

Power Visualization System manual document Documentation EN Manual

Made for: NTN Manufacturing(Thailand) Co., Ltd.
By: TOMAS TECH CO.,LTD.



TOMAS TECH

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Introduction

This manual explains each handy terminal, how to set it up with a PC, how to check the operation, and how to communicate with a PC.
Please read before starting work.

For safe use of this device

To use this device correctly and safely, be sure to observe the following safety precautions when operating this device. TOMAS TECH cannot be held responsible or warranted for any damage caused by using the product in violation of these precautions.

◆How to read the symbols

In this manual, the items to be observed in order to use the device safely are classified as follows.



Danger

If you ignore the information on this label and handle it incorrectly, there is a risk of death or serious injury.



Warning

This indicates the contents that may cause injury if the contents of this display are ignored and the product is handled improperly.



Caution

It indicates that property damage may occur if the product is handled improperly, ignoring the contents of this display.



The symbol represents a "caution" that it should be aware of.



The symbol represents an "instruction" that it must execute.



The symbol represents a "prohibition" that must not be done.




The symbols represent the "information" needed to deepen your understanding of this book.



The symbol represents "prohibited handling" by anyone other than a service person.



The symbol indicates that grounding is required during installation.

Reference  Indicates chapters to refer to and other manual references.

For safe use

◆ General caution



Caution

In the unlikely event that this device breaks down, take sufficient safety measures to prevent various damages before use.

Please note that we cannot guarantee the function and performance of products that are used or modified outside the specifications shown in the specifications.

Do not disassemble this device unnecessarily. There is a risk of failure or damage.

Do not allow the device to get wet with water. It may lead to damage to this device.

Please use within the environmental conditions of this device. In addition, even within environmental conditions, equipment may be damaged in an environment where condensation forms due to sudden temperature changes. Do not drop the device or hit it with strong force. Also, if the wiring from this device is likely to be subject to excessive impact, consider how to protect the wiring. It may lead to damage to this device and other devices.

Do not operate the device in a place with flammable or explosive gas or vapor. It is very dangerous to use this device in such an environment.

When using this device in combination with other devices, the functions and performance may not be satisfactory depending on the usage conditions and environment, so please consider carefully before using.

◆ For proper use



Caution

When installing this device, turn off the power of the device. Do not short-circuit each wiring or terminal.

When installing this device, be sure to perform protective grounding to prevent electric shock.

Be sure to check that the power supply voltage of the device matches the voltage of the power supply before turning on the device.

Only our customer service or equivalent handlers should install this equipment.

To supply power to this device, connect it via a protection circuit such as a switchboard breaker or an earth leakage breaker.

Since this device is an electronic device, when installing various devices, investigate the installation environment (primary power supply system noise, drive device system noise, electrostatic discharge noise, etc.) and take countermeasures. It may cause system malfunction or damage to various devices.

Revision History

Date	Version	File name	Details
20/Jul/2025	R1	Power Visualization System manual document_EN_R1	First edition

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4. Information

1. Overview

Proposal: Power Visualization System For NTN Manufacturing (Thailand) Co., Ltd.

Objective

The objective of this proposal is to develop a Power Visualization System that enables NTN Manufacturing (Thailand) Co., Ltd. to effectively monitor and manage energy consumption throughout the factory.

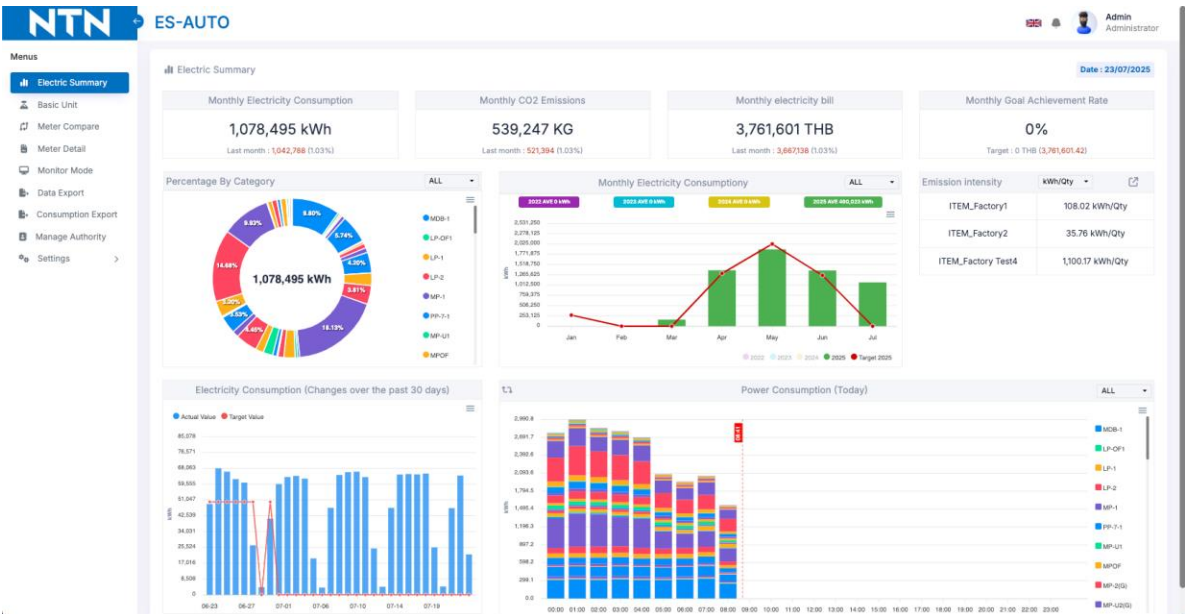
Scope

The system will provide monitoring capabilities for daily, monthly, and yearly energy usage, offering a comprehensive overview of power consumption for each area of the facility.

2. Web Functions

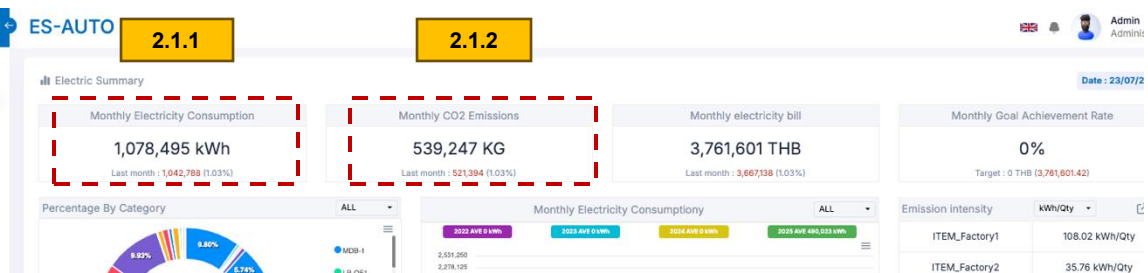
2.1 Electric Summary Dashboard

The **Electric Summary Dashboard** provides a comprehensive overview of the factory's electricity consumption and key performance metrics. This page is designed to help users quickly understand energy usage patterns, track progress toward goals, and identify areas for improvement. Key features include:



2.1.1 Monthly Electricity Consumption: Displays the total energy used in the current month, along with a comparison to the previous month.

