



NATURAL RESOURCES DEFENSE COUNCIL  
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California Air Resources Board Staff  
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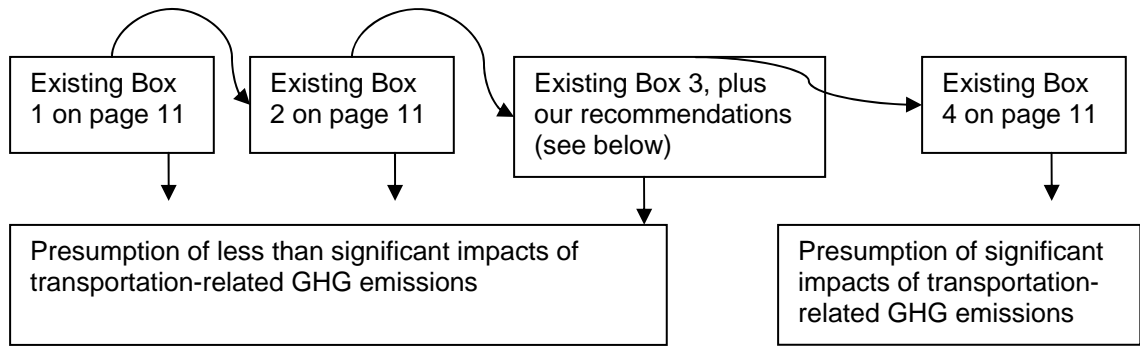
Re: Residential and Commercial Projects in "Preliminary Draft Staff Proposal:  
Recommended Approaches for Setting Interim Significance Thresholds under the  
California Environmental Quality Act"

Dear CARB Staff:

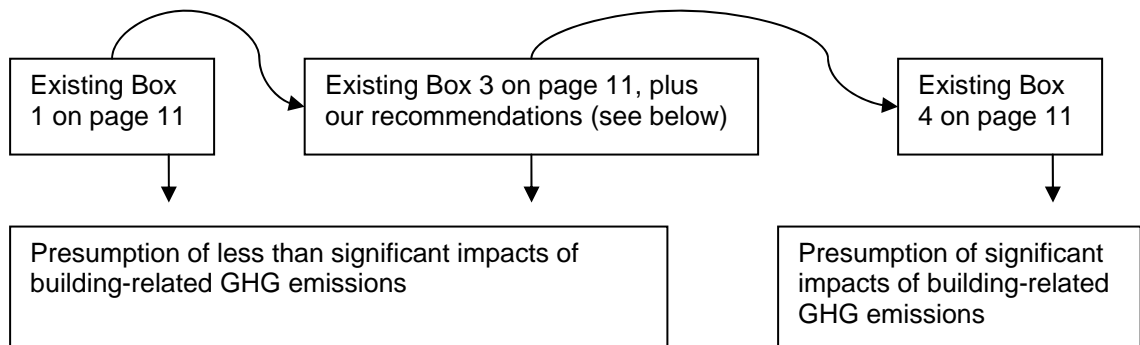
We appreciate the opportunity to comment on your *Preliminary Draft Staff Proposal on Recommended Approaches for Setting Interim Significance Thresholds under the California Environmental Quality Act*. Thank you for taking leadership on this important issue: local planners and facility owners across the state are seeking guidance on the significance of GHG emissions under CEQA, and recommendations from CARB will help answer some of their questions. We support the overall recommended approach of using performance standards in combination with a numerical threshold. We offer the following suggestions on how to improve the approach for residential and commercial projects, and are concurrently submitting comments on the general approach and on the approach for industrial projects.

## **I. RESIDENTIAL AND COMMERCIAL PROJECTS: OVERVIEW**

There are two distinct sources of GHG emissions from residential and commercial projects: those related to transportation, and those related to buildings. In the current Draft Proposal, these two are rolled into one. Box 2 on page 11 addresses only transportation-related GHG emissions, while Box 3 attempts to address both. We recommend that these be separated into two separate considerations under CEQA, with separate thresholds of significance. This would mean that if a new residential or commercial development were in Box 2 on page 11, it would achieve a presumption of less than significant impact for transportation-related GHG emissions, but it would still need to conduct a separate analysis of its building-related GHG emissions. Roughly, our recommendation would look like this:



AND



However, Box 3 for transportation-related GHG emissions should be an interim measure. After 2015, the transportation-related GHG analysis would consist only of the existing Boxes 1, 2, and 4.

