

Climate Pollution Reduction Grants Program:
Technical Reference Document for States,
Municipalities and Air Pollution Control Agencies

**Benefits Analyses: Low-Income and Disadvantaged
Communities**

United States Environmental Protection Agency
Office of Air and Radiation

April 27, 2023

Contents

Introduction	3
Overview of Minimum Requirements	4
Tools for Identifying Low-Income and Disadvantaged Communities	4
Engaging with Low-Income and Disadvantaged Communities in Planning Process	6
Identifying and Describing Benefits	7
LIDAC Analysis Expectations	10
PCAP	10
CCAP.....	10
Status Report	10

Introduction

The Climate Pollution Reduction Grants (CPRG) program provides states, municipalities, air pollution control agencies, territories, and tribes flexible resources to plan for and pursue ambitious greenhouse gas (GHG) pollution reductions to achieve three broad objectives:

- Tackle damaging climate pollution while supporting the creation of good jobs and lowering energy costs for families;
- Accelerate work to address environmental injustice and empower community-driven solutions in overburdened neighborhoods; and,
- Deliver cleaner air by reducing harmful air pollution in places where people live, work, play, and go to school.

In line with these objectives, EPA is committed to supporting the development and expansion of state, tribal, and local climate action plans to reduce GHG pollution. This includes providing a framework that can be used by grantees when developing their Priority Climate Action Plans (PCAPs) and Comprehensive Climate Action Plans (CCAPs) to estimate benefits that may accrue in low-income and disadvantaged communities (LIDACs) from the implementation of GHG emission reduction measures.

For the first time in our nation's history, the federal government has made it a goal that 40 percent of the overall benefits of certain federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. The CPRG program will advance the goals of the Justice40 Initiative set forth in Executive Order 14008, which aims to deliver 40 percent of the overall benefits of relevant federal investments to disadvantaged communities. More information on Justice40 at the EPA can be found at: <https://www.epa.gov/environmentaljustice/justice40-epa>.

This document aims to provide information on the minimum requirements for states, municipalities, and air pollution control agencies to meet EPA's expectations for the CPRG Planning Grants for the LIDAC Benefits Analysis. The steps to perform this analysis include identifying low-income and disadvantaged communities, engaging with the identified communities to understand community priorities, and estimating potential benefits of GHG emission reduction measures to the identified communities.

Special note regarding tribes and territories: Under the CPRG program, tribes and territories that are planning grant recipients are not required to include a LIDAC benefits analysis in their required deliverables (PCAP and CCAP). However, states, municipalities, and air pollution control districts should engage with tribal nations when conducting meaningful engagement and the LIDAC benefits analysis described in this document.

Overview of Minimum Requirements

This document is intended as a resource to accompany the CPRG planning grant program guidance¹ and provide additional information to aid grantees as they develop their LIDAC benefits analysis. The program guidance for CPRG planning grants describes the minimum requirements (shown below) for the LIDAC benefits analysis, which may be a qualitative or a quantitative assessment for all analyses:

PCAP: Planning grant recipients must include a preliminary analysis of benefits for LIDACs anticipated to result from the GHG reduction measure(s) in their PCAP. EPA anticipates requiring an accounting of such benefits as part of any future CPRG implementation grant application.

CCAP: Planning grant recipients must evaluate the extent to which any GHG reduction measures in the CCAP will deliver co-pollutant emissions reductions and other benefits to LIDACs.

Status Report: Updated analyses of the co-pollutant emissions reductions and other program benefits to LIDACs associated with GHG reduction measures listed in the CCAP that have been implemented or are expected to be implemented are required in the Status Report.

Additional resources for the low-income and disadvantaged community benefits analyses can be found on the [Tools and Technical Resources section](#) of the CPRG website.

Tools for Identifying Low-Income and Disadvantaged Communities

To identify low-income and disadvantaged areas, EPA strongly recommends grantees use the Climate and Economic Justice Screening Tool (CEJST) with EPA's Environmental Justice Screening and Mapping Tool (EJScreen) as a supplement to CEJST. More information and links to these tools can be found in Table 1. EPA further recommends using the following definitions for LIDACs:

- Any Census tract that is included as disadvantaged in the Climate and Economic Justice Screening Tool (CEJST); and/or,
- Any census block group that is at or above the 90th percentile for any of EJScreen's Supplemental Indexes² when compared to the nation or state, and/or any geographic area within Tribal lands and indigenous areas as included in EJScreen.

