

VMT Offset Tool for use with MOVES4

Introduction

The tool allows modelers to perform two of the calculations described in [the VMT Offset Demonstration guidance](#). As discussed in this guidance, these calculations “freeze” control measures in place as they existed in the 2011 base year for the 2008 ozone NAAQS, and either assume that there is growth in VMT through the attainment year, 2026, or there is no growth in VMT through the attainment year. Results of these calculations do not include the effects of post-2011 emission controls (e.g., Tier 3).

Installation

To install this tool, first locate your MariaDB data directory. You may have a shortcut to this directory on your desktop. If you installed MOVES4 with all the default options, your MariaDB data directory is likely C:\ProgramData\MariaDB\MariaDB X\data (where X is MariaDB’s version number).

If you do not know where your MariaDB data directory is, follow these steps to find it:

1. Open HeidiSQL
2. Select the MOVES Connection and click Open¹
3. Type the following command in a blank Query Tab (Ctrl+T if you need to make a new one) and execute the statement (F9) to display the location of your data directory:

```
show variables like 'datadir';
```

Once you know the location of your data directory, copy the **movesdb20230615_vmtoffset** folder from the downloaded ZIP file to the data directory.

Instructions for Use

To use this tool, follow the steps below. Note that the order is important, as the tool must be specified before creating the input database or running the model.

1. Open MOVES4
2. In the Settings dropdown menu, select Configure MOVES...
 - Note which default database is currently selected, so you can restore the selection later.
3. Select **movesdb20230615_vmtoffset** in the drop-down list and click OK.
 - If the database is not displaying in the list, you may need to restart MOVES
 - If it is still not displaying, confirm that you copied the database folder to the correct directory
4. Fill out the RunSpec and create the input database as you would to model onroad emissions in the area’s attainment year (2026) and following all of the applicable guidance
5. Run MOVES
6. Check the *movesrun* table in your output database. The *defaultDatabaseUsed* column should contain **movesdb20230615_vmtoffset**, indicating that this tool was used during the run.
7. When you are done using the tool, open Settings > Configure MOVES..., select the original default database, and click OK. This will ensure the tool is not used for subsequent runs.

¹ Note: If you do not have a “MOVES Connection” option, follow the steps in the Quick Start Guide to Accessing MariaDB Data for creating a new connection. Specifically, Section 3 describes how to collect and enter the data for connecting to MariaDB. While this section relates to MySQL Workbench, the connection details are identical between MariaDB and MySQL, and so they can be applied using either program.