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California Air Resources Board  
Senate Committee on Environmental Quality: Select Committee on Climate  
Change and AB 32 Implementation

March 12, 2014

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Chair Hill, Chair Pavley, and Members of the Committee:

Thank you for the invitation to speak to you today about California's climate program.

The adoption of AB 32 in 2006 propelled California into an international leadership role in the fight against global climate change. As the legislature recognized in the law itself, "global warming poses a serious threat to the economic well-being, public health, natural resources and environment of California," and by "exercising a global leadership role, California will position its economy, technology centers, financial institutions and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases."

By building on decades of successful efforts to cut pollution and promote cleaner and more efficient energy, AB 32 solidified California's commitment to tackling climate change in a comprehensive way.

In 2008, ARB developed the initial Scoping Plan as required by AB 32, to lay out the framework for a climate program to meet the 2020 greenhouse gas emissions limit and set a path to reduce emissions to meet California's longer-term climate goals. The initial Scoping Plan was built on the principle that a balanced mix of strategies, including traditional regulations, market mechanisms, and incentives, is the best way to cut emissions and grow the economy in a clean and sustainable way.

As envisioned in that plan, the State has implemented a comprehensive suite of strategies that are moving California toward a low-carbon, clean energy future.

We have made tremendous strides in harnessing our abundant renewable energy resources – increasing renewable energy use to 22 percent and on track to have one-third of our state’s energy come from renewable sources by 2020.

California has long been a global leader in energy efficiency – saving Californians \$74 billion over the past 30 years – and we are implementing additional strategies that will further cut energy use from appliances and buildings and save billions more in reduced electricity costs.

The State has also developed the most comprehensive cap and trade program in the world, sending a clear signal to California businesses that investment in clean, low-carbon technologies will be rewarded.

We are cutting the carbon-content of our transportation fuels; and our pioneering standards for cleaner cars and zero emission vehicles are driving a transformation of the state’s vehicle fleet. By 2025, California will have 1.5 million zero emission vehicles on the road.

As a result of the state’s commitment to a low-carbon economy under AB 32, California has also become a magnet for clean technology investment. For example, in 2012, we benefitted from more than \$2 billion dollars in clean tech venture capital investment, more than the rest of the other 49 states combined.

California is a world center for research, design and manufacture of advanced technology. Among other examples, the 2013 Motor Trend car of the year was originated, designed and manufactured right here in California. We have become a hub of cutting-edge energy efficiency and sustainable business practices.

And we are attracting the best and the brightest from around the world to California to do research on climate-related issues, and continue to develop innovative, clean technologies.

These successes are increasingly visible on the ground throughout the state. For example, the value of wind energy projects alone in Kern County is now assessed at \$7.5 billion, and will generate some 3,000 new jobs this year, helping make Kern County one of the more resilient economies on the path to recovery from the recession.

We are headed in the right direction. As I noted, over the past five years, we have put in place a series of programs to address all the major sources of greenhouse gases in our economy. This includes requiring cleaner and more fuel efficient vehicles, lower-carbon fuels, and the cap and trade program to address emissions from our largest industries, and from the generation of electricity.

These policies are designed to work together to cut emissions, and in the process, will save California consumers on fuel and energy costs.

Our current projections indicate we are on track to meet the 2020 emission limit established by AB 32.

Reported emissions from the industrial sector have leveled out. And our latest data shows how cleaner, more fuel efficient vehicles are helping drive down the consumption of gasoline and diesel – saving consumers and business owners money. It is important to note that as we have implemented AB 32, the California GDP has continued to rise at a rate that exceeds the growth of many other states.

But what about beyond 2020?

The scientific verdict is in: We must accelerate the pace of emission reductions needed over the coming decades to avoid the worst impacts of climate change.

California has established long-term climate goals to reduce GHG emissions to 80 percent below 1990 levels by 2050.

However, a significant gap remains between the ongoing GHG emission reduction progress and this 2050 target. Emissions from 2020 to 2050 will have to decline several times faster than the current rate.

That's why we are proposing that a midterm target – in the 2030 timeframe – be established to ensure continued progress toward the 2050 target.

This will provide greater levels of market certainty for ongoing investment in cleaner, lower-carbon technologies, and frame the next suite of emission reduction measures we will need to continue making progress to our 2050 target.

Determining an appropriate midterm target, and how it will be established, will require coordination with the Administration, the Legislature, stakeholders, scientists, and others.

## A NEW APPROACH TO THE SCOPING PLAN

Since the passage of AB 32, we've come to appreciate how pervasive carbon is in our economy. As we move toward 2020 and beyond, we know that every sector in the State must play an increasing role in our cross-cutting effort to reduce greenhouse gases.

