INSTRUCTION MANUAL

•INSTALLATION •SETTING •OPERATING

Electricity Charge Apportionment Tool for Touch Panel Controller

UTY-PTGXA Ver. 1.0

PART NO. 9710270000-02

FUJITSU GENERAL LIMITED

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For

“Electricity Charge Apportionment Tool for Touch Panel Controller”

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Contents

Operation

Appendix

1. Usage Precautions

1-1 Precautions when using the Electricity Charge Apportionment Tool

1. Please read and agree to the LICENSE AGREEMENT FOR “Electricity Charge Apportionment Tool for Touch Panel Controller” at the beginning of this manual before using the Touch Panel Controller.

2. Please confirm that the PC for the Electricity Charge Apportionment Tool meets the operating condition of the “Product Specifications” described in the Appendix of this manual.

3. Please read and fully understand this manual before using the Electricity Charge Apportionment Tool.

4. The USB memory for this software will not be reissued. Keep and handle them with great care after installing.

5. Electricity Charge Apportionment Tool programs perform electricity apportionment data control based on date and time set in the personal computer. Please correct the time periodically to make the date will not be changed. Changing date and time may affect the functions of the tool.

6. Electricity Charge Apportionment Tool product is provided with software, drivers, components listed below. If the same kind of software, drivers, components with different version is installed on the same PC, Electricity Charge Apportionment Tool may not install or run properly.

(1) Microsoft® SQL Server®

7. This product may be updated without prior notice. If by chance you encounter any trouble with this product, check with your service personnel for updates.

8. The unit parameter definition file which supports your indoor/outdoor/RB units in your site is required.
Please import the latest parameter definition file into the Electricity Charge Apportionment Tool. Contact your service personnel for getting the parameter definition file.

9. When Anti-Virus software is running, an error may occur in this software.
Set the Anti-Virus software to exclude this software from being monitored.
Please refer to your Anti-Virus software manual on how to do this.

1-2 Usage Precautions for Electricity Charge Apportionment

1. The electricity charge apportionment function requires correct setting and use in accordance with the descriptions in this manual.
   If correct operation based on correct setting is not performed, a reasonable result may not be obtained.

2. The electricity charge apportionment function does not calculate official electricity charges like those established by the laws and regulations of each country.

3. Gaining an understanding of the descriptions, etc. in this manual and using the electricity charge apportionment function accordingly are the responsibility of the user.

4. The electricity charges used in electricity charge apportionment calculation are only for the power consumed by the air conditioner.

5. For the electricity charge apportionment function to function properly, the Touch Panel Controller must be operated continuously. If the Touch Panel Controller is shut down or stopped by a power failure, etc. while the data needed by calculation is being acquired, correct electricity charge apportionment calculation may be impossible.

6. Electricity charge apportionment is performed for units identified by scanning. When the unit configuration was changed, perform scanning to re-identify the objective units on the Touch Panel Controller.

7. Constantly maintain the units which are the objective of electricity charge apportionment calculation in the normal operating state.
   If units are left in abnormal state (power not supplied or in error), data acquisition and calculation will not be correct.
   The electricity charge apportionment function should not be performed during such period.

8. When all the indoor units managed by the Touch Panel Controller are not allocated to a block, etc, the electric charges may be allocated to an undefined block. The electricity charges apportionment function cannot be used to reapportion the electricity charges allocated to an undefined block.
   For cases which generate an undefined block, etc., see the later description.

9. Electricity charge apportionment calculation identifies units by address. When the address of a unit was changed by automatic addressing function, etc., perform scanning to re-identify the correct address and update the block setting, if necessary.

10. The electricity charge apportionment function of VRF system can only be performed from 1 controller or 1 gateway simultaneously.

11. You cannot calculate the start day of data collection.

12. Please correct the time periodically to make the date will not be changed.
The calculation of ECA will be as follow by correct time.
- In the case of set time back, ECA data will be deleted before returned time and collect data newly.
- In the case of set time ahead, ECA data will disappear during skip time.

In the case that set time back to change date, please scan for the apportionment can not be calculated accurately.

13. When outdoor unit does not communicate, the apportionment calculation of the appropriate refrigerant system is not performed correctly because the data needed for apportionment is not obtained.

14. Specifications of electricity charge apportionment are subject to change without prior notice.

15. Specifications of electricity charge apportionment may be different depending on the series.

16. With heat recovery, the apportionment result may be different even under the same operating condition, depending on the cooling/heating operation ratio, etc. of indoor units in the same refrigerant system.
For example, the case where there are both cooling units and heating units is more efficient than the case where all units operate in cooling mode within a refrigerant system.

2. How To Use This Manual

2-1 Manual composition

This manual is made up of 5 sections.

- Introduction
- Installation
- Settings
- Operation
- Appendix

Before installing the software, first read the Introduction and check the overview of the Electricity Charge Apportionment Tool and the caution items. For technical terms, refer to the definition of terms in the Appendix.

When installing the Electricity Charge Apportionment Tool to the PC, read the PC Installation and Settings sections. Complete installation to the PC in accordance with the described procedure.

When performing operations related to the various functions of the Electricity Charge Apportionment Tool after installation, refer to the relevant parts of the operation sections.

The Appendix consists of product specifications, troubleshooting, FAQ, and definition of terms. Read them as necessary.

Abbreviated expressions in the text of following chapter

- “VRF Series” means the V-II/V-III/VR-II/J-II/J-IIS.
- “TPC” means Touch Panel controller.
- “ECA Tool” means “Electricity Charge Apportionment Tool”.

Introduction

3. Overview

3. Overview

3-1 Electricity Charge apportionment function

The proportional electricity allocation function apportions consumed electricity for air-conditioning (electricity cost) to each previously defined tenant's indoor unit, based on the usage results of the consumed electricity, after the consumed electricity is input into the ECA Tool.
When implementing electricity apportionment with the VRF system, you can select to either a composition which uses the electricity meter or one that does not. The following explains the differences between these.
As the proportional electricity allocation function apportions consumed electricity for air-conditioning (electricity cost) to each previously defined tenant's indoor unit, based on the usage results of the consumed electricity, after consumed electricity is input to the ECA Tool, it is possible to carry out electricity apportionment calculations based on either consumed electricity or electricity cost input.
[In case of apportioning electricity using an electricity meter]
As it is possible to send consumed electricity information from the electricity meter to the ECA Tool as required, it is basically possible to carry out electricity apportionment calculation at any time.
Since the ECA Tool carries out aggregation in units of days, it is possible to carry out electricity apportionment in units of days.

1. Purpose of electricity charge apportionment

The electricity charge apportionment function apportions air conditioner electric charges to tenants. Generally, indoor units are divided among and used by each tenant, and calculation of the electricity charge for each tenant is easy. But since outdoor units are shared by multiple tenants, calculation of the electric charge for each tenant is not easy.

The electricity charge apportionment function is allows distribution of the electricity charges of outdoor units, which are a large part of the air conditioner power consumption, according to the air conditioner usage ability of each tenant.

2. Features of electricity charge apportionment of ECA Tool

(1) There is a method of carrying out apportionment calculations from the used electricity volume sent from the electricity meter and the unit price, and there is also a method of electricity apportionment calculation based on the amount on the invoice from the electricity company.
(2) Apportionment calculation is performed according to indoor unit usage ability.
(3) In addition to electric charge calculation of outdoor units only, electric charge calculation including indoor units is also possible.
(4) Flexible definition according to the electric charge contract configuration, block configuration, and usage period is possible.
(5) Since the data for 1 year is saved, recalculation of the past is possible.

3. Basic electricity charge apportionment terms

The terms related to electricity charge apportionment which appear in this section are defined below.

Apportionment	Distribution proportional to basic quantity.
Contract	Billing objective of electricity charge from electric power company.
Block	Aggregate of indoor units used by building tenants. A block used exclusively by a specific tenant is called a tenant block and a block shared by multiple tenants is called a common block.
Energy used	Energy used by indoor units and outdoor units to perform air conditioning.
Electricity charge	Electricity charge billed from an electric power company. Consists of basic charge billed without regard to amount used, metering charge billed only for the amount used, additional charge billed for special reasons, etc.
Undefined block	Special block which is allocated the power consumption, etc. of indoor units which are not allocated to a tenant block or common block. Generally, electric charges considered to be borne by the building owner or manager are apportioned to an undefined block.
Parameters	Detailed unit Information used in electricity charge calculation by the electric charge apportionment function.
RB	RB is the abbreviation for "Refrigerant Branch Unit" used with a heat recovery system. It is installed at the refrigerant piping between outdoor unit and indoor unit to switch the refrigerant circuit in the operation mode of each indoor unit.
VRF NW ID	The aggregate of multiple Refrigerant system connected by the same communication line is called as VRF NW and ID is the number to distinguish VRF NW.

4. Items Decided Before Use

Before using the electricity charge apportionment function, decide each of the items below and perform setting and operation correctly based on them.

(1)	Apportionment objective range	Whether or not indoor units are included in the apportionment objectives.
(2)	Basic/additional charges apportionment method	Select from among apportionment proportional to the number, capacity, and usage ability of indoor units or equal apportionment to blocks.
(3)	Common block apportionment method	Burden ratio of each block and building owner.
		When apportioning to blocks, select the apportionment method from the number of indoor units, capacity, equal, or individual.
(4)	Processing of undefined blocks	An undefined block is a block with an integrated electricity charge that could not be apportioned to a tenant block by the electricity charge apportionment function. The building owner or manager may have to process the electric charges apportioned to an undefined block separately from this electricity charge apportionment function. Decide beforehand the method of processing the undefined block when an undefined block was generated. See the later description so that undefined block electricity charges are not generated as much as possible.
(5)	Contents of contract	Contents of block division in contract, present/absence of basic/additional charges, nighttime, weekend charges time, etc.

5. Overview of apportionment method

Electricity charge apportionment is performed by a suitable method corresponding to the VRF Series refrigerant control system.
The following outlines the VRF Series electricity charge apportionment method.

5.1 Fixed period processing

This processing is performed periodically for all the objective units when the electricity charge apportionment function is enabled.

(1) The energy used by and usage ability of each outdoor unit and indoor unit are calculated in accordance with the operation status of each unit.

(2) The energy used by outdoor units is apportioned to indoor units according to the usage ability of the indoor unit and the total energy used by each indoor unit is calculated for each refrigerant system.

5.2 Charge calculation processing

Electricity charge calculation is processed for the period for each block, based on either the used electricity amount from electricity meter and the unit price, or based on the invoice from the electricity company.

(1) Basic and additional charges

- Apportioned to each block in accordance with the selected apportionment method.
- Apportionment is performed in day units.
- Apportioned between real blocks.
- Not apportioned to common blocks.
- Since charges are not distributed when there are no real blocks, when using basic and additional charges, set an owner block, etc. so that blank period blocks are not generated.

(2) Meter rate charges

- The total energy used by each indoor unit calculated by fixed period processing is accumulated through the calculation period as the total energy used by each block. Indoor units not allocated to a block are integrated as an undefined block.
- Meter rate charges are apportioned to each block in accordance with the proportion of the calculated total energy used by each block.

(3) Common block

- The result of accumulation of meter rate charges above becomes the source of apportionment for common blocks.
- Charges are apportioned to blocks specified as distribution destinations in accordance with the selected apportionment method.
- Apportionment is performed in day units.
- Apportionment is apportioned among real blocks.
- The period when there are no real blocks is integrated at undefined blocks.

6. Cases for which Undefined Blocks are Generated

Cases for which undefined blocks are generated and measures to be taken when you do not want the undefined blocks to be generated, are described below.

(1) When there is an R/C group which belongs to a contract, but is not allocated to a block, its power consumption is apportioned to an undefined block.

To prevent generation of an undefined block

- Allocate all R/C groups to blocks.
- When that is not possible, either allocate it to a common block, or power off the indoor unit and perform re-scan so that it is removed from the electricity charge apportionment object.

(2) When the electricity charges of a common block are to be freely distributed to tenant blocks and the total is not 100%, the power consumption under 100% is apportioned to an undefined block.

- To prevent generation of an undefined block, make sure that the total distributed power consumption is 100%. In addition, when the period of the allocated blocks do not match, an undefined block is generated for periods that do not match.

(3) On the day with no block defined, with just common blocks or with blocks but when some units remain unallocated, those energy consumption are apportioned to undefined blocks.

- To prevent generation of an undefined block, disable the electricity charge apportionment function during that period.

7. Electricity charge apportionment error

Errors and their main causes related to electricity charge apportionment detected by the ECA Tool are described.

(1) Generation conditions

- Generated when a unit that does not send the information necessary for electricity charge apportionment (non-communicating unit) is detected during the period electricity charge apportionment data collection is performed.
  Judgment, performed for the outdoor unit and the indoor unit, is based on whether there is no communication for more than 30 minutes or not.

(2) Processing of errors by the ECA Tool

- Electricity charge apportionment error with the unit address are displayed for the non-communicating unit.
  The generation time and recovery time are recorded in the error history as with the other errors.
- In the electricity charge apportionment calculation, non-communicating unit is handled as follows:
  · Non-communicating indoor unit: Handled the same as an indoor unit whose operation is stopped by a remote controller
  · Non-communicating outdoor unit: When the non-communicating unit is a master unit, since the minimum data necessary for electricity charge apportionment is not collected, apportionment calculation of the relevant refrigerant system is not performed. (Charge becomes “0”.) When a slave unit is the non-communicating unit, calculation is performed as if the slave unit does not exist.
- Whether or not the outdoor unit standby power is apportioned to non-communicating indoor units can be set from the basic setting screen.

(3) Recovery conditions

- When the data necessary for electricity charge apportionment can be acquired from the relevant unit, the electricity charge apportionment error is reset.

(4) Main error generation causes

- Electricity charge apportionment errors are mainly generated when the power breaker of a unit is switched off.
  (Because apportionment data is not sent when the power breaker is switched off.)
  When the power breaker of only part of the units in a refrigerant system is switched off, outdoor unit trouble may occur.
  Therefore, if there is a unit whose power breaker is switched off, quickly recover the power by switching on the breaker.

3-2 Features of electricity charge apportionment

1. Configuration and performance befitting the VRF highest level control/management functions

① Supports VRF Series
- Different series can be mixed at network systems

② Supports up to 64 units TPC and 4 VRF-NW (1600 indoor units).

③ Functional high level interchangeability with other VRF controllers

④ Improvement of electricity charge apportionment function
- The apportionment function has been improved by adopting an electricity charge apportionment calculation method matched to VRF Series refrigerant control.

2. Adaptation for new PC environment

① Operation on Windows 7/8/10, is guaranteed.

3-3 ECA Tool function and composition

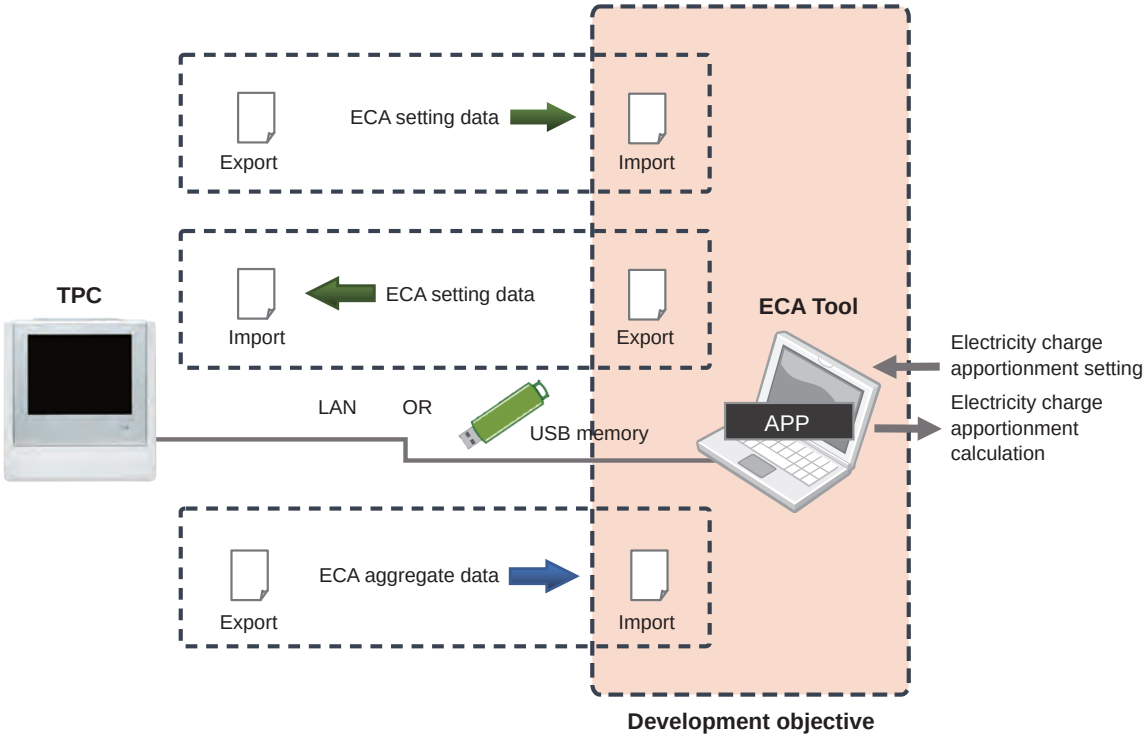
3-3-1 **Functions**

- Up to 20 sites can be created and electricity charge apportionment data can be managed on the ECA tool.
- The TPC electricity charge apportionment data of up to 64 units (for 4-VRF network) per site can be managed.
- The maximum electricity charge apportionment data that can be downloaded and saved from the TPC main unit to the ECA tool is 2 years worth of data.
- Up to 400 contracts per site can be set.
- Contracts spanning the system (VRF network) can be created.
- Contracts spanning multiple TPC can be created.

3-3-2 **Configuration**

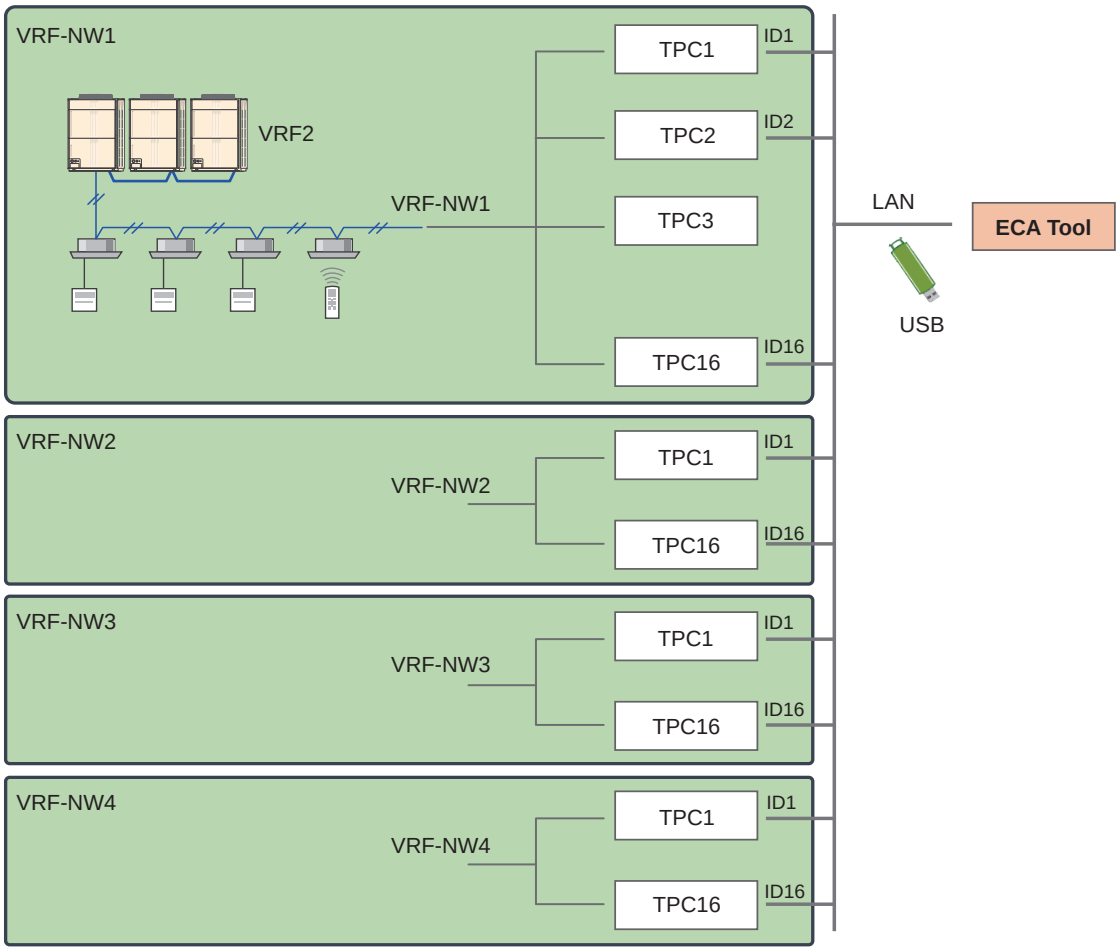
TPC connection diagram

- The ECA Tool exchanges data with a TPC by LAN or USB memory.



[Data transfer with TPC]
Methods: ① LAN connection ② USB memory
Data Format: CSV file

Configuration diagram



Installation

4. Installation

4. Installation

4-1 Installation flow

Installation/setting flow

Installation

4-2-1 Installation notes

↓

4-2-2 Software install
ECA TOOL
Microsoft® .NET Framework
Microsoft® SQL Server®

↓

5 Electricity Charge Apportionment Setting

⚠ WARNING!
ECA Tool is tested to install and operate under new Windows environment. When program executional environment of Windows is corrupted or abnormal, or other softwares that interfere with the operation of ECA Tool is installed or running, ECA Tool may not install or run properly. It is usually extremely difficult to detect such conditions, if it occurs.
ECA Tool product is provided with softwares, drivers, components listed below. If the same kind of softwares, drivers, components with different version is installed on the same PC, ECA Tool may not install or run properly. (1) Microsoft® SQL Server®

4-2 Software installation

4-2-1 **Installation notes**

Before starting the installation of this product, check each of the followings.

- Install Adobe Reader (Ver. 9.0 or later) prior to the installation. (Adobe Reader does not come with this product).
- You are required to login to the computer as Administrator (or equivalent) to the PC to install this product.
- Stop all running programs before you start the installation.
- If Anti-Virus software product is installed, temporarily disable the software during the installation of this product.

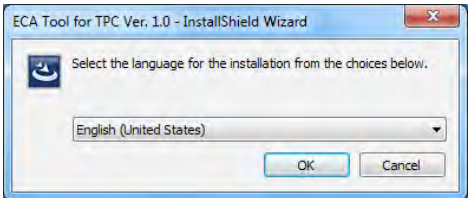
4-2-2 **Software install**

The following software is installed here.

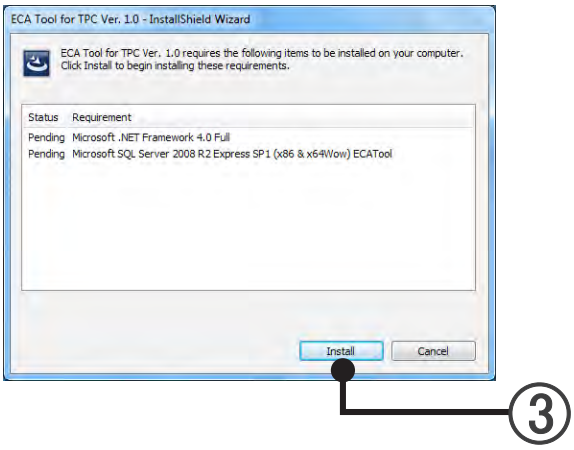
- Microsoft® SQL Server®
- ECA Tool

① Execute setup.exe in the ECA TooL folder on the ECA TooL setup USB memory.

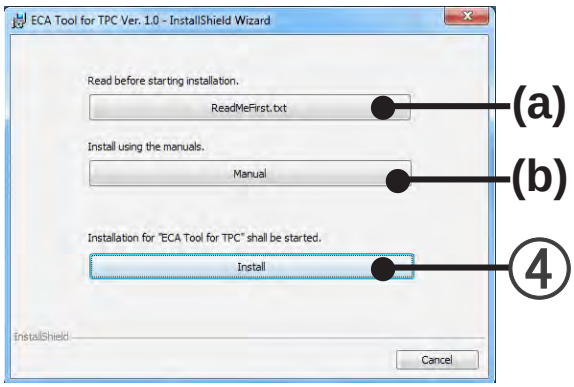
② Select the same language as that of the Windows® (If you select a different language, characters may not be displayed correctly).



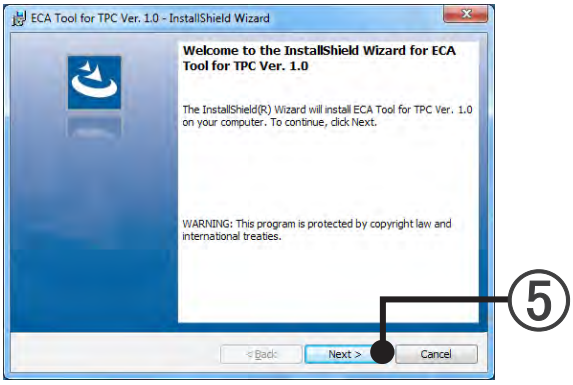
③ Click the [install] button.



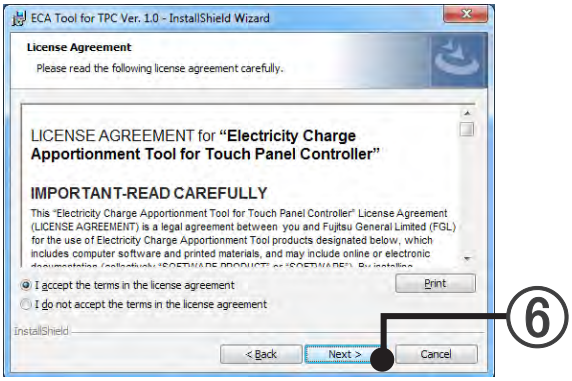
④ When “Install” is selected, installation begins.
(a) When “ReadMeFirst.txt” is selected, ReadMe is displayed.
(b) When “Manual” is selected, the manual is displayed.



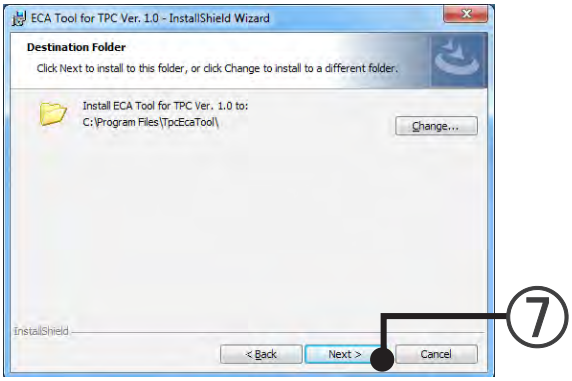
⑤ Install ECA Tool. Click the [Next] button.



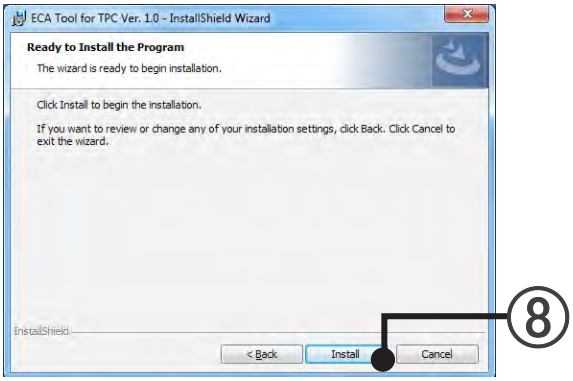
⑥ If the ECA Tool end user “License Agreement” is displayed, confirm the contents.
If you can agree to the terms of the license agreement, check “I accept the terms in the license agreement” and click the [Next] button.



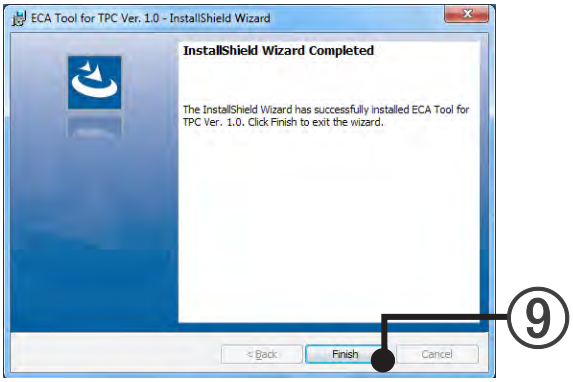
⑦ Specify the installation destination folder and click the [Next] button.



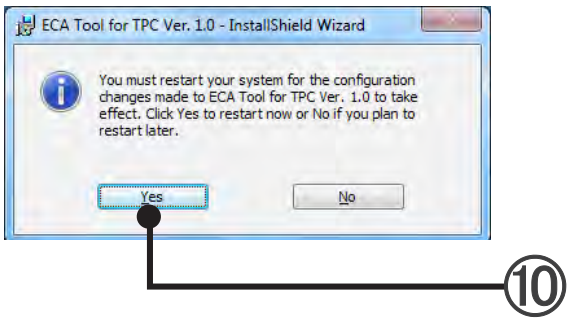
⑧ If the installation setting contents are correct, click the [Install] button.



