Greenhouse Gas Analysis

after the Supreme Court's Newhall Ranch Decision

PRACTITIONERS' RECOMMENDATIONS

Introduction

The California Supreme Court took on the challenging California Environmental Quality Act (CEQA) issue of determining the significance of greenhouse gas (GHG) emissions in its decision, *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (2015) 224 Cal.App.4th 1105 *(CBD vs. CDFW;* also known as the "Newhall Ranch" case*)*. The justices evaluated for compliance with CEQA one of the most common approaches to GHG analyses for development projects (i.e., evaluating the efficiency of a project's emissions in the context of the Assembly Bill [AB] 32's 2020 reduction goal, as presented in the statewide California Air Resources Board (ARB) Scoping Plan), using a comparison to an unregulated, "business as usual (BAU)" emissions scenario.

We issued an *AscentShare* email in December 2015 providing initial thoughts on the Court's decision and the potential "pathways to compliance" it offered to lead agencies. In the months that followed the decision, Ascent has developed and tested applications of quantitative and qualitative approaches intended to comply with the Supreme Court's decision. This paper builds upon our December 2015 *AscentShare* and, as promised, addresses project-level, GHG analysis method choices for CEQA compliance in more detail.

Because of this decision, as well as the changing policy, scientific, and regulatory environment regarding GHG reduction, CEQA approaches for GHG analysis are rapidly evolving. While GHG analysis methods are also being explored by others, a goal of this paper is to contribute to ongoing discussions surrounding the practice of GHG evaluations.

Key Facts about Newhall Ranch

The *CBD v. CDFW* decision concerned a large land use development proposal, commonly known as "Newhall Ranch," proposed in Southern California on approximately 12,000 acres and including over 20,000 dwelling units and other mixed uses. The Newhall Ranch Environmental Impact Report (EIR) was certified in 2010. The EIR concluded that the project would generate approximately 270,000 metric tons of carbon dioxide equivalent per year (MT CO_2e/year) of GHG emissions. The EIR discussed ARB's Scoping Plan and BAU scenario (also known as No-Action Taken), which suggested (at the time the EIR was prepared in 2008 – 2010) that GHG emissions would need to be reduced 29 percent below BAU to meet the statewide reduction goal for 2020 mandated by AB 32. The impact analysis in the Newhall Ranch EIR formulated a BAU scenario and concluded that the project would emit 31 percent less GHG emissions than BAU. Because the project would meet, and do slightly better than, the Scoping Plan's statewide average target of 29 percent below BAU, the EIR determined its GHG impact to be less than significant. The Court overturned the EIR, because it lacked substantial evidence to link a specific project's achievement of the Scoping Plan's statewide average reduction below BAU to the conclusion the project's reduction would meet AB 32's 2020 goal.

The Decision – *A Practitioner's View*

The *CBD v. CDFW* decision is complex, and this paper is not a detailed analysis of the case. For legal interpretations of the decision and how it could apply to a specific project, you may wish to consult an attorney. Rather, we offer views of the implications of the Court's suggested compliance pathways on the practice of GHG analysis in CEQA documents.

While the decision deemed "legally permissible" the approach of assessing "whether the project was consistent with meeting statewide emission reduction goals" as a criterion of significance, the Court set the bar high for using this method. It overturned the Newhall Ranch EIR's use of this approach, because it lacked a "reasoned explanation based on substantial evidence" about the linkage between the individual project's emissions and the statewide Scoping Plan reduction goals. The Court concluded that "the Scoping Plan nowhere related that *statewide* level of reduction effort" (i.e., 29 percent) "to the percentage of reduction that

would or should be required from *individual projects*" and that "nothing … in CDFW's … record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy."

The Court also hinted at the need "in the near future" to consider post-2020 targets for projects with longer buildouts. Another Supreme Court case is pending, *Cleveland National Forest Foundation v. San Diego Association of Governments*, which may provide further guidance on this topic. This will be the subject of a future *AscentShare* paper.