If only one tool will be used to identify LIDACs, EPA recommends that grant recipients use CEJST. The CEJST tool has an interactive map and uses datasets that are indicators of burdens in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. The workforce development category includes indicators for low median income and poverty. The tool ranks most of the burdens using percentiles by Census tract. Percentiles show how much burden each tract experiences compared to other tracts. To qualify as a disadvantaged community in CEJST, one of the burden indicators must be above the 90th percentile. As CEJST is

¹ The CPRG program guidance documents for states, municipalities, and air pollution control agencies and for tribes and territories can be found at: <https://www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants#CPRGProgramGuidance>

² Additional information on EJScreen's Supplemental Indexes can be found at: <https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen>

updated over time, new versions of the tool will be released. Grantees should use CEJST Version 1.0 or higher for the LIDAC Benefits Analyses.

EJScreen is EPA's environmental justice mapping and screening tool that uses national datasets for environmental and socioeconomic indicators. The tool provides several capabilities including mapping, reports for selected areas, and comparisons of environmental and demographic indicators showing how a selected area compares to the state, EPA region, or the nation. EJScreen operates at a finer geographic scale of Census block groups than CEJST, which relies on Census tracts, allowing EJScreen Supplemental Indices to identify smaller areas that may be disadvantaged within a larger non-disadvantaged area. To identify areas in EJScreen that meet one of the above definitions of a LIDAC, grant recipients should use the "Supplemental Indices" option under the tool's map layers.

EPA will provide a "footprint" that combines the information in both CEJST and the Supplemental Indices in EJScreen to facilitate identification of disadvantaged communities. The data and spatial layer for the footprint will be posted on the [Tools and Technical Resources section](#) of the CPRG website.

In some sectors, such as for mobile source projects and emissions, a larger geographic area such as a county along with specific sector information may be used initially in order to identify the impacted areas and then use relevant data fields within screening tools, like EJScreen and CEJST, or external data sources at the same geographic resolution to understand the distribution of communities within that area. Grantees may also use other tools, such as a tool developed by the grantee or a related entity, to incorporate additional information to characterize the nature of environmental risk, economic disparities, and other compounding vulnerabilities burdening specific communities. Such information may be relevant for informing GHG emission reduction strategy development (e.g., identifying specific types of air pollutants and emissions sources that may potentially impact disadvantaged communities in particular areas). Data from other sources (e.g., studies, U.S. Census data, or third-party reports) can also be included to give a more complete picture of the impacted communities and populations, as well as the localized challenges they face. However, if other tools are used, a comparison of the Census tracts identified by that tool to those identified in CEJST as low-income and disadvantaged communities should be submitted as part of the PCAP and CCAP. Additionally, if other tools than those recommended above are used, grant recipients will need to ensure compliance with federal non-discrimination statutes, including Title VI which prohibits discrimination based on race, color or national origin.

To help meet the goals of Justice40, EPA will conduct a reporting analysis of the GHG emission reduction measures and the benefits to disadvantaged communities resulting from the CPRG Program. To facilitate development of this report, grant recipients should provide either the Census tract ID (from CEJST) or the Census block group ID (from EJScreen) with their list of identified low-income and disadvantaged communities that are expected to benefit from the GHG reduction measures.

Table 1: Tools for Identifying Low-Income and Disadvantaged Communities

Screening Tool/Database	Description	Website
Climate and Economic Justice Screening Tool (CEJST) Version 1.0 (or higher)	CEJST was developed under Executive Order 14008 to help Federal agencies better identify communities that can benefit from the Justice40 Initiative. The CEJST uses datasets that are indicators of burden. These burdens are related to climate change and the environment. They are also related to health and lack of economic opportunity. To qualify as a disadvantaged community in CEJST, one of the burden indicators must be above the 90th percentile.	https://screeningtool.geoplatform.gov/
Environmental Justice Screening and Mapping Tool (EJScreen)	EJScreen is EPA's environmental justice mapping and screening tool that provides nationally consistent datasets and an approach for combining environmental and demographic socioeconomic indicators. State and municipality grant recipients should use the "Supplemental Indices" map layer option.	https://www.epa.gov/ejscreen/

Engaging with Low-Income and Disadvantaged Communities in Planning Process

Community benefits from the planning processes to develop the PCAP and CCAP include increased community engagement in the plan development, the opportunity to incorporate community priorities into program or project designs, increased community awareness of GHG emission reduction measure benefits, and increased capacity building for future engagement. After identifying low-income and disadvantaged communities in its jurisdiction, the grant recipient must conduct meaningful engagement with affected communities in the development of the planning grant deliverables. As stated in [Section 8.4.3. of the CPRG planning grants program guidance](#) for states, municipalities, and air pollution control agencies, the CPRG planning grants workplan should:

- Describe how engagement would be conducted (such as through a combination of in-person and/or virtual meetings with reasonable opportunities to provide input);

- Discuss how information on the PCAP and CCAP planning development processes will be made available in a transparent manner, such as through in-person and virtual meetings, public websites, listservs, and social media;
- Describe the approach to conducting meaningful engagement including communicating with residents, leaders, and representatives of LIDACs and identifying community priorities; and,
- Describe an approach for early and frequent engagement and how that engagement will inform the LIDACs benefits analysis.

