

# GHG Inventory Training-Scope 2

2023.12



# What is Greenhouse Gas (GHG)

- Greenhouse gases (GHGs) are gases in the Earth's atmosphere that absorb and re-radiate infrared radiation emitted from the surface, thus creating a phenomenon similar to the greenhouse effect, causing the surface temperature of the Earth to rise.
- Major greenhouse gases:
  - ✓ carbon dioxide (CO<sub>2</sub>)
  - ✓ methane (CH<sub>4</sub>)
  - ✓ nitrous oxide (N<sub>2</sub>O)
  - ✓ hydrofluorocarbons (HFCs)
  - ✓ perfluorocarbons (PFCs)
  - ✓ sulfur hexafluoride (SF<sub>6</sub>)
  - ✓ nitrogen trifluoride (NF<sub>3</sub>)
- The increase in these gases is mainly due to human activities such as the burning of fossil fuels, industrial production, etc., resulting in an increase in their concentration in the atmosphere, which is known as the "greenhouse effect" and has an impact on climate, causing problems such as rising global temperatures and an increase in extreme weather events.



# Purpose to Collect Electricity Information

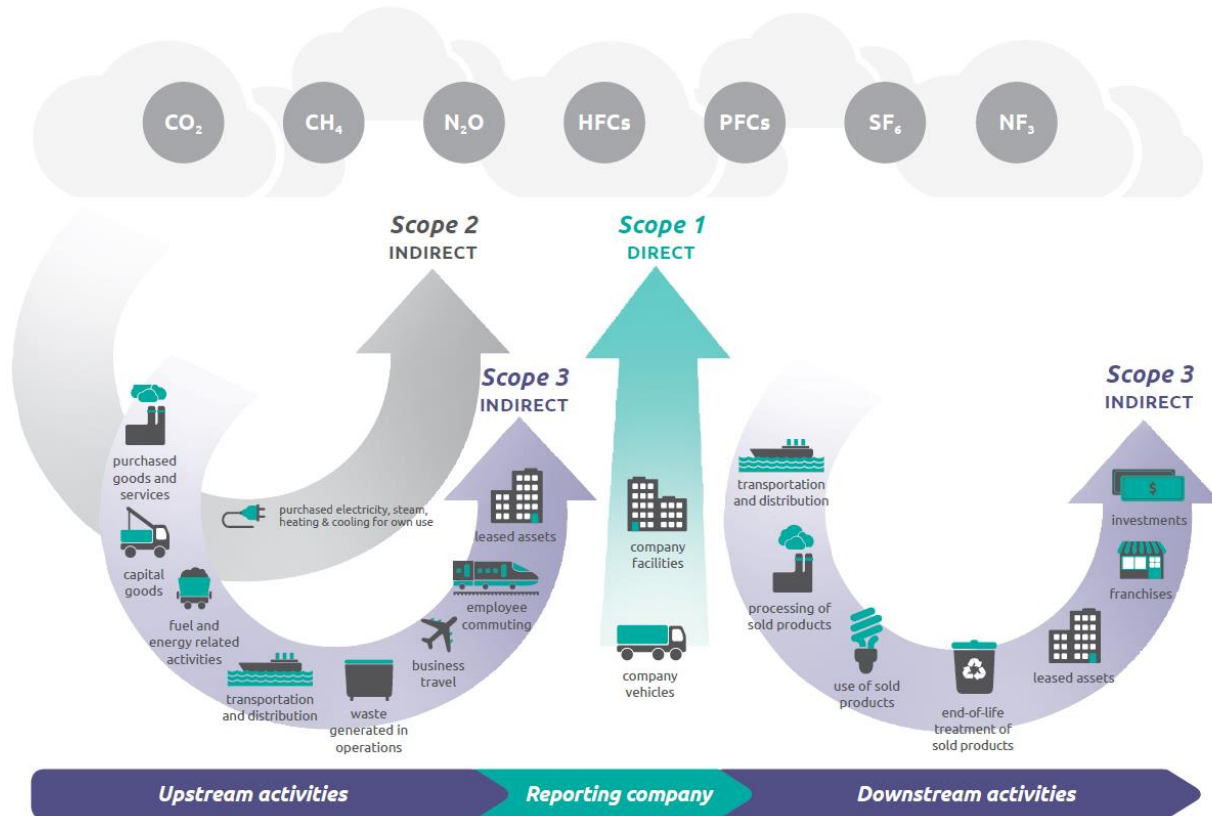
- **Sustainability Roadmap for Listed Companies by Financial Supervisory Commission R.O.C. (Taiwan)**
  - ✓ Taiwan's laws and regulations require companies to complete greenhouse gas inventory and verification schedule planning, and then report to the Board of Directors.
- **SBTi(Science Based Target initiative) Commitment**
  - ✓ Align with the international trend of carbon reduction
- **EPEAT Eco Label**
  - ✓ Procurement Qualification



# 3 Scopes of Emissions

- Scope 1: Direct emissions generated by direct fuel or energy within the organization
- Scope 2: Indirect emissions generated by the use of electricity within the organization
- Scope 3: Indirect emissions generated by upstream and downstream activities in the value chain