The following statement from the decision captures the key conclusion of the Court's perception of the deficiencies in the Newhall Ranch EIR:

> *"At bottom, the EIR's deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the greenhouse gas emissions reduction effort required by the state as a whole, and attempting to use that method, without consideration of any changes or adjustments, for a purpose very different from its original design: To measure the efficiency and conservation measures incorporated in a specific land use development proposed for a specific location."*

The statement is instructive in understanding the vulnerabilities inherent in the commonly used BAU approach and informs our recommendations on potential analysis approaches, as highlighted below.

Pathways to Compliance

The Court identified "potential options" for lead agencies evaluating cumulative significance of a proposed land use development's GHG emissions in future CEQA documents, but the Court was careful to note that there was no "guarantee" that any of these would be sufficient:

> *"We do not, of course, guarantee that any of these approaches will be found to satisfy CEQA's demands as to any particular project; what follows is merely a description of potential pathways to compliance, depending on the circumstances of a given project."*

The "potential pathways to compliance" suggested by the Court include:

1 **BAU Method:**
While the Court cautioned that the Scoping Plan may not be appropriate at the project-level, a BAU-comparison method might be used to determine what level of reduction a new land use development at the proposed location must contribute to comply with statewide goals pursuant to AB 32.

The Court stated that the BAU approach is permissible in concept, but would need to be based on a substantial evidence-supported link between data in the Scoping Plan and the project at its proposed location to demonstrate consistency of a project's reductions with statewide goals. The Scoping Plan is a general, overarching document that describes the statewide approach California needs to take to achieve emission reduction goals consistent with AB 32 (i.e., reducing GHG emissions to 1990 levels by 2020). The Scoping Plan identifies actions in various sectors of the economy, such as energy, transportation, agriculture, water, waste management, natural/working lands (forestry), and buildings. It is not directed at reducing GHG emissions for specific land uses in specific locations. Therefore, there is no defined path within the structure of the Scoping Plan sectors to develop the evidence to reliably relate a specific land use development's reductions to the Scoping Plan's statewide goal, as envisioned by the Court. Notably, the Sacramento Metropolitan Air Quality Management District had previously adopted as a threshold of significance demonstrating consistency with ARB's Scoping Plan by a 21.7 percent reduction below BAU, but has rescinded this approach in light of the Newhall Ranch decision. (The 21.7 percent reduction—rather than the original Scoping Plan's 29 percent—was based on an update to the Scoping Plan adopted in 2011.)

We have explored the potential of using an evidence-based BAU approach that employs local or regional data, instead of the statewide reduction targets from the Scoping Plan. To do this, the threshold must be tailored to the project in question by using the components of local or regional GHG inventories that are relevant to the proposed project type under consideration. For example, inventories used to develop the BAU reduction target for a residential project should only include emissions relevant to this type of land use, and not, for instance, emissions from the agricultural sector. With careful tailoring to consider only relevant inventory sectors, we believe it can be feasible to develop an evidence-

based BAU comparison, if local and/or regional data are adequate. The feasibility of this approach notwithstanding, local agencies with geographically specific GHG inventories would be better served by going a step further and adopting a "qualified" GHG reduction plan or Climate Action Plan (CAP) as highlighted in option #3 below. A CAP, or similar plan, would allow for a comprehensive, holistic analysis of GHG emissions within an agency's jurisdiction from both existing and new development and would allow the agency to take advantage of CEQA streamlining provisions for project-level analyses.

2 Compliance with Regulatory Programs Designed to Reduce GHG Emissions:

The Court suggests that a lead agency could rely on demonstrating compliance with regulatory programs designed to reduce GHG emissions. The Court clarifies that a significance analysis based on compliance with such regulations only goes to impacts within the area governed by the regulations.

Under this approach, a project could examine the degree to which it complies with regulatory programs and performance standards adopted for the purpose of complying with a statewide plan for reduction of GHGs, as long as the programs and standards apply to the elements of the project that generate GHGs. Common mechanisms for compliance are the preparation of and tiering from community-wide GHG reduction plans, such as CAPs and sustainable communities strategies (SCS) described under options #3 and #4 below. This approach may have promise for pertinent activities and performance-based standards for projects that cannot rely on an adopted CAP or SCS; however, the applicability of regulatory programs to specific projects will need careful consideration and substantiation, especially if some GHG-emitting elements of projects are covered by such standards and others are not.

