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ASSOCIATION OF GOVERNMENTS
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HYBRID (IN-PERSON & REMOTE PARTICIPATION) *

EMERGING TECHNOLOGIES COMMITTEE

In-Person & Remote Participation*

Thursday, October 31, 2024

10:30 a.m. - 12:00 p.m.

Members of the Public are Welcome to Attend and Participate In-Person:

**SCAG Main Office – Policy B Meeting Room
900 Wilshire Blvd., Ste. 1700
Los Angeles, CA 90017**

To Participate on Your Computer:

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Call-in Number: 1-669-900-6833

Meeting ID: 867 5297 7630

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If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Maggie Aguilar at (213) 630-1420 or via email at aguilarm@scag.ca.gov. Agendas & Minutes are also available at: www.scag.ca.gov/committees.

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 630-1410. We request at least 72 hours (three days) notice to provide reasonable accommodations and will make every effort to arrange for assistance as soon as possible.



Instructions for Attending the Meeting

To Attend In-Person and Provide Verbal Comments: Go to the SCAG Main Office located at 900 Wilshire Blvd., Ste. 1700, Los Angeles, CA 90017 or any of the remote locations noticed in the agenda. The meeting will take place in the Policy B Meeting Room on the 17th floor starting at 10:30 a.m.

To Attend by Computer: Click the following link: <https://scag.zoom.us/j/86752977630>. If Zoom is not already installed on your computer, click “Download & Run Zoom” on the launch page and press “Run” when prompted by your browser. If Zoom has previously been installed on your computer, please allow a few moments for the application to launch automatically. Select “Join Audio via Computer.” The virtual conference room will open. If you receive a message reading, “Please wait for the host to start this meeting,” simply remain in the room until the meeting begins.

To Attend by Phone: Call (669) 900-6833 to access the conference room. Given high call volumes recently experienced by Zoom, please continue dialing until you connect successfully. Enter the **Meeting ID: 867 5297 7630**, followed by #. Indicate that you are a participant by pressing # to continue. You will hear audio of the meeting in progress. Remain on the line if the meeting has not yet started.

Instructions for Participating and Public Comments

Members of the public can participate in the meeting via written or verbal comments.

- 1. In Writing:** Written comments can be emailed to: ePublicComment@scag.ca.gov. Written comments received by **5pm on Wednesday, October 30, 2024** will be transmitted to members of the legislative body and posted on SCAG’s website prior to the meeting. You are **not** required to submit public comments in writing or in advance of the meeting; this option is offered as a convenience should you desire not to provide comments in real time as described below. Written comments received after 5pm on **Wednesday, October 30, 2024**, will be announced and included as part of the official record of the meeting. Any writings or documents provided to a majority of this committee regarding any item on this agenda (other than writings legally exempt from public disclosure) are available at the Office of the Clerk, at 900 Wilshire Blvd., Suite 1700, Los Angeles, CA 90017 or by phone at (213) 630-1420, or email to aguilarm@scag.ca.gov.
- 2. Remotely:** If participating in real time via Zoom or phone, please wait for the presiding officer to call the item for which you wish to speak and use the “raise hand” function on your computer or *9 by phone and wait for SCAG staff to announce your name/phone number.
- 3. In-Person:** If participating in-person, you are invited but not required, to fill out and present a Public Comment Card to the Clerk of the Board or other SCAG staff prior to speaking. It is helpful to indicate whether you wish to speak during the Public Comment Period (Matters Not on the Agenda) and/or on an item listed on the agenda.

General Information for Public Comments

Verbal comments can be presented in real time during the meeting. Members of the public are allowed a total of 3 minutes for verbal comments. The presiding officer retains discretion to adjust time limits as necessary to ensure efficient and orderly conduct of the meeting, including equally reducing the time of all comments.

For purpose of providing public comment for items listed on the Consent Calendar, please indicate that you wish to speak when the Consent Calendar is called. Items listed on the Consent Calendar will be acted on with one motion and there will be no separate discussion of these items unless a member of the legislative body so requests, in which event, the item will be considered separately.

In accordance with SCAG’s Regional Council Policy, Article VI, Section H and California Government Code Section 54957.9, if a SCAG meeting is “willfully interrupted” and the “orderly conduct of the meeting” becomes unfeasible, the presiding officer or the Chair of the legislative body may order the removal of the individuals who are disrupting the meeting.

OUR MISSION

To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.

OUR VISION

Southern California’s Catalyst for a Brighter Future

OUR CORE VALUES

Be Open | Lead by Example | Make an Impact | Be Courageous



EMERGING TECHNOLOGIES COMMITTEE AGENDA

TELECONFERENCE AVAILABLE AT THESE ADDITIONAL LOCATIONS*

Drew Boyles City of El Segundo - City Hall City Council Chambers 350 Main Street El Segundo, CA 90245	Margaret Clark 3109 Prospect Avenue Rosemead, CA 91770	Keith Eich 4821 Daleridge Road La Cañada Flintridge, CA 91011
Margaret Finlay 2221 Rim Road Duarte, CA 91008	Curt Hagman District Office 14010 City Center Drive Chino Hills, CA 91709	Jan C. Harnik City of Palm Desert - City Hall 73510 Fred Waring Drive Palm Desert, CA 92260
Dan Kalmick 16772 Glenhaven Lane Huntington Beach, CA 92647	Steve Manos 53180 Odyssey Street Lake Elsinore, CA 92532	Carol Moore City of Laguna Woods - City Hall Council Chambers 24264 El Toro Road Laguna Woods, CA 92637
Alan Wapner City of Ontario - City Hall Conference Room 1 303 East B Street Ontario, CA 91764	Acquanetta Warren City of Fontana – City Hall 8353 Sierra Avenue Fontana, CA 92335	

* Under the teleconferencing rules of the Brown Act, members of the body may remotely participate at any location specified above.



EMERGING TECHNOLOGIES COMMITTEE AGENDA

ETC - Emerging Technologies Committee *Members – October 2024*

1. **Sup. Curt Hagman**
Chair, San Bernardino County
2. **Hon. Drew Boyles**
El Segundo, RC District 40
3. **Hon. Margaret Clark**
Rosemead, RC District 32
4. **Hon. Keith Eich**
La Cañada Flintridge, RC District 36
5. **Hon. Margaret Finlay**
Duarte, RC District 35
6. **Hon. Jan C. Harnik**
RCTC Representative
7. **Hon. Dan Kalmick**
Huntington Beach, OCCOG
8. **Ms. Leslie Lindahl**
Government Relations, Ex-Officio Non-Voting Member
9. **Hon. Steve Manos**
Lake Elsinore, RC District 63
10. **Hon. Carol Moore**
Laguna Woods, OCCOG
11. **Hon. Frank Navarro**
Colton, RC District 6
12. **Ms. Pam O'Connor**
CA Road Charge TAC, Ex-Officio Non-Voting Member
13. **Sup. Luis Plancarte**
Imperial County
14. **Hon. Alan Wapner**
SBCTA Representative
15. **Hon. Acquanetta Warren**
Fontana, SBCTA

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EMERGING TECHNOLOGIES COMMITTEE AGENDA

16. Hon. Edward Wilson
Signal Hill, GCCOG

17. Hon. Frank Zerunyan
Rolling Hills Estates, SBCCOG

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EMERGING TECHNOLOGIES COMMITTEE AGENDA

Southern California Association of Governments
900 Wilshire Boulevard, Suite 1700 – Policy B Room
Los Angeles, CA 90017
Thursday, October 31, 2024
10:30 AM

The Emerging Technologies Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.

CALL TO ORDER AND PLEDGE OF ALLEGIANCE

(The Honorable Curt Hagman, Chair)

PUBLIC COMMENT PERIOD (Matters Not on the Agenda)

This is the time for public comments on any matter of interest within SCAG’s jurisdiction that is **not** listed on the agenda. For items listed on the agenda, public comments will be received when that item is considered. Although the committee may briefly respond to statements or questions, under state law, matters presented under this item cannot be discussed or acted upon at this time.

REVIEW AND PRIORITIZE AGENDA ITEMS

CONSENT CALENDAR

Approval Items

- 1. Minutes of the Meeting – October 26, 2023 PPG. 6

INFORMATION/DISCUSSION ITEMS

- 2. Clean Technology Program and Accomplishments 30 Mins. PPG. 10
(Marisa Laderach and SCAG Staff)
- 3. Future Communities and Smart Cities Updates 15 Mins. PPG. 42
(Marisa Laderach, Principal Regional Planner, SCAG)
- 4. ETC Next Steps and Chair Remarks 15 Mins.
(President Curt Hagman)

FUTURE AGENDA ITEMS

ANNOUNCEMENTS

ADJOURNMENT

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EMERGING TECHNOLOGIES COMMITTEE (ETC)
MINUTES OF THE MEETING
THURSDAY, OCTOBER 26, 2023

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE EMERGING TECHNOLOGIES COMMITTEE. A VIDEO RECORDING OF THE ACTUAL MEETING IS AVAILABLE ON THE SCAG WEBSITE AT: <http://scag.iqm2.com/Citizens/>

The Emerging Technologies Committee (ETC) of the Southern California Association of Governments (SCAG) held its meeting both in person and virtually (telephonically and electronically). A quorum was present.

Members Present:

Hon. Curt Hagman (Chair)	San Bernardino County
Hon. Keith Eich	District 36
Hon. Margaret E. Finlay	District 35
Hon. Jan Harnik	RCTC
Hon. Dan Kalmick	Hunington Beach, OCCOG
Ms. Leslie Lindahl	Ex-Officio Member
Hon. Steve Manos	District 63
Hon. Carol Moore	OCCOG
Ms. Pam O'Connor	Ex-Officio Member
Hon. Acquanetta Warren	City of Fontana
Hon. Frank Zerunyan	SBCCOG

Members Not Present:

Hon. Drew Boyles	District 40
Hon. Margaret Clark	SGVCOG
Mr. Paul Marquez, Caltrans District 7	Ex-Officio Non-Voting Member
Hon. Frank Navarro	District 6
Hon. Luis Plancarte	Imperial County
Hon. Deborah Robertson	District 8
Hon. Alan Wapner	SBCTA
Hon. Edward H.J. Wilson	GCCOG

CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Hon. Curt Hagman, San Bernardino County, called the meeting to order at 10:00 a.m. and led the Pledge of Allegiance.

PUBLIC COMMENT PERIOD

There were no public comments.

CONSENT CALENDAR

Approval Items

1. Minutes of ETC Meeting – April 27, 2023

A MOTION was made (Moore) to approve the Consent Calendar. The motion was SECONDED (Manos) and passed by the following votes:

AYES: Eich, Finlay, Hagman, Harnik, Kalmick, Manos, Moore, Warren (8)

NOES: None (0)

ABSTAIN: Zerunyan (1)

INFORMATION ITEMS

2. Laguna Woods Mobility Technology Plan

There were no public comments on Item No. 2.

Steve Wilks, Associate at Arcadis IBI Group, provided a report on Laguna Woods' Mobility Technology Plan. He noted that the plan was awarded project funding from SCAG's Sustainable Communities Program. Goals include supporting lifelong mobility for older adults and those with disabilities. This includes removing any barriers to access. Enhancements include real time schedule information, direct point-to-point travel, first mile last mile options and an ability to hail a ride and have spontaneity of travel. The plan also addresses readiness for connected and autonomous vehicles. Further, best practices among automated vehicle shuttles were examined. He noted a program in Detroit that uses automated shuttles with one attendant in a fixed route used mostly by seniors travelling to local hospitals.