Figure [I] Overview of GHG Protocol scopes and emissions across the value chain



# Scope 2 at A Glance

## Scope 1: 3 Emissions Types

Emission Type	Equipment	Emission Source	Possible Greenhouse Gases Produced
Stationary	Boiler, gas stove, heater, emergency generator	Gas/Diesel	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O
Mobile	Company vehicle	Gas/Diesel	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O
Fugitive	Air conditioner, ice water dispenser, refrigerator, air conditioner of the vehicle	Refrigerant	HFCs

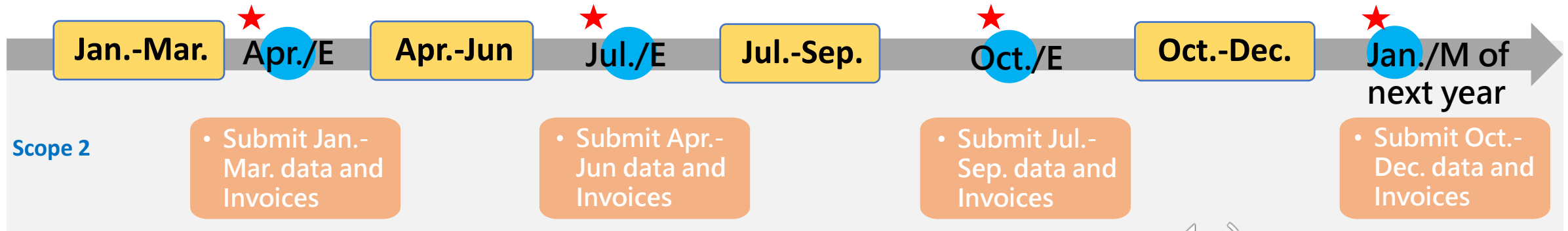
## Scope 2: Purchased electricity, **measured in kilowatt-hour (KWH)**

- General Electricity
  - ✓ The usage can be obtained from the electricity bill or from the Invoice issued by the landlord.
- Electricity generated from renewable energy sources
  - ✓ This type of electricity consumption does not generate greenhouse gases. If the power company's grid uses renewable energy sources, the power company must provide information on the type and the proportion of renewable energy sources supplied.



# Inventory Schedule

- In order to meet ASUSTeK's net-zero target, we have started to collect data (Scope 2) on **quarterly basis** of the reporting year.
- For subsidiaries/suppliers with bimonthly billing cycle, please submit Jan.-Feb. data in the end of April, Mar.-Jun. data in the end of July, and so on. Please see the timeline below.
- For subsidiaries/suppliers with annual billing cycle, we might ask you to obtain the data from the landlord for the first half year in July. Relevant supporting documentations and the data of second half year will be required to submit by next Jan. and ASAP.



# Filling Out the Survey

- General Info. & Instruction
- Scope 2: Electricity



# General Info. & Instruction

- Requested Information
  - ✓ Reporting Period (e.g. 2023/1/1~2023/12/31)
  - ✓ Country
  - ✓ Name of Subsidiary in short (e.g. ACH)
  - ✓ Numbers of office/site
  - ✓ Main Contact Window
  - ✓ Number of Employees by the end of the year (provided in next Jan.)
    - ◆ Employees: (1) Regular (2) Expatriate (3) Temp. Contractor (4) Intern/Trainee, and including both Full-time and Part-time.
    - ◆ Number of Employees: take the number of the above categories who were still employed by the last working day in the reporting year.
  - ✓ Total hours worked by the Defined Employees in the reporting year (provided in next Jan.)
    - ◆ Calculate the total working hours for the defined employees.
- If you are unclear or have any questions about the requested information, please contact the following personnel:
  - ✓ Main Contact: [Fanny\\_Hsieh@asus.com](mailto:Fanny_Hsieh@asus.com)
  - ✓ Alternatives: [Sail\\_Lee@asus.com](mailto:Sail_Lee@asus.com)

The screenshot displays the 'A+ESG' system interface for 'B1101 Audit subject maintenance'. The form is for 'Sail Lee' and includes the following fields:

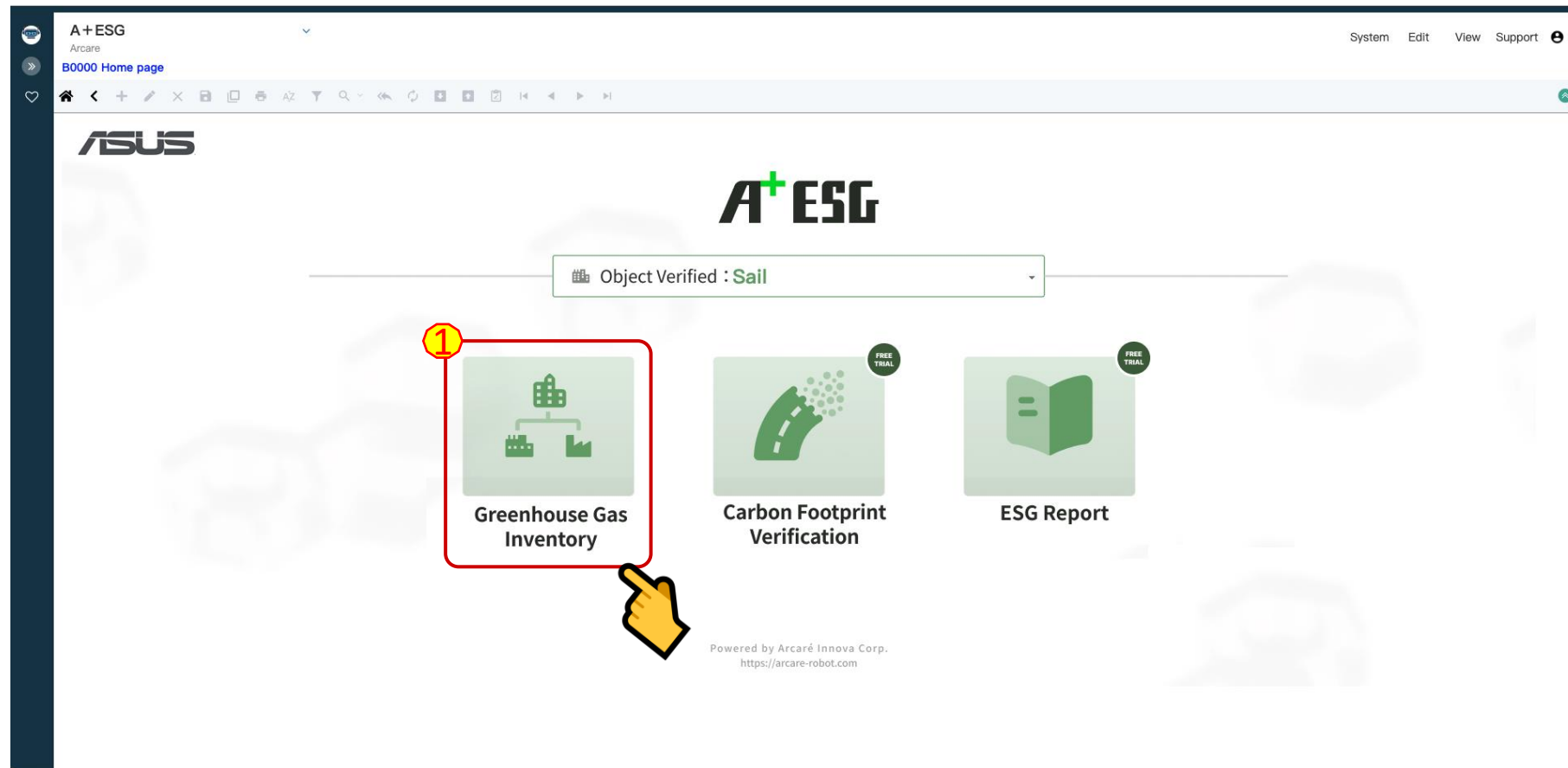
- Audit subject:** Sail Lee
- Abbreviation:** Sail
- Nations:** 台灣 (Taiwan)
- District:** (Empty)
- Subject code:** 00010
- Company address:** 1110000000 (Placeholder text: Enter the country where the inventory unit is located, and you can search using keywords)
- Postal code:** 112
- Uniform numbers:** (Empty)
- Factory certification #:** (Empty)
- Chairman:** (Empty)
- Company website:** (Empty)
- Employees:** 120
- Contact person:** sail
- Contact phone #:** 25214
- Fax:** (Empty)
- Mobile phone:** (Empty)
- Contact Email:** sail\_lee@asus.com
- Administrator:** sail\_lee
- Industry 1:** (Empty)
- Industry 2:** (Empty)
- Control number:** (Empty)
- 14064 version:** (Empty)
- Memo:** (Empty)
- Contract status:** 1. In period
- Usage period from:** 2023/12/22
- Until:** 2024/12/31
- Authorized by:** 1. Simple
- Authorized in:** ☐ 14064 ☐ 14067 ☐ ESG