One regulatory program of importance that addresses emission sources associated with land use projects, but also illustrates the still evolving approach of how to appropriately rely on regulatory programs and standards, is ARB's Cap-and-Trade Program. The Cap-and-Trade Program is a key element of California's GHG reduction strategy. It sets a statewide limit on emissions from covered entities that addresses 85 percent of California's total GHG sources. It establishes a price signal for allowances to emit GHG that is needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program limit

decreases over time, so emissions produced by covered entities (e.g., power plants, petroleum refineries, cement manufacturing) would be reduced sufficiently to meet AB 32 goals. An update to the Scoping Plan (which is currently in preparation) will address the statewide target beyond 2020, and it is expected that future amendments to the Cap-and-Trade Regulation will follow suit by addressing program caps after 2020. However, as of this writing, ARB has not established links between CEQA, land use projects, and the Cap-and-Trade Program. This raises the question of whether GHG emissions from sources covered by the Cap-and-Trade Program will be reduced in accordance with State regulations or should be accounted for and reduced by local government actions at the project level. Because of this question, we feel it may be premature to conclude that the Cap-and-Trade Program provides the type of reliance on regulatory programs envisioned by the Court. Also, the Cap-and-Trade Program currently addresses 2020 emission targets and most sizeable land use projects would be built out after this date. Pending policy decisions, as well as updates to Cap-and-Trade Regulations for the post-2020 period, project-level CEQA analysis may be able to rely on compliance with the Cap-and-Trade Program as a regulatory program for covered project emissions. This approach bears watching as a potential future option for CEQA GHG analysis and significance determinations.

3 Local CAP or Other "Geographically Specific GHG Emission Reduction Plans":

The Court points out that GHG reduction plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, as long as the plan is "sufficiently detailed and adequately supported."

As discussed in the Newhall Ranch decision, determining consistency with local GHG reduction plans or CAPs that qualify under Section 15183.5 of the CEQA Guidelines may be the most effective strategy for local governments to assess the significance of GHG emissions from proposed land use developments. Many jurisdictions have not yet prepared qualifying plans. Nonetheless, such plans are becoming more commonplace to allow for a programmatic analysis of GHG emissions and are being prepared in conjunction with General Plan updates or as standalone plans. Qualified CAPs also provide a workable option for addressing post-2020 GHG emissions and resolving most issues that arise out of project-level GHG analyses raised in the Court's decision. For these reasons, Ascent believes that option #3 represents the most viable and

defensible option for local governments among the compliance pathways suggested by the Court.

4 Regional SCS:

The Court also articulates that a lead agency need not additionally analyze GHG emissions from cars and light-duty trucks in CEQA documents for certain residential, mixed use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to Senate Bill (SB) 375.

SCS consistency is a helpful approach for considering the car and light-duty truck emissions sector of projects, although, as noted by the Court, GHG emissions from other sources (e.g., building energy, water) still need evaluation. Following a qualified CAP, this option is also viable especially because it addresses a large proportion of GHG emissions from typical land use projects. Moreover, the GHG targets for individual metropolitan planning organizations (MPOs) are typically set for 2020 and 2035 (or another post-2020 year). As such, projects that can demonstrate consistency with an adopted SCS can benefit from coverage for post-2020 GHG emissions. SCS consistency, combined with a numeric threshold under option #5 for the remaining emission types, would provide a defensible CEQA analysis of all emission sources associated with a project. An example of such an approach is provided in the next section.

5 Numerical GHG Significance Thresholds:

Although noting that use of such thresholds is not required, the Court noted that the Bay Area Air Quality Management District (BAAQMD) adopted GHG significance thresholds and their validity was not under examination. The thresholds are based on compliance with AB 32 and use a "service population" GHG ratio threshold for land use projects along with a 10,000-ton annual GHG emission threshold for industrial projects.

Well substantiated and relevant numerical thresholds are commonly used as valid significance criteria. This approach has merit where the thresholds provide the substantiated linkage between a specific project and broader GHG targets. Ascent staff devised a methodology to develop a "Bright Line Threshold" for assessing the mass emissions of GHGs from land use projects for BAAQMD. The threshold, which is developed based

on the regional "land use gap" in achieving GHG reductions, can be adjusted to the State's post-2020 GHG reduction targets, once established. The BAAQMD approach defines the region's GHG reduction goal to attain a future horizon year target, compares it with the socioeconomic projections and planned land use development in the region up to that horizon year, and allocates GHG reductions to population, service population (defined as the number of residents plus the number of jobs), and/or land uses.

