DRS Software User Guide

(Distribution Remote System)

Version 1.1

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Distribution Remote System Software

Introduction to DRS

What is Distribution Remote System (DRS)?

DRS (Distribution Remote System) is Software that is developed to manage and collect power consumption on electrical distribution networks. This system has been designed to ease energy consumption management that is more efficient and accurate, such as the display of active power, reactive power, power factor, frequency, voltage, and phase of current, with date and time, and time of use (ToU) functions. Moreover, DRS adds a variety of functions that enable business owners or managers to more easily analyze daily and monthly maximum power consumption in tables and graphs through Peak Analyze. Besides the Peak Analyze function, DRS has other crucial functions, including alarm monitoring. When any energy meter detects something abnormal, such as a door opening alarm, a loss of phase alarm, etc., it receives a notification alarm immediately. With the map view function, the operators can easily pinpoint the accurate fault location on Google Maps when they go to check on site.

Currently, there are four types of DRCs that can be configured into the DRS system,including DRC-004G and DRC-004i for energy metering Landis +Gyr and DRC-012G and DRC-012i for energy metering EDMI.

Overall, both business owners and technical managers are able to receive more advantages from the DRS system for long term investment and preventive maintenance plans.

1. Main menu of Distribution Remote System Functions and Icon

The DRS software has 7 functions and 6 icons representing each function for using and managing the electrical meter data.

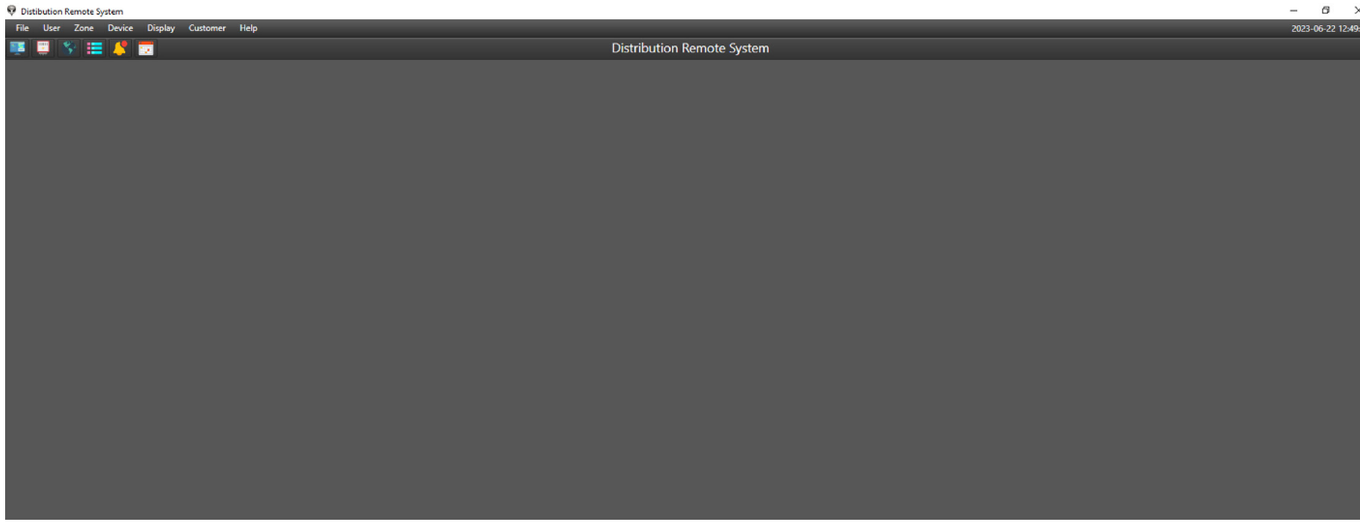


Figure 1: DRS Software Interface

1.1. Distribution Remote System Functions

- **File** has two functions: Logout to exit current user account and Close to close the DRS software.
- **User** has 3 functions: Create User to create new user account Modify User for setting user permission and Change Password to change the user's new password.
- **Zone** has 2 functions: Create Zone to create an area for managing the DRCs and Modify Zone to edit the area name.
- **Device** has 4 functions: Add Device to configure DRC into the DRS software, Modify Device to edit the name and type of remote monitoring device, Setting Device to set the parameters of DRC and Manage Device to determine DRC zone.
- **Display** has 6 functions: All Metering displays all DRCs in DRS, Meter Details displays detail information of each DRC Alarm displays and notifies any problems occurring on ergrgy metering Map View display the location of DRCs on Google Map, Grid View display DRCs in symbolic icons with their name and User Event displays all operation logs.
- **Help** has 2 functions: About Us show up VP.Start Technology Co,.Ltd information on website and Check Update for software update.
- **Customer** has 6 functions: All customer, Modify, Contracted, Register Customer, Manage Customer, Customer Consumption.

1.2. Icon Features

All Metering displays all DRCs in DRS software.

Meter Details displays detail information of each DRC.

Map View displays the location of DRCs on Google Map.

Grid View displays DRCs in symbolic icons with their name.

Alam provides alarm information that occurs on energy metering.

User Event records all operation logs.

2. Device

Device is a software function designed to provide users with a comprehensive tool for managing all their DRCs. This function offers six key features that enable users to perform various actions related to their DRCs, including Add Device, Modify Device, Setting Device, and Manage Device.

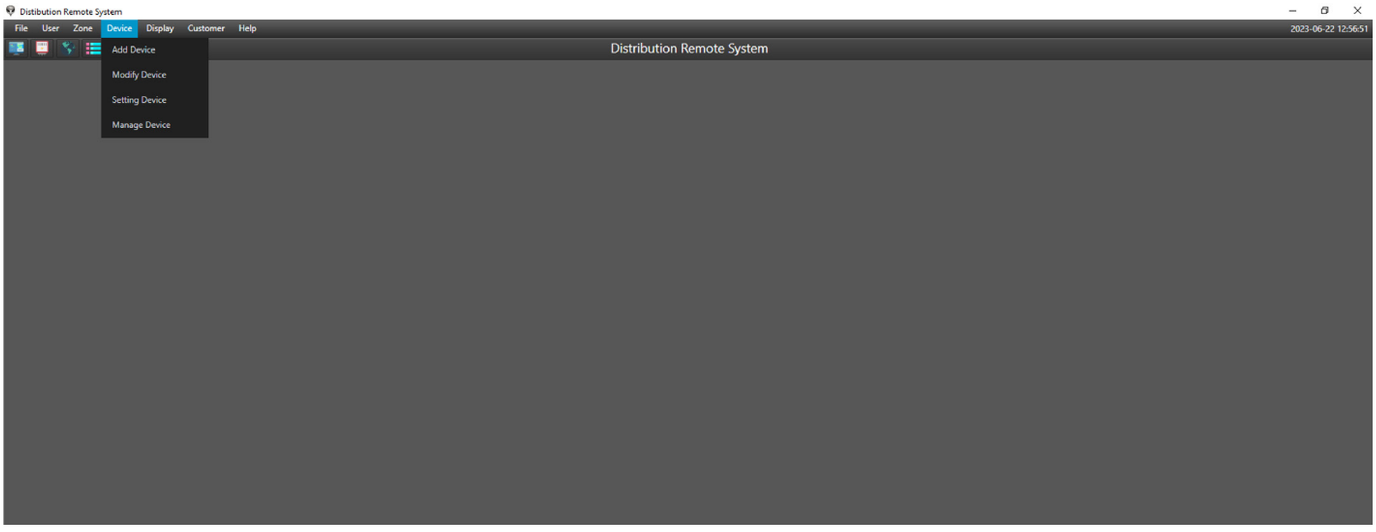


Figure 2: Device

2.1. Add Device

This function allows users to add new DRCs to their system. Users can input the energy metering 's serial number and its name.

Device ➔ Add Device ➔ Add

- Serial: Input serial number of Landis +Gyr or EDMI meter (for example, 50577418).

- Name: Meter's name.

Note: Take notes up to 500 characters.

Figure 3: Add Device

2.2. Modify Device

This function lets users modify existing DRC's information, such as:

- **Name**: Remote monitoring device name.
- **Main or Back Up**: Select main or backup meter.
- **Rate (A)**: Current Transformer rate (CT), which is usually expressed automatically.
- **Model**: Select meter model.
- **Province** : Location of remote monitoring device.
- **Latitude/Longitude:** Location as latitude and longitude of remote monitoring device.

Note : Take note up to 500 characters.

Other information is displayed from the system automatically:

- **Serial Meter :** Meter serial code.
- **VP.Start ID:** VP.Start ID of remote monitoring device.
- **Created:** Configuration date of remote monitoring device into DRS software.

Device ➔ Add Device ➔ Update

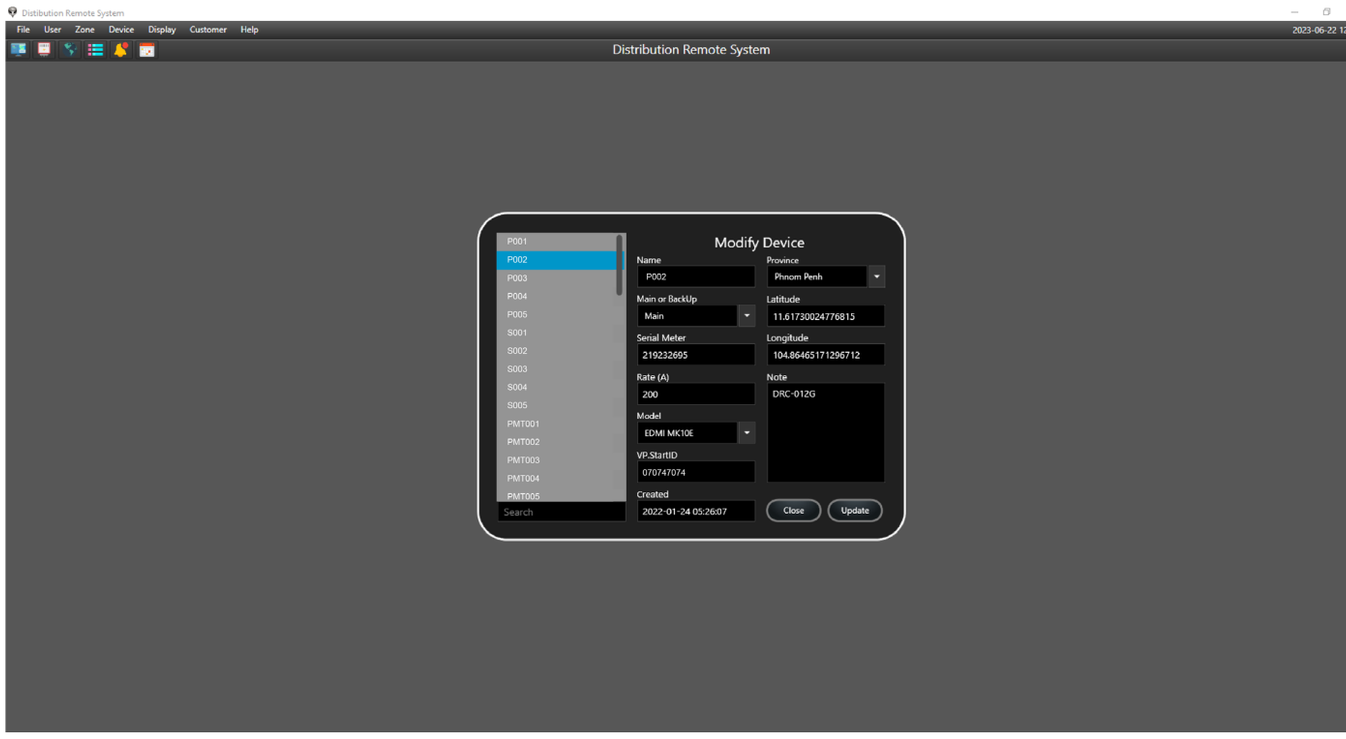


Figure 4: Modify Device

2.3. Setting Device

This function enables users to adjust various settings on their DRCs, such as voltage, current, power, and power limit.

Voltage Multi: The line voltage coefficient of the electrical network is equal to the ratio of the transformer voltage (VT) multiplied by the square root of 3 (Voltage Multi = Voltage Transformer Ratio x √3).

Current Multi: The electrical current coefficient is equal to the ratio of the current transformer (CT) (Current Multi = Current Transformer Ratio).

Power Multi: The coefficient of power is equal to the ratio of the current transformer (CT) multiplied by the ratio of the transformer voltage (VT) Power (Power Multi = Current Transformer Ratio x Voltage Transformer Ratio).

Power Limit: Setting of power consumption. In the case of no power limit setting, the value of the Power Limit must be zero (0).

Note: Normally Voltage Multi, Current Multi and Power Multi will be displayed automatically.

Device ➔ Setting Device ➔ Update

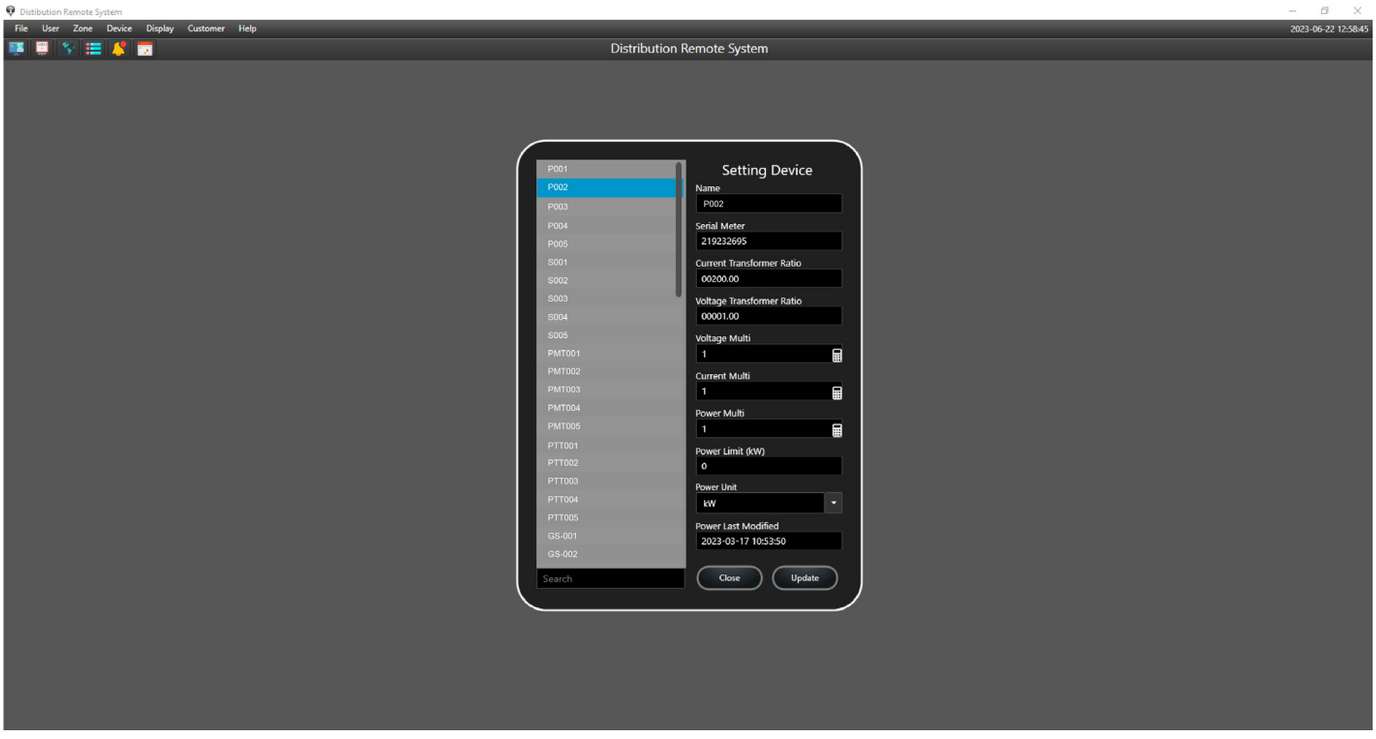


Figure 5: Setting Device

2.4. Manage Device

This function allows users to manage their DRCs by zone.

Device ➔ Manage Device ➔ Update

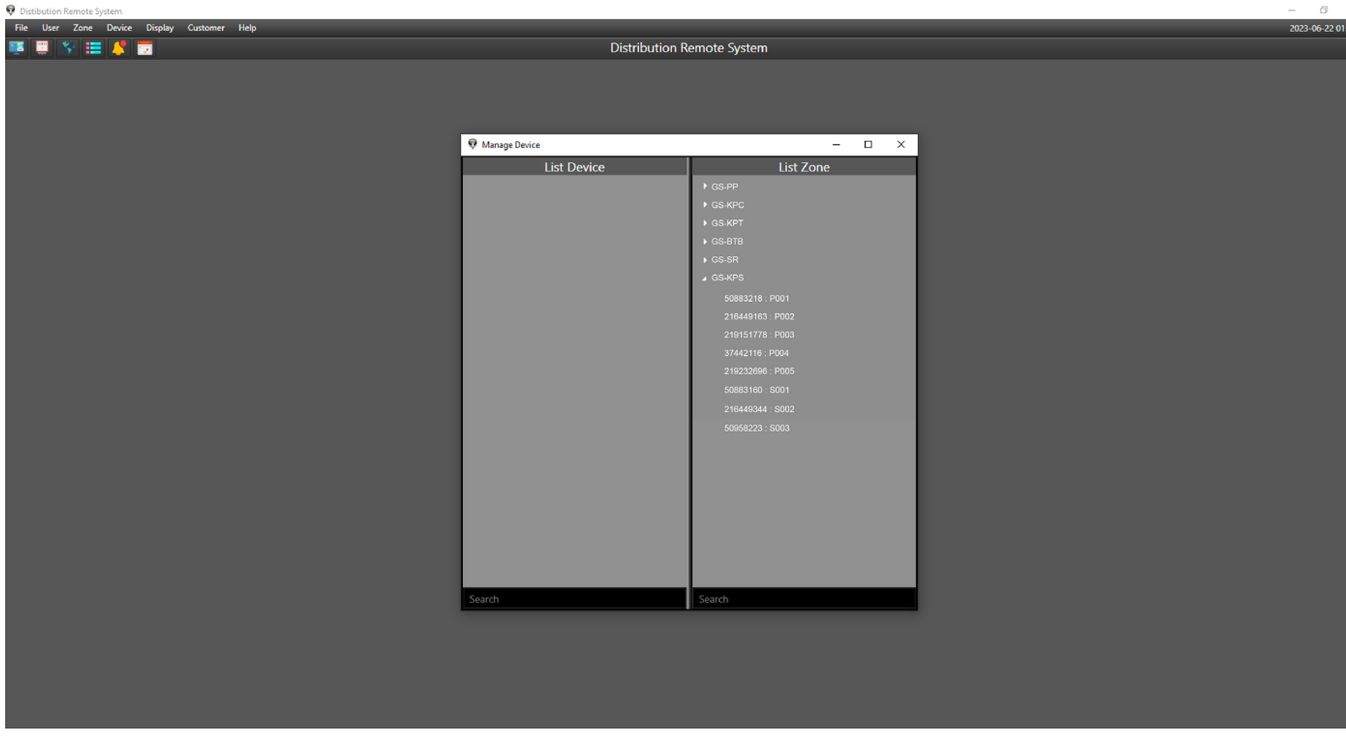


Figure 6: Manage Device

3. Zone

In order to facilitate and manage all energy metering, the operators are able to categorize it by zone. DRS software provides two main functions:

Create Zone and Modify zone.

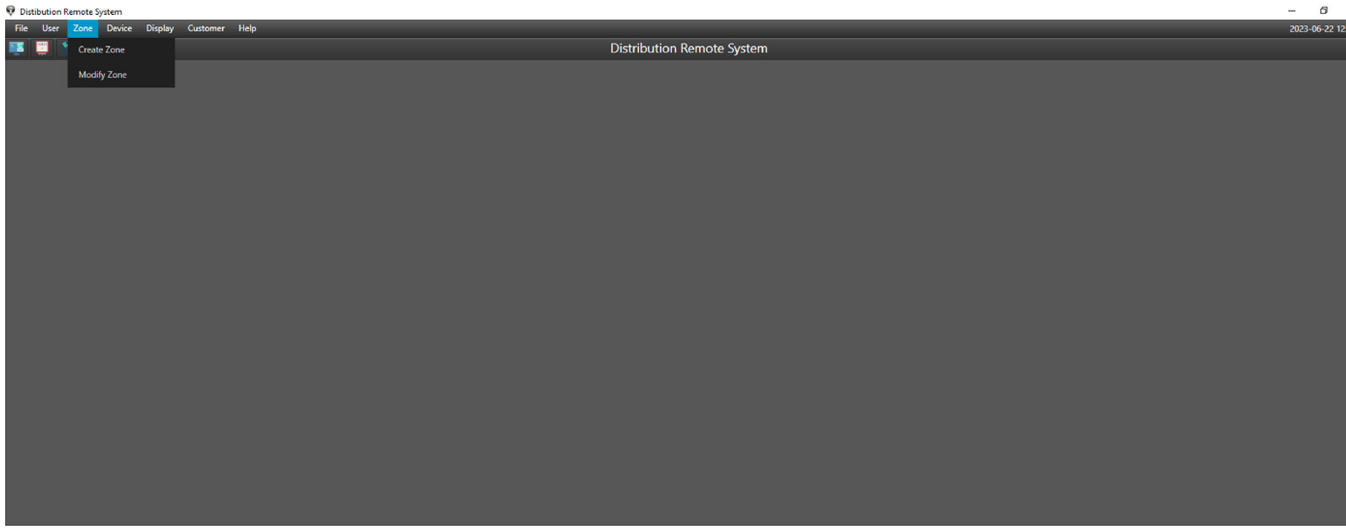


Figure 7: Zone

3.1. Create Zone

How to create zone and group name?

