



Air Pollution Control District
San Luis Obispo County

Proposed Greenhouse Gas Thresholds for CEQA

APCD Board Meeting
March 28, 2012



Purpose of GHG Thresholds

- Provide guidance to lead agencies, project proponents & general public to implement SB 97 in consistent & defensible manner
 - Streamline the review process for smaller projects that are below the thresholds
 - Provide certainty & consistency for project proponents when they design their projects
 - Reduce overall costs for new land use development by eliminating the need to analysis & mitigate GHG emissions from small projects
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CEQA Air Quality Handbook

- Guide on quantifying **new** project construction and operational emission impacts & applying mitigation measures when needed
 - Target audience: lead agencies, planning consultants, project proponents, interested parties and general public
 - Air District Role in CEQA: lead, responsible or commenting agency
 - Handbook timeline:
 - First released in 1997, updated in 2003
 - 2009 Board adopted changes to the Handbook
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Legislation that's driving GHG Threshold

- **Assembly Bill 32 (2006)**
 - Global Warming Solutions Act, set reduction goals into law. AB 32 requires statewide GHG emissions reduce to 1990 levels by 2020
 - **Senate Bill 97 (2007)**
 - Required the California Office of Planning and Research to develop CEQA Guidelines for the evaluation of GHG emissions impacts and recommend mitigation strategies
 - **Senate Bill 375 (2008)**
 - Aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation.
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Senate Bill 97 Requirements

- SB 97 identified the need to analyze GHG emissions as part of CEQA
 - State CEQA Guidelines were modified in 2009 for consideration of GHG emissions
 - Even in the absence of adopted CEQA threshold, **lead agencies are required to analyze & mitigate to the extent feasible GHG emissions on all proposed projects regardless of size**
 - APCD's proposed thresholds provide guidance for lead agencies to implement SB 97 in a consistent, defensible manner
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Summary

Residential/Commercial & Industrial Project Thresholds

Goal: To develop a defensible and feasible interim GHG threshold for lead agencies to ensure new development provides its fair share of GHG reductions to meet the State's goal in AB 32.

GHG Emissions Threshold Summary	
Residential and Commercial Projects	Compliance with Qualified GHG Reduction Strategy OR Bright-Line Threshold of 1,150 MT of CO₂e/yr. OR Efficiency Threshold of 4.9 MT CO₂e/SP*/yr.
Industrial (Stationary Sources)	10,000 MT of CO₂e/yr.
*SP = Service Population (residents+employees)	

Option 1: Programmatic Qualified GHG Reduction Strategy

6 Elements

(CEQA Guidelines § 15183.5(b)) :

1. Quantify emissions
2. Set a target reduction level
3. ID & analyze sector specific GHGs
4. Specify GHG reduction measures
5. Establish tool to monitor progress
6. Adopt in a public process
following environmental review.




The Governor's Office
of Planning and Research



CALIFORNIA ENVIRONMENTAL
RESOURCES EVALUATION SYSTEM

Option 2: Bright-Line (Numeric) Threshold (1,150 MT CO₂e/yr)

- Methodology used is intended to help reach the goals of AB 32 by attributing an appropriate share of GHG reductions needed from new land use development projects subject to CEQA in the SLO County Region
 - Comprehensive evaluation and analyses through a well-defined **8-Step Gap Analysis**
 - Results in a GHG emissions significance threshold of **1,150 MT CO₂e/yr**
 - The land use model (CalEEMod) is used to calculate the GHG emissions from proposed project to determine if they are above or below the Bright-Line Threshold
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Bright-Line Thresholds Effect on Development

- Threshold equivalent to a project size of approximately **70 single-family dwelling units, or 70,000 sf office building**
- Likely to capture **56 projects** (26 residential and 30 nonresidential) between now and 2020 out of 1142 total projects that will be developed

Screening Criteria for Residential Development

Land Use	Unit of Measure	Size Project Expected to Exceed APCD GHG Bright-Line Threshold:	Size Project Expected to Exceed APCD Ozone Precursor Significance Threshold:
		1150 CO ₂ e (MT/year)	25 lbs/ Day ROG + Nox
RESIDENTIAL		Urban / Rural	Urban
Apartment Low Rise	Dwelling Units	109 / 74	94
Condo/Townhouse General		103 / 72	93
Single Family Housing		70 / 49	68

