VALLEY VISION

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April 28, 2014

Mary Nichols, Chairman
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Draft Proposed First Update to the Climate Change Scoping Plan – Broadband Infrastructure as a Greenhouse Gas Emission Reduction Strategy

Dear Chairman Nichols:

On behalf of Valley Vision, we offer this letter in support of the Proposed First Update to the Climate Change Scoping Plan (hereafter referred to as Update), released of February 10, 2014. The Update builds on the existing framework of the Scoping Plan and emphasizes the need to align longer-term greenhouse gas reduction strategies with other State policy priorities, as well as the need for integrated and coordinated planning to achieve success. However, Valley Vision believes it is remiss not to reference broadband (also referred to as high-speed Internet) as a key-enabling infrastructure for greenhouse gas emission reduction.

Valley Vision is a nonprofit consultancy that tackles economic, environmental and social issues facing the Sacramento region. Valley Vision is a partner and staff to the Cleaner Air Partnership, a unique alliance that brings together the local business, environmental communities and air districts to improve air quality such that it benefits public health and economic growth. Valley Vision is managing the "Connected Capital Area" Broadband Consortium, one of 14 regional consortia funded by the California Public Utilities Commission working to expand connections to high-speed Internet within *underserved* parts of California, which includes urban, rural and suburban areas. Through a partnership with the California Emerging Technology Fund, Valley Vision conducted research of over 80 peer-reviewed publications that document the impact of broadband-enabled applications on the environment. The research indicates a growing global recognition of the potential for the Information and Communication Technology (ICT) sector to facilitate positive environmental benefits in the sectors of energy, transportation and agriculture, among others. Valley Vision will soon publish a report summarizing the research and offering recommendations to advance the potential of broadband-enabled applications to reduce greenhouse gas emissions for climate change abatement.

As stated in the Update, one of the purposes of the Scoping Plan is to "identify priorities and recommendations for investment to support market and technology development and necessary infrastructure in key areas." Valley Vision believes broadband communications infrastructure should be described in the Update as necessary infrastructure and a key area for focused investment and coordinated planning. This is imperative as many of the strategies based on emerging

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technologies, referenced in multiple focus areas/sectors, will require broadband-enabled two-way communications systems to achieve their full potential.

Valley Vision appreciates that ARB staff included in the Update two highlights referencing the potential for broadband-enabled technologies to reduce greenhouse gas emissions. These examples included the reduction of vehicle miles traveled through telehealth, and the potential for energy efficiency and greenhouse gas emission reduction in farming through machine-to-machine (M2M) communications. However, these examples don't go far enough in identifying the breadth of broadband as an enabling infrastructure to achieve California's greenhouse gas emission reduction goals. The following are additional areas that will be reliant on advanced communications systems to achieve their full scope of greenhouse gas emissions reductions:

- **Energy:** Energy efficiency through automated building controls; demand response; deployment of electric vehicle infrastructure that enables vehicle charging during off-peak hours at home and at public charging stations; distributed resource generation and energy storage; communications and control software for Smart Grid technologies; energy usage and real-time communications between consumers, their appliances and electricity suppliers.
- **Transportation:** Intelligent transportation systems; vehicle-to-vehicle and vehicle-to-infrastructure communications; smart phone and vehicle apps providing real-time travel information for eco-driving and routing; coordinated signal timing.
- **Water and Agriculture:** Precision farming; soil monitoring; weather forecasting; water use efficiency; sensor web-irrigation management; livestock management; biomass measurement; remote veterinary and other agricultural advisory services.

As noted in the Update, key economic sectors (energy, transportation, agriculture, water, waste management, natural and working lands, short-lived climate pollutants, and green building) have overlapping and complementary interests that will require careful coordination in the State's future policies and strategies. Advanced communications technologies enabled through broadband is one of these complementary interests.

In addition, the Governor's Office of Planning and Research (OPR) included the importance of broadband infrastructure in its vision for California's future within the Environmental Goals and Policy Report. Deployment of broadband infrastructure and adoption is also an important priority for the Governor's Office of Business and Economic Development (GO-Biz) to support regional economic vitality. Emphasizing the importance of broadband infrastructure in the Update will support alignment of State goals.

Recommendations

Many communities in suburban, rural and agricultural areas lack the basic connectivity or speeds required to enable their contribution to California's greenhouse gas emission reduction goals. Disregarding the imperative of

broadband as an enabling infrastructure for greenhouse gas reduction is analogous to building renewable generation plants without connection to the electric transmission and distribution grid. Therefore, we respectfully request that the connection to greenhouse gas reduction potential through the use of broadband-enabled technologies be included and emphasized in the Update as necessary infrastructure.

Valley Vision appreciates the opportunity to provide input on the Update and we recommend the final version include the following:

> Broadband (high-speed Internet access) is an essential 21st Century infrastructure and a necessity for California's future global competitiveness, prosperity, and high quality of life. The use of diverse broadband-driven applications has the potential to reduce greenhouse gas emissions in the sectors of focus in the AB 32 Scoping Plan Update including energy, transportation, agriculture, water, waste, natural resources and land use, short-lived climate pollutants and green buildings. However, connectivity and usage gaps exist in rural, suburban and low-income urban communities. Implementation of the AB 32 Scoping Plan Update will be in collaboration with other agencies and organizations in the State of California promoting the deployment and use of broadband infrastructure.

Thank you for your consideration of our comments.

Best regards,

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