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Ms. Mary Nichols
Chairperson
California Air Resources Board
1001 "I" Street
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Dear Ms. Nichols:

AB 32 is a significant piece of legislation to the future of California and Chevron appreciates the deliberate and thoughtful approach taken by the ARB staff. We thank you for the opportunity to provide comments on the ARB's draft Plan ("Plan") released on June 26th. The Plan has correctly embraced the concept of a mixed policy approach to greenhouse gas (GHG) reduction by recognizing the benefits of using a Cap &Trade (C&T) program for stationary sources while applying direct measures for sectors where such an approach is more effective. To take a leadership role in comprehensive GHG reduction policies California must establish a program that is credible, viable and workable, by selecting the most cost-effective set of policies. To do so, we believe that ARB should make substantial changes to the Plan by minimizing direct measures on sources covered by the C&T program, expanding the offsets program and clarifying the C&T design elements as early as possible. Specifically, Chevron supports the following changes to the Plan:

- Transportation fuels should be kept outside of the C&T program in order to drive innovation and ensure efficiency in fuels markets.
- Allowance allocation must recognize prior investments in California by minimizing auctioning that penalizes California facilities that have made a substantial investment in energy efficiency.
- ARB should take a more balanced approach to interpreting AB 32 implementation criteria by providing equal focus on cost containment mechanisms, cost-effectiveness and technological feasibility, as well as co-benefits.
- To avoid leakage which will undercut the efficacy of the program from both environmental and socio-economic perspectives, ARB should avoid:
  - Direct measures within sectors covered by the cap-and trade.
  - Limits on offsets, including quantitative and geographic limits.
  - Auctions, particularly in the early years of the program.

We also encourage CARB to develop its program in such a way that it will be consistent with a federal program when one is ultimately developed. This will ensure that California is not placed at a competitive disadvantage.

We look forward to the opportunity to continue to work with the ARB in developing the final Plan before its release to the public in October.

While we agree with direct measures in the transportation sector, we oppose the inclusion of transportation fuels in the C&T program

Chevron is extremely concerned with including transportation fuels in a broad cap-and-trade program. We believe that ARB's approach of pursuing separate measures in the transportation sector, such as the Low Carbon Fuel Standard (LCFS), is the correct approach for the AB 32 program.

- This approach provides the correct incentives for innovation and the development of advanced alternative fuels which California will need to meet the objectives of AB 32. It also ensures that this sector is not subject to overlapping, duplicative or conflicting requirements.
- Including fuels in a cap-and-trade program in addition to the LCFS will raise the cost of transportation fuels with no guarantee of carbon emissions reductions. Instead, it will lead to either rationing of fuels or a de facto tax on fuels in the state, particularly if the program is too ambitious. Studies show that carbon reductions using current technology are more expensive for the transportation sector relative to other industry sectors because the technology required to meaningfully reduce the carbon footprint of transportation fuels is simply not yet available. [1]
- Trading carbon credits between transportation sector fuels and other industrial sectors is unprecedented. Subjecting fuels to carbon market volatility could lead to fuel price volatility and supply issues including possible disruptions. For example, the EU-ETS has not included transportation fuels in its cap-and-trade program. The transportation and electric power sectors are subject to very different market forces and forms of regulation.

The Scoping Plan considers including transportation fuels in the C&T program later in the implementation period. There are no additional benefits to including transportation fuels in the cap until low-carbon transportation fuels (e.g., advanced biofuels) are abundant and competitively priced relative to gasoline, which is not expected until 2030, which is a decade after the completion of the AB 32 program.[2] California should minimize the risk of causing unintended constraints on supply and potential rationing of transportation fuels. In addition to keeping fuels out of the cap and trade program, this will require careful design of the LCFS to drive the development of truly advanced low carbon fuels and will include technology reviews that can track and assess the progress of advanced fuel technology.

ARB Should Maximize the Cost Effectiveness of its C&T Program

California can ensure its C&T program is based on the most cost-effective set of policies. However, four policies in particular that are identified in the Plan indicate that ARB may be choosing to make the program less cost-effective. In particular, the Plan should avoid:

- Direct measures within sectors covered by the cap-and trade
- Limits on offsets, including quantitative and geographic limits
- Auctions, particularly in the early years of the program.
- Exclusion of cost containment mechanisms (e.g., safety valves, banking of credits)

Each of these policies will lead to leakage, which will make the program adopted in California sub-optimal from both an environmental and socio-economic perspective. The consequence of incomplete decision-making in program design has, in the past, been very expensive for California's consumers. The following sections seek to highlight areas where additional deliberation is necessary to avoid expensive policy choices and to ensure the program is the least cost to Californians and the state's economy.