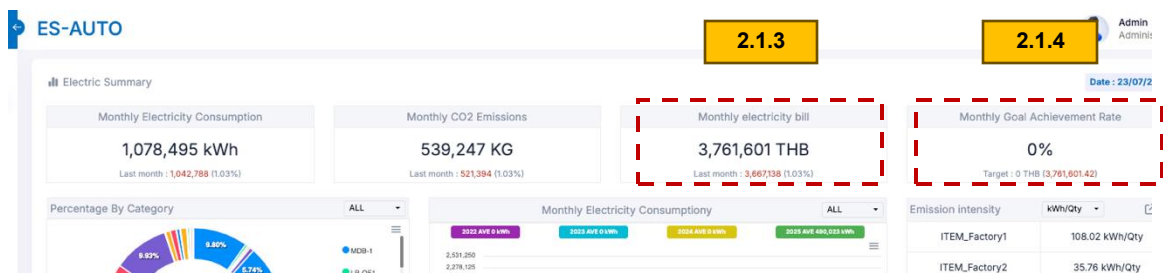
2.1.2 Monthly CO2 Emissions: Shows the total carbon emissions associated with energy use for the current month.



2. Web Functions

2.1.3 Monthly Electricity Bill: Summarizes the total electricity costs for the month.

2.1.4 Monthly Goal Achievement Rate: Indicates the current progress toward monthly energy-saving targets.



2.1.5 Percentage by Category: A donut chart that visualizes the proportion of energy usage by each area or section.

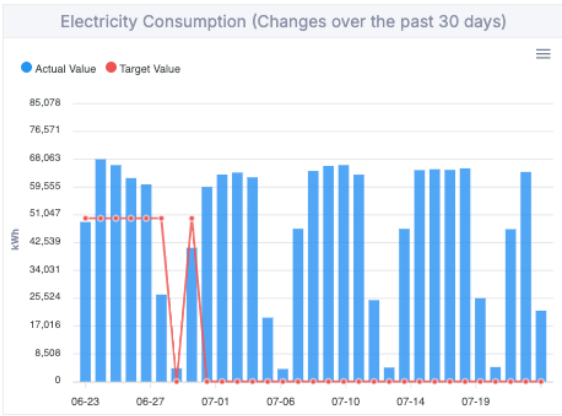
2.1.6 Monthly Electricity Consumption Trend: A bar and line chart that shows monthly consumption across multiple years, including the target line for comparison.

2.1.7 Emission Intensity Table: Lists the energy intensity (kWh/Qty) for each major unit or section.

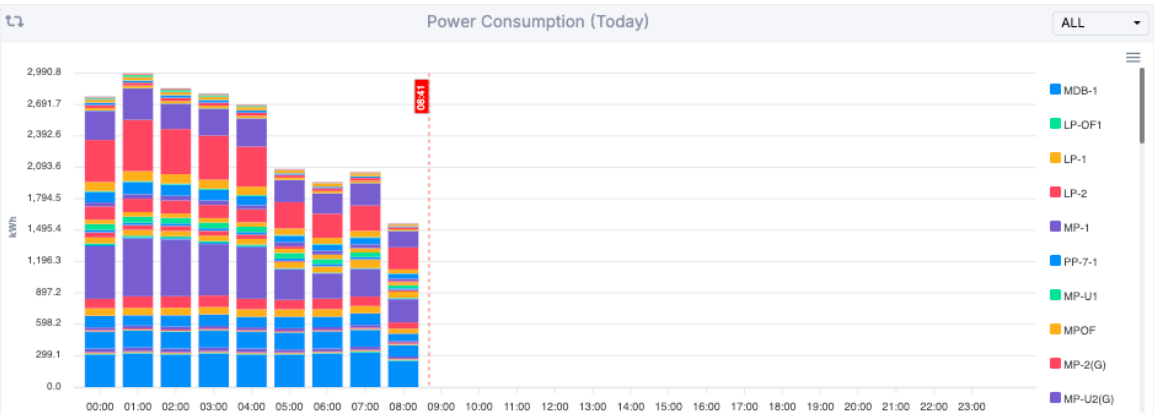


2. Web Functions

2.1.8 Electricity Consumption (Changes over the past 30 days): A bar chart displaying daily actual and target electricity usage.

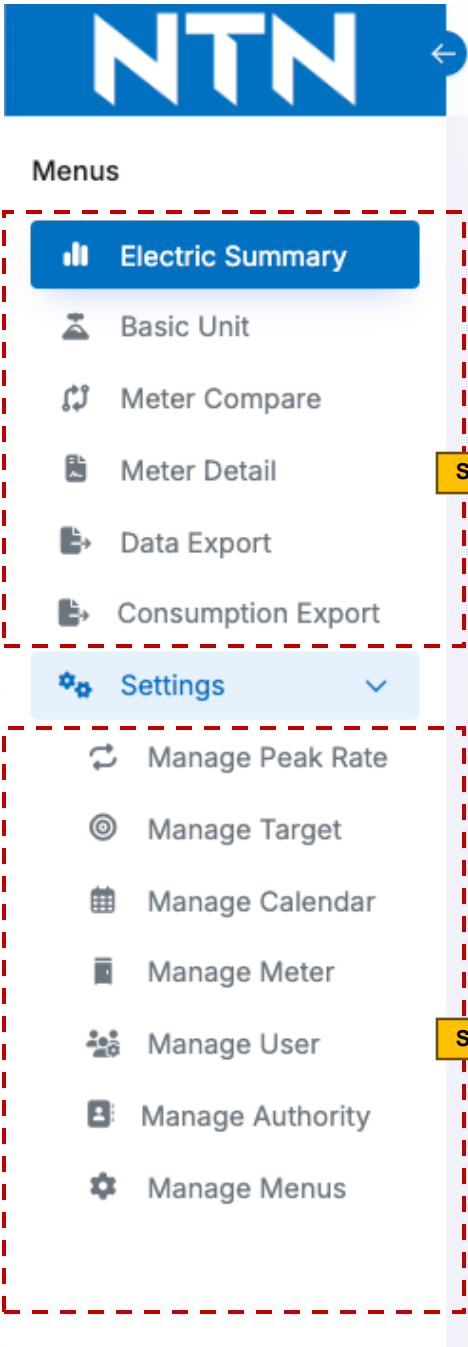


2.1.9 Power Consumption (Today): A stacked bar chart illustrating today's power consumption, broken down by area and hour.



