

Greenhouse Gas Reduction Plan

Presented to

Board of Directors
Truckee Tahoe Airport District

November 28, 2018

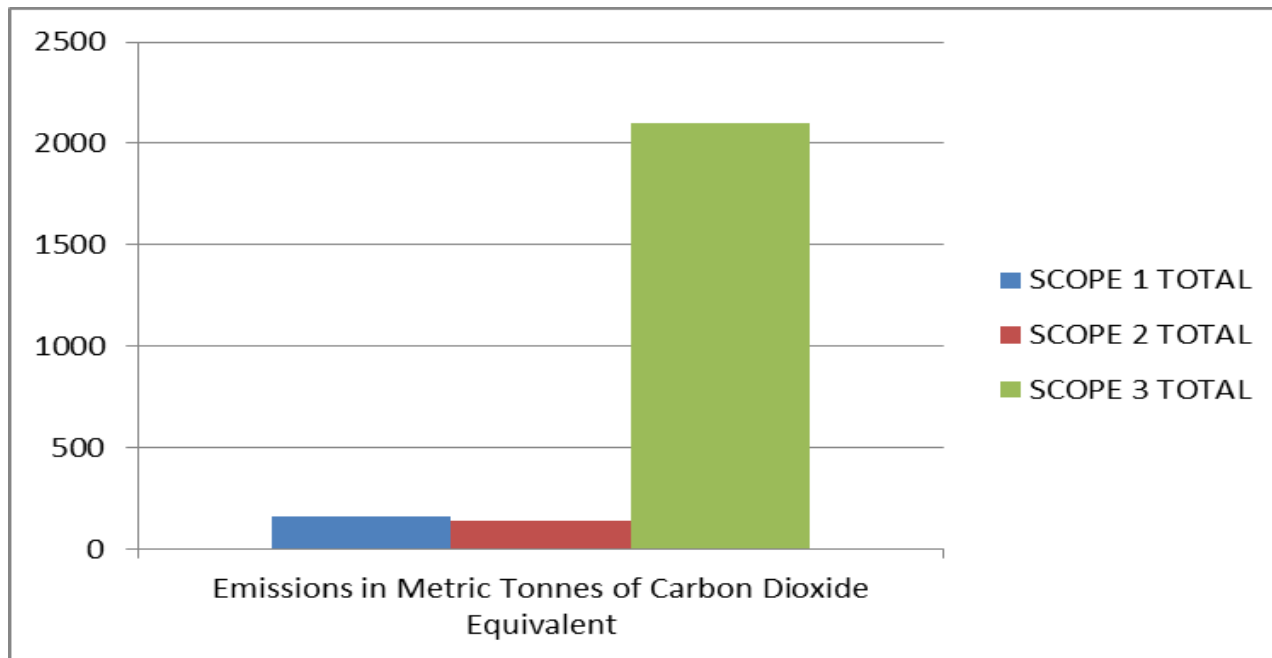
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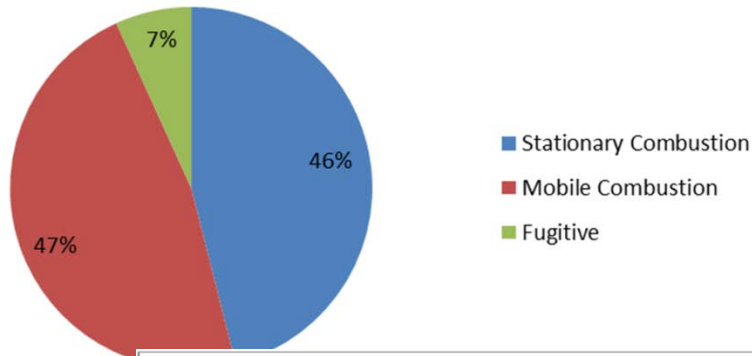
EY2015 GHG Emissions by Scope

- Scope 1 GHG emissions - 158.60 metric tons carbon dioxide equivalents (CO₂e).
- Scope 2 GHG emissions - 138.07 metric tons CO₂e
- Scope 3 GHG emissions - 2099.22 metric tons CO₂e.

