

# Company Carbon Footprint report

For Volta Energy Solutions Hungary Ltd.



**Volta Energy Solutions**

Company name: **Volta Energy Solutions Hungary Ltd.**

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## 1. Executive summary

Volta places a strong emphasis on environmental sustainability, and after 2021 and 2022, in 2023, the company has completed a carbon footprint assessment of its own emissions and a mapping of GHG (greenhouse gas) emissions along its value chain. The calculations were carried out by denkstatt Hungary Kft. on behalf of Volta Energy Solutions Hungary Kft.

During the project, the GHG emissions (Scope 1 & 2) of the company's own activities (those directly influenced by the company) in Hungary were calculated for 2023 of production unit phase 1 and phase 2. The magnitude of the GHG emissions indirectly related to Volta's operations in Hungary was mapped along the upstream as well as downstream value chains (Scope 3), until handover. The calculations were carried out in accordance with the GHG Protocol guidelines, hence both market-based and location-based calculation methodologies have been defined for Scope 2 (purchased electricity).

The direct emissions (Scope 1) of Volta's plant in Hungary was **9 857 tonnes CO<sub>2</sub>eq**, while the total GHG emissions of Scope 1, 2 and 3, including indirect emissions related to operations, were **102 646 tonnes CO<sub>2</sub>eq** based on the **market-based scenario** in 2023 for production unit phase 1 and phase 2. According to the **location-based scenario**, the total GHG emissions of Scope 1, 2 and 3 were **85 499 tonnes CO<sub>2</sub>eq**. After the analysis of the carbon footprint of the entire value chain, it can be concluded that the largest part of Volta's carbon footprint, **70%** is due to **electricity use (Scope 2 and 3)** based on the market-based scenario, while the ratio in accordance with the location-based scenario is **64%**. Summary of the results is shown in the table below:

Table 1: Summary of Volta's company carbon footprint results for PH1 and PH2

Scope	Activity	t CO <sub>2</sub> eq (2022)	t CO <sub>2</sub> eq (2023)	% (market-based)	% (location-based)	y-o-y diff. (%)
Scope 1	<b>Energy sources burned on-site</b>	<b>7 744,75</b>	<b>9 655,42</b>	<b>9,41%</b>	<b>11,29%</b>	125%
	Company vehicles	133,79	190,34	0,19%	0,22%	142%
	On-site transport of materials	4,66	11,11	0,01%	0,01%	238%
Scope 2	<b>Purchased electricity (market-based)</b>	<b>34 085,44</b>	<b>55 597,87</b>	<b>54,16%</b>	-	163%
	<b>Purchased electricity (location-based)</b>	<b>26 979,88</b>	<b>38 450,95</b>	-	<b>44,97%</b>	143%
Scope 3 Upstream	<b>Fuel and energy-related activities (not included in Scope 1 or Scope 2)</b>	<b>14 118,62</b>	<b>20 997,74</b>	<b>20,46%</b>	<b>24,56%</b>	149%
	Water use	177,58	188,48	0,18%	0,22%	106%
	Waste generated in operations	511,05	1 222,99	1,19%	1,43%	239%
	Business travel	41,09	170,08	0,17%	0,20%	414%
	Employee commuting	160,84	442,94	0,43%	0,52%	275%
	<b>Material production</b>	<b>5 323,30</b>	<b>9 446,49</b>	<b>9,20%</b>	<b>11,05%</b>	177%
	Upstream material transport	1 205,69	2 022,78	1,97%	2,37%	168%
	Purchased services	539,10	995,36	0,97%	1,16%	185%
	Capital goods	454,73	709,57	0,69%	0,83%	156%
Scope 3 Downstream	Waste transport	3,92	6,59	0,01%	0,01%	168%
	Wastewater treatment	223,79	243,78	0,24%	0,29%	109%
	Downstream transportation and distribution of product	491,77	744,01	0,72%	0,87%	151%
<b>Total market-based</b>		<b>65 220,11</b>	<b>102 645,53</b>	100,00%	-	157%
<b>Total location-based</b>		<b>58 114,55</b>	<b>85 498,60</b>	-	100,00%	147%

## 2. Introduction

As a result of the negative impacts of global climate change, societal expectations of sustainability, the political and legislative requirements, and guidelines (e.g. the EU Green Deal) are becoming increasingly demanding. Considering these growing expectations, it is essential for a responsible company to focus on sustainability, and one of the first steps is to address its own greenhouse gas emissions and plan its future strategy accordingly.

Volta’s Hungarian plant also intends to follow this path and, as a responsible company, will place greater emphasis on environmental sustainability issues in the future, with the aim of determining its carbon footprint from its own emissions and mapping its GHG (greenhouse gas) emissions along the value chain. Volta aims to understand the magnitude of its carbon footprint in 2023 as well, to be able to assess where the company's GHG emissions can be most efficiently neutralized.

The calculations were carried out by denkstatt Hungary Kft. for Volta Energy Solutions Hungary Ltd.