Bright line thresholds are especially useful for screening out smaller land use projects that are not likely to cause a considerable contribution to the impact of climate change. However, by the same token, they may unduly penalize larger projects based on size alone, especially if an accompanying metric to assess a project's GHG efficiency is not used (e.g., per capita or per service population). Ascent's recommendations for an efficiency-based approach are included in the "Greenhouse Gas Efficiency Metrics" section below.

Post-2020 Considerations

Citing to Executive Orders (EOs) S-3-05 and B-30-15, the Court cautioned that those EIRs taking a goal-consistency approach to CEQA significance may "in the near future" need to consider the project's effects on meeting emission reduction targets beyond 2020. The need for deeper, long-term reductions is supported by scientific evidence regarding the level of emissions associated with avoidance of the most serious climate change-related impacts (which has been cited as substantial evidence under CEQA). EO S-3-05 established a target for GHG emission reduction of 80 percent below 1990 levels by 2050. Also, EO B-30-15, established an interim (i.e., between 2020 and 2050) GHG reduction target of 40 percent below 1990 levels by 2030. ARB is currently working on a second update to the Scoping Plan to reflect the 2030 target established in EO B-30-15. Even though State policy for post-2020 GHG reduction is expressed in executive orders and programs, rather than legislation, CEQA impact evaluation in the context of longer term goals is advised, because the need for deeper reductions after 2020 is founded in scientific evidence. Additionally, certain regulations that are relevant to land use development will continue to be phased in after 2020 (e.g., Advanced Clean Cars, Renewables Portfolio Standard [RPS], SB 375) and result in additional GHG reductions. Thus, projects that are built out after 2020 should analyze consistency with the State's longer-term GHG reduction

goals to provide a good-faith CEQA analysis. Examples of such approaches are provided in the following section.

Ascent's Recommendations

Of the compliance pathways suggested by the Court, #3 (CAPs) and #4 (Regional SCS) represent the most viable options for the reasons explained above. Reliance on GHG reduction plans, CAPs, and SCSs may be an excellent interim strategy for cities and counties to design their own, locally driven approaches to compliance with State reduction targets and set up a streamlined process to determine the significance of a consistent project's GHG emissions under CEQA. But this approach requires that an individual project is located in an area covered by a qualifying CAP or SCS, which is not the case in many places in California. Further, based on the *CBD v. CDFW* decision, these plans must be "sufficiently detailed and adequately supported." A well-crafted GHG reduction plan compliant with the standards in the CEQA Guidelines will be important. Several jurisdictions have embarked upon or completed CAPs or similar GHG reduction plans. Ascent recently completed the City of Sacramento CAP and is preparing CAPs in San Diego County, Napa County, and other communities. Many other communities have also completed CAPs or similar GHG reduction plans, including the City of Davis and University of California. Multiple examples of such plans are available online, which is a testament to their viability as a defensible option.

In the absence of a qualified CAP and/or SCS, compliance pathway #5, well substantiated and relevant numerical GHG thresholds would be the next viable option for use as significance criteria. This approach has merit where the thresholds provide the substantiated linkage between a specific project and broader GHG targets. Below, this paper presents options for numeric thresholds for different scenarios: (1) where no qualified CAP or SCS is available (i.e., using GHG efficiency metrics); and (2) where a qualified SCS is available and a project is consistent with it (i.e., using adjusted GHG efficiency metrics).

Greenhouse Gas Efficiency Metrics

It is important to note that the Court gave a nod to use of efficiency metrics, which describe emissions on a per capita basis, per service population basis, or some other rate-oriented descriptor. The Court's

support of efficiency metrics as a superior approach was based on the recognition that California population will continue to grow, while at the same time GHG emissions will need to shrink. The Court stated:

> *"For projects, like the present residential and commercial development, which are designed to accommodate longterm growth in California's population and economic activity, this fact gives rise to an argument that a certain amount of greenhouse gas emissions is as inevitable as population growth. Under this view, a significance criterion framed in terms of efficiency is superior to a simple numerical threshold because CEQA is not intended as a population control measure."*

ARB's Scoping Plan also presents the reduction target required by AB 32 based on improved efficiency (i.e., reducing per capita emissions from 14 to 10 MT CO_2e/year by 2020).[1] Extending the concept to land use projects, a project's consistency with GHG targets established in AB 32 is assessed through use of GHG efficiency metrics (i.e., per capita GHG emissions). As new GHG targets are established, per capita GHG limits can similarly be developed.

