

Routes to Lower Greenhouse Gas Emissions from Freight Transportation in the City of San José

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Introduction

Freight represents about 30% of transportation greenhouse gas (GHG) emissions in the United States. As local and regional governments develop plans and strategies to reduce communitywide GHG emissions, emissions from goods movement must be addressed. Unfortunately, many local climate action plans (CAPs) and freight plans put little emphasis on freight emissions reduction strategies. This report will assist the City of San José with developing and implementing strategies to reduce GHG emissions from freight transport as well as inform other local agencies seeking to reduce their own communitywide freight emissions.

Study Methods

This study employed a four-pronged approach to develop a toolkit for reducing GHG emissions from freight through local action. First, the authors conducted a geospatial analysis of freight data in San José, as well as the larger Santa Clara County, to better understand the unique context of the

City of San José in relation to freight movement. Additionally, the authors conducted a comprehensive analysis of literature on freight emissions reduction strategies and case studies from real-world strategies employed internationally. Extensive consultation with professionals at the City of San José also helped inform background and recommendations for this report.

Findings

This report offers findings on the best practices and innovative approaches to reduce emissions from goods movement and identifies seven key objectives: (1) Manage freight demand and address consumer expectations; (2) Utilize low emissions modes and multimodal solutions for freight; (3) Optimize freight assets and environmental resources; (4) Focus on the last mile; (5) Deploy alternative sources of fuel and energy efficiency measures; (6) Engage stakeholders and explore collaboration opportunities; and (7) Develop a data sharing platform.

Policy Recommendations

- Freight impacts, especially emissions, should be integrated into municipal plans such as climate action plans, as well as land use and new development decisions.
- With the growth of e-commerce, municipalities should employ diverse strategies, ranging from land use strategies to encouraging off-peak deliveries and green choice alternatives, to manage freight demand and address consumer expectations.
- Where appropriate, municipalities should utilize curb space to make freight loading and unloading more efficient and to encourage goods movement practices that minimize emissions (e.g., introducing green loading zones for the exclusive use of zero- or low emissions commercial vehicles).
- Municipalities should pilot solutions that focus on the last mile of deliveries to reduce emissions, such as cargo bikes, delivery robots, microhubs, and common carrier lockers.
- Where applicable, municipalities can test the viability and effectiveness of restricted multi-use lane strategies, such as allowing low-emissions freight vehicles in bus or bicycle lanes and restricting freight vehicles to the right lane.
- Although strategies to advance alternative vehicle fuel and energy efficiency technologies are often pursued by higher levels of government, municipalities can play an important role in encouraging the use of alternative fuel and energy efficiency measures by incentivizing green freight and efficiency measures and developing an alternative fuel readiness plan.
- Municipalities should engage in public-private partnerships with freight companies and local businesses while also including other relevant stakeholders to enhance data transparency in the logistics chain, develop and adopt freight emission reduction strategies, and accelerate deployment of zero- or low-emissions vehicles.
- Municipalities should adopt strategies to reduce GHG emissions from freight hubs and warehousing through technology tools, incentives, and logistics optimization.



About the Authors

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/2237



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