The public needs to understand how the program was designed to minimize the costs they will face. ARB should provide information to the public on how the program has been designed to be as cost-effective as possible, including clear explanations of the various risk/benefits, tradeoffs and choices. This will help consumers understand the costs of the program to them directly.

[1] Energy Information Administration Report #SR/OIAF/2008-01 (April 2008) Energy Market and Economic Impacts of S. 2191, the Lieberman-Warner Climate Security Act of 2007.
[2] Energy Information Administration Report #SR-OIAF/2007-04 (August 2007) Energy Market and Economic Impacts of S.280, the Climate Stewardship and Innovation Act of 2007.

Avoid Direct Measures in C&T Program Sectors

It is critical that ARB minimize additional mandatory measures for industries in the C&T program. In developing the Plan, ARB has already examined each industrial sector's ability to reduce GHG's and concluded that a 35 MMTCO2e C&T program is appropriately sized. These findings were shared during public meetings during the month of March. The findings in both the oil and gas production sector and refining sector, demonstrate that many of the possible direct regulations ARB could consider for the sector either depend on unproven and untested technologies or generate a very small amount of emission reductions. By contrast, the C&T program will incent facilities to look for emissions reductions in their facilities and try new technologies that are appropriate for their facility's specific configuration. Direct regulation will not have the ability to enhance these actions, and will instead undercut these efforts. Imposing other mandatory regulations on sources already covered by a cap does not achieve more emission reductions; it just redistributes reductions among sectors.[3] Our concern was heightened in this regard by the C&T appendix section, in which ARB notes, "Participating in a C&T program will not excuse facilities from obligations imposed on them by other measures adopted under AB 32. Rather reductions achieved through those other measures will result in reduced emissions and the need for fewer allowances to comply with the C&T program".[4] If we understand this point correctly, ARB believes that stationary sources should have direct regulations on top of the C&T regulations in order to reduce emissions.

ARB should minimize volatility in the carbon market through proper design. As currently drafted, ARB could add new sectors or facilities to the C&T portion of the program at any time. New sectors should only be added at the beginning of a compliance period. ARB should not arbitrarily place sectors into the C&T program off-cycle as such an addition would create market volatility.

Offsets are Necessary to Control Costs and Ensure GHG Reductions

The ARB's proposal to limit the number and geographic location of offset credits will significantly and unnecessarily raise the cost of carbon allowances. Geographically and quantitatively unlimited offset credits are critical to a successful C&T program. According to economic studies on climate change programs, including a study completed by the Environmental Protection Agency,[5] limiting the availability of credits from offset projects increases allowance prices. An analysis conducted by Charles Rivers Associates presented to the ARB on April 4, 2008 demonstrated the significant economic benefits to the California economy by keeping the offsets market open, such as the avoided loss of 250,000 or more jobs in the state.[6] This is particularly important in trade exposed industries, where leakage— not only to other non-WCI states but also internationally— will be high if costs are not minimized. Leakage will undercut the environmental efficacy of the program.

If ARB's goal is to set an artificially high market price for offsets through discounting or limiting availability of offsets, we believe that such an approach is misguided. Such an approach is risky, particularly should California experience a negative impact on the state's economy which brings into question the viability of the program. Should the overall market collapse from participants unsuccessfully seeking to find new projects or sufficient credits to continue production in the state, the ARB will run the risk of having to keep the market liquid. The better approach is to link upfront with an existing market, particularly the Clean Development Mechanism (CDM) to ensure credible, verifiable and real offsets are available to market participants. Without broad linkages, the program runs the risk of having too limited a supply of offsets, leaving market participants and consumers facing the results of a high cost program.

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[3] Judson Jaffe, Analysis Group, Presentation to CCEEB Summer Issues Seminar. An Economic Perspective on the Effects of Blending a Cap-and-Trade Program with Other Mandatory Requirements. July 24, 2007.

