

Help Manual



Renewable Purchase Obligation Web Tool for the State of Uttarakhand



**Help Manual
for
Renewable Purchase Obligation Web Tool
for the State of Uttarakhand**

**Submitted to
Uttarakhand Renewable Energy Development
Agency (UREDA)**

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LIST OF ACRONYMS

Acronyms	Definition
CPP	Captive Power Plant
DISCOM	Distribution Companies
CEI	Chief Electrical Inspector
MU	Million Unit
OA	Open Access
OE	Obligated Entity
PPA	Power Purchase Agreement
PTCUL	Power Transmission Corporation of Uttarakhand Limited
REC	Renewable Energy Certificate
RPO	Renewable Purchase Obligation
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Centre
SNA	State Nodal Agency
UERC	Uttarakhand Electricity Regulatory Commission
UPCL	Uttarakhand Power Corporation Limited
UREDA	Uttarakhand Renewable Energy Development Agency

ABOUT THE MANUAL

In accordance with the Electricity Act, 2003 and corresponding policies, State Electricity Regulatory Commissions have specified obligations to purchase from renewable energy (RE) sources for the obligated entities (OEs), which is defined as Renewable Purchase Obligation (RPO). The State Nodal Agency (SNAs) are entrusted with the responsibility of monitoring and reporting the RPO compliance of all the OEs, i.e., Distribution Companies (DISCOMs) and Captive Power Plants (CPP) and Open Access (OA) consumers. However, RPO enforcement has been weak due to the inefficient framework for RPO compliance monitoring and reporting.

The RPO compliance monitoring is crucial to ensure that the RPO targets are met and non-compliance is brought to the regulators attention for necessary regulatory action. Idam, in association with USAID PACE-D TA Program, was engaged with Forum of Regulators (FOR) to provide technical assistance in the area of development of forms & formats for reporting & compliance monitoring, develop a generic web enabled tool for ease of access to information and ensure transparency in the process.

Uttarakhand Electricity Regulatory Commission (UERC) has engaged Idam Infra in implementation of Generic RPO Web Tool by doing necessary state specific customization. The purpose of this web tool includes:

- Enhancing transparency in the compliance process.
- Availability and accessibility of information pertinent to OEs such as DISCOMs, OA and CPP consumers.
- Creating user interfaces for the OEs to use and access the web portal to provide data for RPO compliance.
- Creating user interfaces for verifiers such as State Load Dispatch Centre (SLDC) to verify the data provided by the OEs and certifying entities as OEs.
- Allow UREDA to monitor and submit the compliance report to UERC.

Idam Infra has customized generic RPO Web Tool and successfully deployed the same on State Data Centre of Uttarakhand State. Subsequently, Idam Infra has developed a detailed Help Manual which provides an easy-to-follow, step-by-step, comprehensive guide/procedure to assist OEs (OA and captive consumers), OA verifiers, SLDC and UREDA to use and access the Web tool for RPO compliance in the state. The RPO Compliance Monitoring Tool has been developed in Microsoft Office Excel spreadsheet format with different forms for data entry, backend calculations and compliance reports. This will enable all the users to complete the RPO compliance in an effective way. This manual will help UREDA for system configuration and set up the tool for the user perspective.

1 GENERAL INFORMATION

1.1 BACKGROUND

Idam Infra has developed RPO Compliance Monitoring and Reporting Web Tool based on the analysis of prevalent regulatory framework and processes adopted by the State of Uttarakhand. This Web tool will facilitate the Implementing agency, distribution licensees, and SLDCs in identifying and certifying the entities as OEs. This Web tool will also help in streamlining the increase in the number of entities on a day-to-day basis and thereby develop a systematic database of information on RPO-OEs in the state.

1.2 SCOPE OF THE WEB TOOL

The RPO Compliance Monitoring and Reporting System (RPOCS) is a web-based application, developed to streamline the process of RPO compliance monitoring in Uttarakhand. With the expansion of the RE sector, there is an increase in the number of entities, who have the obligation of RPO fulfilment. Correspondingly, UREDA, in RE sector, thereby develop a systematic database of information on RPO OEs in the state, which will provide online RPO compliance, monitoring and reporting services to UREDA, DISCOMs, OAs and CPPs.

The RPOCS will indicate if RPO targets are met and simultaneously ensure that non-compliance is brought to the regulator's attention in a timely manner for necessary regulatory action . DISCOM, OA and CPP consumers will connect to the application through the Internet . Therefore, the users can submit their consumption data, upload all relevant supporting documents, submit their quarterly/monthly/annual compliance, and generate compliance reports on self-generated plants and energy procured with a detailed breakup of conventional and RE sources. This consumption data will be sent to the verifiers for further verification and validation.

However, this Web tool does not take any responsibility for the data entered by the user . The data entered by an OE will be valid and verified by DISCOM . It will be the responsibility of the user to adhere to their respective RPO targets as per the UERC's latest regulations. All the changes/modifications done in the application will be the responsibility of UREDA and will be as per the latest regulations prevailing in the state .

1.3 OVERALL APPROACH

The Web tool will be based on user authentication. Only limited users will be eligible for accessing the portal post verification from the respective verifier . The OE will generate the final report after submission of data in a specified format. The steps involved in the proposed system is shown in Figure 1.

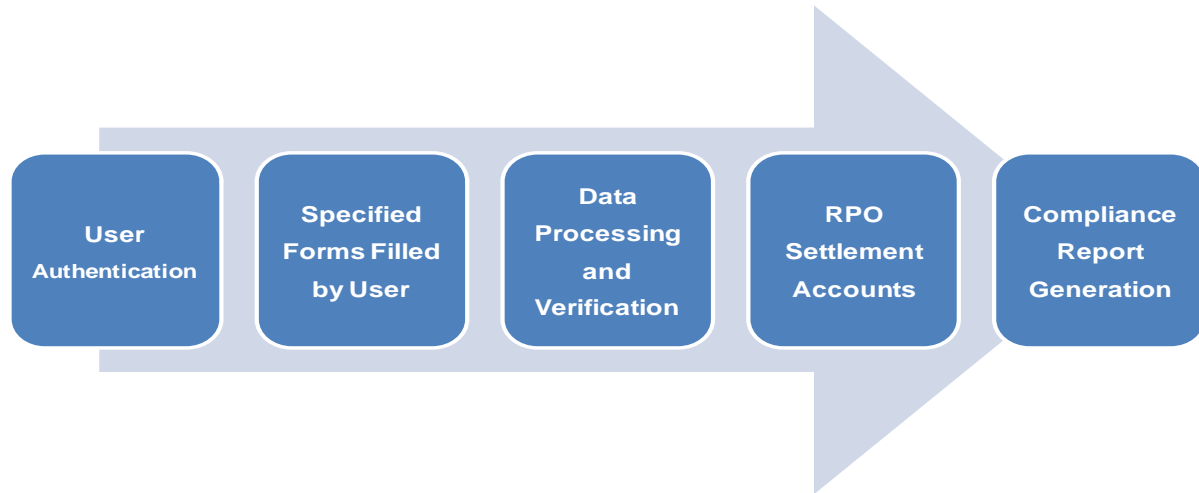


Figure 1: Overall Approach Followed in the Process

1.4 FUNCTIONALITIES OF THE WEB TOOL

The functionalities of the RPO compliance Web tool are shown in Figure 2.

1. **Directory of OEs:** UREDA will create a directory of the OEs in advance.
2. **Registration process :**Users can register in the Web tool and choose a username and password, which is completely secure .The password can be changed at any time .
3. **Admin .interface :**The Web tool provides admin .interface for incorporating new systems, rules and other necessary changes . This is accessible to UREDA for configuration of the state specific RPO rules and regulations .
4. **Multi-user login :** This tool has a facility to create multi-level users with login credentials . System user admin (can set the roles and permissions for user and the users can access the system modules .
5. **Regular updation of data :**Users can regularly update their energy consumption, generation, procurement and other information in multiple predefined web formats .
6. **Data presentation :** This application will store structured data from the information given by different categories of users .
7. **Export data :** The tool will generate the processed data into a user friendly format such as .xls and .pdf.
8. **Classification of data :**Users will view/classify the data based on the OE/DISCOM/ type/location .
9. **Alarm/Report generation :**Users will receive an alert through the system once the verification and validation/rejection of their given information is complete, and the user can generate multiple type report as per their requirements .

- 10. Monitoring/Verification/Validation** :The system will have multiple steps for monitoring, verification and validation in different user/access level .
- 11. Scalable system for future** :The tool will facilitate future update, new process implementation and other scalable options .
- 12. Email/Report generation** :Email service will be implemented within the system based on the report submitted, validated and verified .

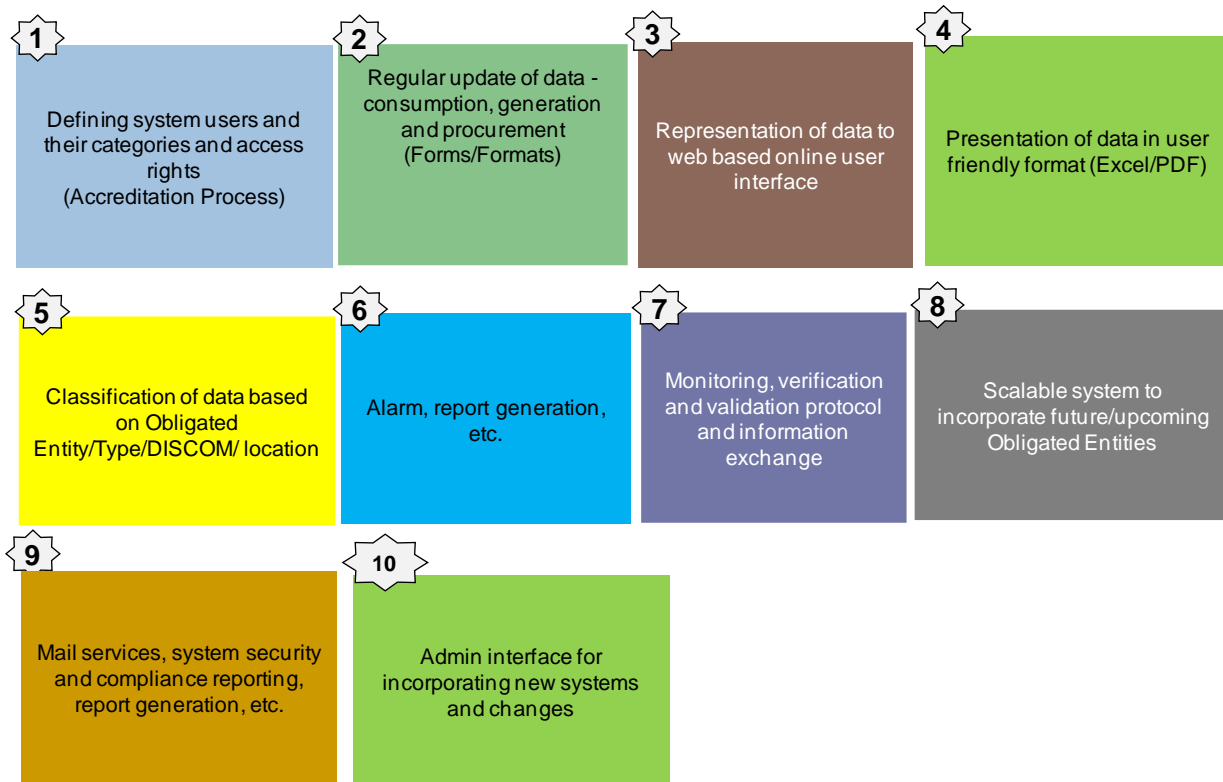


Figure 2: Functionalities of the Web Tool

2 ROLE OF STAKEHOLDERS

2.1 RPO COMPLIANCE STRUCTURE

The UERCs has specified from time to time obligations to purchase energy from the RE sources for the OEs defined as RPO. These regulations define the applicability and eligibility of different stakeholders, called OEs under the purview of the RPO. The RPO compliance structure is illustrated in Figure 3.

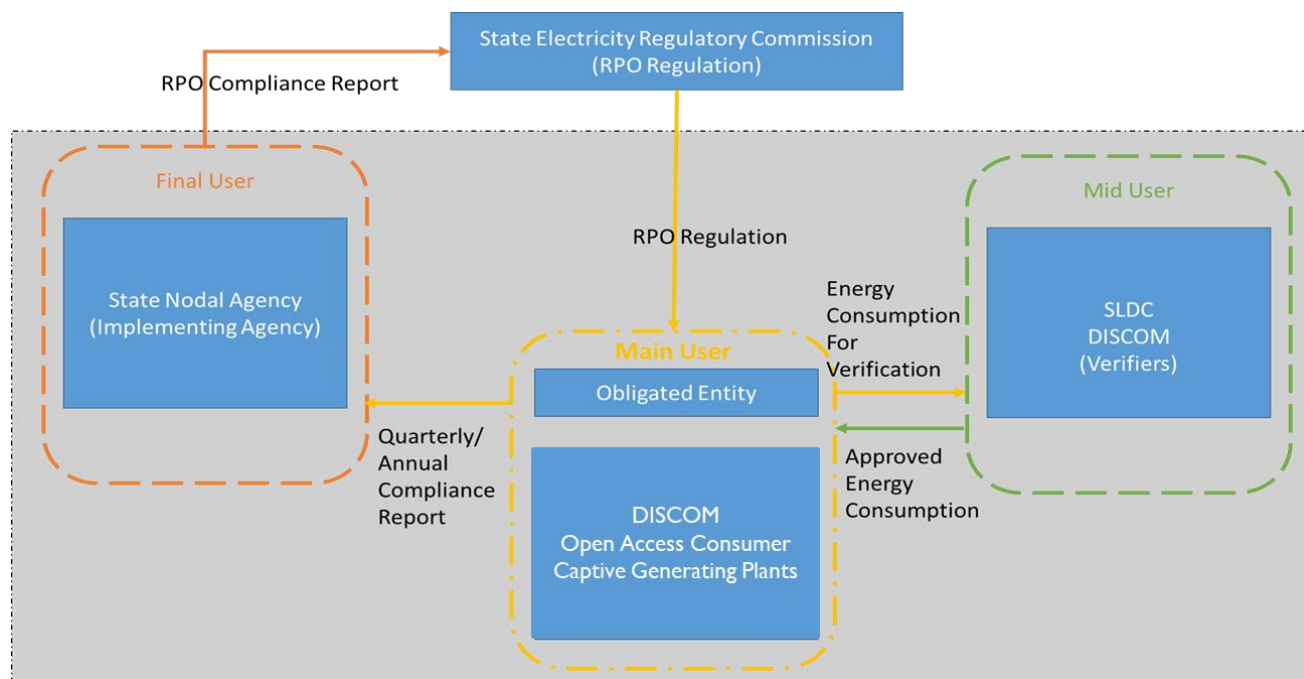


Figure 3: User Login Interconnection

The users of RPO Web tool are shown in Figure 4.

