

## Note

<b>Subject</b>	:	Greenhouse Gas Inventory (2022)
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## 2022 Greenhouse Gas inventory for ProCon Group

This note presents the results of the 2022 Greenhouse Gas (GHG) inventory for ProCon Group (ProCon). Due to an increased focus on sustainability, ProCon has decided to conduct their first ever GHG account for the year of 2022. The results presented in the present note thus forms the initiation of ProCon's future GHG reporting.

The inventory has been performed following the principles of the GHG Protocol which is the global standard for GHG accounting. Due to significant data gaps and data quality issues, the present inventory does not claim to be in line with the GHG Protocol but should rather be seen as an account structured for future reporting to be compliant with the GHG Protocol. Please refer to Appendix 1 for further details on the methodology.

The result of the inventory is presented in table 1. A distinction is made between taking a *Location-based*<sup>1</sup> or a *Market-based*<sup>2</sup> approach, and the result for both methodologies should be reported in accordance with the GHG Protocol. Table 1 presents the result for both the location-based and market-based methodology.

Scope	Location-based/market-based	ton/CO <sub>2</sub> -e
Scope 1		71,81
Scope 2	<i>Location based</i>	5,9
Scope 2	<i>Market based</i>	15,01
Scope 3		1.203,01
<b>Total – including market based</b>		<b>1.289,83</b>

Table 1 - Results of the 2022 GHG inventory

<sup>1</sup> Location-based: Reflects the average emissions intensity of grids on which energy consumption occurs (grid-average emission factors). In Denmark this information is disclosed in "Miljødeklaration".

<sup>2</sup> Market-based: This approach reflects the emission factors calculated based on contractual agreements on the electricity market, and therefore accounts for financially traded green electricity. In Denmark the emission factor is disclosed in "Eldeklaration".

## Appendix 1 – Methodological approach

### 1. Organizational mapping

The company consists of multiple subsidiaries under ProCon Group and is headquartered in Denmark with operations in three Danish offices (in the cities of Aalborg, Aarhus, and Esbjerg). Additionally, ProCon has an office incl. staff in Taiwan to manage local projects. Further international representation with company registrations in the UK (UK), Germany (DE), and Poland (PL), from which no significantly emitting activities have been performed in 2022. For the 2022 GHG inventory, only scope 1 and 2 emissions from the Danish locations have been included, due to lack of readily available data (Taiwan), and assessed insignificant emissions (UK, DE, and PL). ProCon’s organizational structure is visualized in figure 1:

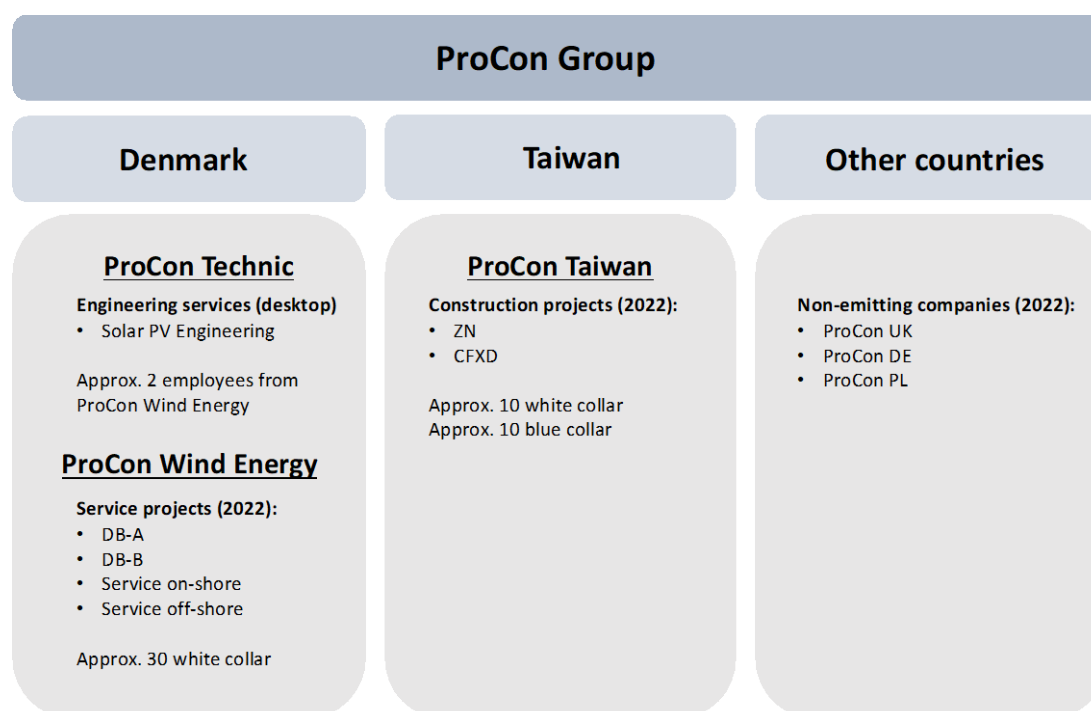


Figure 1 - Organizational diagram

In Denmark, the companies ProCon Technic (solar plant engineering services) and ProCon Wind Energy (repairs and maintenance services for wind power plants in multiple countries) are located. ProCon is represented in Taiwan by ProCon Taiwan (office) which manages projects related to construction of offshore windmill foundations (internal electrical installation works).

## 2. The Greenhouse Gas Protocol

The GHG Protocol is an extensive and globally standard that provides guidance on how to manage and account for emissions of greenhouse gasses (GHGs) in public *and* private sectors. The GHG protocol includes emission from own activities (scope 1 and 2), emission from value chains (scope 3), as well as potential mitigating measures.

- *Scope 1*: Includes direct emissions generated from the company's own activities i.e., from its own localities and assets (e.g., emissions from combustion of diesel, petrol and gas).
- *Scope 2*: Includes the indirect emissions released from the production of externally produced energy used by the company for its operations (e.g., energy purchased from electricity provider or district heating).
- *Scope 3*: Includes indirect emissions from the value chain in which the company participates (e.g, emissions from procurements of goods and services, employee commuting and business travels, and transport of materials and goods)

When reporting following the GHG protocol the first step is to determine the organizational boundaries within which to scope the reporting. These can take the form of equity share approach (where you include entities based on your share of equity) or control approach (where you report on operations over which you have control). Since ProCon both owns and control all entities included in the present inventory both the *equity share approach* and the *control approach* have been applied (in accordance with the GHG Protocol).

## 3. Scoping by service type

As shown in figure 1, the services provided by ProCon are *engineering services* related to solar PV projects, *service projects* related to servicing of electrical installations in windmill structures in various countries (onshore and offshore), and *construction projects* that include fitting and installation of electrical components in windmill foundations.

For each service type qualitative different inputs are required. The scoping of data that was included for each service type is described in further details below:

### 3.1 Engineering services

ProCon offers engineering services for solar PV infrastructure projects. The activities involved primarily comprises desktop work, and all significant associated emissions are assessed to be reported under scope 1 and 2, and scope 3 categories 6 (employee commuting) and 7 (business travels).

#### *Scoping*

Emissions occurring from engineering services are reported in scopes 1, 2, and scope 3 categories 6 and 7.

### 3.2 Service projects

The service projects cover servicing, maintenance and retrofitting of electrical parts within windmills in existing wind farms (both onshore and offshore).

#### *Scoping*

The most significant identified emitting activity during the service projects is employee travels to and from the project sites. Accommodation within the project period has not been included in the present account.

The material components installed during the service projects is supplied by the client, which means that the material input by ProCon related to the service projects mostly comprises *consumables* (nuts, bolts, wiring, light bulbs, etc.), tools, workwear, safety equipment etc. For the 2022 account, consumables have not been included due to lack of available data.

### 3.3 Construction projects

The activities connected to ProCon's construction projects comprise installation of all electrical installations in windmill foundations prior to wind park development. The windmill foundation modules are finished onshore in Taiwan before being shipped to the project site. ProCon enters the project at the stage of the empty foundation modules and exits the project after the module installations are finished (prior to shipping).

#### *Scoping*

The most significant identified emitting activities in the construction projects are employee transportation to project sites and material inputs. The 2022 GHG account does not include employee accommodation related to the projects.

ProCon provides the material inputs based on project-specific contractual agreements with the client. For the 2022 GHG account a representative "foundation module" was mapped for its material inputs and based on this mapping, four material categories stood out as the most significant material inputs:

1. Cables
2. Steel cable routing
3. Lamps and light fixtures
4. Electric switchboards

*Purchased goods* for construction projects has been based on the total purchased volume within each of the four material categories.

Besides the main material inputs within the four categories a range of various *consumables* (nuts, bolts, wiring, light bulbs, etc.) is provided by ProCon; however, this has not been included in the 2022 account due to lack of available data.

