

[10.1016/j.scitotenv.2016.02.035](https://doi.org/10.1016/j.scitotenv.2016.02.035)Title:

Review of Tools for Energy Use and Greenhouse Gas Reduction Applicable to Small- and Medium-Sized Communities

*Abstract* (750 word maximum, pasted directly into online form):

There has been considerable attention given to the variety of options to assess and reduce transportation energy use and greenhouse gas emissions in large cities. This presentation reviews the availability of tools to assess and reduce transportation energy use and greenhouse gas emissions in small- and medium-sized communities. Select tools will be discussed in terms of both their utility and any barriers there are to using these tools in small communities with limited resources. Examples of barriers may include a lack of detailed survey data to use for inputs to a model or a need for staff time or expertise that might not be available. The assessment tools discussed include generic tools that were created to be broadly applicable to a range of communities across the nation, tools that must be tailored to the individual communities where they are employed, and additional resources such as organizations and networks that may be turned to for data and expertise. Strategies for mitigating transportation energy use fall into the general categories of use of alternative fuel sources, including electrification, changing vehicle technologies and fleet turnover to new technologies, altering transportation infrastructure and the management of traffic on that infrastructure, and managing demand for motorized transportation (for example, motivating people to use travel modes other than personal automobiles). Many of the tools we present will be linked to one or more of these specific mitigation options. These strategies can be deployed to reduce energy use and emissions from local government operations as well as from an entire community. The presentation will include informal audience surveys designed to gage the particular transportation-energy-related priorities and challenges faced by agencies in attendance. This input will be used to help guide the discussion. To the extent feasible, we will also engage participants in a discussion of what strategies small- and medium-sized communities may or may not be considering, their awareness of and familiarity with tools that support assessment of those strategies, and any feedback on our classification of the tools that we have reviewed.

*Topic* (from drop-down list):

Sustainability & Resilience (from drop-down list on submittal site)

*Is this abstract directly applicable to small and medium-sized communities?:*

Yes.

*Are you interested in presenting your topic in an innovative and/or interactive manner?:*

Yes.

*Have you submitted this work elsewhere for presentation/publication?:*

No.

*Are you a student interested in submitting this work in the student paper competition?:*

No.

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