One commonly employed approach is to describe an efficiency limit using "per service population," which refers to the sum of the number of jobs and the number of residents generated by a project. An advantage of the service population approach is its application to both residential and employment-oriented land uses. The per capita or per service population metrics represent the rates of emissions needed to achieve a fair share of the State's emission reduction mandate. The use of "fair share" in this instance indicates the GHG efficiency level that, if applied statewide or to a defined geographic area (such as an MPO region), would meet the AB 32 emissions target (or whatever target is in effect) and support efforts to reduce emissions beyond 2020. The intent of AB 32 is to accommodate population and economic growth in California, but do so in a way that achieves a lower rate of GHG emissions, as evidenced in the statement from ARB's Scoping Plan. Future targets will also need to account for population and economic growth. If projects can achieve targeted rates of emissions per the sum of residents plus jobs (i.e., service population), California can accommodate expected population growth and achieve

[1] California Air Resources Board. Climate Change Scoping Plan. December 2008. Page ES-1.

economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

This approach is consistent with #5 above from the Newhall Ranch decision. Specifically, the Court noted in the decision that the validity of the BAAQMD GHG significance thresholds was not under examination. BAAQMD uses a combination of bright line numeric and efficiency thresholds, with the efficiency thresholds based on per service population GHG emissions for land use projects.

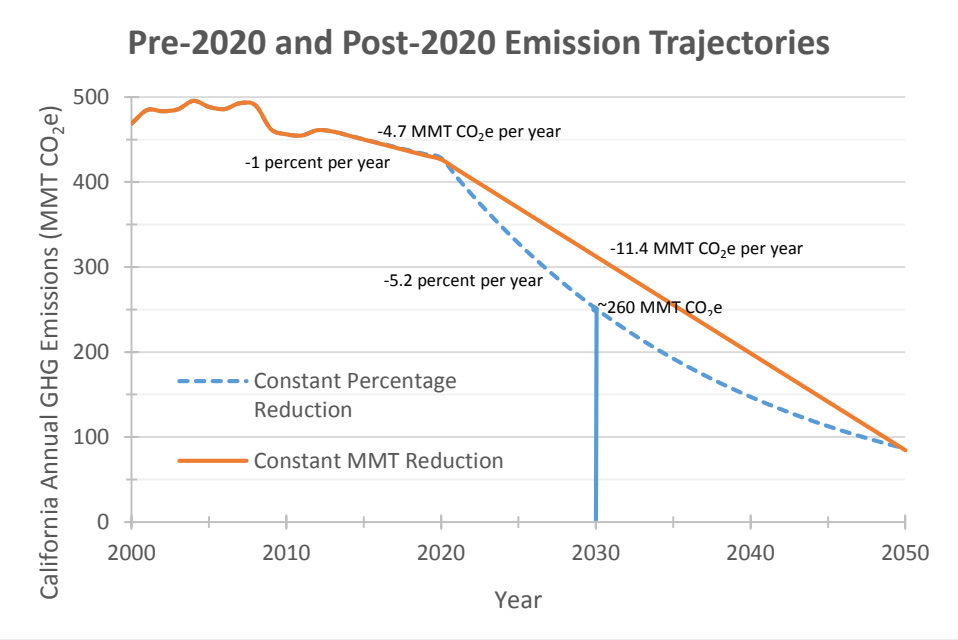
Here we present examples of GHG efficiency metrics for a hypothetical, mixed-use project based on emission rates for the land use-driven emission sectors in ARB's GHG inventory. Development of the metrics is tailored to the sectors that would accommodate projected growth (as indicated by population and employment growth), while achieving consistency with AB 32's 2020 goal (i.e., 1990 GHG emissions levels by 2020). Our illustration uses a per-service-population efficiency target for a mixed-use land development, based on the AB 32 GHG reduction target and GHG emissions inventory prepared for ARB's 2008 Scoping Plan. To develop the efficiency metric for 2020, land use-related sectors in ARB's 1990 GHG inventory are identified and separated to tailor the inventory to land use projects. This process segregates out those emission sources that would not be applicable to a specific project. For this example, a project with residential and commercial components, this would mean excluding emissions associated with industrial uses, agriculture and forestry, ships and commercial boats, aviation, and rail transport. In other words, sources that would not be included in the project's GHG emission estimates would not be included in the development of the GHG efficiency threshold either.