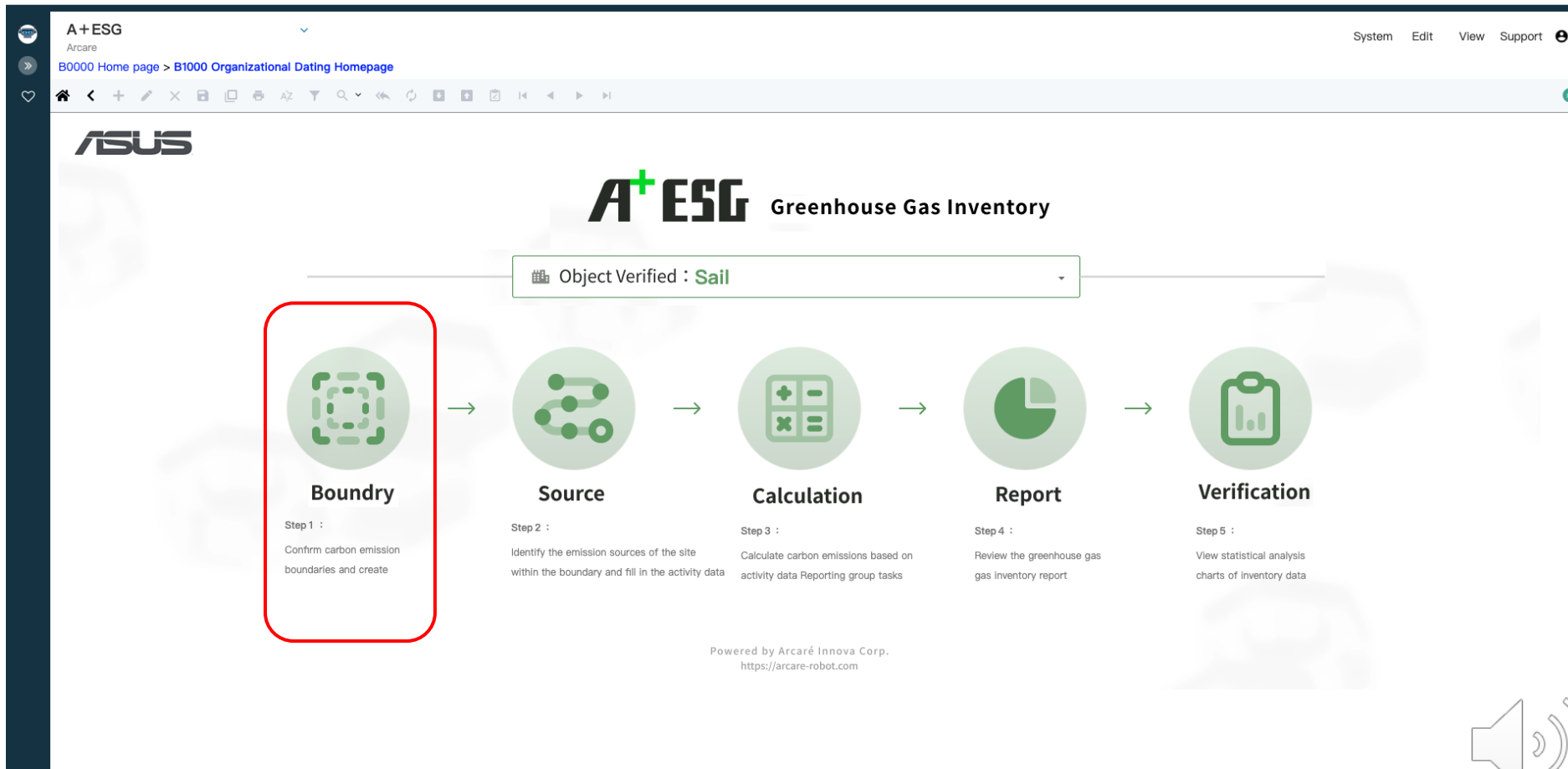
# B0000 Home > Log In

- After logging in, click on 'Organization Carbon Check' to enter the workspace.



# Introduction Page (Homepage)

- 【B1000 Organized Inspection Homepage】 - Click on the functional keys of the images according to the stages of inspection 'Boundary, Source, Algorithm, Report, Check' to enter the corresponding process.



# Basic Information Entry

- Confirm that the 'subject of investigation name' matches your company's trade name, and enter the address, main contact person, contact phone number, contact person's email, and number of employees.

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B0000 Home page > B1100 Organizational Dating Homepage > B1101 Audit subject maintenance

System Edit View Support

Team member Boundary 環境足跡調査 Group information Coefficient Related settings

Audit subject

Sail

Audit subject: **Sail Lee** (highlighted with red box and yellow circle 1)

Nations: 台灣 District:

Company address: 立德路15號

Postal code: 112

Uniform numbers: Factory certification #: Chairman:

Company website:

Contact person: **sail** (highlighted with red box) Contact phone #: 25214

Mobile phone:

Contact Email: **sail\_lee@asus.com** (highlighted with red box)

Employees: **120** (highlighted with red box)

Fax:

Administrator: sail\_lee

Industry 1: Industry 2:

Control number: 14064 version:

Memo:

Contract status: 1. In period

Usage period from: 2023/12/22

Until: 2024/12/31

Authorized by: 1. Simple

Authorized in: ☐ 14064 ☐ 14067 ☐ ESG



# Scope 2: Electricity

Scope 2: Purchased electricity, measured in **kilowatt-hour (KWH)**

Electricity Type	How to Get the Value / Supporting Materials
General Electricity	<ul style="list-style-type: none"><li>• Electricity bill (directly receive from the power company), or;</li><li>• Invoice from the landlord and/or relevant documentations</li></ul>
Electricity from Renewable Energy Sources (wind, sun, hydropower, biomass)	<ul style="list-style-type: none"><li>• Electricity bill (directly receive from the power company), or;</li><li>• Invoice from the landlord and/or relevant documentations</li></ul> <b>and</b> <ul style="list-style-type: none"><li>• Information on the type and the proportion of renewable energy sources supplied</li></ul>

For the leased sites, please also provide the contract with the landlord.

If your site sets up your own renewable energy source (ex. solar panel), please let HQ GHG Team know. We will need additional documentations.