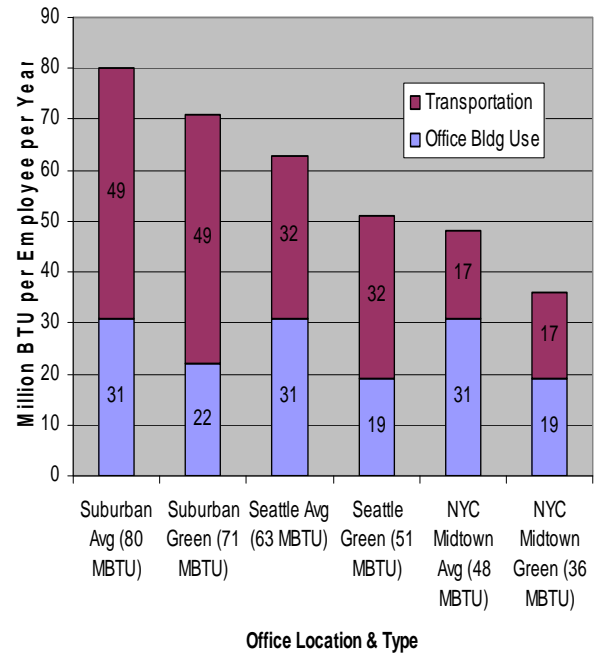
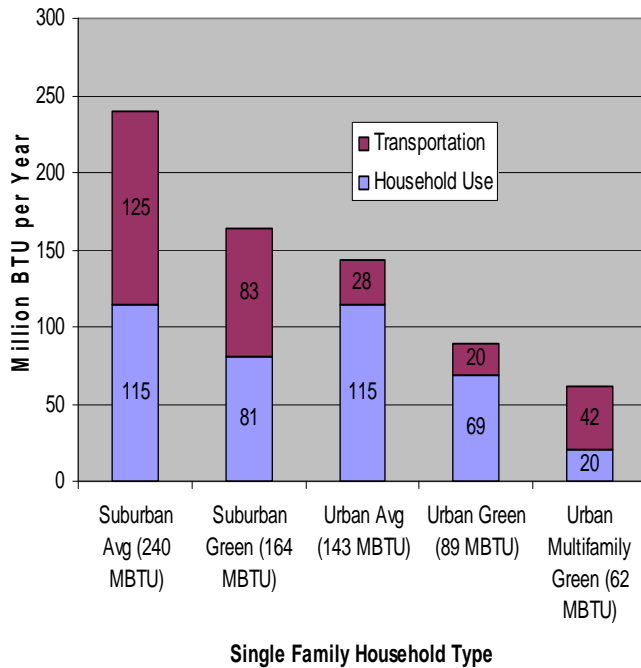
## II. TRANSPORTATION-RELATED GHG EMISSIONS

### A. Box 2: Regional is the appropriate tool through which to address transportation-related GHG emissions from residential and commercial projects.

NRDC supports staff's recommendation to analyze GHG impacts from residential and commercial development at the regional or General Plan level. Both CARB's Proposed Scoping Plan and SB375 testify to the primacy of regional planning as the tool to measure and mitigate transportation-related GHG emissions from land use. NRDC not only believes this is the most accurate approach to analyzing transportation-related GHG emissions under CEQA, we also believe that environmental review at the plan level, combined with tiering for individual projects, is the preferred method from the perspective of the staff capacity of cities and counties.

As the following graphs show for residential and commercial projects, transportation energy is a significant part of a project's entire energy impact. Whether a project is in the right location (e.g. whether its transportation-related GHGs are low) can

be more important than whether the project itself is a green building or not.<sup>1</sup> Performance standards that contend to measure transportation-related GHGs only using project-level information will be inaccurate—project design and location must be looked at together.