Zone ➔Create Zone ➔ Create

- Zone: Name of zone or customer group.

Note: Take notes up to 200 characters.

Figure 8: Create Zone

3.2. Modify Zone

This function lets users modify existing zone name.

Zone ➔ Modify Zone ➔ Update

- Zone: Zone name

Note: Take notes up to 200 characters.

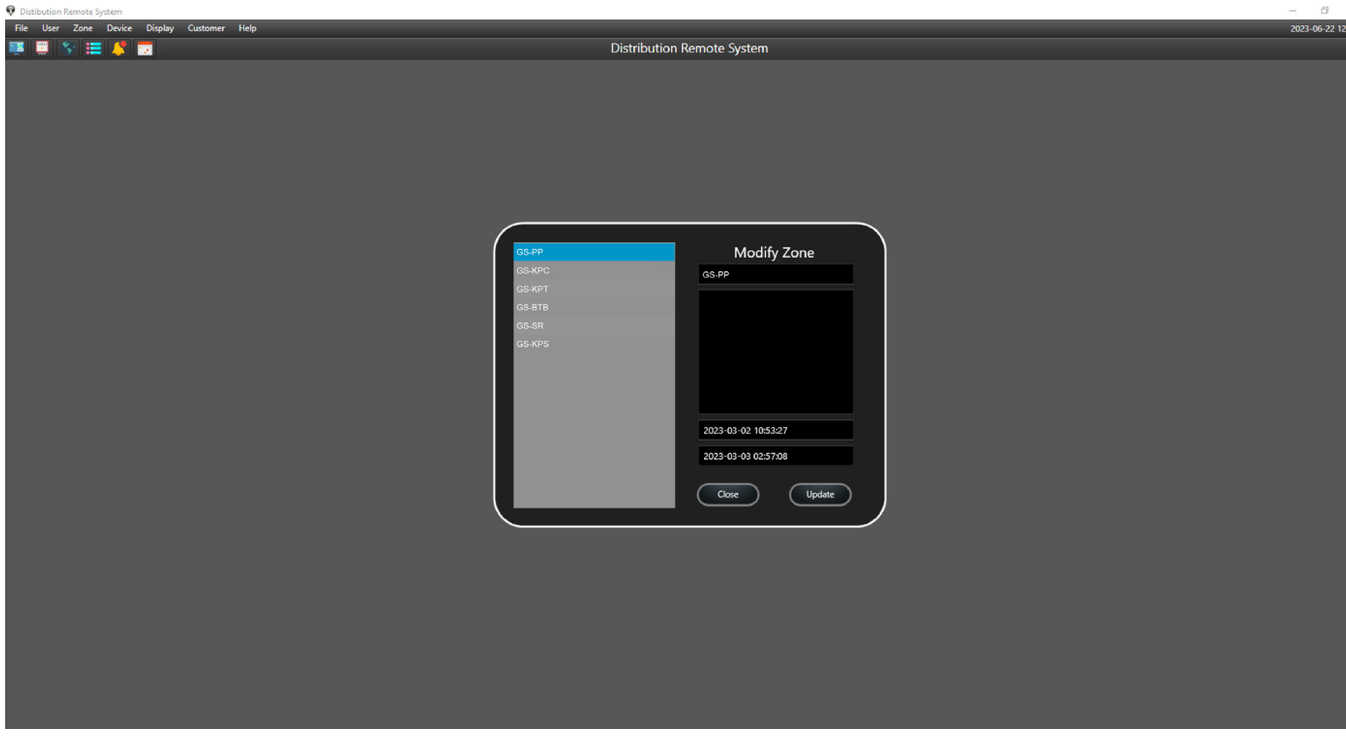


Figure 9: Modify Zone

4. Display

Display allows users to easily view all DRCs' data in the form of a gridview or table. It also has six functions, such as All Metering, Meter Details, Map View, Grid View, Alarm, and User Event.

Figure 10: Display

4.1. Gird View

This allows operators to have an overview of multiple controllers simultaneously. It will blink red on the icon when an alarm occurs.

Display ➔ Grid View

Figure 11: Gride View

4.2. Map View

DRS offers a map view feature that integrates with Google Maps. This feature allows users to visualize the locations of the controllers directly on the map.

Display ➔ Map View

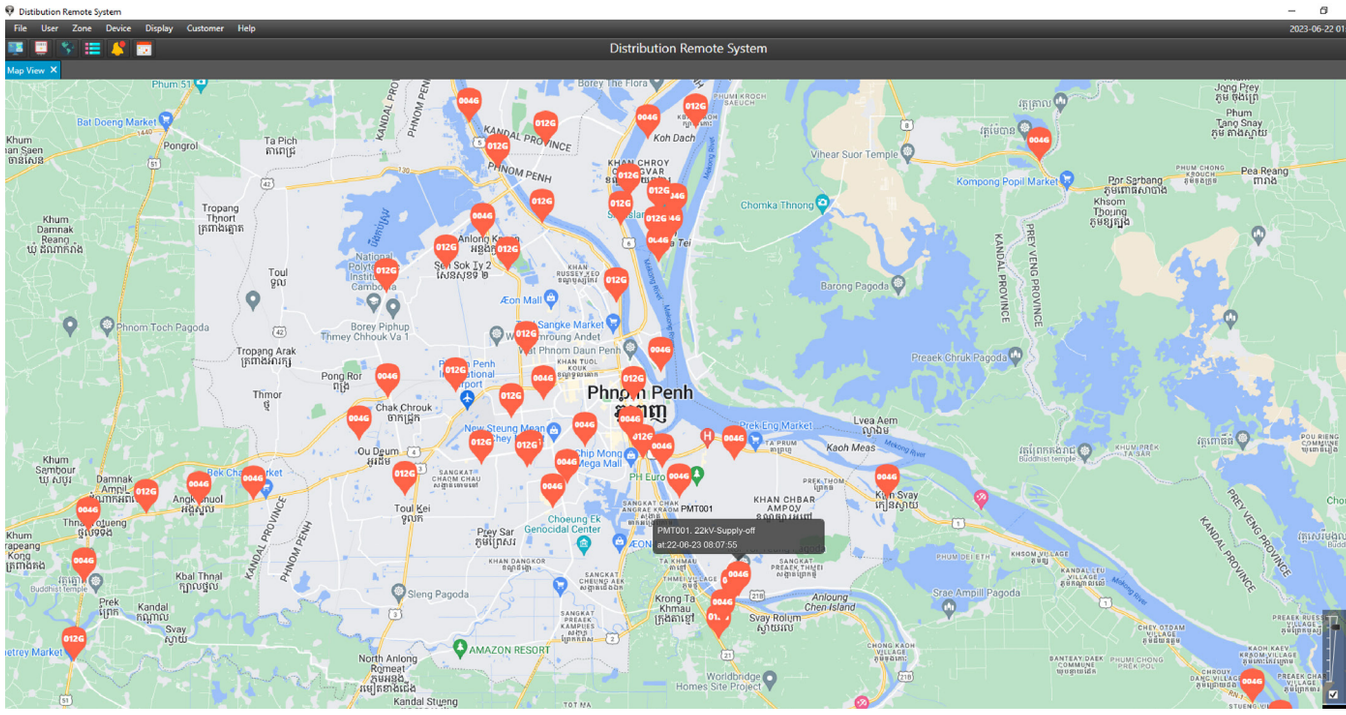


Figure 12: Map View

4.3. Alarm

DRS incorporates an alarm notification system to alert operators about any abnormalities or issues with controllers.

4.3.1. Alarm Functions

There are 3 functions in Alarm: Notification, Alarm and Alarm Event.

Display ➔ Alarm

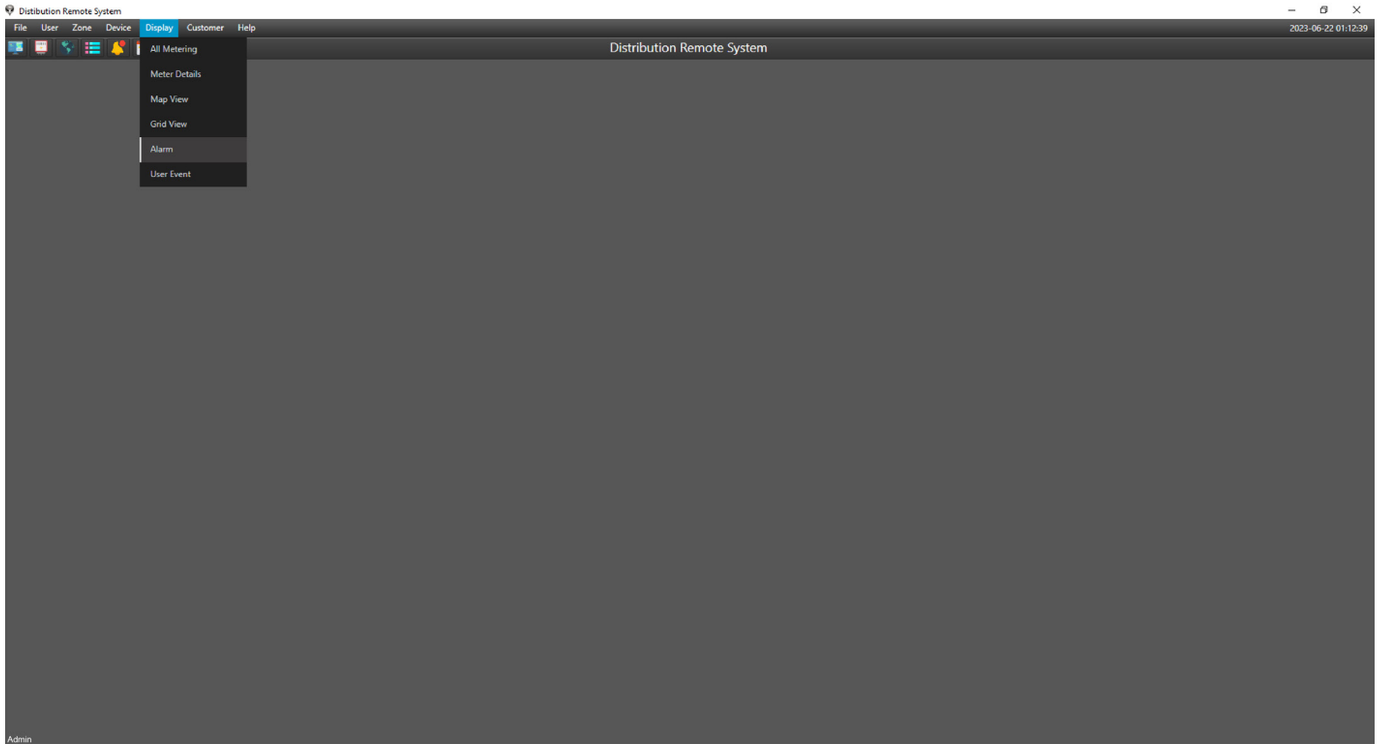


Figure 13: Alarm Functions

A. Notification

Notification will pop up whenever controllers detected over limit of power consumption in MV/LM meter.

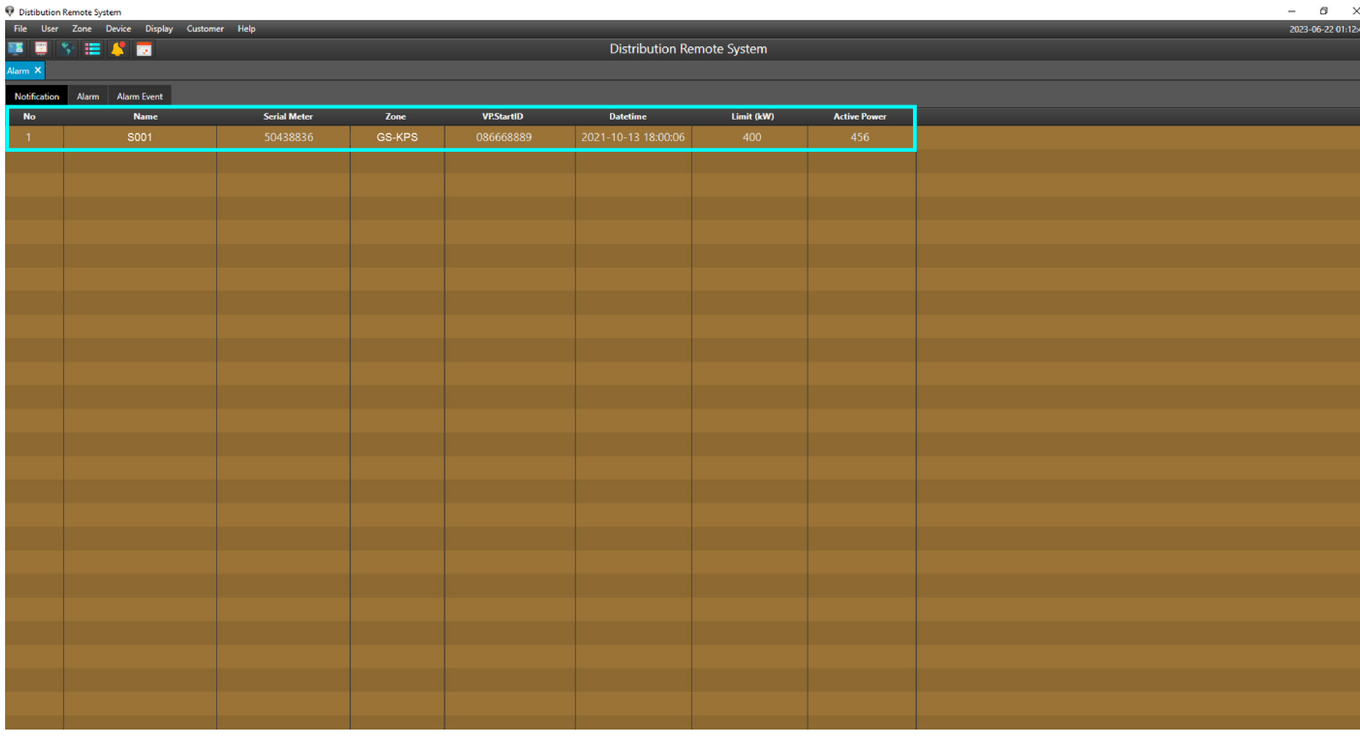


Figure 14: Notification

B. Alarm

Alarm with popup as the notification message and alarm whenever controllers detected on Lost of Phase, Door Open, Maintenance LV/MV Meter, Current Warning and 22KV Supply Off.

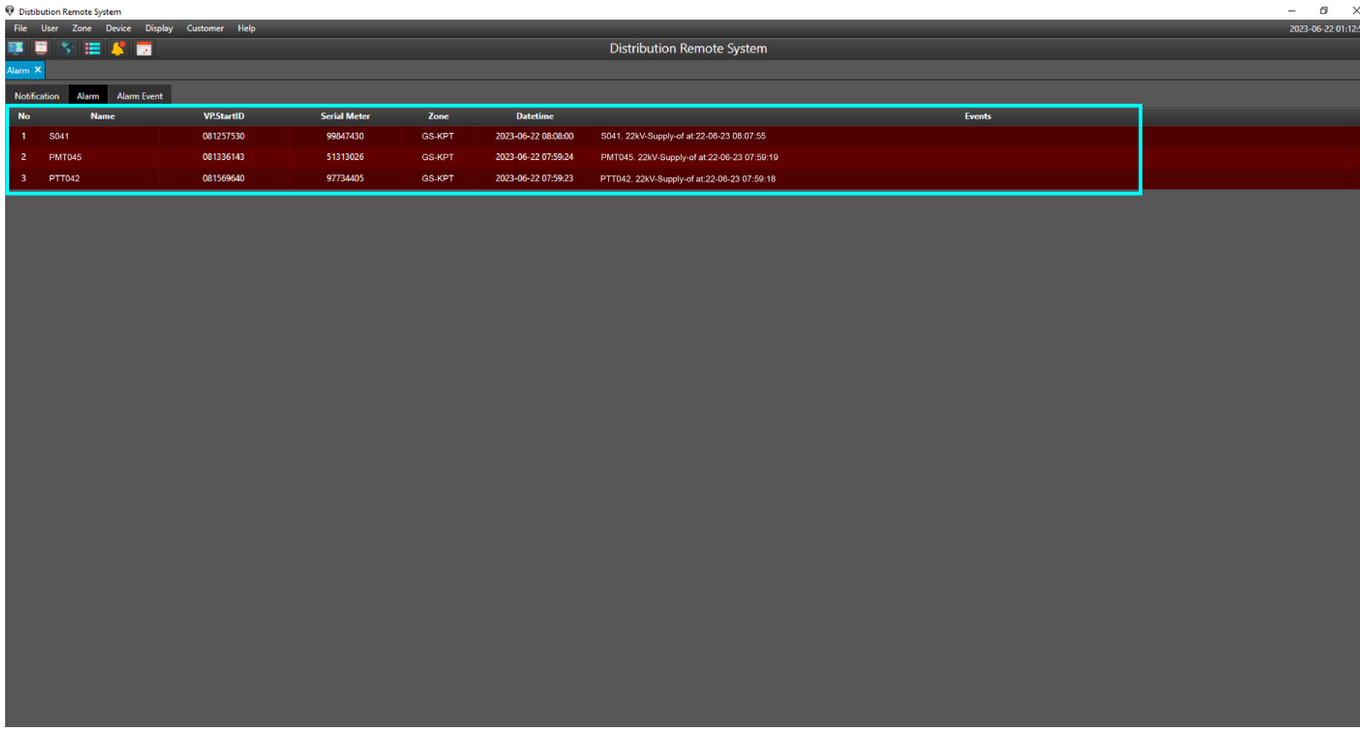
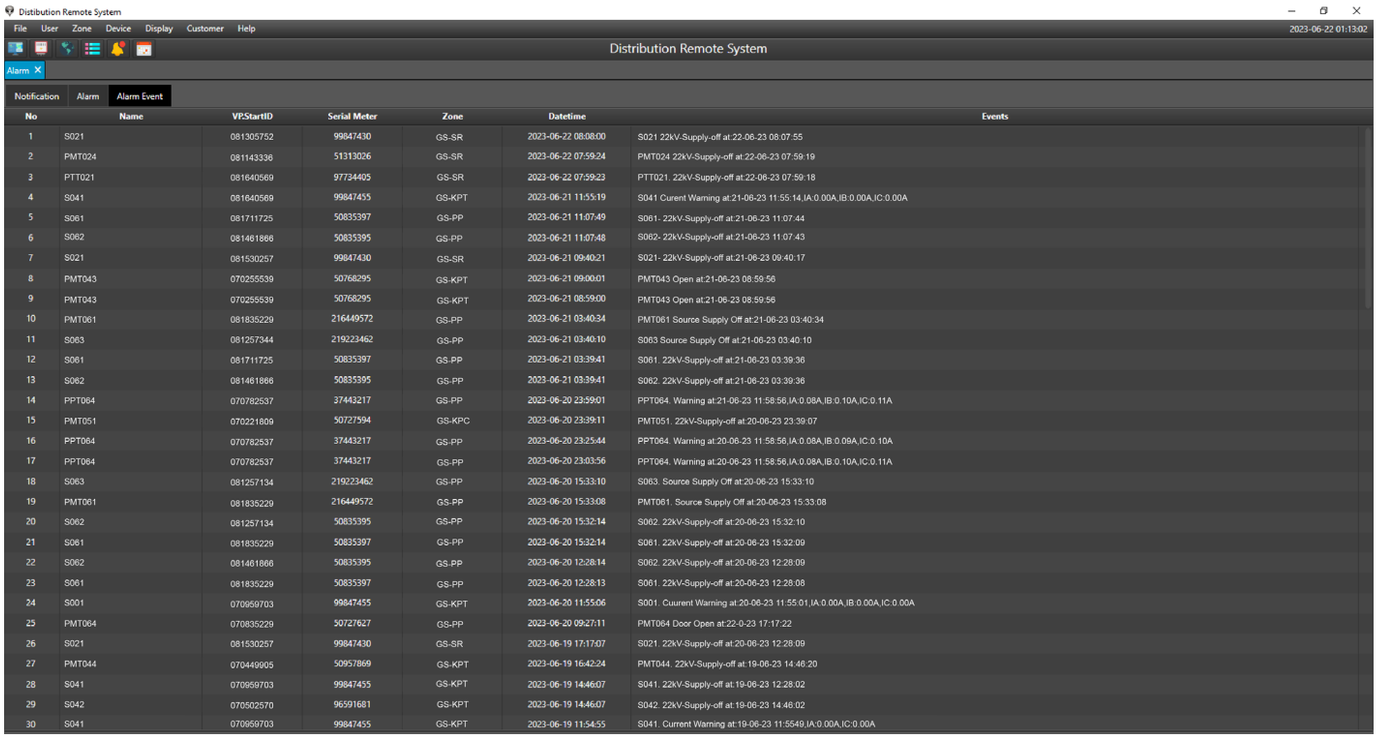


Figure 15: Alarm

C. Alarm Event

Alarm Event Stores all Historical Alarms from DRC Controllers.