Overall, key goals for engaging with residents, leaders, and representatives of LIDACs include:

- Fostering a spirit of collaboration, mutual trust, confidence, and openness;
- Ensuring timely, accessible and accurate information;
- Learning from individuals and organizations and the information they are uniquely able to provide (community values, concerns, practices, local norms, and relevant history);
- Creating a transparent planning process that also provides opportunity for early risk mitigation;
- Keeping communities informed about significant issues and changes; and,
- Anticipating conflict, encouraging early discussions, and utilizing conflict resolution.

In the context of climate action planning, a meaningful engagement process ensures that the full range of the potential impacts (both benefits and disbenefits) of GHG emission reductions measures are understood and considered. Such engagement can help ensure that planning grant recipients:

- Communicate with residents of LIDACs about GHG reduction measure opportunities in their areas;
- Minimize to the extent possible any anticipated disbenefits to residents of LIDACs;
- Identify and incorporate community-driven priorities into plan design and engage with residents of LIDACs throughout plan implementation; and,
- Continue engagement with residents, leaders, and representatives of LIDACs into the future.

Engagement strategies can cover multiple communities and should be inclusive of linguistic, cultural, institutional, geographic, and other differences to assure meaningful participation, recognizing that diverse constituencies may be present within any community. Meaningful engagement under the CPRG program should include early outreach, sharing information, and soliciting input on PCAP and CCAP development, especially in LIDACs. EPA strongly recommends that grant recipients provide evidence of meaningful engagement, a summary of engagement conducted, and a summary of the stakeholder input received and how the input was considered in formulating both the PCAP and the CCAP.

Identifying and Describing Benefits

Climate change poses risks to all Americans and will have disproportionate impacts on disadvantaged populations. If unchecked, climate impacts, such as wildfires, storm surges, more extreme drought, water scarcity, extreme heat, and other impacts, will exacerbate inequalities. Measures to reduce GHG emissions therefore can provide multiple types of benefits to low-income and disadvantaged communities including 1) direct and indirect benefits associated with mitigating these climate impacts; 2) public health benefits due to associated reductions in criteria and hazardous air pollution; and, 3) other benefits resulting from these measures.

Grant recipients should first identify in their planning grant deliverables the specific climate impacts or risks to which disadvantaged communities in their jurisdiction are particularly vulnerable, which could include:

- Extreme weather events, e.g., hurricanes, extreme rainfall;
- Extreme heat and urban heat island effects;
- Flooding;
- Coastal erosion, saltwater intrusion, and other impacts of sea level rise;
- Drought; and/or,
- Wildfires.

GHG emission reduction measures included in grantees' PCAP/CCAP will contribute to national efforts on climate mitigation. These efforts will alleviate the risks and impacts of climate change listed above, yielding benefits. Grantees are **not** expected to conduct climate modeling; instead, recipients should qualitatively describe the identified climate benefits relating to disadvantaged communities in their jurisdiction in terms of how climate mitigation, as a whole, reduces the overall risk of adverse climate impacts. More information on climate risks to disadvantaged populations can be found in EPA's [Climate Change and Social Vulnerability in the United States](#) report.

GHG reduction measures can provide significant community benefits in addition to direct reductions in GHG emissions. In consultation with residents in LIDACs, grant recipients should identify other potential benefits of implementing GHG emission reduction measures included in their plans (PCAPs and CCAPs). The additional potential community benefits could include:

- Improved public health resulting from reductions in co-pollutants (ozone, PM_{2.5} and hazardous air pollutants) such as reductions in new asthma cases and reductions in hospital admissions and emergency department visits;
- Increased resilience to climate change from GHG reduction measures that have both GHG benefits and climate adaptation benefits (e.g. heat island strategies help reduce GHG emissions by reducing energy demand and help reduce health impacts due to extreme heat);
- Creation of high-quality jobs and workforce development opportunities in disadvantaged communities with an emphasis on expanding opportunity for workers from disadvantaged populations and under-represented small businesses/contractors;
- Enhanced community engagement, increased public awareness of projects and results, and community capacity building;
- Improved access to services and amenities;
- Decreased energy costs and improved energy security from energy efficiency improvements and more resilient energy sources;
- Reduced noise pollution;
- New green space and/or community beautification;
- Increased access to transportation alternatives;
- Improved housing quality, comfort, and safety; and/or,
- Other benefits identified during consultation with residents of LIDACs.

Grantees may consider reviewing the [Categories of Burden](#) identified by the Climate and Environmental Justice Screening Tool when evaluating which benefits will accrue to LIDACs.