## 3. Calculation and estimation process, methodology

In the calculation of Volta’s carbon footprint in Hungary, we determined the GHG emissions (Scope 1 & 2) originating from the company's own activities (those directly influenced by the company) and estimated the magnitude of the GHG emissions (Scope 3) indirectly related to Volta’s activities along the value chain based on both market-based and location-based calculation methodologies in line with the GHG Protocol guidelines. Volta’s phase 1 production unit has been operated with full scale up, while phase 2 production unit nearly reached its operational peak throughout 2023. Therefore, the data used for the calculation is of 2023 and includes mainly primary data for the period between 01.01.2023 – 31.12.2023. The calculations include emissions related to the operation of phase 1 and phase 2 of Volta’s Hungarian manufacturing plants, located in Környe, Han folyó Street 1.

The carbon footprint was determined using the GHG Protocol standards (Corporate Standard, Corporate Value Chain (Scope 3) Standard).

The calculation takes each activity of Volta (kilometers car run, kg of raw material used, kWh electricity used, etc.) and multiplies it with its own emission factor. The emission factor refers to the amount of CO<sub>2</sub>e emitted from that activity. For example, total emissions from the production of raw materials necessary for operation is calculated by multiplying the amount of raw material (e.g. kg HCl) and multiplying it with its emission factor (e.g. kg CO<sub>2</sub>e/kg HCl produced).



Figure 1. Calculation methodology

For the footprint calculation, the activities (carbon sources) were considered based on the recommendations of the GHG Protocol, which are presented in Table 1 (below). These sources are excluded from this calculation:

- Fugitive emissions (lack of data)
- Use phase of products (irrelevant, none)
- End of life of products (irrelevant, none)
- Rented facilities (irrelevant, none)
- Processing of products sold (irrelevant, none)
- End-of-life management of products sold (irrelevant, none)
- Downstream leased assets (irrelevant, none)
- Franchises (irrelevant, none)
- Investments (irrelevant, none)

In the calculation, the most relevant emission factors from the available scientific literature and international databases (Ecoinvent, DBEIS<sup>1</sup>, International Energy Agency (IEA)) were used, so that the uncertainty of the calculation is as low as possible for Scope 1 & 2. For Scope 3, respectively, the uncertainty of the calculation is medium due to the lack of primary data and special assumptions in some instances. Moreover, we needed to use estimations in other instances. Consequently, uncertainty of the results is low for Scope 1 and Scope 2 as primary data was used for 2023. The carbon sources considered and the uncertainty in the calculation are summarized in the table below:

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<sup>1</sup> Department for Environment Food & Rural Affairs, Department for Business, Energy & Industrial Strategy - UK Government GHG Conversion Factors for Company Reporting

Table 2: Carbon sources considered in the calculation and their associated uncertainty levels

Scope	Name of carbon source	Level of uncertainty
<b>Scope I</b>	• Energy sources burned locally by the company	low
	• Emissions from the use of vehicles owned or operated by the company including on-site material handling	
<b>Scope II</b>	• Electricity purchased by the company (market-based and location-based)	low
<b>Scope III</b>	<b>Upstream (necessary for the company's activities)</b>	
	• production of materials	low
	• transport of materials	low
	• capital goods	high
	• purchased services	medium
	• water used for production and sanitary purposes	low
	• Emissions generated by the commuting of company employees (both by public transport and by individual car journeys)	medium
	• Business trips not made by company vehicles	low
<b>Scope III</b>	<b>Downstream (resulting from the company's activities)</b>	medium
	• Transport of products to the clients • Treatment and transport of waste and wastewater generated by the company's activities	

## 4. Results

The results are reported in tonnes of carbon dioxide equivalent (CO<sub>2</sub>eq), which is a metric tonne of carbon dioxide (CO<sub>2</sub>) or a quantity of greenhouse gases ((carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>)) with a global warming potential equivalent to the former.

The magnitude and percentage distribution of the carbon footprints determined for the activities considered in the calculations are shown in Table 2 below (t CO<sub>2</sub>eq = tonnes CO<sub>2</sub> equivalent).

Table 3: Size and percentage distribution of Volta's carbon footprint in 2023 for PH1 and PH2

Scope	Activity	t CO <sub>2</sub> eq (2022)	t CO <sub>2</sub> eq (2023)	% (market-based)	% (location-based)	y-o-y diff. (%)
Scope 1	<b>Energy sources burned on-site</b>	<b>7 744,75</b>	<b>9 655,42</b>	<b>9,41%</b>	<b>11,29%</b>	125%
	Company vehicles	133,79	190,34	0,19%	0,22%	142%
	On-site transport of materials	4,66	11,11	0,01%	0,01%	238%
Scope 2	<b>Purchased electricity (market-based)</b>	<b>34 085,44</b>	<b>55 597,87</b>	<b>54,16%</b>	-	163%
	<b>Purchased electricity (location-based)</b>	<b>26 979,88</b>	<b>38 450,95</b>	-	<b>44,97%</b>	143%
	<b>Fuel and energy-related activities (not included in Scope 1 or Scope 2)</b>	<b>14 118,62</b>	<b>20 997,74</b>	<b>20,46%</b>	<b>24,56%</b>	149%
Scope 3 Upstream	Water use	177,58	188,48	0,18%	0,22%	106%
	Waste generated in operations	511,05	1 222,99	1,19%	1,43%	239%
	Business travel	41,09	170,08	0,17%	0,20%	414%
	Employee commuting	160,84	442,94	0,43%	0,52%	275%
	<b>Material production</b>	<b>5 323,30</b>	<b>9 446,49</b>	<b>9,20%</b>	<b>11,05%</b>	177%
	Upstream material transport	1 205,69	2 022,78	1,97%	2,37%	168%
	Purchased services	539,10	995,36	0,97%	1,16%	185%
	Capital goods	454,73	709,57	0,69%	0,83%	156%
Scope 3 Downstream	Waste transport	3,92	6,59	0,01%	0,01%	168%
	Wastewater treatment	223,79	243,78	0,24%	0,29%	109%
	Downstream transportation and distribution of product	491,77	744,01	0,72%	0,87%	151%
	<b>Total market-based</b>	<b>65 220,11</b>	<b>102 645,53</b>	<b>100,00%</b>	-	157%
	<b>Total location-based</b>	<b>58 114,55</b>	<b>85 498,60</b>	-	<b>100,00%</b>	147%