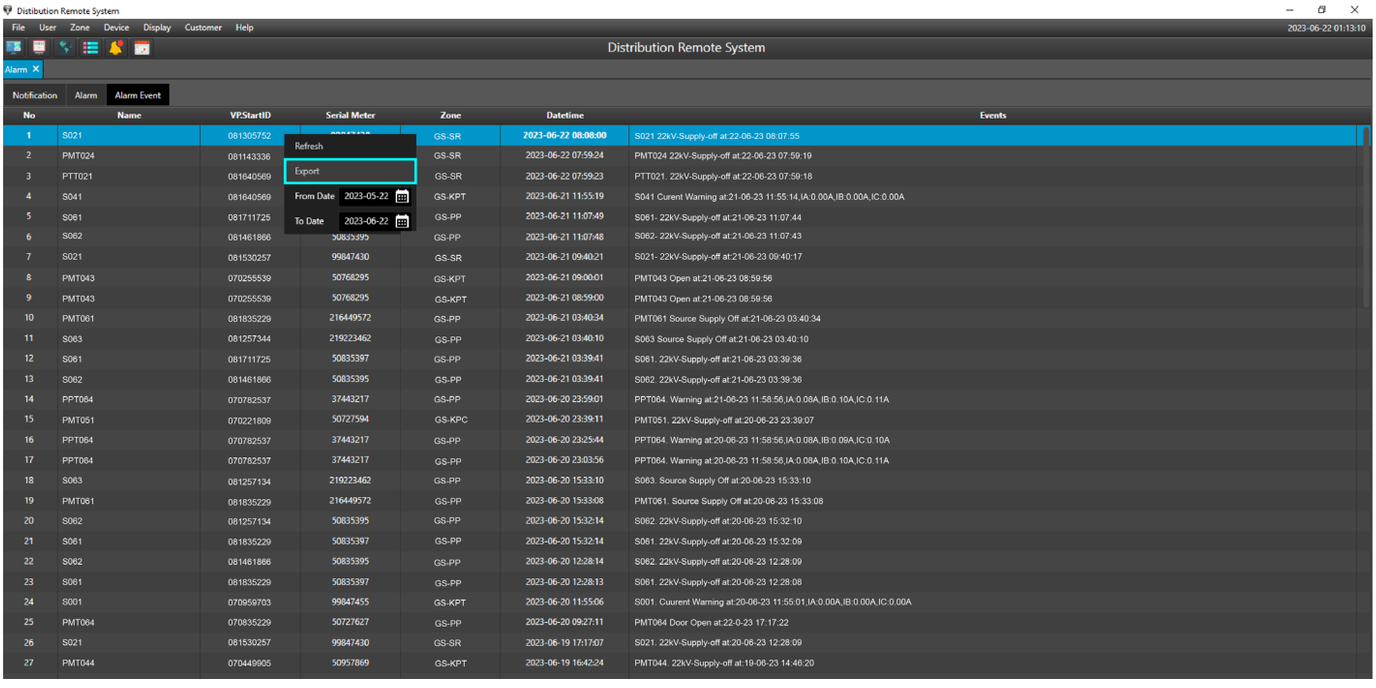
No	Name	VP.StartID	Serial Meter	Zone	Datetime	Events
1	S021	081305752	99847430	GS-SR	2023-06-22 08:08:00	S021 22kV-Supply-off at:22-06-23 08:07:55
2	PMT024	081143336	51313026	GS-SR	2023-06-22 07:59:24	PMT024 22kV-Supply-off at:22-06-23 07:59:19
3	PTT021	081640569	97734405	GS-SR	2023-06-22 07:59:23	PTT021. 22kV-Supply-off at:22-06-23 07:59:18
4	S041	081640569	99847455	GS-KPT	2023-06-21 11:55:19	S041 Curent Warning at:21-06-23 11:55:14,IA:0.00A,IB:0.00A,IC:0.00A
5	S061	081711725	50835397	GS-PP	2023-06-21 11:07:49	S061- 22kV-Supply-off at:21-06-23 11:07:44
6	S062	081461866	50835395	GS-PP	2023-06-21 11:07:48	S062- 22kV-Supply-off at:21-06-23 11:07:43
7	S021	081530257	99847430	GS-SR	2023-06-21 09:40:21	S021- 22kV-Supply-off at:21-06-23 09:40:17
8	PMT043	070255539	50768295	GS-KPT	2023-06-21 09:00:01	PMT043 Open at:21-06-23 08:59:56
9	PMT043	070255539	50768295	GS-KPT	2023-06-21 08:59:00	PMT043 Open at:21-06-23 08:59:56
10	PMT061	081835229	216449572	GS-PP	2023-06-21 03:40:34	PMT061 Source Supply Off at:21-06-23 03:40:34
11	S063	081257344	219223462	GS-PP	2023-06-21 03:40:10	S063 Source Supply Off at:21-06-23 03:40:10
12	S061	081711725	50835397	GS-PP	2023-06-21 03:39:41	S061. 22kV-Supply-off at:21-06-23 03:39:36
13	S062	081461866	50835395	GS-PP	2023-06-21 03:39:41	S062. 22kV-Supply-off at:21-06-23 03:39:36
14	PPT064	070782537	37443217	GS-PP	2023-06-20 23:59:01	PPT064. Warning at:21-06-23 11:58:56,IA:0.08A,IB:0.10A,IC:0.11A
15	PMT051	070221809	50727594	GS-KPC	2023-06-20 23:39:11	PMT051. 22kV-Supply-off at:20-06-23 23:39:07
16	PPT064	070782537	37443217	GS-PP	2023-06-20 23:25:44	PPT064. Warning at:20-06-23 11:58:56,IA:0.08A,IB:0.09A,IC:0.10A
17	PPT064	070782537	37443217	GS-PP	2023-06-20 23:03:56	PPT064. Warning at:20-06-23 11:58:56,IA:0.08A,IB:0.10A,IC:0.11A
18	S063	081257134	219223462	GS-PP	2023-06-20 15:33:10	S063. Source Supply Off at:20-06-23 15:33:10
19	PMT061	081835229	216449572	GS-PP	2023-06-20 15:33:08	PMT061. Source Supply Off at:20-06-23 15:33:08
20	S062	081257134	50835395	GS-PP	2023-06-20 15:32:14	S062. 22kV-Supply-off at:20-06-23 15:32:10
21	S061	081835229	50835397	GS-PP	2023-06-20 15:32:14	S061. 22kV-Supply-off at:20-06-23 15:32:09
22	S062	081461866	50835395	GS-PP	2023-06-20 12:28:14	S062. 22kV-Supply-off at:20-06-23 12:28:09
23	S061	081835229	50835397	GS-PP	2023-06-20 12:28:13	S061. 22kV-Supply-off at:20-06-23 12:28:08
24	S001	070959703	99847455	GS-KPT	2023-06-20 11:55:06	S001. Cuurent Warning at:20-06-23 11:55:01,IA:0.00A,IB:0.00A,IC:0.00A
25	PMT064	070835229	50727627	GS-PP	2023-06-20 09:27:11	PMT064 Door Open at:22-0-23 17:17:22
26	S021	081530257	99847430	GS-SR	2023-06-19 17:17:07	S021. 22kV-Supply-off at:20-06-23 12:28:09
27	PMT044	070449905	50957869	GS-KPT	2023-06-19 16:42:24	PMT044. 22kV-Supply-off at:19-06-23 14:46:20
28	S041	070959703	99847455	GS-KPT	2023-06-19 14:46:07	S041. 22kV-Supply-off at:19-06-23 12:28:02
29	S042	070502570	96591681	GS-KPT	2023-06-19 14:46:07	S042. 22kV-Supply-off at:19-06-23 14:46:02
30	S041	070959703	99847455	GS-KPT	2023-06-19 11:54:55	S041. Current Warning at:19-06-23 11:5549,IA:0.00A,IC:0.00A

Figure 16: Alarm Event

D. Alarm Event Export

Alarm Event allows users to export historical alarms as Excel files. Plus, users can also filter by date to export data.

Right Click on Alarm Event data ➔ Click on Export



No	Name	VP.StartID	Serial Meter	Zone	Datetime	Events
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2	PMT024	081143336		GS-SR	2023-06-22 07:59:24	PMT024 22kV-Supply-off at:22-06-23 07:59:19
3	PTT021	081640569		GS-SR	2023-06-22 07:59:23	PTT021. 22kV-Supply-off at:22-06-23 07:59:18
4	S041	081640569		GS-KPT	2023-06-21 11:55:19	S041 Curent Warning at:21-06-23 11:55:14,IA:0.00A,IB:0.00A,IC:0.00A
5	S061	081711725		GS-PP	2023-06-21 11:07:49	S061- 22kV-Supply-off at:21-06-23 11:07:44
6	S062	081461866		GS-PP	2023-06-21 11:07:48	S062- 22kV-Supply-off at:21-06-23 11:07:43
7	S021	081530257	99847430	GS-SR	2023-06-21 09:40:21	S021- 22kV-Supply-off at:21-06-23 09:40:17
8	PMT043	070255539	50768295	GS-KPT	2023-06-21 09:00:01	PMT043 Open at:21-06-23 08:59:56
9	PMT043	070255539	50768295	GS-KPT	2023-06-21 08:59:00	PMT043 Open at:21-06-23 08:59:56
10	PMT061	081835229	216449572	GS-PP	2023-06-21 03:40:34	PMT061 Source Supply Off at:21-06-23 03:40:34
11	S063	081257344	219223462	GS-PP	2023-06-21 03:40:10	S063 Source Supply Off at:21-06-23 03:40:10
12	S061	081711725	50835397	GS-PP	2023-06-21 03:39:41	S061. 22kV-Supply-off at:21-06-23 03:39:36
13	S062	081461866	50835395	GS-PP	2023-06-21 03:39:41	S062. 22kV-Supply-off at:21-06-23 03:39:36
14	PPT064	070782537	37443217	GS-PP	2023-06-20 23:59:01	PPT064. Warning at:21-06-23 11:58:56,IA:0.08A,IB:0.10A,IC:0.11A
15	PMT051	070221809	50727594	GS-KPC	2023-06-20 23:39:11	PMT051. 22kV-Supply-off at:20-06-23 23:39:07
16	PPT064	070782537	37443217	GS-PP	2023-06-20 23:25:44	PPT064. Warning at:20-06-23 11:58:56,IA:0.08A,IB:0.09A,IC:0.10A
17	PPT064	070782537	37443217	GS-PP	2023-06-20 23:03:56	PPT064. Warning at:20-06-23 11:58:56,IA:0.08A,IB:0.10A,IC:0.11A
18	S063	081257134	219223462	GS-PP	2023-06-20 15:33:10	S063. Source Supply Off at:20-06-23 15:33:10
19	PMT061	081835229	216449572	GS-PP	2023-06-20 15:33:08	PMT061. Source Supply Off at:20-06-23 15:33:08
20	S062	081257134	50835395	GS-PP	2023-06-20 15:32:14	S062. 22kV-Supply-off at:20-06-23 15:32:10
21	S061	081835229	50835397	GS-PP	2023-06-20 15:32:14	S061. 22kV-Supply-off at:20-06-23 15:32:09
22	S062	081461866	50835395	GS-PP	2023-06-20 12:28:14	S062. 22kV-Supply-off at:20-06-23 12:28:09
23	S061	081835229	50835397	GS-PP	2023-06-20 12:28:13	S061. 22kV-Supply-off at:20-06-23 12:28:08
24	S001	070959703	99847455	GS-KPT	2023-06-20 11:55:06	S001. Cuurent Warning at:20-06-23 11:55:01,IA:0.00A,IB:0.00A,IC:0.00A
25	PMT064	070835229	50727627	GS-PP	2023-06-20 09:27:11	PMT064 Door Open at:22-0-23 17:17:22
26	S021	081530257	99847430	GS-SR	2023-06-19 17:17:07	S021. 22kV-Supply-off at:20-06-23 12:28:09
27	PMT044	070449905	50957869	GS-KPT	2023-06-19 16:42:24	PMT044. 22kV-Supply-off at:19-06-23 14:46:20

Figure 17: Alarm Event Export

4.4. Meter Details

Meter Details showed multiple data such as view data in graph, Instantaneous Value, Notification Events and Alarm Events.

Display ➔ Meter Details ➔ Select DRC's name

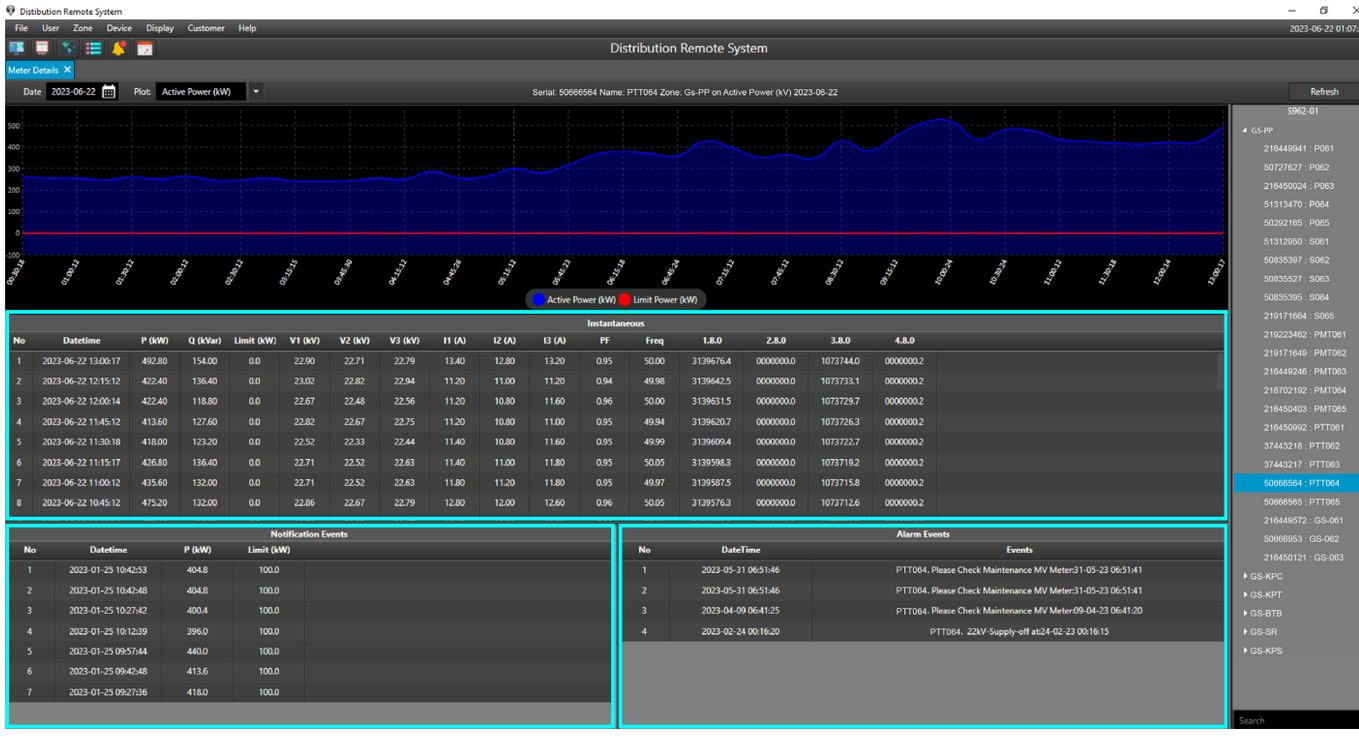


Figure 18: Meter Details

4.4.1. Notification Events Export

Notification Events can export as excel file.

Right click on Notification Event ➔ Click on Export Notifications

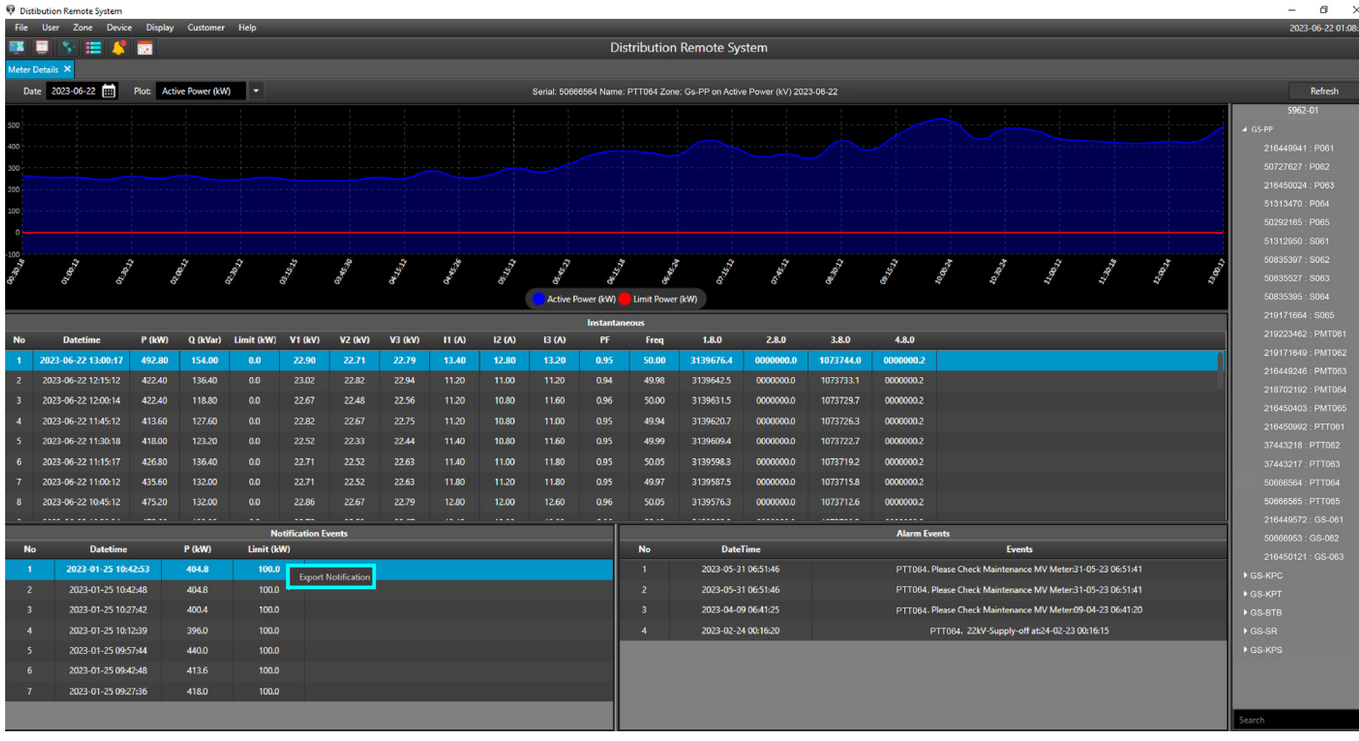


Figure 19: Notification Events Export

4.4.2. Alarm Events Export

Alarm Events can export as excel file.

Right Click on Alarm Event ➔ Click on Export Alarm

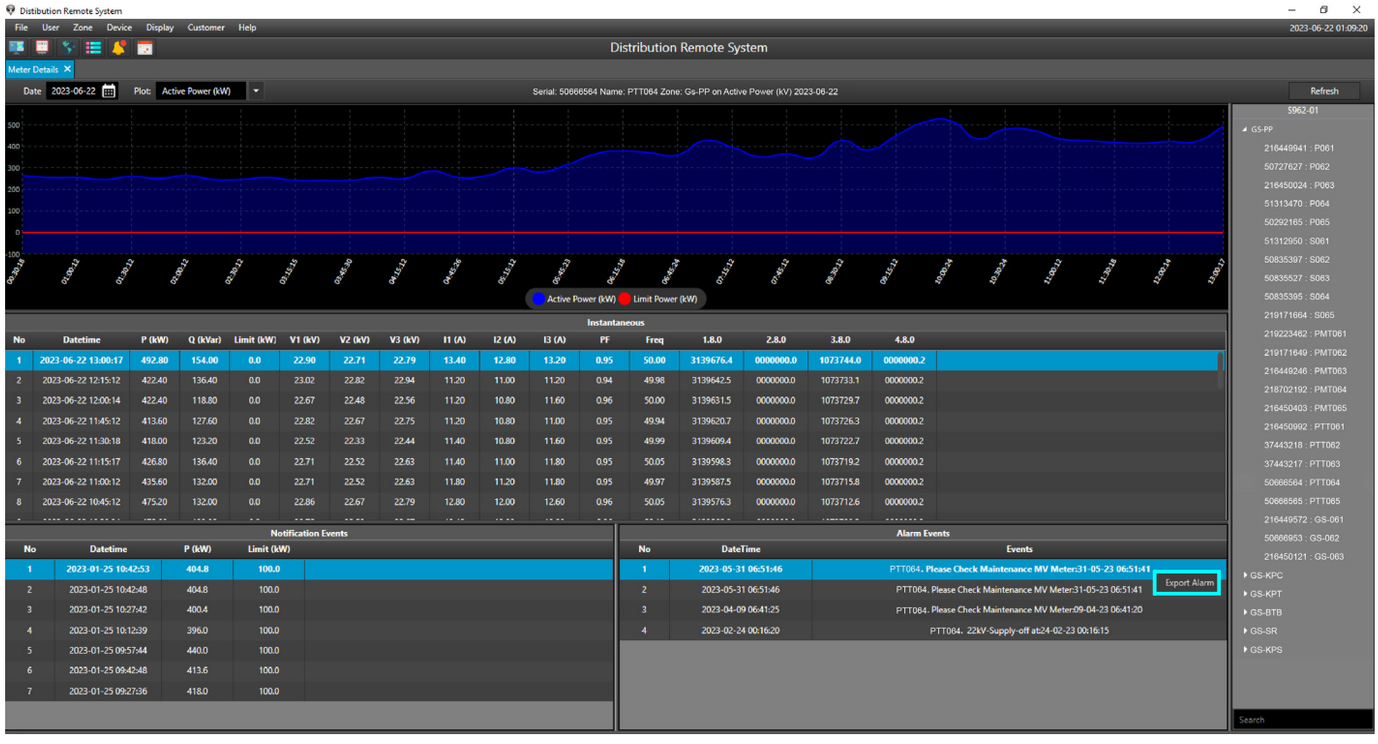


Figure 20: Alarm Events Export

4.5. Utilization monitor and Report (All Metering)

DRS software improves the ability to manage and monitor LV/MV energy metering such as: Active Power (P), Reactive Power (Q), Power Factor (PF), Voltage (V), Current (I) and Time of Use (TOU).