2. Web Functions

2.2 Menu List



Section 1 focuses on displaying data in various formats.

Section 2 is for configuration and management of master data in the system, such as peak rate settings, user management, factory holiday settings, and monthly energy consumption targets.

2. Web Functions

2.3 Basic Unit

The **Basic Unit** section displays information on the total number of equipment units in the factory compared with the energy consumption of each group. This section consists of four parts:

Chart Basic Unit

Shows the total number of equipment units compared with their energy consumption, including the average values.

Chart Basic Unit / Qty

Compares the number of equipment units with energy consumption in three formats:

1. Unit/Qty
2. kWh/Qty
3. CO2/Qty

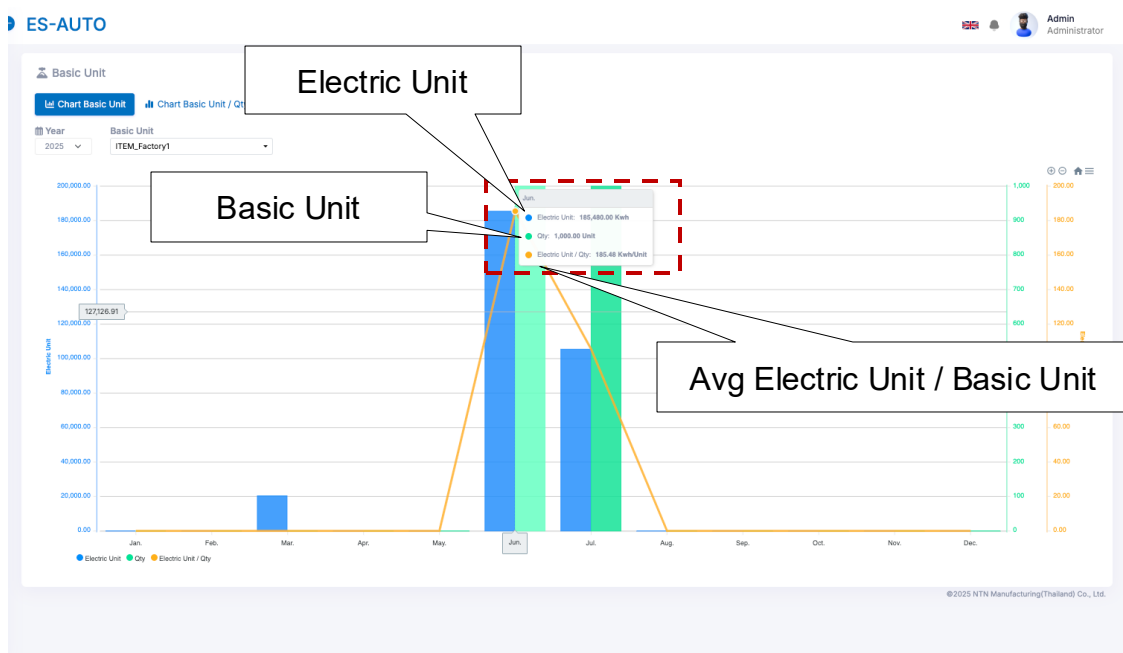
List Basic Unit

Displays the list of Basic Units that have been set up for each month.

Manage Basic Unit

The management page for adding or editing Basic Unit records.

2.3.1 Chart: Basic Unit



2. Web Functions

2.3.2 Chart: Basic Unit / Qty



2.3.3 List Basic Unit: This page is used for managing the monthly Basic Unit reports. Users can add new records or edit the number of each Basic Unit for any given month.

ES-AUTO

Basic Unit

Chart Basic Unit | Chart Basic Unit / Qty | **List Basic Unit** | Manage Basic Unit

Year: 2025 | Month: July | Basic Unit: ALL

Show 50 entries | + Add | - Delete

	Basic Unit	Group Power Meter	Qty	Last Update Date	Update By
1	ITEM_Factory1	G-MDB-1	1,000	2025-07-08 16:00:29	U001
2	ITEM_Factory2	Test-1	500	2025-07-08 16:00:29	U001
3	ITEM_Factory Test4	Test-4	200	2025-07-08 16:00:29	U001




Showing 1 to 3 of 3 entries

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2. Web Functions

2.3.4 Manage Basic Unit: This page is used for managing all Basic Unit records within the factory. Users can add, delete, and edit Basic Units as needed.

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 Admin Administrator

Basic Unit

Chart Basic Unit

Chart Basic Unit / Qty

List Basic Unit




Manage Basic Unit

Show 50 entries

+ Add

- Delete

Search

		Basic Unit ID	Basic Unit Name	Group Power Meter	Create Date	Create By	Update Date	Update By
	1	BU004	ITEM_Factory Test4	Test-4	2025-06-18	U001		
	2	BU001	ITEM_Factory1	G-MDB-1	2025-05-26	U001	2025-06-05	U001
	3	BU002	ITEM_Factory2	Test-1	2025-06-07	U001	2025-06-07	U001

Showing 1 to 3 of 3 entries

<

1

>

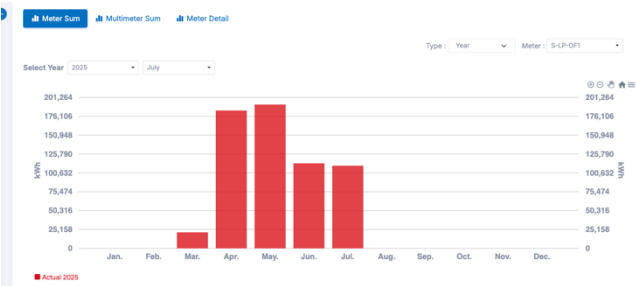
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2. Web Functions

