

**Assurance Report****to the Top Management of Arçelik A.Ş.****Executive Summary**

We, as being a global independent business services organization providing standard-based solutions in more than 140 countries, have performed an independent verification audit in respect of Selected Data submitted by Arçelik A.Ş for their eight production plants, established in six different locations and the headquarter in Turkey.

The selected data of the Carbon Emissions which refer to the year ended 31.12.2018, detailed in Annex 1 has been verified with reasonable assurance.

**Respective Responsibilities**

It is the responsibility of the top management of Arçelik A.Ş to collect and prepare the necessary data for verification review with high accuracy. The top management of Arçelik A.Ş is also responsible for the content of Arçelik A.Ş Sustainability Reports which refers to the selected data in accordance with the criteria set out in Annex 1.

Principles of the verification service that we perform are as follows:

- Impartiality
- Competence
- Factual approach to decision making
- Openness
- Confidentiality

Our verification audit based on reasonable assurance procedures to check whether the Greenhouse Gas assertion is materially correct and the Greenhouse Gas data and information submitted to our verification team is prepared in all material respects in accordance with Annex 1.

The assurance engagement performed is fully in compliance with the applicable independence and competency requirements as laid down in ISO14064-3:2006 Specification with Guidance for the Validation and the Verification of Greenhouse Gas Assertions published by the International Organization for Standardization.

This report, including the Opinion Statement, has been prepared for the top managers of Arçelik A.Ş., to assist their Sustainability Reports referring to the Arçelik A.Ş.'s carbon emission monitoring and control performance.

For the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the top managers of Arçelik A.Ş. for our verification audit or this assurance report.

### **Methodology Used for the Provision of Audit**

We conducted this reasonable assurance engagement in accordance with ISO14064-1:2006 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals published by ISO (International Organization for Standardization).

A reasonable assurance engagement provides a reasonable but not absolute level of assurance that Arçelik A.Ş.'s Greenhouse Gas assertion is materially corrected under ISO 14064-1:2006. In a reasonable assurance work, duration and extent of the procedures for gathering sufficient appropriate evidence is reasonably more than a limited assurance engagement. To perform this assurance work, we have visited all locations and checked all information submitted by Arçelik A.Ş.

Our reasonable assurance procedures require from the verification team to assess the followings:

- a) Inventory design, scope & boundary,
- b) Specific Greenhouse Gas (GHG) activity and technology,
- c) Identification and selection of GHG sources, sinks or reservoirs,
- d) Quantification, monitoring and reporting, including relevant technical and sector issues,
- e) Situations that may affect the materiality of the GHG assertion, including typical and atypical operating conditions.

The verifier or verification team have expertise to evaluate the implications of financial, operational, contractual or other agreements that may affect organization boundaries, including any legal requirements related to the GHG assertion.

### **Restrictions**

The absence of a manual prepared by the national authority has lead both parties to have some assumptions especially related to the grid emission factors and some measurement and calculation techniques which can result in materially different calculations and can impact the comparability. Therefore, the accuracy of different calculations may also vary from company to company in Turkey. Furthermore, the nature and the methods used to determine such information, as well as the measurement criteria and the accuracy thereof, may change overtime. The methodology and references given for the Selected Data are documented in the context of Annex 1.



BSI Group Eurasia Belgelendirme Hizmetleri Ltd. Şti

## Opinion Statement

Based on the results of the verification audit we delivered according to our procedures, the Greenhouse Gas assertion of Arçelik AŞ. reported in their Sustainability Reports is materially correct and is a fair representation of the data and information and is prepared in accordance with the related international standard on Greenhouse Gas quantification, monitoring and reporting and to relevant national standards or practices available at the time verification audit performed.

BSI (British Standards Institution)

BSI Group Eurasia Belgelendirme Hizmetleri Ltd. Şti.

**BSI GROUP EURASIA**  
BELGELENDİRME HİZMETLERİ  
LİMİTED ŞİRKETİ

Özlem Ünsal

General Manager

İstanbul, 10.06.2019

*Ek-1: Arçelik A.Ş. Sera Gazı Emisyonları Envanteri Özet Raporu, 2018*

## Annex 1

### Arçelik A.Ş. Greenhouse Gas Emissions Inventory Summary Report, 2018

#### General Principles and Scope

Arçelik A.Ş. calculated the greenhouse gas emissions sourced by its activities according to "ISO 14064-1: 2006 Greenhouse Gases, Part 1 - Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals Standard" and shares with all its shareholders via this report.