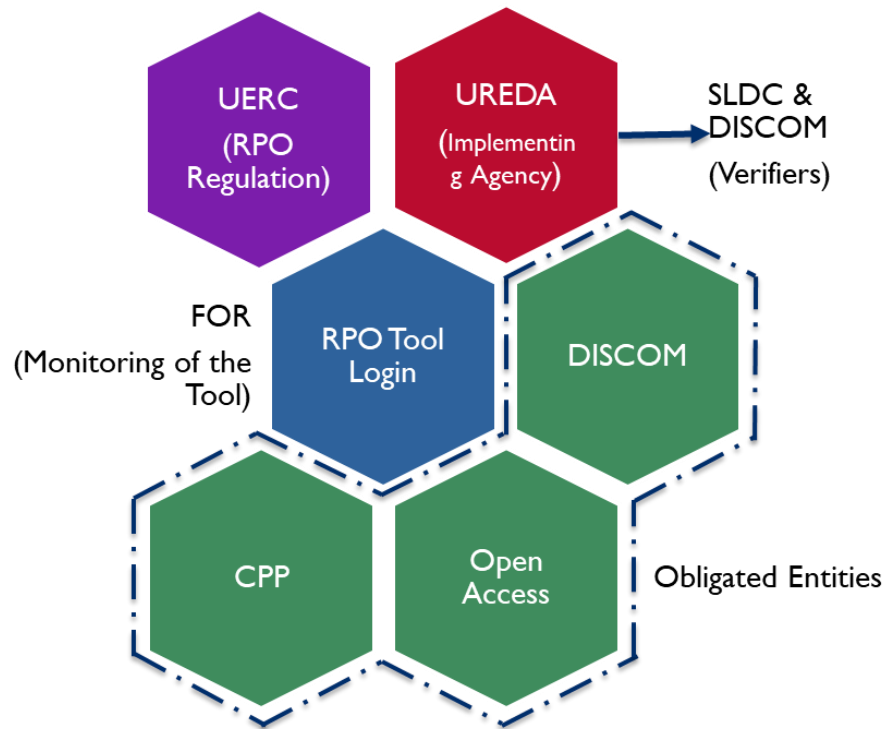


Figure 4: User Logins

2.2 ROLE OF STAKEHOLDERS

1. UREDA

UREDA can log in and manage the profile of OEs, view compliance report and generate quarterly/monthly/annual reports as per the requirement. The verifier Power Transmission Corporation of Uttarakhand Limited (PTCUL) will receive automatic emails sent by the system once the respective verifier approves the compliance reports.

2. OEs: DISCOM, OA and CPP Consumers

DISCOM, OA and CPP consumers can log in, manage their profile, add quarterly/monthly/annual data and generate compliance report and share the report with UREDA. Automatic emails will be sent by the system on submission of new contracts, rejection of contracts and submission of energy consumption in the form of compliance report to the verifier (PTCUL), OE and UREDA for their respective approvals.

3. Verifiers

The SLDCs will verify and validate energy consumption for OA users and DISCOM, and DISCOM will verify and validate energy consumption for captive users. In case of approval, energy consumption entries of the OE will be accepted and in case of rejection; the contract submitted by the OE will be rejected with an appropriate reason. In this case, an entity should re-submit their data for verification.

2.3 OBLIGATION OF VARIOUS ENTITIES

Every OE should procure electricity generated from RE sources as per the RPO under the existing Regulations/Order (s), or as may be amended by the Commission from time to time.

Table 1 : RPO Regulations of the State

Financial Year	RPO - Solar	RPO - Non-Solar
2018-19	6.75%	10.25%
2019-20	7.25%	10.25%
2020-21	8.75%	10.25%
2021-22	10.50%	10.25%

Source: Uttarakhand State RPO Regulations

2.4 FUNCTIONAL FLOW

The steps for RPO fulfillment are as below:

The implementing agency will create a directory of all the OEs within the state.

OE will register by signing up on the Web tool and will provide details for registration.

After registration, the user should enter the contract agreement details for energy generation and upload the supporting documents and submit for verification and validation.

After the verifiers verify the data, OE will be allowed to enter the periodic energy consumption from various sources :

- i. The OE can enter the data and upload all necessary supporting documents. All the data entered in the system will be subject to verification and validation by UREDA. Primarily, there are two sources of energy consumption –conventional energy (CE) and RE. The CE is referred to as energy generated through fossil fuels, coal, diesel, furnace oil, lubricant oil, etc. and RE is divided into solar, wind, biomass, etc.
- ii. The user should enter their relevant consumption details under the CE and RE categories in the Web tool. The user can add information about the Renewable Energy Certificates (RECs) purchase/self-retained for RPO fulfillment.

- iii. Once the consumption details are added, the software will calculate the RPO status of the OEs.
1. After completing the energy consumption data, the user can view their compliance report for that particular period. The user can submit the compliance report for the entire compliance period.
 2. UREDA checks the status of RPO met or deficit. In case of a shortfall, UREDA will take necessary actions as prescribed by the Commission from time to time. The process flow diagram of the RPO Web tool is explained in Figure 5.

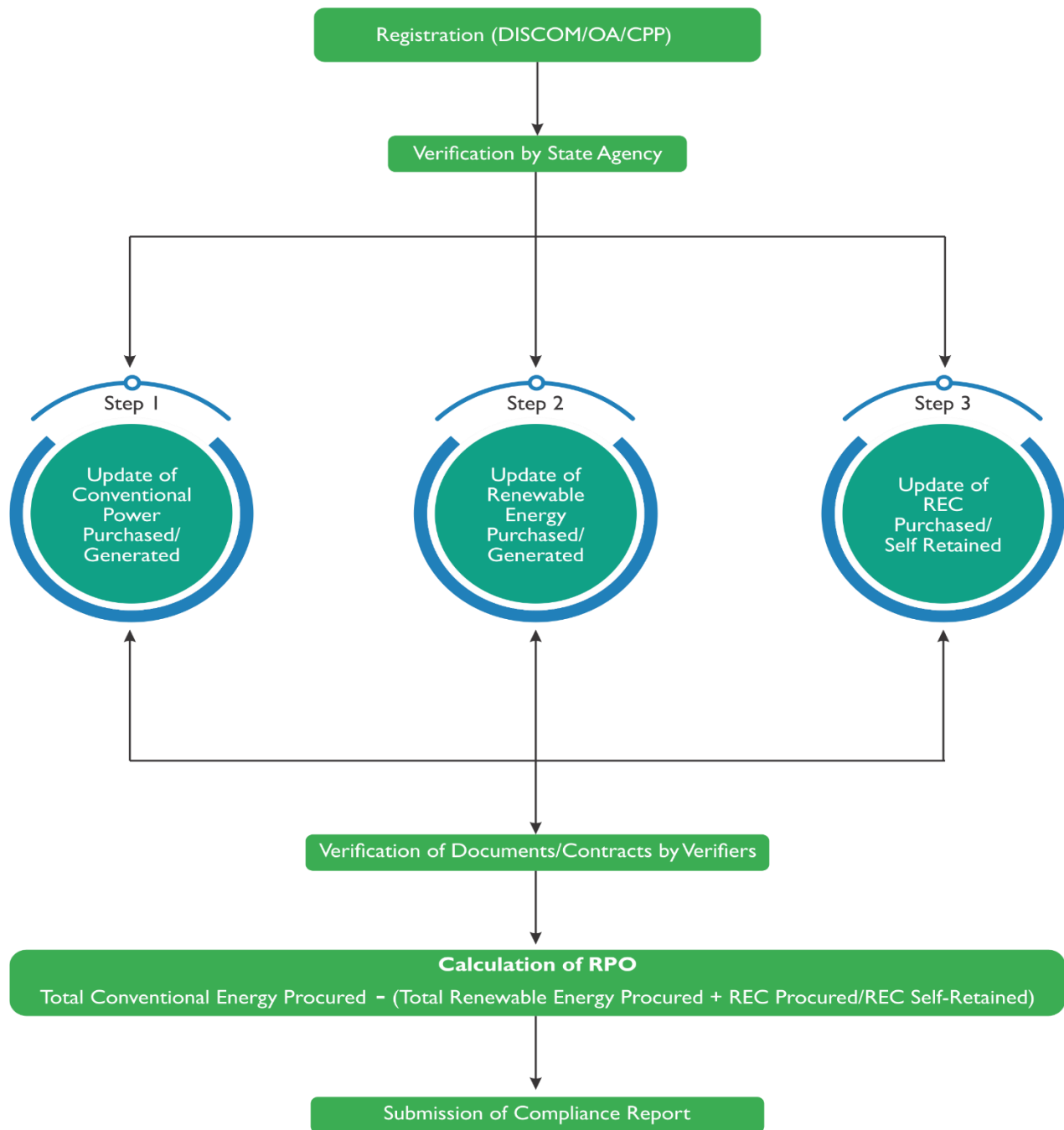


Figure 5: Process Flow of RPO Web Tool

2.5 LINK TO RPO WEB TOOL

The RPO Web tool has been deployed on the website of UREDA, <https://rpoureda.uk.gov.in/>. The homepage RPO Web tool is as shown in Figure 6.

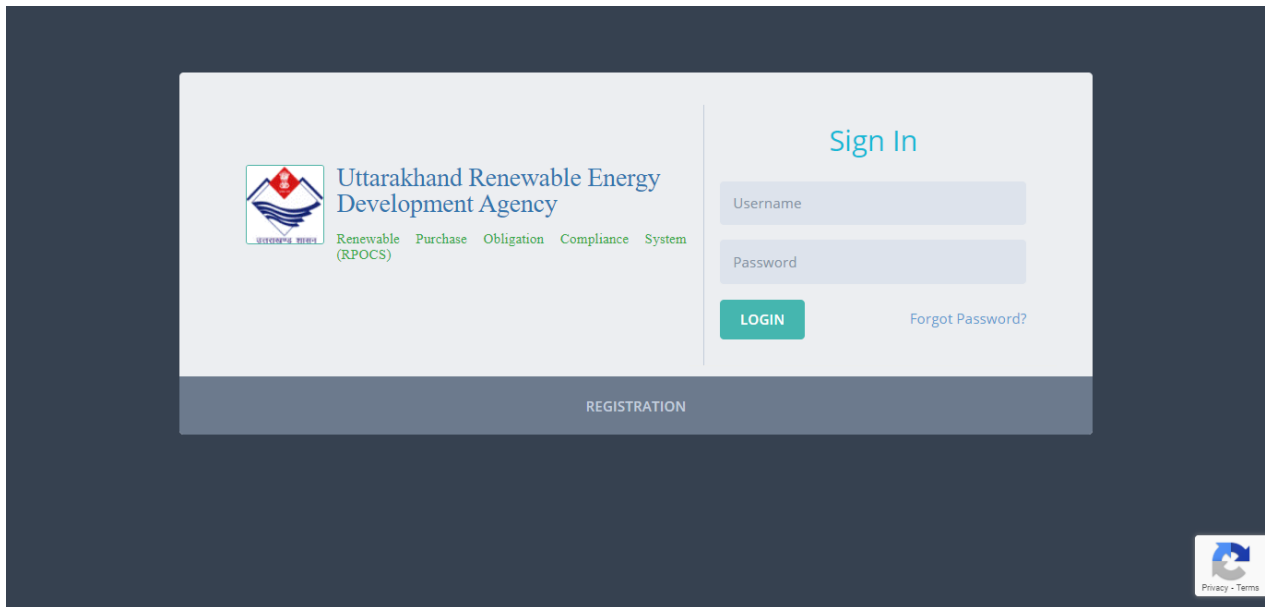
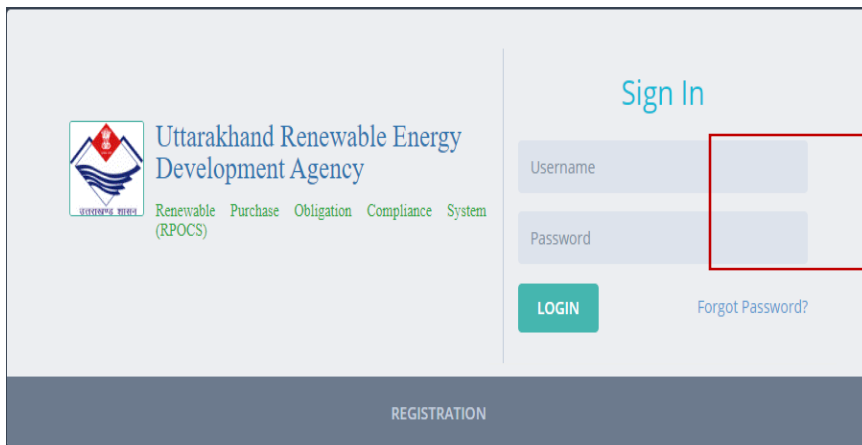


Figure 6: RPO Web Tool Home Page

To access the Web tool, the user, i.e. implementing agency, verifiers, and OEs will select 'RPO Tool' from the menu options and RPO Web tool 'Login Page' will open in a new tab as shown in Figure 7. Further, the user will enter the 'Username' and 'Password'.



The user will enter the Username and Password created at the time of registration.