As part of plan development, technical governance and social acceptability was considered. Josh Albertson continued the presentation and stated a three-level approach was developed for

autonomous vehicles in Laguna Woods. It envisions an operating system including infrastructure development and further expansion. This includes modifying intersections to include signal priority as well as other roadside equipment that can communicate with autonomous vehicles. Mr. Albertson stated the goal was to provide a model that can be replicated across the region.

Hon. Curt Hagman, San Bernardino County, asked about legislation regarding autonomous vehicles. Mr. Wilks responded that autonomous vehicles in the San Francisco area were paused following a recent accident. Josh Albertson responded that autonomous vehicles used in fixed route patterns around airports, for example, would utilize staffed attendants which addresses both labor and safety concerns.

Hon. Carol Moore, OCCOG, noted the event in San Francisco was caused by the driver rather than a technology failure. She noted while we seek 100% performance from a technology, it may not be realistic when human interaction is a component.

Leslie Lindahl, ex-officio member, responded that having an autonomous vehicle that is staffed is helpful particularly when serving seniors.

Hon. Acquanetta Warren, City of Fontana, asked what actions were taken to message about the service to address the public's concern about safety and uncertainty around automated vehicles. Mr. Wilks responded that it is important to engage the public early and often.

3. Clean Transportation Technology Compendium

There were no public comments on Item No. 3.

Sam Pournazeri, Director of Clean Tech Energy, ICF, reported on the Clean Transportation Technology Compendium. He noted that clean transportation technology encompasses zero and near-zero emission vehicles (ZEVs and NZEVs) related infrastructure and their supporting products that minimize environmental impact throughout their life cycle. The project goal is to examine currently available zero and near-zero emission technologies and understand their benefits, technology readiness, status of implementation, cost, market conditions and ability to scale. The four transportation modes examined light duty vehicles, medium and heavy-duty vehicles, busses, and rail. He noted that transportation is responsible for 81% of nitrogen oxides (NOx) emission and 25% of fine particulate matter (PM2.5) emissions in the South Coast Air Basin. Further, the state has established goals of 100% ZEV sales by 2035 for vehicles and short haul/drayage trucks and 2045 for ZEV busses and heavy-duty trucks. The study not only examined vehicles but charging and fueling infrastructure and supporting products. A number of factors were considered including the viability of the different modes of transportation including its cost, range, pollution generated, longevity and adoption.

The study showed, in 2022, there was a considerable increase in ZEV vehicles in the region. Most are electric but some are hydrogen powered. Additionally, these vehicles have a greater price but offer cost savings due to lower maintenance and operating cost. Currently there are many models of zero emission vehicles available in North America with some getting significant range per charge. ZE Medium and Heavy-Duty trucks have shown an expanding market although the cost is three times a diesel truck. There is also an advancement in ZE rail technology. Metrolink has plans to electrify its system in the approaching years and San Bernardino County Transportation Authority plans to debut its first battery electric hydrogen locomotives in 2024.

Mr. Pournazeri noted that although some advancement has been made in deploying EV charging infrastructure the region needs significantly more to remain consistent with growth. While the region currently has 33,000 chargers, it ought to have 1 million by 2035 or 3,000 installed each week. He next reviewed hydrogen fuel infrastructure. There are currently 39 hydrogen fueling stations in the region with more planned. The region is also well equipped with natural gas fueling stations. He concluded that while there is a presence of ZE infrastructure it remains insufficient toward the greater adoption of ZE technology. Issues include affordability and lack of investment in charging and fueling infrastructure. He offered strategies including targeted incentives, public education, modifying building codes, land use and zoning, workforce development and promoting public/private partnerships.

Hon. Margaret Finlay, District 35, noted from personal experience there is a lack of public charging infrastructure and who will bear the cost of providing it. Mr. Pournazeri responded that the most promising approach is public/private partnerships.

Hon. Frank Zerunyan, SCBCOG, noted as a ZE vehicle owner, the charging stations remain a significant and crucial unmet element. He offered that public/private partnerships ought to be encouraged including providing land for those companies to develop the charging stations widely.

ADJOURNMENT

There being no further business, Hon. Curt Hagman, San Bernardino County, adjourned the meeting of the Emerging Technologies at 11:13 a.m.

[MINUTES ARE UNOFFICIAL UNTIL APPROVED BY THE EMERGING TECHNOLOGY COMMITTEE]

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AGENDA ITEM 2
REPORT

Southern California Association of Governments
October 31, 2024

To: Emerging Technologies Committee (ETC)

EXECUTIVE DIRECTOR'S
APPROVAL

From: Marisa Laderach, Senior Regional Planner
(213) 236-1927, laderach@scag.ca.gov

Subject: Clean Technology Program and Accomplishments

RECOMMENDED ACTION:

Information Only – No Action Required

STRATEGIC PRIORITIES:

This item supports the following Strategic Priority 1: Establish and implement a regional vision for a sustainable future. 2: Be a cohesive and influential voice for the region. 3: Spur innovation and action through leadership in research, analysis and information sharing.

EXECUTIVE SUMMARY:

The Southern California Association of Governments (SCAG) established the Emerging Technology Committee (ETC) in 2019 to research and identify new and emerging technologies that can enhance the region's transportation network and communities. Guidance from the ETC ensures that these technologies are accounted for in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and helps develop a framework to integrate them effectively.

Over the past five years, the ETC's input has contributed to the development of SCAG's Clean Technology Program, Broadband Program, Goods Movement Program, and Smart Cities Program. More importantly, it has established a foundation for how SCAG evaluates and integrates discussions on emerging technologies across its programs and provides guidance to member jurisdictions on the benefits of these technologies within their communities. This staff report offers a summary of these major accomplishments and addresses the next phase of emerging technology programming at SCAG. Additionally, it showcases the many program successes at SCAG which were made possible due to input and guidance from ETC.

BACKGROUND:

The Southern California Association of Governments (SCAG) established the Emerging Technology Committee (ETC) in 2019 to research and identify emerging technologies that can enhance the region's transportation network and communities. The ETC also serves as a resource for SCAG's three policy committees: the Community, Economic and Human Development Committee; Energy and Environment Committee; and Transportation Committee – as well as the Regional Council.

Content and discussions brought to ETC have been integrated into the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to help develop a framework for effective technology integration, and they were critical to informing Connect SoCal in 2020 and 2024.

Over the past five years, the ETC has explored a range of critical topics and emerging technologies, such as connected and automated vehicles, smart cities, electric vehicles, clean technology, aviation technology, the digital divide and broadband deployment, telemedicine and remote services, and hyperloop transportation technologies. Additionally, the ETC has provided feedback on and received updates for several SCAG efforts, and of critical note, ETC's adoption on SCAG's Clean Transportation Technology Policy was instrumental in its approval and acceptance. ETC has welcomed presentations from a wide range of participants, representing the public, private, academic, and nonprofit sectors.

The ETC also visited three sites within the region that showcase innovative infrastructure and services poised to help communities adjust to the ever-changing technological landscape: Los Angeles Cleantech Incubator (LACI), The Boring Company, and SpaceX. At LACI, the ETC learned about the Transportation Electrification Partnership, while tours at The Boring Company and SpaceX provided insights into the latest tunnel boring technology and allowed the Committee to explore technologies which, while in a nascent or testing stage, remain relevant to the future of the region's transportation system.

Below is a summary of key work efforts, projects, and programs influenced by the ETC.

SCAG's Broadband Planning Program

Broadband VMT Report: SCAG conducted a study to explore the potential of widespread broadband deployment and universal adoption in reducing vehicle trip generation and vehicle miles traveled (VMT), thereby decreasing greenhouse gas (GHG) emissions to combat climate change. The report employed a comprehensive set of methodologies to provide both qualitative and quantitative projections on how broadband could reduce VMT and GHG emissions, offering valuable insights for policymakers and regulators. Ultimately, the study found that work trip related GHG emissions could be reduced by 1 – 15%.

SCAG's Broadband Resolution: SCAG's Regional Council adopted Resolution No. 21-629-2¹ in February 2021, which pledges SCAG to assist in bridging the digital divide in underserved communities. The resolution recognizes the digital divide and directs staff to develop a broadband action plan and/or program.

¹ SCAG's Broadband Resolution. Available at: https://scag.ca.gov/sites/main/files/file-attachments/resolution_no._21-629-2_-_support_to_increase_broadband_access.pdf?1646942018

Digital Action Plan: In April 2023, SCAG’s Regional Council approved the Digital Action Plan,² which outlines the digital divide across the SCAG region. The plan acknowledges key contributions from various stakeholders and proposes a set of potential actions SCAG will undertake to bridge this divide. These actions include securing funding for local jurisdictions, advocating for Southern California's equitable share of federal and state grants, distributing relevant data and analysis, and conducting studies to support the accelerated deployment of broadband infrastructure.

SCAG’s Clean Technology Program

Southern California Plug-In Electric Vehicle (PEV) Atlas: The Southern California PEV Atlas³ contains 198 pages of maps, charts, and data at the subregional and council of governments level that illustrate factors that influence demand for charging equipment at specific locations. Information in the atlas assists planners with municipal reform by identifying where PEVs are currently owned and operated and where PEV adoption is likely to occur.

Clean Transportation Technology Policy: On February 23, 2023, the ETC recommended that the Regional Council adopt Resolution No. 23-654-5⁴ to formalize SCAG’s Clean Transportation Technology Policy. The policy supports the development and deployment of a zero-emission transportation system to improve air quality, reduce health risks, lower greenhouse gas emissions, and promote economic development, resilience, and equity. The Resolution also commits SCAG to technology neutrality, allowing operators to choose the best technologies for their needs while fostering innovation. Additional information on potential technologies will be provided in a Clean Transportation Technology Compendium for Connect SoCal 2024.

Southern California Electric Vehicle Charging Station Study: The Southern California Electric Vehicle Charging Station Study⁵ was approved on February 28, 2023, with SCAG partnering with 18 cities to promote EV charging infrastructure and accelerate transportation electrification. The study provided tailored policy guidance to partner cities, conducted a regionwide site suitability analysis targeting underserved communities and multi-unit dwellings, and included EV site evaluations. It also produced a Passenger Electric Vehicle Infrastructure Plan to guide cities on developing charging stations and supporting EV adoption across Southern California.

² SCAG’s Digital Action Plan. Available at: <https://scag.ca.gov/sites/main/files/file-attachments/scag-digital-action-plan-final-apr-2023.pdf?1680813297>

³ Southern California PEV Atlas. Available at: https://maps.scag.ca.gov/electric_vehicle/index.html

⁴ Clean Transportation Policy, Resolution No. 23-654. Available at: <https://scag.ca.gov/sites/main/files/file-attachments/rc040623fullpacket.pdf> (packet pg. 134)

⁵ Southern California Electric Vehicle Charging Station Study. Available at: https://scag.ca.gov/sites/main/files/file-attachments/final_report_and_regional_pev_plan.pdf?1684341506

Guiding Principles for Emerging Technology: The Guiding Principles for Emerging Technology⁶ were designed to provide guidance to cities, counties, and local agencies on how to interact with new technologies and implement accordingly. SCAG staff evaluated guiding principles and policies from cities and agencies throughout the U.S. and shared them with internal and external working groups to develop the Guiding Principles for Emerging Technology. The principles encourage technology advancements that prioritize equity, accessibility, safety, sustainability, and resilience.