2.4 Meter Compare

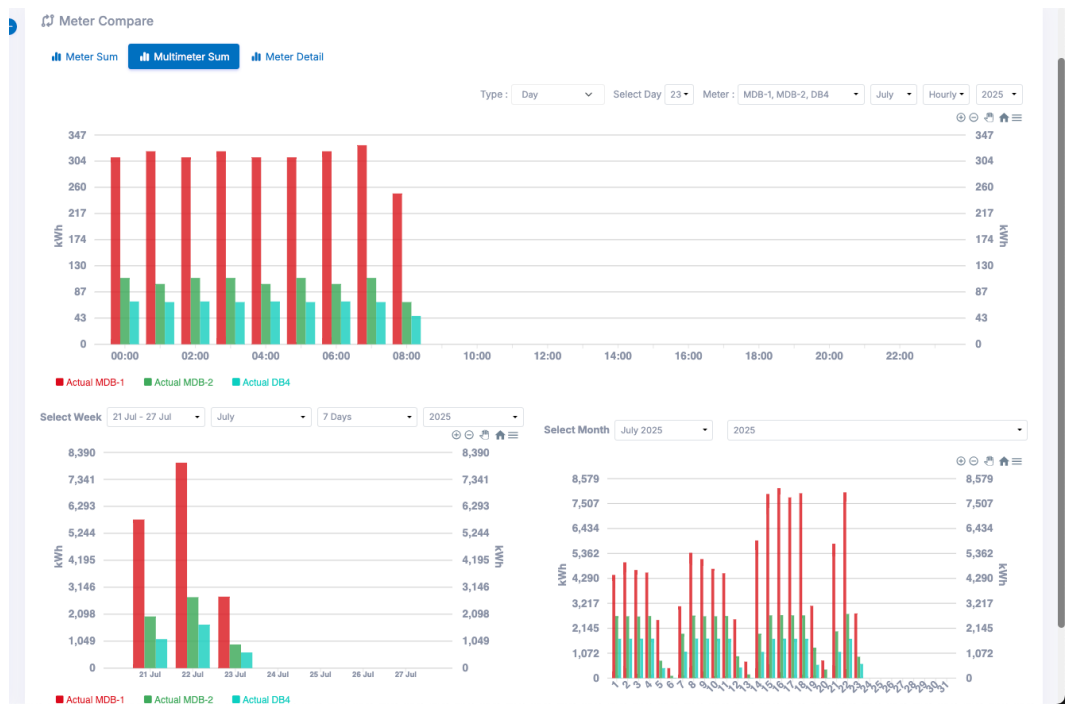
The **Meter Compare** section displays energy consumption data in various chart formats. It includes three different types of charts for comparison.

2.4.1 Meter Sum: This section displays energy consumption data on a daily, weekly, monthly, yearly, and 10-year basis. Users can filter and view the data for specific dates or months as needed.



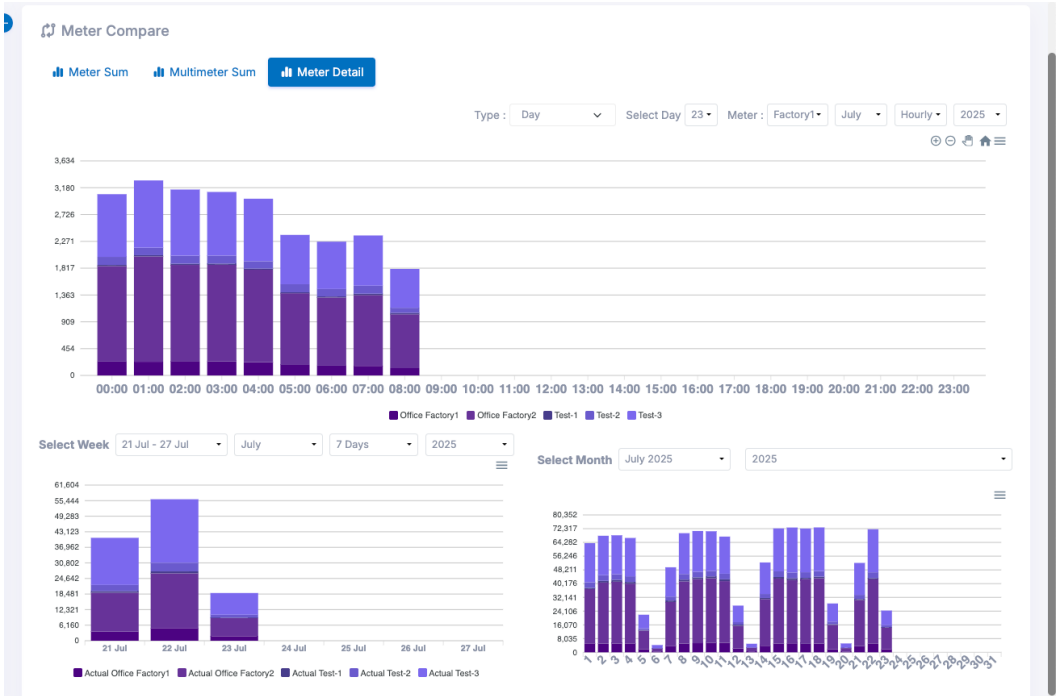
2. Web Functions

2.4.2 Multimeter Sum: This section displays energy consumption data on a daily, weekly, monthly, yearly, and 10-year basis. Users can filter and view the data for specific dates or months as needed, and can also select multiple meters to compare their data side by side.



2. Web Functions

2.4.3 Meter Detail: This section displays energy consumption data on a daily, weekly, and 10-year basis. Users can filter and view the data for specific dates or months as needed, and can also select multiple meters to compare their data side by side. The results are shown in a stacked chart format, making it easy to clearly see the differences in energy usage.






2. Web Functions

2.5 Meter Detail

The **Meter Detail** section displays the raw energy consumption data collected from every power meter installed in the factory.