[4] Judson Jaffe, Analysis Group, Presentation to CCEEB Summer Issues Seminar. An Economic Perspective on the Effects of Blending a Cap-and-Trade Program with Other Mandatory Requirements. July 24, 2007.
Air Resources Board, Climate Change Scoping Plan Appendices. Page C-15.

[5] Environmental Protection Agency (March 14, 2008) EPA Analysis of the Lieberman-Warner Climate Security Act of 2008.

[6] Charles Rivers Associates' testimony to CARB on behalf of Chevron. Role of Offsets and AB 32. April 4, 2008.

That is why Chevron recommends ARB accept the well-recognized Certified Emissions Reduction (CER) credits, generated through the CDM process to link the California program with the global market. We believe ARB should accept CERs for compliance, and accept CDM project types and methodologies for new projects in California. Incorporating the CDM process provides a centralized way to review methodologies, verify and certify projects and quantify reductions. This "approved" set of eligible project types and protocols prior to the program launch will provide certainty, enable the market to develop a pipeline of offset projects, and result in greater GHG reductions in the early years.

Offsets are Enforceable by ARB

During public workshops, ARB staff has expressed concern about the ability of ARB to effectively enforce compliance of entities using CER credits. Creating and verifying credits under these programs is sufficiently rigorous that they should be able to withstand ARB concerns regarding the AB 32 emission reduction criteria for credits used in California -- real, permanent, enforceable, quantifiable and additional. These mechanisms provide ample opportunities for public comment, and require that the project proponent and approving entity describe how it responded to those comments. ARB can easily provide an opportunity for the public to review and comment on the development of these credits by adding UNFCCC materials to ARB's Climate Change web pages, and using ARB's list serve to disseminate announcements of comment opportunities. Additionally, California's registry would need to link and communicate with the CDM Registry.

CER projects include a monitoring plan, and the credits can be reduced or disallowed by the CDM Executive Board if monitoring shows that the anticipated reduction has not been achieved or the pertinent criteria are not satisfied. This is adequate enforcement of the reduction, even if it is not directly enforced by ARB. The CDM Executive Board maintains a public registry of all credits established under the CDM program. This registry assures that credits are not double counted or otherwise misused. With these types of protections in place, and the opportunity for ARB to take its own steps to increase the public awareness of these credits in California, CERs will have at least the level of reliability as any credits created in California under any reasonable AB 32 approach, and will certainly meet the AB 32 criteria. Consequently, the issue of interpreting the phrase "enforceable by the state board," credits that meet CDM standards (and any other standard ARB approves) can used for AB 32 purposes since ARB can easily enforce a requirement that only CDM credits may be used for AB 32.

Allowance Allocation Should Recognize Prior Investments in California

The Plan should recognize the investments made by California businesses, particularly those in energy efficiency. To do otherwise will lead to leakage, early retirement of facilities and discouragement of future investments in the state. Specifically, ARB has two ways to recognize investments: one is through minimizing auction use; the second through allocation methodologies that use a performance-based output benchmark. Auctions devalue existing investments in the state by adding an additional cost upfront just to continue operations, and will likely create national and international economic disadvantages to California. The proposal, particularly in the WCI context of 25-75% auctions, will not only risk existing investments, but also hasten leakage.

ARB should attempt to clarify – as much and as early as possible – its proposed methodology for allowance allocation. This will assist California facilities in understanding specifically their compliance path, and making the correct investment decisions at the earliest. Chevron recommends an allocation methodology that uses a performance-based output benchmark, which provides an easy way for ARB to recognize, rather than punish, those who have made investments prior to the implementation of AB 32.

Cost Control Mechanisms Lowers Costs to Consumers

Given the likelihood that California's implementation will be ahead of either regional (WCI) market developments, or a federal program, there is a significant risk of unanticipated market disruptions, such as carbon price spikes, that could cause unanticipated declines in economic output and growth. Cost control mechanisms are necessary to buffer the most severe negative consequences. For example, banking of credits should be unlimited in the California, as

this would reward companies that invest early in the compliance schedule, keeping overall costs to the state lower. Borrowing of credits is similarly useful in meeting short-term compliance requirements, while market participants can make longer-term investment decisions to lower emissions in cost-effective ways.