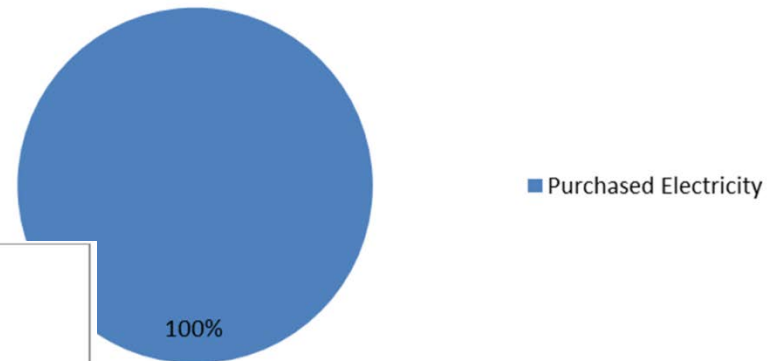


Details of Scope 1, 2, and 3

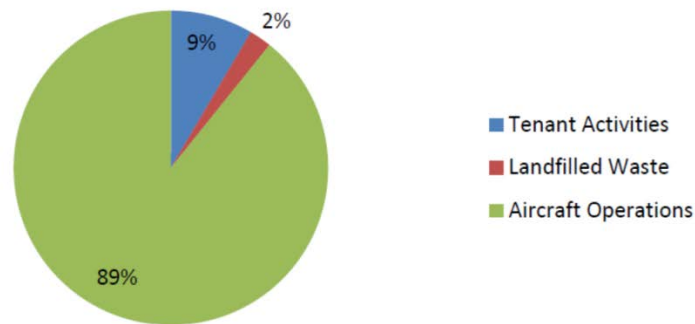
Scope 1 Emissions by Source Type



Scope 2 Emissions



Scope 3 Emissions by Category



GHG Emission Projections



TTAD Development

Development since the 2015 GHG Inventory

2016

- Warehouse Suite E Re-model
- Maintenance Building Lighting Retrofit

2017

- Clear Capital/Car Rental Office Construction
- Hanger 1 Insulation Improvement
- Maintenance Building Expansion
- Temporary Tower Addition
- Maintenance Building, Warehouse Garage and Hanger Lighting Retrofit

2018

- Tahoe City Heliport Construction

Potential Additional Development Before 2025

2019

- Executive Hanger Construction
- Hanger 1 Office Expansion
- Admin Building Expansion

2020

- Hanger 2 Replacement Construction
- Generator Addition

2021

- Box Hanger Construction

2023

- Permanent Tower Construction



2025 Emission Projections

2015 Base Year Emissions

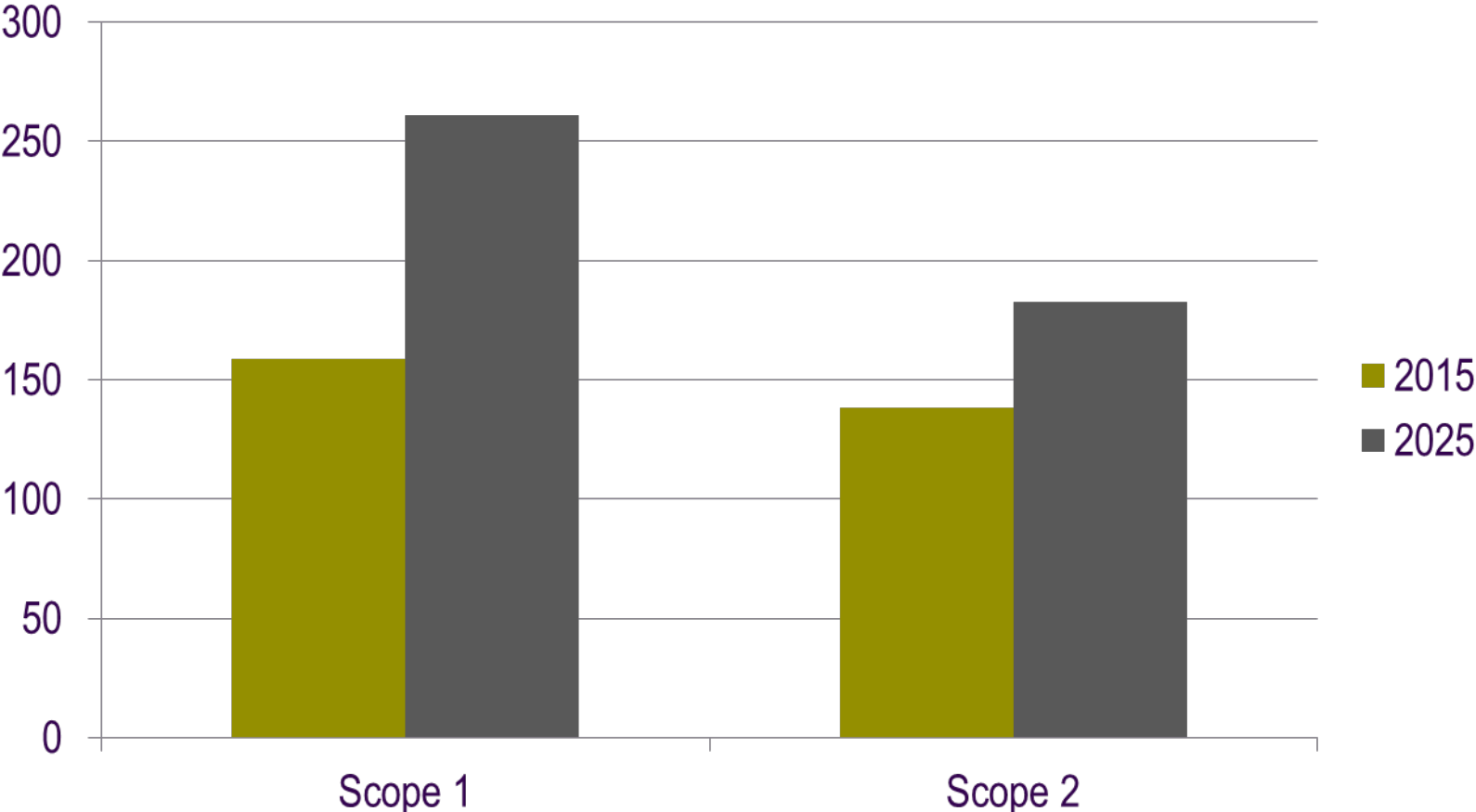
- Scope 1
 - 158.60 MTCO₂e
- Scope 2
 - 138.07 MTCO₂e
- Scope 3
 - 2099.22 MTCO₂e