4.5.1. All Metering

In All Metering data will show: Active Power (P), Reactive Power (Q), Power Factor (PF) and Power Limit.

Display ➔ All Metering

Every meter data will be displayed every 15 minutes by √ on the Auto Refresh box.

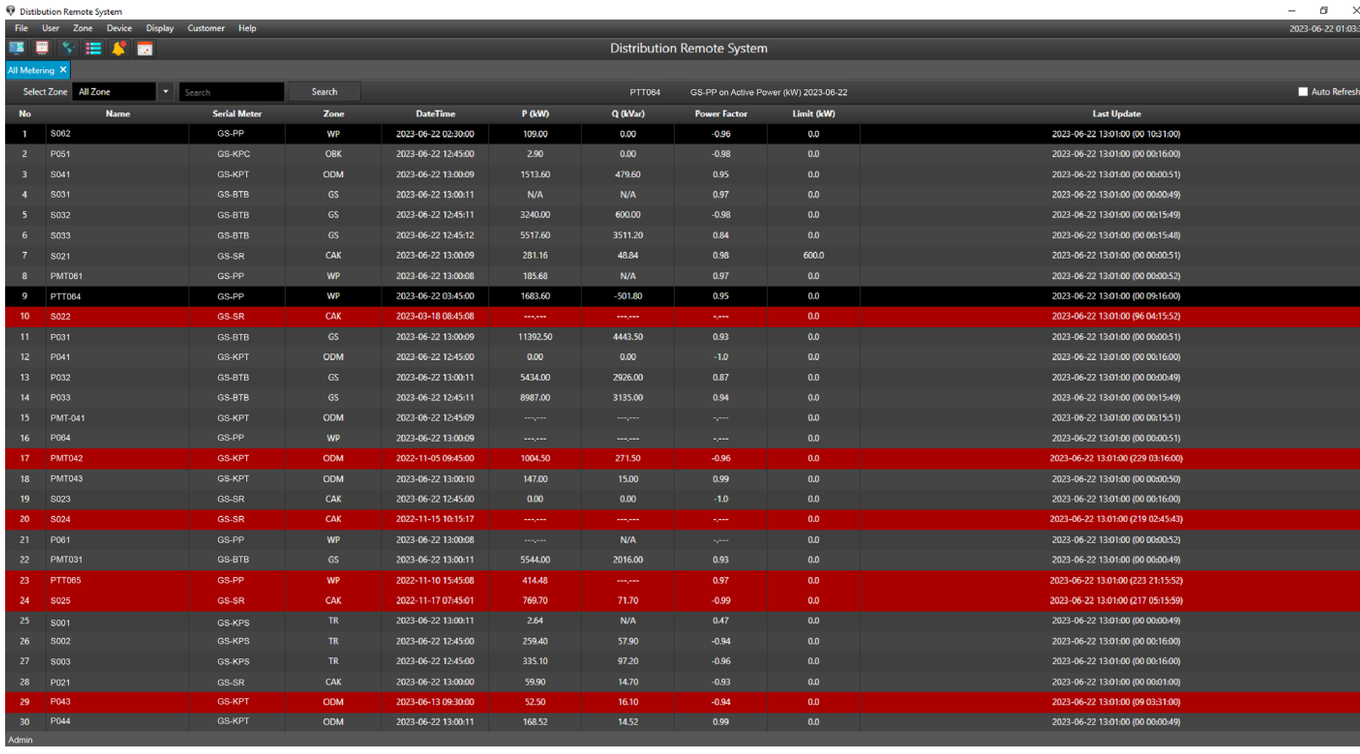


Figure 21: All Metering

4.5.2. Meter Details

Meter Detail show detail data of Active Power (P), Reactive Power (Q), Limit, Voltage (V), Current (A), Power Factor (PF), and Frequency in every 15 min. These data can show as curve, delete table, Peak Analyze for operator to analysis in DRS software.

Display ➔ Meter Details ➔ Select DRC's name

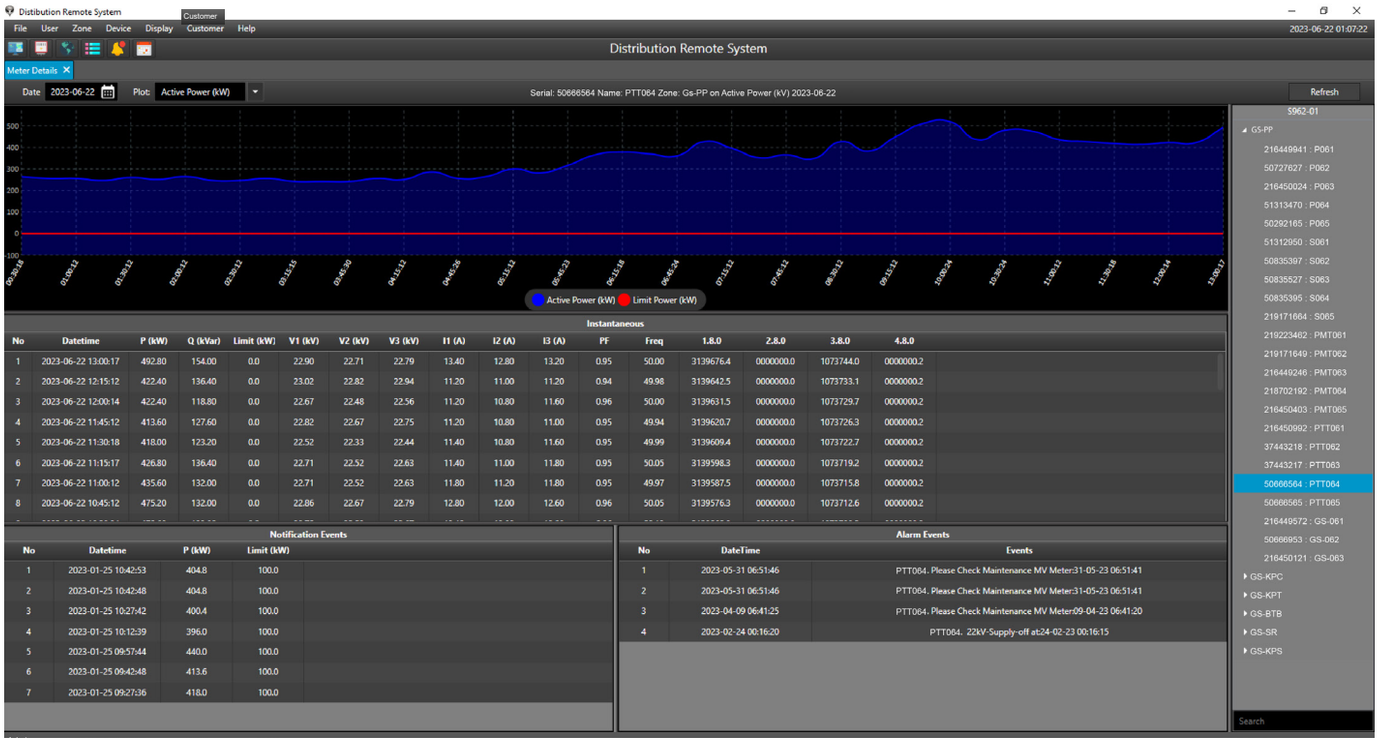


Figure 22: Meter Details

A. Time of Use (ToU)

Show Data with Time of Use (TOU).

Right-click on the Instantaneous Value ➔ Select on Show TOU

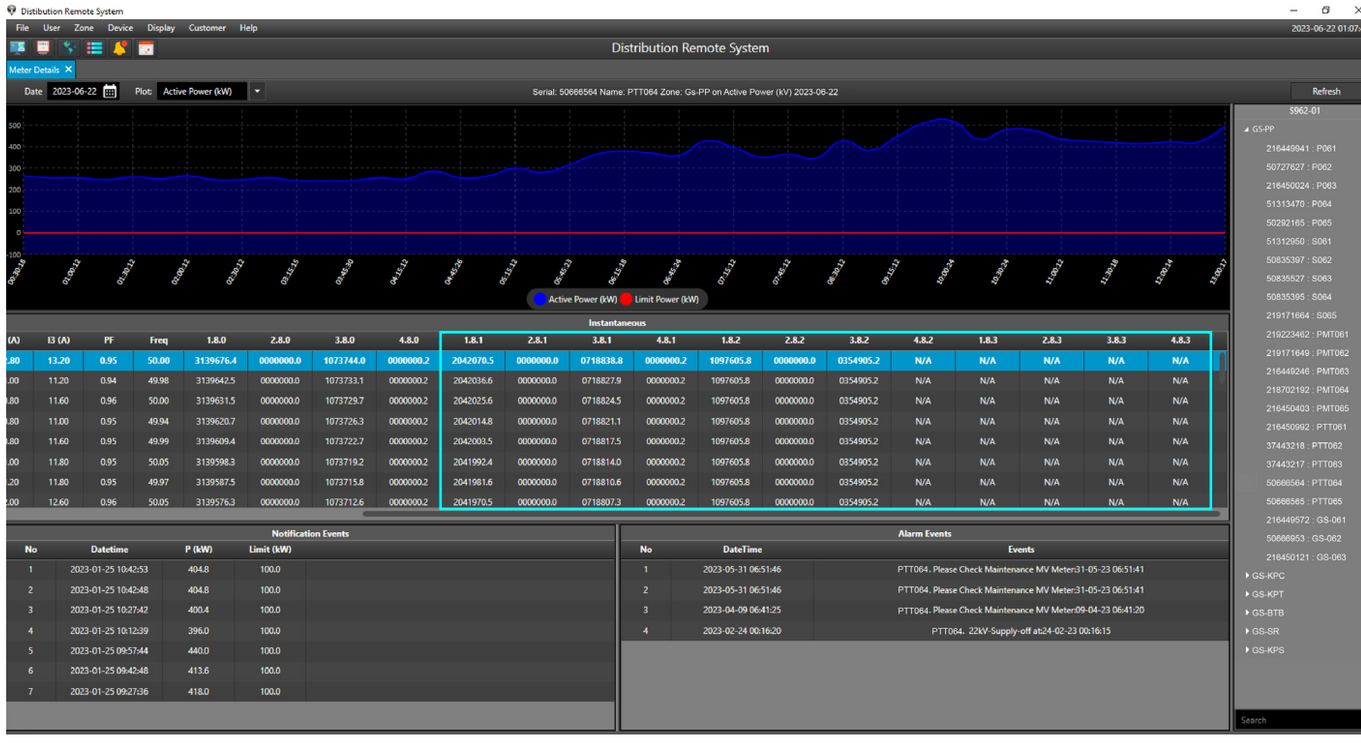


Figure 23: TOU Data

B. Multiply Data

Show Data with Voltage multiply, Current multiply and Power multiply.

Right-click on the Instantaneous Value ➔ Select on Show Multiply

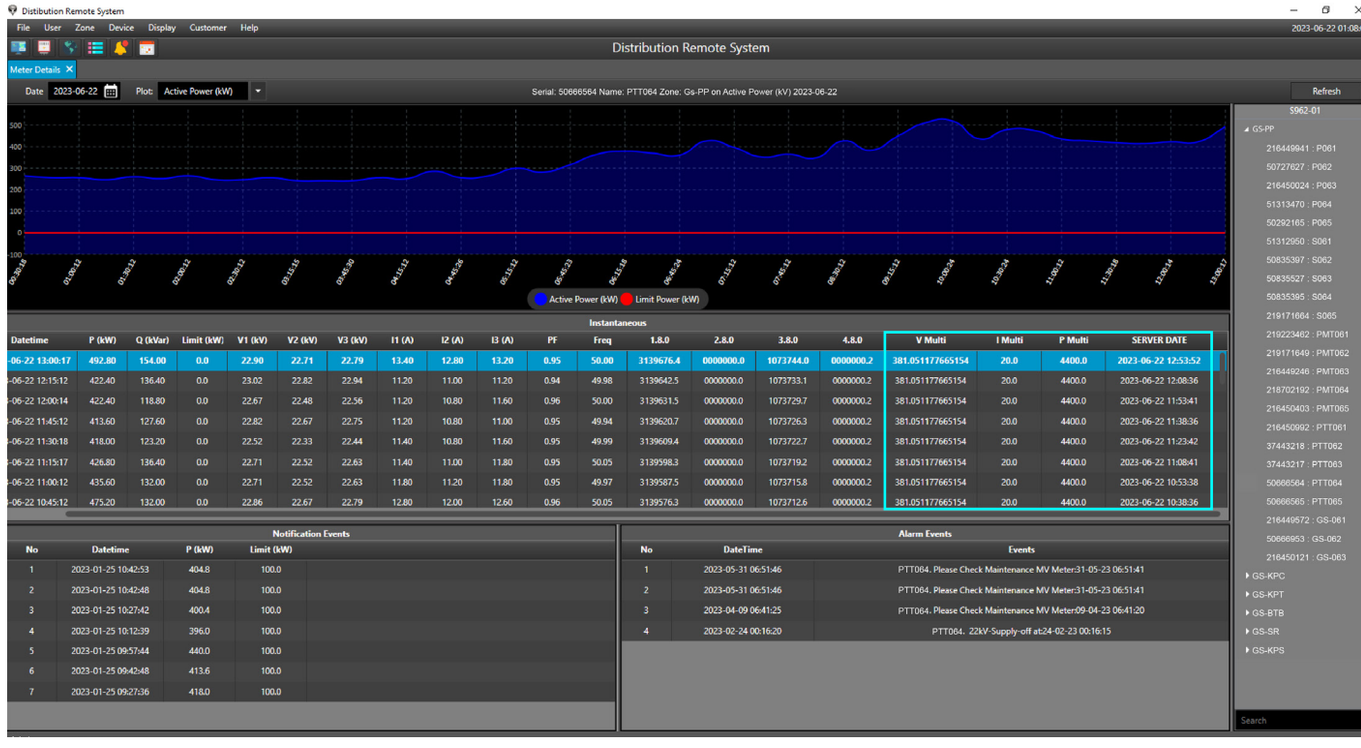


Figure 24: Multiply Data

C. Display data in a specific date

Users can query data with a specific date selection.

Display ➔ Meter Details ➔ Select date

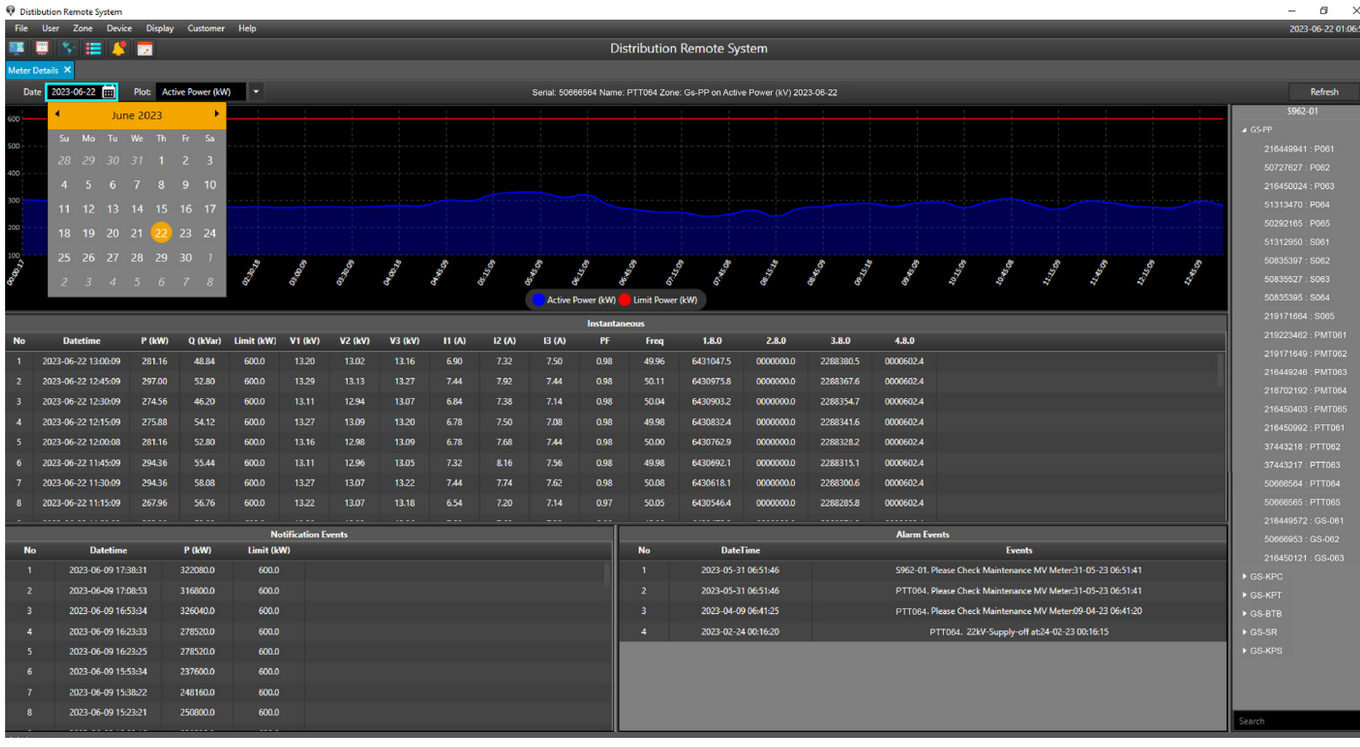


Figure 25: Plot Data

D. Plot Data

Users can plot curve data as Active Power (kW), Reactive Power (kVar), Power Factor, Frequency, Voltage Line 1 (kV), Voltage Line 2 (kV), Voltage Line 3 (kV), Current Line 1 (A), Current Line 2 (A), Current Line 3 (A) in every 15 min.