Clean Technology Compendium: Included in Resolution No. 23-654-5 was the directive for the preparation of a Clean Transportation Technology Compendium.⁷ The compendium was completed in September 2023, and was designed to aid in the development of Connect SoCal 2024. It offers an in-depth look at zero- and near-zero emission transportation technologies, including charging and fueling infrastructure and other supporting products, and highlights essential features, identifies knowledge gaps, and suggests strategies for the deployment of clean technologies in the region. The compendium serves as a resource to public agencies and local governments in formulating policies that encourage the adoption of these technologies, providing stakeholders with information necessary to make decisions that align with sustainability objectives.

Clean Cities Coalition Strategic Plan (FY24): This Plan is envisioned as a multi-year roadmap outlining specific objectives and activities that coalition stakeholders will undertake. The primary goals set by the DOE are to achieve a 16% increase in gasoline gallon equivalent (GGE) displaced and a 20% annual reduction in GHG emissions. Both figures are considered visionary and aspirational rather than a mandated and enforced set of metrics and have been developed in direct alignment with Connect SoCal 2024 projections and strategies. SCAG's Clean Cities Coalition Strategic Plan⁸ complies with the DOE's stipulations but also aligns with Regional Council Resolution No. 23-654-5, adopted by the Regional Council on April 6, 2023, which establishes SCAG's Clean Transportation Technology Policy. Moreover, the Strategic Plan is designed to support the initiatives of SCAG's Clean Technology Program, effectively synchronizing the goals and policies at the federal, state, and regional levels. This comprehensive approach ensures a cohesive strategy in advancing clean transportation technologies within the SCAG jurisdiction. The Strategic Plan shall be updated annually in accordance with the Coalition's agreement. Annual updates bring an increased flexibility to the planning process and helps to ensure this Strategic Plan remains a "living document," rather than a static plan.

⁶ Guiding Principles for Emerging Technology. Available at: <https://scag.ca.gov/sites/main/files/file-attachments/etc-042723-fullagn.pdf?1682032497#page=25>

⁷ Clean Technology Compendium. Available at: <https://scag.ca.gov/post/clean-technology-compendium>

⁸ Clean Cities Strategic Plan Fiscal Year 2024. Available at: https://scag.ca.gov/sites/main/files/file-attachments/23-3194-cleancitiesstrategicplan-finaldraft_final.pdf?1712178087

SCAG's Goods Movement Program

Last Mile Freight Program (LMFP): SCAG partnered with the Mobile Source Air Pollution Reduction Review Committee (MSRC) to establish the LMFP.⁹ The LMFP is a component of a larger goods movement emission reduction effort established by MSRC and focuses on deploying zero-emission (ZE) or near-zero emission (NZE) trucks and infrastructure, aiming to reduce greenhouse gases and air pollutants. The program was structured in two phases: commercial deployment of ZE/NZE vehicles and broader adoption through public-private collaboration. Key goals include the scaling of clean technologies, addressing infrastructure needs, enhancing transparency, informing stakeholders, and supporting equitable funding distribution.

Southern California Zero Emissions Truck Infrastructure (ZETI) Study: SCAG received funding from the Electric Power Research Institute (EPRI) and CALSTART to develop a regional network for zero-emission truck charging and fueling infrastructure. To envision the regional zero-emission transportation infrastructure for battery electric and hydrogen fuel cell trucks, the Southern California ZETI Study¹⁰ provides a phased blueprint and action plan, addressing how stations can serve various truck markets and business functions. The study engaged stakeholders, including truck drivers, fleet and warehouse operators, terminal and intermodal facility operators, and community organizations, guided by a technical advisory committee of key stakeholders. Findings contribute to the Electric Truck Research and Utilization Center (eTRUC) Project, funded by the CEC Research Hub for Electric Technologies in Truck Applications Program and led by EPRI. The study explores where and how charging stations can be deployed, estimates market share and demand for various technologies, and examines how these technologies can work together to support regional zero-emission goals.

LACI, EVs, and Curb Space: Recent and active partnerships with the Los Angeles Clean Technology Incubator (LACI) have focused on accelerating electrification through innovative transportation partnerships and projects. Funding provided by the Department of Energy's Vehicle Technologies Office (VTO) is helping partners in the region to test, deploy, and scale zero emission delivery zones and EV commercial fleets via applications, the integration of curb space management, and automated license plate recognition (ALPR) technologies.

SCAG's Smart Cities Program

Future Communities Pilot Program: The Future Communities Pilot Program (FCPP) was designed to support city and county agencies in the implementation of innovative pilot projects aimed at reducing VMT and GHG emissions. These objectives were achieved through the enhancement of municipal operations, utilization of new technologies and developing enhanced data analytics. SCAG collaborated with the MSRC of the South Coast Air Quality Management District (SCAQMD) to implement the FCPP with pilot projects completed in December 2023. The FCPP Evaluation

⁹ Last Mile Freight Program. Available at: <https://scag.ca.gov/LMFP>

¹⁰ Southern California ZETI Study: <https://scag.ca.gov/socalzeti>

Summary Report was prepared for and approved by the MSRC earlier in 2024. The portfolio of pilot projects includes a range of innovative approaches, and from leveraging smart technologies in parking management to digitizing city services for greater efficiency, the pilot projects showcase a wide array of strategies aimed at improving mobility and reducing environmental impacts.

Sustainable Communities Program (SCP) Smart Cities & Mobility Innovations (SCMI) Program: SCAG's SCP strengthens partnerships with local agencies and strategic partners responsible for land use and transportation decisions, offering technical assistance and financial resources to meet the diverse planning needs of local communities and support implementation of regional planning policies and strategies. Released in 2021 with a focus on Smart Cities & Mobility Innovations (SCMI), this program supported the implementation of three Connect SoCal Key Connections: Smart Cities and Job Centers, Go Zones, and Shared Mobility/Mobility as a Service. Local jurisdictions used technology and innovation to explore and implement curb space management measures that encouraged shared modes, managed parking effectively, and supported commerce and the growth of housing and employment in job centers.

Smart Cities Strategic Plan: Given the rapid evolution of technology and the advancements made in smart cities technologies since SCAG's 2017 Future Communities Framework, and the proactive approach to mobility and sustainability adopted in Connect SoCal, there is a pressing need for a new Smart Cities Strategic Plan for the region. While the concept of smart cities involves a variety of subjects, this Plan is intended to focus on mobility and transportation, along with the clean, emerging technologies that support these areas. The upcoming Plan will outline and advance SCAG's efforts in smart technology integration, transit and multi-modal integration, clean transportation, and broadband. The Plan seeks to evaluate emerging technologies, current trends, and research; establish and manage a working group or technical advisory group; recommend partnerships, policies, and actionable next steps; align with SCAG's long-term planning objectives and strategies; and develop and implement an EV Incentive Program (EVs and EV Charging Stations). It represents a comprehensive update to the multifaceted and various smart cities programs and projects at SCAG and within the region and is reflective of the many successful initiatives completed by the agency and informed by ETC.

Connect SoCal

The culmination of SCAG's smart cities and clean transportation programming, coupled with guidance from the Emerging Technology Committee, heavily influenced the outcome of Connect SoCal with regards to policy development. Supporting a technology-neutral approach, strengthening the emphasis on clean transportation technologies, and underscoring the urgency to electrification and decarbonization are among many critical Connect SoCal objectives informed by this Committee. Connect SoCal further identifies regional strategic investments to support the transition to clean transportation technologies and recognizes the importance of integrating emerging technologies and mobility innovations within the region's transportation ecosystem.

Next Steps

Following the ETC meeting on 10/31, content related to emerging technologies will be integrated into the existing policy committee structure and complemented through future mobile workshops. Emerging technologies will continue to be prioritized as a part of President Hagman's FY25 core Presidential Priorities (transit recovery, clean technology, and goods movement). Upcoming panels at relevant policy committees, including those focused on clean transportation technology, will continue to explore these topics with SCAG elected officials and stakeholders.

Critical subject areas in which staff will continue to research, educate, and inform will include connected and autonomous vehicles (CAVs), grid capacity and electrification, battery and storage technologies, alternative fuel and hydrogen, charging infrastructure, artificial intelligence, data privacy and security, and incentive programs. Additionally, in support of the upcoming Smart Cities Strategic Plan efforts, staff anticipates forming a technical working group or steering committee to guide the planning process, offering another opportunity for stakeholders to get involved in emerging technology at SCAG.

FISCAL IMPACT:

None.

ATTACHMENT(S):

1. PowerPoint Presentation - Clean Technology Program and Accomplishments
2. Clean Tech Program and Accomplishments_Appendix



Accomplishments of the Emerging Technologies Committee (ETC)

October 31, 2024

WWW.SCAG.CA.GOV



SCAG'S EMERGING TECHNOLOGY COMMITTEE (ETC)

ETC Accomplishments and Recap of Critical Projects

Emerging Technology Committee

- Formed in 2019 to research and identify new and emerging technologies which can support SCAG's Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS)
- Serves as a resource for SCAG's other policy committees (CEHD, EEC, and TC)
- Supports the preparation and development of clean technology and smart city policy at SCAG
- Critical **meeting content** included:
 - Private sector and **new, innovative technologies**
 - Public sector examples, case studies, and **insights for replicability**
 - Educational research and guidance from **subject matter experts**
 - Site **visits to explore** innovative infrastructure, projects, and companies



Emerging Technology Committee Responsibilities

- Identify **technological and societal trends** (e.g. Mobility as a Service; Zero Emission, Autonomous and Connected Vehicles; Smart Cities and Intelligent Transportation Systems) that may fundamentally alter the use of the region's transportation system.
- Frame potential **policy considerations** to enable the region to harness the benefits of emerging technologies that reduce sprawl, vehicle miles traveled (VMT), and greenhouse gas (GHG) emissions.
- Highlight **opportunities** for under-represented, disadvantaged communities to utilize emerging technologies.
- Explore **technologies** which, while in a nascent or testing stage, remain relevant to the future of the region's transportation system.



Topics Covered: Technologies, Tools, Resources

- **Smart Cities and Intelligent Transportation Systems (ITS):** Smart city technologies, including infrastructure to support autonomous vehicles, traffic management, and data-driven urban planning solutions.
- **Broadband and Digital Action Plans:** The importance of digital connectivity for transportation and other public services, including broadband infrastructure and its integration with vehicle-miles-traveled (VMT) reporting and regional connectivity goals.
- **Clean and Emerging Technologies:** Updates on clean technology programs, including innovations in electric vehicles (EVs), renewable energy resources, and reducing emissions through improved traffic and transportation systems.

Topics Covered: Technologies, Tools, Resources

- **Regional Data Platforms and Big Data:** The use of big data to improve transportation modeling and forecasting, often involving updates on SCAG's Regional Data Platform, to help local agencies make data-driven decisions.
- **Aviation Technologies:** Emerging aviation technologies, such as electric vertical takeoff and landing (eVTOL) vehicles, which hold the potential to revolutionize urban mobility.
- **Environmental and Resource Challenges:** Discussions about the lithium resources in the Salton Sea and their role in clean technology development.