This report is the summary of Arçelik A.Ş.'s Greenhouse Gas (GHG) Emission Report 2018, including the general principles of the calculation methodologies and the GHG management.

This inventory includes greenhouse gas emissions sourced by 6 campuses in Turkey including production plants, storage units, administrative buildings, other facilities and the Headquarter, between 01.01.2018 - 31.12.2018.

The basis year for Arçelik A.Ş.'s Greenhouse Gas Emissions Inventory is 2010 year.

Arçelik A.Ş. documented the greenhouse gas emission inventory management methodology into its "GCP-16344 Greenhouse Gas Management System Procedure".

#### Greenhouse Gas Emissions Inventory Boundaries

Arçelik A.Ş. adopted control approach into its Greenhouse Gas Emissions Inventory, 2018.

Within this scope, 6 campuses and the Headquarter under financial and administrative control of Arçelik A.Ş. in Turkey have been included in the inventory.

Abroad campuses, other activities that are outside of the campus areas, warehouses, service centers and dealers are not included in the Greenhouse Gas Emission Inventory.

The boundaries of the Arçelik A.Ş. Greenhouse Gas Inventory are as follows:

- ✓ *The Headquarter (Sütlüce Campus):* There are two administrative offices.
- ✓ *Çerkezköy Campus:* There are electrical motors production plant, dryer production plant and warehouses.
- ✓ *Beylikdüzü Campus:* There are electronics production plant and warehouses.
  - ✓ *Çerkezköy Electronics Plant Campus:* There are electronics production plant and warehouses. (Electronics Plant in Beylikdüzü has been transferred to Çerkezköy Electronics Plant Campus in October 2018.)
- ✓ *Çayırova Campus:* There are washing machine production plant, cogeneration, administrative buildings and facilities and warehouses.
- ✓ *Bolu Campus:* There are cooking appliances production plant, WEEE Recycling Plant, other facilities and warehouse.
- ✓ *Eskişehir Campus:* There are refrigerator and compressor production plants, WEEE Recycling Plant, cogeneration and warehouses.
- ✓ *Ankara Campus:* There are dishwasher production plant and warehouse.

#### Greenhouse Gas Emissions and Activity Boundaries

Arçelik A.Ş.'s greenhouse gas emissions are in 3 categories:

- ✓ Direct greenhouse gas emissions,
- ✓ Indirect energy greenhouse gas emissions,
- ✓ Other indirect greenhouse gas emissions.

Direct greenhouse gas emissions are within the scope of Scope 1, energy indirect greenhouse gas emissions are within the scope of Scope 2 and other indirect greenhouse gas emissions are within the scope of Scope 3. Scope 1 and Scope 2 emissions are under the financial and administrative control of Arçelik A.Ş. Scope 3 emissions are not under financial and administrative control of Arçelik A.Ş., thus the Scope 3 emissions not included in the greenhouse gas emissions inventory.

- ✓ *Direct Greenhouse Gas Emissions:*

Arçelik A.Ş.'s direct greenhouse gas emissions are in three categories:

- Greenhouse gas emissions sourced by the stationary combustion,
- Greenhouse gas emissions sourced by the mobile combustion,
- Other direct greenhouse gas emissions.

Arçelik A.Ş.'s direct emission resources are; natural gas, diesel, fuel-oil, LPG, petrol, refrigerants, acetylene, propane and industrial oil.

- ✓ *Energy Indirect Greenhouse Gas Emissions:*

Arçelik A.Ş.'s energy indirect emission resource is electricity. Energy Indirect Greenhouse Gas Emissions can be separated in two subgroups as:

- Scope 2 (Location-Based) Emissions: It is covered the emissions emitted from electricity consumption at Arçelik A.Ş. head quarter and production plants in Turkey and calculated by using national grid emission factor.
- Scope 2 (Market-Based) Emissions: It is covered the emissions emitted from consumption of electricity generated from renewable energy sources at Arçelik A.Ş. head quarter and production plants in Turkey. GHG emission factor of renewable energy and Scope 2 (Market-Based) Emissions are verified as zero.