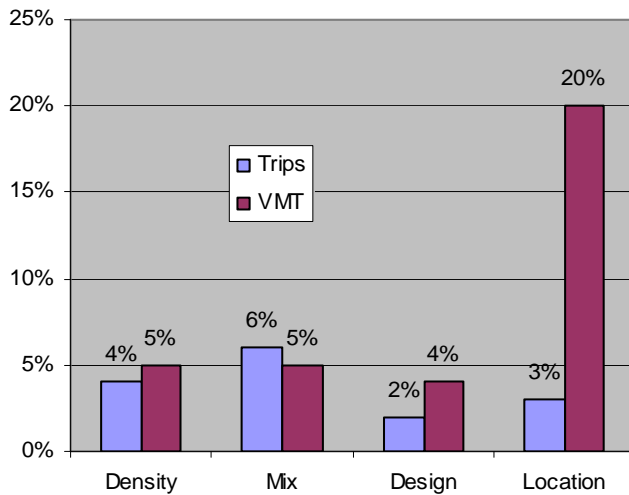


Research has shown that the location of a proposed development is far and away the strongest determiner of individual travel behavior (i.e. overall neighborhood density; proximity to existing transit service; regional accessibility)<sup>2</sup>. As the chart below illustrates, a doubling of each of the included factors would impact vehicle trips or VMT as indicated by the percentage value. For example, doubling a project's density decreases VMT by 5%, while doubling its regional accessibility (location) factor reduces VMT by 20%. Any performance standard for transportation-related GHGs from an individual project must therefore reflect a project's larger regional context and surrounding land uses.

<sup>1</sup> Source: Jonathan Rose Companies, LLC.

[http://www.seattle.gov/DPD/stellent/groups/pan/@pan/@sustainableblding/documents/web\\_informational/dpdp\\_018337.pdf](http://www.seattle.gov/DPD/stellent/groups/pan/@pan/@sustainableblding/documents/web_informational/dpdp_018337.pdf) Accessed: Nov 3, 2008.

<sup>2</sup> Ewing, Reid et al *Growing Cooler: The Evidence on Urban Development and Climate Change*, Urban Land Institute, 2008.



Source: Ewing, Reid, Growing Cooler, ULI, 2007

Accordingly, NRDC believes that the best way to address GHG emissions from land use and transportation is through regional planning. SB375 will provide the necessary framework to align land use planning and transportation investment with California's climate goals. However, SB375 requires significant plan preparation on the regional level, and widespread adoption and utilization of the bill's required Sustainable Communities Strategies is not likely until at least 2015. It is essential, therefore, that CEQA serve as an effective tool to measure the environmental impact of land use-related GHGs and lay out strategies to avoid and mitigate them.

Until California regions adopt their Sustainable Community Strategies, NRDC sees the requirements in Box 3 as interim *measures* to define low carbon development. A project-by-project evaluation of GHG emissions will consistently be inferior to SB375's regional planning approach. Project-level evaluation also introduces greater uncertainty for project applicants and more work for lead agency staff.

**B. Box 3: Performance standards and a per-capita numerical threshold should serve as an interim threshold until regional plans are in effect.**

As mentioned above, we support the use of performance standards in combination with a numerical threshold as an interim threshold until regional plans are in place. Consistent with the intent of SB375, after 2015 the transportation-related GHG emissions impacts of all development in California should be accommodated within Box 2 of the staff proposal. Interim performance measures in Box 3 should be designed with the intention of "pushing" projects into Box 2, while also ensuring that in the interim period low-carbon projects are not burdened with unnecessary or redundant environmental review. NRDC recommends below an approach to both the performance standards and the "x" threshold for commercial and residential projects to achieve these goals.

***1. Box 3, Part (a): Project Performance Standards***

NRDC recommends three specific standards for staff consideration: the Transit Priority Project and Sustainable Communities Project Criteria from SB375 and LEED-Neighborhood Development.

*a) Using SB375 Transit Priority Project or Sustainable  
Communities Project Criteria as a Performance Standards*

Even before regions complete and get approval for the Sustainable Communities Strategies required by SB375, projects that meet its Transit Priority or Sustainable Communities Project criteria (California Public Resource Code Chap. 4.2 § 21155.1) could be presumed to have a less than significant impact related to climate change. In fact, SB375 already grants these projects significant CEQA streamlining with regards to GHGs.

Transit Priority and Sustainable Communities Projects are required to meet a number of criteria that correlate strongly with low transportation-related GHG emissions, such as minimum densities, infill sites and proximity to public transportation. Other prerequisites exclude common “greenfield” or “leapfrog” development, which correlates with higher transportation related GHGs (among these prerequisites are the exclusion of projects in wetlands or in areas not served by existing utilities).

A project able to meet either of these criteria, while meeting the performance standards in the other sectors and the threshold emissions level, could earn a presumption of less than significant impacts for GHGs under CEQA.