SCAG'S BROADBAND PLANNING PROGRAM

Broadband VMT Report

- Caltrans awarded SCAG a Sustainable Communities Grant
- Studies **the potential of widespread broadband deployment** and universal adoption **being a "green strategy"** in reducing vehicle trip generation, VMT, and associated GHG emissions
- Includes comprehensive set of methodologies to provide qualitative and quantitative projections on how **broadband could reduce VMT and GHG emissions**
- Concluded that GHG emissions could be potentially reduced by 1-15%



Resolution 21-629-2 – Pledge to Bridge the Digital Divide

- Adopted by SCAG’s Regional Council in February 2021
- **SCAG Resolution 21-629-2:** SCAG pledged to assist in bridging the digital divide
 - Develop a **Digital Action Plan**
 - Collect and invest in broadband data and conduct analysis
 - Conduct technical studies
 - Incorporate broadband into SCAG’s programs



Digital Action Plan

- Divided into four major goals:
 1. **Accessibility and Affordability** – Every household in the region should have access to affordable high-speed broadband services and high-quality devices
 2. **Adoption** – All residents should have the confidence and skills to participate in digital activities
 3. **Consensus** – Build partnerships and reach consensus that high-quality and affordable broadband is an essential service to everyone and provides economic, environmental and safety benefits
 4. **Planning** – Develop broadband technical tools and studies which provide value to the region
- Includes a vision, goals, and strategies; background information on broadband and the digital divide; causes of the digital divide; the state of the region; work efforts; and actions and deliverables





SCAG'S CLEAN TECHNOLOGY PROGRAM

Southern California Plug-In Electric Vehicle (PEV) Atlas

- Contains **198 pages of maps, charts, and data** at the subregional and council of governments level that illustrate factors which influence demand for charging equipment at specific locations
- Assists planners with municipal reform by identifying **where PEVs are currently** owned and operated and **where PEV adoption is likely to occur**
- Interactive PEV Atlas provides useful data in a visual context, such as locations of existing charging stations and employers
 - Also includes a **suite of spatial tools** for PEV readiness planning

Southern California Plug-in Electric Vehicle Readiness Atlas: 2017 Update



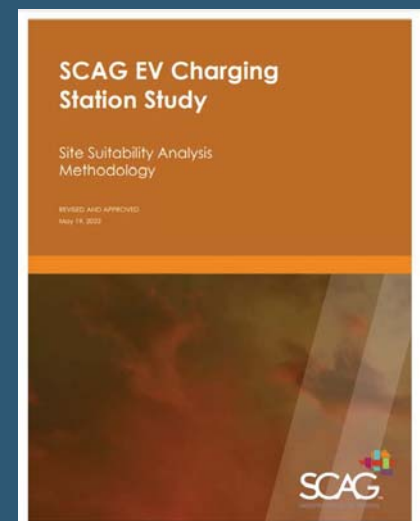
Clean Transportation Technology Policy

- Adopted by SCAG's Regional Council on April 6, 2023
- Defines **Clean Transportation Technology**
 - "zero- and near zero- emission vehicles, their supporting infrastructure, and facilitating technologies that reduce environmental impact over their life cycle."
- Reaffirms SCAG's position on **Technology Neutrality**
 - "stance that does not give preference to a particular technology as long as it furthers the desired outcome of a zero-emission transportation system that meets or exceeds federal and state targets."



Southern California Electric Vehicle Charging Station Study

- SCAG partnered with **18 cities within the SCAG region** to help jurisdictions promote development and deployment of EV charging infrastructure to accelerate transportation electrification.
- The study included:
 - Policy guidance to partner cities (AB 1236)
 - A **regionwide site suitability analysis** to target areas for future EV charging infrastructure, with a focus on increasing EV infrastructure in traditionally underserved and hard-to-reach communities including multi-unit dwellings and disadvantaged communities,
 - EV site evaluations
 - A **Passenger Electric Vehicle Infrastructure Plan** that informs on the need and tools available for cities to spur development of charging stations and support EV adoption across Southern California



Guiding Principles for Emerging Technology

- The Guiding Principles for Emerging Technology were designed to provide guidance to cities, counties, and local agencies on how to interact with new technologies and implement accordingly.
- The principles are as follows:

1. Equity
2. Accessibility
3. Safety
4. Sustainability
5. Integration
6. Adaptability
7. Data Privacy and Security
8. Transparency and Accountability
9. Resilience
10. Workforce Development



Clean Cities Redesignation

- Completed in 2023, represents the **Coalition's active engagement** to increase petroleum displacement and reduce greenhouse gas emissions
- Coalitions required to maintain a robust number of committed, active stakeholders, and hold regular meetings
- Opportunity to **showcase programs, projects, and partnerships**, especially those for SCAG's Clean Transportation Technology program
- Emphasizes support for the deployment of clean transit and technologies as a part of CARB's Innovative Clean Technology (ICT) Rule
- Other priority areas indicated by SCAG include exploring potential incentive programs and continued support for charging infrastructure deployment



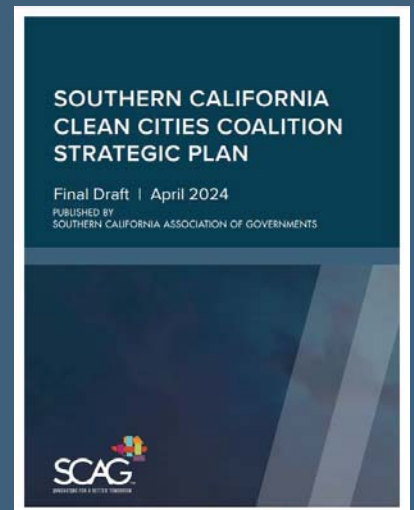
Clean Technology Compendium

- Completed in September 2023
- Offers an in-depth look at **zero- and near-zero emission transportation technologies**, including charging and fueling infrastructure and other supporting products, and highlights essential features, identifies knowledge gaps, and suggests strategies for the deployment of clean technologies in the regions.
- **Serves as a resource** to public agencies and local governments in formulating policies that encourage the adoption of these technologies
- Provides stakeholders with information necessary to make decisions that align with sustainability objectives.
 - SCAG conducted a **Clean Technology Survey** to clean vehicle tech vendors to inform the Clean Technology Compendium, filling key information gaps.



Clean Cities Coalition Strategic Plan (FY24)

- U.S. DOE requires each Clean Cities coalition to prepare a strategic plan
 - Multi-year plan that specifies objectives and activities to be undertaken by coalition stakeholders to achieve a 16% increase in gasoline gallon equivalent (GGE) displaced and 20% reduction in GHG emissions annually
- The Plan addresses the following:
 - **Strategic Framework**
 - **Clean Transportation Transition**
 - **Alternative Fuels**
 - **Both Vehicles and Supporting Infrastructure**
 - **Emission Reductions**
 - **Barriers to Adoption**
 - **Federal and State Policies and Programs**
 - **SCAG's Work Efforts**
 - **SCAG's Clean Cities Strategic Plan Roadmap**





SCAG'S GOODS MOVEMENT PROGRAM

Last Mile Freight Program (LMFP)

- Component of a larger goods movement emission reduction effort established by the Mobile Source Air Pollution Reduction Review Committee (MSRC)
- Serves as **an initial step toward implementing freight-related clean vehicles/equipment** and infrastructure to support cleaner air goals
- Two-phased approach for the LMFP:
 - **Phase 1:** Focusing on the **commercial deployment of zero-emission or near-zero emission (ZE/NZE) heavy- and/or medium-duty on-road trucks** (including ZE/NZE equipment and supporting infrastructure).
 - **Phase 2:** Further expanding Phase 1 projects through coordination with both public and private sector stakeholders to deploy broader innovative technologies currently being demonstrated by leading last mile delivery companies, particularly in e-commerce use cases.



Southern California Zero Emissions Truck Infrastructure (ZETI) Study

- Southern California **Zero Emission Truck Infrastructure (ZETI) Study**
 - Critical agency initiative for the ZEV transition
 - Developing a **phased blueprint and action plan** for a regional network of zero emission truck charging and fueling infrastructure
 - Guided by the Technical Advisory Committee (TAC) comprised of key stakeholders and partners
 - Study will select up to ten sites to provide a closer look at individual station deployment needs



LACI, EVs, and Curb Space

- Recent and active partnerships with the **Los Angeles Clean Technology Incubator (LACI)**
 - LACI Zero Emissions [2028 Roadmap 2.0](#) and the Transportation Electrification Partnership
 - DOE VTO grant to scale zero emission delivery zones and EV use by commercial fleets via applications and integration of curb space management
 - Los Angeles and Santa Monica have study areas
 - Includes automated license plate recognition (ALPR) technology
 - Goals include **reduction in air pollution and increasing productivity at the curb**, especially in disadvantaged communities and environmental justice areas
 - SCAG participates in the Technical Committee and serves as an advisor





SCAG'S SMART CITIES PROGRAM

Future Communities Pilot Program (FCPP)

- Grant opportunity from SCAG and the MSRC for local cities and counties to **implement new technology and data solutions, while also reducing VMT** and implementing SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy
 - **City of Cerritos** *Remote Services Enhancement Project*
 - **City of Glendale** *Route Optimization & Fleet Telematics*
 - **City of Los Angeles Department of Transportation** *Measuring VMT Reduction from Shared Mobility Services through Real-Time Data*
 - **City of Monrovia** *Evaluate Alternative Strategies to Optimize the GoMonrovia Program*
 - **City of Anaheim** *Smart Center City*
 - **City of Riverside** *Integrated Electronic Plans Solution*
 - **County of San Bernardino** *Remote Electronic Warrants*
 - **City of Ontario** *Smart City Rapid Validation Hub*
- FCPP Evaluation Summary Report was prepared for and approved by MSRC earlier in 2024



Sustainable Communities Program (SCP) Smart Cities & Mobility Innovations (SCMI)

- Focused on **using technology and innovation to explore and implement curb space management measures** that encouraged shared modes, managed parking effectively, and supported commerce and the growth of housing and employment in job centers
 - **City of Rialto** *Smart Cities Plan for Warehousing and Logistics*
 - **City of Los Angeles** *Curb Zone Data Inventory for Digital Curb Management*
 - **City of Long Beach** *Curb Space Management Study*
 - **City of Stanton** *Citywide Curb Management Plan*
 - **San Gabriel Valley Council of Governments** *GoSGV Engagement & Evaluation*
 - **City of Desert Hot Springs** *Downtown & Light Industrial Parking Plan*
 - **City of Garden Grove** *Curb Data Study*
 - **City of Laguna Woods** *Mobility Technology Plan*
- Supported the implementation of three Connect SoCal Key Connections:
 1. Smart Cities and Job Centers
 2. Go Zones
 3. Shared Mobility/Mobility as a Service



Upcoming Smart Cities Strategic Plan

- Outline and **advance SCAG's efforts in smart technology integration**, transit and multi-modal integration, clean transportation, and broadband
- Plan Objectives
 - Evaluation of emerging technologies, current trends, and research
 - Establishment and management of a working group or technical advisory group
 - Recommendations for partnerships, policies, and actionable next steps
 - Alignment with SCAG's long-term planning objectives and strategies
 - Development and implementation of an EV Incentive Program (EVs and EV Charging Stations)
- Smart Cities **Strategic Plan Working Group**
 - Will be responsible for providing additional context and insight related to smart technologies and the upcoming strategic plan
 - Can help identify and target barriers that impact the deployment of electric vehicles (EVs) and its supportive charging infrastructure

Next Steps for ETC

- Emerging technologies continue to be prioritized through President Hagman's core presidential priorities for FY25
 - Transit recovery, clean technology, and goods movement
- Critical subject areas staff will continue to research, educate, and inform include:
 - **Connected and autonomous vehicles (CAVs)**
 - **Grid capacity, electrification, and decarbonization**
 - **Battery and storage technologies**
 - **Alternative fuels and hydrogen**
 - **EV incentives and charging infrastructure**
 - **AI and data privacy**



THANK YOU!