Figure 7: RPO Web Tool Login Page

Section I — Guidelines for UREDA

3 UREDA

3.1 ROLE OF SYSTEM USER

UREDA is the organization who will host the RPO Web tool on its server.

UREDA is provided with the default login credentials 'SYSTEM USER' to set up the system configuration. UREDA (system user) is the first user of the RPO Web tool. Therefore, UREDA does not require any registration.

UREDA (system user) will customize the Web tool according to the regulations of Uttarakhand and create a login for itself. The dashboard for a System user is shown in Figure 8.

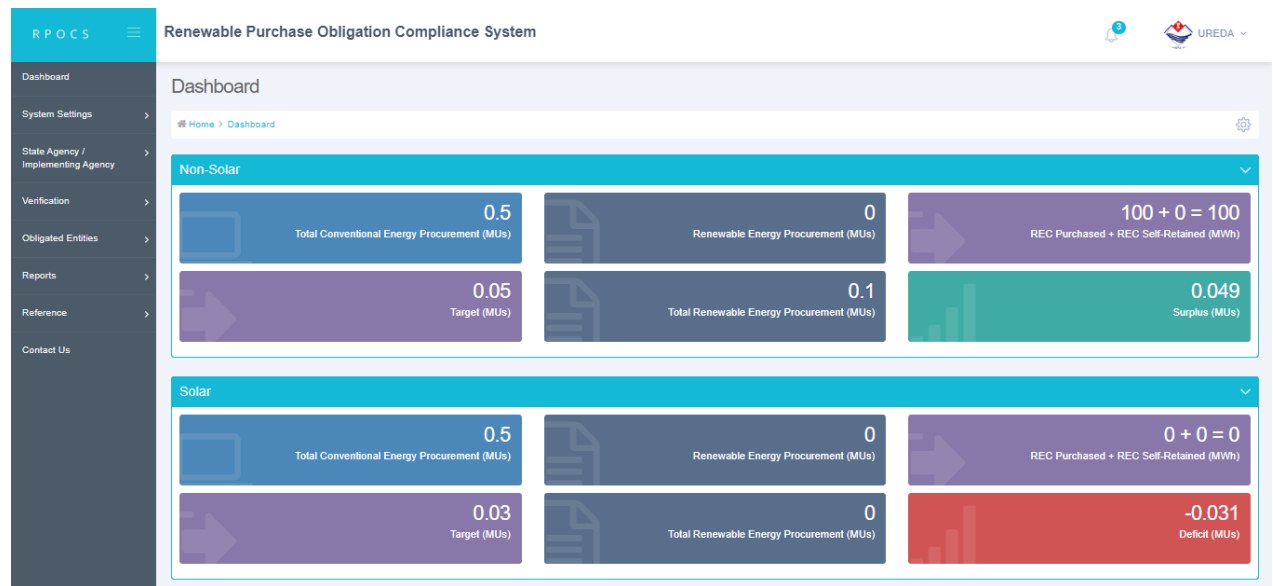


Figure 8: Dashboard for System User

After setting up login credential, UREDA can log in to the RPO Web tool for setting up further modalities on the Web tool for the OEs. The responsibilities of UREDA are provided in Table 2.

Table 2: Role of UREDA

Login Credentials	Roles
UREDA (System User)	<ul style="list-style-type: none">Define state and the implementing state.Define the type of OEs.Create login credentials of UREDA.

Login Credentials	Roles
UREDA (State Agency/ Implementing Agency)	<ul style="list-style-type: none"> • Create a directory of OEs. • Set up the RPO categories, consumption and percentages from time to time. • Set up verifiers for OEs. • Define requirements of verification at different steps. • Set up details of CE and RE. • Organize email events for OEs, etc.

3.1.1 ROLE OF UREDA

UREDA will login to the Web tool and directed to the 'Dashboard' as shown in Figure 9. The Dashboard includes:

- Menu bar.
- RPO compliance summary of the registered OEs for current FY.
- Summary report of OE.
- Summary report of OE to update data on the Web tool.
- OE wise summary compliance report for current FY.

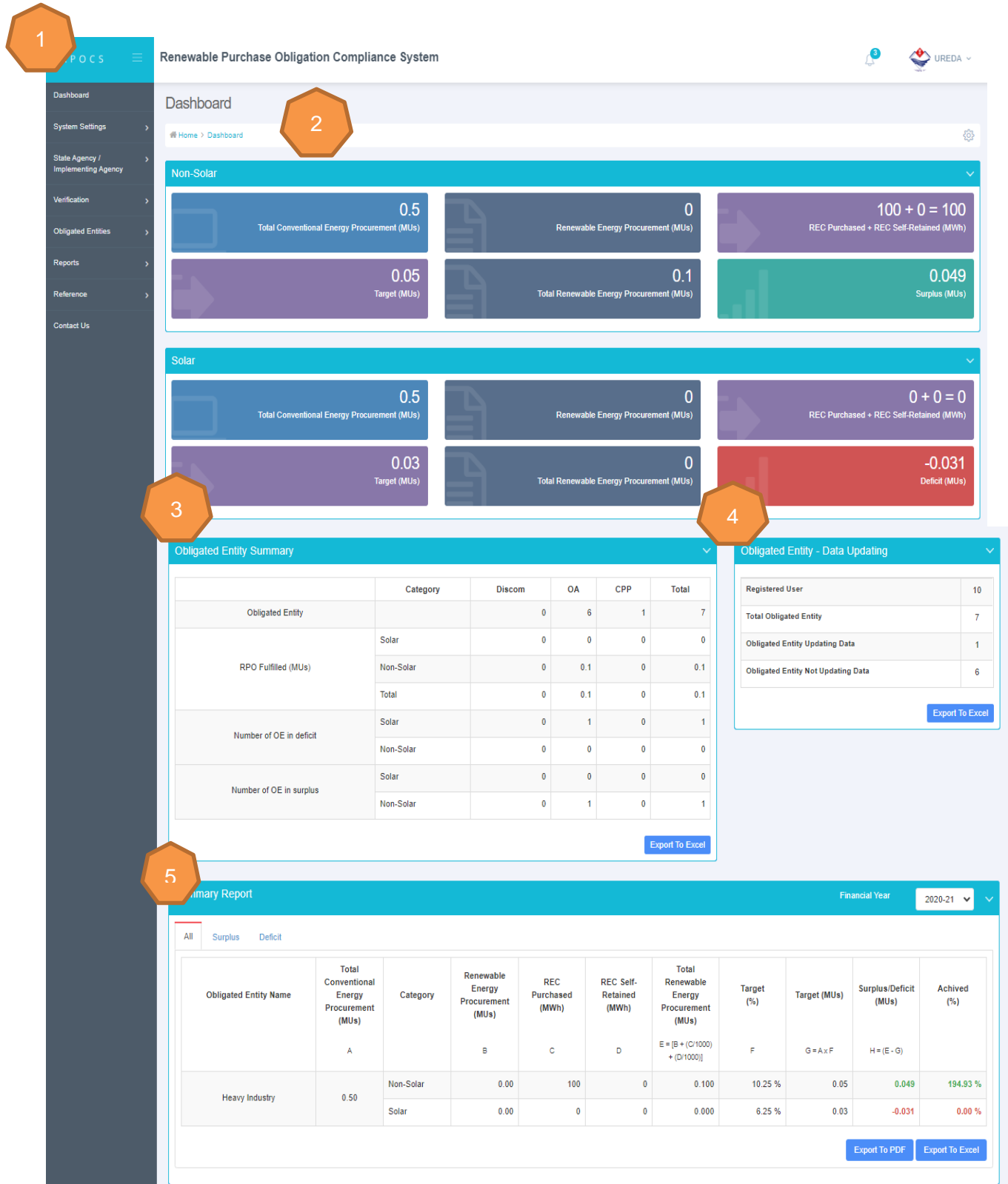


Figure 9: UREDA — Dashboard

3.2 FUNCTIONALITIES OF UREDA

UREDA is provided with three options to customize the Web tool as shown in Figure 10:

1. System Settings
2. State Agency/Implementing Agency
3. Verification

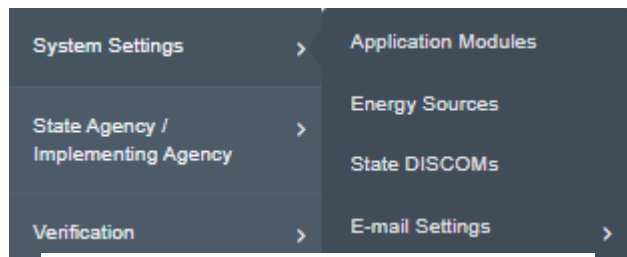


Figure 10: UREDA — Menu Bar

3.2.1 SYSTEM SETTINGS

This function is used by UREDA to setup the entire application for the users. It is further divided into four features:

1. Application Modules
2. Energy Sources
3. State DISCOMs
4. Email Settings

1. Application Modules

Application Modules define the permission for different users. UREDA user can 'Add, Edit, and Delete' the 'Application Module' as per the requirement.

Steps to Configure OEs

- UREDA can edit the information of specific Application Module from the 'Application Module List' by selecting the 'Edit' icon from the 'Action' column as shown in Figure 11. The webpage for a specific module will open, showing the information along with the permission. The user may modify and save the required information.

Application Module	File Path	Help File Path	Action
Application Modules	File/Index	File/Help	
Captive Power Consumer Registration	ObligatoryEntity/CPConsumerRegistration	Nothing	
Captive Power Consumers	ObligatoryEntity/CPConsumer	Nothing	
Captive Power Generator Registration	EnergySourceVendorRegistration/CPConsumer	Nothing	
Compliance Repoort	ComplianceReport/Index	Nothing	

Figure 11: Application Module List

- Click on 'Delete icon' to delete the 'Application Module' from the list.
- Click on 'Add' icon to add a new application and new web page will open as shown in Figure 12.
 - The user should add name of the 'Application Module' and define the 'File Path' and 'Help File Path' in the specified text box.
 - Select the checkbox against the 'File Access Member' to grant permission to access the specific module or file in the system.
 - Click on 'Save' and select 'Back' button to go to the previous page.

Application Module

Fields marked with asterisk (*) are mandatory to fill in

Application Module* File Path*

Help File Path*

File Access Members	Grant
IT Team	<input type="checkbox"/>
State Agency	<input type="checkbox"/>
New DISCOM(HRECS)	<input type="checkbox"/>
System	<input type="checkbox"/>

Back

Figure 12: New Application Module Page

2. Energy Sources

The second feature under System Settings is 'Energy Sources' that refers to the type of energy sources considered in the Web tool. UREDA can view/specify the energy source, illustrated in Figure 13.

Energy Source

Energy Type

- All
- Conventional
- Renewable

Figure 13: Type of Energy Source

Steps to Add, Edit and Delete Details

- Click on 'Add' icon to add new 'Energy Type' in the list, a page as shown in Figure 14 shall be displayed. Select 'Energy Type' from the drop-down list and mention the 'Energy Source' in the text box. Click on 'Save' to save the 'Energy Source' in the list.

Figure 14: Add New Energy Type

- Click on 'Edit' icon, a page with information on 'Energy Type' and 'Energy Source' shall be displayed. The agency can change the 'Energy Type' from the dropdown list and modify the 'Energy Source' and save the changes as shown in Figure 15.
- Click on 'Delete' icon and the user can delete the 'Energy Source' from the list.

Energy Type	Energy Source	Action
Conventional	Thermal	
Conventional	Diesel	
Conventional	Coal	
Conventional	Hydro	
Renewable	Solar	
Renewable	Mini/Micro Hydro	

Figure 15: Energy Source Configuration Page

3. State DISCOMs

UREDA shall define the role of DISCOMs in their State as shown in Figure 16.

State Discom	Action
UPCL	

Figure 16: DISCOM Configuration Page

Steps to Add, Edit and Delete Details

- UREDA can 'Edit or Delete' the information from the Action column. On clicking the specific icon, a configuration page is opened as shown in Figure 17. The user can add or modify the name of DISCOM and save the changes.
- Click on the 'Delete' icon to delete the entry as illustrated in Figure 16.

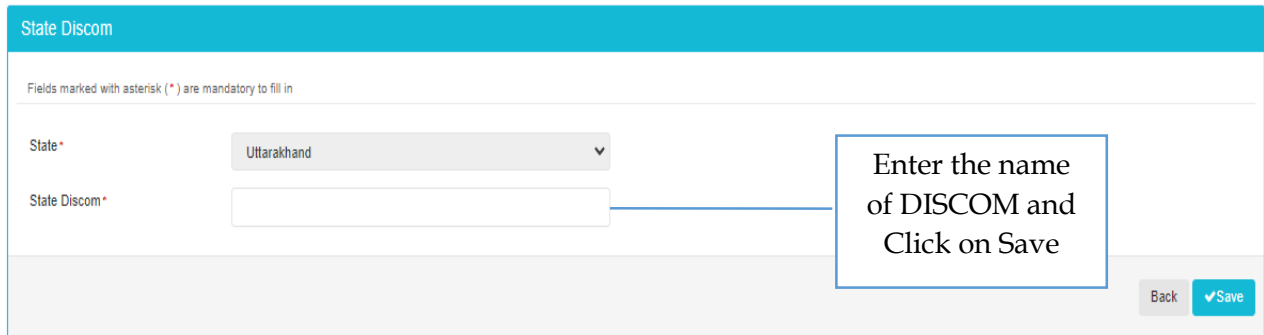


Figure 17: Create DISCOM Webpage

4. Email Settings

The fourth feature of System Settings is 'Email Settings' used to set up the mail service for different types of users. This feature has two options:

- a) System Email
- b) Email Event List

a) System Email

This feature is used to send system generated emails to the OEs regarding regular notices, reminders, or maintaining the correspondence with the OEs. To use this feature, the user should customize the mail as shown in Figure 18.

Steps to Configure Email in the 'System Email'

- Enter the Email ID and password of UREDA.
- Select 'Authenticated Protocol' .
- For setting up Incoming Emails', select the 'Email Protocol' and choose the required option, mention the 'Server Address' and 'Server Port' .
- For setting up 'Outgoing Emails', mention the 'Server Address' and 'Server Port' .
- Click on 'Save' to save the settings of 'Email Configuration' .