#### 4. Data collection, quality, and calculation

The input data used for the CO<sub>2</sub>-e-calculations comes from a variety of sources. The methodology followed a combination of the methods described in the GHG protocol. Table 1 presents four methods for collecting data and obtaining emission factors:

Data collection methods
<p><b>Supplier-specific method:</b> Product-level cradle-to-gate GHG inventory data from goods and services suppliers (product-specific emission factor).</p>
<p><b>Hybrid method:</b> Combines available supplier-specific data (such as product specific emission factors) with secondary data to fill in the gaps.</p>
<p><b>Average-data method:</b> The mass of purchased goods (e.g., kg) or other relevant units of goods and services are multiplied with relevant secondary emission factors (e.g., sector-average emission factors).</p>
<p><b>Spend-based method:</b> The monetary value of purchased goods and services is multiplied with relevant secondary emission factors (e.g., sector-average emission factors).</p>

*Table 1 - Data collection methods*

For ProCon’s 2022 GHG account, the data and emission factors have been collected using the *hybrid*, *average-data*, and *spend-based* methods. Since the core component of ProCon’s business is to provide varying services related to wind farm projects, the material input and associated supply chains vary from project to project, making the *supplier-specific method* ineffective as no standardized product/service is being provided continuously across the organization’s projects.

##### 4.1 Limitations

It is acknowledged that the 2022 GHG account is the first time for ProCon to disclose their GHG emissions and that there are certain limitations to the results of the account.

No data collecting systems targeted at capturing GHG-related data are integrated in the existing processes of ProCon, which means that all relevant data could not always be readily obtained. The strategy used to mitigate this issue has been to combine different of the data-collecting methodologies presented in table 1. In order to improve the quality and obtainability of the necessary input data for future GHG accounts, ProCon is committed to developing new and strengthening existing data registration systems to adequately capture GHG-related data.

In some instances, certain upstream activities were excluded from the GHG account due to the unavailability of sufficient and reliable data. These instances are confined to material procurements assessed to be of relative minor importance to the overall result of the GHG account. See table 1, Appendix 2 for further details on limitations and exclusions for each of the scopes and scope 3-categories.

### *Production-related and non-production-related*

Based on a mapping of ProCon's economic activities and value chains, a split was made between purchased goods and services for *non-production-related* and *production-related* procurements. The non-production-related purchases cover goods and services purchased in the reporting year for the offices in Denmark. The production-related purchases include goods and services purchased for use on the projects in the reporting year.

### *Scope 3, category 1: Scoping of the material purchases*

The variety of ProCon's purchased goods and services result in great complexity in its supply chains. Depending on the scoping and terms of references outlined for each project, the types of procured goods and services varies between projects.

For the technical installation work carried out by ProCon several smaller parts (consumables), e.g., nuts, screws, bolts, and wires are used. Such consumables have been scoped out of the 2022 GHG account, as no systematic registration of such purchases exists across the organization. ProCon commits to

improving its data registration systems over the coming years and aim to include consumables in the account for 2024.

For the 2022 GHG account the scoping of purchased goods and services (apart from those reported via scope 3.2 – 3.8) is including the primary material goods purchased for the construction projects. Tools, safety equipment, and work clothes is also included using by using the spend-based method.