For more information, please visit:

www.scag.ca.gov



RESOLUTION NO. 23-654-5

A RESOLUTION OF THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS APPROVING A REGIONAL CLEAN TRANSPORTATION TECHNOLOGY POLICY

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS 900 Wilshire Blvd., Ste. 1700 Los Angeles, CA 90017 T: (213) 236-1800 www.scag.ca.gov

REGIONAL COUNCIL OFFICERS

President Jan C. Harnik, Riverside County Transportation Commission

First Vice President Art Brown, Buena Park

Second Vice President Curt Hagman, County of San Bernardino

Immediate Past President Clint Lorimore, Eastvale

COMMITTEE CHAIRS

Executive/Administration Jan C. Harnik, Riverside County Transportation Commission

Community, Economic & Human Development Frank Yokoyama, Cerritos

Energy & Environment Deborah Robertson, Rialto

Transportation Ray Marquez, Chino Hills

WHEREAS, the Southern California Association of Governments (SCAG) is the largest Metropolitan Planning Organization (MPO) in the United States covering six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura), and serving 19 million people pursuant to 23 USC § 134 et seq. and 49 USC § 5303 et seq.; and

WHEREAS, SCAG is responsible for bringing Southern California’s diverse residents and local partners together with unifying regional plans, policies, and programs that result in more healthy, livable, sustainable, and economically resilient communities; and

WHEREAS, improving mobility, accessibility, reliability, regional environmental conditions, and transportation safety has been a goal included in SCAG’s long-range plans, including Connect SoCal, for decades; and

WHEREAS, Connect SoCal 2020 identified a vision to create a holistic and coordinated approach to de-carbonizing passenger vehicles, transit, and goods movement vehicles; and

WHEREAS, improvement of regional air quality is a priority and the region is a non-attainment area for NOx; failure to meet requirements of the Federal Clean Air Act means federal sanctions may be imposed, jeopardizing transportation funds; and

WHEREAS, Clean Transportation Technology is defined via this document for SCAG’s purposes as “zero- and near zero-emission vehicles, their supporting infrastructure, and other facilitating products that reduce environmental impacts over their full life cycle including upstream production and end of life,” and the below policy will formalize this; and

WHEREAS, a zero-emission transportation system is envisioned as the regional goal, near-zero-emission technologies may play a role in support of this goal and offer short term benefits as bridging technologies where zero-emission solutions are not yet feasible or commercially viable (heavy duty vehicles); near zero implies a significant reduction compared to commonly used technologies;

WHEREAS, Clean Transportation Technology will be necessary in order to meet state climate and air quality goals and requirements such as the Innovative Clean Transit Rule, Advanced Clean Cars Act, the Advanced Clean Trucks Regulation

Attachment: Clean Tech Program and Accomplishments_Appendix (Clean Technology Program and Accomplishments)

and those reflected in the Climate Action Plan for Transportation Infrastructure (CAPTI) and the 2022 California Air Resources Board (CARB) Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan); and

WHEREAS, SCAG’s Regional Council unanimously adopted a Climate Action Resolution in January 2021 that affirmed its commitment to reduce greenhouse gas emissions and to establish partnerships to support local jurisdictions’ climate adaptation and mitigation initiatives, including implementation of Clean Transportation Technologies; and

WHEREAS, investment in Clean Transportation Technologies is an important part of meeting SCAG’s objectives in economic development and recovery, resilience planning and achievement of equity; and

WHEREAS, jurisdictions throughout the region including cities, counties, transit agencies, and private fleets, are currently evaluating and making investments in Clean Transportation Technology based on their operational needs; and

WHEREAS, SCAG, though not an implementing agency, has an evolving role in Clean Transportation Technology Investment, including but not limited to the Last Mile Freight Program, and future funding opportunities; and

WHEREAS, SCAG supports the region in deployment of Clean Transportation Technology through research and evaluation, stakeholder support, partnerships, and advocacy;


NOW, THEREFORE, BE IT RESOLVED by the Regional Council of the Southern California Association of Governments, that SCAG hereby adopts a regional Clean Transportation Technology Policy with the long-term aim of supporting the development, commercialization and deployment of a zero-emission transportation system and its supporting elements to improve air quality, reduce greenhouse gas emissions, meet federal, state and regional targets and promote economic development, resilience and equity.

BE IT FURTHER RESOLVED THAT:

1. Clean Transportation Technology is defined as “zero- and near zero-emission vehicles, their supporting infrastructure, and other facilitating products that reduce environmental impacts over their full life cycle including upstream production and end of life.”
2. SCAG will take a technology neutral approach in its study of, advancement of, and where applicable investment in Clean Transportation Technology where SCAG defines Technology Neutrality as a “stance that does not give preference to a particular technology as long as it furthers the desired outcome of a zero-emission transportation system that meets or exceeds federal and state targets.”
3. As part of the development of Connect SoCal 2024, SCAG will prepare a Clean Transportation Technology Compendium that will support decision making by providing information on various clean transportation technologies;

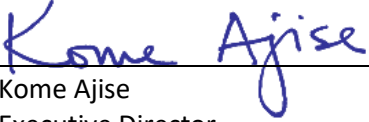
4. SCAG will continue to foster innovation and will support the study and deployment of a range of affordable and scalable Clean Transportation Technologies with consideration of the best available information and expected use case as determined by the end user, based on their operational needs, thus maintaining a Technology Neutral Approach;
5. SCAG will continue to support the region in deployment of Clean Transportation Technology through research and evaluation, stakeholder support, resource and tool provision, intrastate and intraregional coordination, advocacy, and where applicable investment programs; and
6. SCAG will promote equitable use of and access to Clean Transportation Technologies so that all may benefit from them.

PASSED, APPROVED AND ADOPTED by the Regional Council of the Southern California Association of Governments at its regular meeting this 6th day of April, 2023.




Jan C. Harnik
President, SCAG
Riverside County Transportation Commission

Attested by:



Kome Ajise
Executive Director

Approved as to Form:



Michael R.W. Houston
Chief Counsel

LET YOUR NEXT VEHICLE BE AN ELECTRIC VEHICLE (EV)

\$800/year
in fuel
cost savings

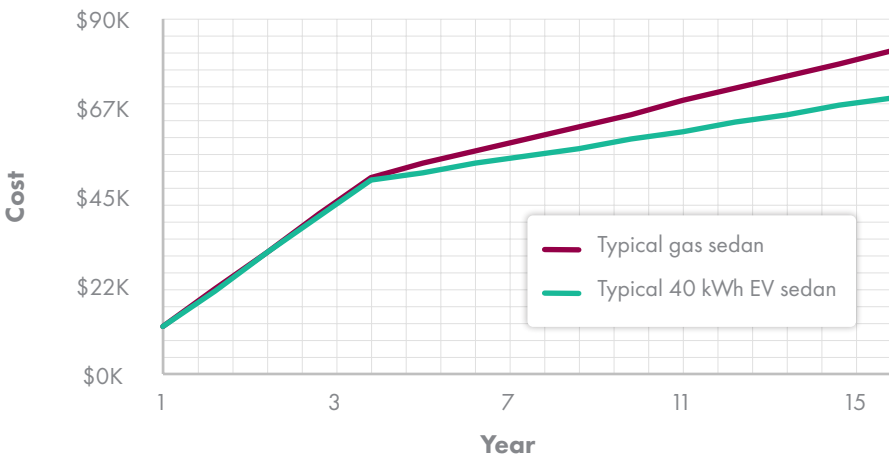
\$700/year on
maintenance
cost savings

Up to
8-year/
100k-mile
battery
warranty

New EVs
starting under
\$35k
(before incentives)

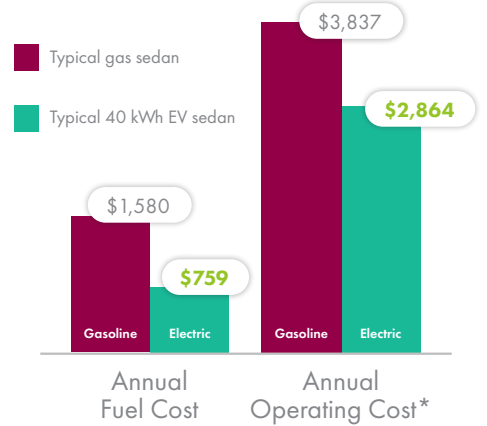
See available EVs at <https://afdc.energy.gov/vehicles/search/>

LIFETIME COST OF OWNERSHIP



Average savings calculated using the Alternative Fuels Data Center Vehicle Cost Calculator (<https://afdc.energy.gov/calc/>)

SAMPLE ANNUAL VEHICLE OWNERSHIP COSTS



*Includes fuel, tires, maintenance, registration, license, and insurance

Average savings calculated using the Alternative Fuels Data Center Vehicle Cost Calculator (<https://afdc.energy.gov/calc/>)

EV DRIVING BENEFITS

- > Quiet ride
- > Fun to drive
- > Smooth operation
- > Better handling
- > Increased reliability

EV ENVIRONMENTAL BENEFITS

- > No tailpipe emissions
- > Cleaner air
- > Greenhouse Gas emission reduction
- > Improved community health and air quality

ALL THE WAYS TO CHARGE

Level 1 Charger



Level 1 Charger

Uses a standard 110-V household outlet. Very low cost and ideal for overnight residential charging. Recharges 3.5-6.5 miles of range per hour.

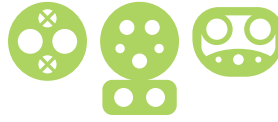
J1772



Level 2 Charger

Ideal for overnight residential, workplace, and commercial charging. Low-mid cost and recharges 14-35 miles of range per hour. All EVs can use Level 2 chargers.

CHAdeMO CCS-1 Tesla



Level 3 DC Fast Charger

Ideal for short stops along major travel corridors. High cost but can recharge up to 80% in under 30 minutes. Different EV brands are compatible with different chargers.

★ Charge at home, at work, or on the road

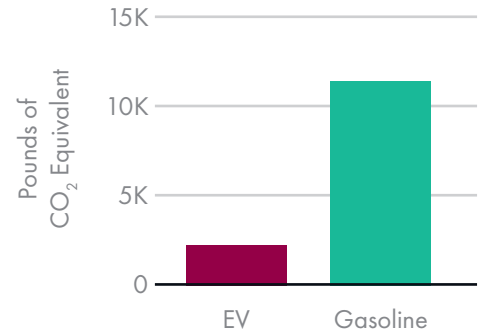
★ 20,000 charging stations in Los Angeles County with another 40,000 being added by the end of 2025

★ If you rent, ask your landlord about installation

To find the location of your nearest EV charging station, visit: www.plugshare.com

BECAUSE CALIFORNIA USES A LOT OF CLEAN ENERGY, THE EMISSIONS FROM DRIVING AN EV ARE SIGNIFICANTLY LESS THAN A GASOLINE VEHICLE.