Figure 18: Email Configuration page

b) Email Event List

With this Email Event List, UREDA can prepare a mail that can be sent to all or selected OEs as per the requirement. The email event can be scheduled in various types of the interval, including minute/day/monthly intervals . The complete list of emails sent is available on the page as shown in Figure 19, and the user can ‘Add, Edit and Delete’ any event as per the requirement.

Email Event	Email View	Is Enabled	Last Executed On	Next Execute On	Action
Forgot Password Notification	Forgot Password Request List	✓	20/02/2017 11:16:04 AM	20/02/2017 11:17:04 AM	
Rejected Consumption Notification	Rejected Consumption List	✓	20/02/2017 11:16:04 AM	20/02/2017 11:17:04 AM	
Submit Consumption Notification	Submitted Consumption List	✓	20/02/2017 11:16:04 AM	20/02/2017 11:17:04 AM	
Submit Contract Notification	New Contract List	✓	20/02/2017 11:16:04 AM	20/02/2017 11:17:04 AM	

Figure 19: Email Event List

Steps to Add or Edit New Event

- To add a new event, click on ‘Add’ in the configuration page of ‘Email Event List’ . A new page will open for adding the event as shown in Figure 20 .
 - Type ‘Event Name’ .
 - Select ‘Event Data Source’ from the dropdown menu .

- Check the box.
 - Configure 'Event Schedule' .
 - Enter a number in 'Scheduled Every' and click on the dropdown list to select the time in minute/hour/day/week.
 - Add the information for 'Scheduled Day (s)', to configure the email event.
 - The user can enable the checkbox for 'Repeat Notification' , as per requirement .
 - Click on 'Save' to save the event in the 'Email Event List' .
- To edit the existing event, the user should click on 'Edit' icon from the 'Event List' .

Email Event

Fields marked with asterisk (*) are mandatory to fill in

Event Name *

Is Enabled

Last Executed On

Event Data Source * -- Select --

Next Execute On

Event Schedule

Scheduled Every * -- Select --

Scheduled Day(s) * of every month

For multiple days use comma, enter 0 for everyday

Repeat Notification

Email Event Configuration

Email View Column	Email Receiving Type
-------------------	----------------------

Back
Save

Figure 20: Create New Event

3.2.2 STATE AGENCY/IMPLEMENTING AGENCY

The second option given in Menu Bar for UREDA is State Agency. Under this menu, the 'State Agency' is provided with multiple features as shown in Figure 21:

1. Manage State Agency/Implementing Agency
2. Verifying Agency Setup
3. RPO Setup
4. Energy Source Generators
5. Manual Email
6. Regulatory Orders
7. State Obligated Entity

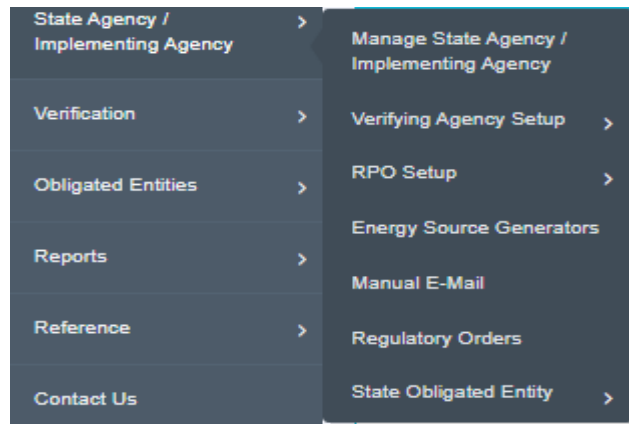


Figure 21: UREDA – Menu Bar Implementation Agency

1. Steps to Manage State Agency

This feature enables UREDA to define its role in the Web tool.

- Click on 'Manage State Agency', a page displaying the list of state agencies will appear as shown in Figure 22. UREDA can 'Add, Edit and Delete' the information as required.

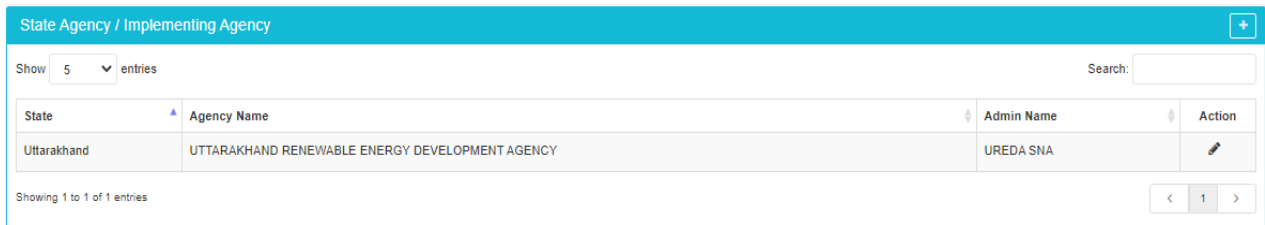


Figure 22: Add New State Agency

- Click on 'Add' icon as shown in Figure 22, and a new page will be displayed as shown in Figure 23. UREDA should enter relevant login details in the specified fields and click on 'Save' to add the new agency in the list.
- UREDA can edit information by clicking on 'Edit' icon as shown in Figure 22.
- Click on 'Edit' icon from the 'Action' column to 'Manage State Agency' Module. Agency specific information page will open with all the information along with two additional

Figure 23: Manage State Agency

tables, i.e., 'Role for State Agency' and 'User for State Agency' as shown in Figure 24. These sections decide the roles and grants specific permission to different users.

Figure 24: Edit Existing State Agency Web Page

Define Role of State Agency

Under the 'Role of State Agency, click on 'Add' icon and a new page will open defining the role of that particular agency along with the permission rights as shown in Figure 25 .

Steps to Setup the Role of State Agency

- Define the role name.
- Enter a brief description of the role defined.
- Select 'Landing File' from the 'Dropdown' list.
- Set access permission (View, Add, Edit, and Delete) for the 'Landing Files' .
- Click on 'Save' .

Note: Once the 'Landing File' permission has been enabled for a particular user, and the user can view and edit the required information.

Role for State Agency

Fields marked with asterisk (*) are mandatory to fill in

Role Name* Role Description*

Landing File*

Show: 10 entries Search:

File	View	Add	Edit	Delete
Application Modules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Captive Power Consumer Registration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Captive Power Consumers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Captive Power Generator Registration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compliance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compliance Summary Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption Document Download	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption Document Upload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Showing 1 to 10 of 68 entries

Back Save

Figure 25: Role for State Agency (UREDA) Page

Define User for State Agency

UREDA can create a second user with restricted permissions and roles by following the below steps:

- Click on 'Add' icon in the section 'User for State Agency (as shown in Figure 25), a new web page will open as shown in Figure 26 .

- Add 'User First Name' and 'User Last Name' in the text box.
- Enter 'Username' and 'User Password' .
- Enter the 'Email ID' and 'Phone No'
- Select the role of the user from the dropdown list.
- Click on 'Save' to set up the configuration.

Figure 26: User for State Agency (UREDA)

2. Verifying Agency Setup

UREDA creates verifiers to verify the information provided by the OEs. UREDA includes three types of verifiers :

- i. DISCOM Verifier
 - ii. Open Access Verifier
 - iii. CPP Verifier
- i. DISCOM Verifier:** As per the RPO regulations of some states, DISCOM as a verifier will be permitted to verify the documents of the following OEs :
- OA
 - CPP
 - OA and CPP both

DISCOM as a verifier will check the following information of the OEs :

- Details of energy generators.
- Details of contracts between the OE and the energy generators.
- Energy consumption data entered.

UREDA will set up the role of verifiers by following the below steps:

- Click on 'DISCOM Verifier' tab, from verifying agency setup, a new page will open displaying the list of DISCOM verifiers as shown in Figure 27 .
- UREDA can 'Add, Edit and Delete' the details of the verifiers.

External Entity - DISCOM Verifier			
Show	5	▼	entries
			Search: <input type="text"/>
External Entity	Admin First Name	Admin Last Name	Action
SLDC	DISCOM	VERIFIER	
Showing 1 to 1 of 1 entries			<input type="button" value="1"/>

Figure 27: DISCOM Verifiers Webpage

- To add new verifiers, click on 'Add' icon and a new page will be displayed to add the user information, as illustrated in Figure 28.
 - Mention the name of the 'External Entity', i.e., name of DISCOM.
 - Mention 'Admin. First Name', 'Admin. Last Name', 'Email ID' and 'Phone No.'
 - Add 'Admin Username' and 'Admin Password' to log in as DISCOM verifier.
 - Click on 'Save' to add and save the new verifier in DISCOM verifier list.

External Entity - DISCOM			
Fields marked with asterisk (*) are mandatory to fill in			
External Entity*	<input type="text"/>		
Admin First Name*	<input type="text"/>	Admin Last Name*	<input type="text"/>
Email Id*	<input type="text"/>	Phone No*	<input type="text"/>
Admin User Name*	<input type="text"/>	Admin Password*	<input type="text"/>
			<input type="button" value="Back"/> <input type="button" value="Save"/>

Figure 28: Addition of DISCOM Verifiers

- Click on 'Edit' icon to edit the details of DISCOM verifier and a web page will open as shown in Figure 29.
- The information that can be edited includes, 'External Entity', 'Admin. First Name', 'Admin. Last Name', 'Email ID' and 'Phone No.'
- The login credentials 'Admin Username' and 'Password', once mentioned, are locked and not editable.
- Click on 'Delete' icon and the external entity will be deleted.

External Entity - DISCOM

Fields marked with asterisk (*) are mandatory to fill in

External Entity*

Admin First Name* Admin Last Name*

Email Id* Phone No*

Admin User Name* Admin Password*

Back

Figure 29: Edit Page for DISCOM Verifiers

- ii. **Open Access Verifiers:** UREDA can create an Open Access Verifier to verify the energy consumption updated by OA consumers. The responsibility can be assigned to any agency as deemed fit by UREDA.

UREDA can configure a verifier page for the OA verifier by following the below steps:

- Click on 'Open Access Verifier', a new page will open that displays the list of OA verifiers as shown in Figure 30.
- Add new OA verifier or Edit and Delete the existing one. (The details of the verifier can be added, edited and deleted in the same way as described for DISCOM verifier.)

External Entity - Open Access Verifier

Show 5 entries Search:

External Entity	Admin First Name	Admin Last Name	Action
Power Transmission Corporation of Uttarakhand Limited	PTCUL	SLDC	

Showing 1 to 1 of 1 entries

Figure 30: Verifier Set Up Page for Open Access Verifier

- **Captive Power Verifier:** The 'Captive Power Verifier' verifies the documents of CPP. The captive power verifier has permission to check the documents submitted by the CPP as per the regulations.

UREDA can configure a verifier page for the captive power verifier by following the below steps:

- Click on 'Captive Power Verifier' in the Menu page, and a new page will open displaying the list of CPP verifiers as shown in Figure 31 .

External Entity	Admin First Name	Admin Last Name	Action
Uttarakhand Power Corporation Limited	UPCL	DISCOM	

Figure 31: Verifier Setup Page for Captive Power Verifier

- Add new OA verifier or Edit and Delete the existing one (the details of verifiers for the CPP consumer can be added, edited and deleted in the same way as described for DISCOM verifier as shown in Figure 32.

Figure 32: Add Details of the New Verifier

3. RPO Setup

The key role of UREDA is setting up the RPO as per the latest regulations followed in the state.

The feature 'RPO Setup' consists of four sub-menus as shown in Figure 33:

- i. Categories
- ii. Consumption Ranges
- iii. Financial Year
- iv. RPO Percentage

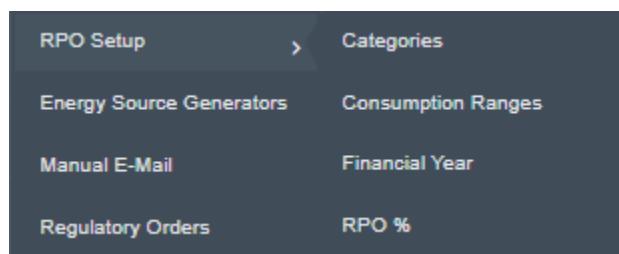


Figure 33: UREDA – RPO setup

- **Categories:** UREDA will set up categories of RPO as per the prevalent RPO regulations of the state. To define the categories, UREDA can 'Add', 'Edit' and 'Delete' the entries from the given list as shown in Figure 34.

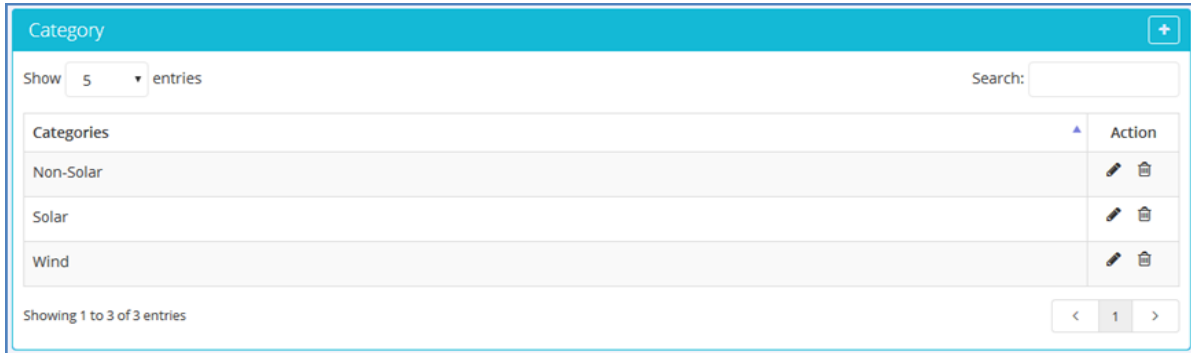


Figure 34: Energy Source Category Setup Page

- Click on 'Add' icon and enter the name of the category and save the changes as shown in Figure 35.