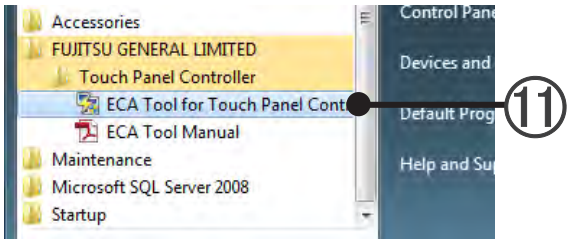
⑨ If this screen is displayed, installation of the ECA Tool for TPC to the PC is complete.
Click the [Finish] button.



⑩ If the Windows® restart confirmation screen opens, click the [Yes] button and restart the server PC.



⑪ ECA Tool starts..
Select “Start” → “All Programs” → “FUJITSU GENARAL LIMITED” → “Touch Panel Controller”→”ECA Tool for Touch Panel Controller”.



⑫ If the “Login Setting” screen opens, perform the initial starting setting.
→ 5-1 ECA Tool starting

Settings

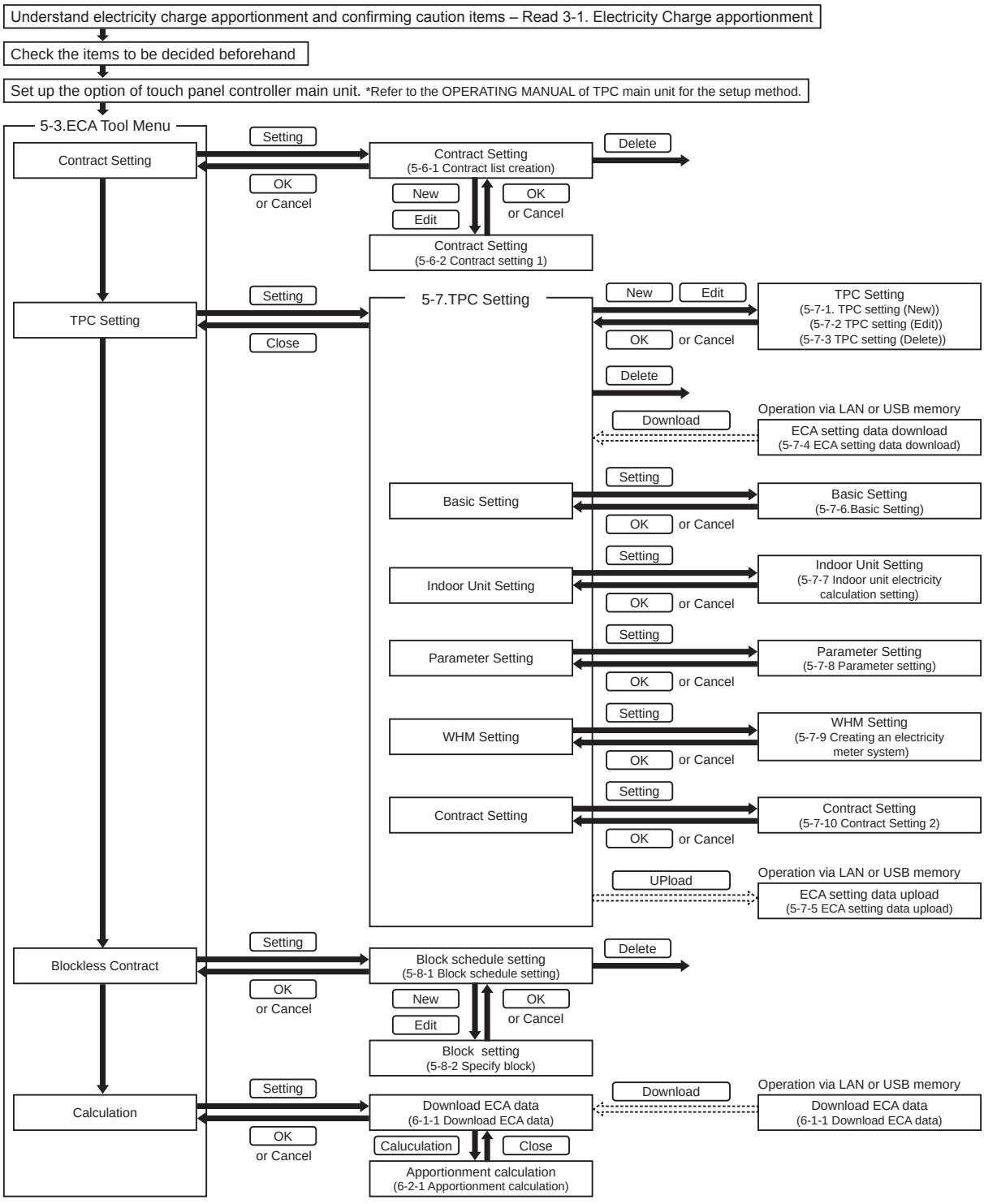
5. Electricity Charge Apportionment Setting

5. Electricity Charge Apportionment Setting

Performs basic settings related to electricity charge apportionment necessary before operation. The settings may also be updated due to facility and tenant changes.
At initial starting after installation, perform setting in accordance with the following flow. For settings and changes after operation starts, perform the necessary settings in accordance with the contents of par. 3-1 and subsequent paragraphs.

Flow at initial setting

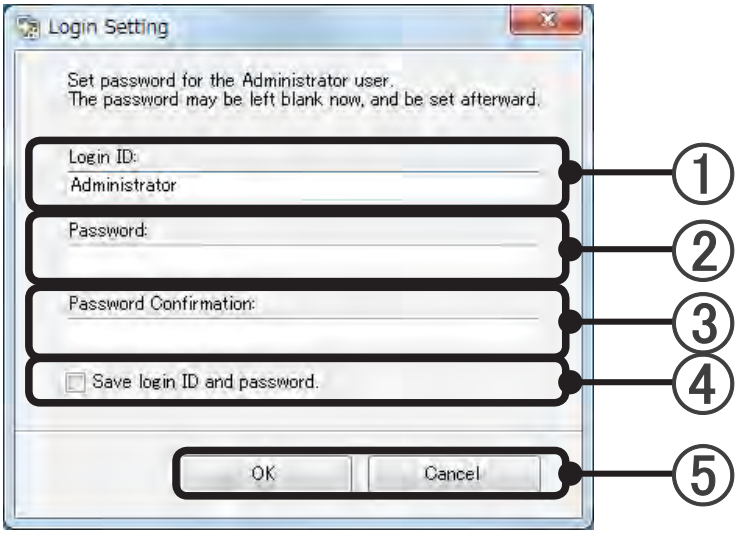
Perform initial setting in accordance with this flow.



5-1 ECA Tool starting

Click the ECA Tool icon.
“Login Setting” screen is displayed. (Initial starting)

Set the password for an initial user.
This initial user has an installer privilege.



① Input the Login ID. (Initial value: Administrator)

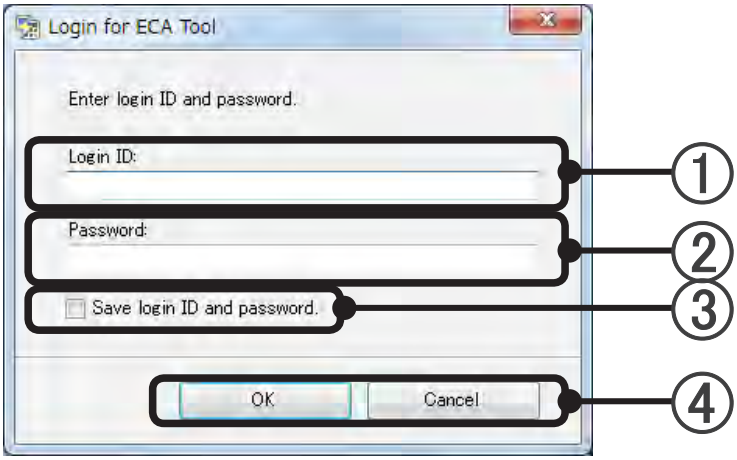
② Input the password.
Blank is also allowed.

③ Re-input the password. (Initial starting only)
When different from the password input at ②, a message is displayed.

④ When “Save login ID and password” is checked, the current ID and password are saved.
When the “Login Setting” screen is displayed thereafter, the saved ID and password are displayed.

⑤ [OK]: Displays the “Site Management” screen.
[Cancel]: Ends the ECA Tool.

“Login for ECA Tool” screen is displayed. (2nd time and thereafter)



① Input the Login ID. (When ③ is checked, the ID is automatically displayed.)

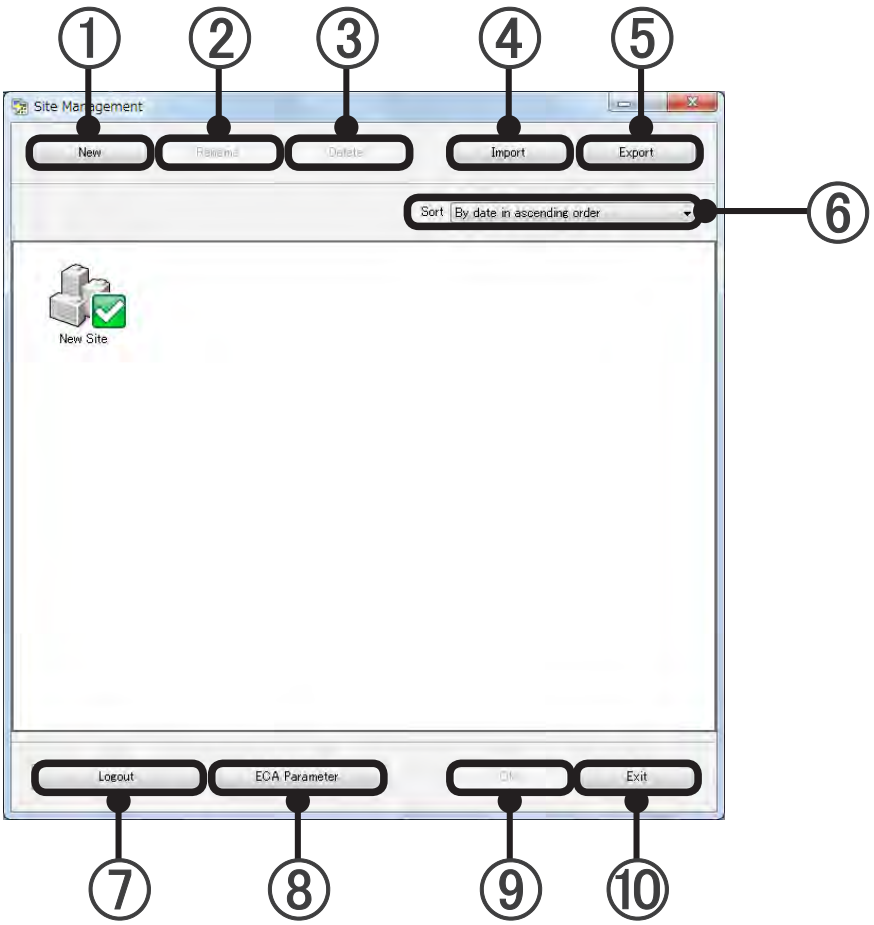
② Input the password. (When ③ is checked, the password is automatically displayed by ****.)

③ When “Save login ID and password” is checked, the current ID and password are saved.
When the “Login Setting” screen is displayed thereafter, the saved ID and password are displayed.

④ [OK]: Displays the “Site Management” screen.
[Cancel]: Ends the ECA Tool.

5-2 Site management

Performs registration, selection (starting), registration deletion, and site data write for multiple sites. (Maximum 20 sites)



① Create new site. (Installer privilege user only) *Refer to user registration for the privilege.
A new site icon is displayed on the “Site Management” screen.
However, this is effective only when the number of registered sites is less than 20. (When the registration reaches 20 sites, the [NEW] button is not displayed and a 21st site cannot be registered.)

② Rename site name (Installer privilege user only)
When a site is selected and the [Rename] button is clicked, the “Site Name Setting” screen is displayed.
Change the site name.
[OK]: Changes the site name and returns to the “Site Management” screen.
[Cancel]: Returns to the “Site Management” screen without changing the site name.

A site without user registration at login cannot be selected.
The name of a selected site (check mark at the icon) cannot be changed.

③ Delete a site (Installer privilege user only)
When a site is selected and the [Delete] button is clicked, the “ID/Password Input” screen is displayed.
When the ID and password are input and the [OK] button is clicked, a confirmation message is displayed.
If the ID and password do not match, an error message is displayed.
[OK]: Deletes the site and returns to “Site Management” screen.
[Cancel]: Returns to the "Site Management" screen without deleting the site.

A site without user registeration at login cannot be selected.
A selected site (check mark at icon) cannot be deleted.

Note

When site data is deleted, all the electricity apportionment setting and electricity apportionment data included in the site are deleted.
Before deletion, recheck if deletion is a problem.

④ Import a site data. (For both installer privilege and administration privilege users)
When the [Import] button is clicked, the “File Selection” screen is displayed.
When a file is specified and the [OPEN] button is clicked, a confirmation message is displayed.
[OK]: Starts processing and displays a done message.
[OK]: Returns to the “Site Management” screen.
[Cancel]: Returns to the “Site Management” screen.

⑤ Export a site data. (For both installer privilege and administration privilege users)
When the [Export] button is clicked, the “Save Destination” screen is displayed.
When a save destination is specified and processing is performed, a confirmation message is displayed.
[OK]: Returns to the “Site Management” screen.
[Cancel]: Returns to the “Site Management” screen.

⑥ Sort Sites by specified order.
Select the site icons sorting condition from the following and rearrange the icons.
Sort condition
By date in ascending order
By date in descending order
By name in ascending order
By name in descending order

⑦ Log out from ECA Tool.
When the [Logout] button is clicked, the “Site Management” screen is displayed.
[OK]: Displays the “Login Setting" screen.
[OK]: Logs in again.
[Cancel]: Ends the ECA Tool.
[Cancel]: Returns to the “Site Management” screen.

⑧ Import unit parameter data.
When the [ECA Parameter] button is clicked, the “Parameter Registration” screen is displayed.
[Import]: Displays the “File Selection” screen.
When a file is specified and the [OPEN] button is clicked, a confirmation message is displayed.
[OK]: Starts processing.
[Cancel]: Returns to the “Parameter Registration” screen.
[Close]: Returns to the “Site Management” screen.

Note

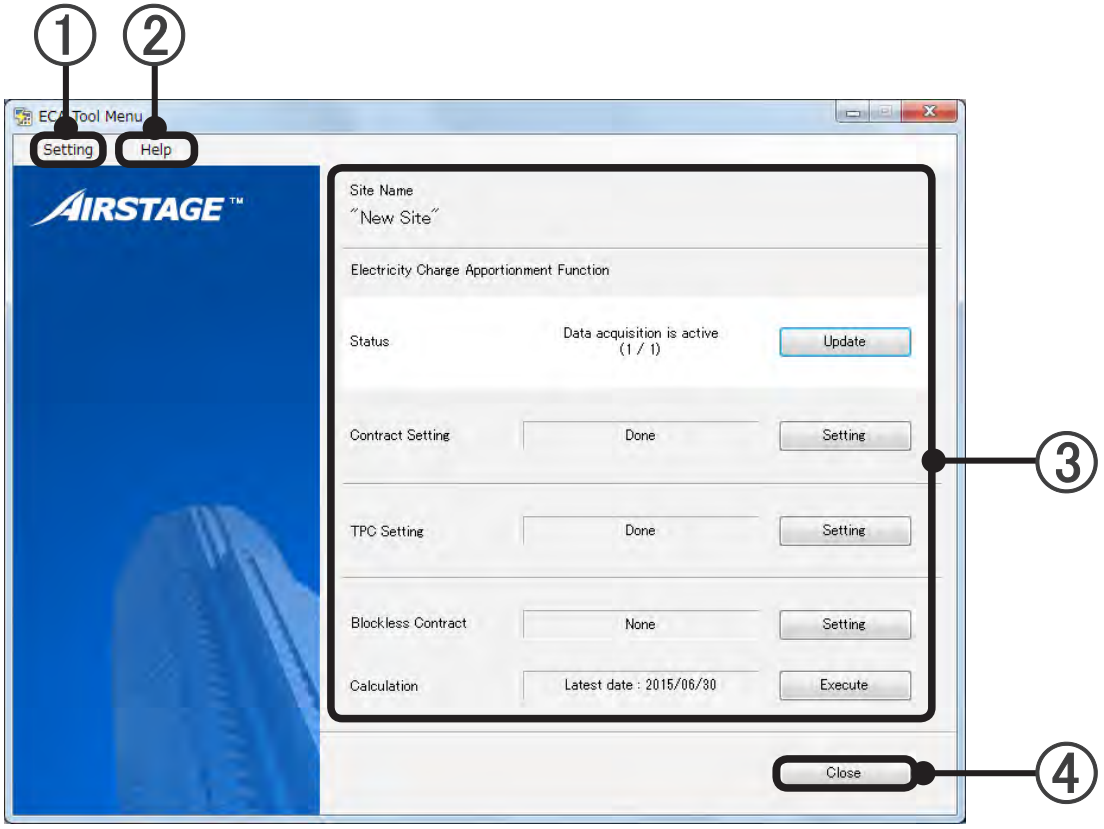
- Update the parameter definition file in accordance with the service staff instructions.
- When electricity charge apportionment of a newly released unit is attempted, the ECA Tool parameter definition file may have to be updated.
  Depending on circumstances, follow the instructions of the service staff because program updating of the TPC main unit may also be necessary.
- When the ECA Tool parameter definition file cannot be updated, the ECA Tool version may be old.
  In such cases, since the newest version ECA Tool must be installed, following the instructions of the service staff.

⑨ [OK]: Open the ECA Tool Menu.
Enabled when a site is selected.

⑩ Exit from the ECA Tool.
When [EXIT] button is clicked, a confirmation screen is displayed.
[OK]: Ends the ECA Tool.
[Cancel]: Returns to “Site Management” screen.

5-3 ECA Tool menu

When setting is performed sequentially from the top of the main menu of the ECA Tool, apportionment setting can be performed.
Displays whether each item is done or not until ECA calculation is performed.



① Setting
When [User Registration] is selected, user registration, change, and deletion can be performed. (See par. 5-4 User registration and setting.)
When [Site Environment Setting] is selected, site environment setting can be performed. (See par. 5-5 Site environment setting.)

② Help
When [Version] is selected, version can be confirmed at the splash screen.
When the displayed screen is clicked, the splash screen disappears.
When [Manual] is selected, this manual is displayed.

③ Display items

Display item	Description
Site name	Displays the selected site name.
Status	When there is the TPC connected by LAN, displays the apportionment data collection status (Whether or not the collection is normal). When the [Update] button is clicked, acquires the data from all the TPC connected by LAN registered at the site and updates the Status information.
Contract Setting	Displays whether or not contract setting on the site is complete. When contract setting of all TPC is complete, “Done” is displayed. When contract setting of any of the TPC is not complete, “Setting is necessary” is displayed. When the [Setting] button is clicked, “Contract list” screen is displayed. (See par. 5-6-1Contract list creation.)
TPC Setting	Displays whether or not ECA setting is complete for all the registered TPC. When ECA setting is complete for all the TPC, “Done” is displayed. When ECA setting of any of the TPC is not complete, "Setting is necessary" is displayed. When the [Setting] button is clicked, “TPC Setting” screen is displayed. (See par. 5-7 TPC setting.)
Blockless Setting	When there are unset block contracts, the number of unset contracts is displayed. (Setting may be forgotten.) When there are no unset block contracts, “None” is displayed. When the [Setting] button is clicked, “Block Schedule” screen is displayed. (See par. 5-8-1Block schedule setting.)
Calcuration	Displays the last acquired date and time of apportionment data. Displays the acquired date and time of latest data and enables the [Execute] button. When there is no data, “No Data” is displayed. When [Execute] button is clicked, “Download ECA Data” screen is displayed. (See par. 6-1 Download ECA data.)

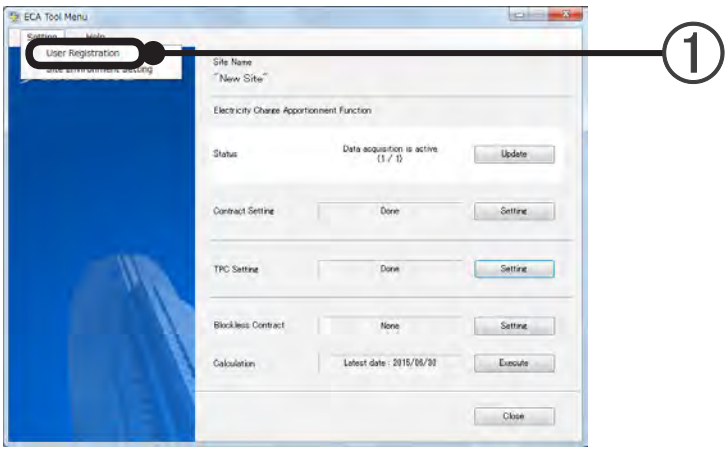
④ Close

When [Close] button is clicked, returns to the “Site Management” screen.

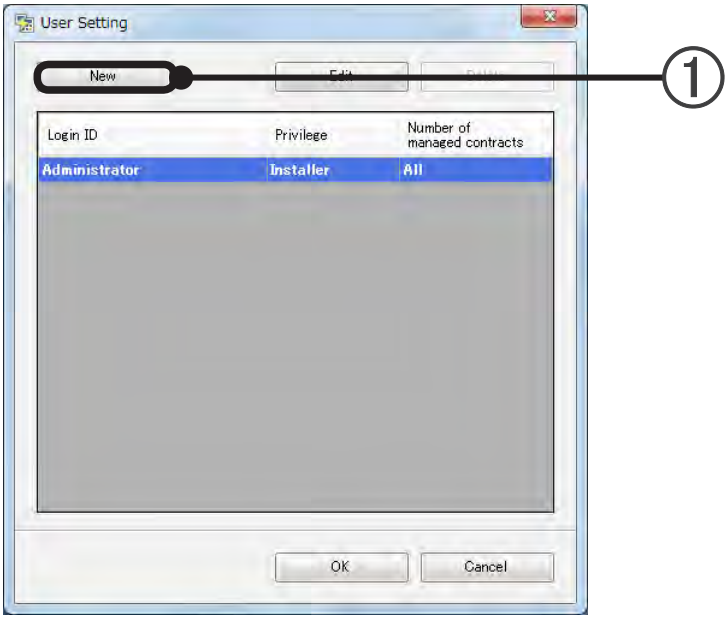
5-4 User registration and setting

Performs user setting (registration, administration privilege setting).
Allocates the managed contract for each user.

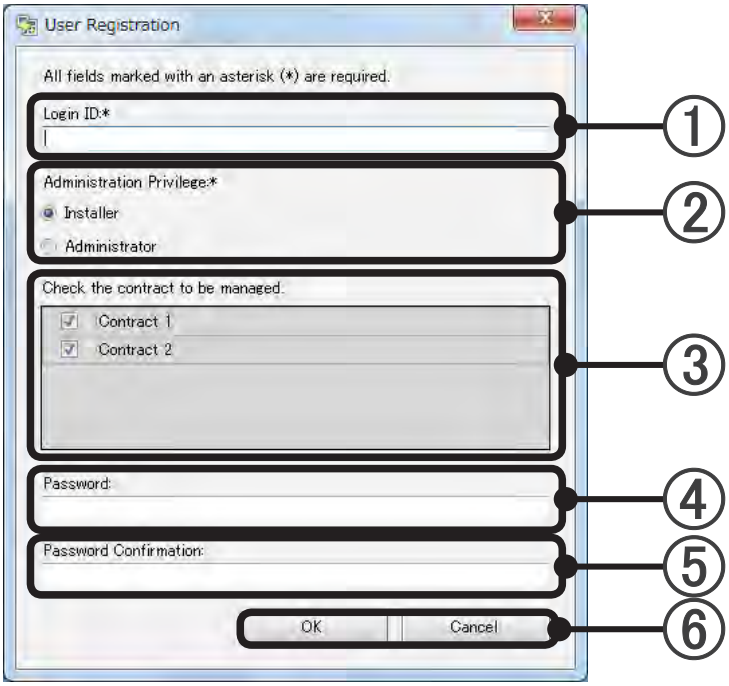
5-4-1 **User setting (New)**



① Select “ECA Tool Menu” → “Setting” → “User Registration”.
“User Setting” screen is displayed.
“Setting” is displayed only when logged in by Installer.



① Click the [New] button to display the “User Registration” screen.



① Input the Login ID.

② Select the adminstration privilege. (Default: “Installer”)

Note

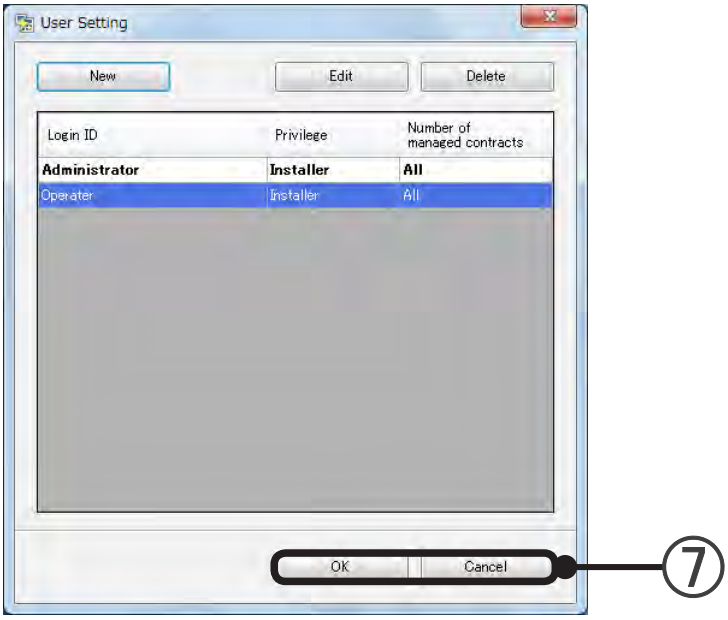
There is “Installer” privilege and “Administrator” previlege at adminstration privilege.
Installer privilege allows all operations including electricity charge apportionment setting.
Administration privilege only allows the apportionment calculation.
Care is necessary when assigning a privilege because the calculation result of electricity charge apportionment differs depending on the set value.
Set a suitable privilege corresponding to the user.

③ Check the contracts managed by the user from the contract list.
When a contract is not set, a message is displayed. Set a contract and perform user registration again.
A contract cannot be checked when “Installer” is selected at ②.

④ Input the password.
Blank is also allowed.

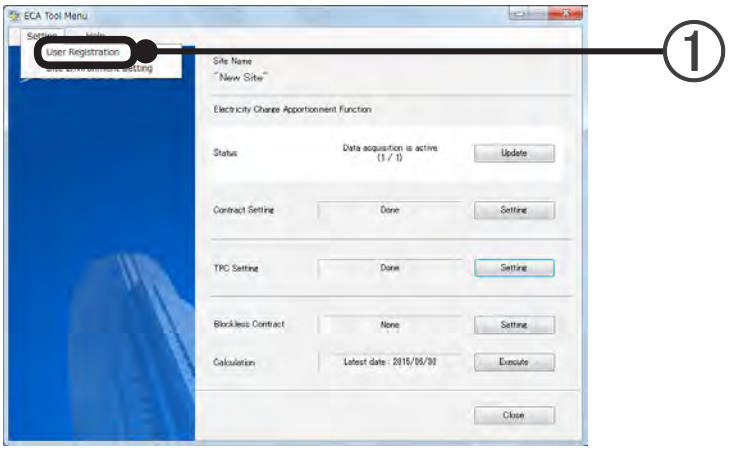
⑤ Input the password again.
When the password is different from the password input at ④, a message is displayed.
Input the correct password.

⑥ [OK]: Saves the setting and ends operation and returns to the “User Setting” screen.
[Cancel]: Returns to the “User Setting” screen without saving the setting.

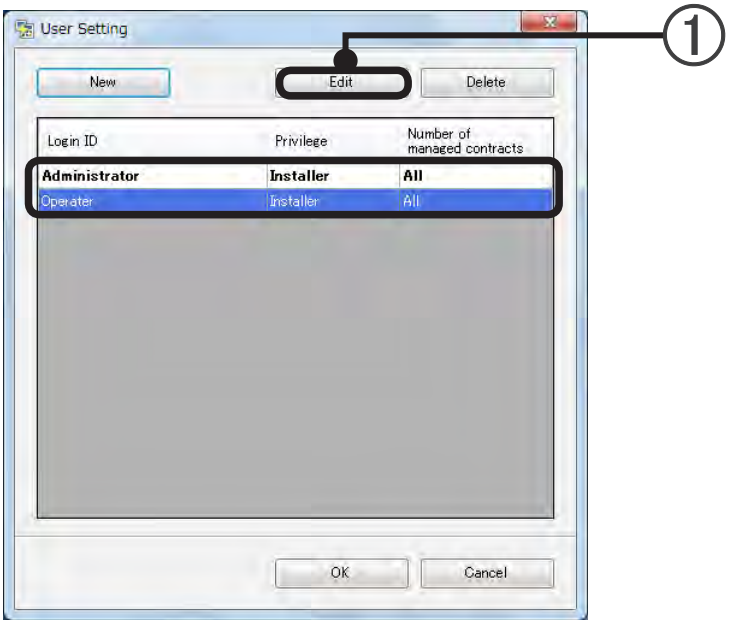


⑦ [OK]: Displays a confirmation message.
[OK]: Saves the setting and returns to the “ECA Tool Menu” screen.
[Cancel]: Returns to the “User Setting” screen.

