



The Transition to & Implementation of MOVES

Introduction

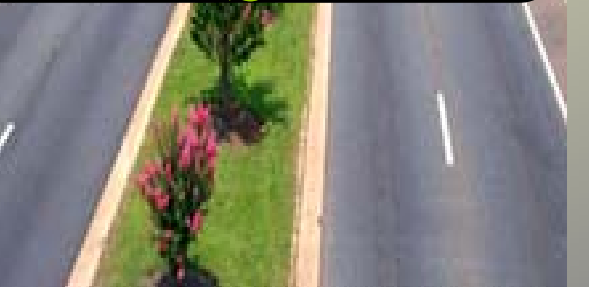
TDOT's Proposal

Work Completed

In Progress


What's "HOT"

Questions ?



THE MOVES TRANSITION MADE EASY... ...THE TDOT WAY





*The Transition to &
Implementation of MOVES*



Introduction

TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



INTRODUCTION

MOtor Vehicle Emission Simulator

- Estimates emissions for mobile sources
- MOVES 2010 released in December 2009
- March 2, 2012 original deadline for conformity determinations to begin using MOVES



*The Transition to &
Implementation of MOVES*

Introduction

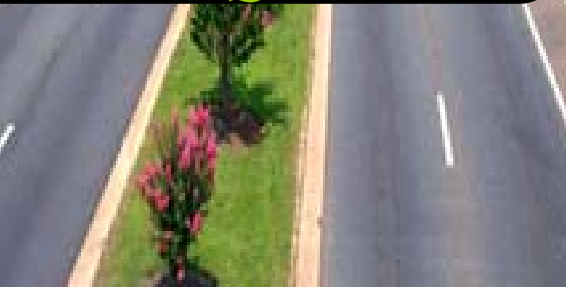
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



GRACE PERIOD

- Several state and local agencies requested additional time to transition to MOVES for their regional conformity analysis.
- The main reasons cited were the significant software, operational, and technical differences between MOVES and MOBILE 6.
- The final rule was announced February 27, 2012 and signed March 8, 2012 by Administrator Lisa P. Jackson.
- Original Grace Period was extended one year to March 2, 2013.



The Transition to & Implementation of MOVES

Introduction

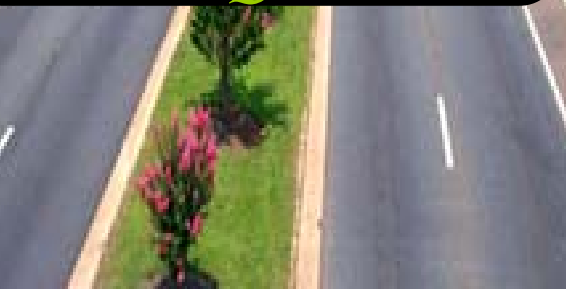
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



*MOVES 2010**

- Incorporates new car and truck greenhouse gas emission standards affecting model years 2012 and newer.
- Includes the effects of corporate average fuel economy standards affecting model years 2008-2011.
- Reduces refueling and sulfur-related emissions associated with the reductions in vehicle fuel consumption
- Improves algorithm for brakewear and tirewear so emissions are always zero at idle.
- Improved error checking in MOVES importers
- 2010b



The Transition to & Implementation of MOVES

Introduction
TDOT's Proposal

Work Completed

In Progress

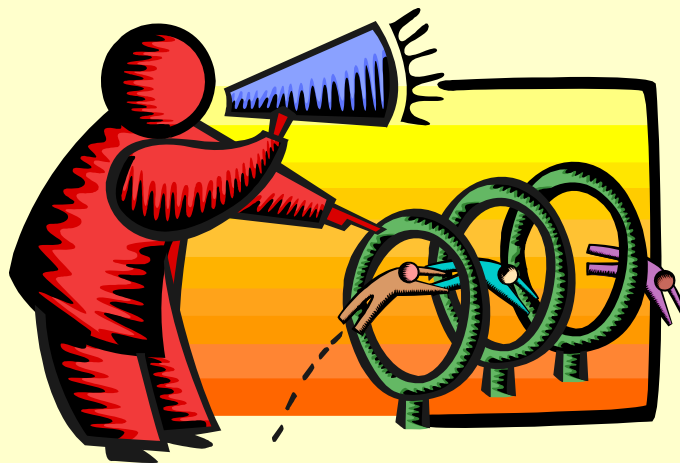
What's "HOT"

Questions ?