## Appendix 2 – Methodology summary and references

Scope	Topic	Description	Method for calculation	Emission factor source
1.	Direct emissions from own operations.	Direct emissions from the company's own energy production for assets owned by ProCon (e.g., emission from own or leased vehicles, gas fired furnace for heating etc.).	<p>Data on the consumption (2022) of fuels used for operating the company's cars were multiplied with the relevant emission factor for each fuel type.</p> <p>The available data solely covers fuel purchased through the purchase agreement with the gas company "Circle K". Fuel for transport purchased outside of this purchase agreement has not been included as it could not be established accurately.</p> <p>Fuel (diesel) used in ProCon's operations (for operating machinery and electricity generation) was also included in scope 1.</p>	<ul style="list-style-type: none"> <li>Danish Centre for Environment and Energy (DCE, 2020)</li> <li>DEFRA (2022)</li> <li>Base Carbone v17 (2019)</li> </ul>
2.	Purchased energy (including heating and electricity)	Indirect emissions from purchased energy covering ProCon's own operations in the reporting year.	<p>Scope 2 was calculated based on data of the electricity consumption (kWh) and the consumption of district heating (MWh) for 2022.</p> <p>The emissions were calculated using <a href="http://www.klimakompasset.dk">www.klimakompasset.dk</a> which utilizes generic emission factors (2021) based on the national average share of renewable energy in the Danish energy grids.</p>	<p>Electricity:</p> <ul style="list-style-type: none"> <li>Energinet (2022)</li> <li>DEFRA (2022)</li> </ul>
3	<p><u>Purchased goods and services.</u></p> <p>To report on scope 3.1, the company's activities were divided into three types of services, each with an inventory of purchased goods and services:</p> <ol style="list-style-type: none"> <li>Offices and operations in Denmark.</li> </ol>	<ol style="list-style-type: none"> <li>Offices and operations in Denmark.</li> </ol>	<p>Data on goods and services purchased via ProCon Wind Energy (Denmark) was obtained through the company's accounting system. Based on the account statement the goods and services could be categorized and the total sum for each category could be obtained.</p> <p>This category was largely calculated by using the spend-based method for categories of products and services obtained listed in ProCon's account system.</p>	<ul style="list-style-type: none"> <li>EXIOBASE v3.3 16b2 (2020)</li> </ul>

Scope	Topic	Description	Method for calculation	Emission factor source
	<p>2. Projects in Taiwan (development).</p> <p>3. Service projects.</p>	<p>2. Projects in Taiwan (development)</p> <p>3. Service projects.</p>	<p>Due to the complexity of the range of input materials and the lack of a sufficient data registration system, purchased goods and services related to the development projects were established by applying a simplified model for each unit (windmill foundation substructure) for which the general main input materials were identified. This method allowed to capture the major material inputs. The main material groups identified were:</p> <ul style="list-style-type: none"> <li>• Cables</li> <li>• Cabling</li> <li>• Lamps</li> <li>• Electrical panels</li> </ul> <p>Since it was not possible to retrieve product specific emission factors, different approaches were used for identifying applicable emission factors for each category:</p> <ul style="list-style-type: none"> <li>• Cables: assumed to contain 53 % cobber (generalized emission factor).</li> <li>• Cabling: was assumed to comprise 100% steel.</li> <li>• Lamps: was based on representative EPD (<a href="https://resources.z.lighting/object/EPD/EPDGen.aspx?Number=296300&amp;CompanyID=7&amp;Language=EN&amp;CC=COM">https://resources.z.lighting/object/EPD/EPDGen.aspx?Number=296300&amp;CompanyID=7&amp;Language=EN&amp;CC=COM</a>)</li> <li>• Electrical panels: based on LCA on enterprise servers published by the EU. (<a href="file:///Users/jakobwork/Downloads/lb-na-27467-en-n%20.pdf">file:///Users/jakobwork/Downloads/lb-na-27467-en-n%20.pdf</a>)</li> </ul> <p>For the purpose of the present inventory, product transportation has not been included as no information on transportation distances was readily obtainable.</p> <p>For its service projects, ProCon delivers human resources, tools, and workwear. Consumables (nuts, bolts, wiring, light bulbs, etc.) will also be delivered by ProCon; however, all components for installations will be delivered (and thus accounted for) by the client.</p> <p>Consumables have been excluded from the present GHG inventory as already accounted for.</p> <p>Data on workwear and tools was obtained through ProCon’s accounting system.</p>	<ul style="list-style-type: none"> <li>• <u>Cables</u>: EXIOBASE v3.3.16b2 (2020)</li> <li>• <u>Cabling</u>: EXIOBASE v3.3.16b2 (2020)</li> <li>• <u>Lamps</u>: EPD for THORN AFP S 24L35-740 A4 HFX CL2 GY</li> <li>• <u>Electrical panels</u>: LCA for enterprise servers</li> </ul> <ul style="list-style-type: none"> <li>• EXIOBASE v3.3 16b2 (2020)</li> </ul>
3.2	Capital goods	Emissions (cradle-to-gate) related to machinery, equipment, buildings, etc. procured by the company in the reporting year.	No capital goods purchases identified for disclosure in 2022.	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>