- ✓ *Other Indirect Greenhouse Gas Emissions:*

Other greenhouse gas emission resources are within the scope of Scope 3 which are not under the financial and administrative control of Arçelik A.Ş.

Arçelik A.Ş.'s other greenhouse gas emissions are personnel buses, subcontractor activities which are the outside of the campuses, food and drink automats, water dispensers, logistic activities and emissions sourced by external waste disposal and recycling activities. Such emissions are not included in Arçelik A.Ş. Greenhouse Gas Emissions Inventory.

### **Greenhouse Gas Emissions Inventory Calculations**

Arçelik A.Ş.'s Greenhouse Gas Emissions Inventory calculations are based on mainly "Intergovernmental Panel on Climate Change (IPCC) 2006 Guidelines".

The calculation methodologies and emission factors are as follows:

- ✓ The "IPCC-2006 Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Chapter 2: Stationary Combustion" is used to calculate the greenhouse gas emissions sourced by stationary combustion.

- ✓ The "IPCC-2006 Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Chapter 3: Mobile Combustion" is used to calculate the greenhouse gas emission sourced by the mobile combustion.
- ✓ In the reporting period, electricity emission factor for Turkey in "International Energy Agency (2015) has been used to calculate energy indirect greenhouse gas emissions. Certificate have been obtained from the suppliers which specify that electricity which is supplied to Arçelik campuses and headquarter in Turkey has been generated from renewable energy sources.
- ✓ The "American Petroleum Industry Compendium (2009)", "TS ISO 14064-1 GHG Reporting Standard - Ek C", "IPCC Guidelines for National Greenhouse Gas Inventories Chapter 7: ODS Substitutes - Volume 3: IPPU Intergovernmental Panel on Climate Change 2006", "2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3: Industrial Processes and Product Use Chapter 7: Emissions of Fluorinated Substitutes for Ozone Depleting Substances", "IPCC Guidelines for National Greenhouse Gas Inventories Chapter 7: ODS Substitutes - Volume 3: IPPU Intergovernmental Panel on Climate Change 2006", "IPCC-2006 Guidelines for National Greenhouse Gas Inventories, Chapter 2: Stationary Combustion, Volume 2: Energy", "UK Government Greenhouse gas reporting - Conversion factors 2016" and "The World Bank - Generic Environmental Management Plan (For Refrigeration Manufacturing Sector)" are used to calculate the other direct greenhouse gas emissions.

In addition to these calculations, the negligible emissions and acceptances are calculated, and the assumptions are documented in the Greenhouse Gas Emission Inventory.

#### **Management of Uncertainties and Materiality**

The uncertainties can be caused by the measurement devices, potential record errors and deviations, possible deviations in calorific value and lower - upper values of the fuels.

The uncertainty is calculated regarding to Arçelik's direct greenhouse gas emission and Arçelik's indirect greenhouse gas emissions, separately.

Materiality is the sum of GHG inventory uncertainties and negligibles, acceptances. The company materiality has been calculated accordingly.

#### **Internal Audits and Control Methods**

With data control purposes, internal audits are performed within the scope of ISO 14064-1 Standard and the finding are managed in accordance with the "GTP-16355 Corrective and Preventive Actions Procedure".

#### **Opinion Restatement**

Arçelik A.Ş.'s Greenhouse Gas Inventory 2018 is materially correct and is a fair representation of the data and is prepared in accordance with the related international standard on greenhouse gas and to relevant national standards or practices available. It has been agreed that the materiality is under 7%.

#### **Verified GHG Emissions Belonging 2018**

Scope-1, Scope-2 and total greenhouse gas emissions of Arçelik A.Ş.'s 6 different campus in Turkey and the HQ were verified as follows:

Scope – 1 GHG Emissions: 55,236 tons CO<sub>2</sub> equivalent



Scope – 2 GHG Emissions: 22,852 tons CO<sub>2</sub> equivalent

Total GHG Emissions: 78,088 tons CO<sub>2</sub> equivalent

Materiality (%): 4.84

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