The policies we now have in place are designed not just to achieve our 2020 target, but to also provide a framework to continue driving down emissions and spurring investment in cleaner technologies over the long-term.

We have to build on this framework by developing new policies in some areas, and expanding and refining existing policies in others. Success will require even greater coordination among state agencies and our partners to develop effective policy frameworks for on-going actions to reduce emissions.

This is the approach we have taken in developing California's Proposed Updated Scoping Plan. The Scoping Plan Update, required every five years by AB 32, identifies eight key areas of focus for ongoing action. These include:

Energy; Transportation; Agriculture; Water;

Waste management; Natural and Working Lands;

Short-Lived Climate Pollutants; and Green Buildings.

The Update recommends actions for each sector, including deliverables, lead agency assignments, and expected due dates. Some of the actions are near-term, and others focus on longer-term efforts.

The recommendations for each sector were developed by working groups led by the agencies with expertise in that area. Each working group drafted technical papers that support their recommendations, which will be released in the next few weeks.

There are several overarching requirements for all the sectors:

- Sector-specific mid-term targets;
- Aligning each sector's recommended strategies with air quality AND climate change objectives. This is a crucial element – in many cases the sources are one and the same. The new approach will get us cleaner air AND fight climate change;
- Achieving additional benefits for disadvantaged communities; and
- Planning for zero or near-zero emissions in all sectors by 2050.

In addition, the update calls for the Cap-and-Trade Program to continue to reduce emissions to help us meet our mid-term and long-term climate goals.

I will not go into detail on each of the sectors here today, but will focus on a few key areas that may be of interest to the Committee.

## TRANSPORTATION:

We have already made significant progress in cleaning up our cars and trucks, but we have to continue building on this. The recommendations in the transportation sector include:

- Reducing light-duty and heavy-duty GHG emissions five percent per year to continue progress toward near-zero emissions by 2050.
- Developing a sustainable freight strategy that will define how we move the goods and freight into and through California in a way that helps us continue to grow the economy while addressing the need to continue to clean up the air and drive down greenhouse gas emissions.
- And as I mentioned, we have the opportunity to leverage investments in the transportation sector to achieve both GHG and air quality goals.

## SHORT LIVED CLIMATE POLLUTANTS

This is a new area of major focus for the Update. Removing these pollutants – which remain in the atmosphere for much shorter periods of time than carbon dioxide will also provide significant air quality benefits in the near-term.

- We are already on the way to addressing these pollutants. Many short-lived climate pollutants are already regulated by ARB. For example, black carbon levels in California will be reduced by 95 percent from historical levels, primarily due to diesel controls and burning restrictions.
- Recommendations for short-lived climate pollutants include developing a comprehensive short-lived climate pollutant strategy next year that will include an inventory of sources and emissions, the identification of additional research needs, and a plan for developing necessary control measures.

## WATER

From our perspective, water IS energy: It takes massive amounts of electricity to move water around the state, to pump it out of the ground, to pump it into the fields and to clean it and get it into our homes and businesses.

The primary mechanisms to reduce water-related energy use are energy efficiency and water conservation strategies. We recommend:

- Convening an interagency workgroup to guide adoption of GHG emission reducing policies for water sector investments, including water conservation measures and regulations;
- Identifying and incenting implementation of rate structures that reflect economic, social, and environmental value of water in California; and
- Developing comprehensive groundwater management strategies.

## GREEN BUILDINGS

The recommendations for the green building sector include the development of a comprehensive greenhouse gas emission reduction program for California's buildings by 2017, including new construction, existing building retrofits, and operation and maintenance of certified green buildings.

## WASTE:

Waste is a prime example of how solutions to cut emissions from our waste stream can provide benefits across multiple sectors. We are thinking about waste as a resource, and the Administration has convened a Bioenergy Working Group to examine this issue in a comprehensive way. California must take advantage of waste materials to generate energy to power our homes and cars, and to improve our working lands. Increasingly, both large industries and small businesses in the state are finding ways to cut their waste, which is reducing emissions and saving them money. The recommendations for the waste sector seek to build on this success and include:

- Developing programs to eliminate disposal of organic waste at landfills and maximize recycling, composting, and anaerobic digestion;
- Exploring opportunities for additional methane control at landfills and increased utilization of captured methane; and
- Implementing financing or incentive mechanisms for in-State infrastructure development.

## NATURAL AND WORKING LANDS:

Enhancement, protection, and conservation of natural and working lands in California will deliver important climate benefits. They also help in adaptation: With a more resilient California that is better prepared for severe wildfires, changing water availability, and rapid changes to species and natural communities. The recommendations for the natural and working lands sector include:

- Convening an interagency workgroup to develop a forest carbon plan that establishes quantitative mid-term and long-term planning targets;



- Developing a coordinated local land use program;
- Expanding urban forestry, green infrastructure, and investments;
- Strengthening, refining, and implementing actions for use of forest biomass; and
- Convening a climate investment working group to outline funding needs and priorities for forests, wetlands, and rangelands.