ES-AUTO



Admin
Administrator

Meter Detail

Item Name

ALL

Last Updated : 2025-07-23 08:30:00

No.	Item Name	Voltage R - S	Voltage T - R	Voltage S - T	Current R	Current S	Current T	Power Factor (COS)	Consumption (Cumulative)	Power Active	Frequency	Power Energy
PM001	MDB-MDB-1	401.80 v	402.10 v	402.40 v	654.00 A	644.00 A	647.00 A	0.83	3.00 Kwh	372.00 Kwh	50.00 Hz	434,902.00 Kwh
PM002	MDB-LP-OF1	401.80 v	402.20 v	402.40 v	184.00 A	137.00 A	224.00 A	0.99	1.00 Kwh	111.00 Kwh	50.00 Hz	832,750.00 Kwh
PM003	MDB-LP-1	402.10 v	402.40 v	402.60 v	198.00 A	152.00 A	125.00 A	1.00	9.00 Kwh	1,093.00 Kwh	50.00 Hz	968,985.00 Kwh
PM004	MDB-LP-2	402.20 v	402.50 v	402.80 v	142.00 A	75.00 A	104.00 A	-1.00	6.00 Kwh	731.00 Kwh	50.00 Hz	611,698.00 Kwh
PM005	MDB-MP-1	402.40 v	402.70 v	402.80 v	67.00 A	63.00 A	65.00 A	0.64	2.00 Kwh	289.00 Kwh	50.00 Hz	135,120.00 Kwh
PM006	MDB-PP-7-1	402.30 v	402.60 v	402.80 v	288.00 A	297.00 A	293.00 A	0.81	14.00 Kwh	1,633.00 Kwh	50.00 Hz	807,009.00 Kwh
PM007	MDB-MP-U1	402.30 v	403.00 v	403.00 v	85.00 A	90.00 A	86.00 A	0.67	0.00 Kwh	40.00 Kwh	50.00 Hz	301,116.00 Kwh
PM008	MDB-MPOF	402.80 v	403.20 v	403.40 v	205.00 A	192.00 A	172.00 A	0.76	2.00 Kwh	101.00 Kwh	50.00 Hz	899,499.00 Kwh
PM009	MDB-MP-2(G)	402.30 v	402.60 v	402.90 v	581.00 A	559.00 A	581.00 A	0.74	2.00 Kwh	294.00 Kwh	50.00 Hz	433,639.00 Kwh
PM010	MDB-MP-U2(G)	402.80 v	403.20 v	403.40 v	414.00 A	402.00 A	415.00 A	0.97	22.00 Kwh	900.00 Kwh	50.00 Hz	379,310.00 Kwh
PM011	MDB-MDB-2	401.80 v	401.90 v	402.30 v	198.00 A	183.00 A	189.00 A	0.98	1.00 Kwh	125.00 Kwh	50.00 Hz	820,339.00 Kwh
PM012	MDB-MP-COMP	402.00 v	402.10 v	402.50 v	0.00 A	0.00 A	0.00 A	1.00	0.00 Kwh	0.00 Kwh	50.00 Hz	572,816.00 Kwh
PM013	MDB-DB4	401.80 v	401.90 v	402.20 v	109.00 A	107.00 A	108.00 A	0.99	6.00 Kwh	704.00 Kwh	50.00 Hz	3,907,564.00 Kwh
PM014	MDB-MDB-3	211.10 v	211.00 v	0.00 v	53.00 A	55.00 A	50.00 A	-0.94	1.00 Kwh	95.00 Kwh	50.00 Hz	490,914.00 Kwh
PM015	MDB-MDB-4	400.70 v	400.80 v	401.40 v	593.00 A	542.00 A	566.00 A	0.94	3.00 Kwh	369.00 Kwh	50.00 Hz	178,533.00 Kwh
PM016	MDB-LP-F1	399.10 v	399.30 v	399.90 v	193.00 A	99.00 A	216.00 A	-1.00	1.00 Kwh	114.00 Kwh	50.00 Hz	915,246.00 Kwh
PM017	MDB-LP-F2	400.90 v	401.10 v	401.40 v	253.00 A	127.00 A	144.00 A	-0.99	1.00 Kwh	118.00 Kwh	50.00 Hz	38,527.00 Kwh
PM018	MDB-LF-APC1	399.40 v	399.70 v	400.00 v	138.00 A	138.00 A	130.00 A	0.69	6.00 Kwh	650.00 Kwh	50.00 Hz	42,947.00 Kwh

Note: This page only displays the current data available in the database.
It is not possible to view historical data on this page.

2. Web Functions

2.6 Data Export

The **Data Export** page displays the total kWh used during the selected date range. By default, it shows data for the current month upon entering the page. Users can export the filtered data as a CSV file, or export monthly data into 6 separate sheets, each containing the following information:

- 1. DemandData** – Shows energy usage data recorded every 15 minutes.
- 2. Demand** – Shows the maximum daily energy demand for each Power Meter.
- 3. Kwhr** – Shows the total daily kWh usage for each Power Meter.
- 4. Energy by Period (TOD)** – Displays energy usage separated into time periods: 08:00–18:30, 18:30–21:30, and 21:30–08:00 (next day).
- 5. Energy by Period (TOU)** – Displays energy usage separated into four periods:
ONPEAK (09:00–22:00)
OFFPEAK1 (00:00–09:00)
OFFPEAK2 (22:00–24:00)
HOLIDAY (00:00–24:00)
- 6. Energy Cost by Period (TOU)** – Shows the energy cost separated into the same four periods above, calculated based on the ONPEAK RATE and OFFPEAK RATE configured in the system.

Excel 6 Sheet

Data Export

Start Date

End Date

Type

Group

Power Meter

Search

Export 6 Sheets

2025

July

Export

Show 50 entries

CSV




On Peak Rate/Unit	On Peak Price (Baht)	Off Peak (KWh)	Off Peak Rate/Unit	Off Peak Price (Baht)	Holidays (KWh)	Holidays Rate/Unit	Holidays Price (Baht)	Total (KWh) ^	Total (Baht)	Total (CO2)
4.2000	108.36	24.30	2.6000	63.18	0.00	2.6000	0.00	50.10	171.54	25.05
4.2000	239.40	21.00	2.6000	54.60	0.00	2.6000	0.00	78.00	294.00	39.00
4.2000	949.20	255.00	2.6000	663.00	0.00	2.6000	0.00	481.00	1,612.20	240.50
4.2000	1,667.40	420.00	2.6000	1,092.00	0.00	2.6000	0.00	817.00	2,759.40	408.50
4.2000	1,885.80	389.00	2.6000	1,011.40	0.00	2.6000	0.00	838.00	2,897.20	419.00
4.2000	2,213.40	353.00	2.6000	917.80	0.00	2.6000	0.00	880.00	3,131.20	440.00
4.2000	2,146.20	419.00	2.6000	1,089.40	0.00	2.6000	0.00	930.00	3,235.60	465.00
4.2000	2,914.80	671.00	2.6000	1,744.60	0.00	2.6000	0.00	1,365.00	4,659.40	682.50
4.2000	3,494.40	569.00	2.6000	1,479.40	0.00	2.6000	0.00	1,401.00	4,973.80	700.50
4.2000	3,813.60	760.00	2.6000	1,976.00	0.00	2.6000	0.00	1,668.00	5,789.60	834.00
4.2000	4,943.40	739.00	2.6000	1,921.40	0.00	2.6000	0.00	1,916.00	6,864.80	958.00
4.2000	5,040.00	754.00	2.6000	1,960.40	0.00	2.6000	0.00	1,954.00	7,000.40	977.00
4.2000	6,598.20	1,106.00	2.6000	2,875.60	0.00	2.6000	0.00	2,677.00	9,473.80	1,338.50
4.2000	6,463.80	1,437.00	2.6000	3,736.20	0.00	2.6000	0.00	2,976.00	10,200.00	1,488.00
4.2000	6,698.58	1,429.70	2.6000	3,717.22	0.00	2.6000	0.00	3,024.60	10,415.80	1,512.30
4.2000	7,093.80	1,382.00	2.6000	3,593.20	0.00	2.6000	0.00	3,071.00	10,687.00	1,535.50

2. Web Functions

2.7 Consumption Export

The Consumption Export page displays energy consumption data at 5-minute, 15-minute, or hourly intervals, based on the user's selection. Users can also select multiple power meters to view and export data for more than one meter at a time.