Examining the Scoping Plan on a California-wide basis, the land-use sector driven inventory for 1990 is divided by the population and employment projections in 2020. The efficiency approach allows lead agencies to assess whether any given project or plan would accommodate population and employment growth in a way that is consistent with the emissions limit established under AB 32. The resultant GHG efficiency metric applicable to the project would be 4.9 MT CO_2e/service population/year for 2020. Note, this example uses California-wide data and may need to be adjusted based on location, if regional or local data are adequate. The lead agency may also choose to make adjustments to reflect the individual growth characteristics projected for the project

location, provided such data are available and can be used to substantiate the adjustments.

Given that the 2020 landmark year is fast approaching, the buildout year of most new land use development projects of a reasonable size is expected to be well after the 2020. For this reason, an evaluation of potential GHG impacts in the timeframe beyond 2020 is warranted. At this time, lacking other direction, targets established by executive orders and the Scoping Plan define State policy regarding post-2020 GHG reduction goals.

Another hypothetical project scenario can be used to illustrate the development of a tailored GHG efficiency metric. The example project is scheduled to be fully built out by 2031. The year 2031 is chosen here to demonstrate the adaptability of the GHG efficiency metric to any buildout year between 2020 and 2050. This is because ARB has indicated that an average statewide GHG reduction of 5.2 percent per year between 2020 and 2050 would be necessary to achieve the 2030 and 2050 targets, as embodied in EOs B-30-15 and S-3-05, respectively.[2] The reduction trajectory necessary to stay on course to achieve GHG emission levels that are 40 percent below 1990 levels by 2030 (EO B-30-15) and 80 percent below 1990 levels by 2050 (EO S-3-05) is steeper than a linear reduction path, as illustrated in the chart below.



[2] California Air Resources Board. 2030 Target Scoping Plan Workshop Slides. (October 1, 2015). Available: http://www.arb.ca.gov/cc/scopingplan/meetings/10_1_15slides/2015slides.pdf.

Therefore, a GHG efficiency goal expressed in metric tons per service population, similar to the one developed for 2020, is estimated for 2031 to allow evaluation of the project's GHG emissions in the post-2020 scenario. The equivalent goal for 2031 computes to 2.5 MT CO_2e/service population/year. This target was estimated by applying a uniform reduction from ARB's 1990 emissions inventory and dividing the resultant value by the projected population and employment in 2031. Again, this is a statewide average that may be geographically adjusted where sufficient regional or local data are available to do so.

Analysis of project emissions at buildout is consistent with current CEQA practice and available guidance from air districts on analyzing other emissions from the project's first fully operational year.[3,4] Operational emissions for a land use development project would be highest during the first year and continue to decline due to fleet turnover to cleaner vehicles and implementation of additional regulations at the State level.

If the project's estimated GHG emissions per service population in 2020 and 2031 are less than the target metrics, the impact would be less than significant for the 2020 target year and project buildout year. The 2031 GHG efficiency metric was derived based on the reduction trajectory the State needs to maintain to achieve its 2030 and 2050 goals (average of 5.2 percent reduction per year). Therefore, if the project's emissions are determined to be in line with this trajectory, based on achievement of the project's 2031 per service population GHG emissions goal, it would not interfere with the State's long-term GHG reduction goals.

