



THE BIANCHO HOTEL OLD CITY

ESA GROUP TOURISM AND HEALTH SERVICES TRADE LIMITED COMPANY

Greenhouse Gas

Scope 1

Scope 2

Scope 3

Report (2024)

Preface

Greenhouse Gas Inventory Report, ISO 14064-1 "Greenhouse Gases - Part 1: Greenhouse Gas Emissions and

It was prepared in accordance with Article 7.3.1 of the Standard "Narrow Guide and Specifications for the Calculation and Reporting of Suspensions at the Organization Level". Inventory creation

IPCC methodologies and national reference calculations valid during the period were taken as basis.

In the study, greenhouse gases generated within the scope of the activities carried out by the organization, environmental management It has been taken into consideration as a new performance criterion.

GENERAL INFORMATION - COMPANY INFORMATION

Company Name: THE BIANCHO HOTEL OLD CITY – ESA GROUP TOURISM AND HEALTH SERVICE TRADE LTD.CO

Address: KEMALPAŞA NEIGHBORHOOD GENÇTÜRK STREET NO: 48 FATİH / ISTANBUL

Activity Type/Sector: TOURISM ACCOMMODATION FACILITY

PREPARATION OF GREENHOUSE GAS EMISSION REPORT

What is Carbon Footprint?

Carbon footprint is the amount of energy a person produces as a result of transportation, heating, energy consumption or any product they purchase.

It is a term used to describe the amount of carbon that is released into the atmosphere. Another

In other words, the energy required for every product we buy or every activity we carry out is produced.

It refers to the total amount of carbon gas released into the atmosphere during the

Climate change, which has been going on for millions of years under the influence of natural processes, is now being caused by human

It has further increased its impact and damage due to environmental pollution. The clean and healthy environment we inherited from the past

Every individual and organization has a duty to pass on the environmental legacy to future generations as needed.

This is also a fact. In this context, we aim to show our sensitivity towards the environment and climate, and

Calculating our carbon footprint to make a concrete contribution to the measures taken against profitability and

It has become an important task to work on reducing carbon footprint, especially fossil fuels.

Since it is a definition based on energy obtained from fuels, reducing the carbon footprint is also

It means reducing or optimizing energy consumption. This is important for businesses.

This could be possible with a package of measures that will start the cycle of reducing energy costs. Carbon footprint

The z study actually means developing a new energy usage culture for organizations.

is coming.

While each activity has a different carbon footprint, individual or company-based studies also require different factors to be calculated. Carbon footprint calculations are internationally recognized.

Various methods and standards have been developed. Among the standards addressing the six main greenhouse gases (CO₂, CH₄, N₂O, PFC, HFC, SF₆) assessed within the scope of the Kyoto Protocol are the methods published by the Intergovernmental Panel on Climate Change (IPCC), as well as the GHG Protocol, ISO 14064, CDP, and PAS 2050.

Calculating Greenhouse Gases - Processes Followed - Determining the Purpose

Determining the goals to be achieved through carbon footprint calculation. For example, carbon footprint results can be used to set CO2 reduction targets and identify possible CO2 reduction measures.

Determination of boundaries

Once the goal is determined, the limits for carbon footprint (limits specified in the standards to be applied)

Various choices should be made to determine the corporate reporting.

The scope used is the operational control scope. This is the scope of the organization's daily operational controls. will calculate the carbon footprint resulting from all activities under its responsibility

It means that the company will receive some emissions outside of its own activities.

will be taken into consideration.

Since the organization is responsible for determining the boundaries of the organization and the narrow control, the method used in calculating emissions was chosen as the 'control approach'. Any changes to be made in the selected method

The change will be declared in the next year's greenhouse gas report and the calculations will be based on the base year. will be renewed.

Data Collection and Application of Emission Factors

Once the boundaries and scope of the Carbon Footprint are agreed upon, the activities are narrowed down.

Emission factors and global warming potentials can be calculated by collecting the data.

The collection of data is called inventory. Emission factors may vary from country to country, and over time may vary. Many sources, such as the IPCC guide for emission factors and the WBCSD's GHG Protocol is available.

Evaluation of Results and Footprint Reporting

The report should be transparent and the choices and assumptions made should be clearly stated.