# Scope 2: Electricity - Filling Out the Excel

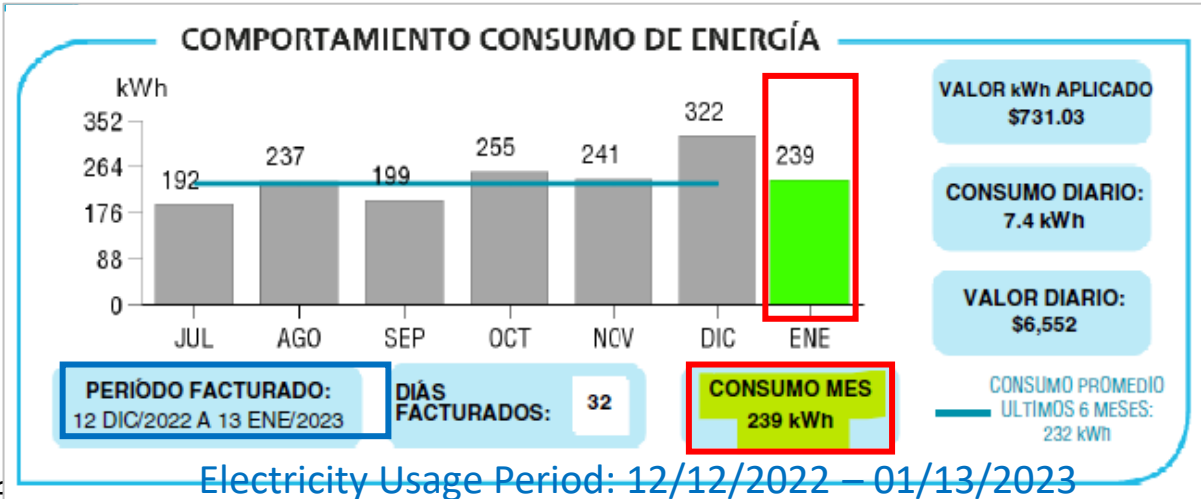
- Provide the electricity information of all sites and name them, regardless whether the offices are leased or owned.
- If there is more than one meters at your location/site/floor, record all of them.
- If there is any move out from/move into a location within the year, please keep the old one and add a new row for the new location.
- Check the usage month/period described in the Invoice and then report the electricity accordingly.
- Look for wordings such as electricity “consumed”/“charge” and check if the unit is in KWH (very rare case in MWH, 1 MWH=1000 KWH). Adding both Peak and Off-Peak electricity consumptions if both exist.
- Record to the 4<sup>th</sup> decimal place.



## Examples of the Invoice:

INFORMACIÓN SOBRE EL TÉRMINO VARIABLE			
Contador	Lect. 01/01/2023	Lect. 31/01/2023	Consumo
Energía Calor	267,30 MWh	287,38 MWh	20.080 kWh
M3803F - Energía Frío Positivo	191,79 MWh	192,01 MWh	220 kWh
M3803F - Volumen Frío Positivo	95.686,50 m3	95.765,80 m3	79,29 m3

Electricity Usage Period: Jan. 2023 (01/01/2023 – 01/31/2023)



# Scope 2: Electricity - Filling Out Examples

- Electricity with single value per month

Office Name		Jan	Feb	Mar
ASGL - Eightrum	Electricity Consumed (KWh)	5,038.00	4,038.00	4,246.00
	Electricity Usage Period	2022/12/24 - 2023/01/24	2023/01/25 - 2023/02/23	2023/02/24 - 2023/03/24
ASGL - R&S	Electricity Consumed (KWh)	2,602.00	2,877.00	3,206.00
	Electricity Usage Period	2023/01/01 - 2023/01/31	2023/02/01 - 2023/02/28	2023/03/01 - 2023/03/31

**Billing Period**  
24 Dec 2022 - 24 Jan 2023

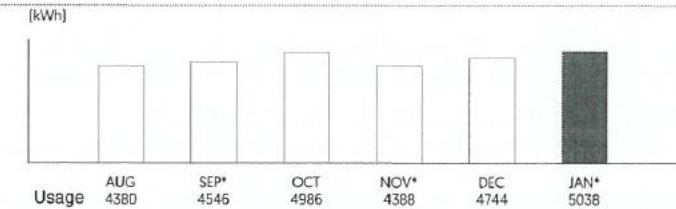
**Bill Date**  
27 Jan 2023

**Account Type**  
Non Domestic

## Current Charges

**Electricity Services**  
Usage: 5038 kWh

## Consumption Trend



Note: If more than one locations, please clearly name it

- Electricity with Peak and Off-peak per month

Office Name		Jan	Feb	Mar
ACH	Electricity Consumed (KWh)	51,792.00	44,370.00	45,019.00
	Electricity Usage Period	2023/01/01 - 2023/01/31	2023/02/01 - 2023/02/28	2023/03/01 - 2023/03/31