Scope	Topic	Description	Method for calculation	Emission factor source	
3	3.3	Fuel- and energy-related activities	Emissions that occur in the extraction, processing and transportation phases from fuels and energy produced in relation to the activities of the reporting company.	The same data inputs used in Scope 1 were used to calculate this category.	<ul style="list-style-type: none"> <li>Danish Centre for Environment and Energy (DCE, 2020)</li> <li>DEFRA (2022)</li> <li>Base Carbone v17 (2019)</li> </ul>
	3.4	Upstream transportation and distribution	Emissions from the upstream transport of purchased goods and services.	Due to high complexity and inadequate data registration, no feasible method of establishing the upstream transportation for the purchased goods and services was identified for the present GHG inventory, and consequently this category has been excluded for 2022.	<ul style="list-style-type: none"> <li>Not disclosed in 2022.</li> </ul>
	3.5	Waste generated in operations	Waste generated as part of the company's operations.	<p>Waste generated from ProCon's office locations comprise general household waste.</p> <p>Waste generated on project sites comprise various types and is handled within existing waste management systems provided by the project owners. Since ProCon has no control over the waste treatment/disposal methods, the associated emissions have been excluded from the present GHG inventory.</p> <p>No data on waste handling has been disclosed to ProCon for 2022.</p>	<ul style="list-style-type: none"> <li>Not disclosed in 2022.</li> </ul>
	3.6	Business travel	Emissions related to the transportation of employees for business related travels (air, rail, road, etc.)	ProCon organizes much of its air travel activity through a travel agency (Marine Travels), from which emissions related to the company's air travel activity could be obtained; however, on some occasions, employees had also purchased travels on their business credit cards, in which cases it was more difficult to establish the airfare. Thus, the business travels disclosed in the present climate account only include travels purchased through Marine Travels in 2022.	<ul style="list-style-type: none"> <li>Marine Travels (2022)</li> </ul>
	3.7	Employee commuting	Emissions related to the transportation of employees in their daily commute to and from their place of work.	<p>ProCon has obtained data on employee commuting via employee surveys for both the Danish office as well as for the office in Taiwan.</p> <p>In the surveys employees have listed distance travelled (home-work place), means of transport, type of fuel (if applicable), days travelled per week, and total months working in ProCon in the reporting year (2022).</p> <p>Emission factors were obtained from various sources.</p>	<p><u>Cars (petrol and diesel):</u></p> <ul style="list-style-type: none"> <li>DEFRA (2022)</li> </ul> <p><u>EV:</u></p> <ul style="list-style-type: none"> <li>Energinet (2022)</li> <li>DEFRA (2022)</li> </ul> <p><u>Public transport:</u></p> <ul style="list-style-type: none"> <li>DSB (2022)</li> </ul>
	3.8	Upstream leased assets	Emissions from operating assets leased upstream	In 2022, ProCon did not lease any upstream assets.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Scope	Topic	Description	Method for calculation	Emission factor source
		from the reporting company.		
<b>3.9</b>	Downstream transportation and distribution	Emissions from the downstream transportation of sold products in vehicles not owned by the reporting company.	Since ProCon's service/product is delivered at the finishing of the components (on site), no associated downstream transportation should be accounted for by ProCon.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>3.10</b>	Processing of sold products	Emissions from processing of sold intermediate products by third parties (e.g., manufacturers) subsequent to sale by the reporting company.	ProCon's services/products do not require further processing and therefore this category has been excluded for reporting.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>3.11</b>	Use of sold products	Emissions from the use of products and services sold by the reporting company in the reporting year	Due to the complexity of separating the emissions from the installations provided by ProCon from the rest of the structure in which they are installed, and due to the assumption that the energy use is provided from a 100% green source (the wind turbine itself), this category is excluded from disclosure.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>3.12</b>	End-of-life treatment of sold products	Emissions from waste disposal and end-of-life treatment of sold products.	<p>Can only be based on assumptions about how the product is disposed of or otherwise handled after use. In ProCon's case, it is expected that most of the provided products will have a long use phase/lifetime, which is why assumptions about the end-of-life treatment are difficult to make, due to e.g., the expected technological development and changes in waste handling systems.</p> <p>The category has been excluded from disclosure in 2022.</p>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>3.13</b>	Downstream leased assets	Emissions resulting from the operation of assets leased downstream from the reporting company.	In 2022, ProCon did not lease any assets. Nothing to disclose.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>3.14</b>	Franchises	Emissions from the operation of franchises (where other entities sell or	ProCon is not franchising any of their business activities and thus there is nothing to disclose in this category.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Scope		Topic	Description	Method for calculation	Emission factor source
			distribute the reporting company's goods or services in exchange for payment such as royalties).		
<b>3.15</b>	Investments	Emissions from investments made during the reporting year.	No investments were made in 2022 and thus there is nothing to disclose in this category.	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	