*b) Using LEED-ND as a Performance Standard*

NRDC, along with the US Green Building Council and the Congress for the New Urbanism, has designed LEED-Neighborhood Development (LEED-ND), the first comprehensive attempt to describe and quantify the benefits and character of sustainable, low carbon development.<sup>3</sup> LEED-ND examines projects for environmental performance in three general areas: the location of the proposed project (Smart Location and Linkage), the urban design elements of the project itself (Neighborhood Pattern and Development) and the utilization of green building, Low Impact Development and other technologies (Green Infrastructure and Buildings). Projects must meet prerequisites in each of the three areas and can earn an accreditation score based on meeting certain criteria for credits.

LEED-ND prerequisites could be used as the performance standard for transportation-related GHGs. A project would satisfy the performance standard by meeting all prerequisites under the Smart Location and Linkage and Neighborhood

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<sup>3</sup> USGBC, “Pilot Version, LEED for Neighborhood Development Rating System,” 2008. Available: <http://www.usgbc.org/ShowFile.aspx?DocumentID=2845>

Pattern and Development sections. These prerequisites reflect many of the regional and project-level characteristics that correlate with low vehicle-related GHG emissions, and are similar to many of the prerequisites noted above for SB375 projects. VMT and GHG emissions from current LEED-ND certified projects in California are 15% to 25% below average.

A project meeting the Smart Location and Linkage prerequisites would be in a “smart” location (infill site, contiguous with existing development served by existing utilizes and with adequate transit access) that correlates with lower transportation-related GHGs. The project would also not be in a location associated with sprawl and high transportation-related GHGs (such as recently converted agricultural land, impacting wetlands or significant habitat, or beyond the service reach of existing utilities).

A project meeting the Neighborhood Pattern and Design prerequisites would include urban design elements that accommodate all modes of travel (not just driving) and encourage walking, biking and transit use. A project would need to be a “connected and open community” (minimum street densities and connectivity; no gated communities); and be compact, with minimum densities and transit service, and a mix of uses.

Projects that meet these transportation-related performance standards, while meeting the performance standards in the other sectors and the threshold emissions level, could earn a presumption of less than significant impacts for GHGs under CEQA. Criterion Planners, a Portland, Oregon-based planning consultancy working in partnership with the USGBC and NRDC, has created a GHG measurement tool for LEED-ND prerequisites and credits which could be applied to CEQA analysis.

## ***2. Box 3, Part (b): Project Emissions Threshold***

For the purposes of residential and commercial development, NRDC recommends an approach different than the bulk threshold recommended for industrial projects. A threshold for residential and commercial projects must be a per capita, or per square foot, efficiency measure. A project’s transportation-related environmental performance is not a factor of its size alone, but rather of the emissions generated per resident, customer or worker. A 70 unit mixed-use development near transit and employment does not have the same impact as a 70 unit subdivision in newly converted farmland miles from an employment center. CEQA thresholds should reflect this reality.

There are a number of approaches to setting the residential emissions threshold. In each case, a project sponsor would be required to show that the average household VMT generated by their project would fall below the limit to meet the requirement in part b):

- **Executive Order Standard:** 80% of 1990 Average VMT per Capita (adjusted for population growth)<sup>4</sup>: Governor Schwarzenegger's Executive Order S-3-05 required California to reduce its greenhouse gas emissions to 80% below 1990 levels. Any project that could demonstrate a per capita VMT that was 80% below California per capita VMT in 1990 would meet the threshold.
- **AB32 Standard:** 1990 Average VMT per Capita (adjusted for population growth)<sup>5</sup>: AB32, the Global Warming Solutions Act, calls for a reduction in total greenhouse gas emissions to 1990 levels by 2020. Any project that could demonstrate a per capita VMT at or below California per capita VMT in 1990 would meet the threshold
- **Growing Cooler Standard:** The Urban Land Institute's Growing Cooler<sup>6</sup> report—the definitive work on the relationship between urban form and climate change—concludes that residents of compact development drive 30% less than residents of typical sprawl development. Accordingly, any project that could demonstrate a per capita VMT at or below 30% of current per capita California VMT would meet the threshold.

