



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

District Policy (APR 2005)

**Addressing GHG Emission Impacts
for Stationary Source Projects
Under CEQA When Serving
as the Lead Agency**

December 17, 2009

**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT
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Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency

Approved by the San Joaquin Valley Air Pollution Control District's Governing Board
on December 17, 2009.

PURPOSE

This policy applies to projects for which the District has discretionary approval authority over the project and serves as lead agency for California Environmental Quality Act (CEQA) purposes. This policy is to be used by District staff to assess the significance of project specific Greenhouse Gas (GHG) emissions impacts on global climate change. This policy establishes the process used to evaluate the significance of project specific GHG emission impacts on global climate change and to establish Best Performance Standards used to reduce project specific GHG emissions.

1. BACKGROUND

CEQA requires lead agencies to establish specific procedures for administering its responsibilities under CEQA, including orderly evaluation of projects and preparation of environmental documents. On April 13, 2009, the Governor's Office of Planning and Research sent proposed amendments of the CEQA Guidelines to the Secretary of the Resources Agency for promulgation. The proposed amendments require lead agencies to determine whether greenhouse gases generated by a proposed project would have a significant individual or cumulative impact on global climate change.

In August 2008, the San Joaquin Valley Air Pollution Control District's Governing Board adopted the Climate Change Action Plan (CCAP). The CCAP directed the District's Air Pollution Control Officer to develop guidance to assist District staff, valley businesses, land-use agencies, and other permitting agencies in addressing GHG emissions as part of the CEQA process.

In support of this policy, District staff has prepared a staff report, *Addressing Greenhouse Gas Emissions under the California Environmental Quality Act*. The staff report provides a summary of background information on Global Climate Change, the current regulatory environment surrounding GHG emissions, and the various concepts in addressing the potential impacts of Global Climate Change.

The report also evaluates different approaches for estimating impacts, and summarizes potential GHG emission reduction measures. As presented in the Staff Report, District staff concludes that existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change. This is readily understood when one considers that global climatic change is the result of the sum total of GHG emissions, both man made and natural that occurred in the past; that is occurring now; and will occur in the future. The effects of project specific GHG emissions are cumulative, and unless reduced or mitigated their incremental contribution to global climatic change could be considered cumulatively considerable. District staff concludes that this cumulative impact is best addressed by requiring all projects subject to CEQA to reduce their GHG emissions through project design elements.

2. OVERALL METHODOLOGY

The District policy proposes an approach intended to streamline the process of determining if project specific GHG emissions would have a significant effect. The methodology being proposed relies on the use of performance based standards that would be applicable to projects that result in increased GHG emissions. Use of performance based standards is not a method of mitigating emissions. Rather it is a method of determining significance of project specific GHG emission impacts using established specifications or project design elements: Best Performance Standards (BPS). Establishing BPS would help project proponents, lead agencies, and the public by proactively identifying effective, feasible GHG emission reduction measures. Emission reductions achieved through implementation of BPS would be pre-quantified, thus negating the need for project specific quantification of GHG emissions.

Best Performance Standards (BPS) are defined as the most effective Achieved-in-Practice means of reducing or limiting GHG emissions from a GHG emissions source. For traditional stationary source projects, BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category.

District staff will establish BPS for specific class and category of stationary sources.

Projects implementing Best Performance Standards would be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Projects exempt from the requirements of CEQA, and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document. Projects not implementing BPS would require quantification of project

specific GHG emissions. To be determined to have a less than significant individual and cumulative impact on global climate changes, such projects must be determined to have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be expected for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates Best Performance Standards.

3. DETERMINING SIGNIFICANCE

Principle

The effects of project specific GHG emissions are cumulative, and unless reduced or mitigated their incremental contribution to global climatic change could be considered cumulatively considerable. When serving as lead agency, the District would require all stationary source projects with increased GHG emissions to implement performance based standards, or otherwise demonstrate that project specific GHG emissions have been reduced or mitigated by at least 29%, as compared to Business-as-Usual (see definition below), consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan.

Use of BPS streamlines the significance determination process by pre-quantifying the emission reductions that would be achieved by a specific GHG emission reduction measure and pre-approving the use of such a measure to reduce project-related GHG emissions. Establishing BPS would also streamline the CEQA review process by providing project proponents, lead agencies and the public with clear guidance on how to reduce GHG emission impacts. Thus, project proponents would be able to incorporate project specific GHG reduction measures during the initial project design phase, which could reduce project specific GHG impacts to less than significant levels.