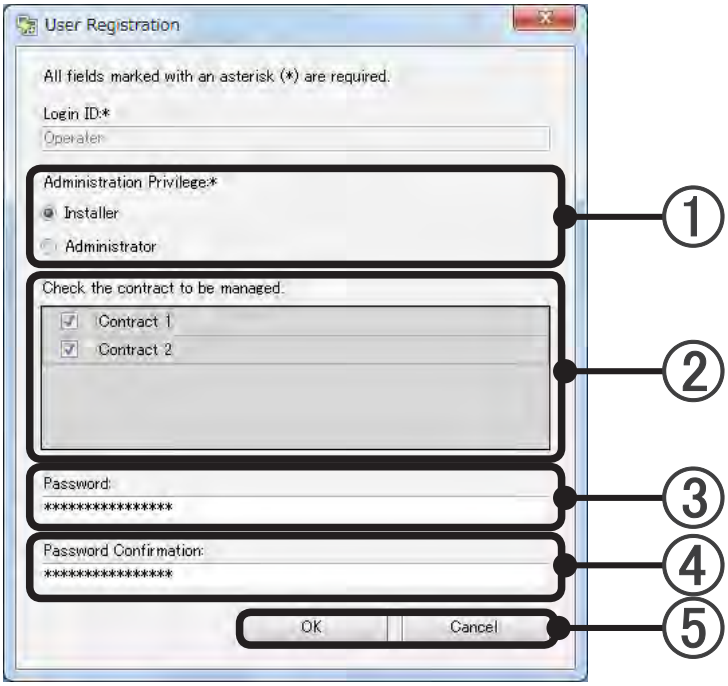
[Cancel]: Returns to the “ECA Tool Menu” screen.
When a new user registration is performed, a confirmation message is displayed.
[OK]: Returns to the “ECA Tool Menu” screen without saving the setting.
[Cancel]: Returns to the “User Setting” screen.



① Select “ECA Tool Menu” → “Setting” → “User Registration”.
“User Setting” screen is displayed.



① Select the user to be edited and click the [Edit] button.
“User Registration” screen is displayed.
However, only password can be edited for the user currently logged in.



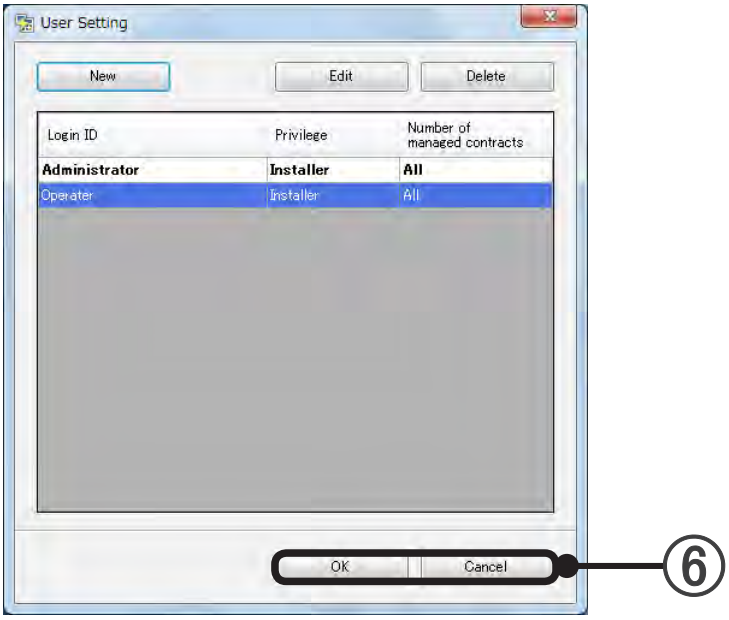
① Select the adminstration privilege. (Default: “Installer”)

② Check the contracts to be managed by the user from the contact list.
When a contract is not set, a message is displayed. Set a contract and perform user registration again.
A contract cannot be checked when “Installer” is selected at ①.

③ Input the password.
Blank is also allowed.

④ Input the password again.
When the password is different from the password input at ③, a message is displayed.
Input the correct password.

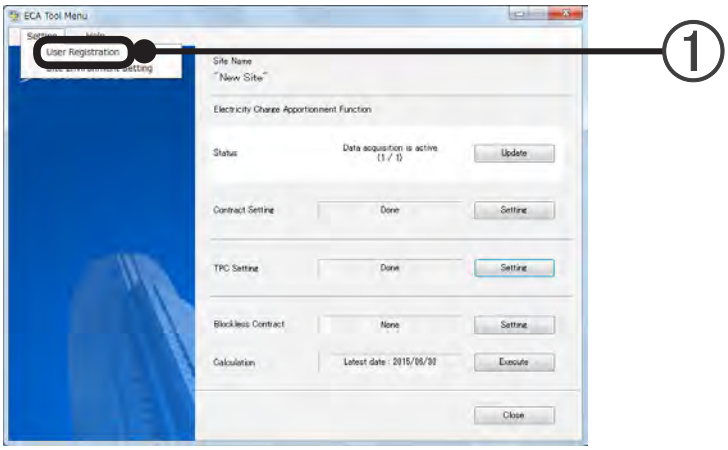
⑤ [OK]: Saves the setting and returns to the “User Setting” screen.
[Cancel]: Returns to the “User Setting” screen without saving the setting.



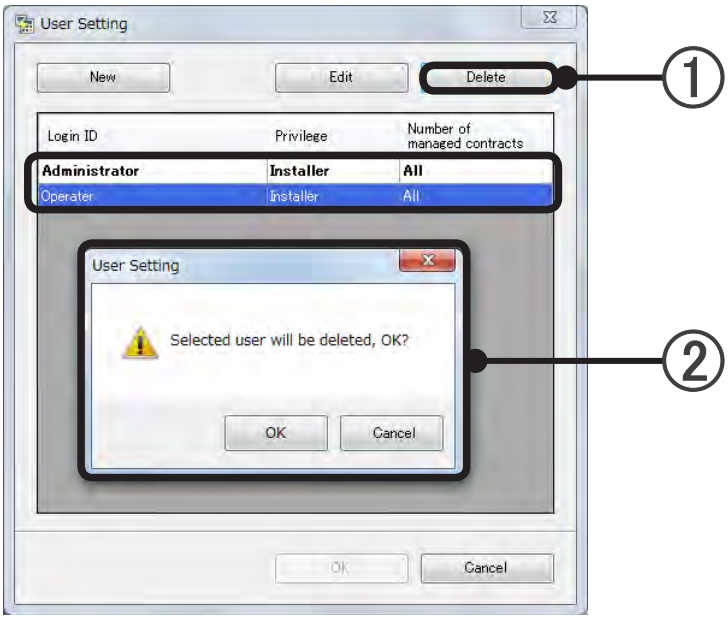
⑥ [OK]: Displays a confirmation message.
[OK]: Saves the setting and returns to the “ECA Tool Menu” screen.
[Cancel]: Returns to the “User Setting” screen.

[Cancel]: Returns to the “ECA Tool Menu” screen.
When the setting was changed, a confirmation message is displayed.
[OK]: Returns to the “ECA Tool Menu” screen without saving the setting.
[Cancel]: Returns to the “User Setting” screen.

5-4-3 **User setting (Delete)**

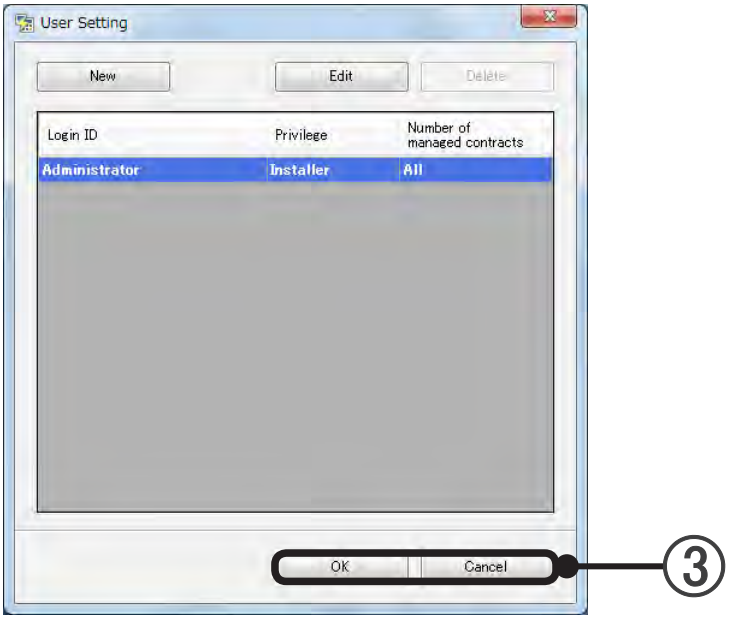


① Select “ECA Tool Menu” → “Setting” → “User Registration”.
“User Setting” screen is displayed



① When the user to be deleted is selected and the [Delete] button is clicked, a confirmation message is displayed.
However, the currently logged in user cannot be deleted.

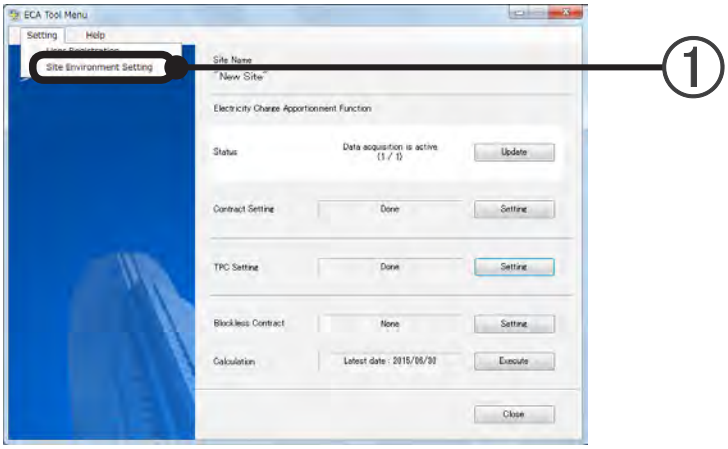
② [OK]: Deletes the appropriate user and returns to the “User setting” screen.
[Cancel]: Returns to the “User setting” screen without deleting the appropriate user.



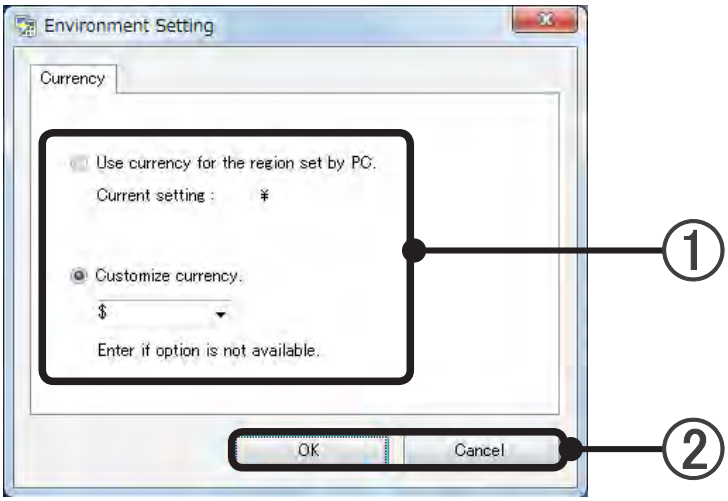
③ [OK]: Displays a confirmation message.
[OK]: Saves the setting and returns to the “ECA Tool Menu” screen.
[Cancel]: Returns to the “User Setting” screen.

[Cancel]: Returns to the “ECA Tool Menu” screen.
When a user was deleted, a confirmation message is displayed.
[OK]: Returns to the “ECA Tool Menu” screen without saving the setting.
[Cancel]: Returns to the “User Setting” screen.

5-5 Site environment setting



① Select “ECA Tool Menu” → “Setting” → “Site Environment Setting”.
“Environment Setting” screen is displayed



① Currency symbol setting

When setting the currency sybmol from OS region setting
Check “Use currency for the region set by PC”.

When you want to select the currency symbol
Check “Customize currency” and select the currency symbol from the combo box or input it manually.

② [OK]: Saves the setting and returns to the “ECA Tool Menu” screen.
[Cancel]: Returns to the “ECA Tool Menu” screen without saving the setting.

5-6 Contract setting

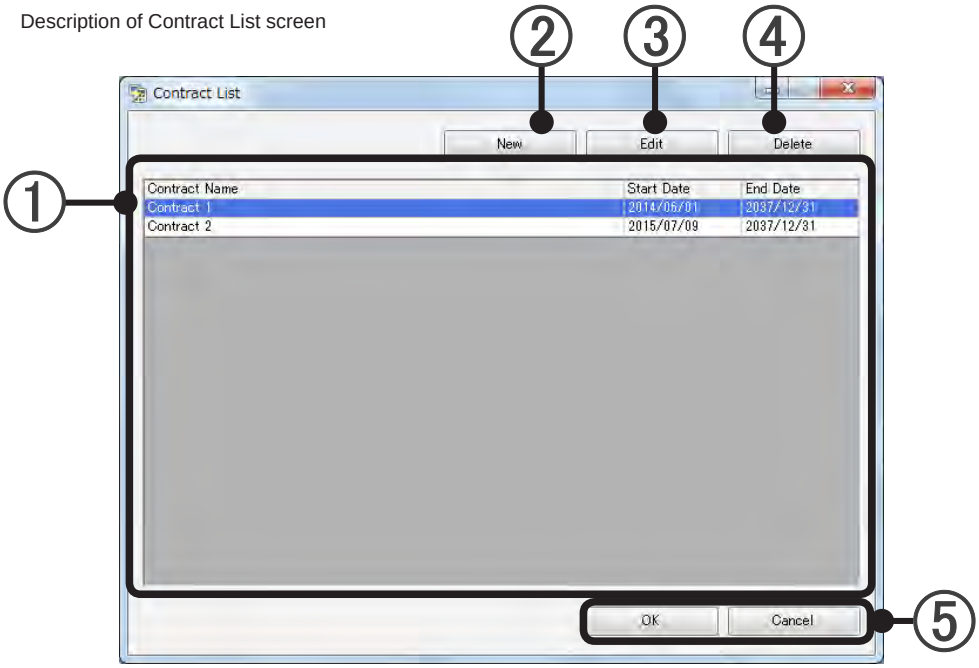
Overview of contract

- Performs data acquisition at which the scan unit becomes the apportionment objective.
- Create a contract either for each invoice from the electricity company (invoice to be apportioned), or in units in which the apportionment calculation is to be carried out.
- Create blocks (become the bill output unit of the apportionment function) in the contract
- One refrigerant system cannot be set to span multiple contracts

5-6-1 Contract list creation

To display this screen, click the [Setting] button of the “Contract Setting” item on the ECA Tool Menu screen. On this screen, you can create contracts as many as contracts with electricity companies. The electricity charge apportionment is calculated for each contract which is created here.

Description of Contract List screen



① Lists set contracts and contract periods.

② Creates and adds new contract setting. (See par. 5-6-2.)

③ Changes the contract setting selected at ①. (See par. 5-6-2.)

④ Deletes the contract setting selected at ①.
Block settings in this contract are simultaneously deleted.

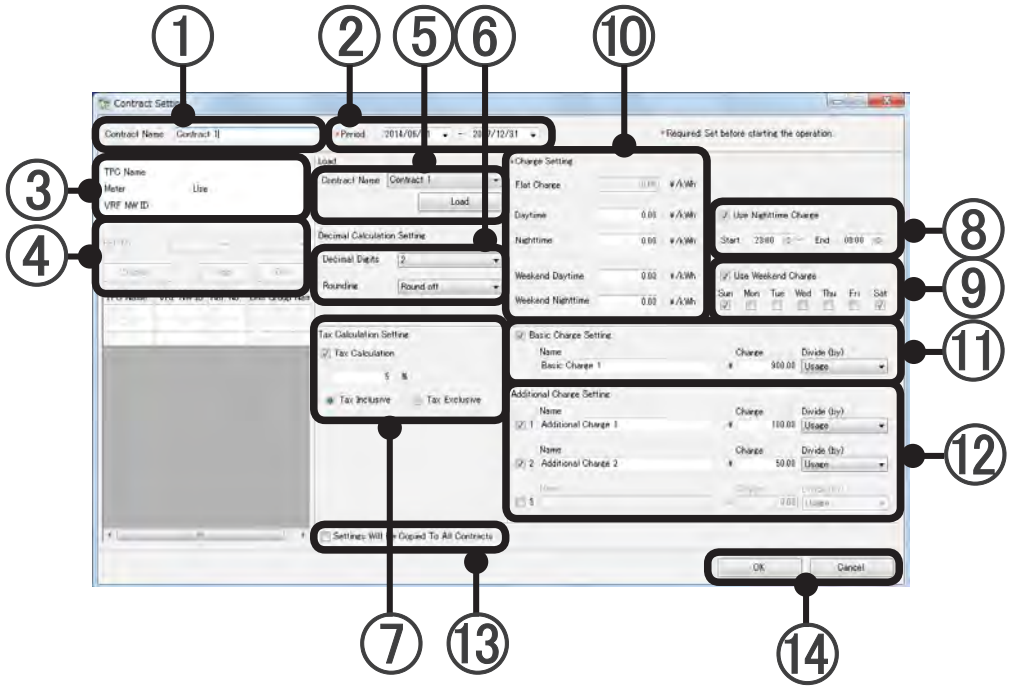
⑤ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.

5-6-2 **Contract setting 1**

At the ECA Tool, contract setting screen is divided into 2 setting.
The contact contents are set at this screen.
At the ECA Tool, contracts spanning TPC can be set.
For this reason, the contract contents are set first so that TPC having the same attributes (for example, TPC that uses a meter) can be registered.

Registration of the refrigerant system making up the contract is performed by par. 5-7-10 Contract Setting 2.

Performs setting for each contract created at par. 5-6-1.
To display this screen, click the [New] button or [Edit] button at par. 5-6-1 Contract list creation.



① Inputs and edits the name of the contract. (Within 20 characters of alphabet, numeric, and symbol)

② Contract start and end dates setting. (Calendar is opened by pull-down menu. Key input is also possible.)

③ TPC Information (to be set later)

④ Refrigerant system setting (to be set later)

⑤ The contents of items ⑥ to ⑫ can be used in contracts which have already been set.
Select the contract name to be referenced by pull-down menu and load it using the [Load] button.

⑥ Sets the number of display digits after the decimal point. (Calculation is performed at this setting.)
- Number of digits after the decimal point which is displayed. Select by pull-down menu. (0 to 5)
- Method of rounding of fractions below the display. Select by pull-down menu. (Round off, count fractions as one, truncate)

⑦ Tax calculation setting. Enabled when checkbox is checked.
Input the tax rate at the text box. (0~99.99)
Selects whether the amount of the calculated result is to be handle “Tax inclusive” or “Tax exclusive”.
When the billed amount includes the tax, select “Tax inclusive” and when the tax is separate, select “Tax exclusive”.

⑧ Nighttime charge setting. Set when the electricity charge unit price is different in the daytime and at nighttime.
Enabled when checkbox is checked.
Set the start time and end time of the time frame corresponding to nighttime charge. (Set in 30 minutes units and evening of current day to morning of next day)
When performing nighttime setting, complete the setting before the start of electricity charge apportionment data collection.
TPC collects the electricity charge apportionment data while referencing the set value.
When setting is not complete before the start of data collection, nighttime setting is not considered in calculation.

⑨ Weekend charge setting. Set when the electricity charge unit price is different on weekdays and weekends.
Enabled when checkbox is checked.
Select the day of week corresponding to weekend charge. (Multiple days can be selected)
When performing weekend setting, complete the setting before the start of electricity charge apportionment data collection.
TPC collects the electricity charge apportionment data while referencing the set value.
When setting is not complete before the start of data collection, weekend setting is not considered in calculation.

⑩ Configure the unit price for each item.

⑪ Basic charge setting. Enabled when checkbox is checked.
“Name”: An arbitrary name can be set. (Within 20 characters of alphabet, numeric, and symbol)
“Charge”: Inputs the basic charge. (Numeric only within 11 digits. Can be changed during calculation)
* Input up to the number of digits after the decimal point set at ⑥.
“Divide”: Select the charge distribution method by pull-down menu. (Equal distribution, distribution according to number of units, distribution by amount of electricity used, distribution according to total indoor unit capacity)

⑫ Additional charge setting. Up to 3 additional charges can be set. Enabled when checkbox is checked.
Perform input sequentially, beginning from additional charge 1.
“Name”: An arbitrary name can be set. (Within 20 characters of alphabet, numeric, and symbol)
“Charge”: Inputs the additional charge. (Numeric only within 11 digits. Can be changed during calculation)
* Input up to the number of digits after the decimal point set at ⑥.
“Divide”: Select the additional charge distribution method by pull-down menu. (Equal distribution, distribution according to number of units, distribution by amount of electricity used, distribution according to total indoor unit capacity)

⑬ When checked and [OK] is clicked, items ⑥ to ⑫ are made the same setting for all the contracts.

⑭ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.

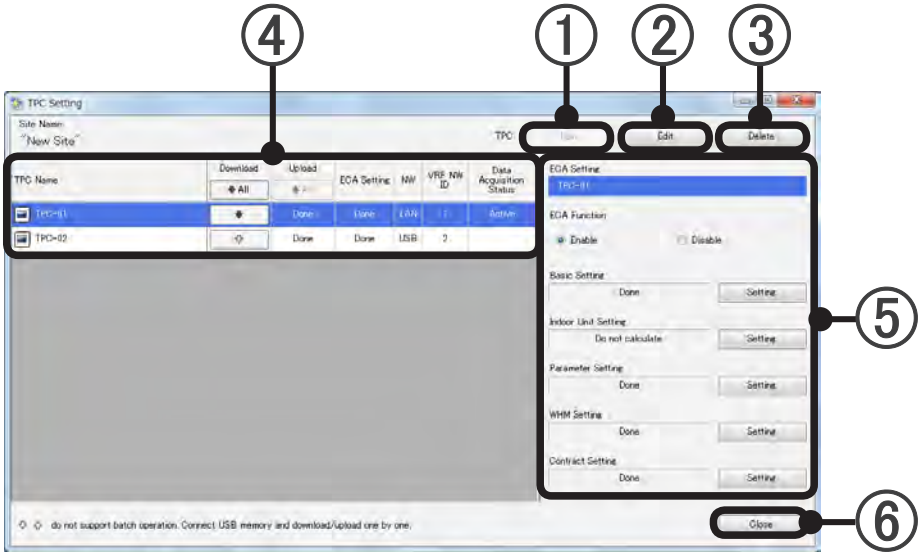
Note

At contract addition, change or end, finish setting up to the relevant date.
If changes are made later, correct calculation will not be performed.
You cannot calculate the start day of data collection.
Do not add/remove outdoor/indoor unit during contract period.
IF you need to do so, end the contract and define a new contract.
Set Basic Charge to the basic amount charged by the electricity company, if there is a basic charge.
If there is no basic charge, you do not need to set this.

5-7 TPC setting

Displays the ECA setting status of each TPC.
Downloads the scan data and ECA setting data from the TPC and uploads the ECA setting data to the TPC.

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.



① Registers a new TPC. (See par. 5-7-1 TPC Setting (New) for the registration method.)

② Changes TPC setting contents already registered. (See par. 5-7-2 TPC Setting (Edit) for the change method.)

③ Deletes a registered TPC. (See par. 5-7-3 TPC Setting (Delete) for the deletion method.)

④ Display items

Display item	Description
TPC Name	Displays the TPC name set at the “TPC Setting” screen.
Download	Downloads the ECA setting data. (Downloading of scan data and ECA setting data from TPC) See par. 5-7-4 ECA Setting Data Download.
Upload	Uploads the ECA setting data. (Uploads the ECA setting data to the TPC.) Enabled only when ECA setting data was changed. See par. 5-7-5 ECA Setting Data Upload.
ECA Setting	Displays whether the ECA function is enabled or disabled and if each setting is complete. When enabled and each setting is complete, “Done” is displayed. When disabled or even 1 setting is not complete, “Necessary” is displayed.
N.W.	Displays the connection configuration. When NW connection is specified at the “TPC Setting” screen, “LAN” is displayed and when not specified, “USB” is displayed.
VRF NW ID	Displays the NW ID set at the “TPC Setting” screen.
Data Aquitition Status	Displays the status based on the information acquired from the TPC. When there is a function, “Active”, “Not Active”, or “-” is displayed. When there is no function or USB memory is connected, the display is blank.

⑤ Display items

Display item	Description
ECA Setting	Displays the selected TPC name.
ECA Function	Sets electricity charge apportionment function enable or disable. (Initial value: Disable) When “Enable” is selected, the status indicators and the setting buttons below are enabled. When “Disable” is selected, the status indicators and the setting buttons below are disabled.
Basic Setting	When setting is complete, “Done” is displayed. When the [Setting] button is clicked, the “Basic Setting” screen is displayed. (See par. 5-7-6 Basic Setting.)
Indoor Unit Setting	The display is divided into 3 shown below depending on the calculating method of power consumption selected by setting screen. When “Include All Indoor Units Into The Calculation” is selected, “Calculate for all units” is displayed. When “Exclude All Indoor Units From The Calculation” is selected, “Do not calculate” is displayed. When “Select For Each Refrigerant System” is selected, “Custom setting” is displayed. When the [Setting] button is clicked, the “Indoor Unit Setting” screen is displayed. (See par. 5-7-7 Indoor Unit Electricity Calculation Setting.)
Parameter Setting	Displays the parameters setting state. When setting is complete, “Done” is displayed. When setting is not complete, “Setting is necessary” is displayed. When the [Setting] button is clicked, the “Parameter Setting” screen is displayed. (See par. 5-7-8 Parameter Setting.)
WHM Setting	Setting is possible only when “Use Electricity Meter” is selected at the “Basic Setting” screen. Displays the electricity meter system setting state. When setting is complete, “Done” is displayed. When setting is not complete, “Setting is necessary” is displayed. When the [Setting] button is clicked, the “Electricity Meter Zone Setting” screen is displayed. (See par. 5-7-9 Creating an Electricity Meter System.)
Contract Setting	Setting is possible only when “Use Electricity Meter” is selected at the "Basic Setting" screen. Displays the contract setting state. When setting is complete, “Done” is displayed. The refrigerant system belonging to the currently selected TPC must be registered at one or more arbitrary contracts. When setting is not complete, “Setting is necessary” is displayed. When the [Setting] button is clicked, the “Contract Setting” screen is displayed. (See par. 5-7-10 Contract Setting 2.)

⑥ When the [Close] button is clicked, the display returns to the “ECA Tool Menu” screen.
When a setting was changed and the [Close] button is clicked before uploading, a confirmation message is displayed.

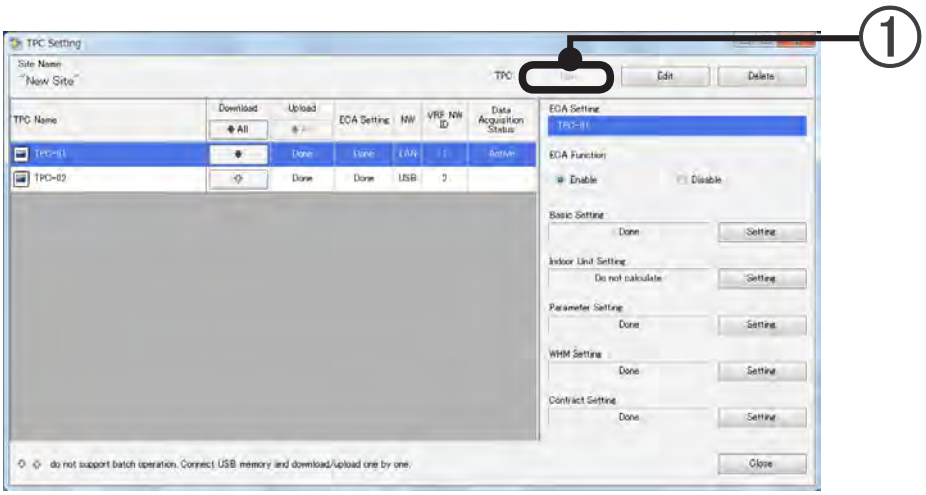
[OK]: Returns to the “ECA Tool Menu” screen without saving the setting data

[Cancel]: Returns to the “TPC Setting” screen.