Display ➔ Meter Details ➔ Click on the data Mater ➔ Plot

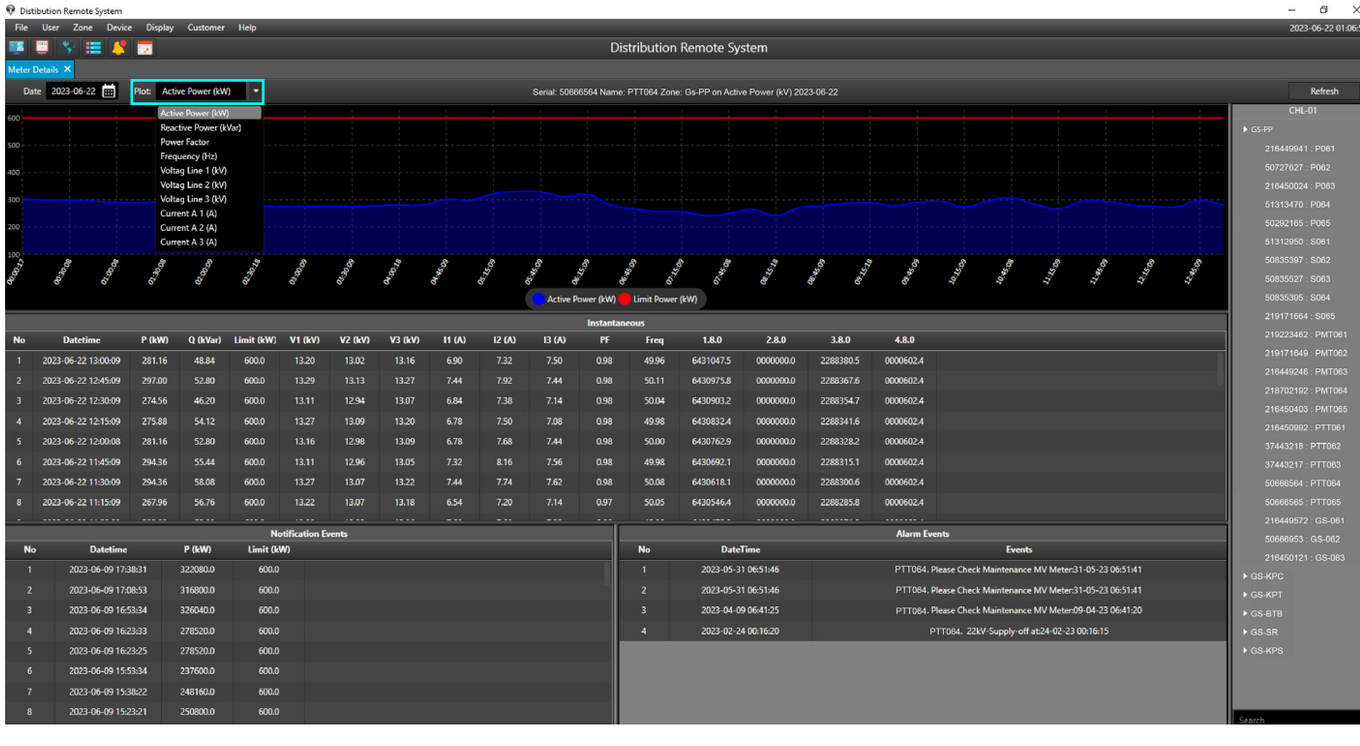
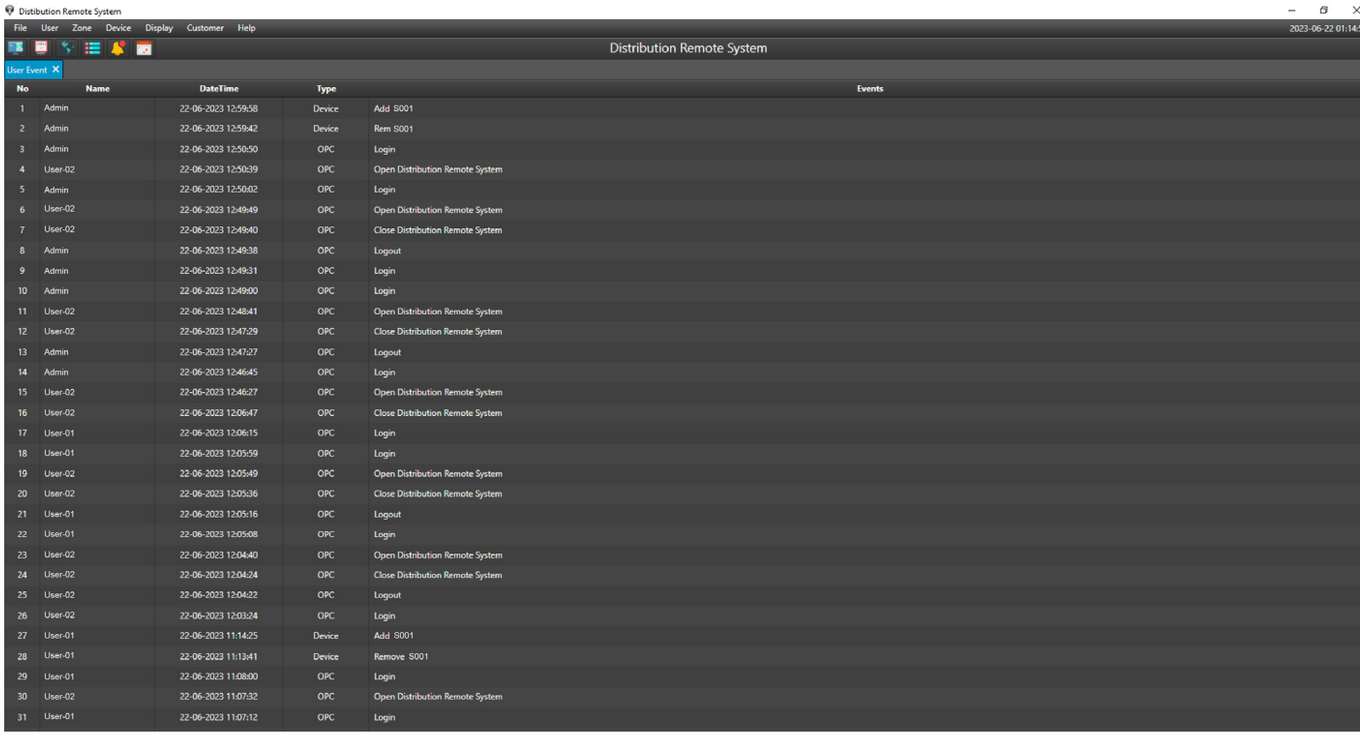


Figure 26: Meter Details in Date

4.6. User Event

Show all operation log of users in DRS software.



No	Name	DateTime	Type	Events
1	Admin	22-06-2023 12:59:58	Device	Add S001
2	Admin	22-06-2023 12:59:42	Device	Rem S001
3	Admin	22-06-2023 12:50:50	OPC	Login
4	User-02	22-06-2023 12:50:39	OPC	Open Distribution Remote System
5	Admin	22-06-2023 12:50:02	OPC	Login
6	User-02	22-06-2023 12:49:49	OPC	Open Distribution Remote System
7	User-02	22-06-2023 12:49:40	OPC	Close Distribution Remote System
8	Admin	22-06-2023 12:49:38	OPC	Logout
9	Admin	22-06-2023 12:49:31	OPC	Login
10	Admin	22-06-2023 12:49:00	OPC	Login
11	User-02	22-06-2023 12:48:41	OPC	Open Distribution Remote System
12	User-02	22-06-2023 12:47:29	OPC	Close Distribution Remote System
13	Admin	22-06-2023 12:47:27	OPC	Logout
14	Admin	22-06-2023 12:46:45	OPC	Login
15	User-02	22-06-2023 12:46:27	OPC	Open Distribution Remote System
16	User-02	22-06-2023 12:06:47	OPC	Close Distribution Remote System
17	User-01	22-06-2023 12:06:15	OPC	Login
18	User-01	22-06-2023 12:05:59	OPC	Login
19	User-02	22-06-2023 12:05:49	OPC	Open Distribution Remote System
20	User-02	22-06-2023 12:05:36	OPC	Close Distribution Remote System
21	User-01	22-06-2023 12:05:16	OPC	Logout
22	User-01	22-06-2023 12:05:08	OPC	Login
23	User-02	22-06-2023 12:04:40	OPC	Open Distribution Remote System
24	User-02	22-06-2023 12:04:24	OPC	Close Distribution Remote System
25	User-02	22-06-2023 12:04:22	OPC	Logout
26	User-02	22-06-2023 12:03:24	OPC	Login
27	User-01	22-06-2023 11:14:25	Device	Add S001
28	User-01	22-06-2023 11:13:41	Device	Remove S001
29	User-01	22-06-2023 11:08:00	OPC	Login
30	User-02	22-06-2023 11:07:32	OPC	Open Distribution Remote System
31	User-01	22-06-2023 11:07:12	OPC	Login

Figure 27: User Event

5. Customer

The customer menu is a comprehensive tool that enables operators to manage customer categories and access various customer-related functions. With the customer menu, operators can set up customer categories such as Time-of-Use (ToU), Solar, and Normal, which helps to streamline the management of customer accounts and ensure that energy consumption data is accurately categorized. The menu includes several options such as All Customer, Modify, Contracted, Register Customer, Manage Customer, and Customer Consumption, providing operators with a range of functions to manage customer accounts.

5.1. All Customer

This function allows operators to view all registered customers, by category, or by specific period.

- The operator can customize the group of customers by selecting All Customer, ToU, Solar, and Normal (1).
- The operator can select a specific period to display data (2).
- The operator can also find any customer by typing customer id, name, and location in the search box (3).

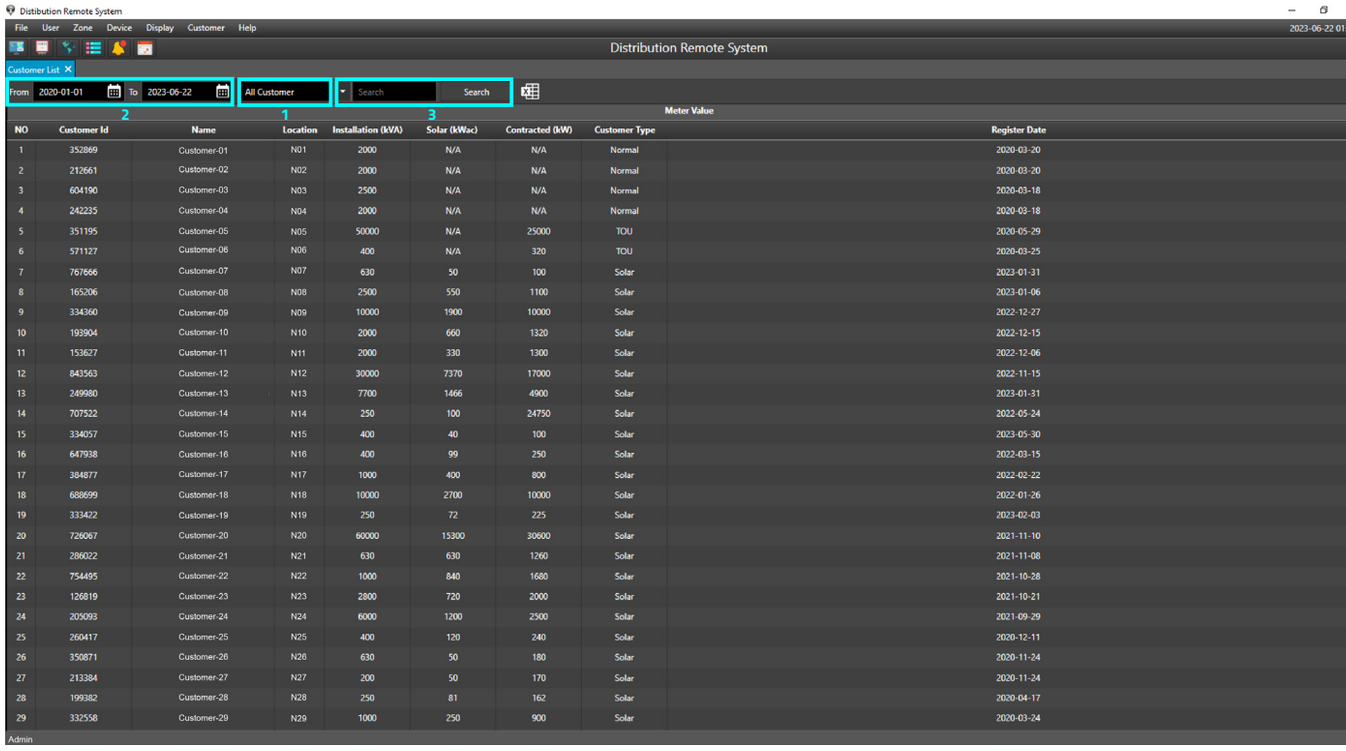


Figure 28: All Customer

5.2. Register Customer

This function allows the operators to create a customer name and type.

- Customer Type: There are three types of customers, including ToU, Solar, and Normal.
- ID: Referring to customer identity.
- Source: Referring to energy metering location identity.
- Customer Name: referring to customer name.
- Installation Power: Installed Transformer Power.
- Solar Power: Installed Solar Power.
- Contracted Power: Number of KW/MW that the customer signs contract from the electricity supplier.
- Meter Reading Cycle: Meter data reading date every month.
- Date: Registered date.

Customer ➔ Register Customer ➔ Create

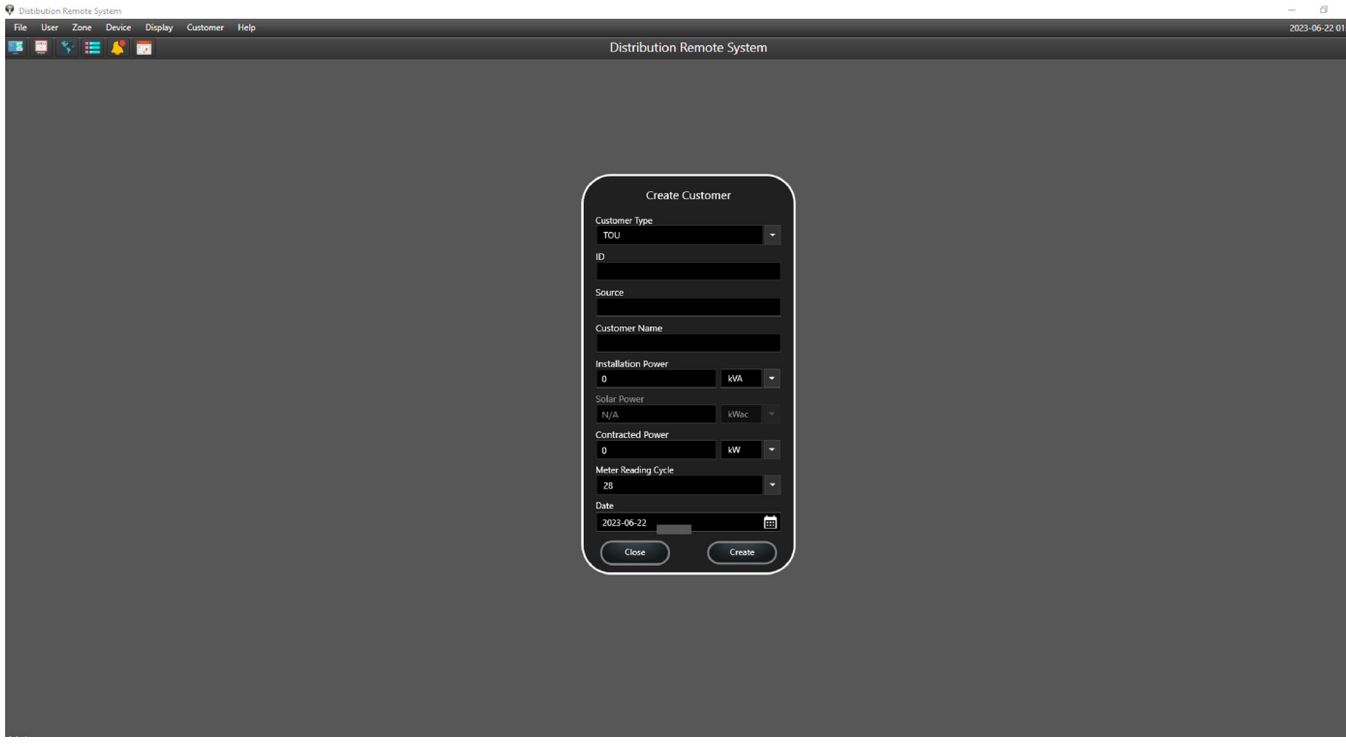


Figure 29: Register Customer

5.3. Modify

The Modify function is a powerful tool that enables operators to make changes to the information about regis tered clients and schedule energy meter readings. This function is designed to streamline the process of man aging client information and ensure that energy consumption data is accurate and up-to-date. With the Modify function, operators can easily update client information, ensuring that all data is current and relevant.

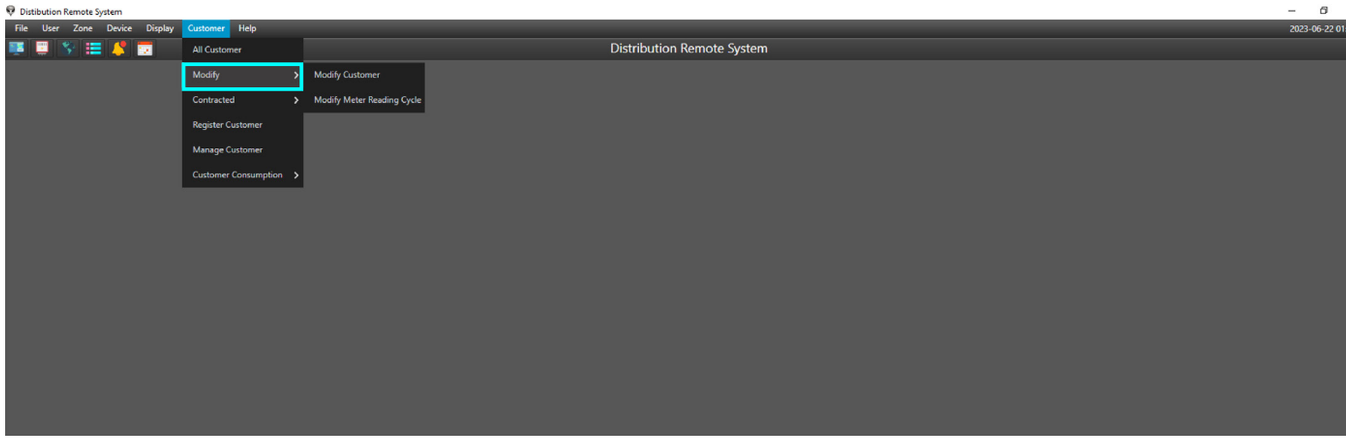


Figure 30: Modify

5.3.1. Modify Customer

The operator has the ability to change any information about registered clients, including customer ID, name, location ID, customer name, installation power, and contracted power, among other details.

Customer ➔ Modify ➔ Modify Customer ➔ Select Customer ➔ Update

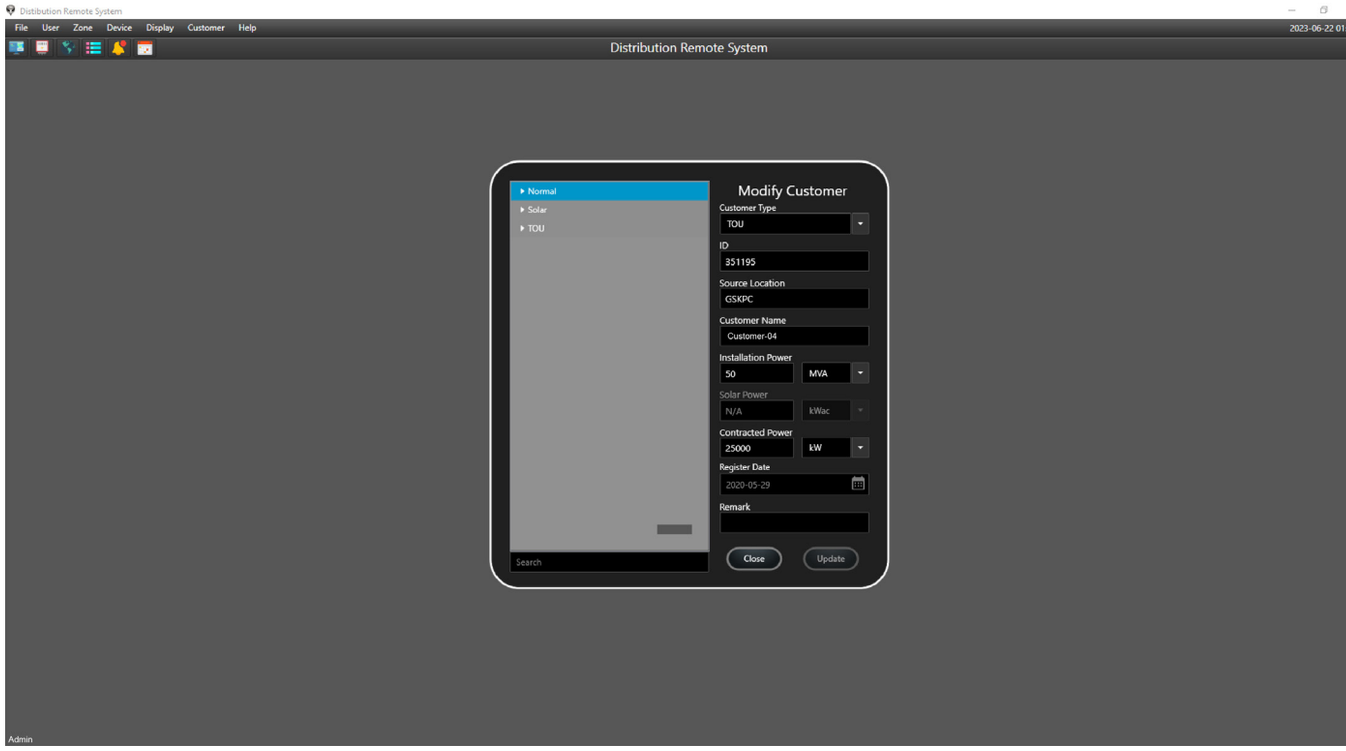


Figure 31: Modify Customer

5.3.2. Modify Meter Reading Cycle

The feature allows the operator to adjust the schedule for reading the power meter: Meter Reading Date From and Meter Reading Date To.