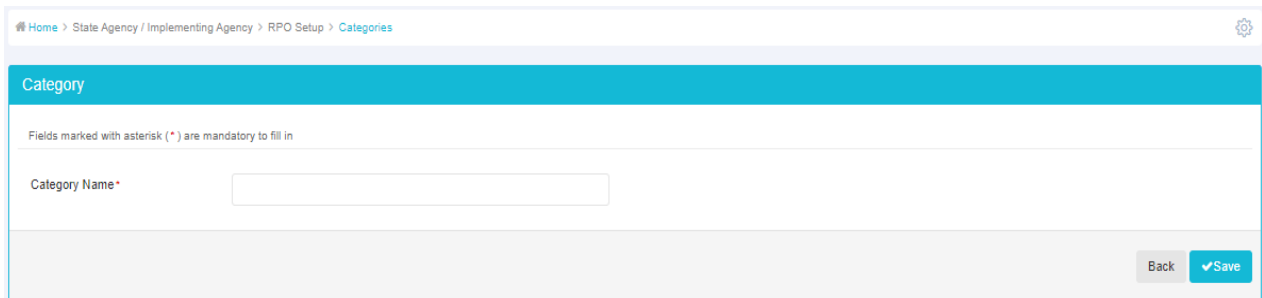


Figure 35: RPO Category Configuration Page

- Click on 'Edit' and the user can make changes in the category name and save the changes as shown in Figure 36

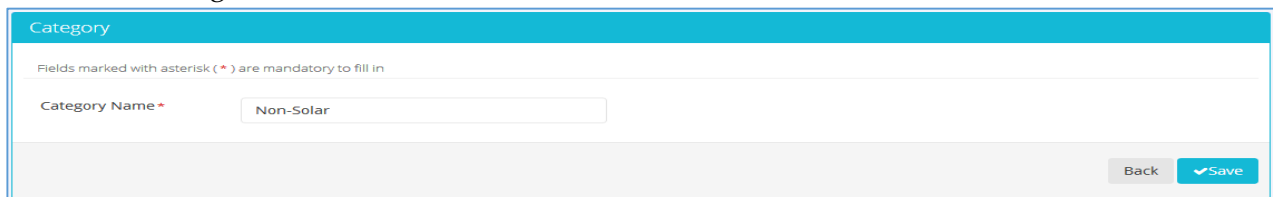


Figure 36: RPO Category Configuration Page

Consumption Ranges: The consumption range is also defined as per the regulations of the state depending upon the project size of the OEs. For example, the State of Rajasthan has different RPO regulations for the OEs having project capacity of more than 10 MW. On clicking the consumption ranges, a page will open displaying the list of consumption range defined by UREDA for the respective state.

- As shown in Figure 37, Click on 'Edit' icon and a new webpage will open and UREDA can add or edit the consumption range as shown in Figure 38.

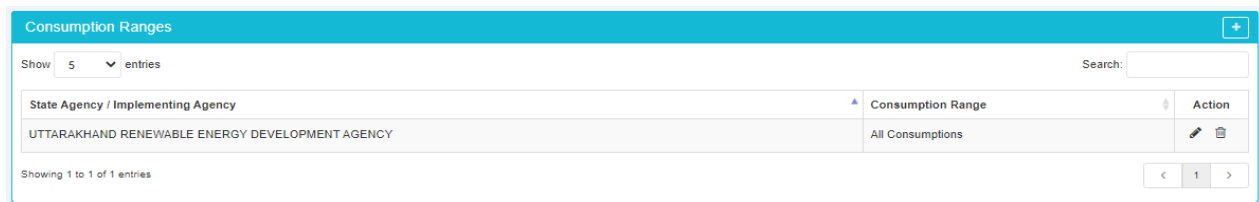


Figure 37: Add/Edit Consumption Range

- Add Consumption Range, Start Value (MW) and End Value (MW) or edit the same in the text box.
- Enable or disable the 'Generator Type' by selecting the checkbox for different consumers.
- Click on 'Save' to save the changes .
- Click on 'Delete' icon and UREDA can delete the consumption range from the list of 'Consumption Range' as per the requirement.

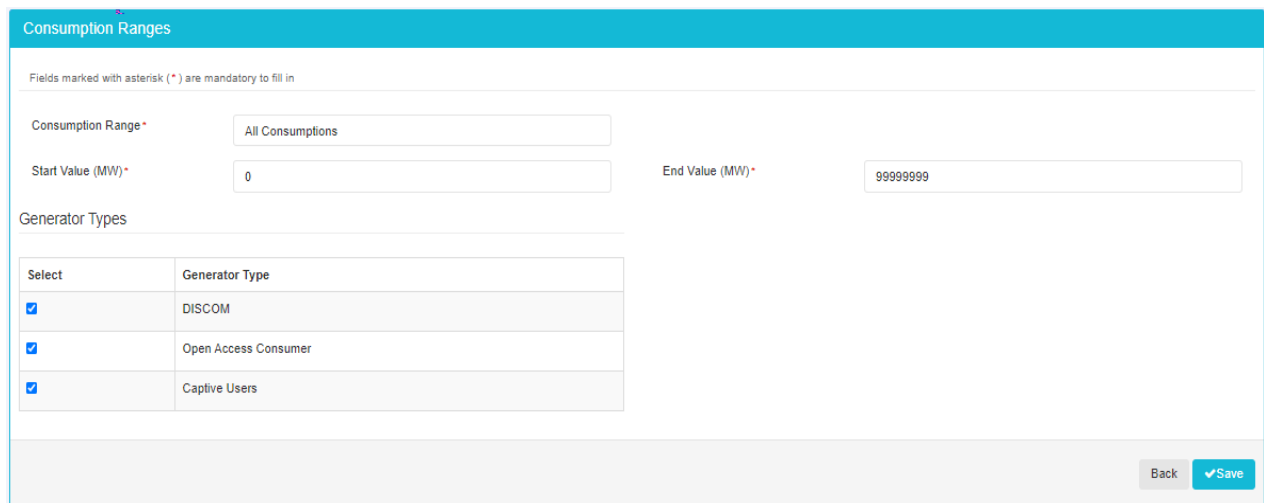


Figure 38: Consumption Range Configuration Page

- **Financial Year:** UREDA can configure category wise consumption range for a certain period within a particular FY. The dropdown list in 'Financial Year' displays the list of individual FY.

UREDA can add the consumption period according to the specified category wise consumption range or modify the existing consumption instruction, configured earlier in the modules 'Categories' and 'Consumption Ranges' for individual FY as shown in Figure 39 .

Financial Year	Start Date	End Date	Report Submission Last Date	Action
2016-17	01/04/2016	31/03/2017	14/01/2020	
2017-18	01/04/2017	31/03/2018	13/01/2020	
2018-19	01/04/2018	31/03/2019	15/01/2020	
2019-20	01/04/2019	31/03/2020	30/04/2020	
2020-21	01/04/2020	31/03/2021	30/04/2021	

Figure 39: Financial Year Setup Page

ADDING FINANCIAL YEAR

Click on 'Add' icon and a page displaying the category wise consumption range during the specified FY will be opened as shown in Figure 40 . The steps are as follows:

- Mention 'Financial Year' in the text box.
- Select 'Start Date' and 'End Date' for the duration notifying the consumption .
- The page 'FY' is divided into two parts, i . e . Category and Consumption Range.
- Configure the 'Category' and 'Configuration Range' .
- Click on 'Save' to add the new FY or edit the existing one .

Financial Year Setup Page for 2020-21:

Fields marked with asterisk (*) are mandatory to fill in

Financial Year*: 2020-21

Start Date*: 01/04/2020

Report Submission Last Date*: 30/04/2021

End Date*: 31/03/2021

Category

Select	Categories	Action
<input checked="" type="checkbox"/>	Non-Solar	
<input checked="" type="checkbox"/>	Solar	

Showing 1 to 2 of 2 entries

Consumption Range

Select	Consumption Range
<input checked="" type="checkbox"/>	All Consumptions (0 MW to <99999999 MW)


Showing 1 to 1 of 1 entries

Back Save

Figure 40: Set Up of Financial Year

As mentioned earlier, a configuration is required for the consumption range according to the category of a certain FY . UREDA shall customize the 'Category' and 'Consumption Range' for

a certain FY. The customization of 'Category' and 'Consumption Range' procedures are as follows:

- **Category:** Define the category of energy to enable the checkbox to add and save the new FY.
 - Open the saved FY in edit mode, and the 'Action' column in 'Category' Box will be enabled.
 - Click on  icon from the 'Action' column, a new page will open to specify the energy category from the energy group as shown in Figure 41.

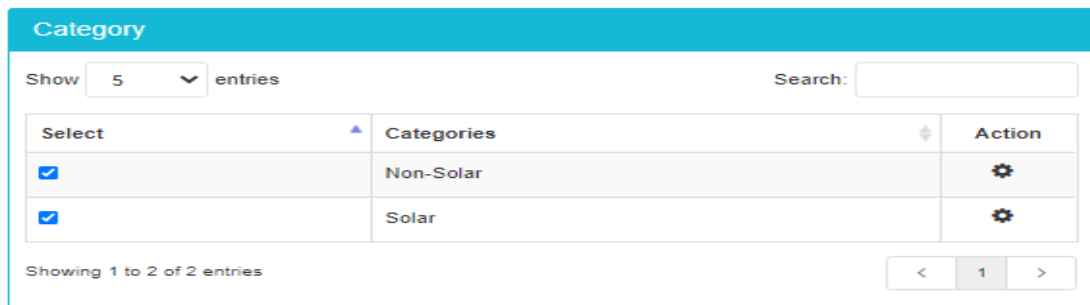


Figure 41: Category selection page

- Enable or disable the checkbox for category wise energy from the 'Energy Group Configuration' page as shown in Figure 42.
- Click on 'Save' to save the changes.
- **Configuration Ranges:** The Figure 42 displays the consumption ranges configured in the menu 'Consumption Ranges'.

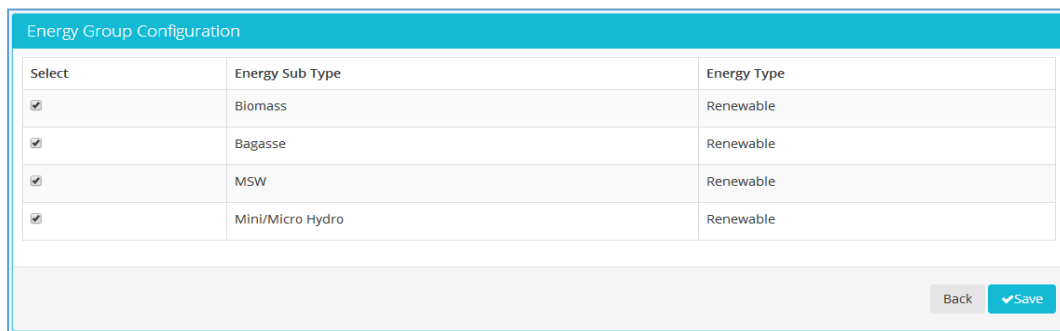


Figure 42: Energy Configuration Page

- Define Consumption Range, to enable the checkbox against the defined range as shown in Figure 43.

Consumption Range

Show entries Search:

Select	Consumption Range
<input type="checkbox"/>	0 to 5 (0 MW to <5 MW)
<input type="checkbox"/>	All Consumption (0 MW to <999999 MW)
<input type="checkbox"/>	5 and above (5 MW to <999999 MW)

Showing 1 to 3 of 3 entries

Figure 43: Consumption Range Selection Page

- Click on 'Save' to configure FY.
- **RPO %:** UREDA can configure the RPO % percentages that shall be applicable for the desired percentage for a select Financial Year.
 - Select the submenu option 'RPO%', a new page will open as shown in Figure 44

RPO %

Financial Year

Consumption Range	Obligated Entities	Categories	Obligated Value (%)	Apply Carry Forward

Figure 44: RPO% Input

- Select the desired 'Financial Year' from the drop, a new page will open as shown in Figure 45.

Consumption Range	Obligated Entities	Categories	Obligated Value (%)	Apply Carry Forward
all consumption	DISCOM	Solar	6.75	<input checked="" type="checkbox"/>
		Non-Solar	10.25	<input checked="" type="checkbox"/>
	Open Access Consumer	Solar	6.25	<input checked="" type="checkbox"/>
		Non-Solar	10.25	<input checked="" type="checkbox"/>
	Captive Users	Solar	6.75	<input checked="" type="checkbox"/>
		Non-Solar	10.25	<input checked="" type="checkbox"/>

Figure 45: RPO % - Select Financial Year

- Provide the RPO% in for Solar and Non-Solar categories in each main category, and
- Tick the checkboxes for which the 'Apply Carry Forward' is applicable.
- Upload the regulation for the Financial Year
- Click on 'Save' to save the RPO %

4. Energy Source Generators

This page provides UREDA detailed information of all the energy generators for that state. UREDA can view the list of energy source generators page-wise or in a single page or can search using the search option to open the page. Click on 'State Agency' and then click in 'Energy Source Generator' a page will be displayed as shown in Figure 46.

Energy Source	Energy Source Generator	Address	City	District	Pin Code	Action
Bio Pellets/Briquettes	Genco Uttarakhand	Dehradun	Dehradun	Dehradun	387992	
Coal	Sunday Power	zxy	1	1	1	
Solar	Solar Rays	q, q	Chamoli	Chamoli	111111	
Solar	Rellance Power	Add1, Add2	City	Dist	123456	
Solar	OAGEN	Dehradun, Dehradun	Dehradun	Dehradun	248001	

Figure 46: Energy Source Generator Configuration Page

UREDA can 'Add' a new 'Energy Source Generator' in the list or 'Edit' the information for the existing energy source generator .

- Click on 'Add' or 'Edit' icon to add to edit the 'Energy Source Generator' and a page will open as shown in Figure 47.

Figure 47: Adding Energy Source Generator

- Provide the necessary information in the fields for adding a new Energy Source Generator .
- Click on 'Save' to save the 'Energy Source Generator' information in the list .