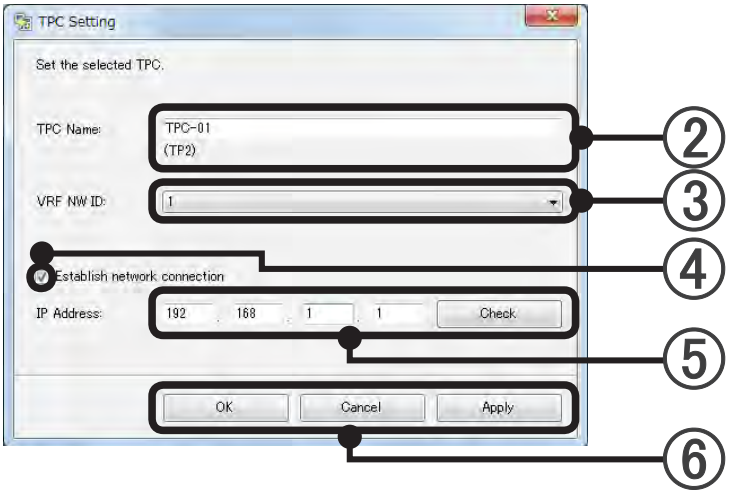
5-7-1 **TPC setting (New)**

Performs management setting of TPC on this Tool.

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.



① When the [NEW] button is clicked, the “TPC Setting” screen is displayed.
Up to 64 units can be set. When up to 64 units is set, the button is disabled.



② Sets the TPC name. (Input is necessary)
All characters can be input. (Alphabetic, numeric, symbols, multilingual)
Up to 24 characters can be input. (Maximum 24 characters whether half size or full size)

③ Selects the VRF network ID. (1 to 4)
4 VRF networks can be selected.

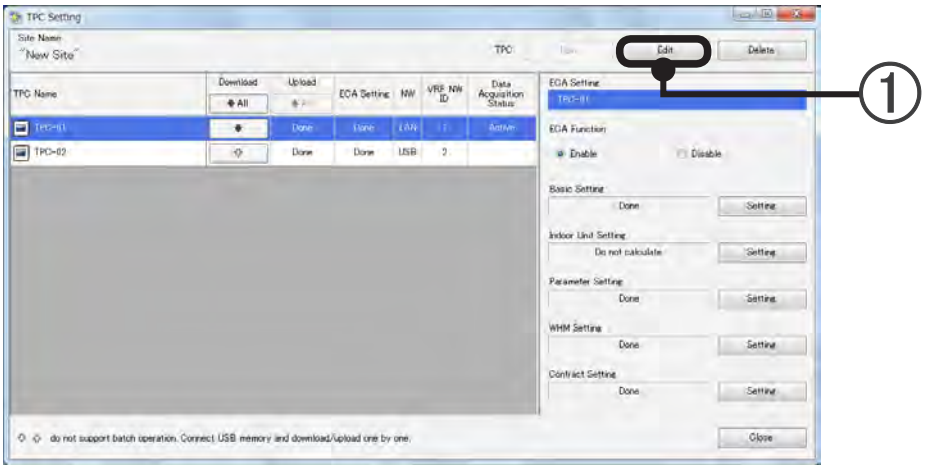
④ When “Establish network connection” is checked, the “IP Address” can be input.

⑤ Input an IP Address and click the [Check] button to connect to TPC.
When connection was successful, the message “(TPC name) Connection succeeded.” is displayed.
[OK]: Returns to the “TPC Setting” screen.
When connection failed, the message “(TPC name) Connection failed.” is displayed.
[OK]: Returns to the “TPC Setting” screen.
Check if the IP Address is not wrong.

⑥ [OK]: Saves the setting contents and returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen without saving the setting contents.
When a setting was changed, a confirmation message is displayed.
[OK]: Returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen.
(When [Apply] was performed during work, it cannot be canceled by [Cancel].)
[Apply]: Saves the setting contents.

5-7-2 **TPC setting (Edit)**

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.



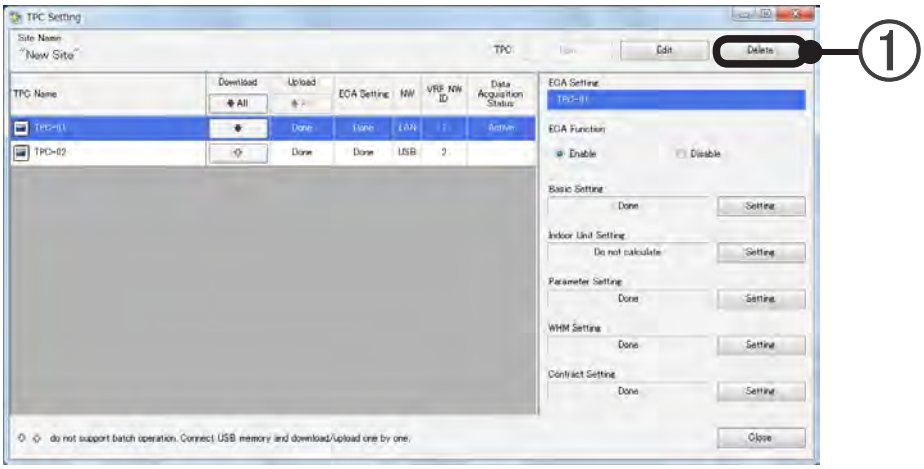
① When the TPC to be edited is selected and the [Edit] button is clicked, the “TPC Setting” screen is displayed.

② Changes the appropriate item.

③ [OK]: Saves the setting contents and returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen without saving the setting contents.
When a setting was changed, a confirmation message is displayed.
[OK]: Returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen.
(When [Apply] was performed during work, it cannot be canceled by [Cancel].)
[Apply]: Saves the setting contents.

5-7-3 **TPC setting (Delete)**

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.



① When the TPC to be deleted is selected and the [Delete] button is clicked, a message is displayed.

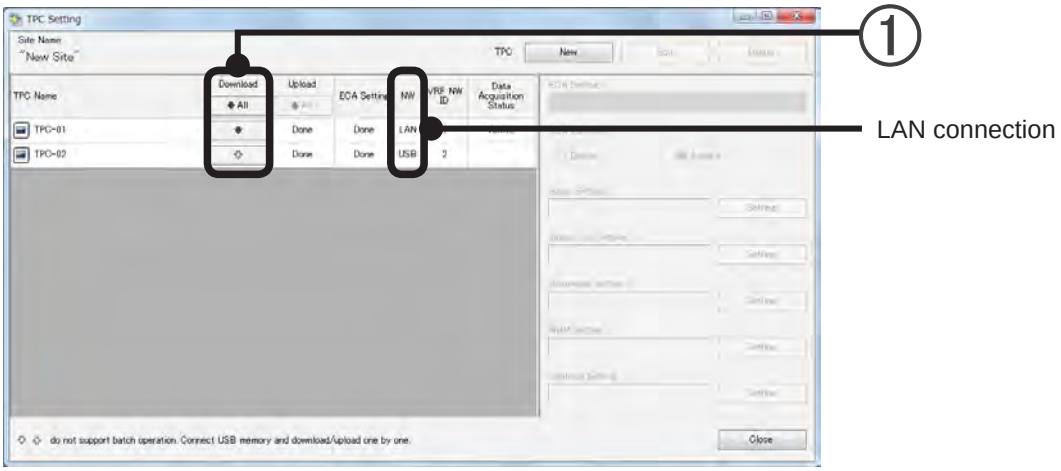
[OK]: Deletes the TPC and returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen.

5-7-4 **ECA setting data download**

Downloads the scan data and ECA setting data from the TPC.
When not downloaded even once at the selected TPC the setting name, setting status, and setting button of all the items (ECA Function to Contract Setting) are disabled.

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.

In the case of LAN connection

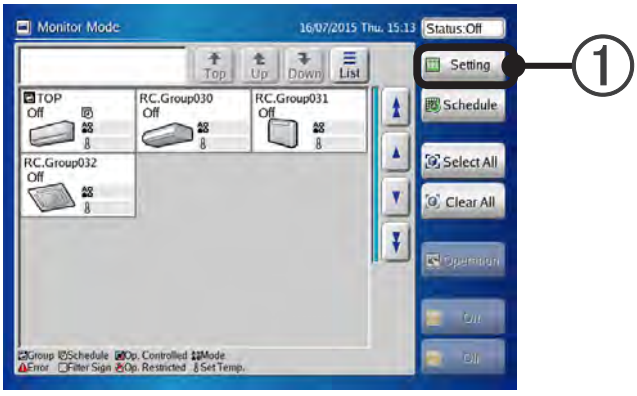


① When the [⬇ ALL] button or [⬇] button is clicked, a confirmation message is displayed.
[OK]: Displays the Download screen and starts processing.
When the [Stop] button is clicked or communication fails during processing, an error message is displayed.
[OK]: Returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen.

In the case of USB memory connection

In the case of USB memory connection, data must be acquired from the TPC main unit.

TPC main unit operation

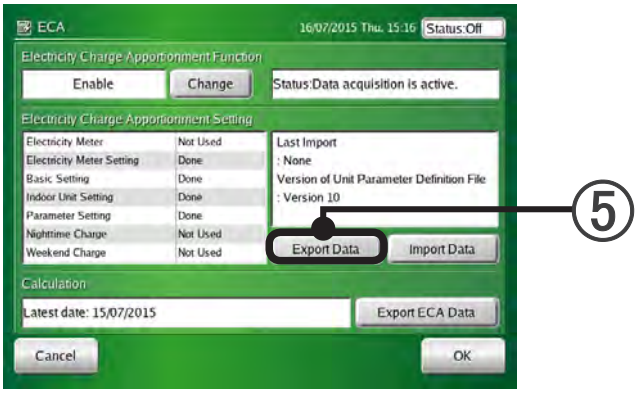


① Touch the [Setting] button.

② Touch the [System Setting] button.

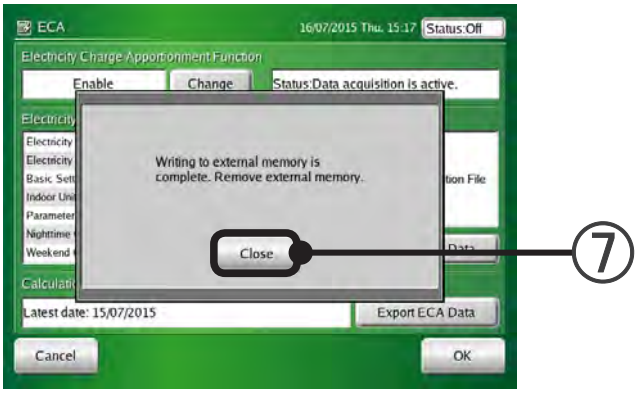
③ Touch the [Next Page] button.

④ Touch the [ECA] button.
When the button is not displayed, setup is not complete.
Refer to the TPC main unit OPERATING MANUAL for the setup method.



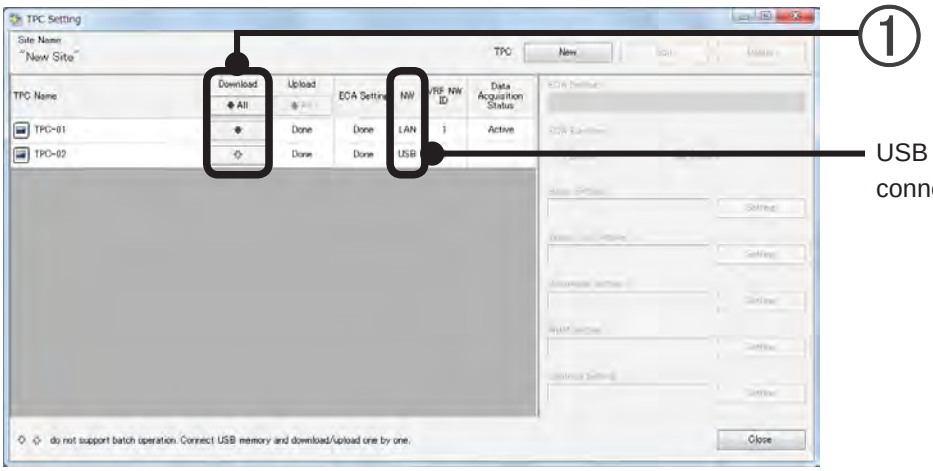
⑤ Confirm that a USB memory is connected to the TPC main unit and touch the [Export Data] button.

⑥ Input password and touch the [OK] button.



⑦ Touch the [Close] button.

ECA Tool Operation



① When the [⇩] button is clicked, the “File Selection” screen is displayed. Select the appropriate file of the USB memory.
When a file is specified and the [OPEN] button is clicked, a confirmation message is displayed.

[OK]: Acquires data.

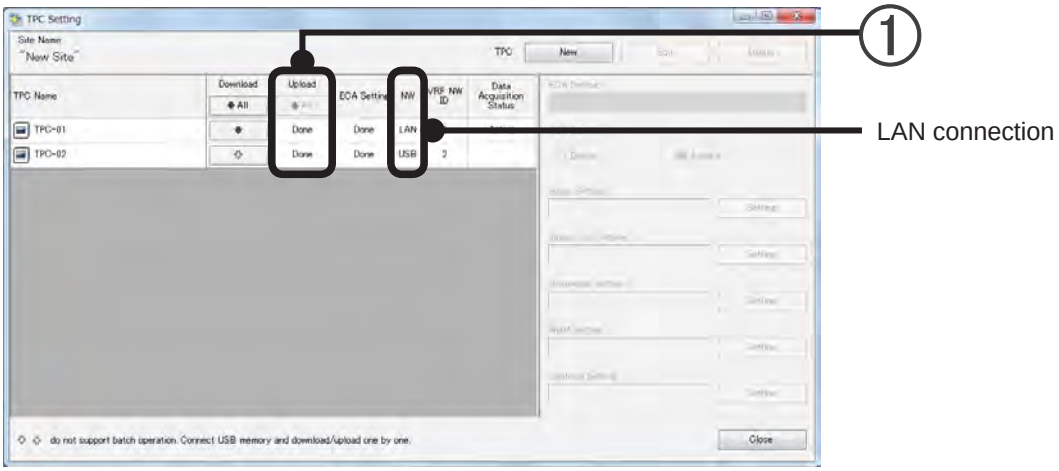
[Cancel]: Returns to the “TPC Setting” screen.

5-7-5 **ECA setting data upload**

Uploads ECA setting data to the TPC.

To display this screen, click the [Setting] button of the “TPC Setting” item on the “ECA Tool Menu” screen.

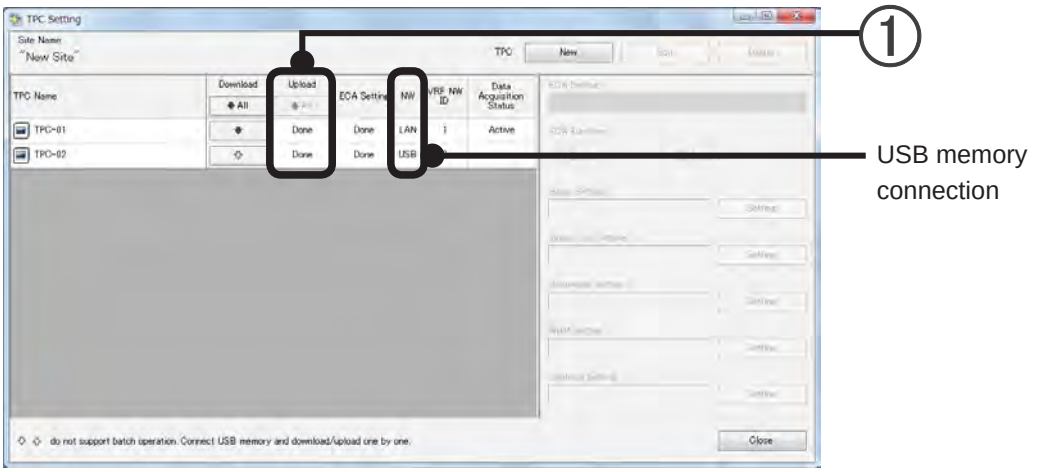
In the case of LAN connection



① When the [⬆ALL] button or [⬆] button is clicked, a confirmation message is displayed.
When the [OK] button is clicked, the Upload screen is displayed and processing is started.
When the [STOP] button is clicked during processing or communication fails, an error message is displayed.
[OK]: Returns to the “TPC Setting” screen.

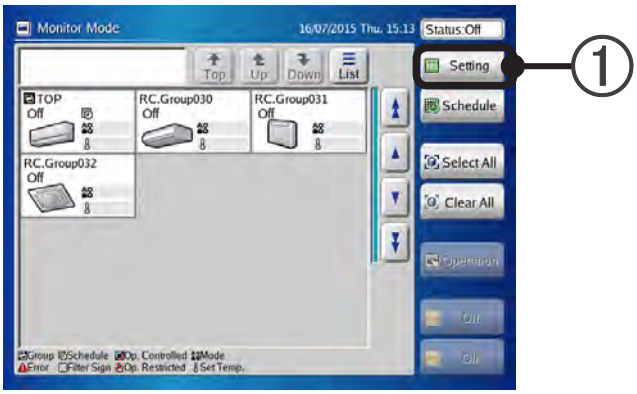
In the case of USB memory connection

ECA Tool operation



① When the [⇧] button is clicked, the “Save Destination” screen is displayed.
When USB memory is specified and the [OPEN] button is clicked, a confirmation message is displayed.
[OK]: Returns to the “TPC Setting” screen.
[Cancel]: Returns to the “TPC Setting” screen.

TPC main unit operation

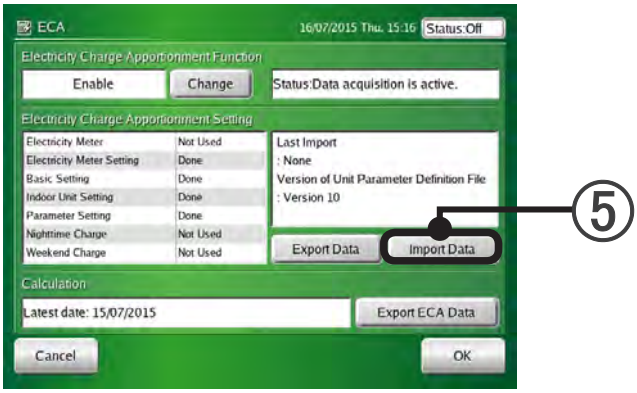


① Touch the [Setting] button.

② Touch the [System Setting] button.

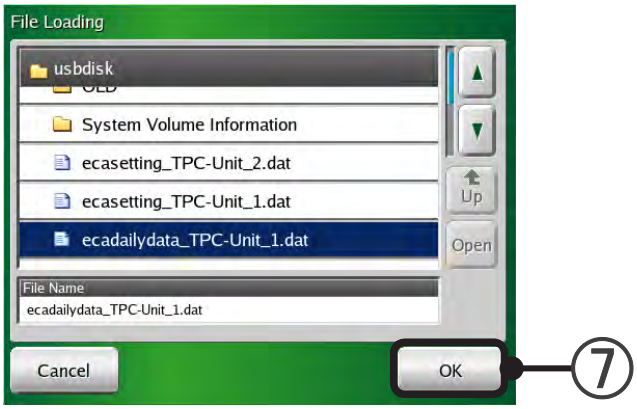
③ Touch the [Next Page] button.

④ Touch the [ECA] button.
When the button is not displayed, setup is not complete.
Refer to the TPC main unit OPERATING MANUAL for the setup method.

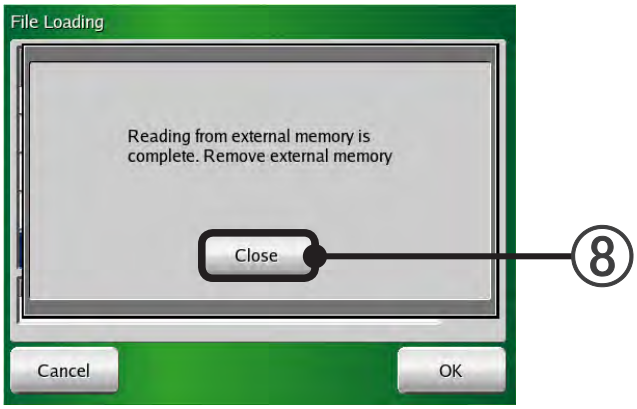


⑤ Confirm that USB memory is connected to the TPC main unit and touch the USB [Import Data] button.

⑥ Input the password and touch the [OK] button.



⑦ Select the data to be imported and touch the [OK] button.

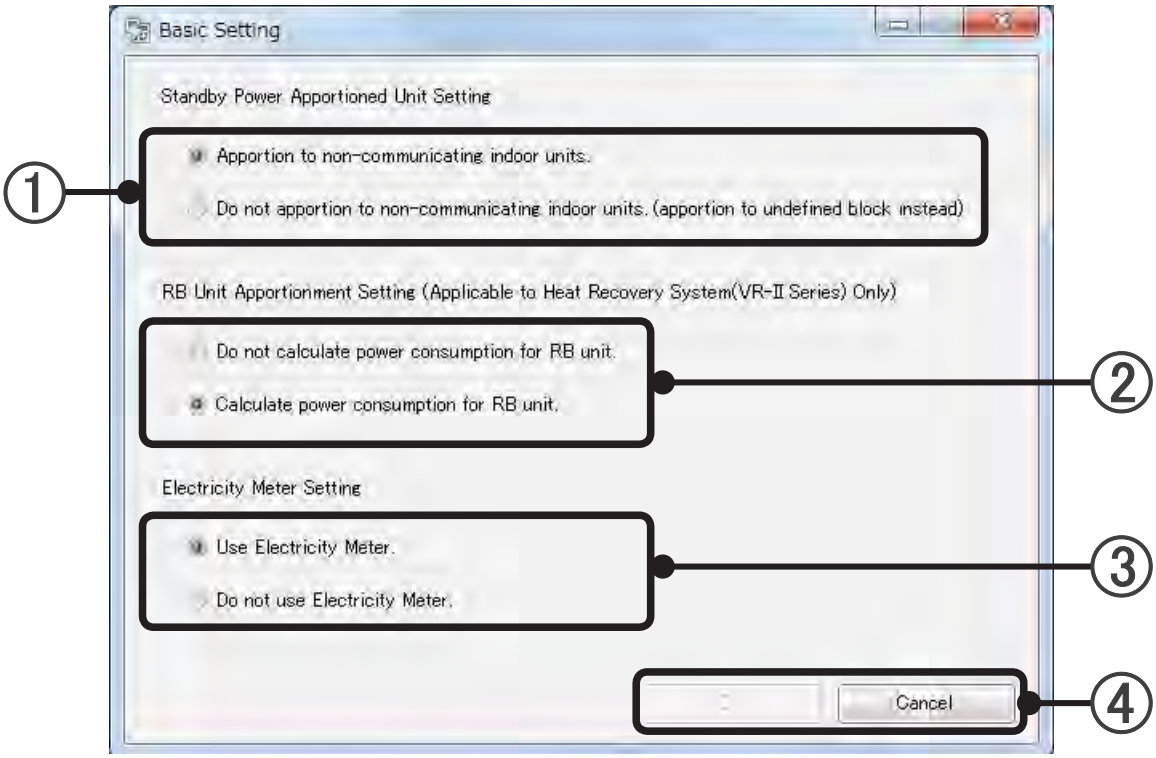


⑧ Touch the [Close] button.

5-7-6 **Basic Setting**

To display this screen, click the [Setting] button of the “TPC Setting” item on “ECA Tool Menu” screen to open the “TPC Setting” screen and click the [Setting] button of “Basic Setting”.

Sets whether or not outdoor unit standby power is apportioned to non-communicating indoor units.



① Set whether or not the outdoor unit standby power is to be apportioned to non-communicating indoor units.

- Apportion to non-communicating indoor units
  Standby power is apportioned even to non-communicating indoor units
- Do not apportion to non-communicating indoor units.(apportion to undefined block instead)
  Outdoor unit standby power is not apportioned to non-communicating indoor units.
  (Standby power not apportioned to non-communicating indoor units is apportioned to the owner block (Undefined Block).

② Set the apportioning method of RB unit.

- “Do not calculate RB Unit's power consumption.”
  The calculation of RB unit is not performed.
- “Calculate RB Unit's power consumption.”
  The calculation of RB unit is performed.

③ Set whether or not the appropriate TPC uses an electricity meter.

Note

In the state in which a refrigerant system is registered at a contact, the contract meter setting (“use” or “not use”) cannot be changed.
When the “use” or “not use” setting of electricity meter for TPC was changed, since the refrigerant system of the appropriate TPC is deleted once from the contract setting to secure setting uniformity, perform contract setting again.
(This processing prevents mixing of “use” or “not use” of the meter in the contract.)
When the electricity meter setting was changed from “use" to “not use", the electricity meter system related to the appropriate TPC is deleted from the electricity charge apportionment setting.

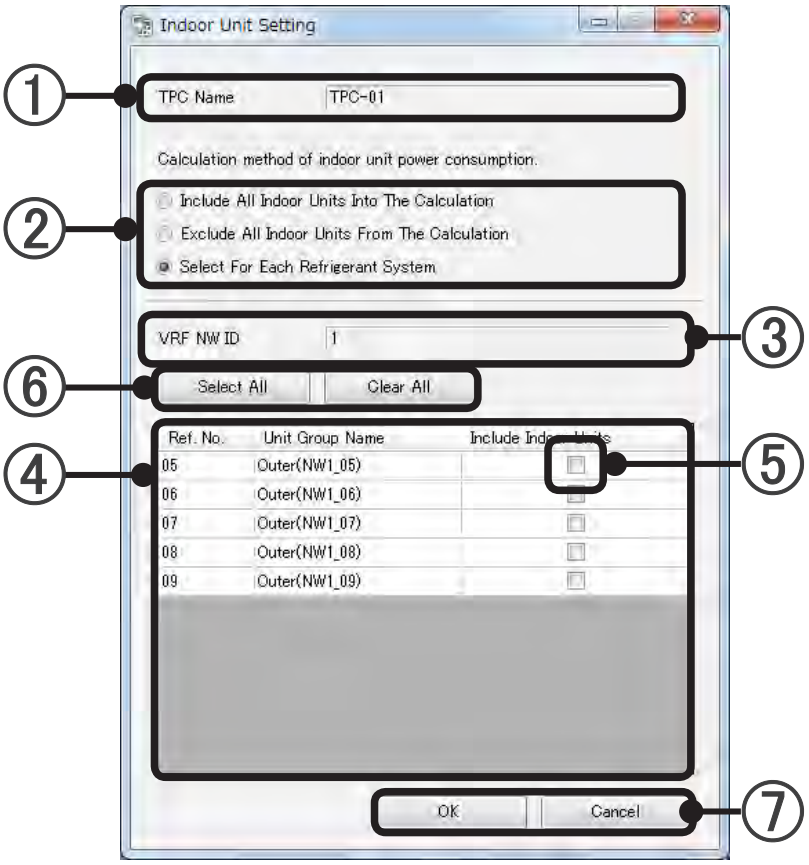
④ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.

Note

When ECA Tool and outdoor unit cannot communicate due to tripping of a unit power breaker or a network error, since the minimum data needed for apportionment calculation cannot be acquired, electricity charge apportionment calculation is not performed.

5-7-7 **Indoor unit electricity calculation setting**

To display this screen, click the [Setting] button of the “TPC Setting” item on “ECA Tool Menu” screen to open the “TPC Setting” screen and click the [Setting] button of “Indoor Unit Setting”.
Whether or not the electricity charge of indoor units is included in calculation is decided by this screen.



① Displays the currently selected TPC name

② Selects the indoor unit calculation type.

“Include All Indoor Units Into The Calculation.”	The electricity charge of indoor units is also included in calculation. Select when the power meter is shared by the indoor unit and outdoor unit power source and when the power meter of the same contract destination as an outdoor unit is installed at an indoor unit power source. (Settings ③ to ⑥ cannot be performed.)
“Exclude All Indoor Units From The Calculation.”	The indoor unit electricity charge is not included in calculation. Select when a power meter independently contracted with the electric power company by tenants is installed at the indoor unit power source, etc. (Settings ③ to ⑥ cannot be performed.)
“Select For Each Refrigerant System”	Select when setting whether or not indoor unit power consumption is included in calculation for each refrigerant system.

Select according to the power meter position and contact with the electric power company.

Note

If a setting is changed during data acquisition, the results of calculation after setting will also change.

When “Select For Each Refrigerant System” is selected at ②, set items ③ to ⑥.

③ Displays the NW ID of TPC displayed at ①.

④ Displays the list of refrigerant system connected to NW ID displayed at ③.

⑤ Selects whether or not indoor units are included individually for each refrigerant system by checkbox.

⑥ When clicked, [Select All] or [Clear All] of ⑤ is checked.
This is convenient when starting from the highest number when selecting the refrigerant systems individually at ⑤. Reflected by range (NW ID) displayed at ④.

