



November 4, 2024

To: Executive Committee
From: Darrell E. Johnson, Chief Executive Officer

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is written over the "From:" line of the memo.

Subject: Orange County Transportation Authority Climate Adaptation and Sustainability Plan Follow-Up Activities Update

Overview

The Orange County Transportation Authority completed its first Climate Adaptation and Sustainability Plan in 2024. The Climate Adaptation and Sustainability Plan is a comprehensive, agencywide plan that addresses how the Orange County Transportation Authority can protect its infrastructure and operations from the negative impacts of climate change (climate adaptation), while minimizing its emissions (sustainability). This report highlights progress that has been made on activities resulting from the completion of the Climate Adaptation and Sustainability Plan and next steps.

Recommendation

Receive and file as an information item.

Background

Development of the Climate Adaptation and Sustainability Plan (CASP), the first of its kind for the Orange County Transportation Authority (OCTA), began in early 2022, and focuses on how OCTA can ensure long-term resilience from climate-related impacts, as well as reduce its greenhouse gas emissions. An update on the development of the CASP was presented to the Board in December 2023 prior to it being finalized in April 2024. The final CASP compiles a comprehensive inventory and builds on all of OCTA's adaptation and sustainability activities to date, including but not limited to, the Natural Hazard Mitigation Plan, Rail Defense Against Climate Change Plan, and Zero-Emission Bus Program. The CASP also addresses potential risks to OCTA's infrastructure¹ and services from climate impacts such as extreme heat and flooding. Based on the results of a climate vulnerability assessment and

¹ Due to OCTA's prior development of the Rail Defense Against Climate Change Plan and ongoing south Orange County coastal rail studies, the shared railway asset was not included in the CASP assessment to avoid duplication of efforts.

greenhouse gas emissions inventory, the plan outlines strategies to advance adaptation and sustainability efforts.

The CASP serves as a strategic roadmap to guide OCTA's climate action efforts. It helps to support OCTA's mission to keep Orange County moving amidst the impacts of a changing climate. Additionally, the CASP helps to align OCTA with the state's climate policies and goals, as well as support OCTA's efforts to secure future state and federal funding.

Discussion

The completion of the CASP marked a significant milestone for the agency as it provides a framework to support future efforts on climate action. The CASP and the potential climate adaptation and sustainability targets and strategies it outlines were intended to serve as a blueprint for further investigation, planning, and decision-making. Since its completion, OCTA has been assessing the feasibility and cost-effectiveness of the proposed strategies to determine which actions should be prioritized for future implementation, while keeping employee and customer safety at the forefront.

To guide this evaluation process, a prioritization tool was developed to assess the initial recommendations identified in the CASP based on factors such as feasibility, cost, level of effort, and impact of implementation. More specifically, several criteria were used to evaluate and rank the CASP strategies. Some of these included whether the relevant asset(s) is owned and operated by OCTA, estimated planning and capital costs, equity benefits (i.e., social and environmental impacts that may benefit disadvantaged communities), energy security and resilience (i.e., measures that contribute to the diversification of OCTA's energy supply), and alignment with existing OCTA policies, goals, and regulatory compliance.

As indicated above, this initial stage of CASP follow-up activities focuses on strategies for assets and facilities owned and operated by OCTA. The abovementioned criteria were then used to prioritize strategies that would have the most influence on OCTA infrastructure, operations, employees, and riders. This initial process yielded potential CASP strategies to consider expanding on or implementing, as outlined in the table below.

Preliminary results of highest ranked CASP strategies for OCTA implementation consideration:

Scored Priority	Focus or Hazard Area	CASP Measure Focus	Potential Results
1	Sustainability	Energy Efficiency/Facility Electrification	Increased energy efficiency of facilities, equipment, and operations
2	Air Quality	Outdoor Exposure and Emissions Reduction	Enhanced productivity and increased employee health
3	Extreme Weather	Emergency Operations	Maintained productivity and improved response to extreme weather events
4	High Heat	Weatherizing	Maintained continuity of service
5	Sustainability	Onsite Renewable Energy	Increased cost savings and resilience co-benefits
6	Air Quality	Indoor Air Quality	Enhanced productivity and increased employee health
7	High Heat	Power	Maintained continuity of service
8	High Heat	Employee Cooling	Maintained productivity and increased employee health
9	Sustainability	Zero-Emission Bus Fleet	Reduced greenhouse gas emissions and air pollution
10	High Heat	Shade Trees	Decreased temperatures and improved work environment

Next Steps

OCTA will continue to assess the adaptation and sustainability recommendations proposed in the CASP to prioritize which to concentrate on moving forward. Once the top CASP priorities are determined, draft implementation plans will be developed to support the application of those strategies. The draft implementation strategies will then be further evaluated and ranked to identify actions that would be the most feasible and impactful for OCTA to consider for implementation. This process will enable OCTA to explore additional strategies, where appropriate, that were not included in the CASP. With ongoing progress in climate change research and awareness at the regional, state, and national levels, new opportunities may emerge to consider further actions that align with state priorities.

Staff will continue to evaluate the CASP action strategies and complete any necessary supplemental analyses to support CASP implementation planning. Staff will also identify potential funding options for the top priority CASP strategies and develop an implementation framework.

Summary

The CASP represents a key step for OCTA toward greater alignment with the state's climate objectives and goals, emphasizing the importance of proactively planning for climate change impacts while working to reduce emissions. OCTA will utilize the CASP to make decisions and determine next steps for potential future implementation.

Attachment

None.

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