Option 3: Efficiency Threshold

(4.9 MTCO₂e/SP/yr)

- Efficiency threshold encourages infill, transit-oriented development based on quantitative efficiency measures.
 - Allows highly efficient projects with higher mass emissions to meet the overall GHG reduction goals of AB 32
- Assesses the GHG efficiency of a project on a service population (residents + employees) basis.
- To calculate the efficiency of an individual project:
 - Calculate the annual CO₂e emissions & divide by the project's service population (residents + employment)

Industrial Threshold

(10,000 MTCO₂e/yr.)

- Applies to **new or modified** stationary source projects
 - Threshold based on capturing at least 90% of the GHG emissions from all new or modified stationary source projects
 - **SCAQMD and BAAQMD have adopted a 10,000 MTCO₂e/yr threshold**
 - Threshold is equivalent to industrial boiler with a rating of 27 mmBTU/hr of heat input, operating at 80% capacity
 - **Extremely large boilers** -- oilfield steam generators, refinery boilers, institutional boilers (Cal Poly, CMC & ASH)
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CEQA Review

- Initial Study and Negative Declaration
 - Issued on February 15, 2012
 - Project Findings
 - No potentially significant impacts identified
 - Negative Declaration Issued
 - Public Review Period
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Public Engagement

- Two Public Workshop
 - December 15, 2011 & February 23, 2012
 - Presentations Provided to:
 - Economic Vitality Corporation Board
 - City/County Community & Planning Directors
 - City/County GHG Stakeholder Committee
 - Exhibit C is the APCD's response to comments from public workshops and written letters received
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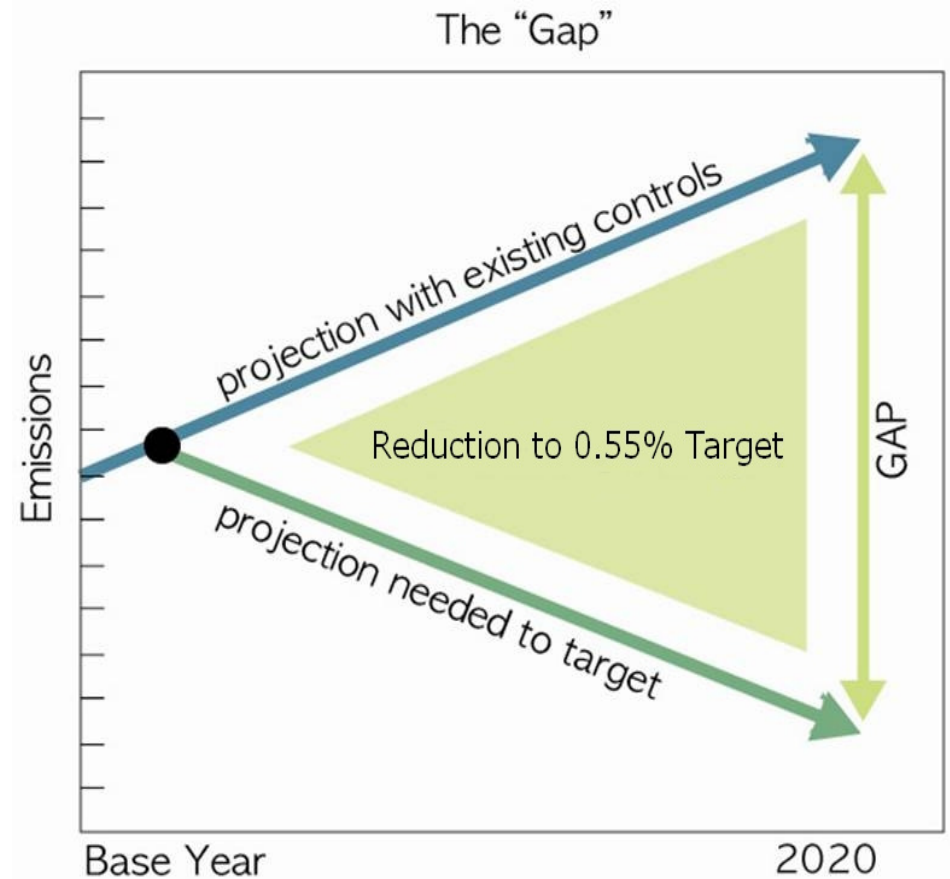
Staff Recommendations