Emissions Savings (Annual) EV vs. Gasoline

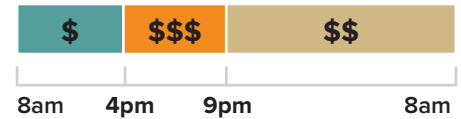


Emissions for California calculated using the Alternative Fuels Data Center Emissions Calculator (https://afdc.energy.gov/vehicles/electric_emissions.html)

TIME-OF-USE RATES

Save money by charging your EV during off-peak times in the middle of the day when there is extra solar power, or overnight when demand is low. With smart meters you can charge your EV when there is extra renewable energy available. In the future, vehicle-to-grid technology can allow the EV to power the grid and YOU will get paid for it!

Cost of Electricity During the Day



Save Even More with Federal, State, Local, and Utility Incentives for EVs and Chargers *

Federal	California State	Southern California Local	California Utility
Federal Tax Credit for Electric Vehicles: \$7,500 (max incentive, varies by manufacturer)	California Clean Vehicle Rebate Project for New EVs: \$2,000 – \$4,500 (income-eligible)	South Coast Air Quality Management District – Replace Your Ride: \$9,500 for New EVs (income-eligible)	All – Special time-of-use rates to reduce the cost of EV charging
	California Clean Fuel Reward for New EVs: \$750	South Coast Air Quality Management District – Residential EV Charging Incentive Pilot Program: \$500	LADWP – Charge Up LA!: Used EVs - \$1,500 Chargers - \$750
			Southern California Edison Pre-Owned EV Rebate: \$1,000 – \$4,000 (income-eligible)

*As of February 2022, to see a list of all available incentives in your area visit <https://afdc.energy.gov/laws>

Development

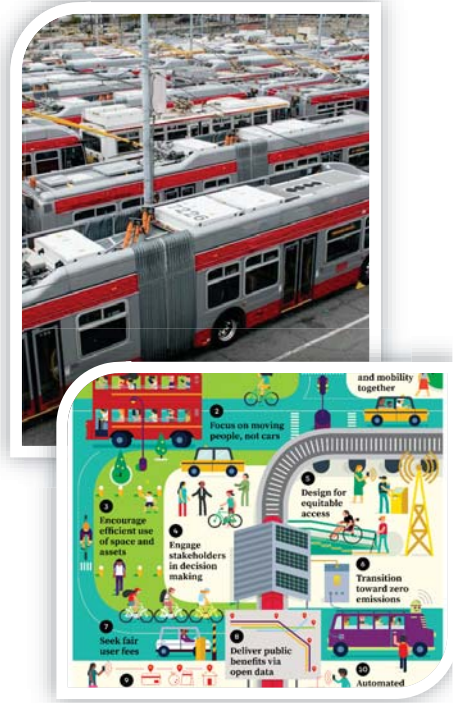
Examples

- SCAG Staff evaluated guiding principles and policies from cities and agencies around the Country as a reference.

Review

- SCAG Staff shared principles with internal and external working groups to develop principles.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS



5



TECHNOLOGY GUIDING PRINCIPLES

6

Draft Principles for Consideration

1. Equity
2. Accessibility
3. Safety
4. Sustainability
5. Integration
6. Adaptive
7. Data Privacy and Security
8. Transparency and Accountability
9. Resilience
10. Workforce Development Investments

Draft Principles for Consideration

1. **Equity:** *Technology should eliminate barriers that may exist based on factors such as race, income, gender, age, language barriers, disability, or geography to ensure people can live a healthy and prosperous life.*
2. **Accessibility:** *Infrastructure and technologies should be designed to provide equal access to mobility, employment and economic opportunity, education, health and other quality of life opportunities.*
3. **Safety:** *Technology should be developed with safety as a high priority and strive to reduce the number of fatalities and serious injuries occurring on our mobility networks.*
4. **Sustainability:** *Technology should reduce the environmental impact of the transportation network over its entire life cycle and support the transition to zero-emission mobility.*
5. **Integration:** *Technology should connect seamlessly into existing mobility infrastructure, such as roads, bridges, and public transit, to create a cohesive, interoperable network. This includes considering the impacts of proposed technology on modal choices, emergency vehicle response times, and transit performance.*

Draft Principles for Consideration

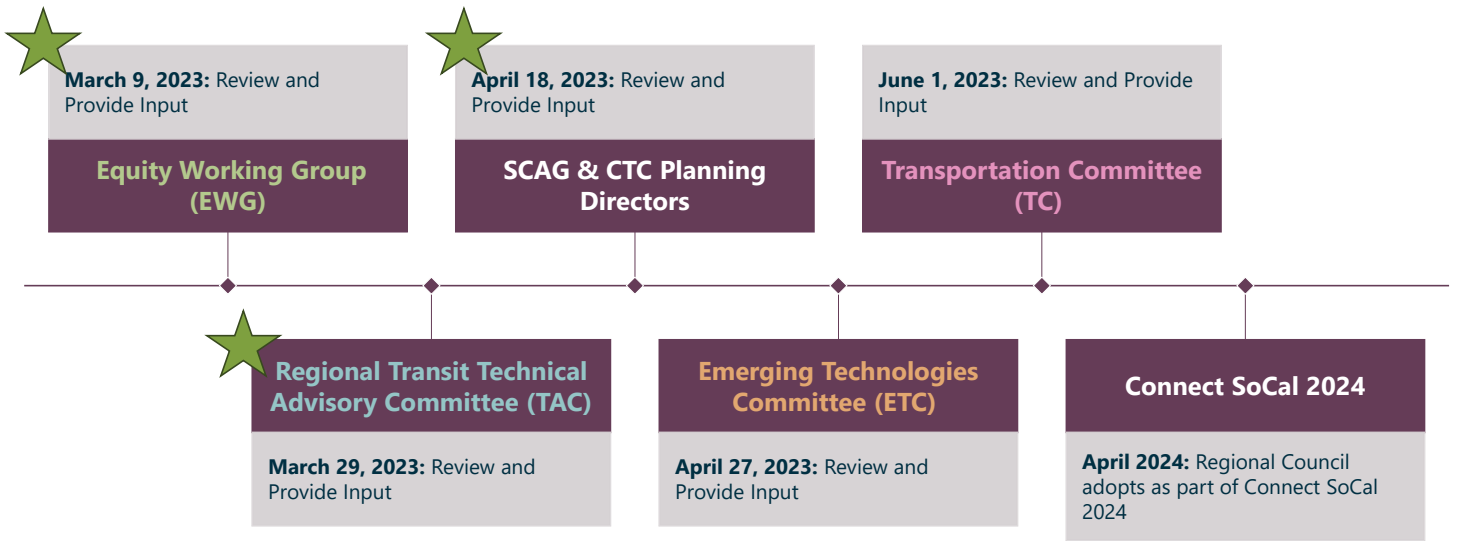
6. **Adaptability:** *Technology should be efficient and responsive to ensure that it remains up-to-date and effective to meet the evolving needs of users and stakeholders.*
7. **Data Privacy and Security:** *Technology should ensure the privacy and security of user data while incorporating equity centered best practices during data collection and integrating any requirements from applicable data specifications*
8. **Transparency and Accountability:** *Technologies providers should share relevant data with local jurisdictions in order for the public and local agencies to effectively evaluate the services' benefits and impacts on communities.*
9. **Resilience:** *Technology should increase the ability of the SCAG region's transportation systems to anticipate and effectively respond to changing conditions, acute shocks, and chronic stressors.*
10. **Workforce Development:** *Recognizing that technology has the capacity to facilitate economic growth, investments in technology should improve workforce development opportunities where these technologies are deployed.*



GUIDING PRINCIPLES TIMELINE

Anticipated Next Steps and Critical Milestones

Next Steps and Critical Milestones



THANK YOU!

For any questions, please contact Javier Silva at silva@scag.ca.gov

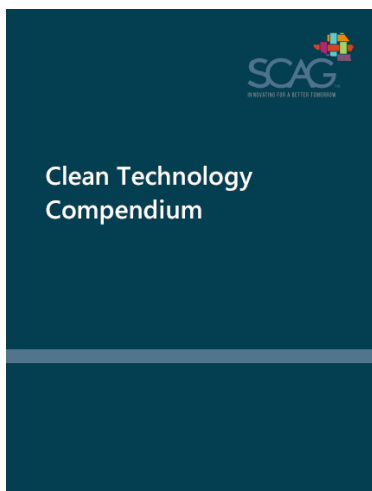


CLEAN TECHNOLOGY COMPENDIUM

OVERVIEW

IMPACTFUL PROGRESS IN ZERO EMISSION VEHICLE (ZEV) AND NEAR-ZEV INITIATIVES, INFRASTRUCTURE AND ASSOCIATED PRODUCTS WILL REQUIRE A COMPREHENSIVE GRASP OF THE EXPANSIVE CLEAN TECHNOLOGY OPTIONS SPANNING VARIOUS SECTORS.

The domain of clean transportation technologies is broad and continuously evolving. Clean transportation technologies vary considerably in readiness, cost implications, effects on air pollution and greenhouse gas emissions, infrastructure prerequisites and scalability.



SCAG has created the [Clean Technology Compendium](#) to provide support for jurisdictions implementing clean transportation technology as a step toward Southern California’s environmental, economic and equity goals. This compendium offers a comprehensive overview of zero and near-zero emission transportation technologies, detailing not only the vehicles themselves but also charging components, fueling infrastructure and other supporting products. Encompassing sectors like passenger vehicles, medium- and heavy-duty vehicles, transit and rail, the compendium delves deeply into the technologies’ key

characteristics, knowledge gaps, uncertainties and strategies to expedite clean technology implementation in Southern California.

CLEAN TRANSPORTATION TECHNOLOGY STATUS



> ZEV adoption surged from 122 vehicles in 2010 to nearly 400,000 by 2022.



> Metrolink is working towards starting the electrification of its rail network by 2028, and San Bernardino County Transit Authority (SBCTA) intends to introduce hydrogen-powered locomotives by 2024.



> ~1 million public and shared-private charging stations needed by 2035 in SCAG region; currently 33,000 Level 2 and 3,700 DCFC stations in the region.

CONTACT

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Principal Planner

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ADOPTION OF CLEAN TECHNOLOGIES FACES SIGNIFICANT BARRIERS



- High upfront cost of vehicles
- Need for significant capital investment for re-fueling infrastructure



- Limited model availability
- Long re-fueling and charging times
- Uncertainties or return on investment



- Insufficient public ZEV infrastructure
- Limited space for depot charging
- Real estate constraints



- Limited knowledge of new technology and incentives
- Lack of technology confidence



- Limited incentives and support
- Lack of vehicles and equipment performance standards
- Inconsistent infrastructure design and standard protocols

SUITE OF STRATEGIES NEEDED

Targeted Incentive Programs: There exists a disparity in the adoption of ZEVs among low- and moderate-income communities, with most incentives benefiting higher-income sectors. To ensure equitable adoption, it is crucial to implement targeted incentive programs prioritizing disadvantaged or low-income communities and expanding their access to clean technology.

Public Education & Outreach: Public education and outreach are essential for promoting clean technologies, addressing misconceptions, and highlighting their benefits. Through strategies like informational campaigns and public-private partnerships, awareness can be raised about ZEV technologies, available incentives, and their environmental and economic advantages.

Building Codes: Local jurisdictions shall consider updating their building code to promote EV infrastructure, including designating EV-ready and EV-only parking and incorporating EV charging in existing structures.

Land Use & Zoning: Land use policies and zoning regulations at the local level can facilitate the adoption of zero and near-zero emission technologies by permitting and promoting charging and fueling infrastructure. Strategies include leveraging public property, land banking, amending zoning regulations and streamlining permitting processes.

