Greenhouse Gas (GHG) Transit Inputs Documentation

This document will be used by California Air Resources Board (CARB) staff to confirm the user-inputs in the Transit Inputs tab of the Affordable Housing and Sustainable Communities (AHSC) Benefits Calculator Tool. Transit agencies must provide all information requested below for each proposed transit project, attach additional evidence where specifically requested, and sign the document to affirm inputs are correct and the proposed project(s) will be built as stated. If the inputs in the AHSC Benefits Calculator Tool differ from the inputs in this document, CARB staff will defer to this signed document to verify and score GHG benefits. If adequate information that allow CARB staff to verify outputs is not submitted, CARB staff will not score the GHG benefits of the proposed project(s).

Refer to the AHSC Quantification Methodology and User Guide for input definitions and guidance on filling out the Transit Inputs Tab of the AHSC Benefits Calculator Tool, found in the [California Climate Investments Reporting Tools webpage](https://www.caclimateinvestments.ca.gov/reporting-tools).

[Transit Agency] has verified the following AHSC Benefits Calculator Tool inputs and attachments for [Project name (as listed in the AHSC Benefits Calculator Tool)].

**Table 1: Applicant documentation of inputs to determine quantification method and emission factors**

| Transit Project Name: |  |
| --- | --- |
| Project Type: |  |
| Service Type: |  |
| Region or Air Basin: |  |
| Year 1 (Yr1): |  |
| Year F (YrF): |  |
| Quantification Period: |  |

**Table 2: Applicant documentation of inputs to estimate the emission and cost reductions from displaced auto vehicle miles traveled (VMT)**

| Yr1 Ridership: | *If the agency chooses to use the* [*Caltrans ridership increase tool*](https://dashboards.calitp.org/public/dashboard/01fb85e3-625d-4d77-9da7-565dd218bb16?number_of_additional_trips_-_weekday=0&number_of_additional_trips_-_saturday=0&number_of_additional_trips_-_sunday=0) *to develop ridership inputs, attach screenshots of the Caltrans tool’s inputs and outputs for Yr1 and YrF.*  *If the agency develops its own ridership increase estimate, it must answer the four questions in the Ridership Justification section below.* |
| --- | --- |
| YrF Ridership: | *If the agency uses the* [*Caltrans ridership increase tool*](https://dashboards.calitp.org/public/dashboard/01fb85e3-625d-4d77-9da7-565dd218bb16?number_of_additional_trips_-_weekday=0&number_of_additional_trips_-_saturday=0&number_of_additional_trips_-_sunday=0) *to develop ridership inputs, provide screenshots of the Caltrans tool’s inputs and outputs for Yr1 and YrF.*  *If the agency develops its own ridership increase estimate, it must answer the four questions in Appendix A.* |
| Adjustment Factor: |  |
| Length of Average Trip (mi): |  |

**Table 3: Applicant documentation of inputs to estimate the net emission reductions from new service or from the purchase of new zero-emission vehicle(s)**

| Vehicle Type: |  |
| --- | --- |
| Engine Tier: |  |
| Engine Horsepower: |  |
| Fuel Type: |  |
| Hybrid Vehicle: |  |
| Model Year: |  |
| Project-Specific GHG Emission Factor (gCO2e/MJ): |  |
| Annual VMT (mi/yr): |  |
| Annual Fuel Use: |  |
| Annual Renewable Energy Generated (kWh/yr): |  |

**Table 4: Applicant documentation of inputs to estimate the net emission reductions from vehicle replacement as a result of the proposed project**

| Vehicle Type: |  |
| --- | --- |
| Engine Tier: |  |
| Engine Horsepower: |  |
| Fuel Type: |  |
| Hybrid Vehicle: |  |
| Model Year: |  |
| Project-Specific GHG Emission Factor (gCO2e/MJ): |  |
| Annual VMT (mi/yr): |  |
| Annual Fuel Use: |  |

**Table 5: Applicant documentation of inputs to estimate Travel Cost Savings**

| Baseline Average  One-Way Fare Cost  ($/One-Way Trip/Rider): |  |
| --- | --- |
| New Average One-Way Fare Cost ($/One-Way Trip/Rider): |  |
| Average Transit Facility Parking Cost ($/Roundtrip/Rider): |  |
| Average Avoided Parking Cost ($/Roundtrip/Rider): |  |
| Average Avoided Toll Cost ($/Roundtrip/Rider): |  |

Ridership Justification

1. Describe the proposed transit improvement. Include (1) an explanation of the demand for the proposed improvement and (2) how the improvement will lead to an increase in ridership on the transit route or an increase in ridership system-wide.

*(e.g., “Agency will purchase a new vehicle to run on Route 6. Over the past two years this route has been overcrowded and feedback from public meetings indicate a need for added capacity. The improvement will increase service frequencies on this route from every 20 minutes to every 15 minutes from 7 – 9 a.m. and 4 - 7 p.m. This will reduce wait time and improve connections to other transit routes.”)*

1. What is the annual ridership on this transit route or system at the time of application?
2. What is the route or system’s projected annual ridership in Yr1 and YrF, **without** the AHSC funded improvement? Applicant must attach or link to agency’s public or internal ridership projection report and/or describe ridership projection assumptions and attach the ridership increase calculations for the transit route or system.

*(e.g., “As outlined in the attached report, annual ridership on Route 6 has decreased by x% due to the COVID-19 pandemic. However, ridership is expected to rise by x% annually, without the AHSC funded improvement, resulting in 150,000 trips in Yr1 and 200,000 in YrF.”)*

1. What is the route or system’s projected annual ridership increase in Yr1 and YrF, **resulting from** the proposed AHSC funded improvement? If the agency is claiming system-wide ridership increase, describe what portion of the system-wide increase is attributed specifically to the AHSC funded improvement and the assumptions that led the agency to determine the portion that is attributable to the AHSC funded improvement. Clearly describe assumptions for ridership increase, include an excel document with ridership increase calculations, and attach or link to data sources and/or ridership modeling methodology.

*(e.g., “The AHSC funded frequency increase on Route 6 will lead to a x% of annual ridership increase. In Yr1 this will result in an additional 1,000 trips per year over the Yr1 baseline of 150,000 and in YrF this will result in an additional 3,000 trips per year over the YrF baseline of 200,000. To determine ridership increase, we multiplied the projected number of passengers per vehicle/revenue hour by every additional AHSC funded vehicle trip/revenue hour. This number was then multiplied by the number of days the new AHSC funded service will operate. To determine how many passengers per vehicle trip/revenue hour we could expect in Yr1, we assumed an x% annual increase based on the ridership impact that similar service changes have had to similar transit routes in our system. We then used data of ridership increase trends on this route for the past 10 years (excluding 2020 and 2021) to estimate that Yr1 AHSC-funded ridership would increase by x% in YrF. Please see attached calculations of the projected number of passengers per vehicle and of total ridership increase for the proposed project as well as data from the previously implemented project for reference.”)*

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_[Transit Agency Signature]

Printed Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Transit Agency Contact]

Attachments:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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