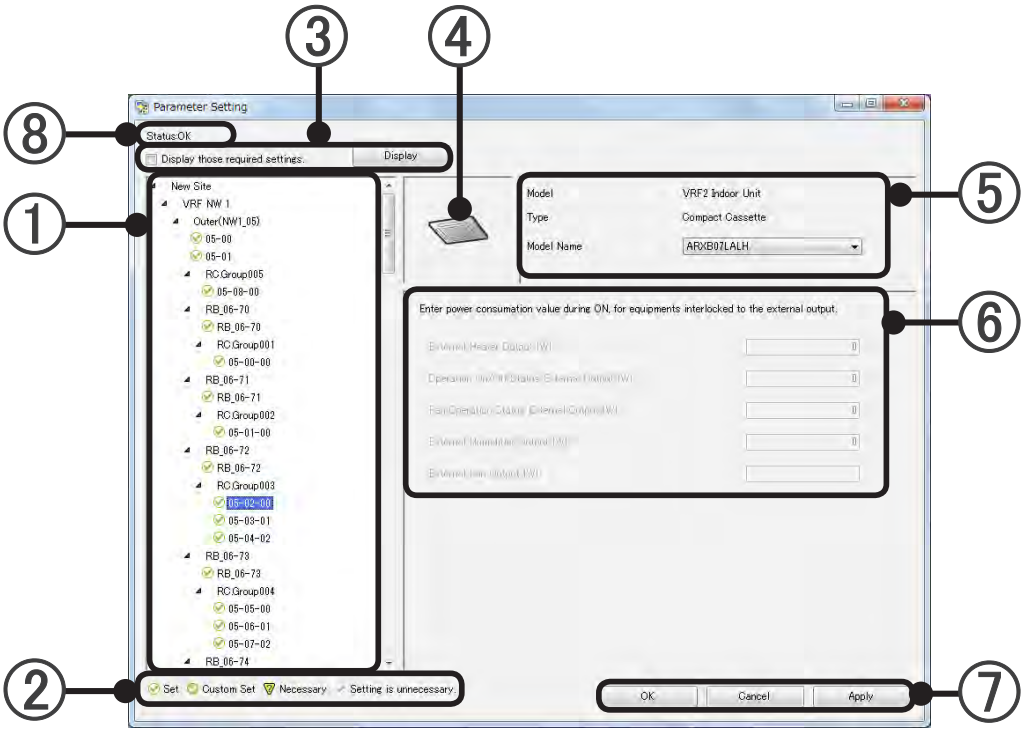
⑦ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.

Note

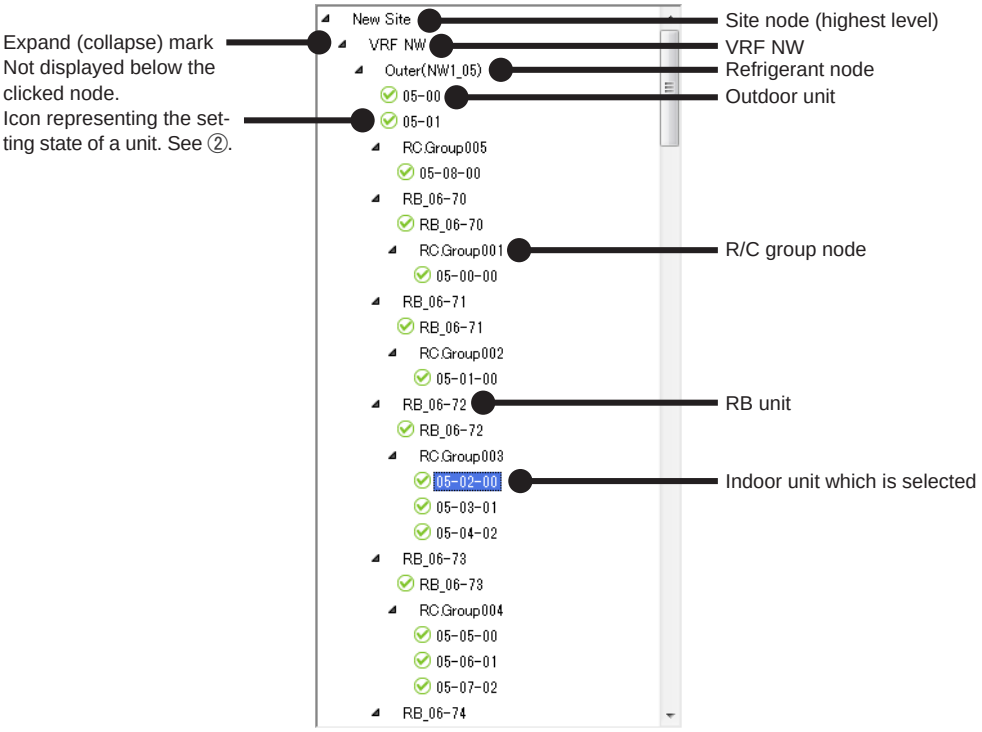
- When setting is finished with [Select All] or [Clear All] checked at ⑥, the setting of ② becomes “Include All Indoor Units From The Calculation.” or “Exclude All Indoor Units From The Calculation.”
- When the power meter or other contract contents were changed by resident or tenant updating, change the setting at the same time.

5-7-8 **Parameter setting**

To display this screen, click the [Setting] button of the “TPC Setting” item on “ECA Tool Menu” screen to open the “TPC Setting” screen and click the [Setting] button of “Parameter Setting”.
Setting of the model name of the unit which is to perform electricity charge apportionment calculation and the externally linked devices are performed by means of this screen.
Since model name setting is necessary in electricity charge apportionment calculation, perform it certainly. (Normally, if scanning is performed, the model name is set automatically.)



① Selects the unit (outdoor unit, indoor unit, RB unit) which is to be set from the list hierarchically displayed in tree view site, adaptor, refrigerant, and R/C group order.



Note

The “Tree View” may not be displayed on the screen depending on the contents. In this case, display it by scrolling the screen using the scroll bar at the side of the screen.

② Description of icons representing the setting state of the units in the “Tree View”.

Set	VRF Series unit set without externally linked devices
Custom Set	VRF Series unit set with externally linked devices
Necessary	VRF Series unit whose parameter is unclear. When you install a new unit or replace the board, it may be incompatible with the version of TPC. When this icon is displayed, electricity charge apportionment calculation is performed without ending setting. Please contact your service personnel.
Setting is unnecessary.	S Series or V Series unit (Setting is unnecessary)

③ Refinement

Display only those units for which parameters have not been set.

Once all unit settings have been configured, the unit name will no longer be displayed.

④ Displays the “unit icon”

⑤ Displays the Model, type, and model name of the Unit.
When the model name is displayed in red bold characters, it is a model which is not compatible with the TPC. Please contact your service personnel.
In the case of RB unit, type is not displayed.

⑥ Sets the power consumption of auxiliary heater, ventilation fan, or other linked device added to the unit in watt. hr. (within 7 digits, integer number only) Manual setting at all relevant units is necessary. (Except the automatic setting objective at scanning.)

Example of out-door unit display

Example of in-door unit display

When a unit is ON/OFF linked and controlled by using the external output terminals on its PCB, entering the power at ON here can be taken into account for electricity charge apportionment calculation.
The electricity charge apportionment function performs calculation with power of the value input at the screen as constant while the external output terminal is ON.
When electricity charge apportionment used an electricity meter, the electricity meter must also be connected to the unit to be linked.
Depending on the unit, items without external output function are displayed grey.

- Operation stop state external output [W]
- Fan operation state external output [W]
- External heater output [W]
- External humidifier output [W]
- External fan output [W]

Refer to the “Design & Technical Manual” for a detailed description of each external output operation.

Example of DX-Kit display

Note

* A value may be given in ( ) after “Model Name”.
For detail of the number, refer to the description in the “ReadMeFirst.txt” file within the installation USB memory

Example of RB unit display

⑦ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.
(When [Apply] was performed during work, it cannot be canceled by [Cancel].)
[Apply]: Saves the edited contents without ending setting.

⑧ Displays whether setting are done for all units.
Status: OK - setting are done for all units.
Status: Necessary - Some units still need to be set parameters.

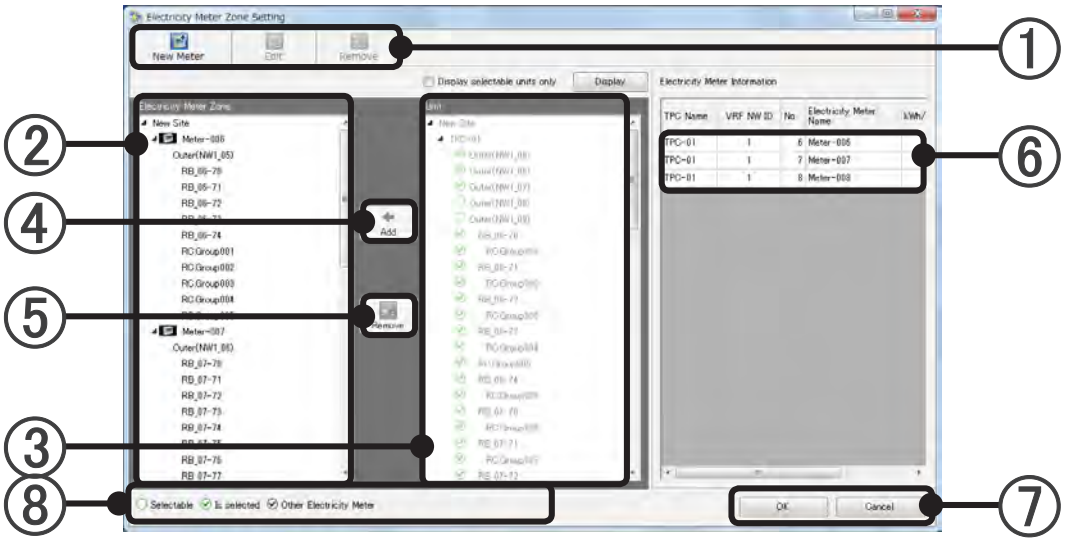
Note

- Except for indoor- and outdoor-units, items cannot be displayed in Tree View.
- If not even one indoor unit or outdoor unit is connected, there may be a display at ① Tree View, but setting is unnecessary.
- When a unit was added or replaced, quickly perform scanning and end unit registration and parameter setting.
- Even if the model name has been set, it will not be reflected in the unit list. Model name setting uses the electricity charge apportionment parameter.

5-7-9 **Creating an electricity meter system**

Configure the connection structure of the electricity meter and air-conditioner units connected to those underneath it. Configure according to the actual electricity meter installation condition.
Since the Electricity Charge Apportionment function has a function that uses and controls electricity consumption information from the electricity meter, it is necessary to configure the electricity meter system.

To display this screen, click the [Setting] button of the “TPC Setting” item on “ECA Tool Menu” screen to open the “TPC Setting” screen and click the [Setting] button of “WHM Setting”.



① Select work term from tool bar.

New Meter	Displays the “Create Electricity Meter Zone” screen. Up to 200 electricity meter systems can be created.
Edit	At electricity meter system selection, this button becomes active and the “Create Electricity Meter Zone” screen is displayed by pressing the button.
Remove	At electricity meter system selection, the electricity meter system is deleted and all the units allocated under it are removed. At unit selection, unit allocation is removed. Multiple electricity meters and units can be selected and deleted.

Note

- The action item on tool bar can be operated equally even right click mouse on the indoor units in ②.

② The currently set electricity meter system and the indoor, outdoor, and RB units registered under it will be displayed hierarchically.

③ The floor groups set in Layout Edit Screen will be displayed.
The indoor, outdoor, and RB units which is not registered in any floor will be displayed in “Undefined Group”.

④ By pressing the [Add] button, the indoor, outdoor, and RB units selected at ③ will be added to the electricity meter system of the selection position of ②.

⑤ By pressing the [Remove] button, the indoor, outdoor, and RB units selected at ② will be removed .

⑥ All the electricity meter system data will be displayed in the data list and at electricity meter system selection (multiple selection is possible) by left side tree, the background color of the selected electricity meters will be changed.

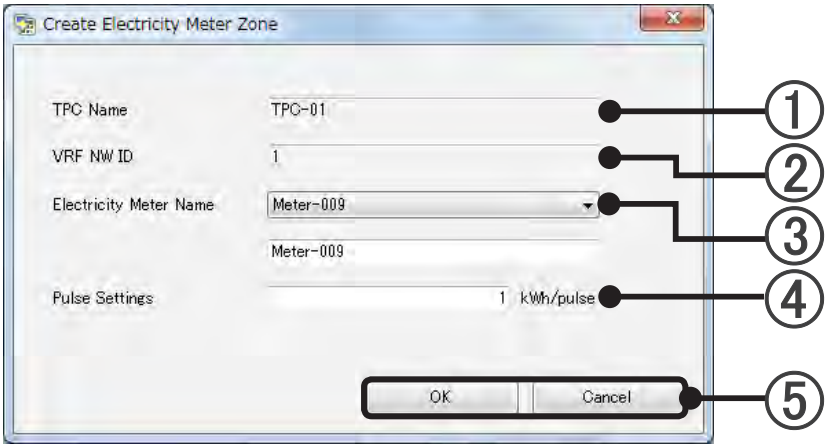
⑦ By pressing the [OK] button, the set electricity meter system and indoor, outdoor, and RB units will be saved and ends setting.
By pressing the [Cancel] button, if there is data being edited, it will be discarded and ends setting.

⑧ An icon will be assigned to the indoor, outdoor, and RB units of the right side tree and will be made reference at registration.

○ Selectable	When none or more than one electricity meter systems are selected, shows VRF Series units (including UTY-VGGXZ1) that are not registered to any meter. When one electricity meter system is selected, shows units that can be registered at the selected meter. [Add] button can also be selected.
✓ Is selected	When none or more than one electricity meter systems are selected, shows units registered to any meter. When one electricity meter system is selected, shows units registered to the selected electricity meter system.
✓ Other Electricity Meter	When one electricity meter system is selected, shows units registered to the other meter systems.

UTY-VGGXZ1 :The VRF Series network converter

[New Meter] button or [Edit] button of Electricity Meter Zone Setting screen



① Displays the TPC selected at “TPC Setting” screen.

② Displays the NW ID of TPC selected at “TPC Setting” screen.

③ Selects the electricity meter to be used.

④ Set whether to handle by specifying how many kWhs correspond to one pulse from the electricity meter.
For the number value only enter 7 or fewer digits for whole numbers and 6 or fewer for digits after the decimal point.

Note

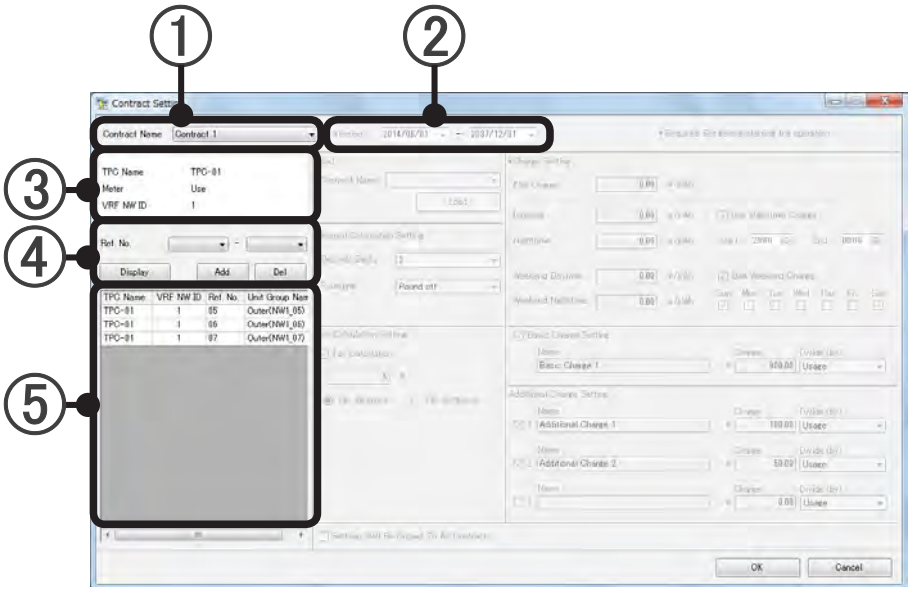
“1” is displayed as the initial value, however, set this to match the electricity meter you are using.

⑤ [OK]: Saves the edited contents and ends setting.
[Cancel]: Ends setting without saving the edited contents.

5-7-10 **Contract setting 2**

The refrigerant system making up the contract is registered at this screen.
First, register the refrigerant system of TPC that can be registered to the relevant contract due to same attributes.
The contact contents are set at par. 5-6-2 Contract Setting1.

To display this screen, click the [Setting] button of the “Contract Setting” item on the “TPC Setting” screen.



① Select a contract.

② Contract start and end dates.

③ Touch Panel Information
1. Displays the TPC name.
2. Displays either “Use” or “Not Use”.
3. Displays VRF NW ID.

④ Refrigerant system setting

- Adding refrigerant system
  1. Select the refrigerant system range by pull-down menu. (Cannot be selected when all systems were set.)
  2. When the [Add] button is clicked, the refrigerant systems are displayed in the list at ⑤.

- Deleting refrigerant system from setting
  1. Select the refrigerant system to be deleted at the list of ⑤.
  2. Click the [Del] button.

- Redisplaying the refrigerant systems
  1. Since the refrigerant systems which can be selected at ③ are updated when [Display] is clicked when the contract period was changed at ②, reset the refrigerant systems.

⑤ List of refrigerant systems set at the contract.

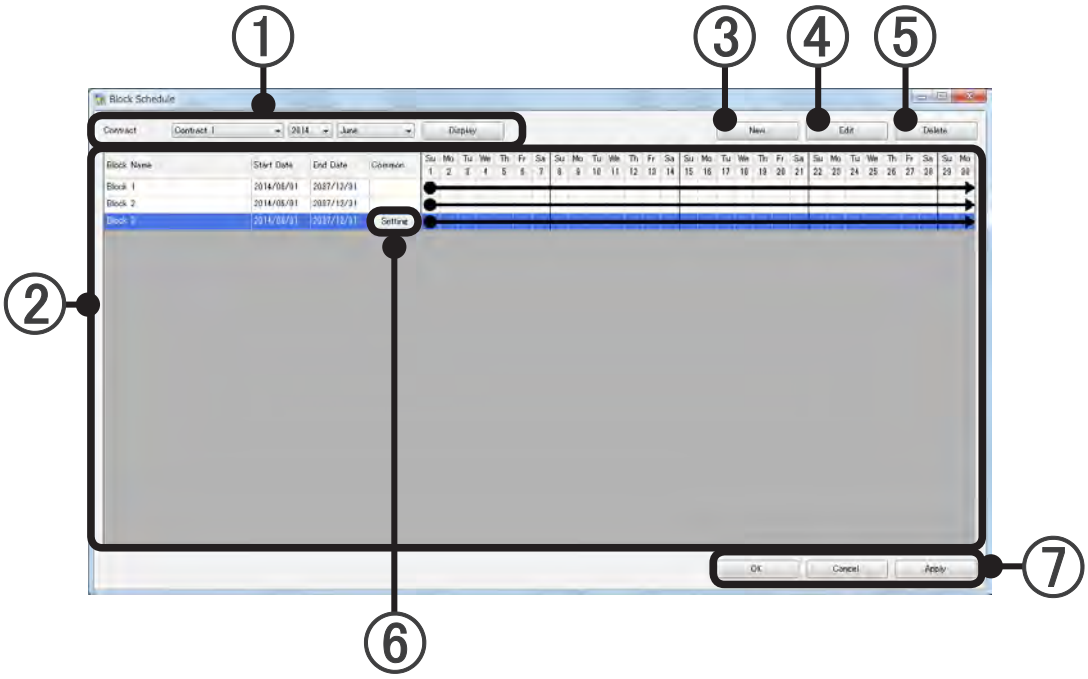
Note

At contract addition, change or end, finish setting up to the relevant date.
If changes are made later, correct calculation will not be performed.
You cannot calculate the start day of data collection.
Do not add/remove outdoor/indoor unit during contract period.
IF you need to do so, end the contract and define a new contract.
Set Basic Charge to the basic amount charged by the electricity company, if there is a basic charge.
If there is no basic charge, you do not need to set this.

5-8 Block setting

5-8-1 **Block schedule setting**

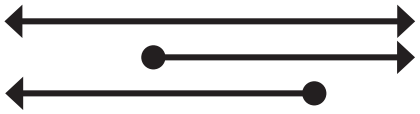
To display this screen, click the [Setting] button of the “Blockless contract” item on the “ECA Tool” Menu screen.
Setting of the move-in/move-out schedule of supposed tenant blocks is performed for each contract. Common blocks can also be set.
Blocks spanning contracts cannot be created.



① Selects the contract name, year, and month to be displayed.
When the [Display] button is clicked, the blocks set at ② are displayed.

② The block setting state of the contents selected at ① is displayed. The block setting period is represented on the calendar by a line.

- When the block setting period spans the previous month and the next month or more
- When the block setting period starts from in the displayed month
- When the block setting period ends in the displayed month
(Units of periods not belonging to a block are attributed to an “Undefine” block.)



Note

The calendar display of ② may not appear on the screen depending on the number of set blocks and the PC monitor size.
In this case, display it by scrolling the screen with the scroll bar at the end of the screen.

③ New block creation button. (See par. 5-8-2)
Creates a new block. When the [New] button is clicked, the “Specify Block” screen opens. The created blocks are displayed at ②.

④ Block edit button. (See par. 5-8-2)
Edits the setting contents of the block. When the [Edit] button is clicked after a block is selected at ②, the “Specify Block” screen opens.

⑤ Block delete button.
Deletes the block. When the [Delete] button is clicked after a block is selected at ②, that block is deleted.

⑥ Common block [setting] button.
(See par. 5-8-2 Displayed when set to common block at the “Specify block” screen.) When clicked, the “Common Specify Block” screen opens. Always set when there is a common block. (If common block setting is not complete, correct calculation cannot be performed.)

* Perform common block setting after creating all the tenant blocks.

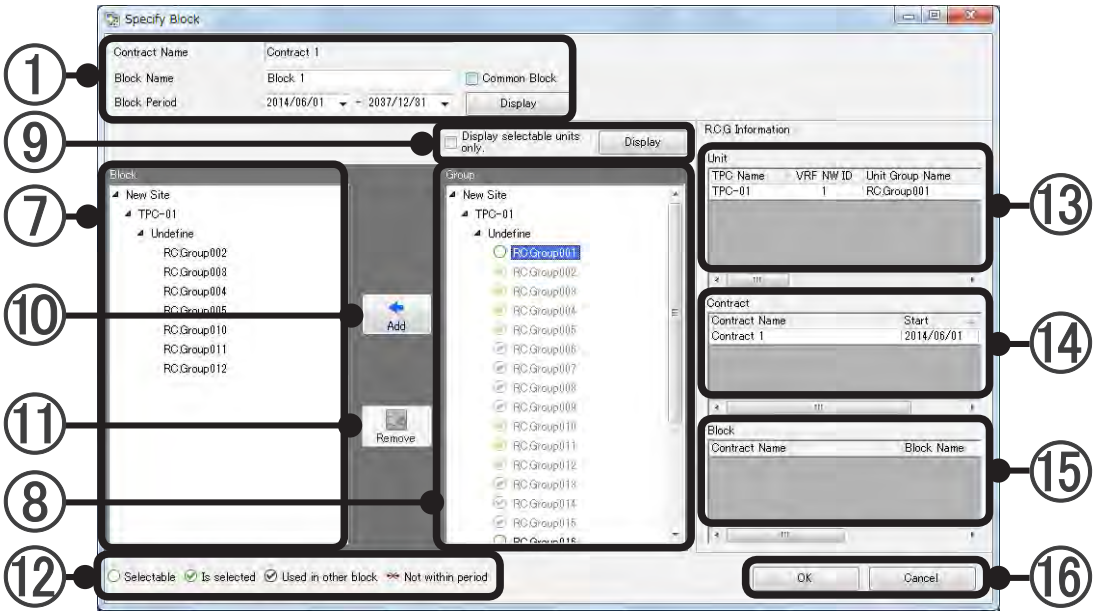
⑦ [OK]: Saves the setting and ends it.
[Cancel]: Ends the setting without saving it.
(When [Apply] was performed during work, it cannot be canceled by [Cancel].)
[Apply]: Saves the block schedule setting without ending it.

Note

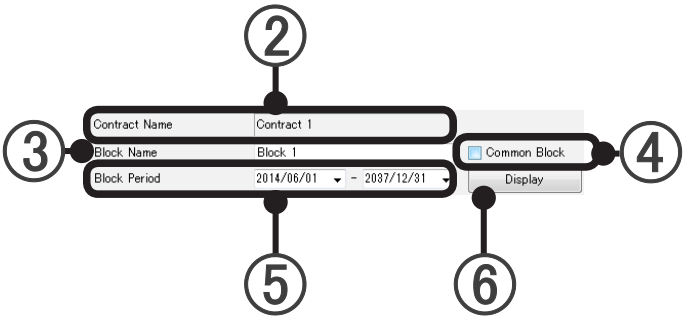
When a new contract was created and when a block (resident or tenant) was updated, end setting before the block period starts.
In addition, when the block period end date was decided, end setting before the end date.

5-8-2 **Specify block**

To display this screen, click the [New] button or the [Edit] button of the par. 5-8-1 “Block schedule setting”. Creates a new block or edits an existing block. Registers and edits R/C groups belonging to the block.



① Block basic setting



② Contract name: Displays the name of the contract to which the block belongs.

③ Block name setting:
An arbitrary name can be text input. (Within 20 characters of alphabet, numeric, and symbol)

④ Common setting:
Can be set as a common block. Enabled by checking the checkbox. The [Setting] button at the block schedule setting screen is enabled.

⑤ Block period setting:
Sets the start and end dates of the objective period of the block. Can be set by key input or from the calendar displayed by pull-down menu. Setting within the contract period is possible.

⑥ [Display] button: When clicked, the setting state for the period specified at ⑤ is displayed at ⑦ and ⑧.

⑦ Block list:
Tree view of the R/C groups registered at the block being set.

⑧ Group list:
Tree view of the R/C groups by group. R/C groups not set at a group are displayed as “Undefine” Group.
Registered R/C groups are displayed in gray and cannot be set.
* R/C groups without electricity charge apportionment function are not displayed.

⑨ Refinement button
Display only those units for which parameters have not been set.

⑩ [Add] button
Registers the R/C groups and groups selected at ⑧ group list at the block of ⑦.

⑪ [Remove] button
Deletes the R/C group and group set at a block at ⑦.

⑫ Description of icon displayed at ⑧. Represents the state of the unit.

Selectable	R/C group which can be registered
Is selected	R/C group already registered at the block being set
Used in other block	R/C group already registered at another block
Not within period	Unit that does not exist within the period specified by ⑤

⑬ Unit information: Displays the “TPC Name”, “ VRF NW ID”, “Unit Group Name”, “Address”, “Unit Type”, “Operation StartDate”, “Operation End Date”, “Model Name*”, “System Type (Cooling Only, Heat Pump, etc)”, and “Model” of the R/C group selected at ⑧.
*The letter ":" as the last letter of the Model Name signifies that the Model Name for the corresponding unit was written after shipment. The letter ":" is not part of the Model Name.

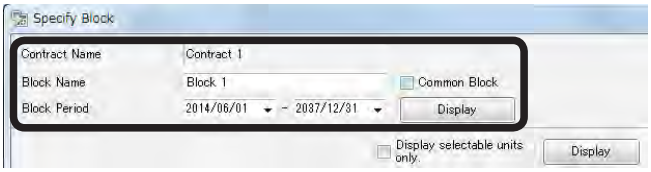
⑭ Contract information: Displays the “contract name”, “contract start date”, and “contract end date” of the R/C group selected at ⑧.

⑮ Block information: Displays the “contract name”, “block name”, “block start date”, and “block end date” of the R/C group selected at ⑧.

⑯ [OK]: Saves the setting and ends it.
[Cancel]: Ends the setting without saving it.

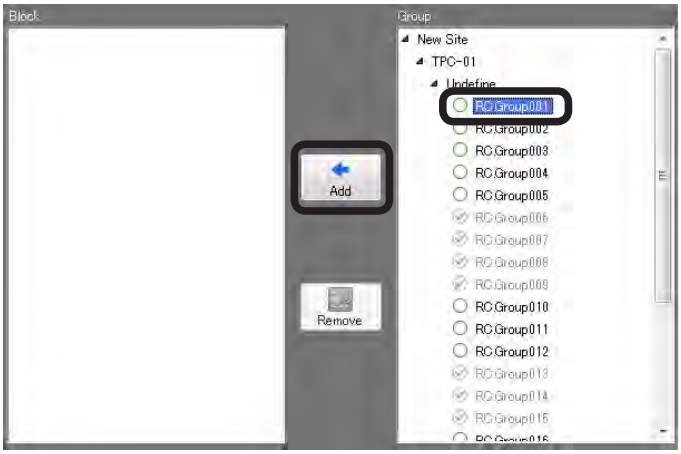
New block setting flow

1. Contract name confirmation. Block name and period setting.



When registering the block as a common block, check “Common Block”.
Reflect the setting on the screen by clicking the [Display] button.

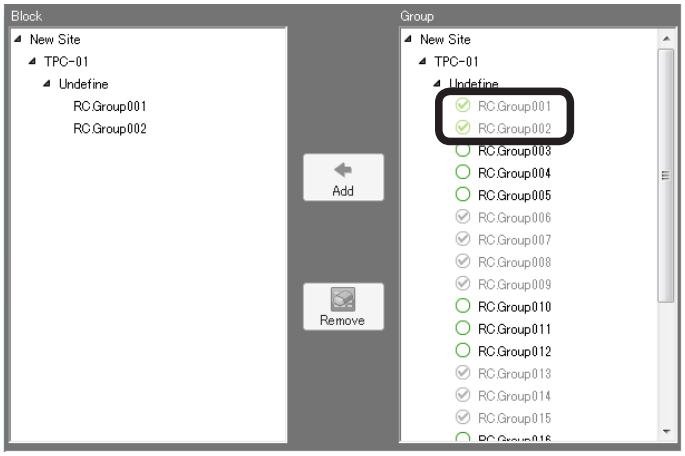
2. Select the R/C group to be registered at the block from the ⑧“Group” list. When the ⑨[Add] button is clicked, the R/C group is registered at the ⑦ “Block” list.