Customer ➔ Modify ➔ Modify Meter Reading Cycle ➔ Select customer ➔ Update

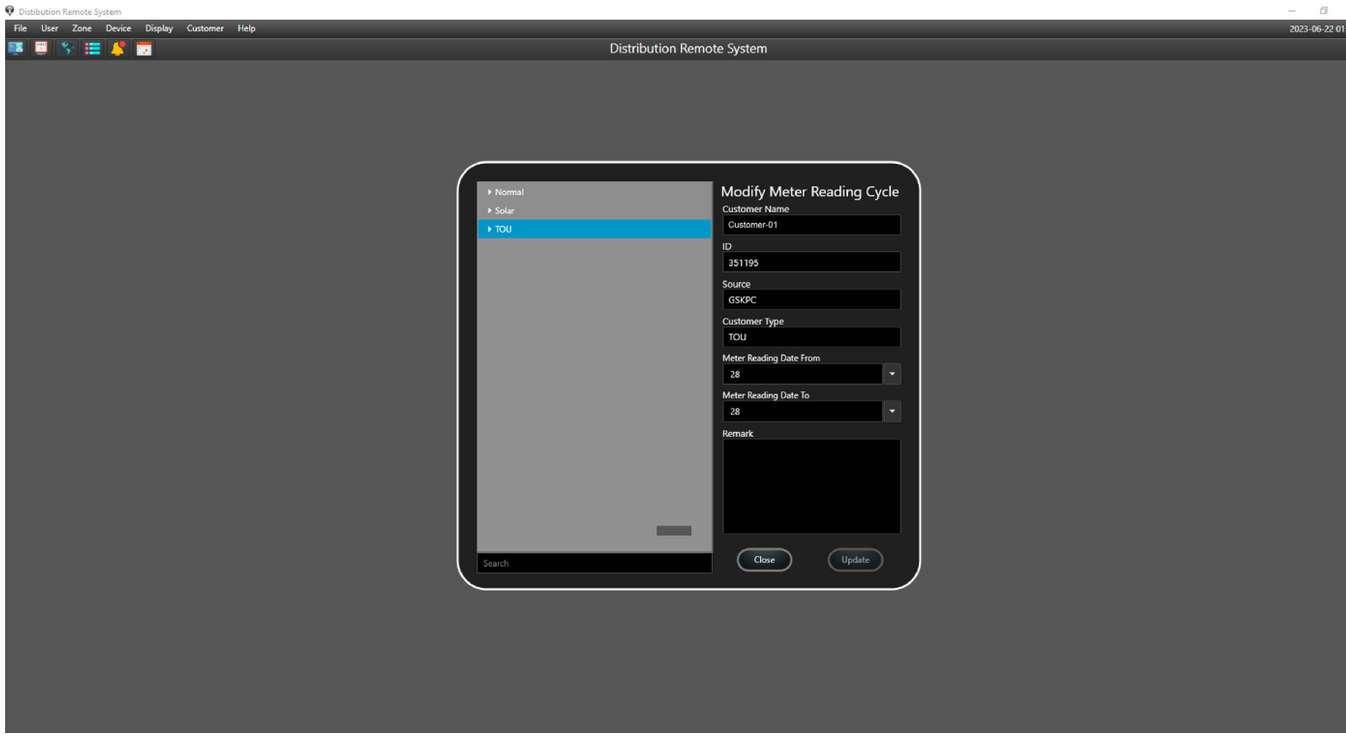


Figure 32: Modify Meter Reading Cycle

5.4. Contracted

The contracted function enables operators to identify customers whose power consumption exceeds the established limit and view their historical information. This function is designed to assist operators in managing power consumption and ensuring that customers adhere to their contracted limits. By using the contracted function, operators can easily access detailed information about each customer's power usage history and identify any patterns or anomalies that may require investigation.

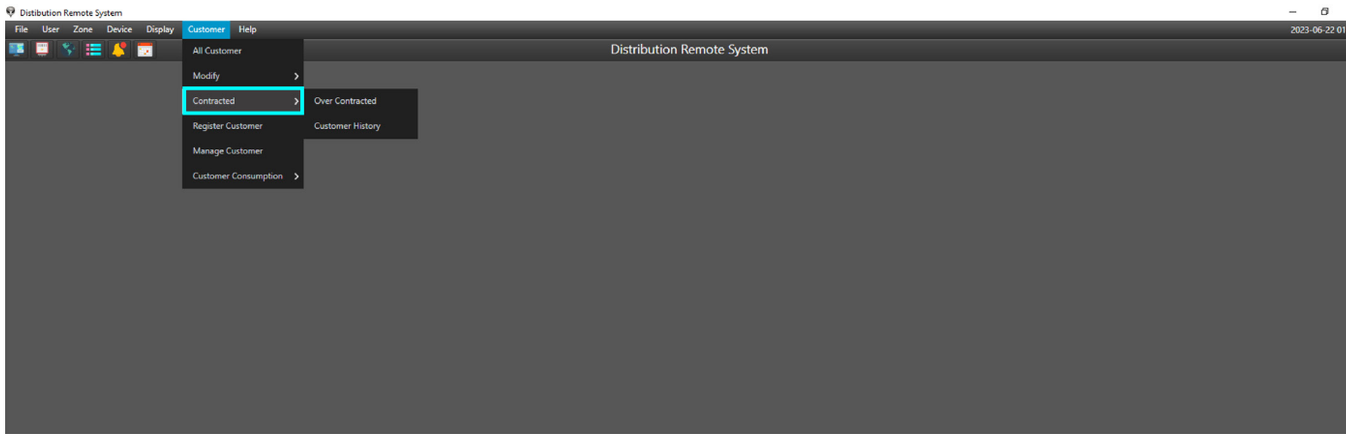
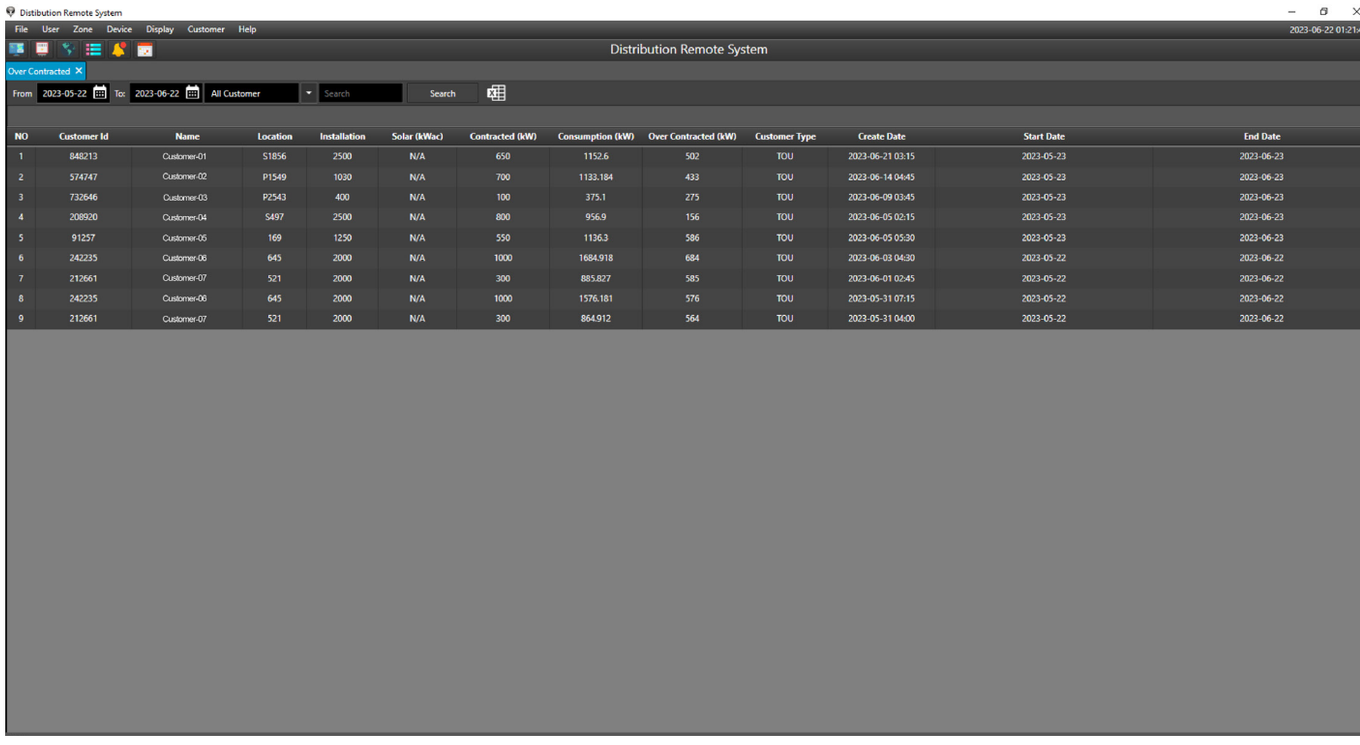


Figure 33: Contraced

5.4.1. Over Contracted

The function allows the operator to identify customers whose power consumption exceeds the established limit.

Customer ➔ Contracted ➔ Over Contracted



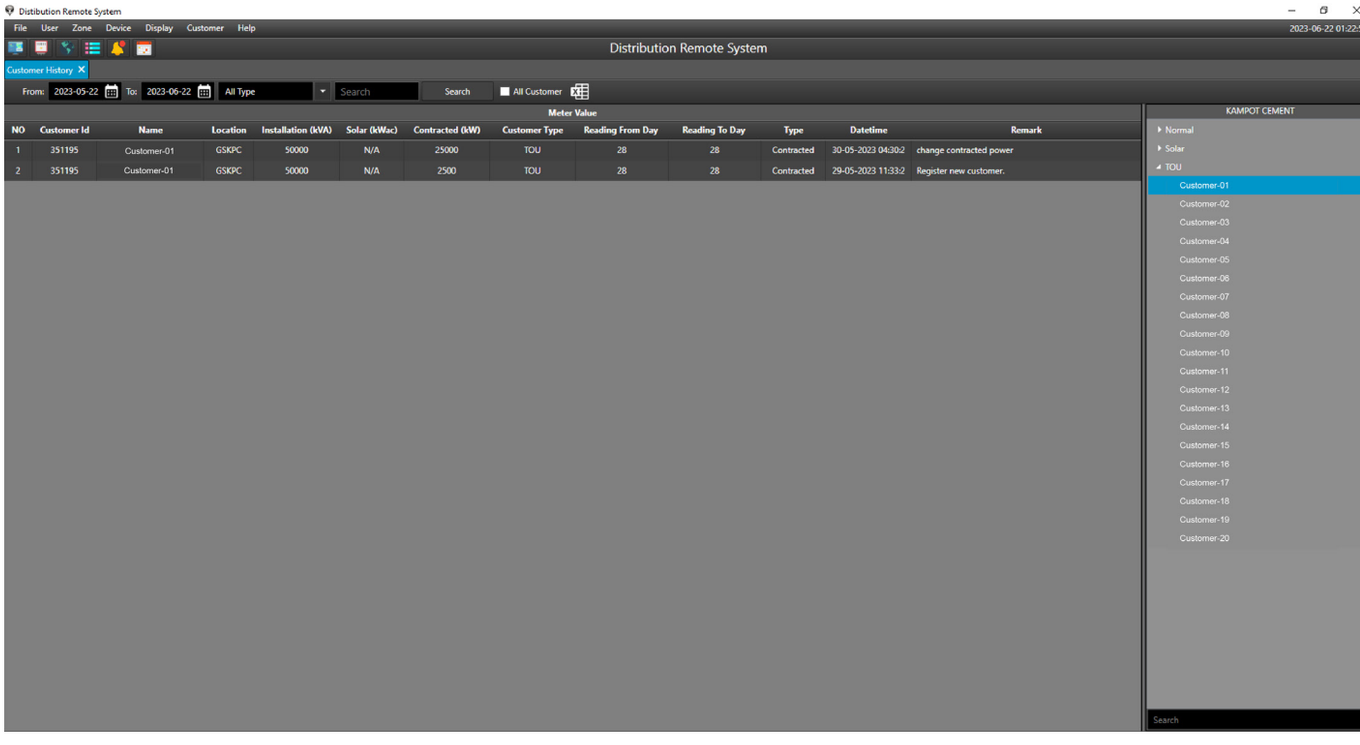
NO	Customer Id	Name	Location	Installation	Solar (kWac)	Contracted (kW)	Consumption (kW)	Over Contracted (kW)	Customer Type	Create Date	Start Date	End Date
1	848213	Customer-01	51856	2500	N/A	650	1152.6	502	TOU	2023-06-21 03:15	2023-05-23	2023-06-23
2	574747	Customer-02	P1549	1030	N/A	700	1133.184	433	TOU	2023-06-14 04:45	2023-05-23	2023-06-23
3	732646	Customer-03	P2543	400	N/A	100	375.1	275	TOU	2023-06-09 03:45	2023-05-23	2023-06-23
4	208920	Customer-04	S497	2500	N/A	800	956.9	156	TOU	2023-06-05 02:15	2023-05-23	2023-06-23
5	91257	Customer-05	169	1250	N/A	550	1136.3	586	TOU	2023-06-05 05:30	2023-05-23	2023-06-23
6	242235	Customer-06	645	2000	N/A	1000	1684.918	684	TOU	2023-06-03 04:30	2023-05-22	2023-06-22
7	212661	Customer-07	521	2000	N/A	300	885.827	585	TOU	2023-06-01 02:45	2023-05-22	2023-06-22
8	242235	Customer-06	645	2000	N/A	1000	1576.181	576	TOU	2023-05-31 07:15	2023-05-22	2023-06-22
9	212661	Customer-07	521	2000	N/A	300	864.912	564	TOU	2023-05-31 04:00	2023-05-22	2023-06-22

Figure 34: Over Contracted

5.4.2. Customer History

The function allows the operator to display historical customer information since the registration date.

Customer ➔ Contracted ➔ Customer History ➔ Select Customer Name



NO	Customer Id	Name	Location	Installation (kVA)	Solar (kWac)	Contracted (kW)	Customer Type	Reading From Day	Reading To Day	Type	Datetime	Remark
1	351195	Customer-01	GSKPC	50000	N/A	25000	TOU	28	28	Contracted	30-05-2023 04:30:2	change contracted power
2	351195	Customer-01	GSKPC	50000	N/A	2500	TOU	28	28	Contracted	29-05-2023 11:33:2	Register new customer.

Figure 35: Customer History

5.4.3. Export Customer Data

DRS software allows energy providers to export data from various functions, including All Customer, Contracted, and Customer Consumption, to an Excel spreadsheet. This function is designed to enable operators to analyze and manage large amounts of data more efficiently and effectively.

R-Click ➔ Export Over Contract

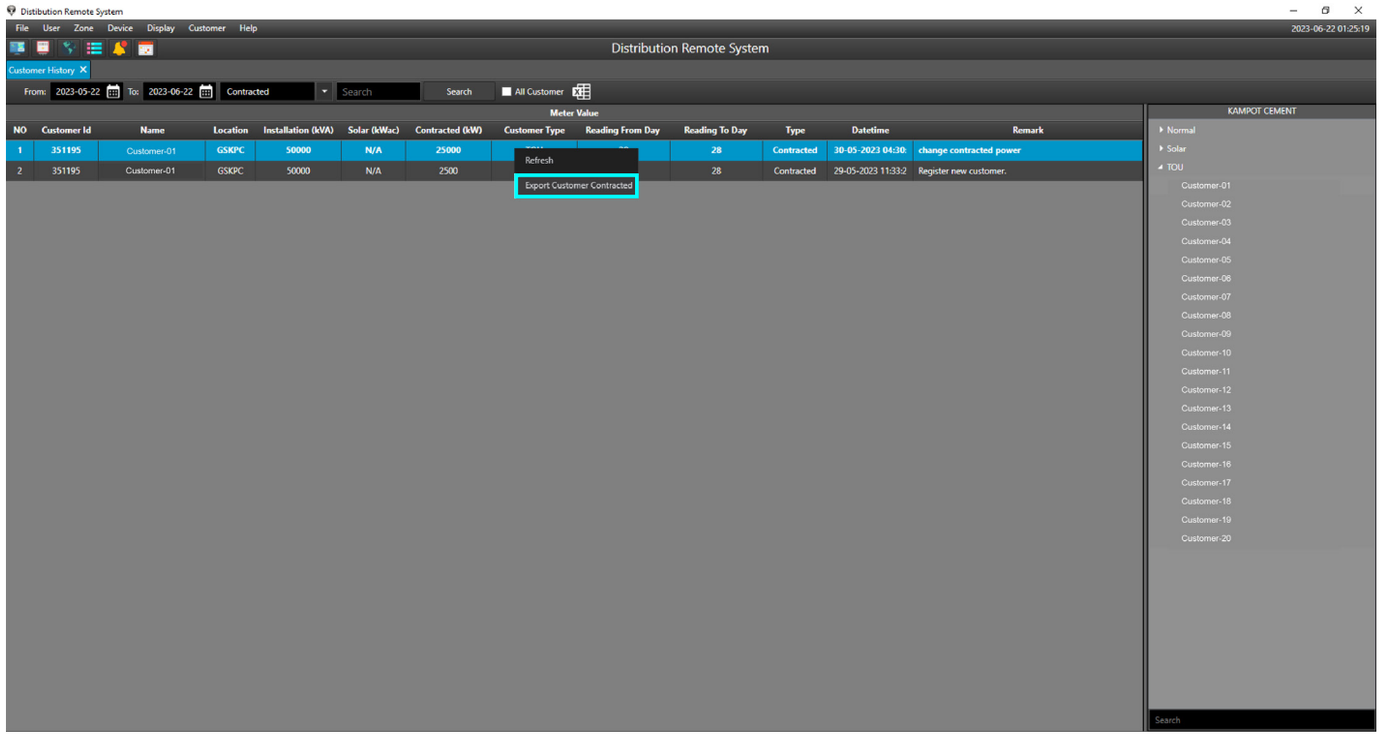


Figure 36: Export Customer Data

5.5. Manage Customer

The Manage Customer function is a tool used by energy providers to manage customer accounts and determine which power meters are associated with each customer. This function is designed to ensure that energy consumption data is accurately recorded and attributed to the correct customer account.

Customer ➔ Manage Customer ➔ Go To following steps

- Step1: Select Customer Name in List Customer (1)

- Step2: Select power meter in List Meter (2) and move to (3)

- Step3: Click Update

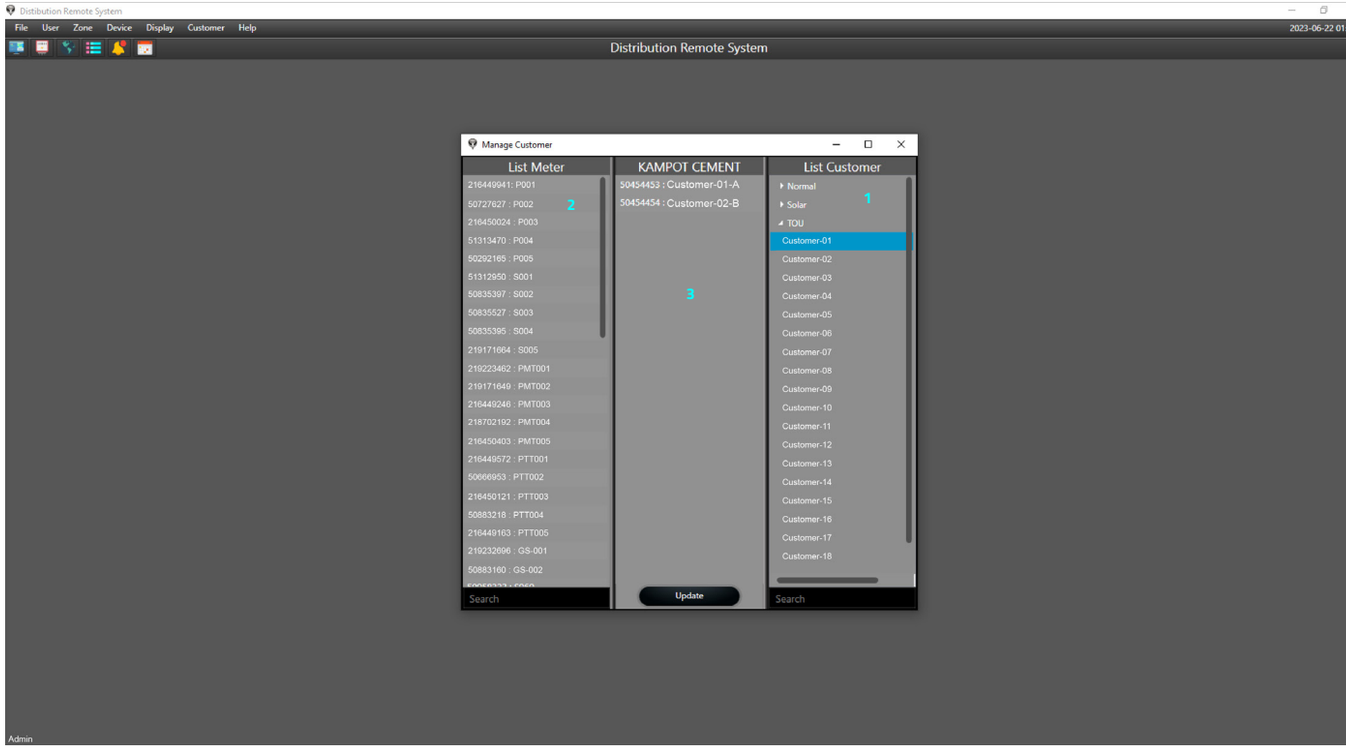


Figure 37: Manage Customer

5.6. Customer Consumption

The Customer Consumption function is a tool that allows energy providers to display daily or monthly power con sumption data for individual customers in the form of graphs and tables. Using the Customer Consumption function, operators can view energy consumption data for individual customers in various formats, including graphs and tables. This data can be displayed on a daily or monthly basis, providing operators with detailed insights into customer energy consumption patterns over time.

