AB 617 Community Planning Emission Inventory: Key Elements

This document discusses the key elements of an AB 617 base year community planning emission inventory.

Emission Sources

A community planning emission inventory should include **all** stationary (point sources and aggregated area sources), areawide, and mobile sources that occur within the boundary of the selected community. All district-permitted sources within the community boundary should be included in the base year planning emission inventory.

Base Year

For first year AB 617 communities, the base year emission inventory should be developed based on 2017 activity and emissions data, when possible and available. In situations where a base year inventory includes different years for the emission source categories, application of growth and control surrogates to bring all emission categories to a common year is recommended. This is to ensure that the base year planning inventory can be used for emissions forecasting.

Pollutants

The base-year community inventory must include all criteria pollutants and toxic air contaminants in the AB 617 community. In order to ensure correct speciation of air toxic emissions, the following criteria pollutants must be included: 1) Total Organic Gases (TOG) in tons per year (tpy) and 2) Total Particulate Matter* (PM, tpy); particulate matter 10 micrometers less in diameter (PM10, tpy); or particulate matter 2.5 micrometers or less in diameter (PM2.5, tpy). In addition to the above criteria pollutants, stationary point sources must also include Lead (Pb) and Ammonia (NH_3) in pounds per year.

Toxic pollutant emissions from processes, devices or facility activities listed in Appendix D of the AB2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines[1] must be measured in accordance with the CARB-approved testing methods specified therein. Other pollutant emissions can be quantified using other appropriate methods, which may include using CARB chemical speciation profiles found at: https://www.arb.ca.gov/ei/speciate/speciate.htm, emission factors, material mass balance, or other comparable methods approved by an air district. When available, actual measured toxic pollutant emissions are preferred over speciated toxic emissions.

The methods used to estimate criteria pollutants and air toxics emissions must be documented and transparent.

Data Fidelity

Stationary Point Sources: Information consistent with submittal to CEIDARS (at EIC or SIC/SCC) must be included in a community emission inventory for all permitted facilities within a community boundary.

[1]AB2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines, Appendix D, Source Testing: Summary of Requirements for Measurements and Alternatives. https://www.arb.ca.gov/ab2588/2588guid.htm

Areawide Sources: Emissions must be inventoried by Emission Inventory Code (EIC). Documentation of the areawide source emissions inventory methodology must also be provided, as well as, supporting spatial surrogates for allocation of areawide source emissions within the community boundary.

Stationary-Areawide Reconciliation: Stationary and areawide sources should be reconciled in a community emission inventory to avoid double counting of emissions. Both unreconciled and unreconciled inventory should be developed.

On-road Mobile Sources: Vehicle activity and emissions occurring within the community should be inventoried at a granular scale. CARB has developed a spatial analysis method that allocates vehicle activity data to all roads in a community to estimate emissions. CARB staff are available to both develop on-road mobile inventory for AB 617 communities, and/or work with the air districts on their methodology for a community-scale on-road vehicle inventory. All on-road mobile emissions must be inventoried by EIC and include documentation. If an alternative method is chosen other than the CARB method, complete documentation must be provided.

Off-road Mobile Sources: CARB staff are available to both develop off-road emission inventory for the AB 617 communities and/or work with the air districts on their methodology for a community-scale off-road inventory. All off-road source emissions must be inventoried by EIC. Documentation for the off-road mobile methodology, including supporting spatial surrogates for allocation of off-road mobile emissions within the community boundary should be developed.

Documentation of Community Inventory

The community inventory elements discussed above should be well documented and included as part of the base year inventory for each AB 617 community. Documentation should include methods, results, uncertainties, existing data gaps, and future plans and schedule for improving the community-scale inventory.