REALIZATION OF A DEMANDING TRANSITION

- Increased staff time
- Technical expertise
- Additional financial resources



- Set aside planning funds that are typically allocated to MPOs in non-attainment areas.

The Transition to & Implementation of MOVES

Introduction

TDOT's Proposal

Work Completed

In Progress

What's "HOT"

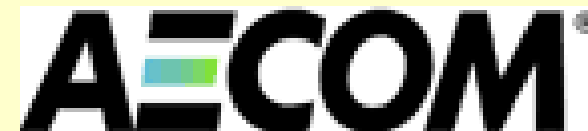
Questions ?

OBTAINING ASSISTANCE



- Acquire and prepare Data

- Transition and Implementation Plan



- Data Collection, analysis, and formatting



*The Transition to &
Implementation of MOVES*

Introduction

TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



DEVELOPING THE PLAN

- Organization and Exploration
 - Air quality status
 - Policies
 - Procedures

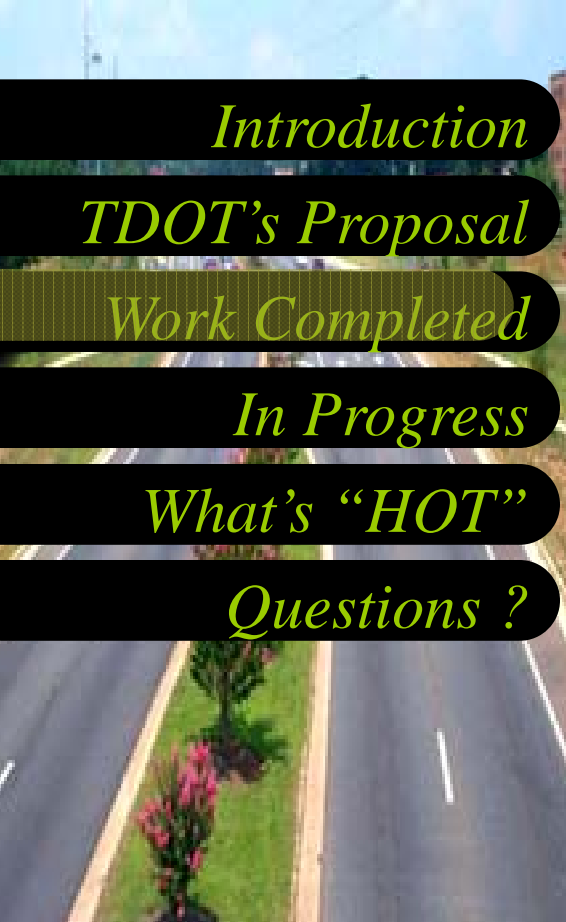
- Inventory and Evaluation
 - Bristol, Chattanooga, Clarksville, Johnson City, Kingsport, Knoxville, Memphis, and Nashville
 - TDEC, UTK, and TDOT

- Develop Strategic Plan

- Implement Strategic Plan



*The Transition to &
Implementation of MOVES*



Introduction

TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?

INTERVIEW RESULTS

Travel Demand Model Updates

MPO/TPO	Time-of -Day Sub-model Needed?	Truck Sub-model Needed?
Bristol	Yes	Yes
Chattanooga	Yes	Yes
Clarksville	Yes	Yes
Johnson City	Yes	Yes
Kingsport	Yes	No
Knoxville	No	No
Memphis	No	No
Nashville	No	No



*The Transition to &
Implementation of MOVES*



Introduction

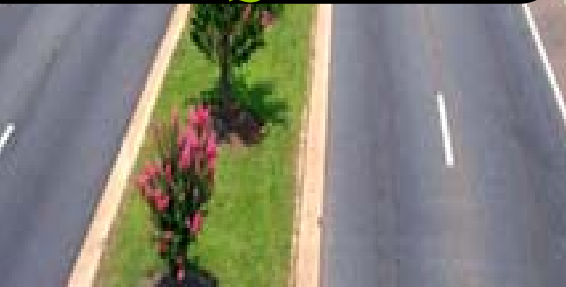
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



IMPLEMENTATION PLAN STATUS

- Validation of the Bristol and Johnson City travel demand models
- Revision of the Clarksville and Kingsport travel demand models
- The Knoxville prototypical post-processor is 95% complete
- Review of all data collected to date
- Conducted the meetings for the Core and Policy Groups

DATA ACQUISITION & DEVELOPMENT

UTK developed MOVES input activity for each of the 95 counties in the state.