2025 Emissions Projections

- Scope 1
 - 260.74 MTCO₂e
 - **64% increase** ↑
- Scope 2
 - 182.47 MTCO₂e
 - **32% increase** ↑
- Scope 3
 - 1780.05 MTCO₂e
 - **15% decrease** ↓
 - Though increases are likely.



2025 Emission Projections – Scope 1 & 2



GHG Reduction Target



GHG Emissions Reduction Target

Based on the analyses performed, a 50% reduction of Scope 1 and Scope 2 emissions by 2025 is feasible and achievable.

Greater reductions are possible if all proposed projects are successfully implemented.



Reduction Projects



GHG Reduction Projects

1.	Building Lighting Upgrades	2.67 MTCO ₂ e
2.	Runway Lighting Upgrades	1.00 MTCO ₂ e
3.	Insulation Improvements	4.78 MTCO ₂ e
4.	Generator Fuel Switch	1.69 MTCO ₂ e
5.	Smart Aircraft Engine Block Pre-Heater Systems	43.33 MTCO ₂ e
6.	Electric Ramp Vehicles	0.01 MTCO ₂ e
7.	Composting Program	6.00 MTCO ₂ e
8.	Recycling Program	23.90 MTCO ₂ e
9.	Solar Generation	Up to 414.48 MTCO ₂ e
10.	Biosequestration	975.92 MTCO ₂ e <i>sequestered</i>



GHG Reduction Balance Sheet



Reduction Balance Sheet

	SCOPE 1 TOTAL	SCOPE 2 TOTAL	SCOPE 3 TOTAL
2025 Emission Projections	260.74 MT CO ₂ e	182.47 MT CO ₂ e	1780.05 MT CO ₂ e
Reduction Actions			
1 Building Lighting Upgrades		2.67 MT CO ₂ e	
2 Runway Lighting Upgrades		1.00 MT CO ₂ e	
3 Building Insulation Improvements	4.78 MT CO ₂ e		
4 Generator Fuel Switch	1.69 MT CO ₂ e		
5 Smart Block Heater Systems			43.33 MT CO ₂ e
6 Electric Ramp Vehicles	0.01 MT CO ₂ e		
7 Composting Program			7.00 MT CO ₂ e
8 Recycling Program			23.90 MT CO ₂ e
9 Solar Generation		178.80 MT CO ₂ e	88.98 MT CO ₂ e
10 Biosequestration	254.26 MT CO ₂ e		721.66 MT CO ₂ e
	Scope 1	Scope 2	Scope 3
Net Emissions	0.00 MT CO ₂ e	0.00 MT CO ₂ e	895.18 MT CO ₂ e



Next Steps in GHG Management



Recommended GHG Management Actions

- Study Biosequestration Potential of TTAD Properties.
- Improve Estimate of Future Aircraft Operations and Associated Scope 3 Emissions Projections
- Explore Carbon Offset Programs for Scope 3 Emissions
- Conduct a 2020 GHG Inventory Update and Assess GHG Reduction Progress



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