## AGRICULTURE

To address the complexity of this focus area, the plan recommends convening an interagency workgroup to:

- Establish mid-term and long-term planning targets;
- Provide tools and calculators for GHG emission reduction best practices; and
- Recommend strategies to reduce GHG emissions associated with energy in agricultural water use.

In addition, there are recommendations for methane capture standards and strengthening technical assistance and associated incentives to help agricultural operators develop carbon plans and implement GHG emission reduction practices.

## ENERGY

Recommendations for the energy sector include the development of a comprehensive greenhouse gas reduction program for the State's electric and energy utilities by 2016.

This approach will help drive a fully integrated and coordinated energy plan that includes a range of policies, technologies, and investments needed to achieve the most cost-effective mid-term and long-term emission reductions across the sector

Among other elements in this plan: Continuing to focus on California's nation leading efforts to improve energy efficiency, a focus on distributed generation, along with more efficient generation such as combined heat and power plants, engaging consumers and ratepayers in demand response, and an integrated low-carbon energy supply.

## NEXT STEPS

Next steps for finalizing the Updated Scoping Plan include:

- Publishing the draft Environmental Analysis for a 45-day public review and comment period next week. That begins the period of formal public comment. Staff will also publish the remaining appendices to the Proposed Update at that time.
- The comment period for the Proposed Update, the draft Environmental Analysis, and the additional appendices will close in late April.
- After consideration of public comments received on the draft Proposed Update, staff will present the final Proposed Update for Board consideration in late May.

## ONGOING WORK IN THE CLIMATE PROGRAM

In addition to developing the Scoping Plan Update, ARB continues to focus on implementing programs from the initial Scoping Plan. I'll briefly highlight a few key events coming up this year. With respect to the Cap-and-Trade program, the

Board heard a set of amendments last October. ARB staff will bring these amendments back to our Board in April for final approval. The proposed amendments provide more transition assistance for covered sectors, enhance market oversight, and add a new offset protocol for fugitive mine methane capture.

Staff continues to work on the development of offsets, with plans to bring an offset protocol for reductions in methane from rice cultivation to the Board in the fall.

Beginning January 1, 2015, fuels will be subject to the Cap-and-Trade program. Including fuels in the program ensures that all major sources of emissions face the same price incentives to reduce emissions. This level playing field is not only fair, it ensures that we achieve emission reductions to meet the 2020 cap and maximizes the overall cost-effectiveness of the program.

We are continuing to implement the Low Carbon Fuel Standard, which calls for a ten percent reduction in carbon intensity of transportation fuels by 2020. Later this year, the Board will consider amendments to improve the Low Carbon Fuel Standard as well as correct procedural and CEQA requirements per direction from a State court. In fact, yesterday ARB held two workshops to discuss the planned regulatory amendments.

Staff also intends to bring a measure to the Board in late 2014 to reduce vented and fugitive greenhouse gas emissions from oil and gas production, processing, and storage operations, including methane emissions from storage tanks, well stimulation, compressor seals, pneumatic devices, and leaking components.

We plan to expand this work to integrate consideration of well stimulation treatment per SB 4.

And, we are building on the work we have already undertaken to address short-lived climate pollutants like black carbon and methane by developing a comprehensive plan for completion in 2015 to further cut these potent greenhouse gases.

ARB is also working with U.S. EPA staff as they work on achieving carbon reductions from power plants under Section 111(d) of the federal Clean Air Act. We are encouraging EPA to build upon existing state programs while balancing state policymaking autonomy with the need for federal accountability.

## CONCLUSION

As I said at the outset, when the legislature passed AB 32 it recognized that the steps California takes to address climate change can go hand-in-hand with our efforts to promote long-term economic prosperity. We have a long and successful legacy in this state of building a world-class economy in concert with some of the most effective environmental and public health policies on the planet.

This is exactly the approach we have taken to implement AB 32. As a result, California is now recognized around the world as a model for what can be done to successfully turn the tide against climate change. We have a framework for action in place that is driving down emissions, spurring innovation across a range of clean and advanced technology sectors, improving the air Californians breathe, and creating more livable communities. By building on the framework we have in place, we can do our part to meet the challenge of global climate change, and in the process, continue to build the clean, sustainable future that all Californians deserve.

I look forward to continuing to work with you in this effort. Thank you for the opportunity to discuss ARB's climate program. I would be happy to answer any questions.

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