Because the efficiency threshold is tailored to an individual project, the calculated threshold could differ from project to project even within the same jurisdiction or air district. The threshold would differ based on land uses proposed and the project buildout year. Another important consideration is the level of detail provided in the ARB inventory and the degree to which it can be appropriately used at a sub-sector level. For

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[3] Sacramento Metropolitan Air Quality Management District. 2014 (November). *Sacramento Metropolitan Air Quality Management CEQA Guide. Chapter 6 | Greenhouse Gas Emissions.* Available at: http://www.airquality.org/ceqa/cequguideupdate/Ch6ghgFINAL.pdf and http://www.airquality.org/ceqa/ceqaguideupdate.shtml. Page 6-5.

[4] Bay Area Air Quality Management District. 2011. *California Environmental Quality Act Air Quality Guidelines*. Available http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/baaqmd-ceqa-guidelines_final_may-2012.pdf?la=en. Updated May 2012. Page 4-6.

example, the electricity sector is not broken down by end-use (e.g., residential, commercial, industrial) in the inventory. As such, attempts to parse ARB electricity sector data into sub-sectors and apply them to a specific project may lead to assumptions that are not substantiated. It is worth weighing the value of post-processing ARB data for a project-specific analysis with the risk of introducing additional uncertainty into the threshold development process, which may be counter-productive. Any adjustments to the ARB inventory should be based on real data using a bottom-up approach (i.e., using actual activity/consumption data for a specific land use type in the applicable air district or jurisdiction). For example, if the proportion of heavy industrial uses and their associated electricity consumption for the jurisdiction or air district where the project is located is available, it may be used to adjust the appropriate sector in the inventory. Local data, where available, may be used to develop the GHG efficiency metrics.

Adjusted Greenhouse Gas Efficiency Metrics for SCS-Compliant Projects

CEQA allows the exclusion of emissions from cars and light-duty trucks from the quantitative analysis for projects that are compliant with an applicable SCS because these emissions have already been accounted in the SCS CEQA analysis. California Public Resources Code, Section 21159.28(a) is paraphrased here. The section states that if a residential or mixed-use residential project is consistent with the use designation, density, building intensity, and applicable policies specified for the SCS project area, then any findings or other determinations for the CEQA document prepared for the project pursuant to this division shall not be required to assess again any project-specific or cumulative GHG impacts from cars and light-duty truck trips generated by the project or impacts on the regional transportation network. This provision was reinforced by the Court in the Newhall Ranch decision, stating that environmental documentation "for certain residential, mixed-use, and transit-priority projects that are consistent with the limits and policies specified in an applicable SCS need not additional analyze greenhouse gas emissions form cars and light-duty trucks."

A GHG efficiency metric may be formulated to evaluate the efficiency of the remaining emissions associated with the SCS-consistent project (e.g., construction, building natural gas use, lost carbon sequestration, heavy-duty vehicles, building electricity use, solid waste, water, and wastewater). For instance, the GHG efficiency target examples described above (4.9 MT CO_2e/service population/year for 2020 and 2.5 MT

CO_2e/service population/year for 2031) apply to all emission types from land use development projects, including both light-duty mobile sources and non-light-duty mobile sources. The adjusted GHG efficiency target is developed to apply to emission rates for the land use-driven sectors that are in ARB's statewide GHG inventory, excluding light-duty vehicles, because the light-duty mobile sources are analyzed for consistency with the applicable SCS. Estimated GHG efficiency metrics applicable to a hypothetical, fictitious example are shown in the table below.

Greenhouse Gas Efficiency Metrics for a Fictitious Mixed-Use Project

Year	2020		2031	
	Land Use Inventory	Land Use Inventory without Cars and Light-Duty Trucks	Land Use Inventory	Land Use Inventory without Cars and Light-Duty Trucks
Land Use-Driven Emissions (MMT CO_2e)	287	178	159	99
Population	40,619,346		44,406,080	
Employment	18,511,200		20,426,797	
GHG Efficiency Target (metric tons per service population per year)	4.9	3.0	2.5	1.5

Notes: MMT = million metric tons; CO_2e = carbon dioxide equivalent; IPCC = Intergovernmental Panel on Climate Change

Source:
California Air Resources Board. California Greenhouse Gas Inventory for 1990 — by Sector and Activity (Land Use-driven sectors only) MMT CO_2e - (based upon IPCC Second Assessment Report's Global Warming Potentials)

California Department of Finance Demographic Research Unit Report P-2 "State and County Population Projections by Race/Ethnicity and Age (5-year groups)" 2010 through 2060 (as of July 1). Published 12/15/2014

California Department of Finance Employment Development Department. Industry Employment Projections Labor Market Information Division 2010-2020 (Published 5/23/2012) and 2012-2022 (Published 9/19/2014)

Employment data for interim years is estimated based on proportionality with population trends based on historical data.