① + ②

Off-peak consumption  
Peak consumption

Maandafrekening periode: van 01-01-2023 tot en met 31-01-2023

## Elektriciteit Vast & Zeker

Levering & diensten	Hoeveelheid	Eenheid	Tarief (in €)	Bedrag excl. BTW (in €)	BTW%
Verbruik dal	① 23.893,00	KWh	0,0665750	1.590,68	21,00
Verbruik piek	② 27.899,00	KWh	0,0778290	2.171,35	21,00
Energiebelasting 2023 Zone 1	10.000,00	KWh	0,1259900	1.259,90	21,00
Energiebelasting 2023 Zone 2	40.000,00	KWh	0,1004600	4.018,40	21,00
Energiebelasting 2023 Zone 3	1.792,00	KWh	0,0394200	70,64	21,00
Heffingskorting	31,00	Dagen	-1,3514247	-41,89	21,00
Bedrag excl. BTW				9.069,08	



# Scope 2: Electricity - If Fee is Included in the Rent

- Please check the content of the contract and/or ask the landlord if “a fix electricity charge” is included in the rent.
- If YES, please provide the following to HQ:
  - ✓ The page number of the statement
  - ✓ The fix electricity charge
  - ✓ The price per KWH (ask the landlord for a copy of the Electricity Bill by the electricity company)

Fix Electricity Charge	Price	Calculated Usage Per Month (KWH)
RM 200	RM 31.5/KWH	RM 200 / (RM 31.5/KWH) = 634.9206 KWH

Note: ASUS calculated usage per month = Fix Electricity Charge / Price per KWH



## TENANCY AGREEMENT

THIS TENANCY AGREEMENT is made this **1st** day of **April, 2021** BETWEEN **SIA HOW KWONG (WNKP: 750908-13-5195)** of at Lot 8142, No. 156, Taman Daya, 93350 Kuching, Sarawak. (hereinafter called “the Landlord”) of the one part AND **ASUSTEK COMPUTER MALAYSIA SDN. BHD.** of 10-01, 10th Floor, Menara Keck Seng, 203, Jalan Bukit Bintang, 55100 Kuala Lumpur. (hereinafter called “the Tenant”) of the other part.

WHEREAS the Landlord has agreed to let and the Tenant has agreed to rent all that parcels of land described as Lot 3.17 on Level 3 of Wisma Saberka, Jalan Tun Abang Haji Openg, Kuching (hereinafter called “the demised premises”) upon the terms and conditions hereinafter contained.

NOW THIS AGREEMENT WITNESSETH as follows:-

1. The Landlord hereby demises unto the Tenant and the demised premises for a term of **TWO (2) years** commencing on the **1st day of March, 2022** and expiring on the **31st day of March, 2024**.
2. The monthly rental is respect of the demised premises shall be **RINGGIT MALAYSIA ONE THOUSAND THREE HUNDRED ONLY (RM 1,300.00)** and **a fixed electricity charges of RINGGIT MALAYSIA TWO HUNDRED ONLY (RM200.00)** payable in advance, the first of such payment to be made on date commencement of the term hereby created and thereafter on or before the seventh (7th) day of each calendar month subject to the stipulations modifications terms and conditions hereinafter contained.

## Scope 2: Electricity – If No Independent Meter

1/2022			
EAN 859182406460001286			
Hall/Tenant			Percentage. Cost Share (by area)
O10			
	3 854,00	1,93%	
	4 955,00	2,48%	
	14 785,00	7,39%	
	3 975,00	1,99%	
O8			
	11 253,00	5,62%	
O9			
	9 743,00	4,87%	
	3 480,00	1,74%	
O11			
	5 619,00	2,81%	
	1 747,00	0,87%	
Asus/C	3 345,00	1,67%	
O17			
Asus	7 662,00	3,83%	
O19			
	5 887,00	2,94%	
O20			
	4 428,00	2,21%	
	1 168,00	0,58%	
O22			
	6 395,00	3,19%	
O23			
	25 286,00	12,63%	
	23 274,14	11,63%	
Celkem	200 163,14	100%	

- It is normally calculated on the ratio of a tenant's area to the total area leased by all tenants.
- The landlord should have the share percentage for each tenant. Please ask the landlord to provide the documents that contains the following information:
  - Total Area Leased by All Tenants ( $M^2$ )
  - ASUS Leasing Area ( $M^2$ )
  - Share Percentage (%)
  - Total Electricity Consumption of the Building (KWH)



\*Electricity cost of the common area shared by  
ACZS: 1.67%+3.83%=5.5%



# Scope 2: Electricity - Share of the Consumption

## ASUS Share Percentage

= ASUS Leasing Area / Total Area Leased by All Tenants

= ①/② = ③

= 500M<sup>2</sup>/5000M<sup>2</sup> \* 100% = 10%

## ASUS Share Electricity Consumption

= ASUS Share Percentage \* Total Electricity Consumption of the Building

= ③ \* ④

= 10% \* 1000KWH = 100KWH



Tenant	Individual Leasing Area (M <sup>2</sup> )	Total Area Leased by All Tenants (M <sup>2</sup> )	Share Percentage (%)	Total Electricity Consumption of the Building (KWH)	Share Electricity Consumption (KWH)
ASUS	500 M <sup>2</sup> ①	5000 M <sup>2</sup> ②	10% ③	1000 KWH ④	100 KWH
B	2500 M <sup>2</sup>		50%		500 KWH
C	2000 M <sup>2</sup>		40%		400 KWH

# Scope 2: Renewal Electricity

- If the electricity source of the power company includes renewable energy (wind, sun, hydropower), please confirm the coefficient of the electricity with the power company or obtain the relevant documentation, and provide the plan you choose for HQ to determine the ratio used if available.