ES-AUTO

   Admin
Administrator

Consumption Export

Start Date
2025-07-23

End Date
2025-07-23

Power Meter
Nothing selected

Interval
5 Minutes

Search

Show 50 entries

CSV

No	MeterID	Name	Date	Hour Of Day	Minute Of Day	Total (KWh)
1	PM001	MDB-1	2025-07-23	0	0	10.00
2	PM001	MDB-1	2025-07-23	0	5	20.00
3	PM001	MDB-1	2025-07-23	0	10	20.00
4	PM001	MDB-1	2025-07-23	0	15	30.00
5	PM001	MDB-1	2025-07-23	0	20	30.00
6	PM001	MDB-1	2025-07-23	0	25	20.00
7	PM001	MDB-1	2025-07-23	0	30	30.00
8	PM001	MDB-1	2025-07-23	0	35	30.00
9	PM001	MDB-1	2025-07-23	0	40	20.00
10	PM001	MDB-1	2025-07-23	0	45	30.00
11	PM001	MDB-1	2025-07-23	0	50	30.00
12	PM001	MDB-1	2025-07-23	0	55	40.00
13	PM001	MDB-1	2025-07-23	1	0	10.00
14	PM001	MDB-1	2025-07-23	1	5	20.00
15	PM001	MDB-1	2025-07-23	1	10	30.00
16	PM001	MDB-1	2025-07-23	1	15	30.00
17	PM001	MDB-1	2025-07-23	1	20	20.00

2025-07-23 Consumption Export (1)

No	Date	Hour Of Day	Minute Of Day	MDB-1	LP-1	LP-2	MP-1
1	2025-07-23	0	0	10	0.2	0.3	0
2	2025-07-23	0	5	20	0.5	0.5	1
3	2025-07-23	0	10	20	0.6	0.6	2
4	2025-07-23	0	15	30	0.7	0.6	3
5	2025-07-23	0	20	30	0.6	0.7	3
6	2025-07-23	0	25	20	0.6	0.6	3
7	2025-07-23	0	30	30	0.6	0.7	4
8	2025-07-23	0	35	30	0.6	0.6	2
9	2025-07-23	0	40	20	0.6	0.6	3
10	2025-07-23	0	45	30	0.7	0.7	3
11	2025-07-23	0	50	30	0.6	0.6	4
12	2025-07-23	0	55	40	1.1	1.2	5
13	2025-07-23	1	0	10	0.3	0.2	1
14	2025-07-23	1	5	20	0.5	0.6	1
15	2025-07-23	1	10	30	0.6	0.6	1
16	2025-07-23	1	15	30	0.6	0.7	3

CSV Export

2. Web Functions

2.8 Manage Peak Rate

The **Manage Peak Rate** page is used to manage the cost settings for ONPEAK and OFFPEAK periods. These rates are used to calculate the monthly energy costs.

NTN

ES-AUTO

Admin Administrator

Menus

Electric Summary

Basic Unit

Meter Compare

Meter Detail

Data Export

Consumption Export

Settings

Manage Peak Rate

Manage Target

Manage Calendar

Manage Meter

Manage User

Manage Authority

Manage Menus

Manage Peak Rate

Date ALL

Show 50 entries CSV Add

	Start Date	Peak Rate	On Peak Rate	Off Peak Rate	Service Change	FT Rate	Peak Rate Period	CO2	Unit CO2	Air Flow Rate
	2025-03-01 11:42:00	132.9000	4.2000	2.6000	312.2000	0.4000	0.0000	0.5000	Off Peak Rate (kWh/THB)	0.0000
	2024-12-01 00:00:00	0.0000	4.5000	4.0000	0.0000	2.0000	0.0000	3.6000	Peak Rate (kW/THB)	0.0000
	2024-11-01 00:00:00	0.0000	4.5000	4.0000	0.0000	0.0000	0.0000	3.6000	T	0.0000

Showing 1 to 3 of 3 entries

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2.8.1 Add: if you want to add a new Peak Rate setting, click the "Add" button. After entering all required information, click "Save" to store the data. The new rate will be applied starting from the Start Date you specified.

Manage Peak Rate

Date ALL

Show 50 entries CSV Add

	Start Date	Peak Rate	On Peak Rate	Off Peak Rate	Service Change	FT Rate	Peak Rate Period	CO2	Unit CO2	Air Flow Rate
	2025-03-01 11:42:00	132.9000	4.2000	2.6000	312.2000	0.4000	0.0000	0.5000	Off Peak Rate (kWh/THB)	0.0000
	2024-12-01 00:00:00	0.0000	4.5000	4.0000	0.0000	2.0000	0.0000	3.6000	Peak Rate (kW/THB)	0.0000
	2024-11-01 00:00:00	0.0000	4.5000	4.0000	0.0000	0.0000	0.0000	3.6000	T	0.0000

Showing 1 to 3 of 3 entries

+ Add Peak Rate

Start Date *

PeakRate *

Off Peak *

CO2 *

Service Change *

FT *

Unit CO2 *

CO2 (kg-CO2/kWh)

On Peak *

PeakRate Period *

Air Allow Rate *

Save Close

2. Web Functions

2.8.2 Edit: If you want to edit the details of a Peak Rate, click the "pencil" icon next to the rate you wish to modify. After updating the necessary information, click "Save" to save your changes.

Manage Peak Rate

Date

ALL

Show 50 entries

CSV

Add

	Start Date	Peak Rate	On Peak Rate	Off Peak Rate	Service Change	FT Rate	Peak Rate Period	CO2	Unit CO2
	2025-03-01 11:42:00	132.9000	4.2000	2.6000	312.2000	0.4000	0.0000	0.5000	Off Peak Rate (kWh/
	2024-11-01 00:00:00	0.0000	4.5000	4.0000	0.0000	2.0000	0.0000	3.6000	Peak Rate (kW/
	2024-11-01 00:00:00	4.5000							

Showing 1 to 3 of 3 entries

Edit Peak Rate

Date: 2025-03-01 11:42

Last Update: 2025-07-04 10:39

Peak Rate

132.9000

Service Change

312.2000

On Peak

4.2000

Off Peak

2.6000

FT

.4000

PeakRate Period

.0000

CO2

.5000

Unit CO2

Off Peak Rate (kWh/THB)

Air Allow Rate

.0000

Save

Close

3 of 3 entries

2. Web Functions

2.9 Manage Target

The **Manage Target** page is used to set energy consumption targets for each day and month, which serve as benchmarks for various data displays throughout the system. You can also set target costs for each day and month on this page.