It is widely recognized that there is substantial uncertainty about the cost of reducing greenhouse gas emissions to meet ambitious emissions targets. For example, projections of 2020 allowance prices under a California cap-and-trade program in the Climate Action Team's updated macroeconomic analysis range from as low as $22 to as high as $206 per ton. In the short-run, unexpected developments could cause significant allowance prices spikes. That is why ARB must include a safety valve in the final Plan. We urge ARB to keep an open mind with regard to safety valves as they provide significant safeguards to unanticipated events and allowance price uncertainty, and can be designed to ensure environmental certainty and reduce investment uncertainty to California businesses.

ARB Should Include Additional Guidance to Enable Carbon Capture and Storage

Unfortunately, the plan does not include a discussion of carbon capture and storage (CCS). We believe CCS is likely to have a critical role in achieving GHG emissions in the long term. We urge ARB to include in the final Plan an outline for a regulatory framework for a workable CCS program (as is required by AB 32 – H&SC §38561(f)). Further we urge that the Plan promote research, development and demonstration of CCS in California, particularly providing a means for prioritization of CCS permitting review as well as practical regulatory guidance that will align with any eventual Federal program.

ARB Should Take More Balanced Approach to Interpreting AB 32 Implementation Criteria

While we understand ARB is mandated to maximize co-pollutant reductions, it is also equally mandated to minimize program costs as well as conduct and apply information from a robust economic analysis. The Plan appears to be heavily skewed toward maximizing reductions in co-pollutant without equal attention to cost effectiveness, technological feasibility or cost-minimization efforts in general. Professors Lawrence Goulder and Robert Stavins agree that AB 32 cannot effectively address such pollutants: "If current limits for co-pollutants are thought to be insufficient, the best response is not to scuttle a statewide system that can achieve AB 32's ambitious targets at minimum cost."[7] We urge ARB to take a more balanced approach to the numerous criteria laid out in the Plan to ensure that all parts of our state achieve the maximum benefits from this program. At a minimum, ARB should not pursue a facility level audit of mitigation opportunities and co-benefits.

ARB Should not Dismiss the Economic Costs of the Program

AB 32 requires that the best available economic modeling be used to evaluate the economic impacts of potential measures to reduce GHGs. It appears that ARB has not sufficiently prioritized these efforts since stakeholders have not been provided any of the data. ARB should provide whatever results have been generated through their models as soon as possible. ARB should also conduct a calibration of their model with other models, such as the NRM-NEEM model, particularly since the Energy 2020 model was originally constructed from significantly different variable structures and geographical coverage which would tend to minimize the economic impacts of the Scoping Plan. Sensitivity analyses should be conducted. Finally, the models should present data on the amount of leakage. In addition to urgently completing the modeling, CARB must establish confidence that the outcome of the modeling will actually inform program design. The ARB should not rely on analyses of federal proposals to attempt to estimate the impacts of ARB's program on California. Finally, ARB should be as transparent as possible, making sure to communicate to the public the costs of the program.

Harmonization with Federal Programs is Critical for California Business

It is imperative that any state approach to climate change be able to easily harmonize with the likely Federal program. How California will transition to a federal program should be clearly spelled out in the Plan since a Federal program will likely emerge well before the 5 year review of the Plan. Costly policies that put California at a

[7] Lawrence Goulder and Robert Stavins: State fight against climate change benefits everyone. Sacramento Bee. March 17, 2008

competitive disadvantage should be avoided. Offset credits from programs to which the Federal program will likely link, such as the CDM program, should be accepted. Duplicative, or likely conflicting requirements such as direct regulations on facilities, should be avoided, particularly since ARB itself recognizes in the Plan that the Federal program will be based on C&T. Clear transitioning to a Federal program should be part of the Plan.

Initial Appendices Reactions

While we are still undertaking a review of the detailed appendices, Chevron would like to share a few early observations. From a technical standpoint, without clear methodologies, documentation of assumptions and full data disclosure for determining the net annualized cost of each measure, it is difficult to make an assessment of the information presented. On its face, there appears to be quite a few measures where costs are significantly lower than expected; additional transparency will help stakeholders react to the information provided. Additionally, we are concerned that the only trading market considered in the appendices is with the WCI. While the WCI is a helpful partner, there are numerous other carbon markets that can broaden California's carbon market. Chevron intends to provide additional comments on the Appendices separately.

Thank you again for the opportunity to comment. Chevron, as a California company, looks forward to working closely with ARB staff to ensure the final program that is workable and encourages economic growth while reducing GHG emissions.

Best regards,

Stephen D. Burns