Selecting the Calculation Method

The IPCC Tier-1 methodology was used for greenhouse gas calculations, and the Tier-2 methodology was used for activity data containing national information. Because Turkish Electricity Generation Inc. production data was used in the electricity emission factor calculations, the Tier-2 methodology is used for Scope 2 energy indirect greenhouse gas emissions. Accordingly, the following formulas and variables are used in the calculations of Scope-1 and Scope-2 greenhouse gas sources. Scope-3 emissions are also calculated according to the formula below.

$$\text{Emissions, fuel} = \text{EmissionCO}_2, \text{fuel} + \text{EmissionCH}_4, \text{fuel} + \text{EmissionN}_2\text{O, fuel}$$

$$\text{EmissionCO}_2, \text{fuel} = \text{Consumption Quantity, fuel} \times \text{Emission FactorCO}_2, \text{fuel}$$

A calculation methodology was chosen because there was not enough technological infrastructure to measure all emission sources. No measurement methodology was used. This calculation method is uncertain.

It can be reflected in the results. It meets its energy needs only from electrical energy. Mass

It does not use energy sources classified as biomass. For this reason, biomass use

No relevant calculations have been made.

Selection of Greenhouse Gas Emission Factors

CO2 equivalent tonnes calculated separately from the consumption of externally supplied electricity

Since the greenhouse gas emission value for Turkey has been determined at www.ea.org/CO2highlights, the calculation was made according to the TIER 2 approach. CO2 equivalent calculated separately per ton. Greenhouse gases resulting from diesel consumption of company vehicles

Emission value for Turkey at www.ea.org/CO2highlights

Since it has not been determined, the calculation was made according to the TIER 1 approach.

In this study, greenhouse gas emissions (carbon footprint) for the relevant organization are shared

It was calculated separately with the data for 2025, and by taking 2025 as the 'base year' to cover the date range of 01.01.2025 İse 01.07.2025, the total corporate Carbon Footprint was calculated separately first and then.

GREENHOUSE GAS INVENTORY AND CORPORATE CARBON FOOTPRINT CALCULATION

Activity	Activity Categories	Activity Vers	Scope	Greenhouse Gases
Heating System	Constant Burning	Natural gas (m3)	Direct (Scope 1)	CO2 CH4 N2O
Air Conditioning Gases	Fugitive Emissions Air	conditioning gas kg (Not calculated)	Direct (Scope 1)	R410a
Custom Vehicles	Moving Combustion	Engine (lt)	Direct (Scope 1)	CO2 CH4 N2O
Fire Extinguishers	Leakage Emissions	Fire Extinguisher (kg)	Indirect (Scope 2)	FM200 CO2
Electricity Consumption	Electricity	kWh	Indirect (Scope 2)	CO2
Transportation Activities	Moving Combustion	Engine (lt)	Indirect (Scope 3)	CO2 CH4 N2O
Dangerous Waste Ger Acquisition	Open Loop	kg	Indirect Value (Scope 4)	CO2

Determinations and Acceptances

Greenhouse Gas	Global warming Potential (GWP)
CO ₂	1
CH ₄	28
N ₂ O	265

In calculating greenhouse gas emissions from natural gas;

Activity data related to natural gas consumption is ensured by reading the natural gas supplied from the main network from the natural gas meter.

In calculating fugitive emissions;

The emission factor of the R407C type refrigerant has been determined within the scope of the "Kyoto Protocol". Data are from the "EPA- Greenhouse Gas Emission Calculator" data system.

has been taken.

Annual loss/leakage amount for air conditioners is accepted as 4.5% of the filled gas.

(Uncertainty=±10%) Source: "IPPC-Special Report on Safeguarding the Ozone and the Global Climate System-Chapter 5: Residential and Commercial Air

In the calculation of fire extinguishing systems;

Leakage rates for portable CO₂ fire extinguishers are 4% of the weight of the gas in the cylinder.

It is accepted as (Uncertainty=±2%). "Source: IPPC-Special Report on Safeguarding the Ozone and the Global Climate System- Chapter 9: Fire Protection-Table 9.2"

In the calculation of CO₂ systems used for cooling purposes;

Portable CO₂ intakes are added to the calculations as direct carbon emissions.

The engine's emission factors included in the report are based on the EPA-Greenhouse Gas Emissions Calculator. obtained from the tables

Direct Greenhouse Gas Emissions (Scope 1)

Heating System

There is no natural gas use in the business.