NTN

ES-AUTO

Admin Administrator

Menus

Electric Summary

Basic Unit

Meter Compare

Meter Detail

Data Export

Consumption Export

Settings

Manage Peak Rate

Manage Target

Manage Calendar

Manage Meter

Manage User

Manage Authority

Manage Menus

Manage Target

Year2025MonthJulyTotal (Kwh)19,995Total (Baht)68,014Save

SundayAverageKwh20000Baht68000PR

TodayCSVImport CSV

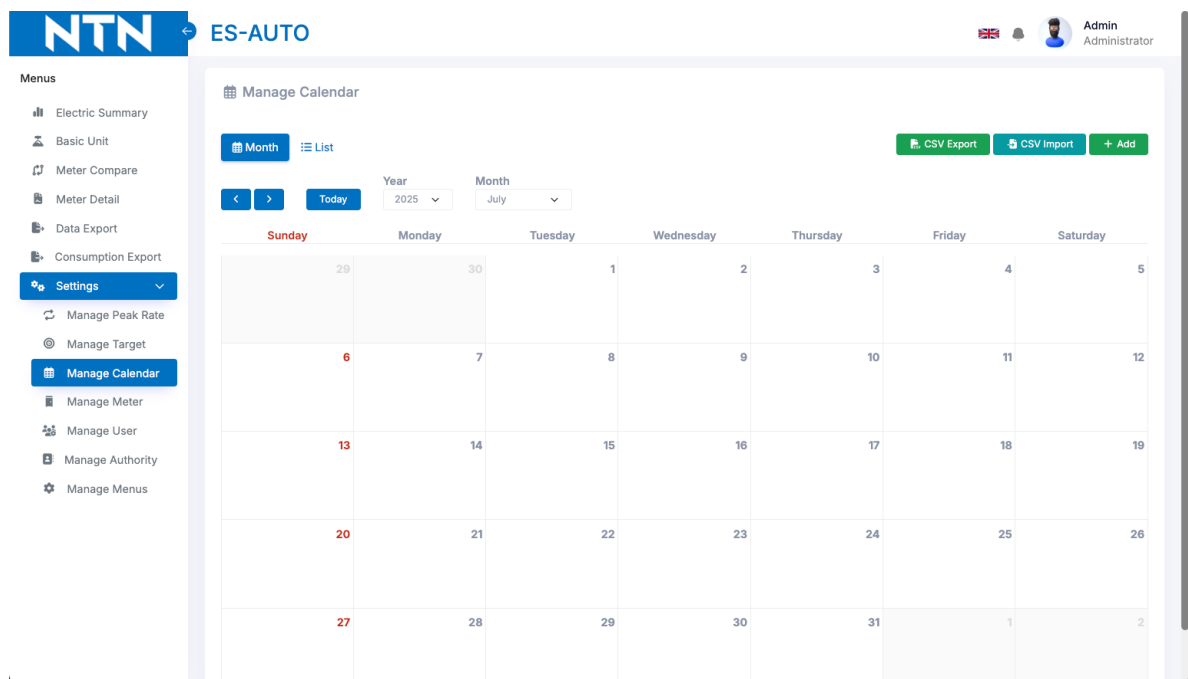
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1645 Kwh2194 Baht	2645 Kwh2194 Baht	3645 Kwh2194 Baht	4645 Kwh2194 Baht	5645 Kwh2194 Baht
6645 Kwh2194 Baht	7645 Kwh2194 Baht	8645 Kwh2194 Baht	9645 Kwh2194 Baht	10645 Kwh2194 Baht	11645 Kwh2194 Baht	12645 Kwh2194 Baht
13645 Kwh2194 Baht	14645 Kwh2194 Baht	15645 Kwh2194 Baht	16645 Kwh2194 Baht	17645 Kwh2194 Baht	18645 Kwh2194 Baht	19645 Kwh2194 Baht
20645 Kwh2194 Baht	21645 Kwh2194 Baht	22645 Kwh2194 Baht	23645 Kwh2194 Baht	24645 Kwh2194 Baht	25645 Kwh2194 Baht	26645 Kwh2194 Baht
27	28	29	30	31	1	2

You can specify the dates for which you want to set targets and choose to exclude Sundays if needed. The system also allows you to enter a total kWh value, which will be automatically averaged and distributed as daily targets. After entering all required information, click the "Save" button to save your settings.