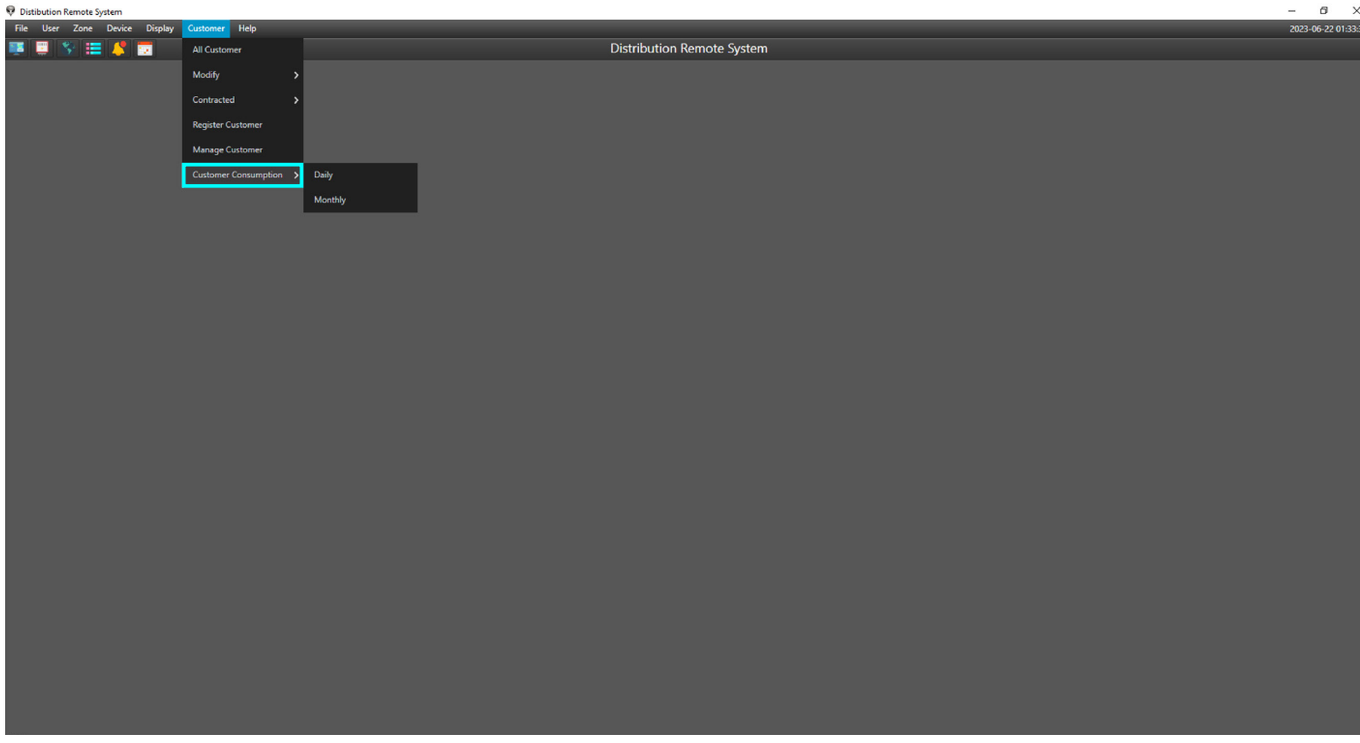


Figure 38: Customer Consumttion

5.6.1. Daily

The operator can select a specific date to view power consumption data in graphs and tables.

Customer ➔ Customer Consumption ➔ Daily ➔ Customer Name

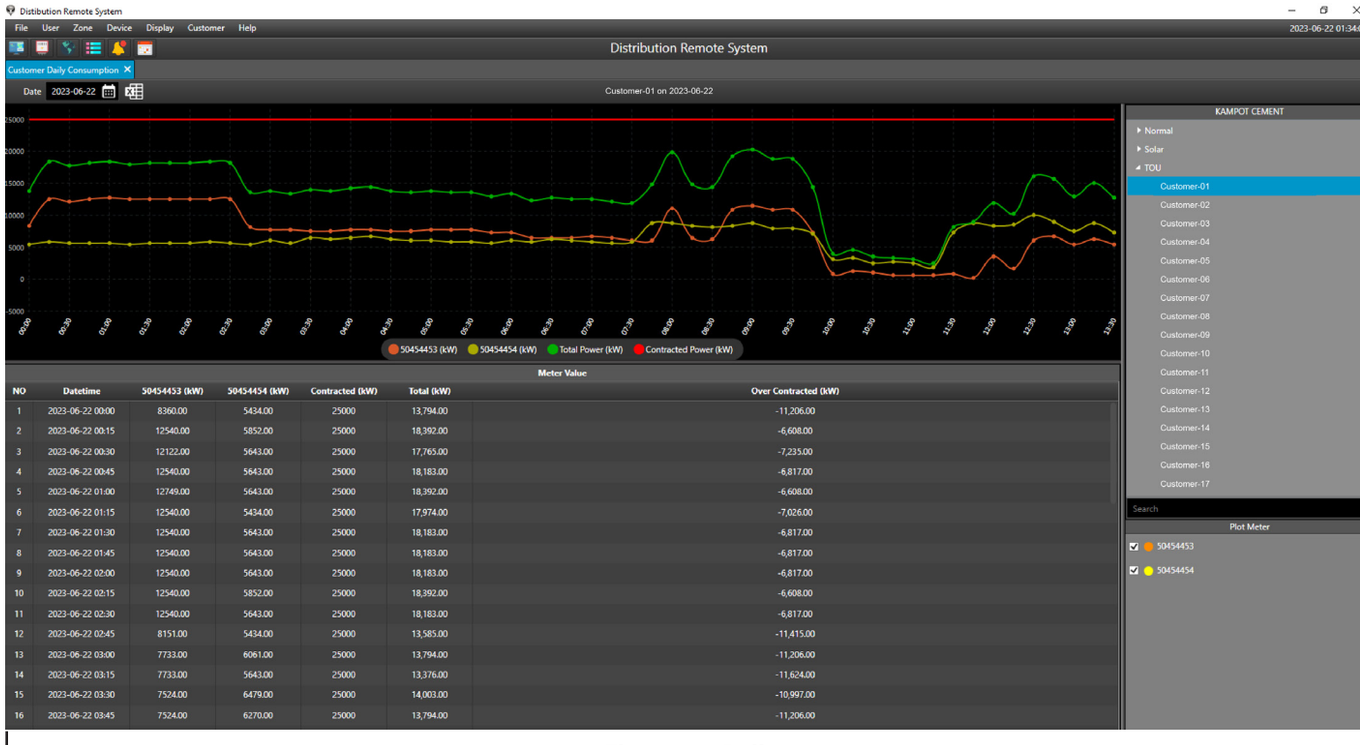


Figure 39: Daily

5.6.2. Monthly

The operator can select a specific period or reading cycle to view power consumption data in graphs and tables.

Customer ➔ Customer Consumption ➔ Monthly ➔ Customer Name

NO	Datetime	50454453 (kW)	50454454 (kW)	Contracted (kW)	Total (kW)	Over Contracted (kW)
1	2023-05-28 23:45	0.00	0.00	0	0.00	0.00
2	2023-05-29 23:45	0.00	0.00	0	0.00	0.00
3	2023-05-30 23:45	0.00	0.00	25000	0.00	-25,000.00
4	2023-05-31 23:45	0.00	0.00	25000	0.00	-25,000.00
5	2023-06-01 23:45	0.00	0.00	25000	0.00	-25,000.00
6	2023-06-02 23:45	0.00	0.00	25000	0.00	-25,000.00
7	2023-06-03 23:15	0.00	0.00	25000	0.00	-25,000.00
8	2023-06-04 23:45	0.00	0.00	25000	0.00	-25,000.00
9	2023-06-05 20:15	11704.00	10659.00	25000	22,363.00	-2,637.00
10	2023-06-06 02:30	9823.00	9614.00	25000	19,437.00	-5,563.00
11	2023-06-07 08:00	12749.00	9823.00	25000	22,572.00	-2,428.00
12	2023-06-08 00:00	6897.00	9196.00	25000	16,093.00	-8,907.00
13	2023-06-09 12:15	14630.00	10659.00	25000	25,289.00	289.00
14	2023-06-10 04:00	10241.00	9405.00	25000	19,646.00	-5,354.00
15	2023-06-11 03:15	12331.00	8987.00	25000	21,318.00	-3,682.00
16	2023-06-12 23:45	14839.00	10450.00	25000	25,289.00	289.00
17	2023-06-13 00:00	14839.00	8569.00	25000	23,408.00	-1,592.00
18	2023-06-14 03:00	15048.00	3344.00	25000	18,392.00	-6,608.00

Figure 40: Manage Customer

6. Export Report from DRS Software

6.1. Export All Metering Data

Export All Metering data as excel file.

R-Click on All Metering Data ➔ Click on Export All Metering

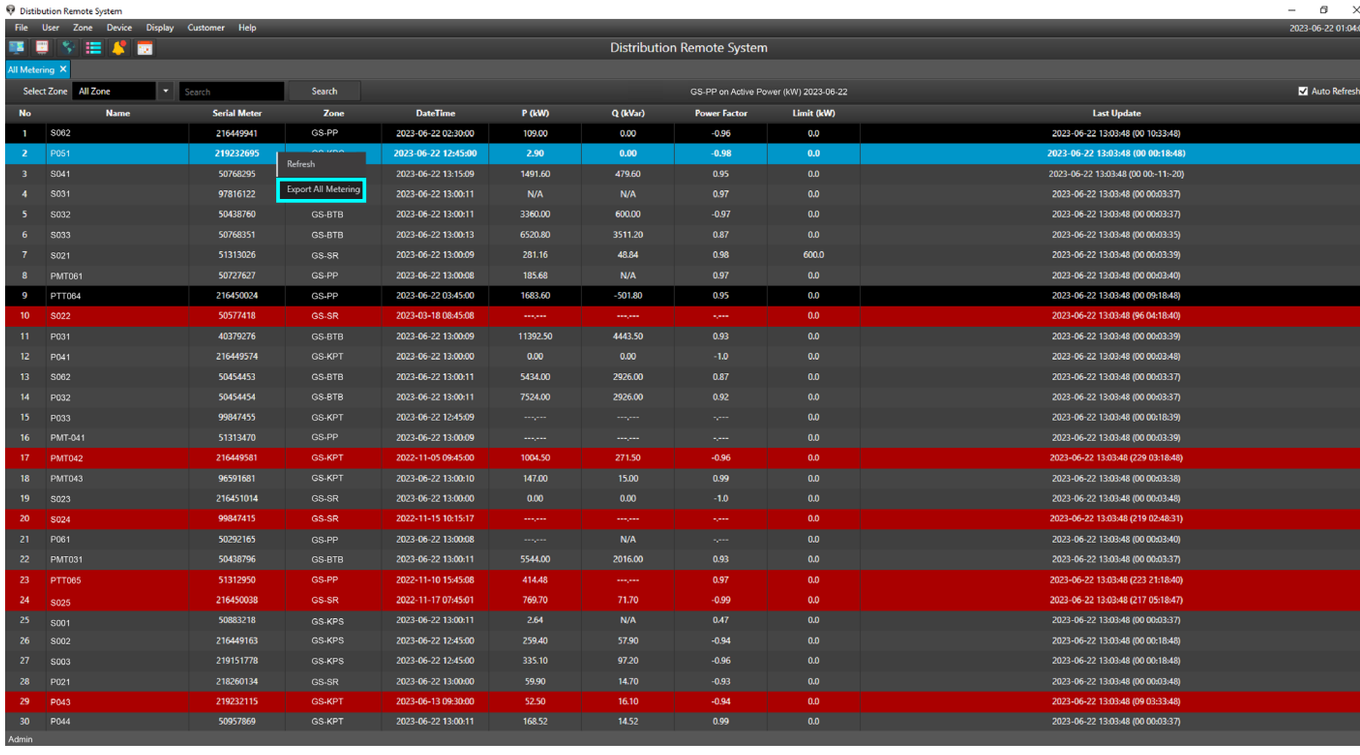


Figure 41: Export All Metering Data

6.2. Export Meter Details Data

Export Meter Details data as excel file.

R-Click on Instantaneous Value data ➔ Click on Export Instantaneous

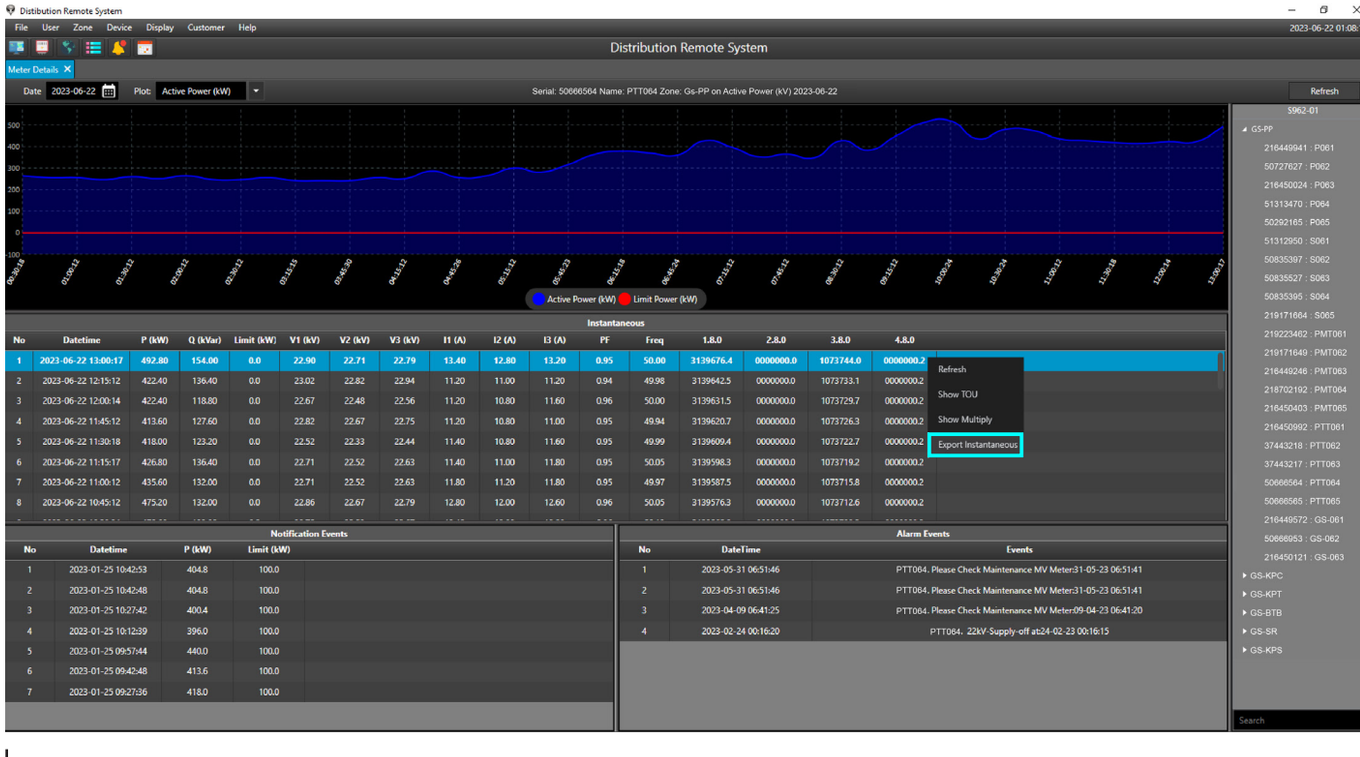
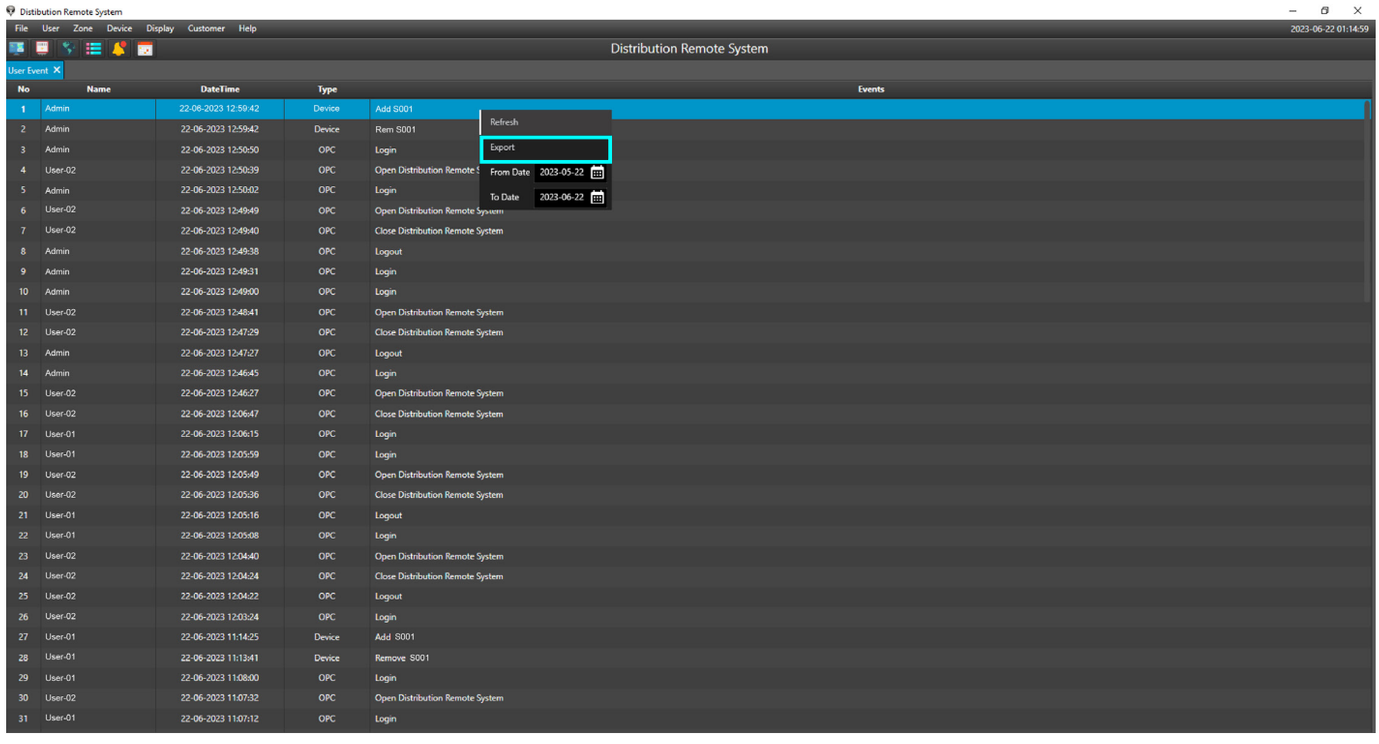


Figure 42: Export Meter Details Data

6.3. Export User Event Data

Export User Event data as excel file.

R-Click on User Event data ➔ Click on Export



No	Name	DateTime	Type	Events
1	Admin	22-06-2023 12:59:42	Device	Add S001
2	Admin	22-06-2023 12:59:42	Device	Rem S001
3	Admin	22-06-2023 12:50:50	OPC	Login
4	User-02	22-06-2023 12:50:39	OPC	Open Distribution Remote S
5	Admin	22-06-2023 12:50:02	OPC	Login
6	User-02	22-06-2023 12:49:49	OPC	Open Distribution Remote System
7	User-02	22-06-2023 12:49:40	OPC	Close Distribution Remote System
8	Admin	22-06-2023 12:49:38	OPC	Logout
9	Admin	22-06-2023 12:49:31	OPC	Login
10	Admin	22-06-2023 12:49:00	OPC	Login
11	User-02	22-06-2023 12:48:41	OPC	Open Distribution Remote System
12	User-02	22-06-2023 12:47:29	OPC	Close Distribution Remote System
13	Admin	22-06-2023 12:47:27	OPC	Logout
14	Admin	22-06-2023 12:46:45	OPC	Login
15	User-02	22-06-2023 12:46:27	OPC	Open Distribution Remote System
16	User-02	22-06-2023 12:06:47	OPC	Close Distribution Remote System
17	User-01	22-06-2023 12:06:15	OPC	Login
18	User-01	22-06-2023 12:05:59	OPC	Login
19	User-02	22-06-2023 12:05:49	OPC	Open Distribution Remote System
20	User-02	22-06-2023 12:05:36	OPC	Close Distribution Remote System
21	User-01	22-06-2023 12:05:16	OPC	Logout
22	User-01	22-06-2023 12:05:08	OPC	Login
23	User-02	22-06-2023 12:04:40	OPC	Open Distribution Remote System
24	User-02	22-06-2023 12:04:24	OPC	Close Distribution Remote System
25	User-02	22-06-2023 12:04:22	OPC	Logout
26	User-02	22-06-2023 12:03:24	OPC	Login
27	User-01	22-06-2023 11:14:25	Device	Add S001
28	User-01	22-06-2023 11:13:41	Device	Remove S001
29	User-01	22-06-2023 11:08:00	OPC	Login
30	User-02	22-06-2023 11:07:32	OPC	Open Distribution Remote System
31	User-01	22-06-2023 11:07:12	OPC	Login

Figure 43: Export User Event Data

7. User

User have 3 functions such as: Create User, Modify User and Change Password.

