California Emerging Technology Fund
Summary of Comments on the Cap-and-Trade Auction Proceeds
Draft Third Investment Plan:
Fiscal Years 2019-20 through 2021-22

The California Emerging Technology Fund (CETF) appreciates this opportunity to submit Comments on the Draft Third Investment Plan for the Cap-and-Trade Auction Proceeds. CETF commends the California Air Resources Board (CARB) for leadership in reducing greenhouse gas (GHG) emissions to meet the State of California's adopted goals. CETF also salutes CARB for acknowledging the importance of access to broadband (a generic term for high-speed Internet service that includes both wireline and wireless technologies) to assist the State in meeting the GHG emission targets. Attached is a publication previously submitted to CARB that explains why and how "broadband is a green strategy" for the State in addressing several inter-related challenges (*Can the Internet Help Save the Environment?* YES). This testimony explains how closing the Digital Divide and promoting Digital Inclusion supports and aligns with the priorities in the Draft Third Investment Plan and, therefore, should be recognized as a California Climate Investment Program in the final 2019-2022 Investment Plan.

Shared Focus on Disadvantaged Communities and Low-Income Households

The focus for the Greenhouse Gas Reduction Fund (GGRF) on disadvantaged communities and low-income households are the same priorities for closing the Digital Divide as set forth by the Legislature and Administration, California Public Utilities Commission (CPUC), CETF, Broadband Regional Consortia, and Digital Inclusion community-based organizations (CBOs) throughout California. According to the 2017 Statewide Survey on Broadband Adoption sponsored by CETF and conducted by the University of California, Berkeley Institute of Government Studies (IGS), <u>31% of California households are "digitally disadvantaged"</u>: <u>13% are unconnected</u> with no home high-speed Internet service and <u>18% are underconnected</u> with only a smartphone (which limits the ability of students to achieve excellence in education and inhibits the opportunities for adults to acquire workforce skills). These 31% of Californians live in the same rural communities and urban low-income neighborhoods that have been recognized by CARB and identified as priorities for GGRF. Further, it should be noted that there is a rapidly shrinking percentage of the population who state they don't want to be online: less than 2% of residents today who tend to be older and often gain a new perspective when the develop a chronic health condition and realize that Internet access will enable them to remain in their home through telemedicine. The unconnected and underconnected residents are disadvantaged in contributing to and benefiting from GGRF investments. Closing the Digital Divide and getting online all residents is essentially axiomatic to achieving the GHG emission goals: there is a shared focus on disadvantaged communities and low-income households.

Alignment of Investment Priorities with Digital Inclusion Strategies

The Draft Third Investment Plan for the Cap-and-Trade Auction Proceeds and GGRF investment priorities align with Digital Inclusion strategies, as indicated below by an asterisk. For example:

- Transportation: To reduce congestion and improve mobility, the best trip is a "virtual trip" because it has no direct impact on the environment and clearly is low carbon systemically. Internet connectivity between rural and urban medically-underserved communities and medical centers enables telehealth-telemedicine, reducing trips for outpatient follow-up visits by as much as 40%. High-speed Internet connectivity is essential for online college courses and to support long-distance learning, which is especially vital for disadvantaged communities and low-income households who have fewer resources to access education and workforce training. Thus, having all communities connected with high-speed Internet infrastructure advances the investment priorities for transportation.
- Energy: To improve energy efficiency the State and energy utilities promote peek demand management through load dispatch in the built environment, which requires Internet connectivity. However, unconnected and underconnected low-income households are not able to participate in such energy efficiency programs, incentives or rebates. Less than half of low-income households signed up for the CARE programs administered by investor-owned utilities (IOUs) have email addresses and are not able to receive information about energy efficiency programs or pay bills online, often requiring trips to the utility to pay bills with cash. Sacramento Municipal Utility District has fully embraced the concept of getting all of their low-income customers online and has worked with CETF and the California Foundation for Independent Living Centers to reach out to their CARE customers. San Diego Gas and Electric Company and Southern California Gas have cooperated with pilot projects. But, generally, the IOUs have been reluctant to fully embrace this strategy and need encouragement from the CPUC (and their Low Income Oversight Board) and CARB.
- Natural Resources: To optimize management of natural resources, particularly water use, Internet connectivity is required infrastructure. Unconnected and underconnected rural communities and low-income urban neighborhoods cannot participate in water-use efficiency programs managed with information or controls dependent on the Internet.
- Agriculture: To optimize resource use and maximize production for agriculture, emerging "AgTech" requires sensors in the fields with a wireless signal. AgTech holds much promise for conserving water, determining fertilizer needs, increasing crop production, and accessing external markets. Further, many agricultural communities also are disadvantaged communities with high percentages of low-income households. However, most of California's very productive farmlands are not connected to a high-speed Internet network.
- Resiliency: To protect public safety, facilitate quicker recoveries from natural disasters and other emergencies, and support increased resiliency of vulnerable communities and fragile population segments, high-speed Internet networks are required throughout the state. The majority of county fairgrounds (state assets) used for staging emergency responses and evacuations have no permanent high-speed connectivity. Research, communication networks, and data analyses that could better inform fighting wildfires (which cause huge amounts of GHG and other air pollutant emissions) cannot be applied because of the lack of connectivity. And, employers (particularly small businesses) and fragile communities cannot quickly recover because of the lack of ubiquitous broadband.