5. Manual Email

The purpose of the module is to send emails manually to the OEs for circulating notices, reminders, information or any correspondence . UREDA may circulate the email to all OEs or individuals . The menu 'Manual Email' displays the list of email subject and sending date under the column 'Sent On' . Generally, 'Manual Email' shows all past information . The 'Manual Email' page is displayed in Figure 48 .

Sent On	Email Subject	Action
	Update data	

Figure 48: Manual Email Page

UREDA can view the individual's mail information by click on 'Edit' icon under 'Action' column . To send the 'Manual Email' using this application, UREDA can follow the below steps :

- Click on 'Add' icon from the 'Email Record List' page. A new page will open as shown in Figure 49.

The screenshot displays the 'Manual Email Configuration Page' with the following components:

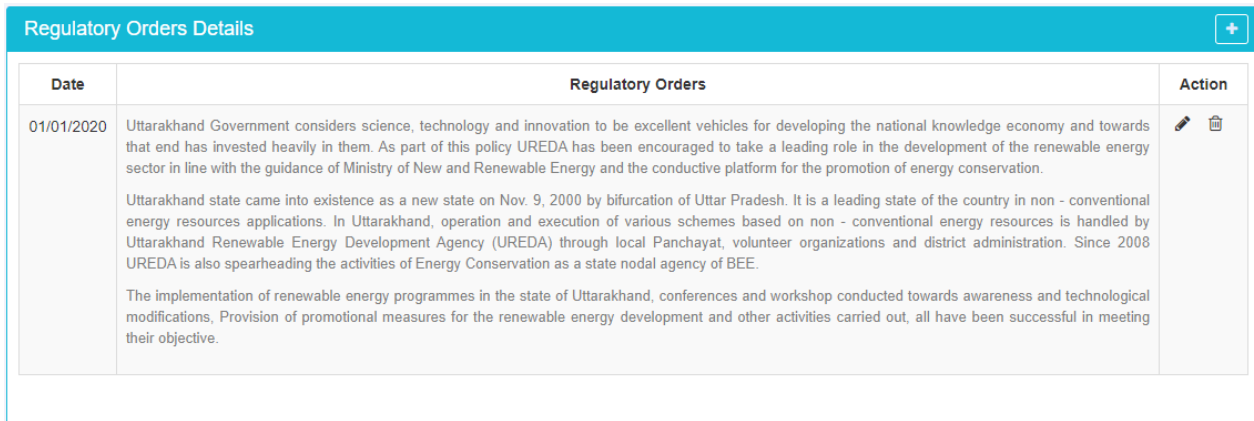
- To Section:** A table with columns 'Select', 'Obligatory Entity', and 'Email Id'. One entry is shown for 'OA Urja Pvt. Ltd.' with email 'gaurav.balani@idaminfra.com'. A search bar and pagination controls are also present.
- Details Section:**
 - Subject:** A text input field.
 - Email Body:** A rich text editor with a toolbar containing options for bold, italic, underline, strikethrough, text color, background color, bulleted list, numbered list, link, unlink, and help. The body text reads: "Dear Obligated Entity", "Please update your consumption data", and "Regards".
 - Attachment:** A section labeled 'Attachments' with a 'Remove' button.
- Navigation:** A 'Back' button is located at the bottom right of the page.

Figure 49: Manual Email Configuration Page

- The email sending page has two parts, namely, 'To' and 'Details'.
- To select 'Obligatory Entity', select 'Compliance Status' from the dropdown list, select either 'Surplus', 'Deficit' or 'All' to send email as per the requirement.
- Enable the checkbox of OE, to whom the email should be sent.
- Mention appropriate subject for the email and type the content in the email body.
- Click on 'Choose File' to attach external files as an attachment. The attached external file will be displayed below in the content text box. If required, it can be removed from the list.
- Click on 'Send' to send the email to the respective OEs.
- Click on 'Back' button to return to the 'Email Record List' page.

6. Regulatory Orders

The menu 'Regulatory Orders' is used to circulate notice or order to the OEs. UREDA maintains this event. All the OEs can view the notice or order from the menu 'Regulatory Orders'. Initially, the page 'Regulatory Orders' displayed date-wise list of all orders as illustrated in Figure 50.





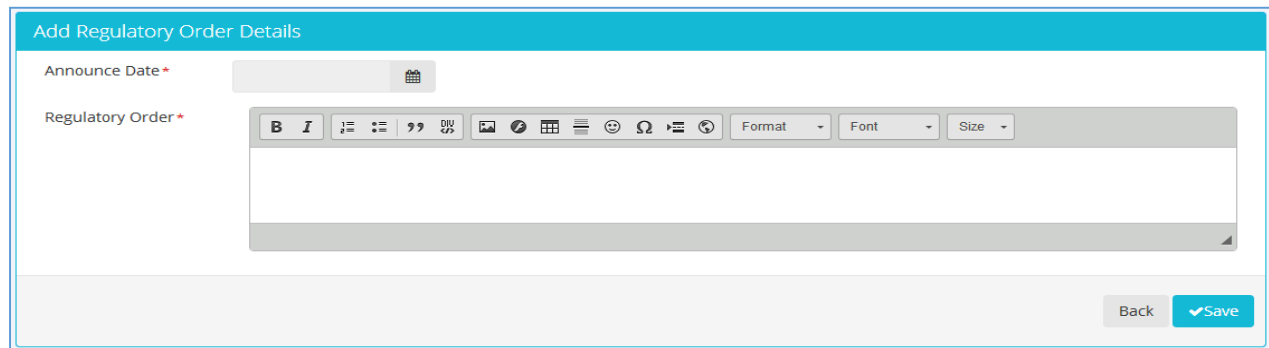
Date	Regulatory Orders	Action
01/01/2020	<p>Uttarakhand Government considers science, technology and innovation to be excellent vehicles for developing the national knowledge economy and towards that end has invested heavily in them. As part of this policy UREDA has been encouraged to take a leading role in the development of the renewable energy sector in line with the guidance of Ministry of New and Renewable Energy and the conducive platform for the promotion of energy conservation.</p> <p>Uttarakhand state came into existence as a new state on Nov. 9, 2000 by bifurcation of Uttar Pradesh. It is a leading state of the country in non - conventional energy resources applications. In Uttarakhand, operation and execution of various schemes based on non - conventional energy resources is handled by Uttarakhand Renewable Energy Development Agency (UREDA) through local Panchayat, volunteer organizations and district administration. Since 2008 UREDA is also spearheading the activities of Energy Conservation as a state nodal agency of BEE.</p> <p>The implementation of renewable energy programmes in the state of Uttarakhand, conferences and workshop conducted towards awareness and technological modifications, Provision of promotional measures for the renewable energy development and other activities carried out, all have been successful in meeting their objective.</p>	 

Figure 50: List of Regulatory Orders

UREDA can add a new notice or modify the existing information from the list. To add 'Regulatory Orders', click on 'Add' icon or click on 'Edit' icon to make the necessary changes. After selecting 'Add' or 'Edit' icon, the following page will open as shown in Figure 51.



The screenshot shows a form titled 'Add Regulatory Order Details'. It has two main input fields: 'Announce Date' with a calendar icon, and 'Regulatory Order' with a rich text editor toolbar (including Bold, Italic, Bulleted List, Numbered List, Indent, Outdent, Link, Unlink, Image, Table, Undo, Redo, Font Color, Background Color, Format, Font, and Size). At the bottom right, there are 'Back' and 'Save' buttons.

Figure 51: Add Regulatory Order

- Select the date icon to add Notice/Order issuing date in the box 'Announce Date' .
- Add the Notice/Order for the OEs in the 'Regulatory Order' textbox .
- Click on 'Save' to save the order in the list for a new and existing entry.
- Click on 'Back' button to return to the list of 'Regulatory Order' page .

7. State Obligated Entity

This feature allows UREDA to create a directory of the OEs. This directory is further utilized at the time of registration by OEs. The features include the following sub-menu as shown in Figure 52.

- Manage Obligated Entity

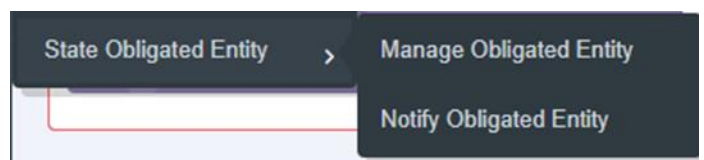


Figure 52: State Obligated Entity

ii. Notify Obligated Entity

These options provide functionality where UREDA can add an OE in the directory and if the OE has not registered UREDA could send bulk emails.

i. Manage Obligated Entity

Upon selecting 'Manage Obligated Entity', a new page will open as shown in Figure 53. This page shows a list of OEs already added in the directory by UREDA.

Company Name	Obligated Entity Type	Consumer No	Sub-Station	Feeder	Mailid	Action
abc123	DISCOM	0			abc123@gmail.com	
Ajit pandit infrastructure ltd.	Open Access Consumer	0			mayank.sharma@idaminfra.com	
Amarjeet Singh	DISCOM	12	sub	fed	amarjeet.singh@idaminfra.com	
ccghgv	DISCOM	0			adam123@gmail.com	
Devina Anand	Open Access Consumer	12	sdasd	asdasd	devina.anand@idaminfra.com	

Figure 53: List of OEs in the directory

To add a new OE, UREDA shall click on the 'Add' button on the top right corner as shown in Figure 53 and a new page will open as shown in Figure 54.

Fields marked with asterisk (*) are mandatory to fill in

Obligatory Name* Obligatory Mail-Id*

Obligated Entity Type* -- Select -- Consumer No*

Substation Name* Feeder Name*

Back

Figure 54: Add OE in the Directory

As shown in Figure 54, the State Agency will update the necessary details of the OE and then click on 'Save' to add the OE in the directory. The authority to modify the list of directories will remain with UREDA only. In case the SLDC needs to add or modify any OE, SLDC shall place a request to UREDA to do so.

ii. Notify Obligated Entity

This option will provide ease in shooting bulk reminder mails to all the OEs who have not registered. UREDA shall select this option from the menu and a new page will open. This page has two parts, the first part shows the list of OEs who has not registered yet as shown in Figure 55. The second part provides space to write the information in the email body as shown in Figure 56.

Section II – Guidelines for Verifiers

4 VERIFIERS

The three main verifiers of this application are UREDA, PTCUL and UPCL.

1. UREDA as a verifier will be permitted to verify the documents of the following OEs:
 - Open Access Verifier
 - CPP Verifier
2. PTCUL as a verifier will be permitted to verify the documents of the following OEs:
 - Open Access Verifier
 - UPCL
3. UPCL as verifier will verify the details of CPP.

4.1 VERIFICATION

The feature 'Verification' comprises the following sub-menu as shown in Figure 57.

1. Energy Generators
2. Contracts
3. Consumptions

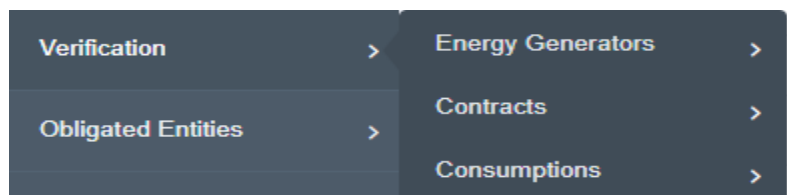


Figure 57: Menu Bar — Verification

The verification work can be performed automatically or manually. The verifier defined and configured for OEs is explained earlier 3.2.2 under the feature 'Verifying Agency Setup'.

4.1.1 ENERGY GENERATORS

The Energy Generator consists of two types - OA and CPP. UREDA can view the pending request of Energy Generator in the list.

UREDA can manually verify the request from OA or CPP source for Energy Generator on behalf of the particular verifier. The Energy Generator page is shown in Figure 58.

UREDA can approve or return the Energy Generator's request, enable the checkbox and submit the request for approval or return the Energy Generator confirmation.

Figure 58: Energy Generator for Verification to UREDA

4.1.2 CONTRACTS

The verification of the contract is a process for all types of OEs. UREDA can view the pending contract request in the Contract List and can verify or approve the contract manually, whether the contract request is from DISCOM, OA or CPP on behalf of the verifier. The 'Contract Verification' page is displayed in Figure 59.

Figure 59: Energy Generator Contracts for Verification to UREDA

The Contract Verification page displays the total contract information. UREDA can approve or return the contract request to enable the checkbox and submit the request for approval or return the Contract.

4.1.3 CONSUMPTIONS

The verification process of energy consumption comprises of three types of sources, i.e., DISCOM, OA and CPP. UREDA can view the pending consumption information from the Consumption Verification list and verify or approve the consumption request manually on behalf

of the particular verifier, whether the request is from DISCOM, OA source or CPP. The Consumption Verification page shall appear as displayed in Figure 60.

Consumption Verification - Captive Power

Financial Year* 2017-2018

Show 5 entries Search:

Obligated Entity ▲	Energy Source Generator ⚙	Energy Source ⚙	Contract No ⚙	Consumer No ⚙	Meter No ⚙	Quarter Name ⚙	Month Name ⚙	Consumpt
No data available in table								

No entries found

Reset Submit

Figure 60: Energy Consumption for Verification to UREDA

The Consumption Verification page displays the total consumption information. UREDA can approve or return the energy consumption request by enabling the checkbox and submit the request for approval/return the consumption confirmation.

Section III — Guidelines for OEs

5 OES

The three main OEs are DISCOMs, OA and CPP consumers. The system can add more OEs if required. These entities will have an option to login, manage profile, add quarterly/monthly/annual consumption data from conventional and RE sources including the purchase of RECs, generate quarterly/monthly/annual reports, upload the supporting documents, etc. in the application.

The OEs can submit their compliance report on quarterly/monthly/annual basis to UREDA. Subsequently, the system will send an automated email to UREDA to verify quarterly/monthly/annual reports submitted. The RPO tool has five major parts:

Part I: Registration and RPOCS Login

Part II: Add Details of Energy Generator Contracts

Part III: Add/Update Details of Contract with Energy Generator

Part IV: Add/Update Details of Energy Consumption

Part V: Generate Compliance Report

A step-by-step approach for an OE is shown in the following sections.