## 4.1. Market-based scenario results

The results are demonstrated by the following figure according to the market-based scenario:

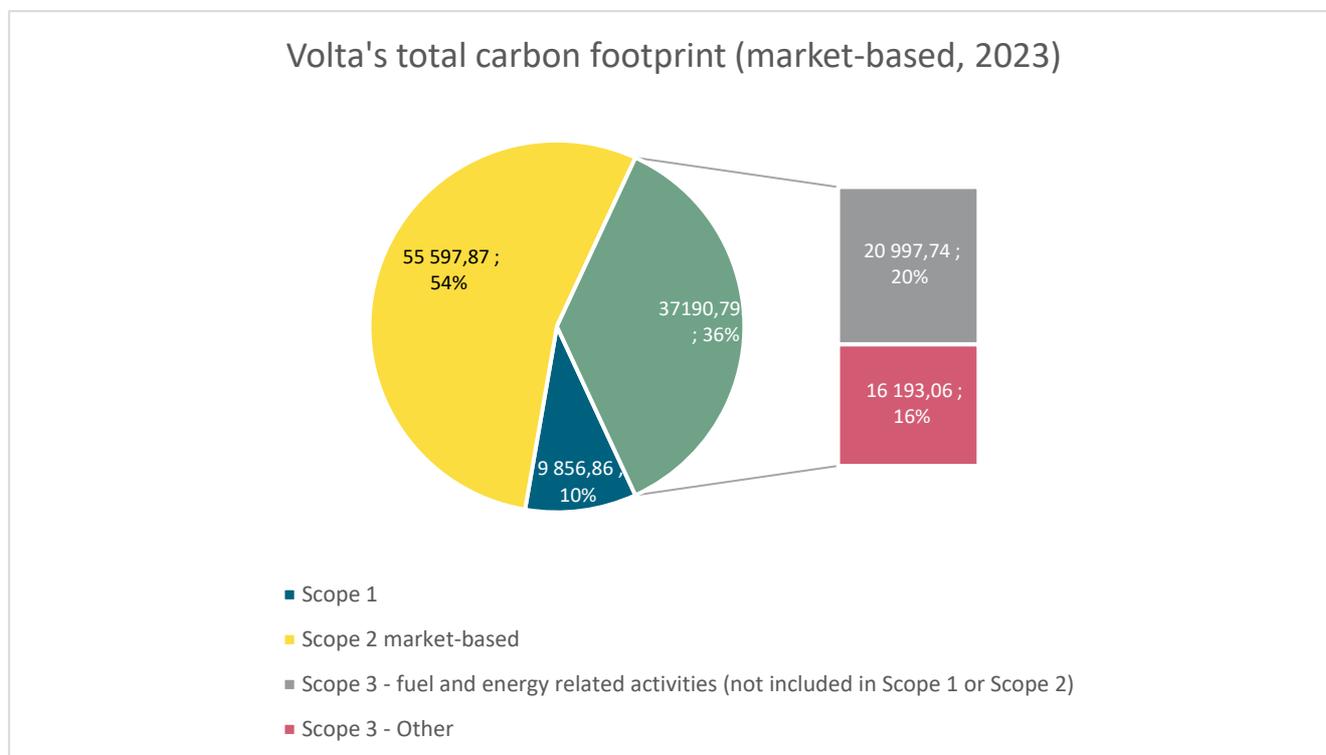


Figure 2: Volta Hungary's total carbon footprint (market-based) of PH1 and PH2 in 2023 (tonnes CO<sub>2</sub>eq)

Volta's total carbon footprint for 2023 in Hungary was **102 646 tonnes CO<sub>2</sub>eq based on the market-based calculation.**

Scope 1&2 emissions amounted to **65 455 tonnes CO<sub>2</sub>eq (64%)** in 2023 for production unit phase 1 and phase 2. This rate is rather high compared to industry expectations of proportions since the activities of Volta's Hungarian site are very energy-intensive by their nature of material transformation and production. Emissions from the use of natural gas (most of Scope 1) and the use of electricity (Scope 2) also contribute to Scope 3 mostly in the form of Transport and distribution of energy, as shown on Figure 2 (above).

Scope 3 activities, which Volta can only indirectly influence, accounted for **37 191 tonnes CO<sub>2</sub>eq (36%)** of total emissions in 2023. This rate is rather low since Volta's primary activity is not as material-intensive but energy-intensive. The main raw materials were shredded copper, slitting by-copper, copper chip and copper wire with significant proportion of emissions that could be attributed to material production. Within Scope 3 emissions, the largest contributor in 2023 was the transport and distribution (T&D) of the energy used. T&D of energy refers to the emissions resulting from the extraction and transportation of natural gas before it gets burned on site and the transportation of electricity after it is generated at a power plant.