NRDC recommends a similar approach to analyzing transportation-related emissions from commercial development. In practice, square footage is used as the metric to account for employee, customer, and supplier trips in commercial development. Since Growing Cooler only analyzes residential land uses, NRDC recommends utilizing only the first two standards from the list above (the Executive Order Standard or the AB32 Standard)

Unlike residential development, a wide array of building and business types and land uses are classified as “commercial.” Office buildings, retail establishments and warehouses are all considered commercial, but each has significantly different trip generation profiles. Office uses may have many employees per square foot, while retail establishments' transportation impacts come mainly from their customers. Warehouses have very few employees per square foot, but significant transportation emissions from delivery of goods. Even within land use types there is considerable variation: an office building in San Francisco's Financial District will have a different trip profile than an office park in Irvine. Any determination of a transportation-related threshold must take into account these differences.

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<sup>4</sup> In order to adjust for population growth, CARB would need to take total LDV VMT from 1990, divide by projected California population in 2050, and 80% of that number would be the threshold.

<sup>5</sup> In order to adjust for population growth, CARB would need to use total LDV VMT from 1990, divide by projected California population in 2020, and that would be the per capita threshold.

<sup>6</sup> Ewing, Reid et al *Growing Cooler: The Evidence on Urban Development and Climate Change*, Urban Land Institute, 2008.

### **III. BUILDING-RELATED GHG EMISSIONS**

It is unfortunate that this effort not coincide with the development of the California Green Building Code. Were the Green Building Code fully developed, it would be convenient and effective for CARB to simply reference the most stringent version of that code as sufficient to reduce any significant greenhouse gas emissions from the commercial and residential buildings sector. NRDC suggests that CARB work with the Building Standards Commission (BSC) and other state agencies in the upcoming development of the Green Building Code. Perhaps CARB could suggest a greenhouse gas reduction target to the Building Standards Commission, beneath which a given project would pose no significant environmental threat. Using this target the BSC and other state agencies would have clear direction for the development of the Green Building Code and the CEQA guidance could simply reference these standards.

Until the Green Building Code is complete, NRDC supports the concept to produce performance-based standards for the greenhouse gas intensive components of buildings; Energy, Water, Waste and Transportation. These standards should be designed to reduce a given project's greenhouse gas emissions as much as is feasible.

#### **A. Recommendations for performance-based standards for energy-efficiency.**

NRDC supports staff's recommendations of Tier II efficiency requirements for the performance-based standard for energy efficiency. Considering the administrative burden of developing a new set of energy efficiency standards, CARB should focus on available and effective standards. Furthermore, in order to achieve the greatest feasible reductions from commercial and residential buildings, the standards selected should be as stringent as possible. For these two reasons, availability and effectiveness, NRDC supports Tier II requirements as adequate performance-based standards for energy efficiency.

As the Energy Commission revises the energy code over the coming years this standard will become increasingly stringent, pushing all buildings in the state towards zero-net energy and zero-carbon operation. As the process moves forward, NRDC suggests that CARB re-evaluate these standards to avoid conflict with the Energy Code. In other words, if the Energy Code were to require zero-energy buildings, this guidance should not require buildings to be 30% more efficient than zero.

#### **B. Recommendations for performance-based standards for water.**

Water use accounts for a tremendous amount of energy use in California, and that energy use is results in GHG emissions. Accordingly, it is appropriate to account for water-related energy use and include a performance standard for water use in these significance thresholds under CEQA. We encourage CARB to require that developers:

- document the energy needed to deliver water to the project, and to treat wastewater from the project, in the assessment of a building's GHG performance, and



- reduce energy use and related GHG by maximizing water efficiency and reliance on less energy intensive sources of supply, such as recycled water or captured stormwater.

In many areas of California, water is conveyed over significant distances, which increases the energy required for water use. Thus, the source of water supply for the project will be a large factor in determining the energy intensity of the project's water supply.

CARB can draw from LEED 2009, and EPA's WaterSense New Homes criteria to develop a performance threshold for water. However, the EPA WaterSense specifications for new homes have not yet been finalized, and the LEED program has significant shortcomings in its treatment of water. Accordingly, we have attached NRDC's comments and recommendations to WaterSense and to the Green Building Council as to how those programs could be strengthened, and we urge CARB to adopt these modifications before relying upon the LEED or WaterSense approach.

#### **IV. CONCLUSION**

We support CARB's proposed approach of using a combination of regional planning, performance standards, and numerical thresholds. We urge CARB to separate transportation-related emissions from building-related emissions. We also urge CARB to make clear that Box 3 (performance standards plus a numerical threshold) for transportation-related emissions is merely an interim measure until regional plans come into effect.

Sincerely,



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