Part I: Registration and RPO Login

1. To register, OE shall visit the website of UREDA (<https://rpouerda.uk.gov.in/>) and click on the RPO Web tool link available on the homepage in menu options of UREDA's website. A login page will be displayed as shown in Figure 61.

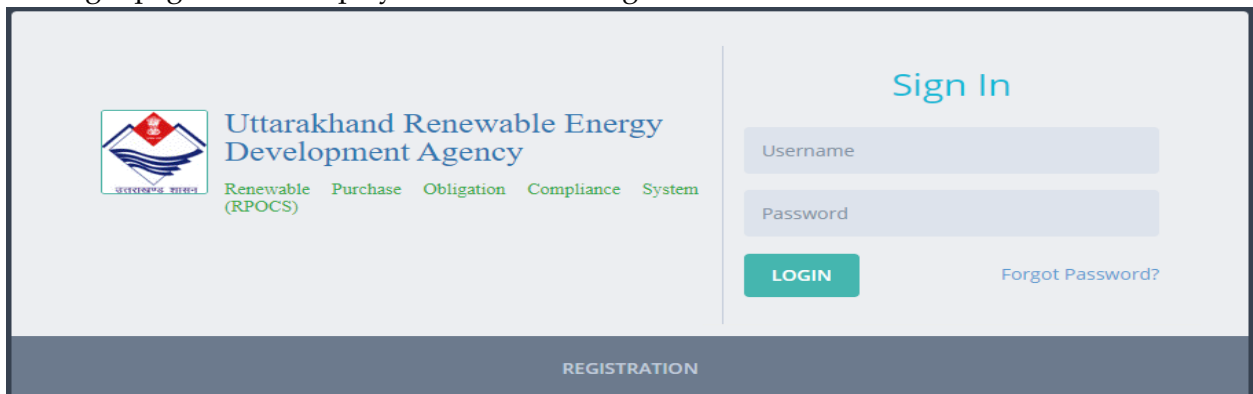
The image shows a web page for the Uttarakhand Renewable Energy Development Agency (UREDA). On the left, there is a logo with a red diamond and blue lines, and the text "Uttarakhand Renewable Energy Development Agency" in blue. Below the logo, it says "Renewable Purchase Obligation Compliance System (RPOCS)" in green. On the right, there is a "Sign In" section with a light blue header. It contains two input fields: "Username" and "Password". Below these fields is a green "LOGIN" button and a link for "Forgot Password?". At the bottom of the page, there is a dark blue bar with the word "REGISTRATION" in white capital letters.

Figure 61: Login Page

2. Click on the 'Registration' tab to open the registration page as shown in Figure 62.

Figure 62: Registration Page

3. OE shall enter the details in the required fields to complete the registration process as shown in Table 3.

Table 3: Registration of New OEs

Key Field	Activity
Register as*	<p>Users can register as OE by selecting the option from the dropdown list as shown in the screenshot below .</p>
Company Name*	<p>The OEs will select the name of the company from the list provided at the time of registration as shown under. Only OEs whose name is in the directory can register themselves in the Web tool.</p>

Key Field	Activity
District*	'District' name, where the company belongs to should be added.
Contracted Load (MW) *	Mention the 'Contracted Load (MW)' for OEs. The contracted load field should be in decimal.
Admin. First Name*	Type the first name of the obligated user.
Admin. Last Name	Type the last name of the obligated user.
Email Id*	Provide a valid email ID of the user in the specified field. This email ID will be used for auto email purposes.
Phone Number*	The user shall mention the contact number (Landline/Mobile) within this field for further contact.
Admin. Username*	Mention the username to login to the application.
Password*	Create a unique password to protect the user's registered account from trespassers (use alphanumeric for better security).
Confirm Password*	Re-enter the password.
Company Logo*	The OEs should select <input type="button" value="Choose File"/> option and attach the image file from the external device. The file can be uploaded in .jpg/png/.jpeg format.

Note: Fields marked with an asterisk () is mandatory.*

Click on 'Submit' to register the new OE user. Else, click on 'Clear' to reset the Registration Form.

5.1 OE DASHBOARD

Subsequently, the OE will receive a notification alert on the registered email ID regarding successful registration. To login, the OE should enter Username and Password and then click on 'Login' as shown in Figure 63.



Figure 63: Login page for OE

Once logged in, the OE can view the RPO Web tool 'Dashboard' as shown in Figure 64. The Dashboard provides deeper accessibility to the OE regarding the following:

1. Menu Bar
2. RPO Compliance Summary Bar
3. Regulatory Orders
4. Summary Report of Current FY
5. Notification Alert

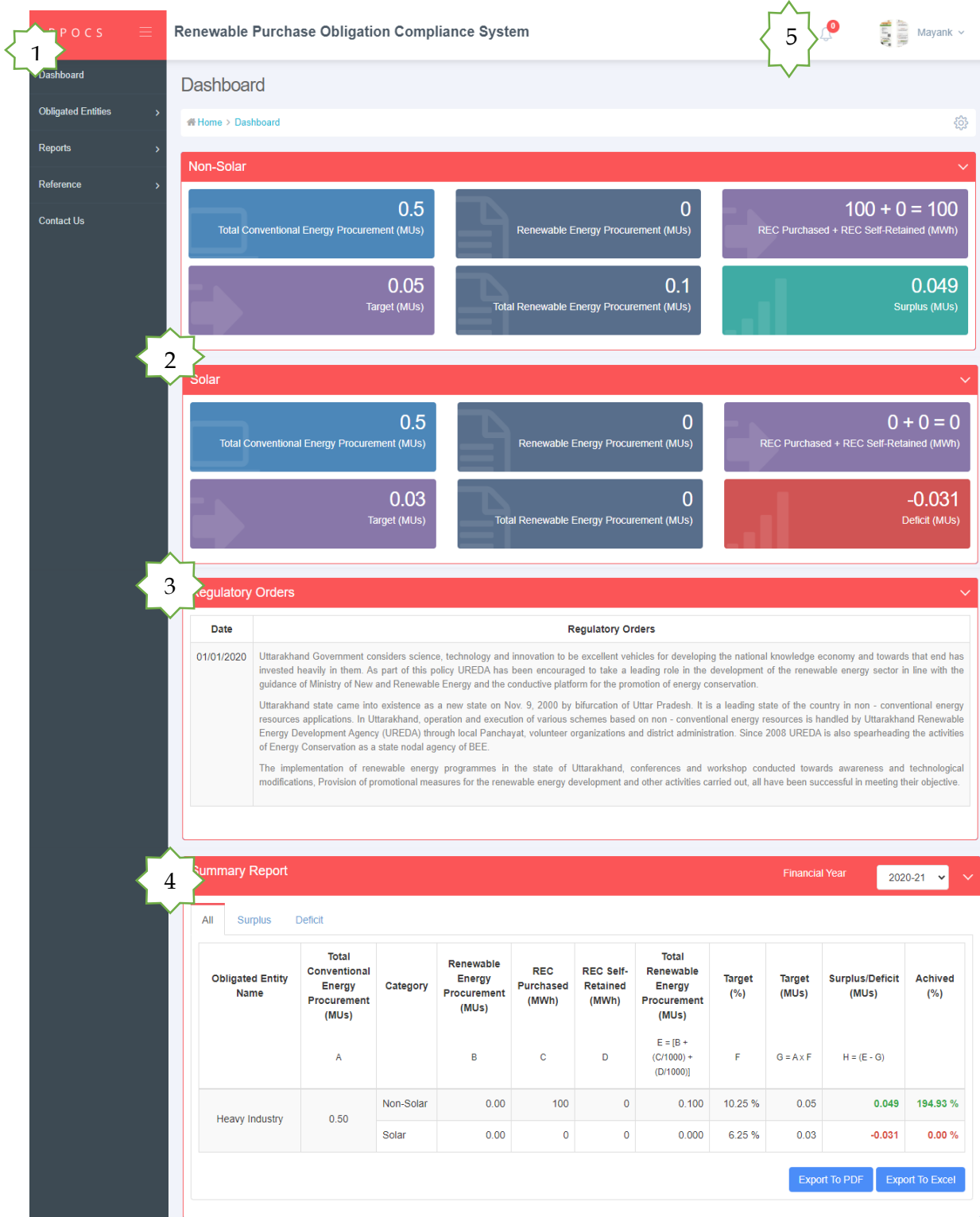


Figure 64: Dashboard for OE

5.2 OBLIGATED ENTITIES

The first option on the menu bar is 'Dashboard' . This option can be used to migrate to the Dashboard from any section of the RPO Web tool. The second option is 'Obligated Entities' as shown in Figure 65.

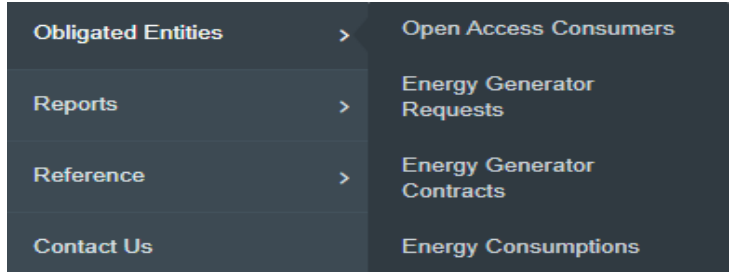


Figure 65: Menu Bar for OE

5.2.1 OA CONSUMERS

The RPO Web tool is designed to provide flexibility to the OE such that multiple users can update the data for energy consumption . In case the OE is registered with a Senior Level Personnel, i.e., MD/CEO etc . and cannot update the energy consumption data, the personnel can appoint junior level personnel, i.e., Junior . Engineer . to update the energy consumption data. The OE can define the roles and responsibilities of the sub-user within the tool.

To create a sub-user, the OE shall select 'Open Access Consumer' (based on the type of entity selected during registration). A new webpage will open as shown in Figure 66. The OE can edit the general details by selecting the 'Edit' icon under the 'Action' column .

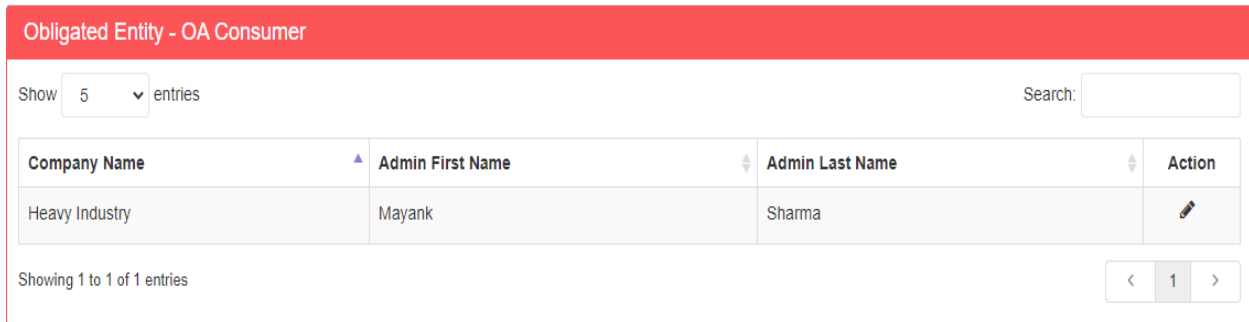


Figure 66: OE Setup Page

Selecting the edit option will open a new window on the Web tool as shown in Figure 67.

1 Obligated Entity - OA Consumer

Fields marked with asterisk (*) are mandatory to fill in

Obligated Entity*	Heavy Industry	Contracted Load (MW)*	10.0
Admin First Name*	Mayank	Admin Last Name*	Sharma
Email Id*	mayank.sharma@jdaminfra.com	Phone No*	875045232
Admin User Name*	Heavy	Admin Password*
District*	Dehradun	Company Logo*	Choose File No file chosen

2 Role for OA Consumers

Role Name	Description	Action
-----------	-------------	--------

3 User for OA Consumers

User First Name	Login User Name	Role Name	Action
-----------------	-----------------	-----------	--------

Back Save

Figure 67: OE Configuration Page – Part I

As shown in the above Figure 67, the OE can edit the following details from Section 1 :

1. Name of the OE
2. Contracted Load
3. Admin. First Name and Last Name
4. Email Id and Phone No.
5. District and Company Logo

The OE can never change the Username used in the login credentials .

Section 2 defines the sub-user roles. Here, the OE should enter the requested details and a new user will be created. The OE shall enter the details in the below fields:

- Role Name : Choose a name for the sub-user as per his convenience .
- Description : Describe the role of the sub-user .
- Landing File : Select the Web page the sub-user can view once logged in.

The OE can decide the authority of the sub-user and limit it to View/Add/Edit/Delete or can provide full access to the sub-user by checking the relevant checkbox as shown in Figure 68 .

Role for OA Consumers

Fields marked with asterisk (*) are mandatory to fill in

Role Name* Role Description*

Landing File*

Show 10 entries Search:

File	View	Add	Edit	Delete
Compliance Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compliance Summary Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption Document Upload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contract Document Upload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dashboard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy Generator Contract	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy Generator Request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy Type Wise Consumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Showing 1 to 10 of 21 entries

Back Save

Figure 68: Sub user Role Configuring Page – Part II

As shown in Section 3 of Figure 69, the OE can create or edit a new sub-user. Clicking on the ‘Add’ button will enable the OE to create a new user under the predefined roles and responsibilities.

User for OA Consumers

Fields marked with asterisk (*) are mandatory to fill in

User First Name* User Last Name*

User Name* User Password*

Email Id* Phone No*

Role*

Back Save

Figure 69: Sub user Login Creation Page – Part III

The OE shall enter the necessary details in the required fields and then click on ‘Save’ to create a profile along with login credentials as shown in Figure 70.

An OE can procure electricity from different generators and different sources .It can opt for any access route, i.e. OA, CPP and OA and CPP both, from multiple energy sources. i.e. convention and renewable. OE shall follow the below three step process to update energy consumption in RPO Web tool:

- Energy Generator Requests
- Energy Generator Contracts
- Energy Consumption

5.2.2 ENERGY GENERATOR REQUESTS

The OE shall enter the list of Energy Generators from which it is procuring energy, irrespective of the source of the energy procured, i.e., CE or RE. The OE can request verifiers to add the Energy Generator as per the following steps:

- Click on 'Obligated Entities' then select 'Energy Generator Requests' as shown in Figure 65.
- The webpage in Figure 70 shows a list of previously requested Energy Generators by the OE.