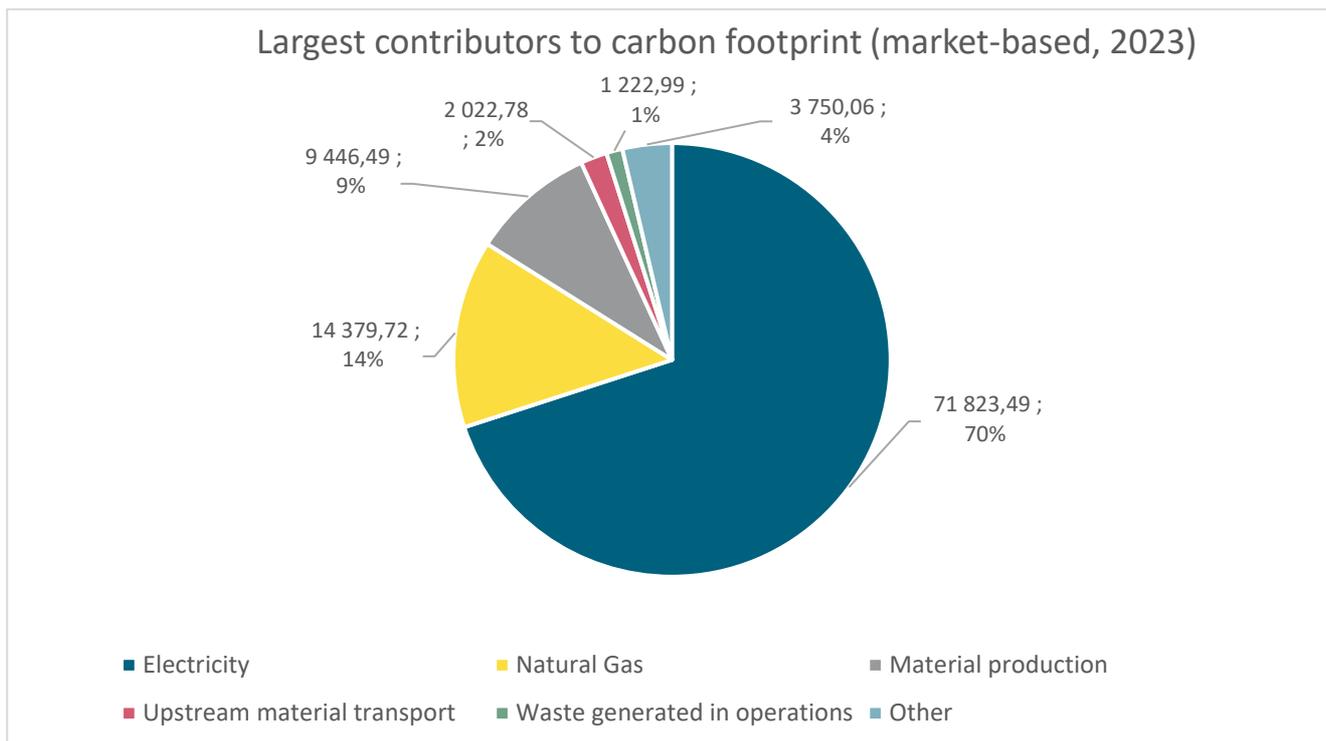


Figure 3: Largest contributors to Volta’s carbon footprint (market-based) of PH1 and PH2 in 2023 (tonnes CO<sub>2</sub>eq)

All in all, as Figure 3 illustrates, the emissions associated with **electricity use (Scope 2&3)** account nearly three quarter (**70%**) of the company’s total carbon footprint, while the emissions associated with the use of **natural gas (Scope 1&3)** accounts for nearly one quarter of the total (**14%**). Other significant emissions are those originating from material production and transportation; however, their share of emissions could change once the previously mentioned uncertainties are addressed.

## 4.2. Location-based scenario results

The results are demonstrated by the following figure according to the location-based scenario:

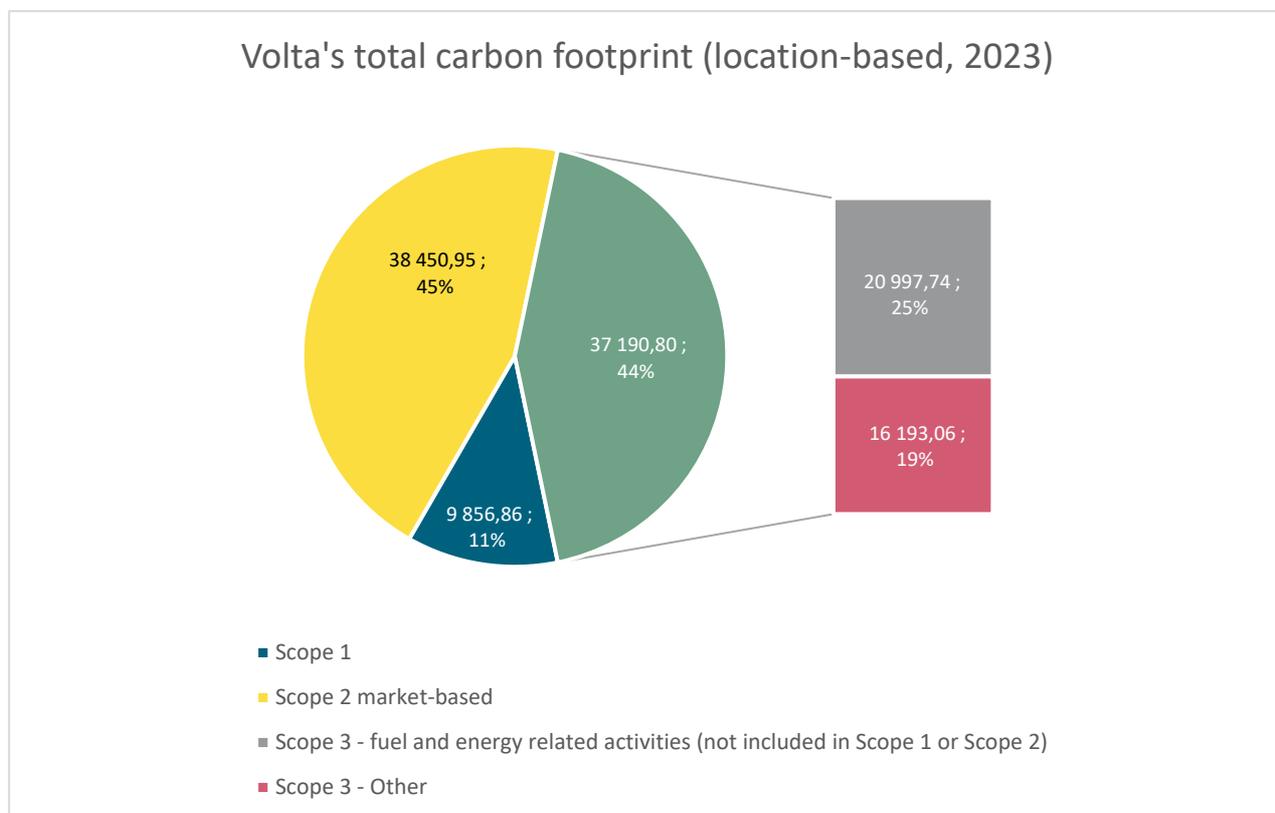


Figure 4: Volta Hungary's total carbon footprint (location-based) of PH1 and PH2 in 2023 (tonnes CO<sub>2</sub>eq)

Volta's total carbon footprint for 2023 in Hungary was **85 499 tonnes CO<sub>2</sub>eq based on the location-based calculation.**

Scope 1&2 emissions amounted to **48 308 tonnes CO<sub>2</sub>eq (57%)** in 2023 for production unit phase 1 and phase 2. Emissions from the use of natural gas (most of Scope 1) and the use of electricity (Scope 2) also contribute to Scope 3 primarily in the form of Transport and distribution of energy, as shown on Figure 4 (above).

Scope 3 activities, which Volta can only indirectly influence, accounted for **37 191 tonnes CO<sub>2</sub>eq (43%)** of total emissions in 2023. Within Scope 3 emissions, the largest contributor in 2023 was the transport and distribution (T&D) of the energy used. T&D of energy refers to the emissions resulting from the extraction and transportation of natural gas before it gets burned on site and the transportation of electricity after it is generated at a power plant.