Definitions

Achieved-in-Practice

Achieved-in-Practice is – Any equipment, technology, practice or operation available in the United States that has been installed and operated or used at stationary source site for a reasonable period of time sufficient to demonstrate that the equipment, technology, practice or operation is reliable when operated in a manner that is typical for the process. In determining whether equipment, technology, practice or operation is Achieved-in-Practice, the District will consider the extent to which grants, incentives or other financial subsidies influence the economic feasibility of its use.

Approved Alternate Technology

Approved Alternate Technology is – Any District approved, Non-Achieved-in-Practice GHG emissions reduction measure equal to or exceeding the GHG emission reduction percentage for a specific BPS

Baseline

Baseline is – the three year average (2002-2004) of GHG emissions for a type of equipment or operation within an identified class and category, expressed as annual GHG emissions per unit.

Best Performance Standard

Best Performance Standard is – For a specific Class and Category, the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a GHG emissions source, that is also economically feasible per the definition of Achieved-in-Practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category.

Business-as-Usual

Business-as-Usual is - the emissions for a type of equipment or operation within an identified class and category projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period.

Category

Category is – A District approved subdivision within a “class” as identified by unique operational or technical aspects.

Class

Class is - The broadest District approved division of stationary GHG sources based on fundamental type of equipment or industrial classification of the source operation.

4. ESTABLISHING BUSINESS-AS-USUAL AND BASELINE

In executing its legislative mandate to establish emission reduction targets which would achieve the 1990 GHG emission levels by the year 2020, the California Air Resources Board (CARB) used its emission inventory to establish a three-year average for GHG emissions occurring by sector during the baseline period of 2002-2004. This three-year average baseline emissions inventory was projected to the year 2020 using assumptions about potential growth, and assuming no change in the existing business practices. CARB designated the baseline emissions inventory projected to the year 2020 as business-as-usual (BAU) and determined that a 29% reduction from BAU is necessary to achieve the 1990 GHG emissions level.

BAU, as established by CARB, is a projected emissions inventory and does not represent actual business or operational practices generating GHG emissions. To

translate BAU into an emissions generating activity, District staff will establish emission factors per unit of activity, for each class and category, using the 2002-2004 baseline period. For example, for a combustion process, an emissions factor could be expressed as pounds of GHG emissions generated per cubic feet of gas consumed, or pounds of GHG emissions generated per unit of production.

GHG emission reductions would be determined by establishing a GHG emissions factor per unit of activity for the proposed project and comparing it to the emissions factor established for the 2002-2004 baseline period. Projects implementing BPS, or otherwise demonstrating that GHG emissions have been mitigated or reduced by 29% will be determined to have a less than significant individual and cumulative impact on global climate change.

The percent reduction in GHG emissions would be calculated using the following methodology:

$$\% \text{ Reduction in GHG emissions} = \frac{(2002 - 2004 \text{ baseline GHG emission factor}) - (\text{Proposed project GHG emissions factor})}{2002 - 2004 \text{ baseline GHG emission factor}} \times 100\%$$

5. DETERMINING PROJECT SIGNIFICANCE

CEQA requires lead agencies to establish specific procedures for administering its responsibilities under CEQA, including orderly evaluation of projects and preparation of environmental documents. Each lead agency is encouraged to develop and publish thresholds of significance for use in determining the significance of environmental effects. The San Joaquin Valley Air Pollution Control District proposes the following process (Figure 1) for determining the cumulative significance of project specific GHG emissions on global climate change when issuing permits for stationary source projects:

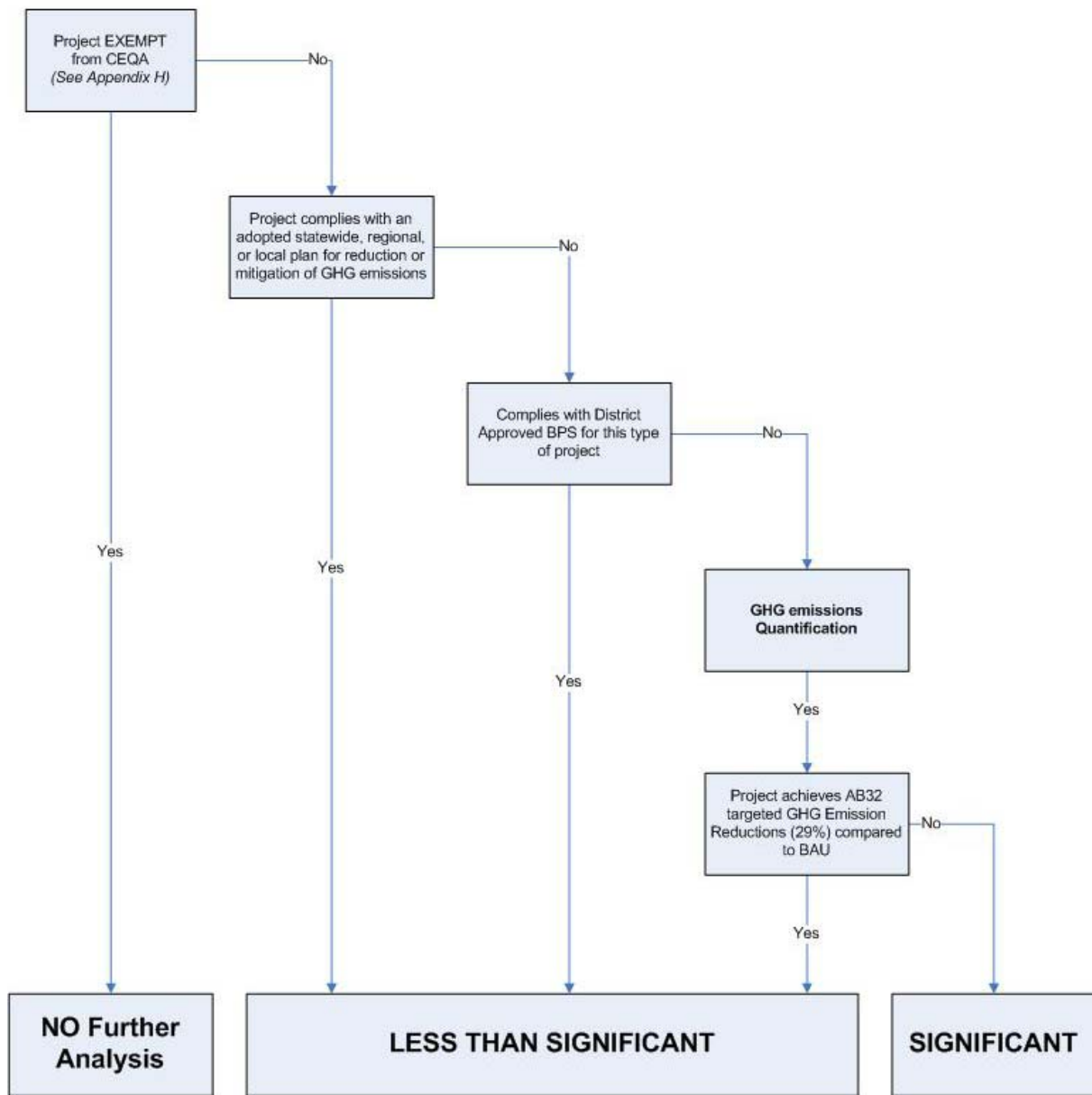
Process for Evaluating GHG Significance

- Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by

the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.

- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Projects requiring preparation of an Environmental Impact Report would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

Figure 1: Stationary Source Projects with GHG Emissions



6. ESTABLISHING BEST PERFORMANCE STANDARDS

6.1 Public Process

BPS will be established through a public process that provides ample opportunity for stakeholders and other interested parties to participate and provide valuable input into the establishment of baseline GHG emissions and BPS.

The public process will begin with an initial outreach via the District's CCAP list server. Individuals registered with the CCAP list server will be notified when the District initiates the process of establishing BPS for a specific equipment or operation within an identified Class and Category. Individuals interested in participating in the public process would register themselves with a list server dedicated to the BPS under development. Using the dedicated BPS list server, stakeholders and other interested parties will have opportunity to provide the District with information to be considered when drafting documents establishing baseline GHG emissions and BPS. When draft documents are available on the District's website for review and comment, a notice of availability will be sent via the BPS list server. Workgroups would be convened as necessary to obtain additional technical information for use in establishing baseline emissions or BPS. After receiving public input, the BPS will be finalized and posted on the District's website. Availability of final BPS will be noticed via the District's general CCAP list server.

6.2 Process for Establishing BPS

To be approved by the District, BPS must be demonstrated to achieve real GHG emission reductions. Such reductions must be quantifiable to support a determination that project specific GHG emissions would have a less than significant individual and cumulative impact.