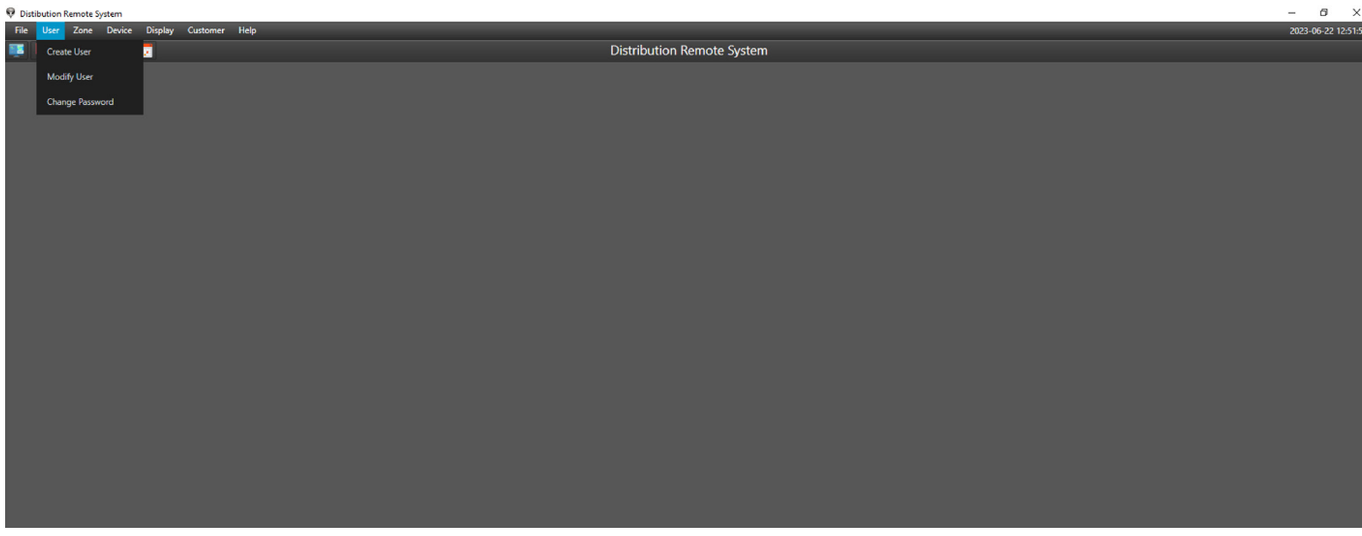


Figure 44: Create User

7.1. Create User

Create new user account to operate in DRS software.

- **Full Name:** User name
- **Date of Birth:** User date of birth
- **Phone:** User phone number
- **Email:** User email address
- **Username:** User's name to login DRS software
- **Password:** User password

Note: Username no space characters, for example: Myuser Admin

- **Phone/Email:** Use whenever the user forgets the password

User ➔ Create User

Figure 45: Create User

7.2. Modify User

Modify User information, Enable/Disable and set user permission.

User ➔ Modify User

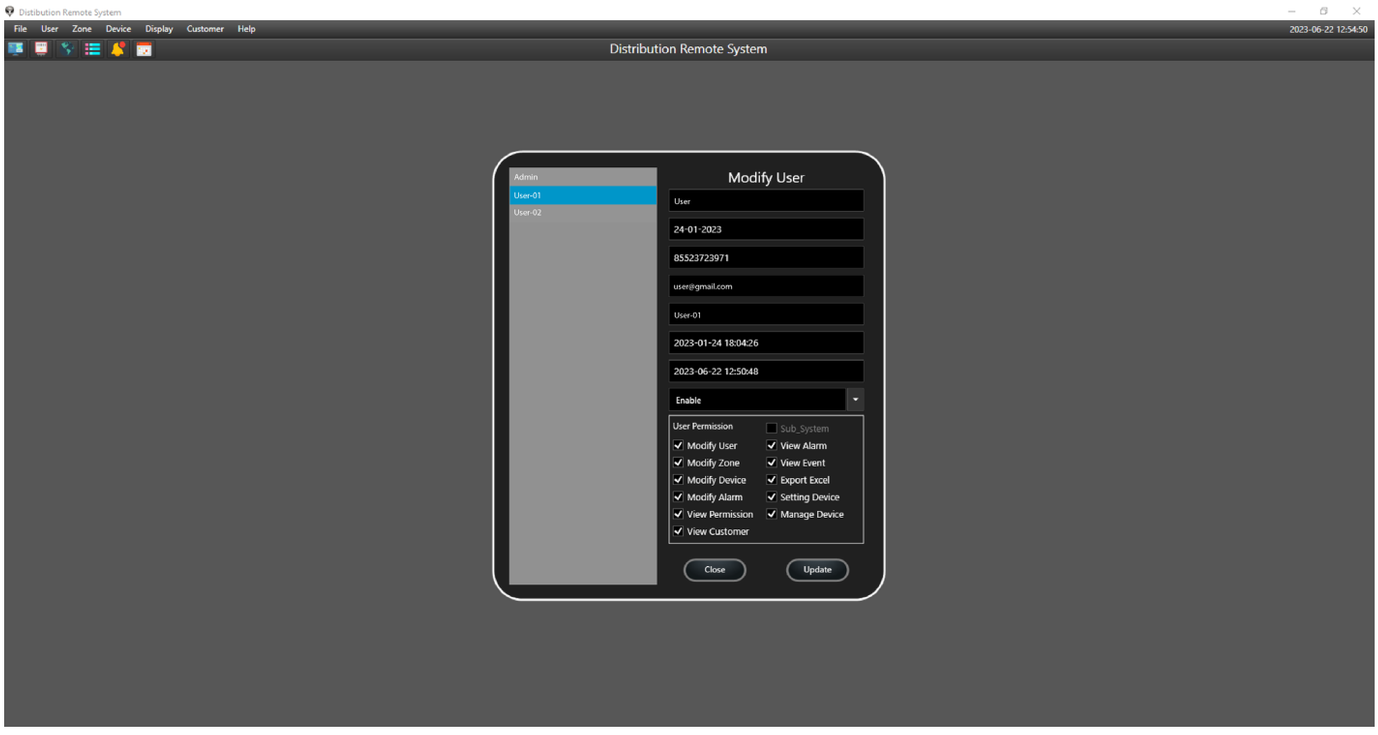


Figure 46: Modify User

7.3. Change Password

Change new user password.

User ➔ Change Password

Figure 47: Change Password

8. Update

8.1. About Us

About Us show up VP.Start Technology Co,. Ltd.

Help ➔ About Us

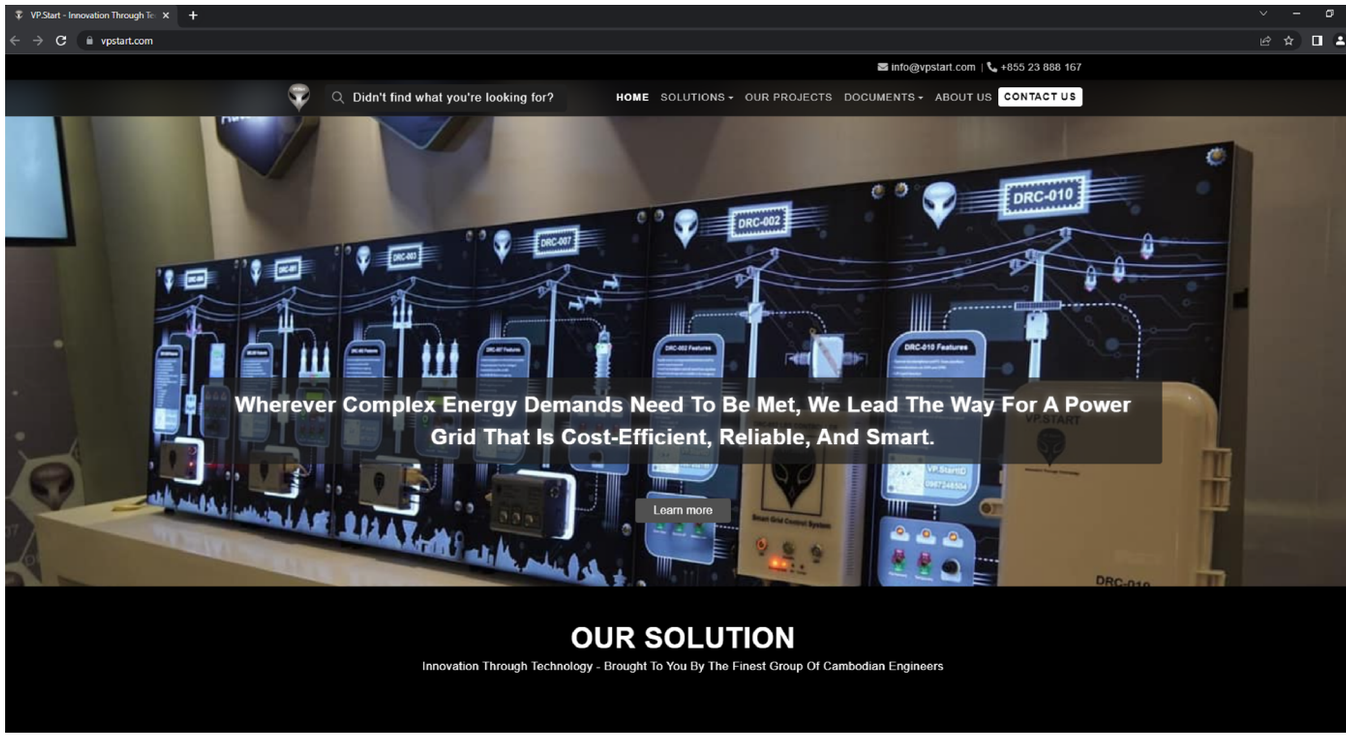


Figure 48: About Us

8.2. Check Update

Update DRS software version.

Help ➔ Check Update

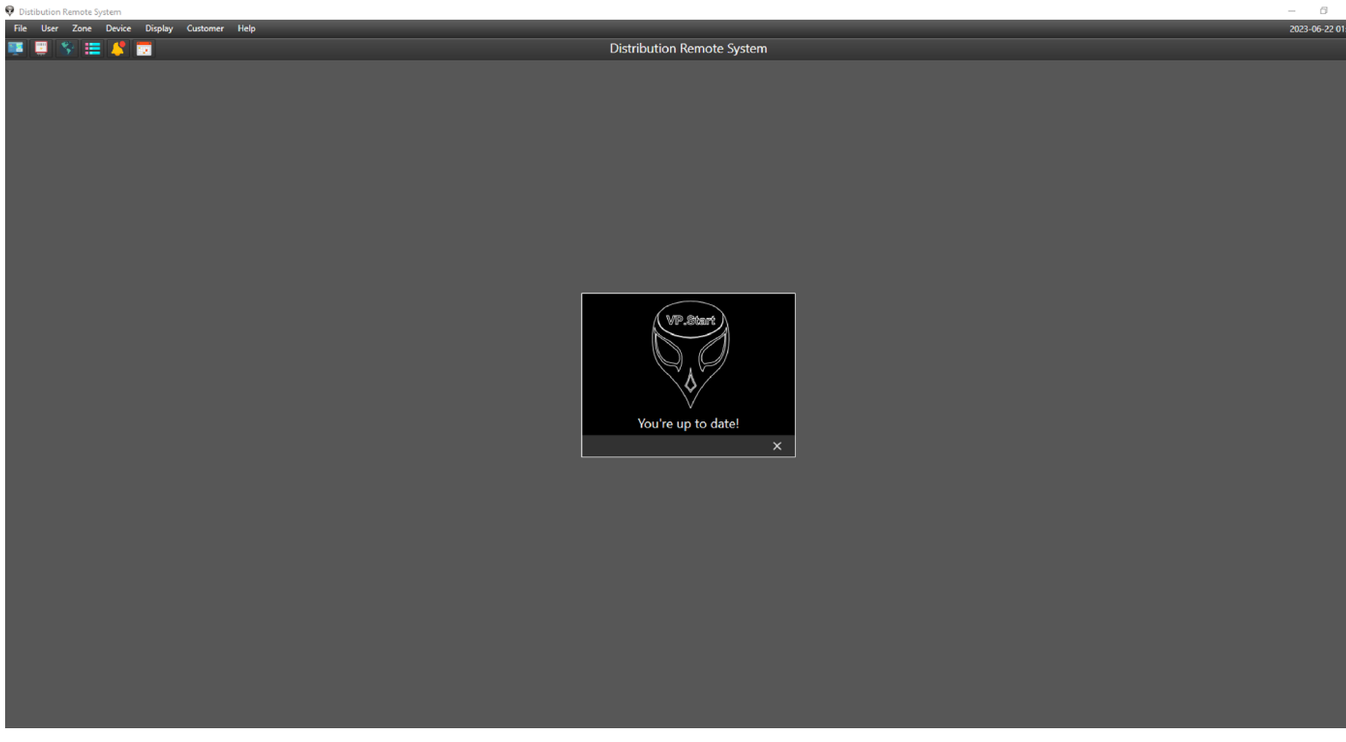


Figure 49: Check Update

9. File

9.1. Logout

Logout from DRS software.

File ➔ Logout

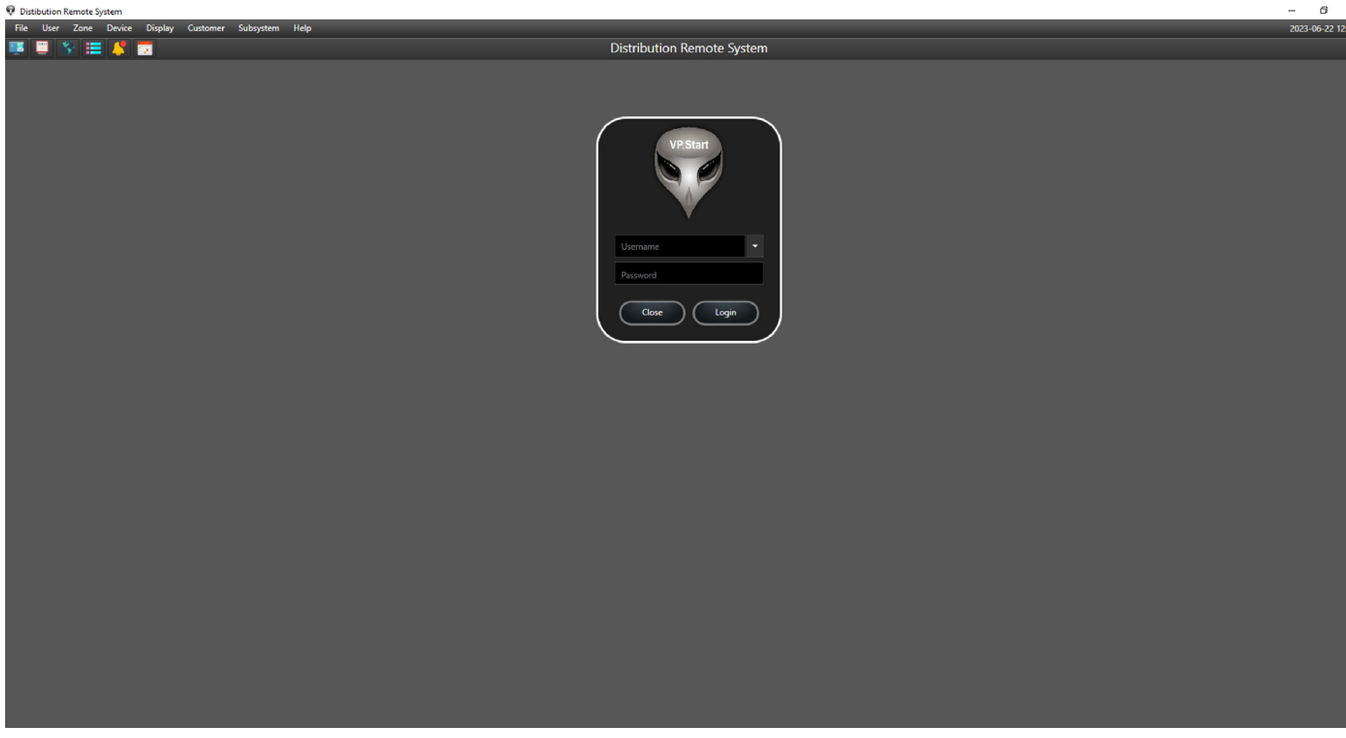


Figure 50: Logout DRS Software

9.2. Close

Close DRS software.

File ➔ Close

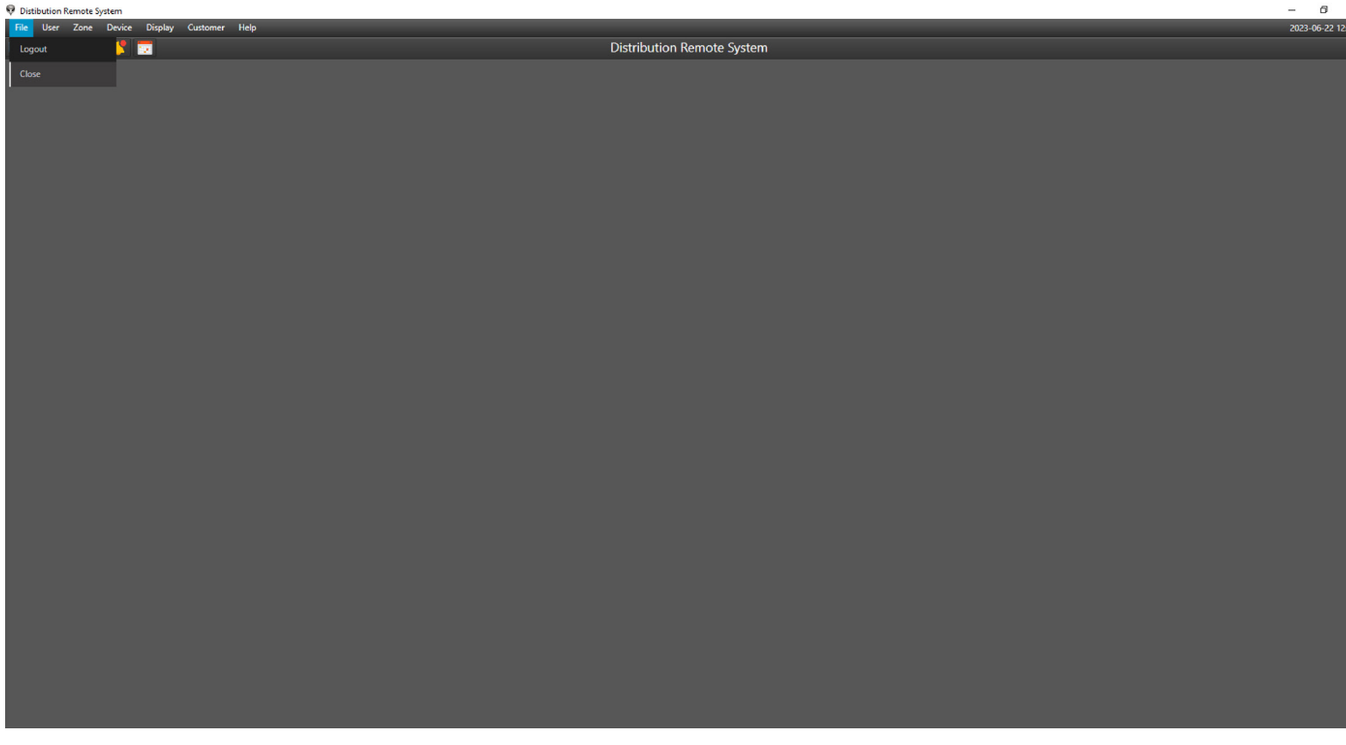


Figure 51: Close DRS Software

Reference Table

No	Data Name	Data Label	Unit	Landis +Gyr		EDMI		
				Data Code	Note	Address	Register	Note
1	Active Power	P	MW		1-1:16.7.0	48013	0000E033	
2	Reactive Power	Q	Mvar		1-1:131.7.0	48015	0000E043	
3	Voltage Phase A	Ua	kV	32.7.0	1-4:32.7.0	48007	0000E000	
4	Voltage Phase B	Ub	kV	52.7.0	1-4:52.7.0	48009	0000E001	
5	Voltage Phase C	Uc	kV	72.7.0	1-4:52.7.0	48011	0000E002	
6	Current Phase A	Ia	A	31.7.0	1-4:31.7.0	48001	0000E010	
7	Current Phase B	Ib	A	51.7.0	1-4:51.7.0	48003	0000E011	
8	Current Phase C	Ic	A	71.7.0	1-4:71.7.0	48005	0000E012	
9	Power Factor	Cos θ		13.7.0	1-1:13.7.0	48017	0000E026	
10	Frequency	f	Hz	14.7.0	1-1:14.7.0	48019	0000E060	
11	Active Energy Import		kWh	1.8.0	1-1:1.8.0	48021	00000069	
12	Active Energy Import (Rate 1)		kWh	1.8.1	1-1:1.8.1			
13	Active Energy Import (Rate 2)		kWh	1.8.2	1-1:1.8.2			
14	Active Energy Import (Rate 3)		kWh	1.8.3	1-1:1.8.3			
15	Active Energy Export		kWh	2.8.0	1-1:2.8.0	48023	00000169	
16	Active Energy Export (Rate 1)		kWh	2.81	1-1:2.8.1			
17	Active Energy Export (Rate 2)		kWh	2.8.2	1-1:2.8.2			
18	Active Energy Export (Rate 3)		kWh	2.8.3	1-1:2.8.3			
19	Active Energy Import		kvarh	3.8.0	1-1:3.8.0	48027	00000369	
20	Active Energy Import (Rate 1)		kvarh	3.8.1	1-1:3.8.1			
21	Active Energy Import (Rate 2)		kvarh	3.8.2	1-1:3.8.2			
22	Active Energy Import (Rate 3)		kvarh	3.8.3	1-1:3.8.3			
23	Active Energy Export		kvarh	4.8.0	1-1:4.8.0	48025	00000269	
24	Active Energy Export (Rate 1)		kvarh	4.8.1	1-1:4.8.1			
25	Active Energy Export (Rate 2)		kvarh	4.8.2	1-1:4.8.2			
26	Active Energy Export (Rate 3)		kvarh	4.8.3	1-1:4.8.3			
27	CT Ration				1-1:0.4.2	48039		
28	VT Ratio				1-1:0.4.3	48041		
29	Mater Date				0-0:0.9.2	48031		
30	Mater Time				0-0:0.9.1	48035		
31	Mater Serial Number				0-0:C.1.0	48029		

Tags

- Remote Monitoring Device refer to DRC-004G, DRC-004i, DRC-012G, DRC-012i.
- DRS Software (Distribution Remote System).

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