Consistent global warming potential values should be used to estimate the greenhouse gas efficiency target metric and project emissions. The example shown here is based on global warming potentials from IPCC's Second Assessment Report.

It should be noted that an adjusted GHG efficiency target may not be more achievable for certain projects. For example, a transit-oriented development with low trip distances would have a lower proportion of transportation emissions, thus finding it more challenging to meet an adjusted target that removes car and light-duty truck emissions. The unique circumstances of the project should be taken into account when choosing the metric to use and the unadjusted GHG efficiency metric may be more applicable in some cases, even if a project is consistent with the SCS.

An important consideration in using this approach is the process for assessing consistency with an adopted SCS. Certain MPOs provide a framework for assessing project consistency with the SCS. For example, the Sacramento Area Council of Governments (SACOG) provides a consistency worksheet that includes a step-by-step process for consistency determination. SACOG states that for the purposes of determining SCS consistency, the policies of the Metropolitan Transportation Plan (MTP)/SCS are embedded in the metrics and growth forecast assumptions of the MTP/SCS. Projects consistent with the growth forecast of the MTP/SCS, are deemed consistent with the MTP/SCS and its policies. Other MPOs may not have this process in place and the responsibility rests with the lead agency to make the determination. The SCS consistency question must be considered carefully to avoid setting a low bar for such analyses.

Existing vs. New Development

The numeric thresholds shown in the fictitious example above are based on tailoring the threshold to an individual project. As such, the calculations inherently lead to new development providing a larger contribution to the State's goals than they would if the entire inventory was used without removing non-land use-oriented sectors. Once built, the project would become part of existing development within the State that would be required to comply with a variety of future State or federal GHG reduction measures intended to target existing development to the extent they are legally applicable, such as a more stringent renewable energy portfolio. Additionally, the project's operational emissions would be reduced as additional regulations for GHG emissions are implemented by ARB and other State agencies. For example, the project's transportation emissions would be expected to decline as vehicle efficiency standards are implemented beyond the Advanced Clean Cars program or as the Low Carbon Fuel Standard is strengthened to further decrease the carbon intensity of vehicle fuels. Therefore, project emissions would continue to decline beyond the buildout year in response to regulations that would indirectly decrease project emissions.

Closing Thoughts

The options presented herein represent good-faith approaches for consideration when assessing GHG emissions in CEQA analyses. As noted previously, CEQA approaches for GHG analysis are rapidly evolving and other valid approaches are likely to emerge. The upcoming Scoping Plan update may provide additional clarification about these analyses; the Cap-and-Trade Program is expected to be extended; and GHG reduction targets for SCSs are being updated in many jurisdictions. The State Legislature, Governor, and the Courts may change the landscape again with regard to GHG reduction targets and evaluation approaches and requirements. Regulatory programs, which to date have been effective in helping meet statewide AB 32 goals, could play an increasing role in achieving future GHG targets. Evolution of analytical methods will continue.

The quantitative approach outlined in this paper attempts to address the concern raised by the Court in the Newhall Ranch decision of tailoring statewide data to relevant land uses included in a project. In the absence of an adopted CAP and/or SCS, a lead agency may be best served by using a GHG efficiency metric, if adequate local and/or regional data are available. Where such data are not available, a similar metric using statewide data may be appropriate, but carries a risk, because it is not geographically tailored, an issue in the Newhall Ranch decision. Therefore, the questions of whether and/or how to use statewide data in the analysis of a local project's GHG emissions warrants further thinking. Lead agencies and practitioners should examine the specific attributes of a proposed project and availability and adequacy of local and/or regional data before relying on statewide data.

Questions

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Please note that the above discussion reflects the opinions of experienced environmental planners from Ascent Environmental, Inc. We do not practice law nor give legal advice, but rather apply our CEQA experience with the goal of offering helpful practice information. Please consult with an attorney for counsel regarding the CEQA compliance requirements of your projects.