented that members are welcome to consider an overall VMT reduction for later consideration and emphasized that these policies are standalone scenario-based estimates.

There were no additional questions or comments regarding TLU-3A.

6. Scott Williamson reviewed TLU-10: Promoting the Use of Alternative Transportation Fuels, which was discussed during the tenth TLU TWG meeting.

Michelle King asked if the goal is too conservative seeing as business as usual will achieve almost the same thing. Scott Williamson replied that the strategy had been designed by the TWG to change fuel but not vehicle type. Scott Williamson also responded that the VISION tool assumes that most of the state is currently using E-10. Michelle King commented that more widespread use of E-10 beyond northern Kentucky could be included in the goals of TLU-10. Scott Williamson, Jesse Mayes, Michelle King and Kristina Anderson of the Kentucky Energy and Environment Cabinet will investigate the possibility of altering the target ceiling. Jesse Mayes commented that Kentucky Governor Steve Beshear's 2008 energy plan is the source of much of the policy language and that the gasoline standards in Louisville and northern Kentucky might be different from the rest of the state.

7. Scott Williamson began discussion of TLU-11: Promoting the Use of Clean Light Duty Vehicles. The goal of this policy option is to increase the average fuel efficiency of Kentucky's new-vehicle fleet by 12 percent to 25 percent by 2025 over and above the projected fuel efficiencies of the federal 2016 CAFE standards. The analysis chose a midpoint of the 12% to 25% range - an 18 percent efficiency increase - and extended the analysis five years to 2030. Like TLU-10, the VISION model was used for quantification. The analysis predicted a cumulative 37.79 MMtCO₂e reduction in greenhouse gases, a net cost of negative \$4.486 billion, a cost-effectiveness of negative \$102.54 per ton of carbon dioxide, and a total gas and diesel reduction of 2.809 billion gallons. The summary table for TLU-11 can be found on page 82 of the POD.

Michelle King asked why the policy option only covers the light duty fleet. Scott Williamson replied that TLU-8 has many incentives for heavy duty and diesel freight. Michelle asked if some of the diesel mechanism language in TLU-11 should be relocated to TLU-8. Judy Mueller will investigate this possibility.

There were no additional questions or concerns regarding TLU-11.

8. Scott Williamson began discussion of TLU-8, GHG-Efficient Heavy Freight Movement. The main goal is a statewide 10 percent reduction in fleet emissions by formulating anti-idling measures, improving efficiency, taking advantage of programs such as SmartWay, and other measures. The VISION model was used for TLU-8. The summary results for TLU-8 can be found on pages 55 and 56 of the POD.

Michelle King asked if there will be any mention of black carbon in the discussion of diesel use. Lewison Lem replied that language could be added and mentioned that it could be classified as an additional benefit.

There were no additional questions or concerns regarding TLU-8.

9. Scott Williamson began discussion of TLU-9, Consumption of Locally Produced Goods and Services. The main goal of this policy option is to reduce heavy duty freight VMT by 5% of projected VMT by 2025. The analysis team extended the period of analysis to 2030 in order to maintain consistency. The analysis for TLU-9 also utilized the VISION model. The analysis predicts a 0.55 MMtCO₂e GHG reduction and \$147 million in fuel cost savings in 2030. The summary results table for TLU-9 can be found on page 70 of the POD.

In response to a TWG member comment, Scott Williamson will revise the policy language to include total savings.

There were no additional questions or comments regarding TLU-9.

10. Lewison Lem asked the TWG if they had any additional questions. Michelle King asked if hyperlinks could be included at the top of the POD so viewers could skip straight to specific policy options. Lewison Lem replied that this possibility will be investigated.

There were no additional questions or comments.

11. Lewison Lem discussed the next steps of the TWG process. The analysis team will modify the POD language as suggested above. The team will also add up the effects of each stand alone policy to ascertain the cumulative effects of the integrated policy options.

12. There were no public comments. Lewison Lem thanked the TWG members for their participation and adjourned the call.

Attendance:

NAME	Organization	Call 11
CAC Members		November 18th 2010
Jose Sepulveda	Federal Highway Administration (US DOT)	
Jim Newberry	LFUCG	XX
Elaine Walker	Bowling Green, Government	
TWG Members		
Bernadette Dupont	USDOT Federal Highway Administration	
Susan Lambert	Earthworks	
Jesse Mayes	KYTC	XX
Max Conyers	Lexington Area Municipal Planning Organization	
Michelle King	Louisville Metro Air Pollution Control District	XX
Andy Reser	Municipal Planning Organization, Cincinnati Area	XX
Greg Pritchett	Henderson Riverport	
Geoff Hobin	TARC (Louisville Metro Public Transit)	XX
Scott Render	Bike Louisville	
Terri Sicking	Ashland MPO	
Henry Jackson	LexCoolCity.org	XX
Jamie Fiepke	Kentucky Motor Transport Association	
Michael Bomford	Walk Bike Frankfort	XX
Shane Corbin	Louisville Metro Air Pollution Control District	XX
Tom Webb	LFUCG	XX
Agency Liaisons		
John Lyons	DAQ	XX
Millie Ellis	DAQ	XX
Transportation Cabinet		
David Waldner	KYTC	
Vickie Bourne	KYTC	
Seconds		
Christa Turner	KYTC	XX
James Bush	LFUCG	
Charles Schaub	Lexington Area Municipal Planning Organization	
Dirk Gowin	Bike Louisville	

Additional Participants:

Lewison Lem

Scott Williamson

Rami Chami

Judy Mueller

Mike Brooks

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