- Source Type Population – 13 vehicle types
- Age Distribution – Older vehicles generally have higher emissions
- Vehicle Type VMT – Monthly and Daily VMT by vehicle class and road type
- Road Type Distribution - Fraction of VMT by the four road types

The Transition to & Implementation of MOVES

Introduction

TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



*The Transition to &
Implementation of MOVES*

Introduction

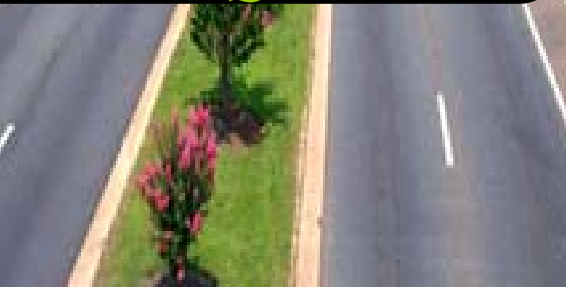
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



DATA ACQUISITION & DEVELOPMENT

- Fuel Formulation and Supply – data was developed for 2012
- Meteorology – submitted to the IAC for comments
- Inspection and Maintenance (I/M) Programs – Available for Nashville MPO and Hamilton County





*The Transition to &
Implementation of MOVES*



Introduction

TDOT's Proposal



Work Completed



In Progress



What's "HOT"



Questions ?

WHAT'S NOT HOT

- TDOT will need to develop Hourly VMT data for the non-modeled counties outside of a MPO or TPO.
- FHWA and EPA requirements for vehicle types are not the same. EPA vehicle type classification is based on vehicle use while FHWA based on number of axels.
- TDOT staff resources are stretched. No in-house capabilities for providing technical assistance for MOVES
- County level vehicle mix data collection method needs to be updated.



The Transition to & Implementation of MOVES

Introduction

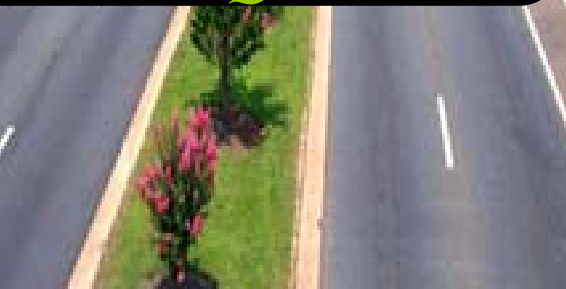
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



NEXT STEPS

- Perform a MOVES model run for the base year and one future year condition using the Knoxville test post-processor.
- The results will be made available to all.
- Research option to obtain post processing license (one for each interested MPO) which would include technical assistance.
- Start SIP Revisions
- Revise Emissions Budgets.



*The Transition to &
Implementation of MOVES*



Introduction

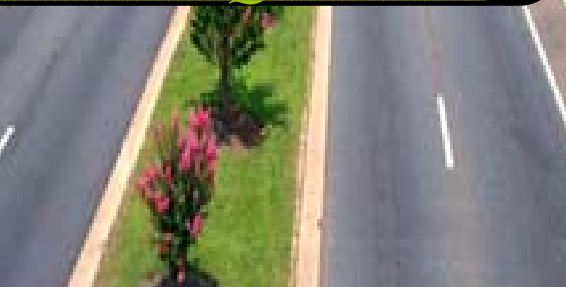
TDOT's Proposal

Work Completed

In Progress

What's "HOT"

Questions ?



QUESTIONS



Contact Information

Terrance Hill

Special Projects Coordinator

University of Tennessee (TDOT)

Email: Terrance.Hill@tn.gov

Phone: (615) 532-5824