All of these challenges can be better addressed if there was high-speed Internet infrastructure throughout California, particularly for disadvantaged communities and low-income households. Fortunately, the Draft Third Investment Plan and GGRF priorities and strategies constitute a solid foundation and provide a rational framework to accelerate progress in closing the Digital Divide by aligning resources and "connecting the dots" among State programs. The following indicates opportunities for alignment of Digital Inclusion strategies with GGRF priorities.

**Alignment with Digital Inclusion Strategies*

<u>AB 1532 Original Investment Priorities</u>

1. Energy Efficiency and Renewable Energy*
2. Low Carbon Transportation, Freight, and Advanced Technology Vehicles and Fuels*
3. Natural Resources: Water Use and Supply, Land Conservation, Forestry, and Sustainable Agriculture*
4. Strategic Planning
5. Waste Diversion, Reduction, and Reuse
6. Research, Development, and Deployment of Innovative Technologies and Practices
7. Partnerships for Local and Regional Program Implementation*

<u>AB 398 Priorities for Funding:</u>

1. Air Toxics and Criteria Pollutants
2. Low and Zero Carbon Transportation*
3. Sustainable Agriculture Practices*
4. Health Forests and Urban Greening
5. Short-Lived Climate Pollutants
6. Climate Adaptation and Resiliency
7. Climate and Clean Energy Research

Overall, what is needed is to incorporate Digital Inclusion into every GGRF investment, both for the 4 programs that receive 60% of the funds through continuous appropriation and the 40% allocated through the State budget process pursuant to the Cap-and-Trade Investment Plan. Each of the 4 programs receiving the continuous appropriation should be asked to develop a set of strategies for optimizing broadband deployment in the course of implementing their projects. And, then CARB needs to continue to provide focused leadership to ensure that something actually happens. As examples: (1) While the High-Speed Rail Project (HSR), which goes right through the heart of San Joaquin Valley agriculture, receives 25% of GGRF and is considering incorporating broadband into its construction, years have passed since this concept was first raised and there is still no significant broadband deployment being enabled by HSR. (2) While the Strategic Growth Council receives 20% of GGRF for the Affordable Housing and Sustainable Communities Program, the majority of residents in publicly-subsidized housing in California remain unconnected and Digital Inclusion is not fully embraced as an essential "sustainable" strategy for all funded projects. (3) While the California State Transportation Agency and Department of Transportation (Caltrans) receive 15% of GGRF, Caltrans and the California Transportation Agency are still deliberating on how to advance broadband as a fully-supported mobility strategy, including the designation of strategic corridors for deployment.