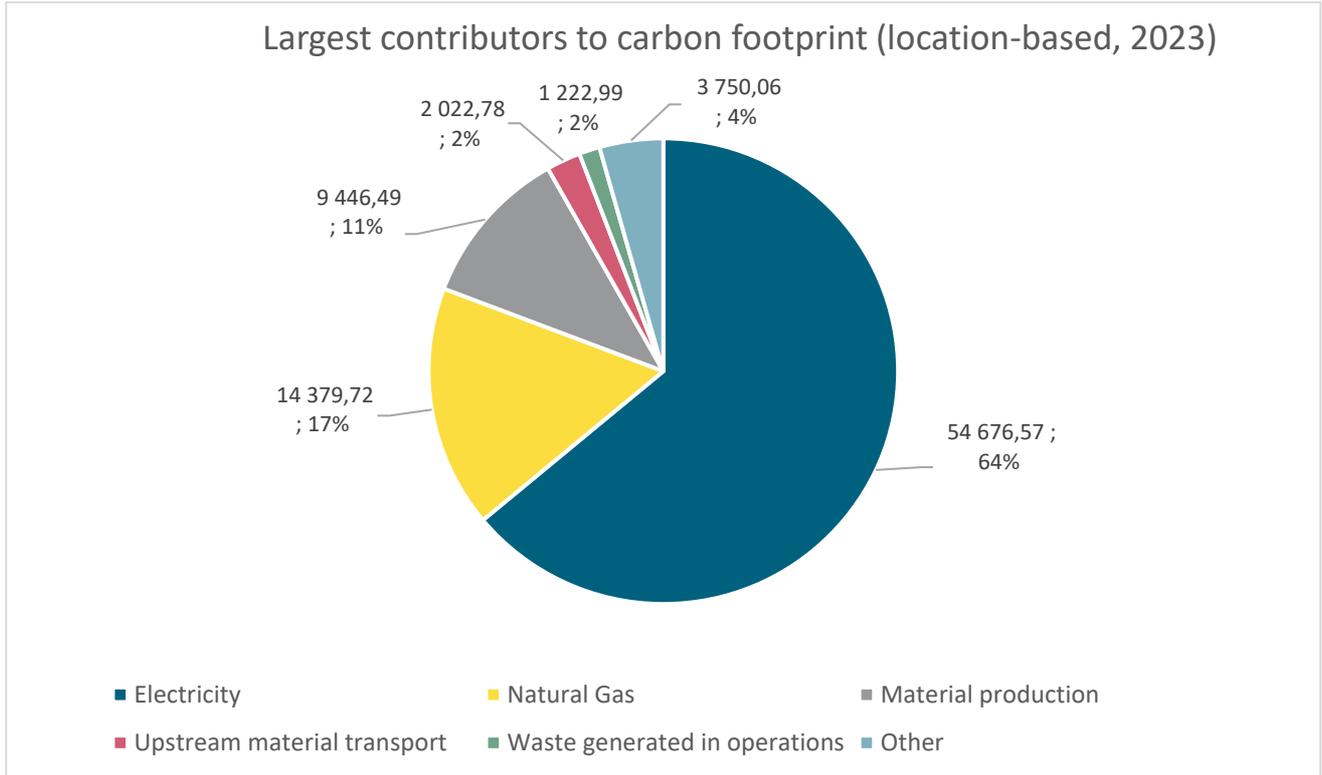


Figure 5: Largest contributors to Volta’s carbon footprint (location-based) of PH1 and PH2 in 2023 (tonnes CO<sub>2</sub>eq)

Figure 5 illustrates that the emissions associated with **electricity use (Scope 2&3)** account for **64%** of the company’s total carbon footprint, while the emissions associated with the use of **natural gas (Scope 1&3)** accounts for **17%**. Other significant emissions are those originating from material production and transportation.

### 4.3. Product carbon footprint

Product carbon footprint has been calculated based on mass-allocation of total emissions (Scope 1, 2, 3) by excluding the activities which are not involved in the production phase (excluded Scope 1: company vehicles; Scope 3: Business travel, Employee commuting, Capital goods).

Comparing the product carbon footprint from 2021 to 2023, it should be highlighted that the **product carbon footprint** was 5,98 in 2021 and 5,44 in 2022, while the figure **improved to (further decreased to) 4,91 in 2023** at phase 1 and phase 2 **in accordance with the market-based calculation** methodology. Respectively, the **carbon intensity** year-on-year figure **in line with the location-based calculation methodology** was 5,60 in 2021 and 4,84 in 2022 and **improved to (further decreased to) 4,08 throughout 2023**. Summary table of the product carbon footprint is shown in the table as follows:

Table 4: Volta's product carbon footprint

Year	Calculation method	Total production volume (t)	Total tCO <sub>2</sub> eq emissions	Product carbon footprint
2021	Market-based	7 258	43 405	<b>5,98</b>
2022	Market-based	11 845	64 430	<b>5,44</b>
2023	Market-based	20 602	101 133	<b>4,91</b>
2021	Location-based	7 258	40 616	<b>5,60</b>
2022	Location-based	11 845	57 324	<b>4,84</b>
2023	Location-based	20 602	83 986	<b>4,08</b>

#### 4.4. Special addition: product carbon footprint allocation dedicated to Tesla Inc.

Volta has calculated its product carbon footprint specifically allocated to the production volume for Tesla Inc. Breakdown of the allocation is shown in the Table below:

Table 5: Volta's product carbon footprint specifically allocated to the production volume for Tesla Inc.

Scope	Production activity	Allocated emissions for Tesla (tCO <sub>2</sub> eq)	% (market-based)	PCF ratio (tCO <sub>2</sub> eq/t)
Scope 1	<b>Energy sources burned on-site</b>	<b>1 295,86</b>	<b>9,55%</b>	<b>0,47</b>
	On-site transport of materials	1,49	0,01%	0,00
Scope 2	<b>Purchased electricity (market-based)</b>	<b>7 461,81</b>	<b>54,98%</b>	<b>2,70</b>
Scope 3 Upstream	<b>Fuel and energy-related activities (not included in Scope 1 or Scope 2)</b>	<b>2 818,11</b>	<b>20,76%</b>	<b>1,02</b>
	Water use	25,30	0,19%	0,01
	Waste generated in operations	164,14	1,21%	0,06
	<b>Material production</b>	<b>1 267,82</b>	<b>9,34%</b>	<b>0,46</b>
	Upstream material transport	271,48	2,00%	0,10
Scope 3 Downstream	Purchased services	133,59	0,98%	0,05
	Waste transport	0,88	0,01%	0,00
	Wastewater treatment	32,72	0,24%	0,01
	Downstream transportation and distribution of product	99,85	0,74%	0,04
<b>Total production volume for Tesla (t)</b>		<b>2 765</b>	<b>-</b>	<b>-</b>
<b>Product carbon footprint (tCO<sub>2</sub>eq / t) - [market-based]</b>		<b>4,91</b>	<b>-</b>	<b>-</b>
<b>Total emissions allocated to the production for Tesla (tCO<sub>2</sub>eq)</b>		<b>13 573</b>	<b>100%</b>	<b>-</b>