3. The R/C group registered at the block is displayed in the ⑦ “Block” list and becomes the registered display by ⑧“Group” list.

4. To delete an R/C group from a block, select the R/C group to be deleted from the ⑦ “Block” list and click the ⑩ [Remove] button.

5. The selected R/C group is deleted from the block and can be selected at the ⑧“Group” list.



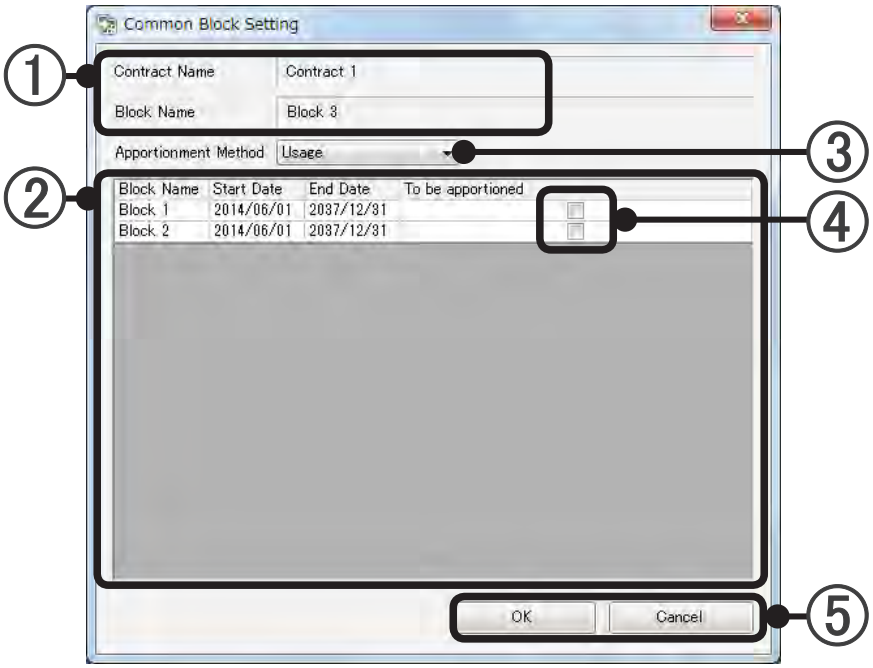
6. After registration is complete, end setting by clicking the [OK] button. To end by canceling the setting, click the [Cancel] button.

Note

To register each building and floor which already has the units laid out to a block, select the relevant building name or floor name from the ⑧“Group” list and click the ⑨[Add] button.

5-8-3 **Common block setting**

Sets the block with Common Block ④ checked at par. 5-8-2 Specify Block.
To display this screen, click the ⑥ Common block [setting] button of par. 5-8-1 Block schedule setting.
Sets the method the power consumed by common blocks is apportioned to tenant blocks.



① Confirms the contract name and block name.

② Displays the block name and period of tenant blocks in the same contract as a common block in a list.

③ Selects the apportionment method by pull-down menu. See the block apportioned at ④.

"Equally": Apportion equally to the selected blocks

"Unit quantity": Apportion by proportion of number of units

"Usage": Apportion by proportion of amount of power used (metering) (Recommended)

"Capacity": Apportion by allowable capacity of unit

Set by checkbox.

"Manually": Apportion by arbitrary setting.—— Manual setting of apportionment ratio. In the initial state at selection, 100% of the consumed power is apportioned to "Undefine" blocks as imaginary blocks and displayed. Since key input is possible at field (4), adjust so that the total apportionment ratio to the tenant block is 100%. If an apportionment ratio to an "Undefine" block remains, the "Undefine" block will be charged at apportionment calculation.

⑤ [OK]: Saves the setting and ends it.
[Cancel]: Ends the setting without saving it.

Note

After all settings are finished, electricity charge apportionment data acquisition is started.

Operation

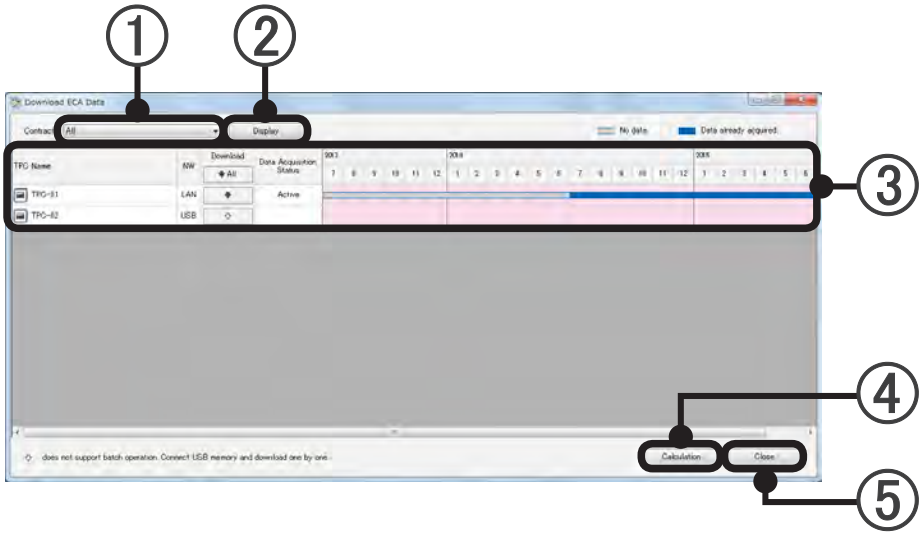
6. Electricity Charge Apportionment

6. Electricity Charge Apportionment

6-1 Download ECA data

Acquires the aggregate data from the TPC and displays whether or not there is a data.
When connected by USB memory, the data used by the ECA Tool must be acquired from the TPC main body in advance.

To display this screen, click the [Execute] button of the “Calculation” item on the “ECA Tool Menu” screen.



① Select contract.
Displays the contract managed by the user logged in by contract set at the site.

② When the [Display] button is clicked, displays the information of the TPC included in the selected contract in a list (③).

③ Display items

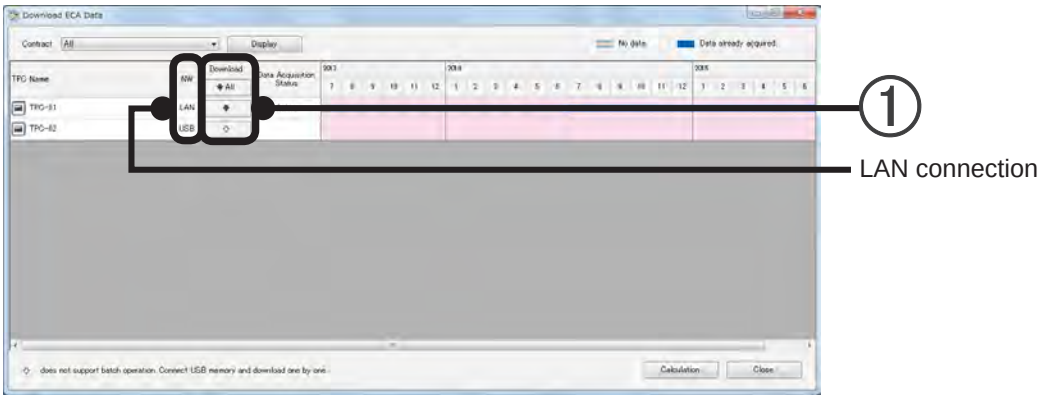
Display item	Description
TPC Name	Displays the TPC name set at the “TPC Setting” screen.
N.W.	Displays the connection condition. When NW connection is specified at the “TPC Setting” screen, “LAN” is displayed and when not specified, “USB" is displayed.
Download	When the data up to the preceding day is acquired, “Done” is displayed. See par. 6-1-1 Download ECA Data.
Data Aquitition Status	Displays the status based on the information acquired from the TPC. When there is a function, “Active”, “Not Active”, “-” is displayed. When there is no function, the display is blank. For USB memory connection, the display is blank.
Aggregate data bar	Displays the acquisition status of the aggregate data. (For 2 years) The data bar start date and end date are displayed by moving the mouse to the data bar. The start and end dates display the period there is data bar data and there is no data bar data. The date format is matched to the OS

④ When the [Calculation] button is clicked, the “Apportionment Calculation” screen is displayed.
When the TPC registration for the contract is 0, the button cannot be clicked.

⑤ When the [Close] button is clicked, returns to the “ECA Tool Menu” screen.

Downloads the ECA aggregate data of TPC.

In the case of LAN connection



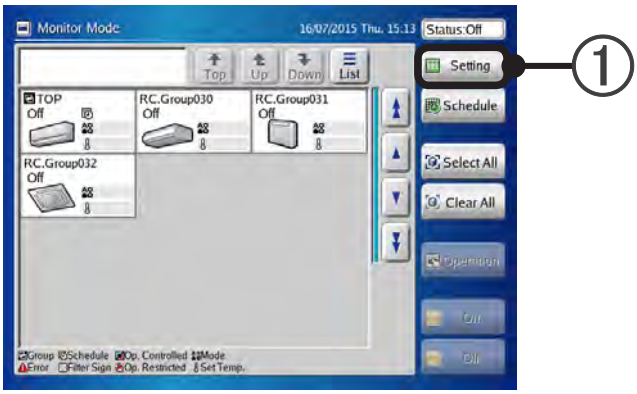
① When the [⬇ ALL] button is clicked, the unacquired TPC data is acquired in a batch.
When the [⬇] button is clicked, a confirmation message is displayed and the data up to the preceding day is acquired.

[OK]: Acquires data.
[Cancel]: Returns to the “Download ECA Data” screen.

In the case of USB memory connection

In the case of USB memory connection, data must be acquired from the TPC main unit.

TPC main unit operation

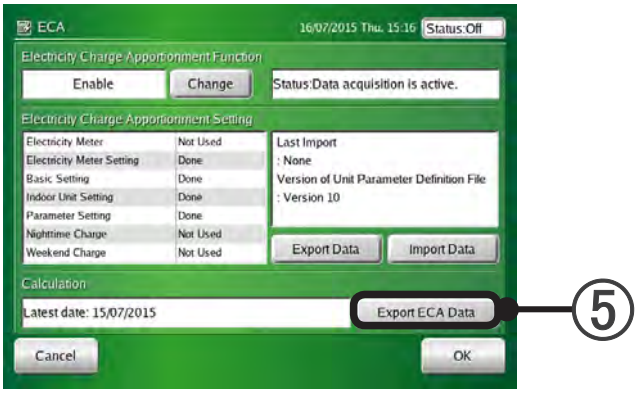


① Touch the [Setting] button.

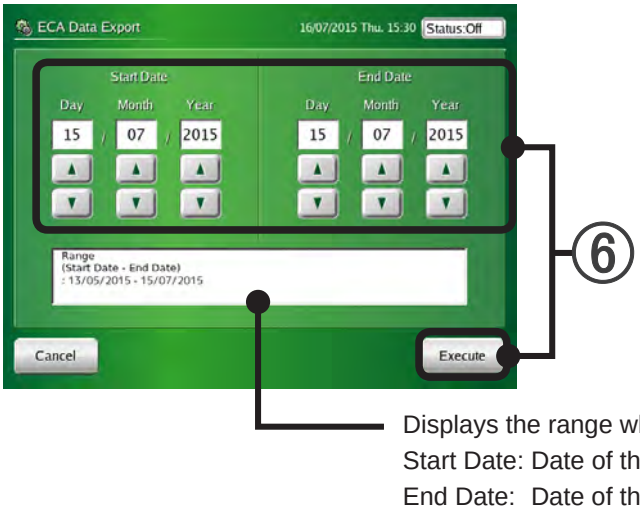
② Touch the [System Setting] button.

③ Touch the [Next Page] button.

④ Touch the [ECA] button.
When the button is not displayed, setup is not complete.
Refer to the TPC main unit OPERATING MANUAL for the setup method.

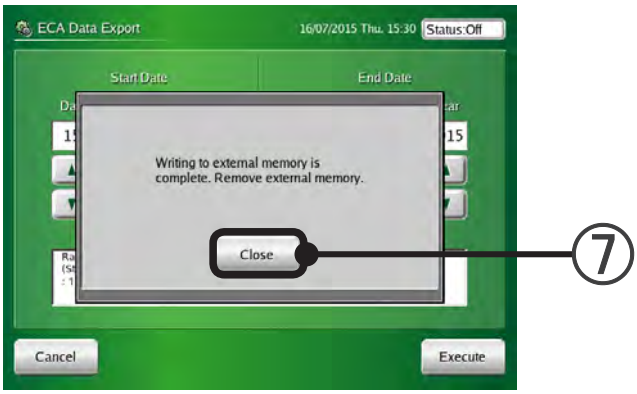


⑤ Confirm that USB memory is connected to the TPC main unit and touch the [Export ECA Data] button.



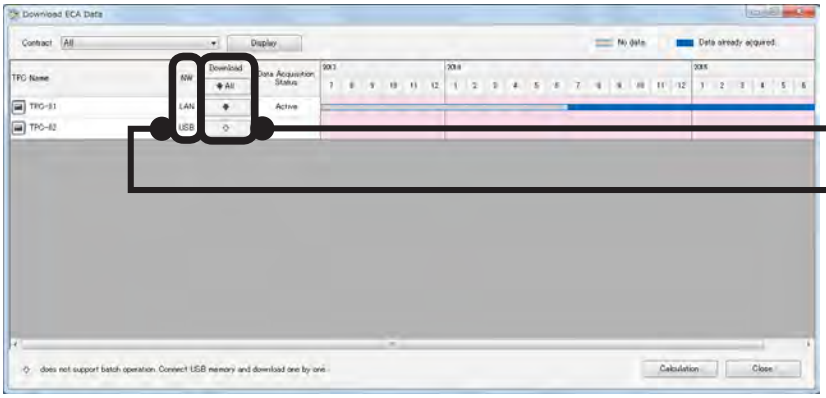
Displays the range which can be set.
Start Date: Date of the oldest aggregate data
End Date: Date of the latest aggregate data

⑥ Set the start and end date and touch the [Execute] button.
Specify the date according to the date of charged period on a bill.



⑦ Touch the [Close] button.

ECA Tool operation



① When the [⇩] button is clicked, the “File Selection” screen is displayed. Select the appropriate file of the USB memory.

When a file is specified and the [OPEN] button is clicked, a confirmation message is displayed.

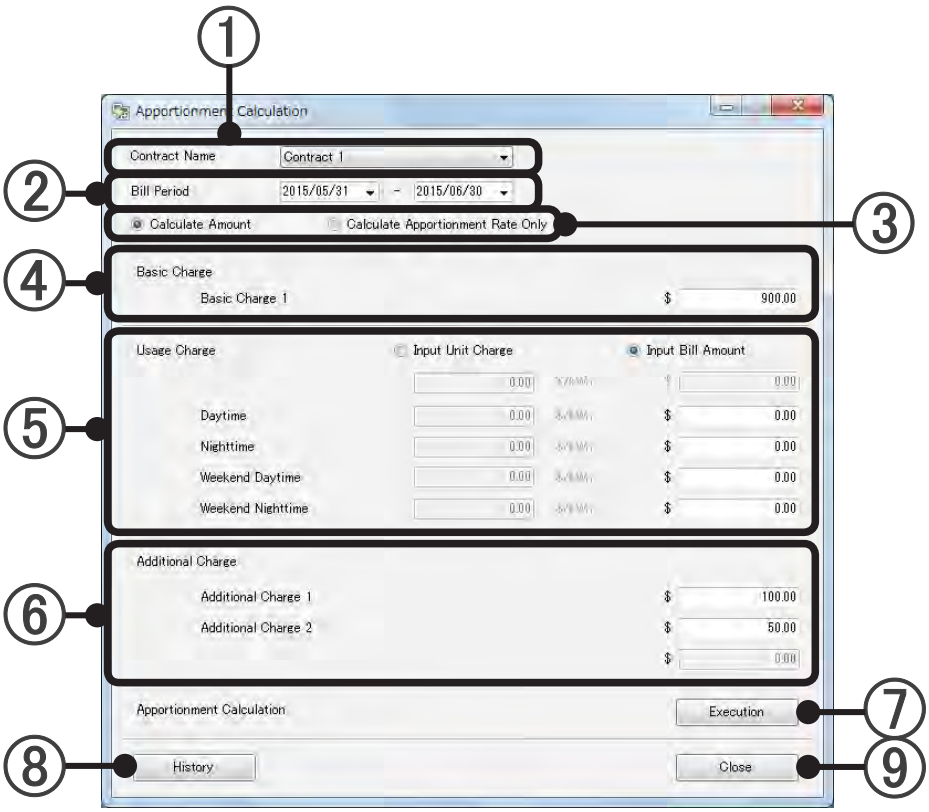
[OK]: Acquires data.

[Cancel]: Returns to the “Download ECA Data” screen.

6-2 Apportionment calculation

To display this screen, click the [Execute] button of the “Calculation” item on “ECA Tool Menu” screen to open the “Download ECA Data” screen and click the [Calculation] button.

6-2-1 **Apportionment calculation**



① Selects the calculation target contract.

② Sets the billing target period.
Text can be input.
When the dropdown button at the right-hand side is clicked, a date selection calendar is displayed. Select the day.
The range of the period over which there is electric power apportionment collection data in the contract period can be selected.

③ Select “Calculate Amount” or “Calculate Apportionment Rate Only”.
Calculate Amount: Calculates the apportionment rate and the actual amount billed to each block based on that apportionment rate and the amount.
Calculate Apportionment Rate Only: Calculates the apportionment rate only of each block based on the amount of electricity used.
When “Calculate Apportionment Rate Only” is selected, ④, ⑤, and ⑥ cannot be input.

④ If there is a basic charge, input the amount.
Input is possible when basic charge setting is performed at par. 5-6-2.Contract Setting1.
The name of the basic charge set at the par. 5-6-2.Contract Setting1 is displayed.

⑤ If calculating the invoiced amount, you can choose whether to enter the total invoice fee or the cost per unit of electricity.

- If selecting total invoice fee.

If there is a usage charge, input the amount respectively. (Within 11 digits each)
■ Daytime ■ Nighttime ■ Weekend daytime ■ Weekend nighttime
When nighttime charge setting is performed at the par. 5-6-2.Contract Setting1,
■ Nighttime input is possible.
When weekend charge setting is performed at the par. 5-6-2.Contract Setting1,
■ Weekend daytime input is possible.
When nighttime charge setting and weekend charge setting are performed at the par. 5-6-2.Contract Setting1, ■ Weekend nighttime input is possible.
When nighttime charge setting and weekend charge setting are not performed at the par. 5-6-2.Contract Setting1, only the topmost item can be input.

- If selecting the cost per unit of electricity.

Enter each of the monetary amounts.
The unit price entered at the time of contract creation will be initially displayed. If changes are made, enter each unit price.
■ Daytime ■ Nighttime ■ Weekend daytime ■ Weekend nighttime

⑥ If there is an additional charge, input the amount. (Within 11 digits each)
■ Add1 ■ Add2 ■ Add3
Input is possible when additional charge setting is performed at the par. 5-6-2.Contract Setting1.

⑦ Perform apportionment calculation. When the [Execution] button is clicked, Confirmation screen appears. Click the [OK] button. A calculating progress bar and [Cancel] button are displayed.
When the progress bar reaches 100%, apportionment calculation is complete and the [Calculation result] screen (par. 6-2-2) is opened.
When the [Cancel] button is clicked, apportionment calculation is stopped and the display returns to the Apportionment Calculation screen.

⑧ Displays the History Selection screen. (The calculation items input before the history can be input. See par. 6-2-3 Calculation history.)

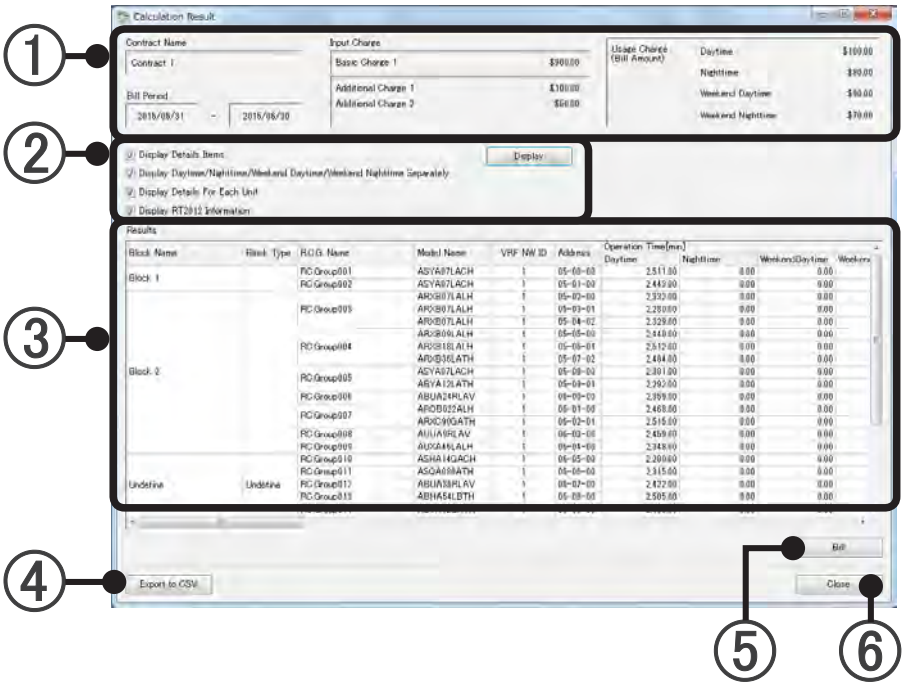
⑨ Click to end and close the screen after apportionment calculation ends or the calculation result is printed.

Note

Apportionment calculation may take several tens of minutes or more depending on the number of units calculation and calculation objective period. Since no operations can be performed during this time, be amply careful when performing apportionment calculation.

6-2-2 **Calculation result**

Calculation Result screen (Amount calculation example)
This screen is displayed after the [Execution] button at the par. 6-2-1. Apportionment Calculation is clicked and the calculating progress bar reaches 100%.



① ● If calculating the total invoice amount
Displays the contract name, bill period, and total amount (amount from the electric company) of the basic charge, additional charge, daytime charge, nighttime charge, weekend daytime charge, and weekend nighttime charge.

● If calculating using the unit price
Displays the contract name, applicable invoice period, basic charge, additional charge, and unit prices for daytime charge,nighttime charge, weekend daytime charge and weekend nighttime charge.

② Adds a details display to ③ Calculated charge. (Reflected when the [Display] button is clicked when the check box is ON.)

(a) Displays the detail items. (Operation Time/ Thermostat ON / Total Energy Used)

(b) Displays the daytime charge / nighttime charge / weekend daytime charge / weekend nighttime charge.

* Cannot be checked when both nighttime charge and weekend charge are not set

(c) Displays the details for each unit.

(d) Displays the RT2012 information.
A row is added and the RT2012 information (cooling and heating electricity amount) is displayed.
However, only displayed when all the following conditions are satisfied.

- There is a contract that uses an electricity meter.
- Calculate Amount is performed using the electricity meter at the apportionment calculation screen.
- “Display Details Items” is checked at this screen.

Operation

③ Displays the calculation result.

- For “Calculate Amount” and “Calculated Apportionment Rate Only”

<table>
<tr><td colspan="3">Block Name</td><td>Displayed without regard to the checking of (a), (b), and (c), (d).</td></tr>
<tr><td colspan="3">Block Type (Common, Undefine)</td></tr>
<tr><td colspan="3">R.C.G. Name</td><td rowspan="4">Displayed on when (c) is checked.</td></tr>
<tr><td colspan="3">Model Name *
*The letter ":" as the last letter of the Model Name signifies that the Model Name for the corresponding unit was written after shipment. The letter ":" is not part of the Model Name.</td></tr>
<tr><td colspan="3">VRF NW ID</td></tr>
<tr><td colspan="3">Address</td></tr>
<tr><td>Operation Time</td><td rowspan="3">Displayed on when (a) is checked.</td><td rowspan="2">Day, Night, Weekend Day, Weekend Night, Total</td><td rowspan="2">Displayed on when (b) is checked.</td></tr>
<tr><td>Thermostat ON Time</td></tr>
<tr><td>Total Energy Used</td><td>Cool,Heat</td><td>Displayed on when (d) is checked.</td></tr>
<tr><td>Power Consumption(kWh)*</td></tr>
</table>

* Only when using electricity meter.

- For “Calculate Amount”

<table>
<tr><td>Charge</td><td>Day, Night, Weekend Day, Weekend Night</td><td>Displayed on when (b) is checked.</td><td rowspan="10">Displayed only when “Calculate Amount” is set.
→par. 6-2-1 ④</td></tr>
<tr><td colspan="3">Charged Amount</td></tr>
<tr><td colspan="3">Basic Charge</td></tr>
<tr><td colspan="3">Common Charge</td></tr>
<tr><td colspan="3">Additional Charge 1</td></tr>
<tr><td colspan="3">Additional Charge 2</td></tr>
<tr><td colspan="3">Additional Charge 3</td></tr>
<tr><td colspan="2">Sub Total Charge *</td><td rowspan="2">Displayed only when tax calculation setting effective.
→par. 5-6-2 ⑦</td></tr>
<tr><td colspan="2">Tax</td></tr>
<tr><td colspan="3">Total Charge</td></tr>
</table>

* Amount with Tax subtracted from Total Charge

- For “Calculate Apportionment Rate Only”

Apportionment Rate	Day, Night, Weekend Day, Weekend Night	Displayed only when “Calculate Apportionment Rate Only” is set. →par. 6-2-1 ④

④ Writes the data in CSV format

Write the contents displayed by ③ to a file.

To reflect the details display setting of ②, click the [Export to CSV] button after displaying to ③. A file save dialog box is displayed. Select the folder to be saved and input the filename and save.

⑤ Creates a bill. Advance to “Bill setting” (par. 6-2-4).

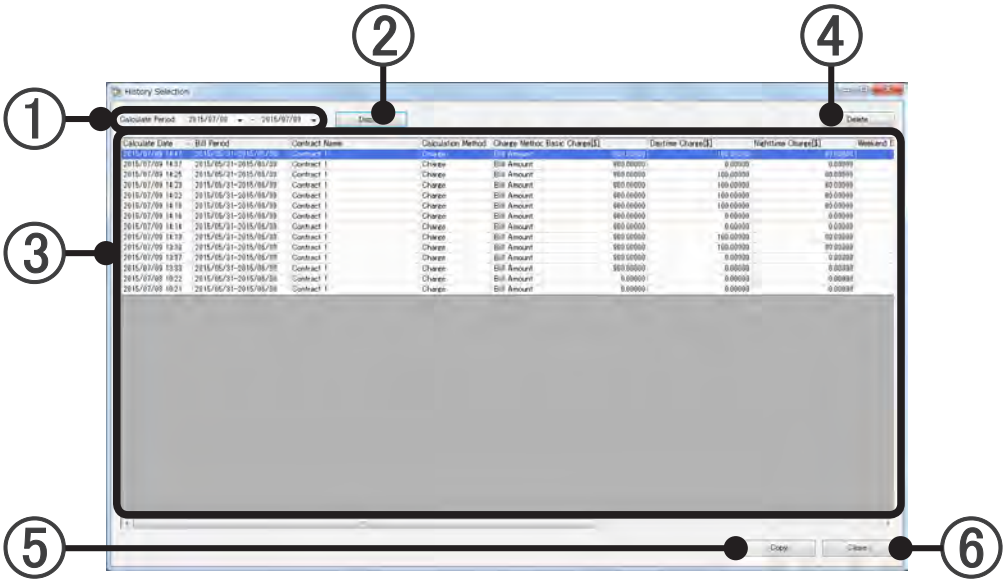
Cannot be pressed when “Calculate Apportionment Rate Only” is selected in par. 6-2-1 Apportionment Calculation.

⑥ Click to end and close the screen after checking the calculation result or printing a bill.

6-2-3 **Calculation history**

A history of past electricity charge apportionment calculations can be referenced and reflected at the Apportionment Calculation screen.

To display this screen, click the [History] button on “Apportionment Calculation” screen.



① Calculate Period: Set the start and end of the period of time whose calculation history is to be displayed.

② When the [Display] button is pressed, the calculation history is displayed in the [calculation history list] of ③.

③ Calculation history list:
Displays apportionment calculation input contents for “Calculate Date” within the period specified by ② in a list.
When the [Calculate Date item] is clicked, the apportionment calculations can be sorted in old order or new order.

Calculate Date	Calculation date
Bill Period	Period of time that used the electricity charges to be billed
Contract Name	Calculated contract name
Calculation Method	Charge/Rate
Charge Method	Bill Amount/Unit Charge (Nothing is displayed if the Calculation Method is "Rate")
Basic Charge	Total basic charge
Daytime Charge	Total daytime charge
Nighttime Charge	Total nighttime charge
Weekend Daytime Charge	Total weekend daytime charge
Weekend Nighttime Charge	Total weekend nighttime charge
Additional Charge 1	Total additional charge 1
Additional Charge 2	Total additional charge 2
Additional Charge 3	Total additional charge 3

* When nighttime charge setting and weekend charge setting is not performed, the billing amount of the power used is displayed at “Daytime Charge”.