1	2	3	4	5	6	7	8	9	10	11
Fuel mix	Eneco Total	Eneco Business BV	Gray current	Dutch Wind	European Wind	Belgian Wind	Hydropower	Sun	biomass	EcoPower
<b>A. Renewable</b>										
Wind	57.7%	62.2%	0%	100%	100%	100%	0%	0%	0%	31.9%
Sun	6.9%	3.3%	0%	0%	0%	0%	0%	100%	0%	24%
Hydropower	15.6%	1.6%	0%	0%	0%	0%	100%	0%	0%	43.3%
biomass	1.3%	2.4%	0%	0%	0%	0%	0%	0%	100%	0.8%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Subtotal <sub>1)</sub>	81.5%	69.6%	0%	100%	100%	100%	100%	100%	100%	100%
<b>B. Fossil</b>										
Natural gas	16.8%	30.4%	100%	0%	0%	0%	0%	0%	0%	0%
Coal	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Nuclear	1.6%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Subtotal	18.5%	30.4%	100%	0%	0%	0%	0%	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



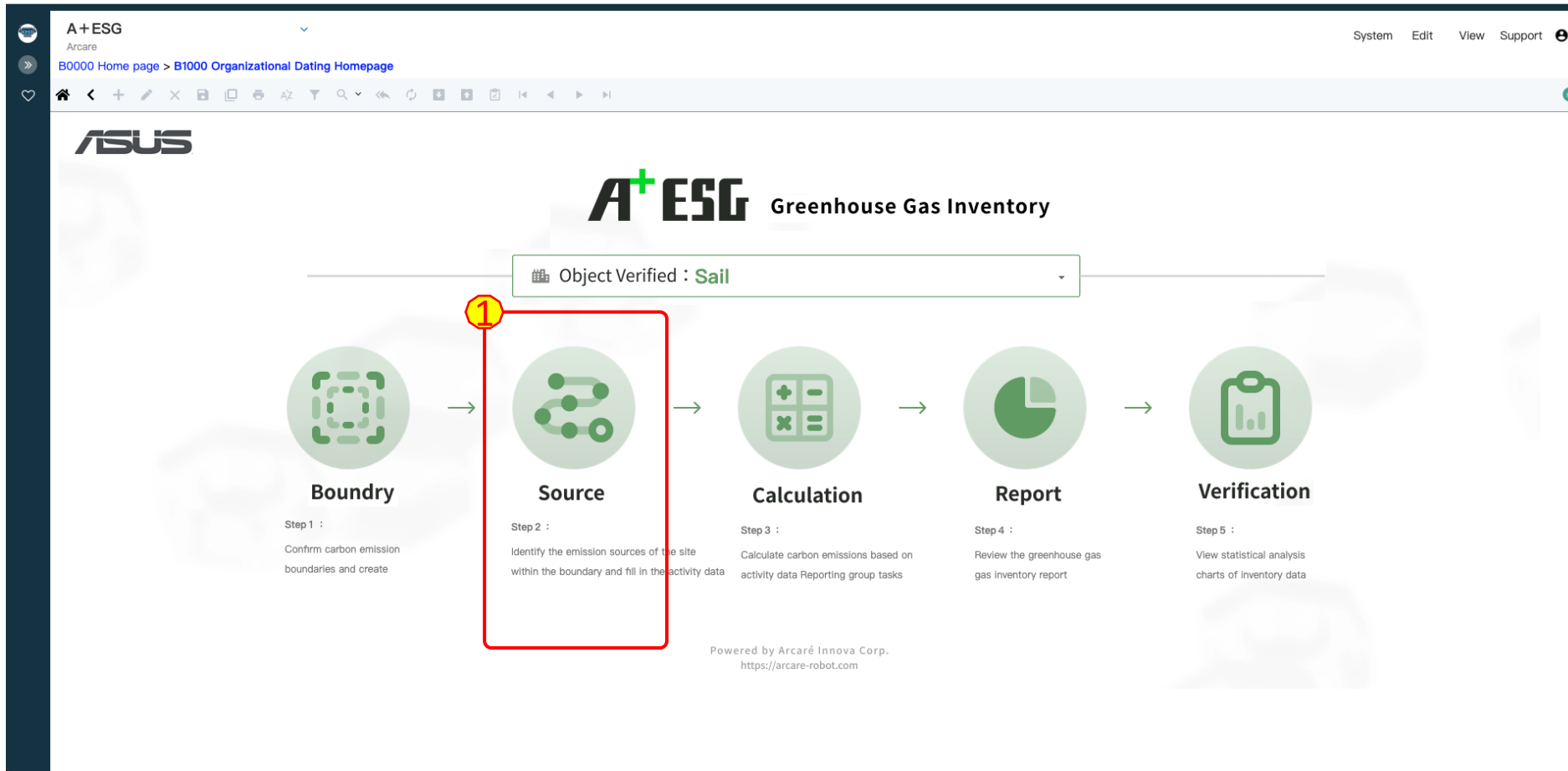
# Before Submitting the Scope 2 Data, Please Check:

- ✓ The values is in KWH, NOT the electricity fee
- ✓ Fill out the values according to the actual usage period, NOT the Invoice issued month
- ✓ Be aware of the use of commas and periods in numbers. HQ uses Periods (Full Stops) as the decimal point (e.g. 15,200.5300 KWH)
- ✓ Besides the Excel, please also provide files or documents that show the electricity consumption or the calculation of the shared electricity
- ✓ For the leased sites, please also provide the contract with the landlord
- ✓ If the electricity source of the power company includes renewable energy, confirm the emission factor of the electricity with the power company or obtain the relevant documentation, and provide the plan you choose for HQ to determine the ratio used if available
- ✓ If you begin to use renewable energy (such as setting up solar panels), please also let HQ knows



# B1300 Activity Data Inventory Operation

- Choose 'Source' to enter the inventory data collection operation.



- Within Scope 2, there are three items that can be inputted

- 

21

# B1300 Activity Data Inventory Operation > S2 Foreign Purchased Power Data

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B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation

Download sample file Merge files import All data export

Audit subject 森田印刷 GHG

Emission source category	Maintenance	Main file XLS	Checklist	Activity data
S1 fuel -related data				Import
S1 septic tank data				Import
S1 refrigerant loose data				Import
<b>S2 outsourcing electricity data</b>				Import
S2 renewal energy use				Import
C5 business waste				Import
C9 downstream transportation and distribution				Import

4/7

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B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation (SBT) > B1304 S2 Purchased energy data

Upload Attachment Attachment list

Audit subject 森田印刷

Statistical date	Boundary	Energy and equipment
2022/01/01	科工廠	本廠外購
2022/01/01	安平廠	外購電力

Boundary name 科工廠

Energy category 1.Electricity

Statistical date from 2022/01/01

Statistical date to 2022/12/31

Data input dept.

Data type Regular (intermittent)

Equipment / field 本廠外購

Unit of measurement 度(kwh)

Renewable energy 0.00 %

Place 科工廠

Total consumption 12,741,200.00 Kwh

January	February	March	April	May	June
1,061,766.00	1,061,766.00	1,061,766.00	1,061,766.00	1,061,767.00	1,061,767.00
July	August	September	October	November	December
1,061,767.00	1,061,767.00	1,061,767.00	1,061,767.00	1,061,767.00	1,061,767.00

If the original document is a summary of multiple months, please split the data into each month. For example: year/12, quarter/3.

Coefficient name 台電(110年)

Remark

Modified by 葉建一

Modified date 2023/12/27 18:27



# B1300 Activity Data Inventory Operation > S2 Renewable Energy Utilization

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B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation (SBT)

Download sample file Merge files Import All data export

Audit subject 森田印刷 GHG

Emission source category	Maintenance	Main file XLS	Checklist	Activity data	Import history
S1 fuel -related data				Import	View
S1 septic tank data				Import	View
S1 refrigerant loose data				Import	View
S2 outsourcing electricity data				Import	View
S2 renewal energy use				Import	View
C5 business waste				Import	View
C9 downstream transportation and distribution				Import	View

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B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation (GHG) > B1305 S2 Renewable energy usage

Upload Attachment Attachment list

Audit subject Sall

Recognition date	Boundary
2023/12/22	台北廠

Recognition date 2023/12/22

Boundary name 台北廠

Statistical date from 2023/12/01 to 2023/12/31

Data input dept.

Country 台灣

Power coefficient

Source Category	Renewal energy category	Purchasing kwh	Renewal energy voucher (REC)	Renewal energy purchase agreement (CPPA)	Self -built	Total usage	Other vouchers
2.Renewable Energy Power Purchat	Solar	500	0	500	0	500	

Remark

Modified by Jacky Chen Modified date 2024/03/02 18:52

# Addition Coefficient

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B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation (SBT) > B1302 S1 Septic tank data > B1012 Carbon Emission Coefficient Query

Return Self-develop coefficient

Coefficient source

Emission type

Coefficient name

Audit subject

Emission category

Search

Coefficient	Emission type	Emission source	Coefficient name	Data unit	Coefficient code
Environmental Pr	Artificial System/Yisan	廢水處理	BOD		DEF-000070

A + ESG  
Arcare

B0000 Home page > B1000 Organizational Dating Homepage > B1300 Activity data check operation (SBT) > B1302 S1 Septic tank data > B1012 Carbon Emission Coefficient Query

上傳

附件

Audit subject

Coefficient name

Coefficient name

Coefficient source

Emission type

Coefficient desc.

Coefficient code

Data unit

Emission category

GHG category	Coefficient value	Coefficient unit	Interval min.	Interval max.
Carbon dioxide CO	1450.0000000000	kgCO <sub>2</sub> e/kg	1111%	2222%

Modified by

Modified date

1/1

1/4

1/1

1/4





IN SEARCH OF INCREDIBLE

# Thank you