## 5. Appendices

### 5.1. Key data, descriptive information (as required by the Greenhouse Gas Protocol)

Type of information	Information
Name of the company	Volta Energy Solutions Hungary Ltd.
A brief introduction to Volta	Volta Energy Solutions Hungary Kft. is a battery foil manufacturer subsidiary of the South-Korean based Solus Advanced Materials. Solus Advanced Materials is a steadily growing global company headquartered in Seoul, South- Korea aiming to provide leading solutions for core materials in electric vehicles, display materials and biomaterials. Solus expanded their operations to Europe and established sites in Luxembourg for copper foil and most recently in Hungary for battery foil (Volta). Battery foil is a core material of the electric car battery. Solus Advanced Materials has completed its development of high-end, compact, high-efficiency battery foil that can help increase the mileage of electric cars. The battery foil plant that was constructed in Hungary in early 2020 is the only battery copper foil production base in Europe.
The consolidation approach chosen	Operational control
Description of the business lines and activities within the organisational boundaries of Volta	This carbon footprint covers the full-scale operation of Volta's production facility phase 1 and phase 2.
The reporting period	2023.01.01.-2023.12.31.
List of Scope 3 activities included in the report	<ul style="list-style-type: none"> <li>• Purchased services</li> <li>• Material production</li> <li>• Capital goods</li> <li>• Fuel and energy related activities (not part of scope 1, 2)</li> <li>• Upstream transport, distribution (material transport)</li> <li>• Waste and wastewater treatment</li> <li>• Business trips (Vehicles not owned or operated by the company)</li> </ul>

Type of information	Information
	<ul style="list-style-type: none"> <li>• Employee commuting (in vehicles not owned or operated by the company)</li> <li>• Downstream transport and distribution</li> </ul>
<p>List of Scope 1, 2 and 3 activities not included in the report or calculation, together with the reasons for their exclusion.</p>	<ul style="list-style-type: none"> <li>• Fugitive emissions (lack of data)</li> <li>• Rented equipment and facilities (irrelevant, none)</li> <li>• Use of products sold (irrelevant, none)</li> <li>• Processing of products sold (irrelevant, none)</li> <li>• End-of-life management of products sold (irrelevant, none)</li> <li>• Downstream leased assets (irrelevant, none)</li> <li>• Franchises (irrelevant, none)</li> <li>• Investments (irrelevant, none)</li> </ul>
<p>The year chosen as the base year and the justification for the choice of the base year</p>	<p>Base year is 2021 as a commencement date of production facility Phase 1's operation.</p>
<p>Once the base year is defined, the emissions recalculation policy for the selected base year. If the base year emissions have been recalculated, a description of the background of the significant emission changes that triggered the recalculation</p>	<p>Business decisions that result in a 5+% change in emissions (acquisitions)</p>

## 5.2. Description of methods and data used

Scope	Methods used to calculate or measure emissions, with reference to the calculation tools used
<b>Scope 1</b>	Scope 1 emissions include energy sources (natural gas) burned on site at the Volta PH1 and PH2 site and vehicles owned and operated by the company. The amount of natural gas burned as well as the consumption of cars were aggregated for the whole year of 2023 in accordance with the data provision. Sources for emission factors are the National Inventory Report (Hungary), Ecoinvent and DBEIS databases.
<b>Scope 2</b>	The Scope 2 emissions activity data (primary data) includes the electricity purchased by Volta, which is read from meters. The emission factor for the location-based calculation is a field factor based on the International Energy Agency (IEA) Hungarian energy mix. Both market-based and location-based calculations have been defined in this category. The source for the market-based calculation is MVM (Magyar Villamos Művek), the electricity provider of Volta.

Scope 3 category (Upstream)	Description of the types and sources of data used to calculate emissions	Description of the methods, allocation methods and assumptions used to calculate emissions
<b>Category 1: Purchased goods, materials, services</b>	<p>Activity data: the volume and monetary value of goods and services purchased are provided by Volta.</p> <p>Source of emission factors: DBEIS and Ecoinvent databases, scientific articles<sup>2</sup></p>	The goods and services purchased by Volta are collected for all the company's activities. The raw materials used in production were collected in kg, so cradle-to-gate emissions were calculated using the corresponding emission factors from the Ecoinvent database. Non-tangible services were aggregated at the level of the whole company and their monetary values were multiplied by the corresponding

<sup>2</sup> [https://pdfs.semanticscholar.org/67ac/35e352ae1126a5ea5477dbb8270f15aa2920.pdf?\\_ga=2.140840434.1524352149.1631693256-1770292042.1631693256](https://pdfs.semanticscholar.org/67ac/35e352ae1126a5ea5477dbb8270f15aa2920.pdf?_ga=2.140840434.1524352149.1631693256-1770292042.1631693256)  
<https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/bbb.2139>  
[https://www.copper.org/environment/sustainability/pdfs/copper\\_life\\_cycle\\_assessment\\_tube\\_and\\_sheet.pdf](https://www.copper.org/environment/sustainability/pdfs/copper_life_cycle_assessment_tube_and_sheet.pdf)  
<https://onlinelibrary.wiley.com/doi/pdfdirect/10.1002/bbb.2139>  
[https://www.copper.org/environment/sustainability/pdfs/copper\\_life\\_cycle\\_assessment\\_tube\\_and\\_sheet.pdf](https://www.copper.org/environment/sustainability/pdfs/copper_life_cycle_assessment_tube_and_sheet.pdf)