④ [Delete] button:
If there is a calculation history you want to delete from the list of ③, select it and click the [Delete] button.
A confirmation screen is displayed. When [OK] is clicked, the data of the selected calculation history is deleted.

⑤ [Copy] button:
When you want to use input contents from the list of ③, select the calculation history and click the [Copy] button.
A confirmation screen is displayed. Click [OK].
The contents input at the Apportionment Calculation screen are destroyed.
The History Selection screen is closed and the data selected at the list of ③ is reflected at the Apportionment Calculation screen.

⑥ [Close] button:
Interrupts history referencing and closes the History Selection screen and returns to the Apportionment Calculation screen.

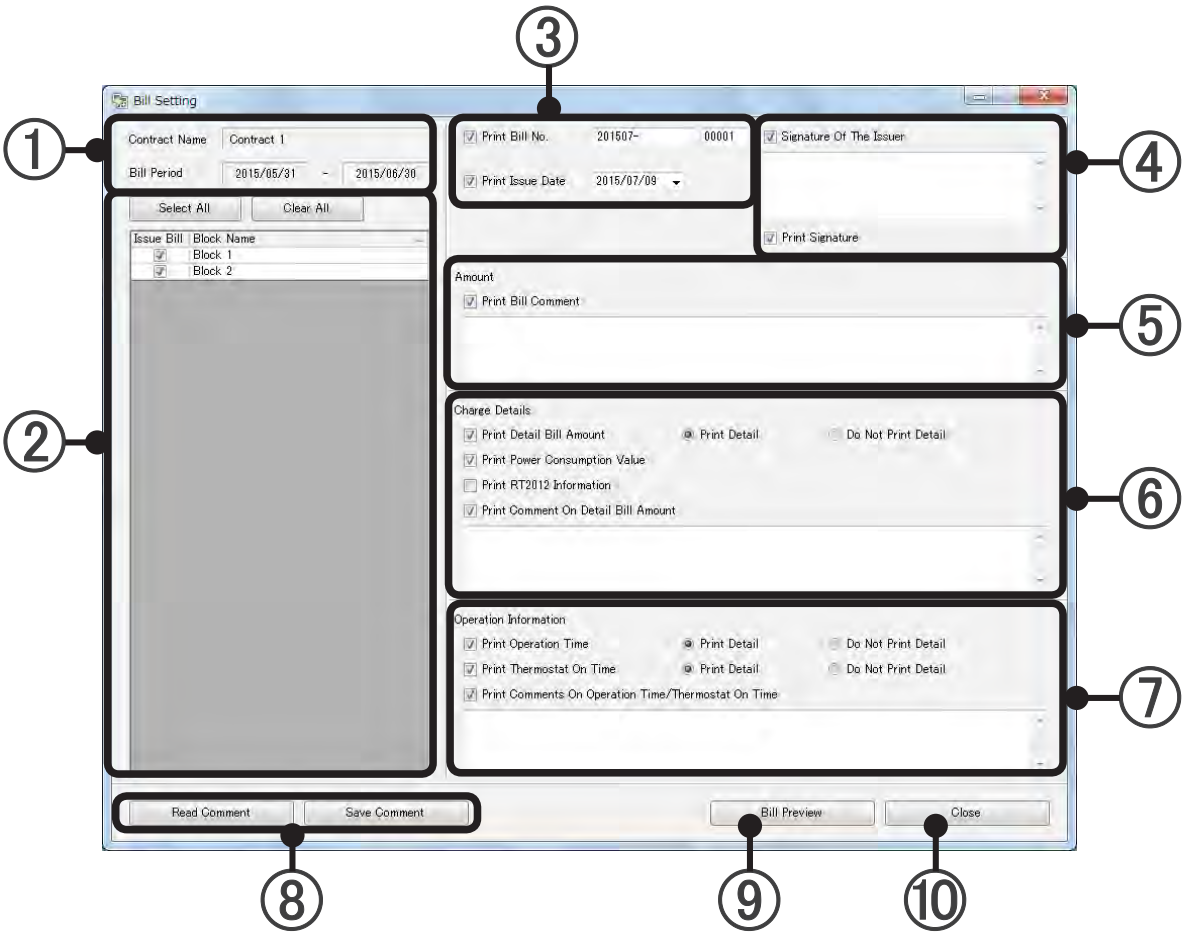
Note

The history does not reference past calculation results, but does reference the past data needed in calculation.
The data will be stored for 2 years.

6-2-4 **Bill setting**

Creates a bill for each block based on the amount of the apportionment calculation result.
To display this screen, click the [Bill] button on the Calculation Result screen.

Description of screen (Different from the initial screen in the state in which all the check boxes are ON)



① Check “Contract Name” and “Bill Period”.

② Select bill destination (Block) which is to output the bill. All select is possible by [Select All] button and all clear is possible by [Clear All] button.

③ Select whether or not the bill No. and bill issue date are to be printed.
(Bill No. is stored for each user in the VRF Controller database.)
When a check is entered, the number allocated by the VRF Controller database is input at “Bill No.” and the date the bill setting screen was opened is input at “Bill issue date”.
To change them, enter them at the “Bill No. (Within 15 characters of alphabet, numeric, symbol + 5 digits of numeric)” and “Bill issue date”.

④ Select whether or not the bill issuer is to be printed and the comment (within 500 characters) is to be input and whether or not the bill destination name field is to be printed.

⑤ Amount

Print Bill Comment check box:

Select whether or not a comment related to the bill is to be output.

To output a comment, enter the comment in the comment field. (Within 500 characters)

⑥ Charge Details

Print Detail Bill Amount check box:

Select whether or not basic charge (when set), usage charge, common charge, and additional charge 1 to 3 (when set) are to be output.

When Print Detail is selected, a summary of the nighttime charges and weekend charges is output.

Print Power Consumption Value check box:

If entering the invoice amount, the amount of power will be displayed.

If entering the unit price, the unit price and the amount of power will be displayed.

Print RT2012 Information check box:

Output the cooling and heating information for RT2012.

Print Comment On Detail Bill Amount check box:

Select whether or not a comment related to the amounts summary is to be output.

To output a comment, enter the comment in the comment field. (Within 500 characters)

⑦ Operation Information

Print Operation Time check box:

Select whether or not Operation Time is to be output.

When Print Detail is selected, a summary of the Night Operation Time and weekend Operation Time is output. (Cannot be selected when both night time charge and weekend charge are not set.)

Print Thermostat On Time check box:

Select whether or not Thermostat On Time is to be output.

When Print Detail is selected, a summary of the Night Thermostat On Time and weekend Thermostat On Time is output. (Cannot be selected when both nighttime charge and weekend charge are not set.)

Print Comment On Operation Time/Thermostat On Time check box:

Select whether or not a comment related to Operation Time/Thermostat On Time is to be output.

To output a comment, enter the comment in the comment field. (Within 500 characters)

⑧ Saves and reads the bill output setting contents.

[Save Comment] button: Saves the setting contents and comments of ③ to ⑦ to a file. (.xml format)

[Read Comment] button: Reads the setting contents and comments of ③ to ⑦ from a file. (.xml format)

* Only the state of the checkbox is saved and read at ③.

⑨ Opens the Bill Preview screen.

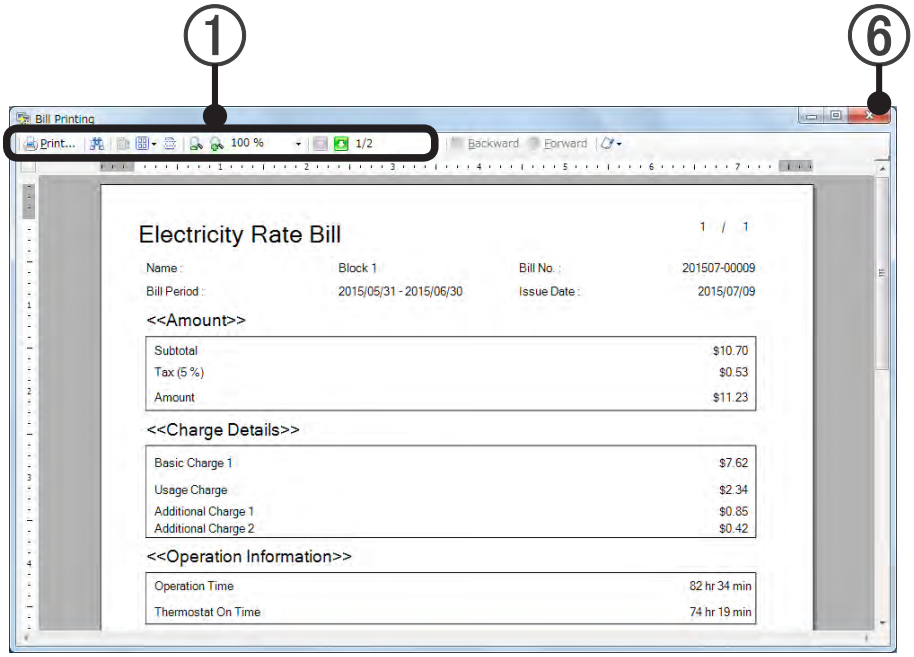
(Prints at the preview screen and writes in .rpt format.)

Advance to par. 6-2-5 Bill printing.

⑩ Click to end bill creation after bill printing. The Bill Setting screen closes.

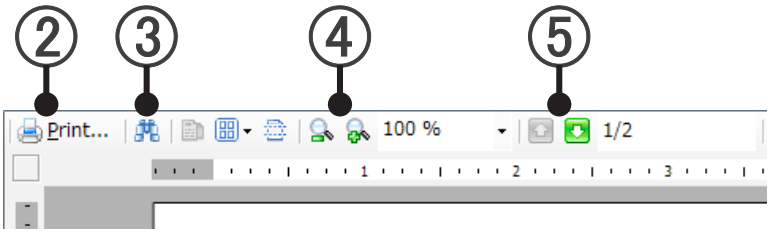
6-2-5 **Bill printing**

Displays a print preview of the bill.
Check the contents, and if there is no problem, print the bill.



If “Input Unit Charge” is selected in the apportionment calculation, the unit cost will be displayed.

① Description of tools



② Bill print

③ Text search in document

④ Preview display size specifications. (Zoom)

⑤ Bill page feed

⑥ After bill printing or the end of data write, close the Bill Printing Screen.

Note

- To end bill creation, after closing the Bill Printing Screen, click the [Close] button of the “Bill Setting” (par. 6-2-4).
- End apportionment calculation in order of “Calculation Result” screen (par. 6-2-2), “Apportionment Calculation” (par. 6-2-1), and “ECA Tool Menu” (par. 5-3).

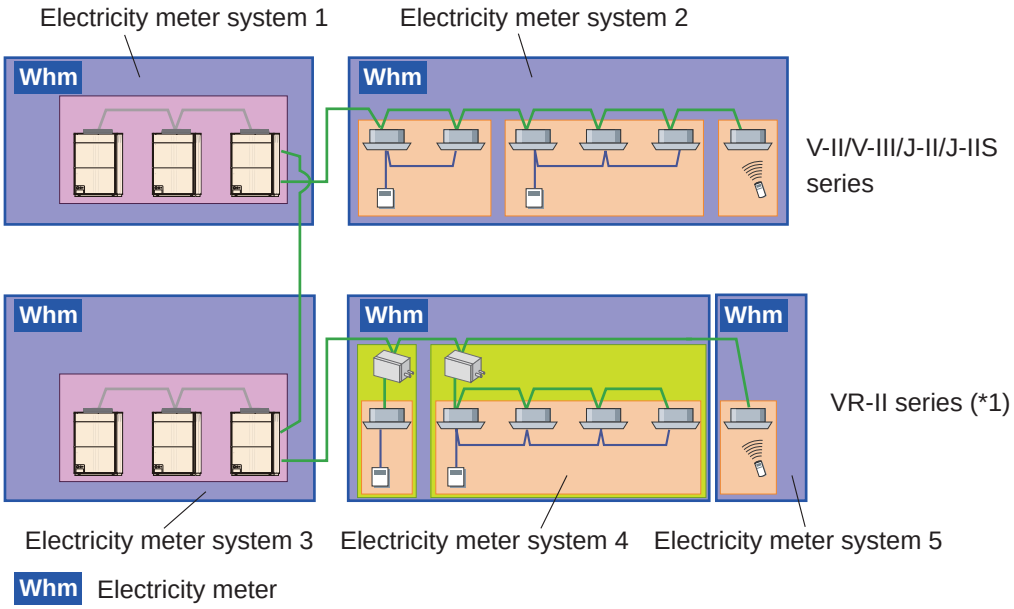
Appendix

7. Electricity Meter System
8. Installation Restriction of Electricity Meter
9. The Settings of Outdoor Unit and Touch Panel Controller
10. Electrical Wiring
11. Product Specifications
12. FAQ
13. Setting of ECA Function at the TPC Main Unit

7. Electricity Meter System

Electricity meter system is the connection configuration of one electricity meter and the air conditioner units which are connected to the power line under it. this is set on the ECA Tool.
Set to the ECA Tool match the actual electricity meter installation configuration.
Since the electricity charge apportionment function performs the control using the power consumption data from an electricity meter, it is necessary to set an electricity meter system on the ECA Tool.

When installing electricity meters as shown, 5 electricity meters systems are set.



(*1) In the VR-II series, Electricity Meter System can contain the RB units.

Appendix

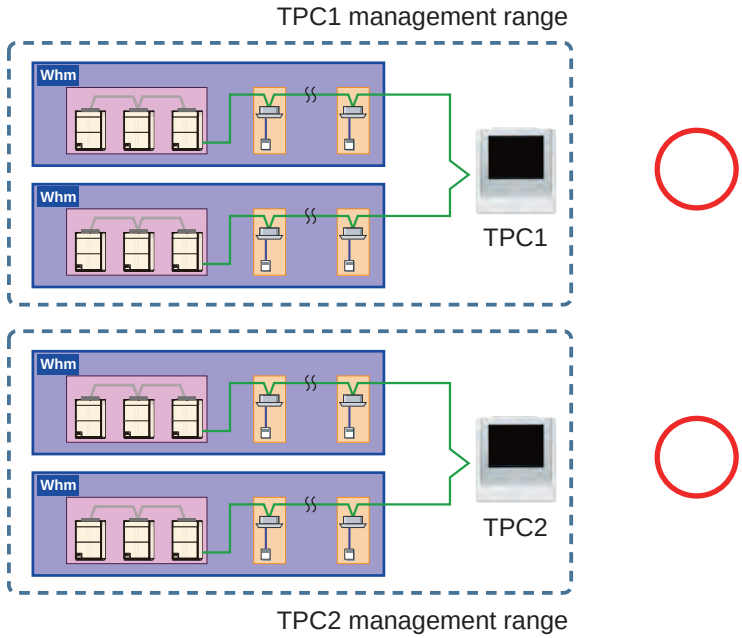
8. Installation Restriction of Electricity Meter

Note

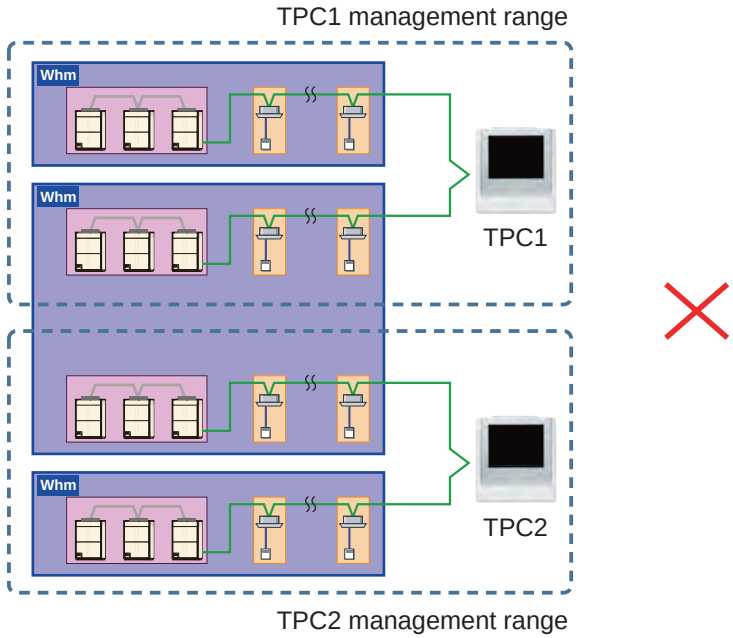
The following items are ways of connecting the electricity meter that are supported by the TPC.
However, it is necessary to observe the following restrictions.

① With the electricity charge apportionment function, an electricity meter system cannot span TPC.

Create an electricity meter system within the range of the units managed by each TPC.

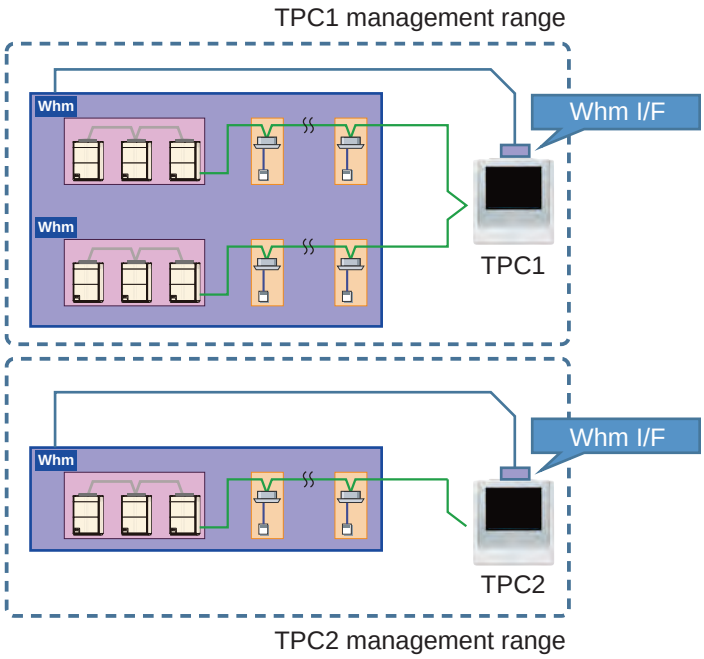


An electricity meter system spanning units managed by TPC cannot be created.

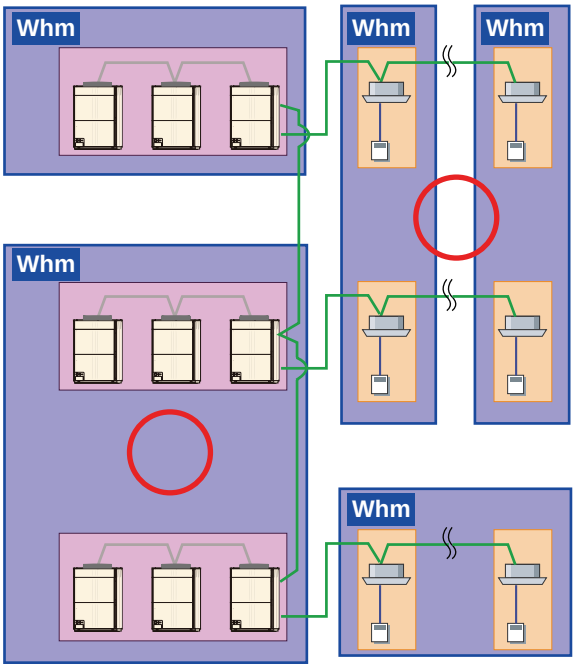


Appendix

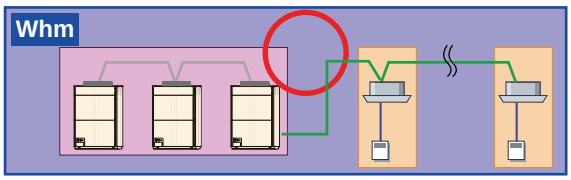
Connect the electricity meter that measures the units managed by the appropriate TPC to the electricity meter I/F belonging to the TPC main unit.



② Electricity meter may cover more than one refrigerant system.
However, at least one electricity meter is recommended to be installed for each refrigerant system.



③ It is permitted to mix indoor/ outdoor units for a single meter.



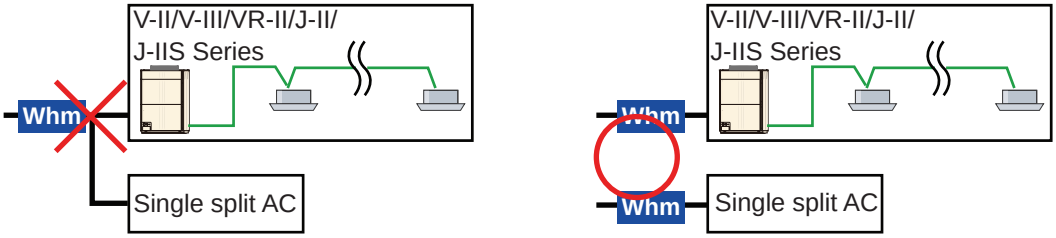
Appendix

- Installation limitations

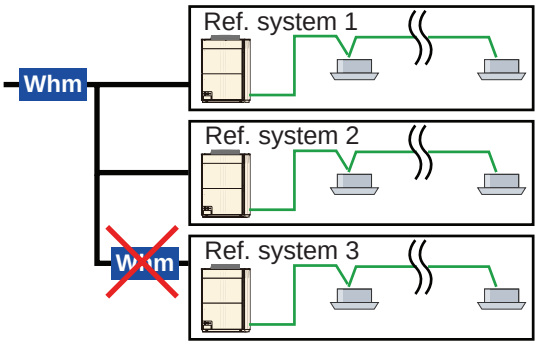
① Only install air-conditioning units which are to be in-scope for the function.
If an electric lamp or other OA equipment is connected to the electricity meter, also take into account the amount of power they use.
Make it so that the electricity meter is only connected to required air-conditioning units.

② Only connect the meter to V-II/V-III/VR-II/J-II/J-IIS Series air-conditioners.
Electricity meters can only be installed on V-II/V-III/VR-II/J-II/J-IIS Series equipment. Do not connect the electricity meter to S Series or V Series, as these do not support it.

③ You cannot have a mixture of units that support the electricity meter and those that do not support it working under a single electricity meter.
This is because the functions that can be used are different.
If connecting Single split AC using the V-II/V-III/VR-II/J-II/J-IIS series' network converter (UTY-VGGX or UTY-VGGXZ1), please separate the connection between the V-II/V-III/VR-II/J-II/J-IIS series VRF air conditioner and the electricity meter, as part of the functions*1 are not supported.
However, this does not include UTY-VGGXs that are connected to a Group Remote Controller.
*1: [Electricity Apportionment Function] It is not possible to carry out apportionment processing for indoor units such as Single split AC connected to Network converters.
The electricity cost for equipment connected to the network converter must be calculated in another way.
[Energy Saving Function] The Target Electricity in the Peak Cut function is a target, and there are no restrictions implemented for the Target Electricity.



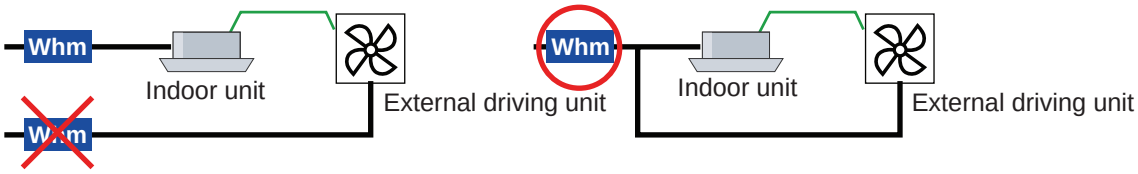
④ Nests for other meters and multiple installations are not permitted.
The meter itself can be installed, but please only use one for the Touch Panel Controller power meter (if you use both, the amount of electricity will be counted twice).



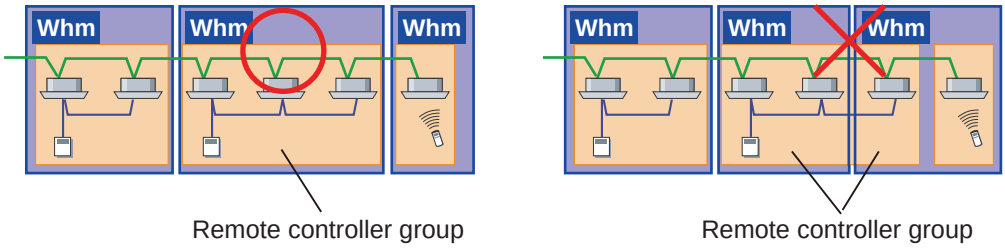
Appendix

⑤ The externally linked units*shall be connected to the same electricity meter as the air conditioner to which they are connected.

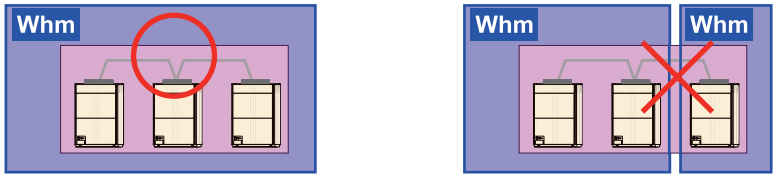
*General-purpose unit which performs calculation as an externally linked unit by electricity charge apportionment function.



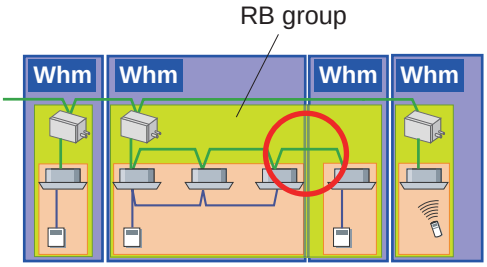
⑥ It is prohibited to install electricity meters that split Remote controller group.



⑦ It is prohibited to install electricity meters that split outdoor unit group.

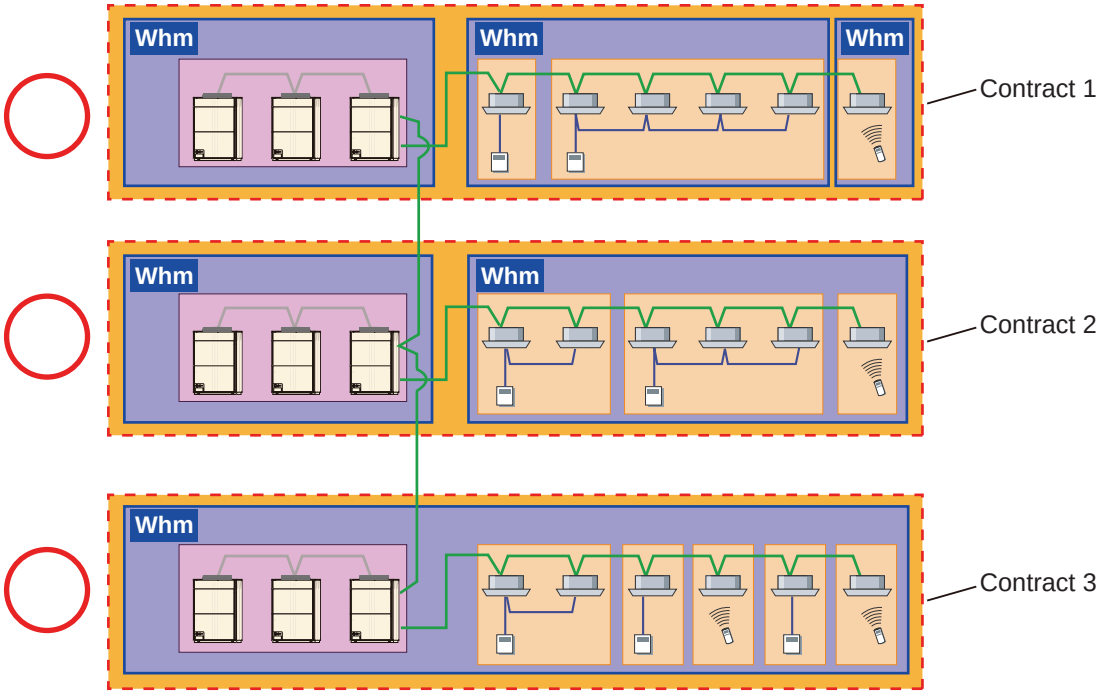


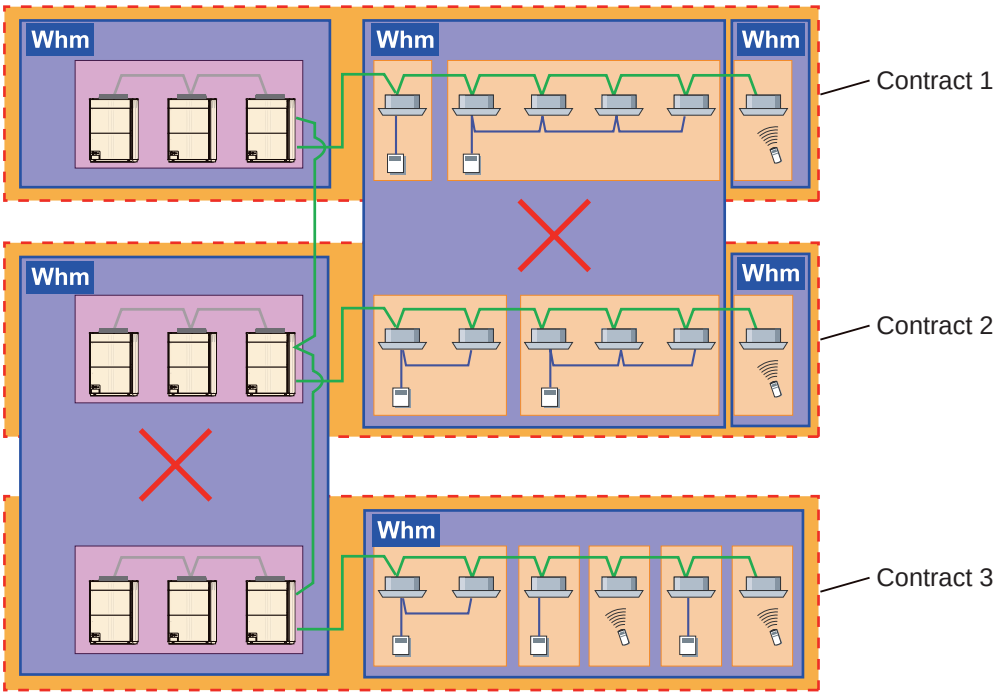
⑧ Installation of electricity meter which divides RB groups is OK.