Workforce Development: The adoption of ZEV technologies demands a shift in the skills and knowledge of the transportation workforce. Educational institutions can respond by developing curricula focused on these technologies, emphasizing areas like EV design, battery production and charging infrastructure.

Lead by Example: Local governments can set a precedent by transitioning their fleets to zero and near-zero emission technologies, demonstrating their feasibility and supporting emerging technology providers. To enhance this initiative, they can establish ambitious targets for ZEV adoption, monitor progress, and invest in the required charging and refueling infrastructure.



AGENDA ITEM 3
REPORT

Southern California Association of Governments
October 31, 2024

To: Emerging Technologies Committee (ETC)

EXECUTIVE DIRECTOR'S
APPROVAL

From: Marisa Laderach, Senior Regional Planner
(213) 236-1927, laderach@scag.ca.gov

Subject: Future Communities and Smart Cities Updates

RECOMMENDED ACTION:

Information Only – No Action Required

STRATEGIC PRIORITIES:

This item supports the following Strategic Priority 1: Establish and implement a regional vision for a sustainable future. 2: Be a cohesive and influential voice for the region. 3: Spur innovation and action through leadership in research, analysis and information sharing.

EXECUTIVE SUMMARY:

The purpose of this staff report and presentation is to provide program results and takeaways from the Future Communities Pilot Program (FCPP) and an update on SCAG's Smart Cities program. The FCPP was funded through a partnership with the Mobile Source Air Pollution Reduction Committee (MSRC) with the goal of supporting city and county agencies in implementing innovative pilot projects that reduce vehicle miles traveled (VMT) from local travel and municipal operations through new technologies and enhanced data analytics. The FCPP pilots demonstrated varied reductions in VMT and greenhouse gas (GHG) emissions while yielding valuable insight into these strategies. Although the program experienced significant disruption caused by the COVID-19 pandemic, the pilot projects were completed in December 2023, and a FCPP Evaluation Summary Report was prepared for and approved by the MSRC earlier this year.

As a part of SCAG's Smart Cities program, and informed by the FCPP results, staff is preparing to develop a Smart Cities Strategic Plan, which will outline and advance SCAG's efforts in smart technology integration, transit and multi-modal integration, clean transportation, and broadband. The associated technical working group will be responsible for providing additional context and insight related to smart technologies and the upcoming Plan and will also assist in identifying and targeting barriers that impact the deployment of EVs and its supportive charging infrastructure. FCPP results will continue to inform other programming at SCAG as well, including within the Sustainable Communities Program (SCP) and the Smart Cities & Mobility Innovations (SCMI) program.

BACKGROUND:

SCAG’s Future Communities Pilot Program

The Future Communities Pilot Program (FCPP) was approved by the Regional Council on February 7, 2019 and was designed to support city and county agencies in the implementation of innovative pilot projects aimed at reducing vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions. These objectives were achieved through the enhancement of municipal operations, utilization of new technologies and developing enhanced data analytics. Since 2018, SCAG has collaborated with the Mobile Source Air Pollution Reduction Committee (MSRC) of the South Coast Air Quality Management District (SCAQMD) to implement the FCPP. The pilot projects were completed in December 2023, and a FCPP Evaluation Summary Report was prepared for and approved by the MSRC in April 2024. The Report summarizes the potential benefits and challenges of implementation of a series of mobility pilot projects. The portfolio of pilot projects includes a range of innovative approaches, each designed to address the specific mobility challenges and opportunities of its location.

From leveraging smart technologies in parking management to digitizing city services for greater efficiency, the pilot projects showcase a wide array of strategies aimed at improving mobility and reducing environmental impacts.

Agency	Project	Objective
City of Anaheim	Smart Center City	<ul style="list-style-type: none"> Integrate real-time parking guidance with the ATN transit planning and ride hailing mobile application (FRAN) FRAN: “Free Rides Around the Neighborhood” electric shuttle fleet
City of Cerritos	Remote Services Enhancement Project	<ul style="list-style-type: none"> Develop an online permitting and licensing software program offering online self-service, 24/7 real-time information, and record access
City of Los Angeles	BlueLA Electric Carshare	<ul style="list-style-type: none"> Evaluate VMT/GHG reduction from the BlueLA fleet while surveying users for carshare preferences
City of Ontario	Smart City Rapid Validation Hub	<ul style="list-style-type: none"> Implement broadband, micromobility, and intelligent trash bin infrastructure downtown

City of Glendale	Route Optimization and Fleet Telematics	<ul style="list-style-type: none"> Update older street sweeping and garbage collection routes to reduce VMT, GHG, and congestion
City of Monrovia	Incentivizing Bikeshare	<ul style="list-style-type: none"> Encourage mode shift behavior Incentivize bikeshare participation Partner with local businesses for zero-emission delivery services
City of Riverside	Integrated Electronic Plans Solution	<ul style="list-style-type: none"> Establish an online development permit process that coordinates review through eight city departments, dozens of blueprints, and multiple rounds of review
County of San Bernardino	Remote Electronic Warrants	<ul style="list-style-type: none"> Upgrade the County's after-hours online system to a fully scalable, 24/7 platform to process warrant applications virtually

While some projects demonstrated remarkable reductions in VMT, other projects were not as successful in this specific metric, but brought other significant benefits, including improved access to services, the introduction of innovative technologies in urban spaces, and time savings for staff and the public. These outcomes highlight that the value of implementation of a similar project may extend beyond its primary objective, contributing to broader benefits to the jurisdiction and the public.

The specific circumstances of each project, including the demographic, geographic, and infrastructural context, played a crucial role in determining its feasibility and success. Policy and regulatory considerations also emerged as key factors, influencing project implementation and scalability. With a coordinated approach, these technologies can be tested in other communities, contexts, and capacities within the SCAG region to explore the potential for VMT and GHG reduction.

SCAG staff is producing an expanded version of the final report to distribute, and more information can be found in the attached PowerPoint presentation accompanying this staff report.

SCAG's Smart Cities Programming

SCAG's Smart Cities & Mobility Innovations Program (SCMI) as a part of the 2020-2021 Sustainable Communities Program (SCP) funding cycle was designed to support the implementation of 2020 Connect SoCal and innovative mobility projects in the region. Greatly informed by the findings of the FCPP, the SCMI program is nearing completion and has produced successful reports, studies, and findings affiliated with curb space and parking management strategies. Results from the program will be available in Q3 of FY25, and programs such as these continue to demonstrate SCAG's role as a leader in technology and innovation.

Given the rapid evolution of technology and the advancements made in smart cities technologies since SCAG's Future Communities Framework in 2017, and the proactive approach to mobility and sustainability adopted in Connect SoCal, there is a pressing need for a new Smart Cities Strategic Plan for the region. While the concept of smart cities involves a variety of subjects, staff intends for this Plan to focus on mobility and transportation, along with the clean, emerging technologies that support these areas. Clean technologies and "smart city" technologies have a significant overlap, and although they are sometimes treated as separate concepts, the Plan aims to connect the two together for one cohesive approach to smarter, cleaner communities.

Infrastructure readiness for physical and digital infrastructure are key to supporting the fundamental features of smart cities, including networks, connectivity, and open data. Yet many areas lack the necessary infrastructure for basic needs, such as residential and curbside EV charging. Equity and accessibility are another significant obstacle as low-income households and underserved communities have less access to critical smart city benefits such as EV charging. Technological integration and the coordination of emerging technologies remains a challenge. The careful development of a cohesive and efficient transportation system can help address these problems, with smarter technologies offering solutions.

SCAG's role in addressing these gaps includes providing strategic direction, resources, and support to local jurisdictions, encompassing several critical implementation strategies identified in Connect SoCal 2024. These strategies involve multiple approaches to ensure support is provided in the widest range of contexts and for the hardest-to-reach groups, including technical assistance, research, program development, and partnership facilitation. In terms of incentives, SCAG further seeks to develop and support the implementation of an EV incentive program. The acceleration of electric vehicles and the expansion of necessary charging infrastructure are two critical priorities that SCAG aims to address.

The upcoming Smart Cities Strategic Plan will outline and advance SCAG's efforts in smart technology integration, transit and multi-modal integration, clean transportation, and broadband. The Plan seeks to evaluate emerging technologies, current trends, and research; establish and manage a working group or technical advisory group; recommend partnerships, policies, and

actionable next steps; align with SCAG’s long-term planning objectives and strategies; and develop and implement an EV Incentive Program (EVs and EV Charging Stations).

The Plan’s working group will be responsible for providing additional context and insight related to smart technologies and the upcoming Plan. Stakeholders and representatives may include those from academic institutions, industry associations, utility companies, technology providers, manufacturers, government agencies and community-based organizations. The group will also assist in identifying and targeting barriers that impact the deployment of EVs and its supportive charging infrastructure.

Staff will bring more information regarding the SCP SCMI results, Smart Cities Strategic Plan, and other critical initiatives to relevant policy committees in the coming months.

FISCAL IMPACT:

Budget for the FCPP concluded under the project numbers 280-4824.02 and 280-4824.03. Labor and non-labor budget for the Smart Cities Strategic Plan is included in project number 100.4911.01 in the FY24-25 OWP.

ATTACHMENT(S):

1. PowerPoint Presentation - Future Communities and Smart Cities Updates



Future Communities and Smart Cities Program Updates

October 31, 2024
Marisa Laderach
laderach@scag.ca.gov

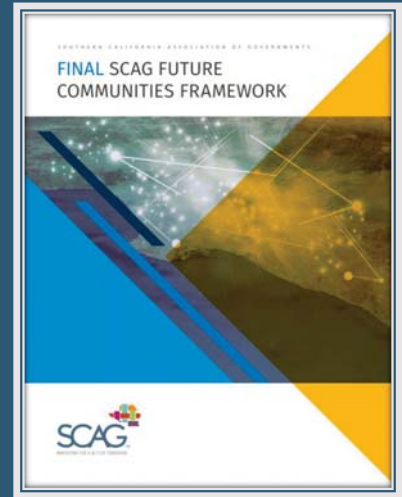
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A BRIEF OVERVIEW: SCAG'S FUTURE COMMUNITIES PILOT PROGRAM (FCPP)

The Future Communities Framework

- SCAG’s formal smart cities policy originated in the **Future Communities Framework (FCF)**
 - Adopted by SCAG’s Regional Council in 2017
- The **Framework** supported SCAG’s role as a leader in technology and innovation
- The FCF outlined several program areas and work products:
 - **The Regional Data Platform (RDP)**
 - **The Future Communities Pilot Program (FCPP)**



The Future Communities Pilot Program (FCPP)

- Program goals included:
 - **Apply new technologies and data analytics to reduce VMT & GHG**
 - **Improve the efficiency of municipal services**
 - **Promote replicable pilots in the region**
- The program aligned pilots with SCAG’s long-range planning (RTP/SCS 2020 policies)



The Future Communities Pilot Program (FCPP, FY19-20)

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FCPP PROGRAM CONCLUSIONS

Lessons learned and key takeaways from the eight pilot projects.