Scope		Methods used to calculate or measure emissions, with reference to the calculation tools used
		emission factors of DBEIS database. Emission factors were calculated using the cradle-to-gate method and included the entire process of material production including energy use, raw material extraction, processing and transportation.
Description of the data quality of reported emissions		Some of the activity data are monetary, in which case the data quality is poor. The emission factors used (Ecoinvent) are of good quality.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 2: Capital goods, assets acquired</b>	Activity data (primary data): the volume and monetary value of longer-lived assets are obtained by Volta.  Source of emission factors: DBEIS database.	The emissions associated with the longer-lived assets purchased by Volta in 2023 were calculated as follows: the emissions associated with the production and transport of the assets, i.e., the cradle-to-gate carbon footprints of the assets, were determined using the cradle-to-gate factors of the Ecoinvent and DBEIS databases.
Description of the data quality of reported emissions		Activity data are monetary, so data quality is poor. The emission factors were used from the DBEIS database.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 3: Fuel and energy related activities (not part of Scope 1, 2)</b>	Activity data (primary data): the amount of energy carriers used by the company is provided by Volta.  Source of emission factors: Hungarian averages calculated from the Ecoinvent database factors	The transmission and distribution losses for the company's Scope 1 & 2 emissions are based on the data used for the Scope 1 & 2 calculations. Well-to-Tank emission factors are taken from Ecoinvent and DBEIS databases.

Scope		Methods used to calculate or measure emissions, with reference to the calculation tools used
	using denkstatt's internal methodology and the DBEIS database.	
Description of the data quality of reported emissions		The activity data used for the calculation are derived from measurements, the emission factors used are of good quality, so the calculated emissions can be considered of good quality overall.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 4: Upstream transport and distribution</b>	Activity data (primary data): the required km distances from Tier 1 suppliers are provided by Volta.  Source of emission factors: Ecoinvent database.	The transport of purchased goods from Tier 1 suppliers was determined by multiplying the average kilometer distance and the emission factor for the corresponding truck/ship/aircraft from Ecoinvent database, to calculate the emissions from the supply and distribution paid for by Volta.
Description of the data quality of reported emissions		The activity data used for the calculation are accurate and the emission factors used are of good quality, so the calculated emissions can be considered of good quality overall.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 5: Waste and wastewater treatment</b>	Activity data (primary data): the quantity and quality of the waste generated by the operation comes from Volta.  Source of emission factors: Ecoinvent database.	The emissions from the final incineration or landfilling of waste and treatment of wastewater from Volta's activities were calculated based on the following: the final disposal of waste and wastewater was estimated based on the total amount of waste and wastewater that has generated during production and operation. By multiplying the amount of waste and wastewater by the corresponding emission factor from Ecoinvent, we obtained the total GHG emissions. Waste transport has also been calculated according to the average transportation distances, which was provided by Volta, with the methodology as the average km was multiplied by the

Scope		Methods used to calculate or measure emissions, with reference to the calculation tools used
		corresponding emission factor from Ecoinvent, resulting the total GHG emissions of waste transport.
Description of the data quality of reported emissions		The activity data and emission factors used for the calculation are of good quality, so the calculated emissions can be considered of good quality overall.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 6: Business trips (with vehicles not owned or operated by the company)</b>	<p>Activity data (primary data): the distances travelled in business trips in 2023 are from Volta.</p> <p>Source of emission factors: Ecoinvent database</p>	To calculate GHG emissions from employee business travel, the company collected activity data for the full year of 2023. The GHG emissions are calculated by multiplying the distances travelled by the corresponding emission factor.
Description of the data quality of reported emissions		Both the activity data and the emission factors are of good quality, so the results of the emission calculation are also of good quality.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.
<b>Category 7: Employee commuting (in vehicles not owned or operated by the company)</b>	<p>Activity data (primary data): data on the distances travelled by car of employees in 2023 and the number of employees travelling by other modes of transport are from Volta.</p> <p>Source of emission factors: Ecoinvent database.</p>	For the calculation of GHG emissions from employee commuting, activity data comes from yearly total distances provided by car and company bus. While calculating GHG emissions, activity data were multiplied by the corresponding emission factors (considering the different means of transport).
Description of the data quality of reported emissions		The activity data are of acceptable quality, while the emission factors are of good quality, so the result of the emission calculation can be considered as good quality

Scope		Methods used to calculate or measure emissions, with reference to the calculation tools used
		overall. It should be noted, though, that a recalculation with higher quality data provision might result more precise outcome in this category.
Percentage of emissions calculated from data received from suppliers or other value chain partners		Approximately 25% of the data originates from suppliers or other value chain partners of Volta.
Scope 3 category (Downstream)		
<b>Category 9: Downstream transport and distribution</b>	Activity data (primary data): the required km distances from Tier 1 suppliers are provided by Volta.  Source of emission factors: Ecoinvent database.	The transport of sold products to the customers was determined by multiplying the activity data (average km transportation distance multiplied with the quantity of transported goods (kg)) and the emission factor for the corresponding vehicle (truck/ship/aircraft) from Ecoinvent's database, to calculate the emissions from unpaid delivery and distribution by Volta.
Description of the data quality of reported emissions		The activity data used for the calculation are accurate and the emission factors used are of good quality, so the calculated emissions can be considered of good quality overall.
Percentage of emissions calculated from data received from suppliers or other value chain partners		No data was purchased from third parties in the framework of this project.

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