After identifying the potential benefits associated with GHG measures in their PCAP and CCAP, grant recipients should then describe qualitatively or quantify, where possible, the expected benefits that will accrue in low income and disadvantaged communities. The grantee should assess projected benefits of GHG reduction measures that could be implemented on GHG emission sources located *within* such disadvantaged communities (direct benefits). The analysis should also assess projected benefits of measures that could be implemented on sources *outside* such communities that could nonetheless have benefits for identified communities (indirect benefits).

In many instances, it may be difficult to estimate the associated benefits quantitatively, but at a minimum, a qualitative description of benefits should be provided. Grant recipients are **not** required to perform air quality modeling to estimate or describe expected benefits. The “Technical Reference Document for Benefits Analyses: Co-Pollutant Impacts” provides further information on quantifying expected co-pollutant reductions and benefits. Grant recipients should also identify and describe any disbenefits that may result from the GHG emission reduction measures. For resources that grantees can use to quantify the benefits of GHG reduction measures for different sectors, please visit the [Tools and Technical Resources section](#) of the CPRG website.

Grantees should indicate the geographic scope (i.e., county or Census tract) of their plans’ measures in relation to their identified communities where feasible. Grantees should also provide as much detail as possible to describe anticipated benefits. Examples to describe or quantify the expected benefits in disadvantaged communities could include:

- Expected reductions of greenhouse gases [tons], criteria air pollutants [tons] and toxic air pollutants [pounds] at the lowest spatial resolution available (this could be county level, Census tract or source specific) in identified communities;
- Estimated number of jobs created in identified communities resulting from the grant measures;
- Dollars spent [\$] and/or number of participants from identified communities in clean energy job training programs or apprenticeship programs;
- Estimated decreased energy costs [\$] for residents of the identified communities;
- Estimated energy saved [MMBTU or MWh] or reduction in fuel use [gallons or equivalent] by disadvantaged communities;
- Area of green space created for urban heat island mitigation;
- Number of stakeholder events, participants, and/or dollars spent to engage with organizations and residents of identified communities; and,
- Qualitative descriptions of expected benefits to the identified communities, where quantification is not possible.

Since benefits to low-income and disadvantaged communities may represent only a portion of the total benefits estimated from a given GHG emission reduction measure, the grant recipient should describe the expected proportion of benefits to the identified communities, if this information is available. In consultation with residents in LIDACs, grantees should also describe any metrics or methods used to estimate these benefits in their PCAPs and CCAPs.

LIDAC Analysis Expectations

This section summarizes the information described in the above sections to specifically identify the minimum expectations for grant recipients for each grant deliverable.

PCAP

At a minimum, the PCAP should include:

- A preliminary analysis that identifies low-income and disadvantaged communities that will be affected by the GHG reduction measures in the PCAP;
- For each community that may be affected by a proposed measure, provide either the Census tract ID (from CEJST) or the Census block group ID (from EJScreen);
- A qualitative discussion of the expected benefits to LIDACs associated with the GHG reduction measures included in the PCAP (including direct and indirect benefits, as described above); and,
- An overview of planned and/or ongoing engagement with representatives and residents of LIDACs to inform PCAP and CCAP development and implementation.

As noted above, EPA strongly encourages grantees to use CEJST to identify low-income and disadvantaged communities in the development of PCAPs and CCAPs. EPA also encourages grantees to use the Supplemental Indices in EJScreen to better inform the identification of communities in their jurisdiction. If additional tools or data are used to identify LIDACs, grantees should include a comparison of identified Census tracts with CEJST to determine if there is overlap between the two methods and build better awareness of LIDACs when planning engagement activities and policy design.

CCAP

At a minimum, the CCAP should include:

- An analysis that identifies low-income and disadvantaged communities that will be affected by the GHG reduction measures in the CCAP;
- For each community that may be affected by a proposed measure, the grantee should provide either the Census tract ID (from CEJST) or the Census block group ID (from EJScreen);
- A qualitative discussion or quantitative assessment of the expected benefits to LIDACs associated with the GHG reduction measures included in the CCAP (including direct and indirect benefits, as described above);
- The proportion of benefits expected to accrue in the identified communities as compared to the total benefits resulting from the GHG emission reduction measures described in the CCAP where feasible. These benefits can be described quantitatively or qualitatively; and,
- An update on meaningful engagement activities as well as a summary of engagement conducted, and a summary of the stakeholder input received and how the input was incorporated.

Status Report

In accordance with the requirement to submit a Status Report four years after the grant is awarded, the Status Report should include:

- Updated analyses (qualitative or quantitative) of the benefits to LIDACs associated with GHG reduction measures included in the CCAP that have been implemented or are expected to be implemented; and,
- Any changes to the expected benefits to LIDACs that were described in the PCAP or CCAP.