Total amount of natural gas consumed in the heating system			13549	m3
Activity data		Emission factor	Emission amount	
13549	m3 EF CO2 =	2,040 kg/m3 27639,960	kg CO2-eq	
13549	m3 EF CH4 =	0.003 kg/m3 40.647	kg CO2-eq	
13549	m3 EF N2O =	0.001 kg/m3 13.549	kg CO2-eq	
TOTAL EQUIVALENT DUE TO WARMING GREENHOUSE GAS EMISSION AMOUNT			27694,156	kg CO2-eq

Air Conditioning System

Since there is no leakage amount of Greenhouse Gas Emissions from Air Conditioners until 2025, it has not been taken into account.

Custom Vehicles

The amount of engine consumed in passenger cars in 2025: 500 liters
The amount of engine consumed for the generator in 2025: 370 liters

Total amount of diesel consumed from vehicles and generators			870	lt
Activity data		Emission factor	Emission amount	
870	lt EF CO2 =	2.51 kg/lt 2183,700	kg CO2-eq	
870	lt EF CH4 =	0.00029 kg/lt 0.252	kg CO2-eq	
870	lt EF N2O =	0.033 kg/lt 28,710	kg CO2-eq	
FROM VEHICLES AND GENERATORS TOTAL EQUIVALENT GREENHOUSE GAS EMISSION EMISSION AMOUNT			2212,662 kg CO2-eq	

Fire Extinguishers

It is estimated that the amount of CO2 leaking from fire extinguishers will be 2025 .

Total number of fire extinguishers replaced during the year kg number					
96 kg					
Tube type	changing tube quantity	tube kg	Total kg	Activity data	Emission amount
CO2 Cylinder	15	6	90 kg	1 kg/	90,000 kg CO2-eq
HFC-227ea (FM200)	1	6	6 kg	3,350 kg/ 3350	000 kg CO2-eq
TOTAL EQUIVALENT GREENHOUSE GAS EMITTED FROM FIRE EXTINGUISHERS EMISSION AMOUNT					3440,000 kg CO2-eq

Indirect Greenhouse Gas Emissions - Electricity Consumption (Scope 2)

Electricity consumption is the total amount of electricity consumed.		20179	KWH
Activity data	Emission factor	Emission amount	
20179 KWH	0.493 CO2-eq/kWh	9948	kg CO2-eq
CAUSED BY ELECTRICITY CONSUMPTION			
TOTAL EQUIVALENT GREENHOUSE GAS EMISSIONS AMOUNT		9948	kg CO2-eq

Transportation Activity (Scope 3)

Business trip total km			2000	km
Activity data		Emission factor	Emission amount	
2000	KM EF	CO2 =	0.080 kg/km	160 kg CO2-eq
TOTAL KM DUE TO BUSINESS TRAVEL EMISSION AMOUNT			160	kg CO2-eq

Non-Hazardous Waste Recovery/Disposal (Scope 3)

Waste Type	Waste Amount (kg)	Emission Factor	Annual Emission CO ₂ (kg)
Organic Waste	295	0.446	131.57
Paper Waste	88	0.022	1,936
Plastic Waste	118	0.022	2,596
Mixed PACKAGING	89	0.022	1,958
Total			138.06

TOTAL EQUIVALENT GREENHOUSE GAS EMISSION AMOUNT

TOTAL EQUIVALENT GREENHOUSE GAS EMISSION AMOUNT		
TOTAL EQUIVALENT DUE TO WARMING GREENHOUSE GAS EMISSION AMOUNT	27694,156	CO ₂ (kg)
CAUSED BY VEHICLES AND GENERATORS TOTAL EQUIVALENT GREENHOUSE GAS EMISSION AMOUNT	2212,662	CO ₂ (kg)
TOTAL CASES CAUSED BY FIRE EXTINGUISHERS EQUIVALENT GREENHOUSE GAS EMISSION AMOUNT	3440,000	CO ₂ (kg)
TOTAL ELECTRICITY CONSUMPTION EQUIVALENT GREENHOUSE GAS EMISSION AMOUNT	9948,247	CO ₂ (kg)
TOTAL KM DUE TO BUSINESS TRAVEL EMISSION AMOUNT	160	CO ₂ (kg)
Recycling/Disposal of Non-Hazardous Waste (Scope 3)	138.06	CO ₂ (kg)