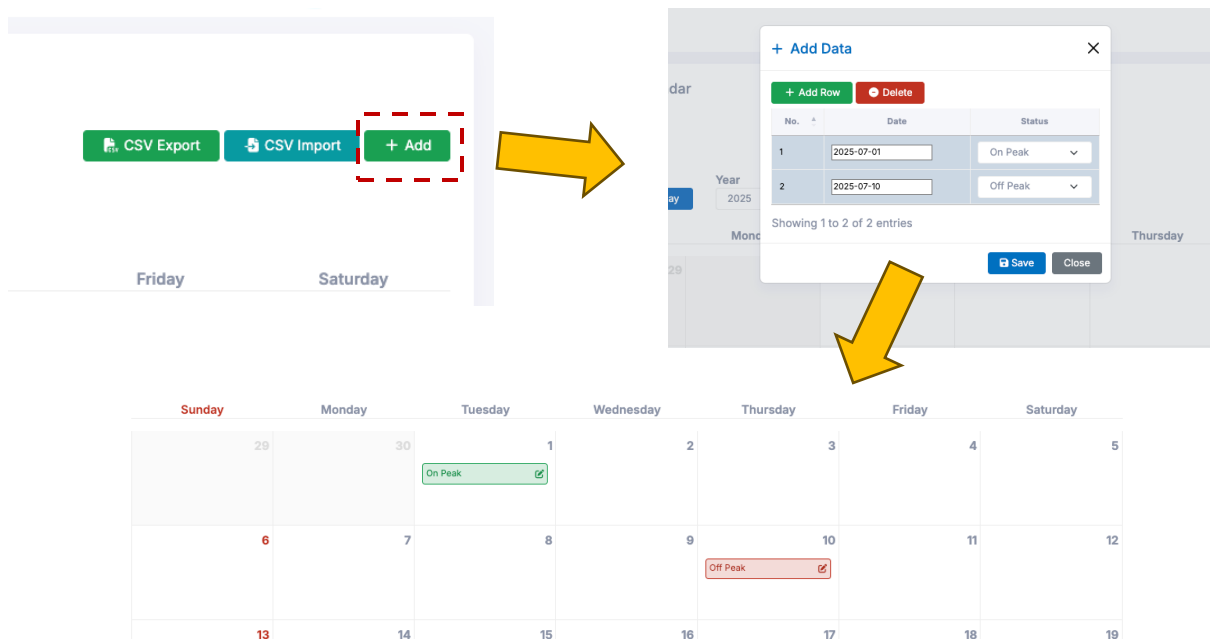
2. Web Functions

2.10 Manage Calendar

The **Manage Calendar** page is used to configure ONPEAK and OFFPEAK days for each day and month. This ensures that monthly energy costs are calculated accurately based on the correct peak and off-peak periods.



2.10.1 Add: To set ONPEAK or OFFPEAK days, click the "Add" button. Then, select the dates and choose the type (ONPEAK or OFFPEAK). You can add multiple entries at once. After completing your selections, click the "Save" button to save the settings.



2. Web Functions

2.11 Manage Meter

The **Manage Meter** page is used to group Power Meters for data display on the Dashboard. The grouping is organized in the following order:

Type	Factory 1				
Group	GROUP	Office 1	Plant 1		Plant 2
Sub Power Meter	Sub Power Meter	SMDB1	SMDB2	SMDB3	SMDB4
Power Meter	Power Meter	MDB-1	MDB-2	MDB-3	MDB-4
		MP-U1	LP-OF	PP-7	PP-1
			MPOF		PP-200-4

Factory 1 is provided as an example to illustrate how grouping works. Users can customize the groups they want to view as needed. To edit a group, click the "Edit" button.

NTN

ES-AUTO

Admin

Administrator

Electric Summary

Basic Unit

Meter Compare

Meter Detail

Data Export

Consumption Export

Settings

Manage Peak Rate

Manage Target

Manage Calendar

Manage Meter

Manage User

Manage Authority

Manage Menus

Manage Group Power Meter

Manage Type Group

Delete Group

Add Group

CSV

Import CSV

Edit

Sub Power Meter

Group	Type	Remark	S-MDB-1	S-LP-OF1	S-LP-1	S-LP-2	S-MP-1	S-PP-7-1	S-MP-U1	S-MPOF	S-MP-2(G)	S-MP-U2(G)	S-MP-U2(MD)
Office Factory1	Factory1												
Office Factory2	Factory1												
Test-1	Factory1												
Test-2	Factory1												
Test-3	Factory1												
Test-4	Factory2												
G-MDB-1	Factory2												

Manage Power Meter

Manage Sub Power Meter

CSV

Import CSV

Edit

Power Meter

Sub Power Meter	MDB-1	LP-OF1	LP-1	LP-2	MP-1	PP-7	MP-U1	MPOF	MP-2(G)	MP-U2(G)	MDB-2
S-MDB-1											
S-LP-OF1											
S-LP-1											
S-LP-2											
S-MP-1											
S-PP-7-1											
S-MP-U1											
S-MPOF											
S-MP-2(G)											

2. Web Functions

2.12 Manage User

The **Manage User** page is used to manage system users, allowing you to add, delete, and edit user accounts, as well as reset passwords.

Manage User

Show 50 entries

+ Add

Delete

1

U003

demo

001

2025-06-23 10:45:14

2025-06-23 10:45:14

Showing 1 to 1 of 1 entries

< 1 >

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2.13 Manage Authority

The **Manage Authority** page is used to manage user groups within the system. You can add, delete, and edit groups as needed. Once access rights have been set, they will be applied in the Manage User menu.

Manage Authority

Show 50 entries

+ Add

Delete

1

001

Staff

1

Showing 1 to 1 of 1 entries

< 1 >

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2. Web Functions

2.14 Manage Menus

The **Manage Menus** page is used to manage the menus within the system. You can show, hide, or control user access to specific menus as needed.

NTN

ES-AUTO

Admin
Administrator

Menus

Electric Summary

Basic Unit

Meter Compare

Meter Detail

Data Export

Consumption Export

Settings

Manage Peak Rate

Manage Target

Manage Calendar

Manage Meter

Manage User

Manage Authority

Manage Menus

Manage Menu

+ Add new menu

No.	Menu Name	Manage
1	Electric Summary	<div><div></div><div></div></div>
2	Basic Unit	<div><div></div><div></div></div>
3	Meter Compare	<div><div></div><div></div></div>
4	Meter Detail	<div><div></div><div></div></div>
5	Monitor Mode	<div><div></div><div></div></div>
6	Chiller	<div><div></div><div></div></div>
7	Air Flow	<div><div></div><div></div></div>
8	Data Export	<div><div></div><div></div></div>
9	Consumption Export	<div><div></div><div></div></div>
10	Settings	<div><div></div><div></div></div>

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Users can configure which users have access to view specific pages within the system.

Manage Permission

Meter Compare

Access rights

Only Accessible To Authority

Select Authority

Nothing selected

Close

3. Q&A

#	Date	Question	By	Date	Answer	By
1						
2						
3						
4						
5						

4. Contact information



The contents of this specification and manual are subject to change without notice. Copying or copying part or all of the manual without the written permission of TOMAS TECH is prohibited, regardless of its form.



If you have any questions, concerns, or questions regarding the specifications of this system and the contents of the manual, please contact us by phone or e-mail.
Tel: +66 (0) 2 336 0574 E-mail: info@tomastc.com

Item	Description
1. Service time	8 hours x 5 days (8:00 -17:00 Monday to Friday)
2. Onsite Hardware Maintenance	-
3. Onsite System Maintenance	-
4. Response after receive a call	On-line support within 24 hours / On-site support within 48 hours
5. Remote service	Yes
6. Phone service	Yes
7. Email service	Yes

#	Support	Name	Language	TEL	E-Mail
1	All	Ryo Nozaki	JP/TH/EN	+66-94-552-3097	nozaki.ryo@tomastc.com
2	All	Kittisak Isarapongporn	TH	+66-97-364-6149	kittisak.i@tomastc.com
3	Web	Nattaporn Chaiya	TH	+66-86-707-5159	nattaporn.c@tomastc.com
4	HT	Pairoj Neamjarn	TH	+66-98-271-9741	priroj.n@tomastc.com