Using the Tracking and Analysis Framework (TAF) in the Electricity Sector

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Abstract

The Tracking and Analysis Framework (TAF) is an integrated assessment software model developed on behalf of the National Acid Precipitation Assessment Program (NAPAP). The model links changes in behavior in the electricity sector to environmental and public health consequences. Emissions that are fully modeled include sulfur dioxide and nitrogen oxide, along with formation of secondary particulates. Endpoints that are modeled include public health, changes in lake acidity in the Adirondacks, and visibility changes in a subset of locations. Each module is based on a peer-reviewed full-form model and the integrated assessment model itself was peer-reviewed in a process run by Oak Ridge National Laboratory. Effects are aggregated at the state level. Monetary values of these changes are calculated based on estimates from the economic literature. The model has an open architecture that invites the development of additional modules. The model is built in the Analytica software, which offers a graphical user interface with influence diagrams that promotes collaborative efforts. The model supports Monte Carlo uncertainty analysis.