FCPP Results

City of Anaheim's Smart Center City Project

- Partnered with the Anaheim Transportation Network (ATN)
- Integrated real-time parking guidance for Center City Anaheim and its transit planning and ride hailing mobile application (Free Rides Around the Neighborhood, FRAN)
- Directed drivers to available parking via real-time wayfinding signage and ATN's FRAN application
 - Reduced neighborhood parking complaints
 - Served over 160,000 customers annually
 - Reduced VMT generated by cars circling parking structures and neighborhood streets searching for parking spots



City of Cerritos' Remote Services Enhancement Project

- Automated numerous community development-related and business license applications online, eliminating the need to physically travel to City Hall
 - Removed over 68,000 VMT annually
 - Reduced over 2,800 trips annually
- Estimated to have saved two full-time positions' salaries
- Was widely used as it launched during the Covid-19 pandemic
- Increase in submissions due to ease of platform



City of Los Angeles' BlueLA Electric Carshare Project

- Aimed to verify VMT impacts and benefits of carshare services by documenting the transportation behavior of participants in LADOT's Carshare Pilot Program
 - Combination of survey data and origin-destination data provided the VMT performance
 - LADOT could then encourage enrollment in carshare strategies and via outreach with housing developers
- Saved \$6.7M in fuel annually
- BlueLA program reflected a shift in community transportation preferences
 - 90% of members remained in the program



City of Ontario's Smart City Rapid Validation Hub

- Developed a Smart City Rapid Validation Hub
 - Real-world technology testing zone
 - Smart bin commercial refuse pilot
 - Final-mile micromobility program
- Covid-19 pandemic provided unexpected opportunity to utilize the suite of smart city transportation modality characterization sensors beyond its original use
 - Allowed the City to see impacts of public policy in near-real-time
- Removed over 100,000 VMT annually
- Serviced over 400,000 customers annually
- Fostered high community engagement in smart city events, signifying a robust public interest in sustainable urban development



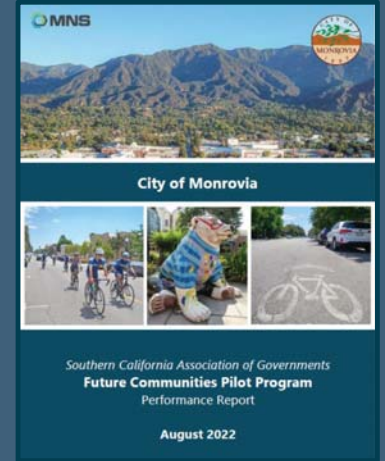
City of Glendale's Route Optimization Program

- Optimized and redesigned City refuse collection routes using advanced software analytics
- Trash and recycling routes had a 13% overall decrease in VMT
 - 49 fewer journeys to the dump each week, significant reduction in air pollution
- The program maximized the existing fleet to reduce the need for additional staff or trucks
 - Positive key performance indicators for resource utilization and efficient municipal operations
 - City and employees no longer need to work overtime



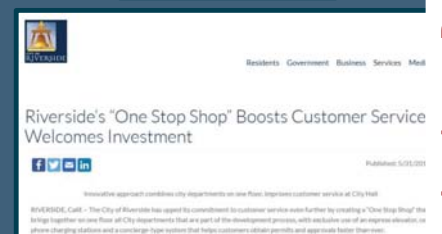
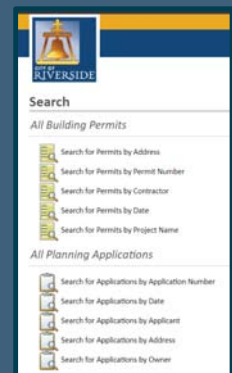
City of Monrovia's "Biking for Bucks" Bikeshare Program

- Incentivized bicycle ownership for City residents and employees
- Assisted 503 applicants, including 44 low-income applicants, with purchasing bikes or critical accessories
 - The program had the capacity for 564 participants with a resource utilization rate of 89%
- The applicants were then asked to complete surveys and track their bicycle trips using an Activity Tracker
- Removed over 24,000 VMT/year
- Users each saved \$1k annually
- The program provided valuable insight into bikeshare preferences and behaviors, plus best practices for future programs



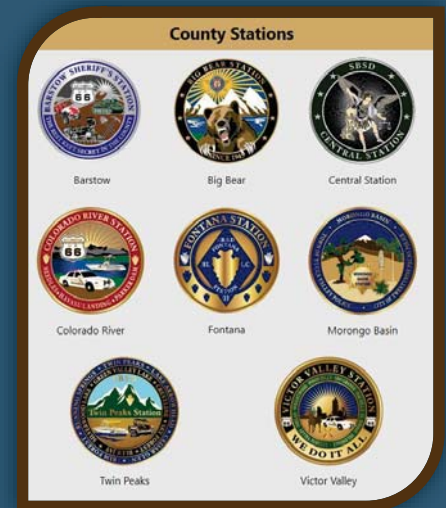
City of Riverside's Integrated Electronic Plans Solution

- Developed online software that allows all community development-related permits and applications to be submitted online, eliminating the need to physically travel to City Hall
 - Removed over 146,000 VMT/year
- Use of online services at the City skyrocketed after implementing the new portal
- Each online application submittal removed, on average, three trips to City Hall
 - Reduced over 11,700 trips annually
 - Reduced driving hours by 4,900
- Staff hourly labor reduction of \$41,702.93 annually



San Bernardino County's Remote Electronic Warrants Program

- Developed software program for officers and judges to remotely submit, review, and sign warrants reducing the need to travel for court approval
 - Prior to online warrant submission platform, sheriffs were required to travel far distances to county courthouses
- As the geographically largest county in the US and California, VMT savings are significant
 - Removed over 400,000 VMT in less than two years
 - Reduced over 24,200 trips annually
- Saved 6,000 hours of police time annually



Key Take-Aways

- Online portals are incredibly popular and growing in demand, with many opportunities
- Route optimization projects are impacted by available resources and constraints (mileage and costs can be greatly influenced by the addition or removal of a single truck)
- Bikeshare programs have the potential for significant VMT reduction
- Technology continues to be an effective tool in managing parking, increasing accessibility, and inventorying assets
- SCAG, vendors, and consultants alike are navigating a new procurement space regarding emerging technology (see [SCAG's Technology Guiding Principles](#), pg. 23)
- Pilots and projects have been successful in meeting program goals and helping us understand the benefits and challenges with each technology
- Final products complement release of Connect SoCal 2024 and prepare for the next SCP funding cycle (estimated to begin summer 2025)

Smart Best Practices

- **Cross-Agency Task Forces**
 - Steering committees, technical advisory committees, and agency working groups comprised of relevant staff from across multiple agencies offer a holistic, collaborative approach
- **Comprehensive Regulatory Framework**
 - Create a clear and adaptable regulatory framework that addresses the safety standards, data governance and privacy requirements, liability concerns, and environmental impacts that relate to projects
- **Public-Private Partnerships**
 - Critical for public agencies to engage with private companies when it comes to innovative, clean, and emerging technologies to address funding, technology deployment, and technical expertise
- **Infrastructure Investments**
 - Allocating sufficient resources to the development and maintenance of smart infrastructure to ensure technology projects will be capable of supporting the connectivity requirements of emerging technologies

Smart Best Practices (cont.)

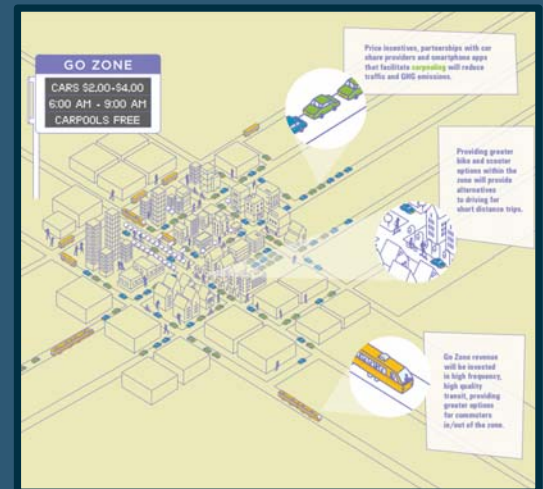
- **Community Engagement and Education**
 - Engaging with community-based organizations, stakeholder groups, SoCal residents, and other public agencies is critical for addressing community concerns, securing public support, and ensuring equity is integrated from the ground-up
- **Pilot Test Beds and Hubs**
 - Creating spaces to test newer technologies on smaller scales in real-world environments can help address the feasibility, safety, and public acceptance of mobility solutions
- **Research Institutions**
 - Local, county, and regional governments alike can foster partnerships with research institutions and universities to leverage their expertise and maximize impact
- **Monitoring and Evaluation**
 - Regional agencies can monitor pilots across multiple agencies, environments, and communities. Similarly, agencies can then provide information to the region to make informed decisions on scaling, modifying, or discontinuing specific technologies.



SCAG'S SMART CITIES PROGRAM

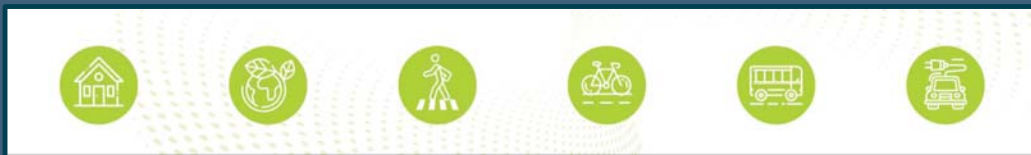
Smart Cities & Mobility Innovations (SCMI) Program

- The Smart Cities & Mobility Innovations Call focused on the implementation of three Connect SoCal Key Connections:
 - **Smart Cities & Job Centers**
 - **Go Zones**
 - **Shared Mobility & Mobility as a Service**
- Projects emphasized the use of technology and innovation by implementing curb space management measures and establishing best practices
- Part of 2020-2021 SCP funding cycle



Smart Cities & Mobility Innovations Awards

- **City of Los Angeles:** Curb Zone Data Inventory for Digital Curb Management
- **San Gabriel Valley Council of Governments:** GoSGV Engagement & Evaluation
- **City of Laguna Woods:** Mobility Technology Plan
- **City of Rialto:** Smart Cities Plan for Warehousing and Logistics
- **City of Long Beach:** Curb Space Management Study
- **City of Stanton:** Citywide Curb Management Plan
- **City of Desert Hot Springs:** Downtown and Light Industrial Parking Plan
- **City of Garden Grove:** Curb Data Parking Study



Upcoming and Ongoing Projects

- Clean Technology
 - Goods movement fleet conversion efforts (LMFP, etc.)
 - Zero Emission Truck Infrastructure (ZETI) study
- Clean Cities Coalition
 - Clean Cities Strategic Plan annual update
 - Alternative fuel vehicle, price, and station tracking
 - Annual progress report
 - Various partnerships and educational events
- FY25 Presidential Priorities
 - Transit recovery
 - Clean technology
 - Goods movement
- **Smart Cities Strategic Plan** (coming soon!)
- **Future SCP Calls for Projects** (est. summer 2025)



Upcoming RFP for SCAG's Smart Cities Strategic Plan

- Technology has rapidly evolved and advanced since SCAG's 2017 FCF
- The Plan will **outline and advance SCAG's efforts** in smart technology integration, transit and multi-modal integration, clean transportation, and broadband
- Plan Objectives
 - Evaluation of emerging technologies, current trends, and research
 - Establishment and management of a **working group or technical advisory group**
 - Recommendations for partnerships, policies, and actionable next steps
 - Alignment with SCAG's long-term planning objectives and strategies
 - Development and implementation of an **EV Incentive Program** (EVs and EV Charging Stations)



THANK YOU!

For more information, please visit:

<https://scag.ca.gov/post/future-communities-pilot-program>

Questions? Contact:

Marisa Laderach (laderach@scag.ca.gov)