Appendix

⑨ Installation of cross-contract electricity meters is prohibited.
If an electricity meter is used in the electricity apportionment function, install the electricity meter such that the “contract settings” configured in the electricity apportionment are not skipped.

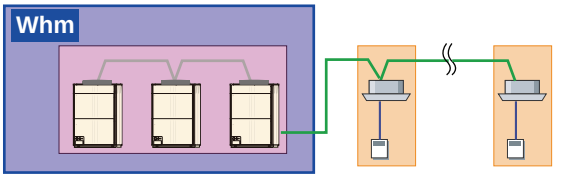




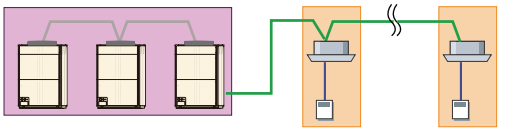
Appendix

⑩ When an option to use electricity meter for performing an apportionment function is selected, all units which are the subject of calculation must be monitored by electricity meter.
If an electricity meter is not connected, it may not be possible to calculate electricity apportionment using the electricity meter.

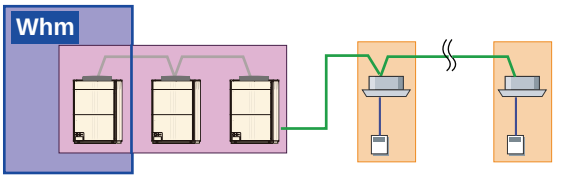
<For only electricity distribution for Outdoor units> → Connect the electricity meter to all Outdoor units.



All outdoor units must be connected to an electricity meter for each refrigerant system.

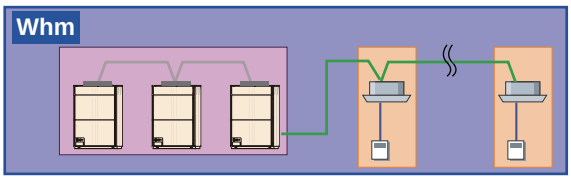


The outdoor unit is not connected to the electricity meter.

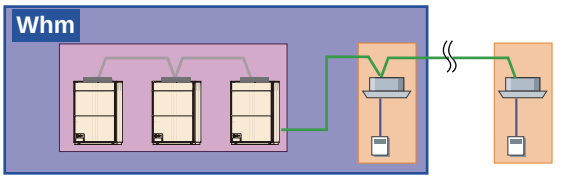


The outdoor unit is only partially connected to the electricity meter.

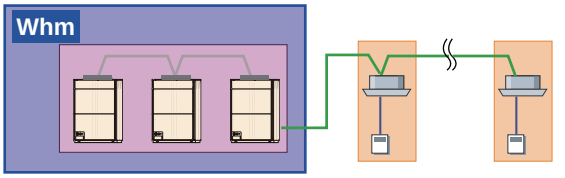
<For an electricity apportionment of outdoor unit + indoor unit> → Necessary to connect the electricity meter to all outdoor units and indoor units.



All outdoor units and indoor units must be connected to an electricity meter for each refrigerant system.



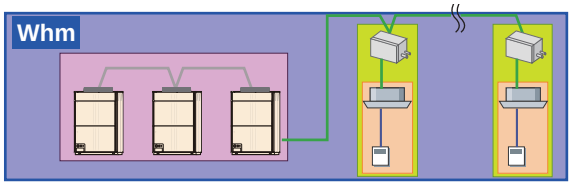
The indoor unit is partially not connected to the electricity meter.



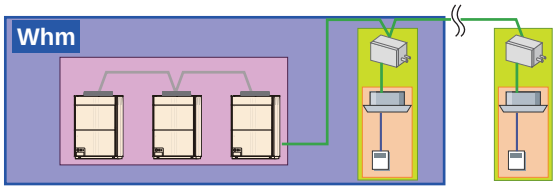
Also, regardless of whether electricity apportionment is carried out for the outdoor unit + indoor unit, the electricity meter is only connected to the outdoor unit.

Appendix

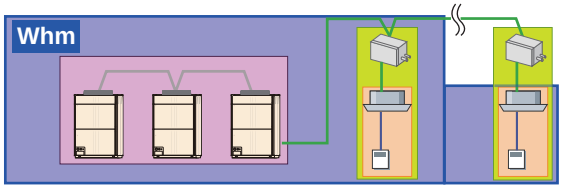
<For an electricity apportionment of outdoor unit + indoor unit + RB unit>→ Necessary to connect the electricity meter to all outdoor units, indoor units and RB units.



All outdoor units, indoor units and RB units must be connected to an electricity meter.



Electricity meter is not connected to some indoor units and RB units



Electricity meter is not connected to some RB units

⑪ Electricity apportionment for DX-Kit

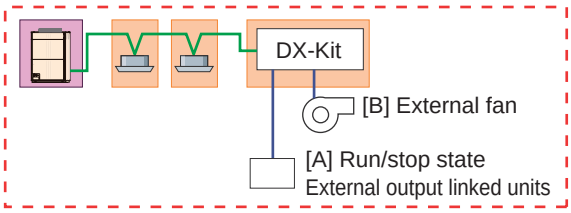
- When electricity meter not connected

The following units can be linked to the DX-Kit, by using external output terminals.

[A]：External fan

[B]：Units linked to run/stop state external output

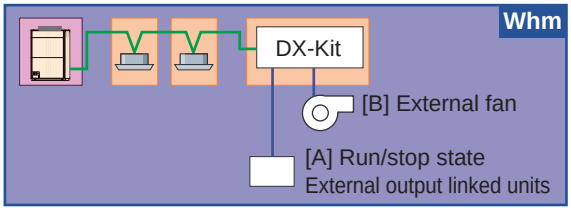
At electricity apportionment, the DX-Kit itself and units [A] and [B] mentioned above can be handled. Set the electricity value at ON beforehand for the units [A] and [B] from the “Parameter Setting” screen. The input value is included in the calculation as a constant value when the external output terminal is ON.



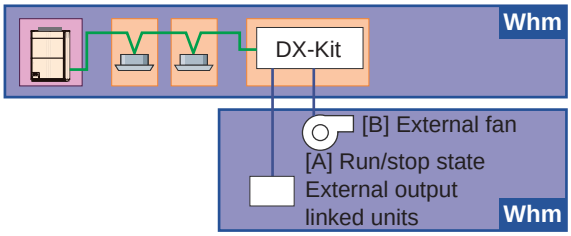
Appendix

- When an electricity meter is connected

  At electricity apportionment, the DX-Kit itself and units [A] and [B] mentioned above can be handled the same as when an electricity meter is not connected.
  Set the electricity value at ON beforehand for the units [A] and [B] from the “Parameter Setting” screen and install the electricity meter so that the units [A] and [B] are included.
  The input value in the calculation as a constant value when the external output value is ON is included.

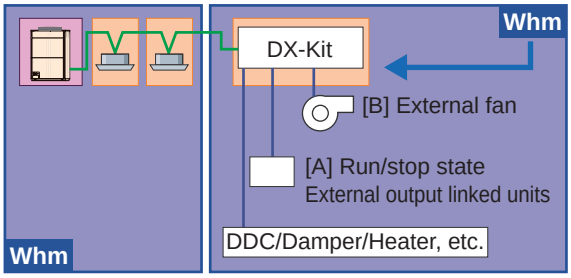


The electricity meter is installed so that the units [A] and [B] are included.



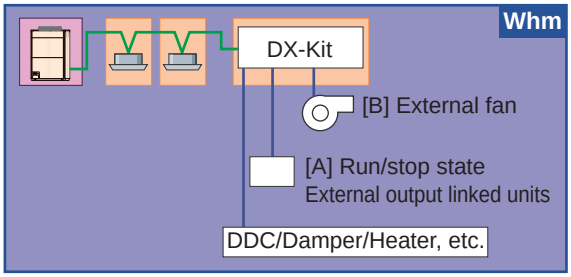
The electricity meter is installed independently from the units [A] and [B].

If there is a unit related to the DX-Kit other than [A] and [B], if the DX-Kit is connected as an independent electricity meter system and installed so that other units are included, it may be included in electricity charge apportionment. (All the value of that electricity meter is charged to the DX-Kit.)



The electricity meter is installed so that [A], [B], and other units are included.

Units other than [A] and [B] must not be connected to an electricity meter together with other indoor units. If connected, the electricity amount of DDC, damper and heater is also charged to the other indoor units.

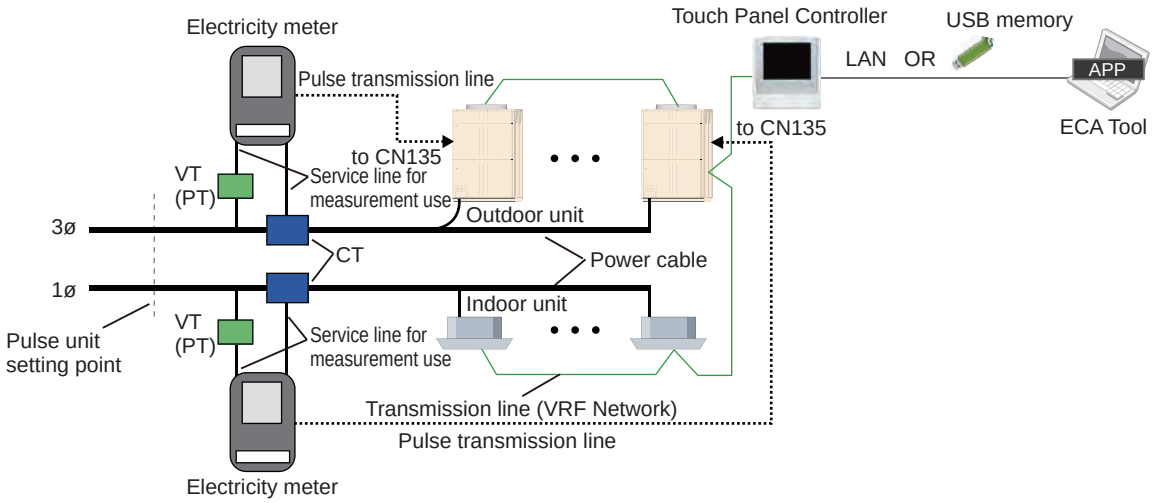


The electricity meter is installed so that the units other than [A], [B] and indoor units are included.

9. The Settings of Outdoor Unit and Touch Panel Controller

In order to understand the appropriate power consumption with the Touch Panel Controller, it is important to correctly transmit the electricity value measured with the power meter.
In order to do this it is necessary to configure appropriate settings on the power meter, outdoor unit, and Touch Panel Controller.
The following describes the method of setting the pulse value on the controller.
Setting example

① If the electricity meter you are using has units of pulses specified.

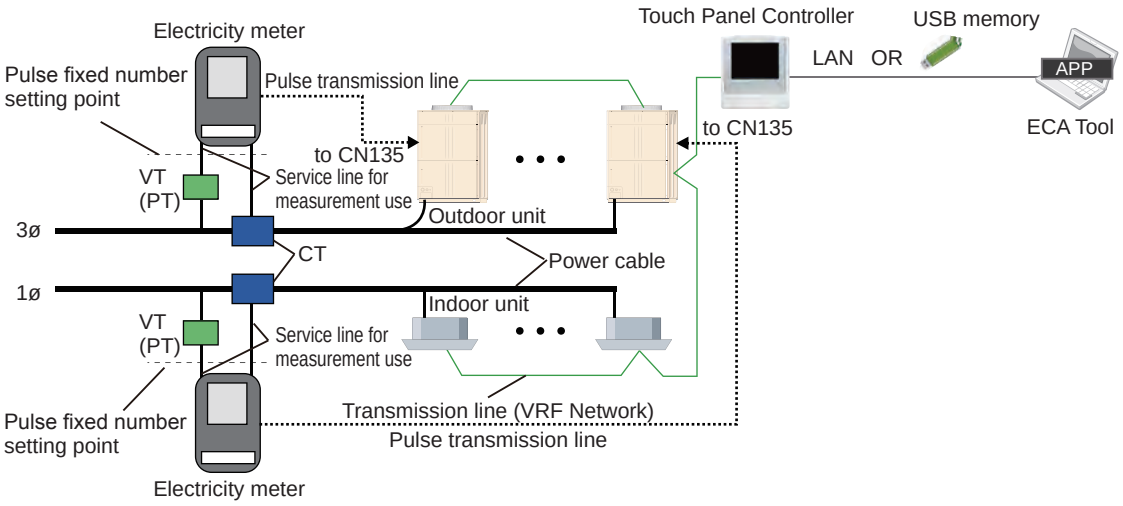


Pulses output with electricity meters specified in units of pulses are normalized (usually 1kWh/pulse) beforehand and then output.

Set location	Setting items	Set value	Comment	Remarks
Electricity meter	Configuration following the product manual.	-	If the product has fixed settings, configure by following the product manual (pulse unit value, VT/CT ratio, output factor, etc.).	
Outdoor unit	Meter number setting	Any	In order to distinguish between power meters, configure a fixed power meter number	These information are required for ECA Tool setting. Please refer to the Installation Manual of the outdoor unit.
	Electricity meter pulse setting	1	Set it fixed at “1”. When one pulse comes from the electricity meter, the outdoor unit will communicate “1” to the ECA Tool.	
ECA Tool	Electricity meter system settings	Unit that is subject to measurement by the electricity meter	The electricity meter with the meter number set in the outdoor unit configures the measured outdoor and indoor units.	Use values set for each outdoor unit
	Pulse setting	Electricity meter pulse unit value (normally it is either of 1, 10, or 100 [kWh/pulse])	The electricity meter is set to the specified pulse units without them being changed. Set the number of kWh that corresponds to the “1” communicated from the outdoor unit.	Refer to values set for each outdoor unit

[Setting Examples]
Setting conditions: VT ratio = 1 (unused), CT ratio = 50 (250/5A), power meter = 1kWh/ pulse
Set value: Electricity meter pulse setting = 1 (fixed), pulse setting = 1 (for the electricity meter used)

② If the electricity meter you are using has a fixed number of pulses specified.



Consumed electricity values displayed by output pulses with an electricity meter specified in a fixed number of pulses must be corrected with the VT/CT ratio. In this case configure the following settings.

Set location	Setting items	Set value	Comment	Remarks
Electricity meter	Configuration following the product manual.	-	If the product has fixed settings, configure by following the product manual (pulse unit value, output factor, etc.).	
Outdoor unit	Meter number setting	Any	In order to distinguish between power meters, configure a fixed power meter number	These information are required for ECA Tool setting. Please refer to the Installation Manual of the outdoor unit.
	Electricity meter pulse setting	The pulse fixed number of settings/ (VT ratio x CT ratio), however, remove the numbers after the decimal point	Set the approximate number of power meter pulses that are equivalent to 1kWh. When the pulses of set number come from the electricity meter, the outdoor unit will communicate “1” to the ECA Tool.	
ECA Tool	Electricity meter system settings	Unit that is subject to measurement by the electricity meter	The electricity meter with the meter number set in the outdoor unit configures the measured outdoor and indoor units.	Use values set for each outdoor unit
	Pulse setting	(Outdoor unit electricity meter pulse setting value) x (VT ratio x CT ratio)/ Fixed number of pulses However, the figures after the decimal point are also input.*1	Set whether the communication from the outdoor unit is in kWh. Set the number of kWh that corresponds to the “1” communicated from the outdoor unit.	Refer to values set for each outdoor unit

*1: Input until the 6th place after decimal point
[Setting Examples]
Setting conditions: VT ratio = 1 (unused), CT ratio = 500 (2500/5A), power meter = 3200pulse/kWh
Set value: Electricity meter pulse setting = 6 (3200/(1x500)),
pulse setting = 0.9375 (6x(1x500)/3200) ... Refer to the calculating formula on above table

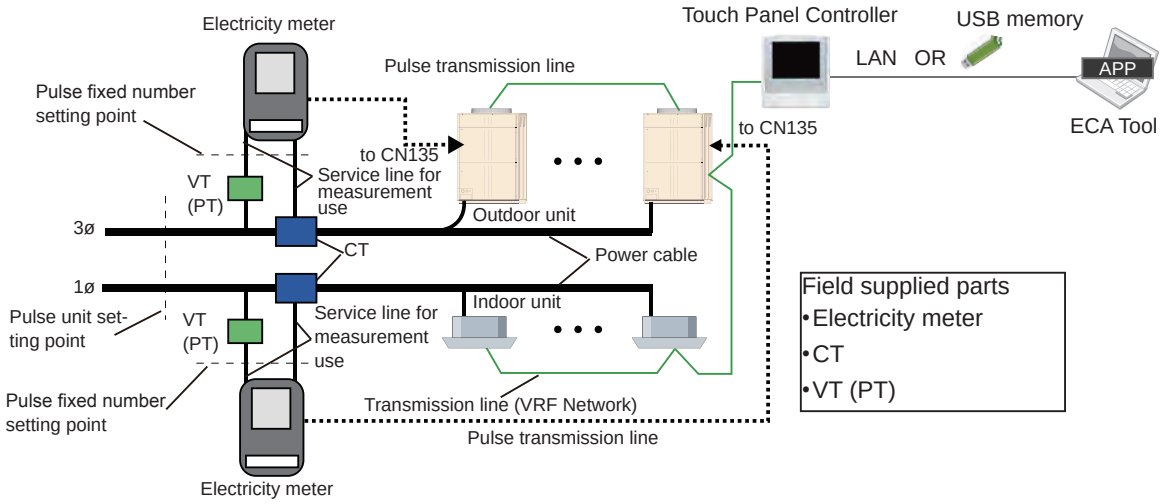
Appendix

Note

Be sure to select an electricity meter that sends more pulses per 1kWh than VT ratio x CT ratio. Otherwise, the measurement error of the power will be larger than 1kWh, thus affecting the accuracy of ECA.

10. Electrical Wiring

- Electricity meter connection composition
  In order to control the peak cut of energy saving, In principle, It is necessary that a electricity meter with pulse sending function to monitor all electricity consumed by air conditioner. The number of electricity meter should be less than predefined number, but if cover all observed subject, it can be multiple installed. The installation construction of general electricity meter is shown as follows.



Item	Explanation	Remarks
Electricity meter	Service line for measurement use measure the voltage and current of connected power cables to obtain consumed electricity or output a measured value related pulse from pulse transmission line.	
VT(PT)	Voltage Transformer (Power Transformer) Make the voltage of power cables lower to be a voltage that the electricity meter can measured. It will shows with VT(PT) ratio that how the voltage was lowered. Usually, it has no necessary that a voltage level used on outdoor units, indoor units.	
CT	Current Transformer Shunt the current value of power cables to be current that the electricity meter can measured. It will shows with CT(PT) ratio that how the shunt it. It have 2 type of " insert into power cable type" and " through into power cable type".	
Pulse unit	Pulse unit shows the relation of electricity meter's output pulse and measured electricity. The numerical value specified in pulse unit shows the value of kWh that are equivalent to a pulse in consumed electricity of power cables. Unit is [kWh/pulse] The numerical value specified in pulse unit has consider to the used VT or CT ratio, it corresponding to the value of actual consumed electricity.	
Pulse unit setting point	It shows the measurement point of consumed electricity specified in pulse unit.	
A fixed number of pulses	Pulse fixed number shows the relation of measured electricity of electricity meter and output pulse. The numerical value specified in pulse fixed number shows the number of pulses that are equivalent to 1kWh consumed electricity that input electricity meter. Unit is [pulse/kWh] It is need to multiply VT, CT ratio by the value of pulse fixed number respectively when you calculate the actual electricity consumed on power cables, because of the numerical value specified in pulse unit has not taken the used VT or CT ratio into consideration.	
Pulse fixed number setting point	It shows the measurement point of consumed electricity specified in pulse fixed number.	

- Selection of Electricity meter, CT, and VT.

Please take the follow item into consideration to select electricity meter, CT,VT.

① Install the electricity meter with refrigerant system unit as possible.

② Select VT/CT with a low ratio.

③ In the case that a electricity meter specified in pulse unit (kWh/ pulse) is used, a output of kWh/ pulse should be selected usually.

- Outdoor unit connection interface (CN135) to electricity meter

Item		Specifications	Remarks
Interface		Non-powered connection point “a” *3	Connection point “a”: ON upon short circuit*1
Pulse	Specifications	Width: 50ms or greater Interval: 50ms or greater	
	Unit	1 kWh/ pulse (pulse units) is recommended.	
	A fixed number	However, with consideration given to the power meters that can be obtained in some countries, power meters with 3,200 pulse/kWh (fixed number of pulses) and below are also supported.	
Wire length limitations		150m(492ft) or less	Between Electricity meter to Outdoor unit
Wiring specification		Control and instrumentation cable CVV-S (Control-use Vinyl insulated Vinyl sheathed cable - Shielding) *2 2 cores 1.25mm^2(16AWG)	

*1: Pulse signal that is OFF when electricity is flowing (open), and ON at the time of a short circuit (closed).

*2: In the case of the trouble effect caused by induction, please select a CVV cable (CVV-S cable) with shield.

Because the copper shield tape is wrapped on CVV cable make it has a effect to relax induction trouble from near power cable to keep normal transmission.

In additional, in the case of the wiring at outdoor, please select a weather-resistant one.

*3: To connect an electricity meter, an additional service part "External Input Wire"(Parts No.9368777005) is required.

- Restrictions on electricity meter installation

Item	Specifications	Remarks
Number of electricity meters installed	Max.200	Per Site (include Max. 4 VRF systems)

11. Product Specifications

11-1 Operating condition

PERSONAL COMPUTER SYSTEM REQUIREMENTS

Operating system	• Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2 • Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 (32-bit or 64-bit), Windows® 8 Pro (32-bit or 64-bit) • Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit) • Microsoft® Windows® 10 Home (32-bit or 64-bit), Windows® 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8, Windows® 8.1 and Windows® 10)
HDD	40 GB or more of free space
Display	1024 × 768 or higher resolution
Interface	• USB port • Ethernet Port (to communicate with TPC via LAN)
Software	Adobe® Reader® 9.0 or later

11-2 Specifications

Model	UTY-PTGXA
Number of sites	Max 20
Number of NW	Max 4 (per site)
Refrigerant system	Max 400　100 x 4NW (per site)
Outdoor unit	Max 400　100 x 4NW (per site)
Indoor unit	Max 1600　400 x 4NW (per site)
Number of TPC	Max 64　16 x 4NW (per site)
Number of contracts	Max 400 (per site)
Number of blocks	Max 1600 (per site)
Data storage period	Max 2 years

12. FAQ

12-1 Questions and answers related to electricity charge apportionment

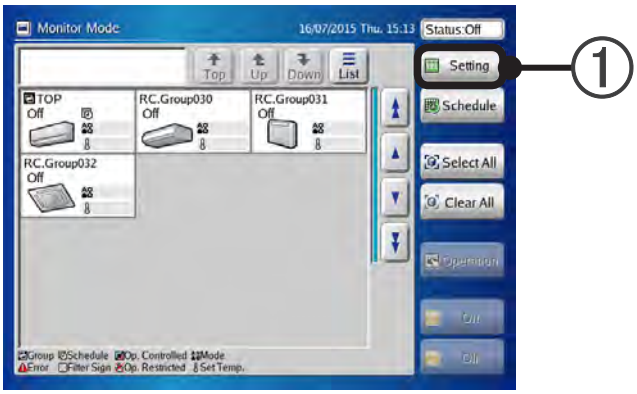
No.	Question / Answer
1.	Why is an electricity charge generated even though none of the indoor units is being used?
	Since power is consumed by the outdoor unit even when all the indoor units are not in use, an electric charge is generated.
2.	Why isn't the operation time and electric charge proportional?
	If the room temperature is already the set temperature even when operation is turned ON by remote controller, the indoor unit will not operate and the power consumption will be that much lower. In addition, if the difference between the room temperature and the set temperature is large, more power is consumed than when the difference is small. Therefore, the operation time and electricity charge may not necessarily be proportional.
3.	Why is the electricity charge of operated indoor units so much smaller than that of indoor units that are not operated at all?
	Electricity charge includes the power consumed by the outdoor unit in addition to that of the indoor unit. The outdoor unit consumes power constantly so that operation at any time is possible even through indoor units are not operating. This is called "standby power". Since the standby power differs with the model of outdoor unit, if the number of indoor units per outdoor unit is assumed to be the same, the indoor units which use a high standby power outdoor unit will consume more power than indoor units which use a low standby power outdoor unit. This question is an example of when the difference of this standby power was larger than the power consumed by operation. This is a normal result. Generally, this kind of difference is made small by selecting the model of outdoor unit based on appropriate facility design.
4.	Why has the electricity charge suddenly increased even though use is the same as in the past?
	The electricity charge is apportioned between blocks. When the number of blocks is decreased or increased by the leaving and entering of tenants, the electricity charge increases and decreases. As an example, if the case when setting so that the basic charge is apportioned equally by number of blocks, when the number of tenants decreases, apportionment per block increases and when the number of tenants increases, apportionment per block decreases. This phenomenon also varies depending on the electricity apportionment setting method. The building owner and manager should perform appropriate setting in accordance with that policy.
5.	I want to replace the server PC with a new PC. Can the data be transferred?
	The ECA Tool has data Export and Import functions. For details, see the Import/Export page.
6	When SQL Server 2008 R2 installation failed while the this application is being installed.
	Please refer to the log in the following folder. C:\Program Files\Microsoft SQL Server\100\Setup Bootstrap\Log

13. Setting of ECA Function at the TPC Main Unit

Sets whether the electricity charge apportionment function is enabled or disabled at the TPC.
This setting is not necessarily required.

To perform this setting, the setup at the TPC main unit must be performed in advance by using the USB memory packed together at the time of option purchase.

* Refer to the TPC main unit OPERATING MANUAL for the setup method.



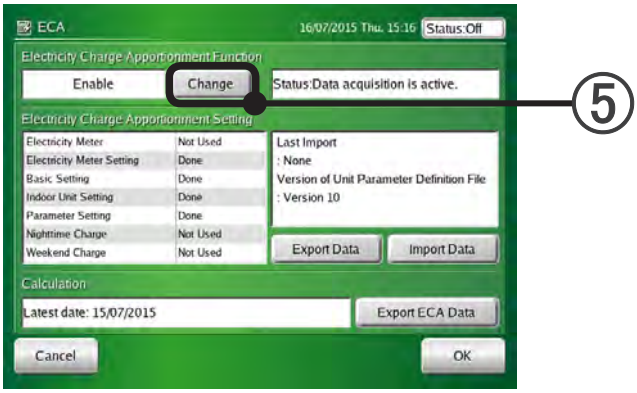
① Touch the [Setting] button.

② Touch the [System Setting] button.

Appendix

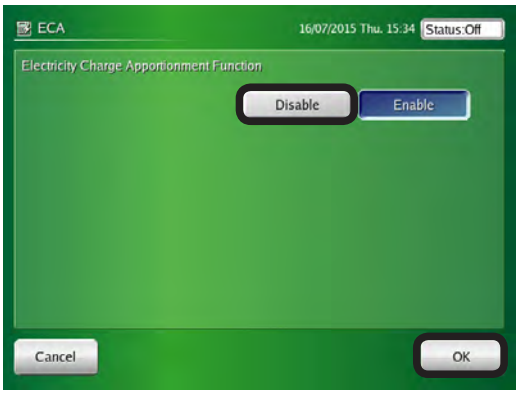
③ Touch the [Next Page] button.

④ Touch the [ECA] button.
When the button is not displayed, setup is not complete.



⑤ Touch the [Change] button.
The “Installer Setting Password Verification” screen opens.

⑥ Input the password and touch the [OK] button.



⑦ Touch the [Enable] button or [Disable] button and touch the [OK] button.
By this setting, the electricity charge apportionment function can be switched between [Enable] and [Disable].