- Adopt the Resolution to:
 - Certify the Negative Declaration has been completed in compliance with CEQA
 - Adopt the Negative Declaration prepared for the GHG CEQA Thresholds of Significance; and,
 - Adopt the proposed GHG CEQA Thresholds of Significance.
 - Instruct the APCO to incorporate the GHG CEQA Thresholds of Significance into the District's CEQA Air Quality Handbook
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Option 2: Bright-Line (Numeric) Threshold

Process Overview:

- 1) Defined Statewide “gap”**
Determine shortfall between projected 2020 statewide land use emissions existing programs and target emission levels to meet AB32 goals = 0.55%
- 2) Define SLO County’s Fair Share**
Apply statewide “gap” to determine fair share reduction target for new SLO County land use
- 3) Forecast Regional Land Use GHG**
Forecast the # of land use projects & related emissions to 2020
- 4) Setting Bright-Line Threshold**
Ensure threshold level achieves the regional reduction target



Bright-Line Threshold (1150 MTCO₂e/yr.)

% Reduction Goal from Statewide Land Use Driven Sectors **10.12%**
1 - 1990 LU Emissions (308.35 MMT CO₂e/yr) / 2020 LU projected (343.06 MMT CO₂e/yr) x 100

% Reduction Goal from AB 32 Scoping Plan measures applied to LU Sectors **-9.57%**
Low Carbon Fuel Standard, SB 375, Energy Efficiency & Solar Roof

% Reduction beyond Scoping Plan measures (Gap) **0.55%**
10.12% - 9.57%

Regional Mass Emission Reductions Needed (MT/yr.) **13,788**
2020 SLO Co Regional LU Projected Emissions (2,506,982.99) X .0055

Threshold Sensitivity Analysis **1,150**
SLO Co Projects Projected over next 10 years 1,142 X .05 = 56 projects expected to be captured by Bright - Line

A threshold of **1150 MTCO₂e/yr.** would reduce between 13,500 and 14,200 MT CO₂e/yr. assuming a mitigation effectiveness of 23% – 25% for the 56 projects captured between now and 2020.

Example Residential Development

100 Unit, Single Family Housing Development	
Land Use	Size Metric
SFH	100 units
Service Population (Residents)	236 people
Annual Emissions (MTCO ₂ e/yr) without mitigation	1330.02
Annual Emissions (MTCO ₂ e/yr) with mitigation	1101.72
Per Capita Emissions (MTCO ₂ e/yr/SP) without mitigation	5.6
Per Capita Emissions (MTCO ₂ e/yr/SP) with mitigation	4.7

Do Annual emissions exceed the bright-line threshold of 1,150 MTCO₂e? **No.**

Do per capita emissions exceed the efficiency threshold of 4.9 MTCO₂e? **No.**

Exceeds efficiency and Bright-Line Thresholds before mitigation, but drops below both thresholds after mitigating 17%.

No further action would be required.



Example Commercial Strip Mall & Restaurant

Commercial Strip Mall and Restaurant	
Land Use	Size Metric
Quality Restaurant	3 1000 sf
Strip Mall	45 1000 sf
Parking Lot	100 Spaces
Service Population (population+employment)	111
Annual Emissions (MTCO₂e/yr) without mitigation	1465.34
Annual Emissions (MTCO₂e/yr) with mitigation	1141.21
Per Capita Emissions (MTCO₂e/yr/SP) without mitigation	13.2
Per Capita Emissions (MTCO₂e/yr/SP) with mitigation	10.3

Do Annual emissions exceed the **bright-line threshold** of 1,150 MTCO₂e? **No.**

Do per capita emissions exceed the **efficiency threshold** of 4.9 MTCO₂e? **Yes.**

With 22% Mitigation, this project is able to reduce emissions below the Bright-Line Threshold.