In evaluating GHG emissions from a specific project, District staff will characterize both direct and indirect GHG emissions. Direct GHG emissions would include emissions resulting from a specific operation or process, e.g. fuel combustion emissions from a boiler. Indirect GHG emissions would include emissions resulting from project related energy consumption, e.g. electricity consumed by the production and electricity required to produce and transport water used by the project. For projects resulting in increased vehicle miles traveled (VMT), indirect GHG emissions associated with transportation related activities would also be included in the GHG emissions quantification.

Process Steps

BPS is intended to achieve the maximum GHG emission reductions from a stationary source project compared to BAU. BPS is established per the following process:

1. Establish Baseline GHG emissions factor per unit of activity for the proposed equipment or operation identified within a specific class and category
2. For the specific equipment or operation being proposed within a specific class and category, list all technologically feasible GHG emissions reduction measures, including equipment selection, design elements and best management practices, that do not result in an increase in criteria pollutant emissions compared to the proposed equipment or operation
3. For all technologically feasible GHG emission reduction measures identified in steps 2, identify all GHG reduction measures determined to be Achieved-in-Practice. In determining Achieved-in-Practice, consider the extent to which grants or other financial subsidies influence economic feasibility.
4. For each Achieved-in-Practice GHG emission reduction measure identified in steps 3:
 - a. Quantify the potential GHG emission reduction, as compared to the Baseline GHG emissions factor per unit of activity
 - b. Express the potential GHG emission reduction as a percent of Baseline GHG emissions factor per unit of activity

$$\% \text{ Reduction in GHG emissions} = \frac{(2002 - 2004 \text{ baseline GHG emission factor}) - (\text{Proposed project GHG emissions factor})}{2002 - 2004 \text{ baseline GHG emission factor}} \times 100\%$$

5. Rank all Achieved-in-Practice GHG emission reduction measures by order of percent GHG emissions reduction,
6. Deem the Achieved-in-Practice GHG emissions reduction measure(s) with the highest percent reduction in GHG emissions as the District approved Best Performance Standard (BPS) for the respective class and category of equipment or operation being proposed, and
7. Eliminate all other Achieved-In-Practice options from consideration as BPS

6.3 Process for Reviewing Established Best Performance Standards

Implementation of strategies to achieve AB 32 emission reduction targets is anticipated to drive technology development, potentially obsolescing or improving established standards over time.

To ensure that Best Performance Standards reflect the most current available technology, annual reviews are conducted and Best Performance Standards are revised, as necessary, to include new and improved technologies. Revisions to BPS only apply to future projects and do not apply retroactively to projects already permitted or approved.

Project-by-Project Basis

Project proponents or other members of the public may propose other technologies, equipment designs, or operational/maintenance practices. When proposed by a project proponent in lieu of an adopted Best Performance Standard, the District will evaluate the proposed GHG emission reduction measure. If demonstrated to be equivalent to or better than District approved BPS, the proposed GHG emission reduction measure will be added to the list of approved BPS. If demonstrated to be superior to District approved BPS and Achieved-in-Practice, the proposed GHG emission reduction measure will replace the existing District approved BPS for future projects.

Annual Evaluation

BPS is to be evaluated on an annual basis and compared to newly identified GHG emission reduction measures, if available. If demonstrated to be equivalent to District approved BPS, new GHG emission reduction measures will be added to the list of approved BPS. If demonstrated to be superior to District approved BPS and Achieved-in-Practice, new GHG emission reduction measures will replace existing District approved BPS for future projects.

6.4 Process for Evaluating Effectiveness of the Best Performance Standard Significance Determination Method

As presented in the District Staff Report, the District's analysis demonstrates that implementing BPS is expected to equal or exceed 29 percent reduction in GHG emissions from stationary sources¹ and development projects.

To ensure that implementation of BPS will achieve the GHG emission reduction targets; the District will prepare a triennial report evaluating the effectiveness of the Best Performance Standard significance determination method. The District report will include a comparison of actual GHG emissions reductions achieved by stationary source projects permitted under this policy to the 29% GHG emission reduction goal, consistent with the GHG emission reduction target established in ARB's AB 32 Scoping Plan. If the report demonstrates that a gap exists the District will revise BPS accordingly, or will take other steps to assure that the shortfall is addressed for future projects.

¹ San Joaquin Valley Air Pollution Control District, Final Draft Staff Report on *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*. November 5, 2009. (See p. 55 & 280)