Further, in order to get disadvantaged communities and low-income households online, there must be in-language and in-culture outreach by "trusted messengers and honest brokers"—community-based organizations (CBOs) who know and understand the priority populations. This requires collaboration between all of the recipients of GGRF funds and grants and CBOs that are experienced in promoting and achieving Digital Inclusion. The Third Investment Plan presents that opportunity to harness the energy and power of collaboration and partnerships by bringing together a broader set of CBOs and stakeholders to explore working together to achieve the shared goals for GHG emission targets and closing the Digital Divide.

Recommendations

The following are over-arching recommendations for policy in the Third Investment Plan that will require consultation among all the stakeholders to develop and refine implementation actions. However, it is essential to establish the policy and commitment in the Plan.

- Request High-Speed Rail Authority (HSR), Strategic Growth Council, California State Transportation Agency, and Department of Transportation to prepare and implement plans to incorporate Digital Inclusion and facilitation of broadband deployment in their use of GGRF continuous appropriations. Engage the California Department of Food and Agriculture and California State Board of Food and Agriculture, University of California (Agriculture and Natural Resources), U.S. Department of Agriculture, and CENIC (Corporation for Education Network Initiatives in California) to assist HSR.

- Endorse efforts of the California Broadband Council, California Transportation Commission, Department of Transportation, California Public Utilities Commission, Office of Emergency Services, California Emerging Technology Fund, Internet Service Providers, Metropolitan Planning Organizations, Local Transportation Commissions, and other stakeholders to confer and designate "Strategic Corridors" for broadband deployment.

- Encourage all recipients of GGRF to engage with community-base organizations (CBOs) experienced in promoting and achieving Digital Inclusion to become partners in closing the Digital Divide and eligible to receive funding through their GGRF grants. In particular, encourage the Strategic Growth Council to convene a forum with the Broadband Regional Consortia, Digital Inclusion CBOs, and all current recipients of funding from the Affordable Housing and Sustainable Communities Program to explore how to collaborate and partner to get disadvantaged communities and low-income households online. The California Emerging Technology Fund will assist with this convening.

- Engage and urge the California Public Utilities Commission and energy utilities to reach out to all low-income customers to inform them about available affordable offers for Internet service. Encourage planning and funding within the CARE Program for outreach to and assistance to low-income household to subscribe to affordable offers or support expanded legislative authority if needed. Consider providing match funding to CARE from GGRF.

- Authorize Digital Inclusion projects as eligible for GGRF funding, including:
  - Outreach and assistance to low-income households, especially in disadvantaged communities, to sign up for affordable Internet service offers in conjunction with providing awareness and education about reducing household carbon footprints.
  - Screening and technical assistance by 2-1-1 Information Services for both home connectivity and opportunities to reduce household carbon footprints coupled with referrals to Digital Inclusion CBOs to assist residents in getting online.
  - Planning in disadvantaged communities to become "smart sustainable communities" with ubiquitous broadband deployment to ensure access for all residents online, including preparation of policies and ordinances for implementation.
  - Convening of Local Governments with disadvantaged communities by the California State Association of Counties (CSAC), Rural County Representatives of California (RCRC), and League of California Cities (LCC) in collaboration with Broadband Regional Consortia to develop strategies for broadband deployment and adoption in those areas.
  - Planning by the Office of Emergency Services and Regional Consortia for deployment of broadband to county fairgrounds frequently used for staging emergency responses and evacuating residents, including installation of research monitoring stations to gather information to inform strategies and tactics to assist with fighting wildfires to reduce GHG emissions.
  - Technical assistance to farmers regarding AgTech, particularly in disadvantaged communities, coupled with monitoring and data gathering to document results and conduct research on resource efficiency.
  - Establishment and operations of a robust statewide telehealth-telemedicine network based in California (with all Directors residing in the state) that connects healthcare facilities in all disadvantaged communities to medical centers.
  - Deployment of infrastructure to ensure that all publicly-subsidized affordable housing units (particularly in older housing authority complexes) have connectivity and digital literacy training (coupled with affordable devices) to get online all residents.
  - Outreach and technical assistance to small businesses in disadvantaged communities to get them online to reduce their carbon footprint, improve productivity and increase profitability, and assure enhanced resiliency.
  - Planning, technical assistance and funding to Tribal Governments for broadband deployment powered by renewable energy to homes on Tribal Lands.