Details of Energy Generator Providing Energy								
Company Name* Heavy Industry								
Energy Source	Name of Generator	Address	City	District	Pin Code	Energy Access Route	Approved	Action
Solar	Solar Energy	1	Dehradun	Dehradun	123456	Open Access Plants		

Figure 70: Energy Generator List

Energy Generator Request			
Fields marked with asterisk (*) are mandatory to fill in			
Company Name* Heavy Industry			
Generator Company Name*	<input type="text"/>	Energy Source*	-- Select --
Address 1*	<input type="text"/>	Address 2	<input type="text"/>
State*	-- Select --	City*	<input type="text"/>
District*	<input type="text"/>	Pin Code*	<input type="text"/>
Website	<input type="text"/>		
Energy Access Route*	-- Select --	Captive Type*	-- Select --
			Back <input type="button" value="Save"/>

Figure 71: Energy Generator Detail Page

- Click on 'Add' icon to add a new Energy Generator and Energy Generator Request page will be displayed as shown in Figure 70. The OE shall provide the details as requested on the webpage.
- Once the details have been entered, click on 'Save'. Later, request for approval of Energy Generator should be sent to the verifiers. The verifiers will approve the Energy Generator,

and after verification. The Energy generator will be added to the database of the RPO web tool.

5.2.3 ENERGY GENERATOR CONTRACTS

The OE shall click on ‘Obligated Entities’ and select ‘Energy Generator Contracts’. A new webpage will open as shown in Figure 72. This webpage is the database of all the Energy Generators approved by the verifiers.

Details of Contract with Energy Generator

Company Name* Heavy Industry

DISCOM Contracts

Show 5 entries Search:

Select	Name of Generator	State	Generator Verified	Contract Verified	Contracts
<input type="checkbox"/>	UPCL	Uttarakhand	✓	ⓘ	

Showing 1 to 1 of 1 entries

Open Access Contracts

Show 5 entries Search:

Select	Name of Generator	Energy Source	State	Generator Verified	Contract Verified	Contracts
<input checked="" type="checkbox"/>	BRPL	IEX	Assam	✓	Total Contract: 1 (0 Extensions, 0 Pending, 0 Rejected)	ⓘ
<input checked="" type="checkbox"/>	Solar Rays	Solar	Uttarakhand	✓	ⓘ	ⓘ
<input checked="" type="checkbox"/>	Sunday Power	Coal	Uttarakhand	✓	ⓘ	ⓘ
<input type="checkbox"/>	Anantapur Solar	Solar	Andhra Pradesh	✓	ⓘ	
<input type="checkbox"/>	bgc	Solar	Andhra Pradesh	✓	ⓘ	

Showing 1 to 5 of 76 entries

Captive Power Plants

Show 5 entries Search:

Select	Name of Generator	Energy Source	State	Generator Verified	Contract Verified	Contracts
<input type="checkbox"/>	AOD DR	Solar	Assam	✓	ⓘ	
<input type="checkbox"/>	AOD DR	Gas	Assam	✓	ⓘ	
<input type="checkbox"/>	BCPL	Co-Generation	Assam	✓	ⓘ	
<input type="checkbox"/>	BRPL	Thermal	Assam	✓	ⓘ	
<input type="checkbox"/>	BRPL	Solar	Assam	✓	ⓘ	

Showing 1 to 5 of 39 entries

Reset Save

Figure 72: Energy Generator Addition List Page

If an OE’s Energy Generator is listed in the database, the OE can select the Energy Generator without raising a request for approval. In this step, the OE submits the details of the Energy Generator from which it is procuring electricity. Under these sources, the user will have an option to add various types of power sources under each category and complete details of the generator. An OE can select the Energy Generator from the database

An OE shall enter their energy consumption data for a month. Partial/Incomplete entries will not be accepted by the system. An OE will have an option to add different sources of RE consumption/consumption from conventional sources for different time period in particular FY. Accordingly, an obligation will be applicable on the entity.

The OE shall choose relevant Energy Generators by selecting the checkbox and click on 'Save' to save the list as shown in Figure 72. Once the Energy Generators are saved, a document-shaped icon will appear in the 'Contracts' column. By clicking on the icon, the OE can upload the contract details between the OE and Energy Generator, and a new page will open as shown in Figure 73.

Contract Reference No	Consumer No	Meter No	Voltage Level (kV)	Sub Station	Feeder	Installed Capacity (MW)	Contracted Load (MW)	Action
123255	1251435134	Mtr1234	11			0.0	2.0	

Figure 73: Add Energy Generator Contracts

This page shows the list of Energy Generator Contracts updated by the OE. To add a new Energy Generator Contract, click on 'Add' icon as shown in Figure 73. This will direct the OE to Figure 74.

Fields marked with asterisk (*) are mandatory to fill in

Contract Reference No* Consumer No*

Meter No* Voltage Level (kV)

Sub Station Feeder

Installed Capacity (MW) Contract Demand (MW)*

Contract Periods

Show 5 entries Search:

Start Date	End Date	Approved	Action
No data available in table			

No entries found

Figure 74: Energy Generator Contract Details Page

Provide the required data in the specified field and mention the new contract period by clicking on 'New' or edit the contract period by clicking on 'Edit'. 'New' or 'Edit' option enables the OE to edit the date and contract field as shown in Figure 74. Select the time period of the contract and click on 'Save' as shown in Figure 75.

Figure 75: Contract Period Addition

Later, click on the folder icon to upload the documents . A new webpage will open as shown in Figure 76. Here, the OE shall select the document type, mention the document name and select the document to be uploaded. Click on 'Upload' to save the document on the server .

Figure 76: Document Uploading Webpage

Energy Generator Contracts will be forwarded to the verifiers for verification . The verifiers will verify and approve the contract . Accordingly, the OE will receive a new option to update Energy Consumption .

5.2.4 ENERGY CONSUMPTION

In this section, the OE shall update the monthly energy consumption of different Energy Generators . Here, the OE shall enter the details of energy procured from all sources, i . e . , CE, RE, energy procured from DISCOMs, captive power generated, REC procured and REC self-retained . To proceed with the energy consumption, select 'Obligated Entities' and then click on 'Energy Consumption' tab leading to Figure 77 .

Figure 77: Energy Consumption List

Here, the OE shall select the Financial Year, then click on ‘Add’ icon to add a new month. The energy consumption is updated on a monthly basis, and the energy consumption details against an Energy Generator can be updated for the time period as mentioned in the previous stage of Energy Generator Contracts. The energy consumption is majorly divided into three sections as shown in Figure 78.

1. Consumptions: To update energy consumed in a particular month procured from different Energy Generators, enter the energy consumption details against the Energy Generator for that particular month.
2. RECs Purchased : Mention the RECs purchased in a particular month and enter the number of RECs purchased if any .
3. RECs Retained: OE shall enter the number of RECs: OE shall enter the number of RECs retained in a particular month.

Figure 78: Energy Consumption Addition Webpage

Once the data is updated, click on 'Save' and the data will be saved by the system. Subsequently, the Energy Generator is required to upload relevant documentary proof of procurement of electricity/REC.


Source Generator	Energy Source	Contract No	Consumer No	Meter No	Start Date	End Date	Consumption (MUs)	Approved	OE Approved	Document(s)
generator solar	Solar	1	1	1	07/05/2017	16/08/2017	10	✓	☑	
	Solar	123	Test123	123	16/05/2017	21/06/2017	0	ⓘ	☐	

Figure 79: How to Upload Reference Document

A folder icon will appear under 'Document (s)' column as shown in Figure 79. Click on the icon and the OE will be directed to a document uploading window as shown in Figure 80.

Upload New Document

Document Type* Document Name*

Select Document* No file chosen

Upload Document [jpg/jpeg/png/pdf]

Notes

- The maximum file size for uploads in this demo is **5 MB**.
- Only **pdf, image** files (JPG, JPEG, PNG) are allowed in this system.

Figure 80: Reference Document for Consumption Upload Page

Here, the OE shall upload relevant documentary proof separately for each Energy Generator. As shown in Figure 80, the OE shall select the type of document, mention the document name and select the file to be uploaded. Once the file is selected, click on 'Upload' to upload the document to the server.

Similarly, the OE can upload the documents for RECs Purchased and RECs Retained. The Energy Consumption data will be saved and forwarded to the verifiers for verification. Once the verification is done, the OE can generate the compliance report.

5.3 REPORTS

The RPO Web tool provides four types of report formats for the OE as shown in Figure 81 :

1. Obligated Entities
2. Energy Generator Request
3. Energy Generator Contract
4. Energy Type Wise Consumption
5. Compliance Report
6. RPO Achieved Summary

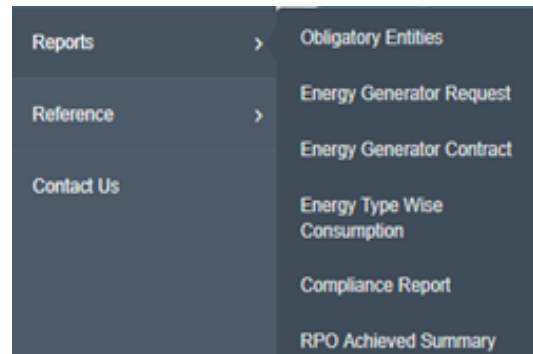


Figure 81: Menu Bar — Reports

5.3.1 OBLIGATORY ENTITIES

This report assists UREDA to generate a category wise list of OEs along with company and contact details. When 'Obligated Entities' option is selected a new page will open as shown in Figure 82. Here, UREDA will select the type of OE and click on 'Generate Report'.

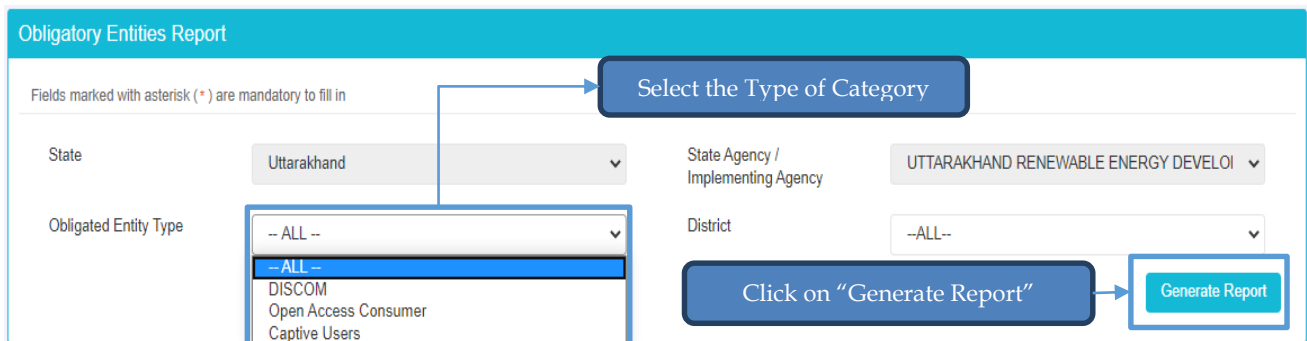
A screenshot of a web form titled 'Obligatory Entities Report'. The form has a light blue header. Below the header, there is a note: 'Fields marked with asterisk (*) are mandatory to fill in'. The form contains several dropdown menus: 'State' (set to 'Uttarakhand'), 'State Agency / Implementing Agency' (set to 'UTTARAKHAND RENEWABLE ENERGY DEVELOI'), and 'District' (set to '--ALL--'). The 'Obligated Entity Type' dropdown is open, showing options: '-- ALL --', 'DISCOM', 'Open Access Consumer', and 'Captive Users'. A blue callout box with an arrow points to the 'Obligated Entity Type' dropdown, containing the text 'Select the Type of Category'. Another blue callout box with an arrow points to a 'Generate Report' button, containing the text 'Click on "Generate Report"'. The button itself is a teal rectangle with white text.

Figure 82: Generate OE Category Wise Report

The generated report is shown in Figure 83. The report is downloadable in PDF and Excel formats. Only UREDA has the right to access the report.

Obligatory Entity								
Show <input type="text" value="5"/> entries						Search: <input type="text"/>		
Obligatory Entity Type	Company Name	First Name	Last Name	User	District	Contracted Load (MW)	Email Id	Phone No
Captive Users	CPP Urja Pvt. Ltd.	cppurja	Admin	cppurja	Dehradun	100	gaurav.balani@idaminfra.com	7838868089
New DISCOM	Tata Power	Tata	Power	tata	Almora	10	tata.power@enfragy.com	1234567890
New DISCOM	Torrent	Gaurav	Gaurav	gaurav	Dehradun	500	gauravsabharwal06@gmail.com	7481111111
New Open Access & Captive Both	Doon Urja Pvt. Ltd.	Admin	Name	doonurja	Dehradun	20	gaurav.balani@idaminfra.com	7838868089
Open Access Consumer	General Motors	Raghu	Sharma	Raghu	Dehradun	2	pop21@gmail.com	8375045232

Showing 1 to 5 of 10 entries

Figure 83: Category Wise OE Report

5.3.2 ENERGY GENERATOR REQUEST

The OE can generate a list of Energy Generators requested and contracted . To generate a report, select 'Energy Generator Request' as shown in Figure 81, a new page will open as shown in Figure 84. By clicking on 'Generate Report', the OE can view the list of Energy Generators . Click on 'Export to PDF' or 'Export to Excel' to download the report in PDF or Excel format respectively .

Company Name* <input type="text" value="Joni OAC Company Gujarat"/>							
<input type="button" value="Generate Report"/>							
Show <input type="text" value="5"/> entries						Search: <input type="text"/>	
Energy Source	Energy Source Generator	Address	City	District	Pin Code	Is Approved	
Biomass	comp1	adfv, sasa	sad	cxzc	1312	Approved	
Hydro	acgk	a1	c1	d1	1	Not Approved	
MSW	Reliance Power	add 1, add 2	city	dist	123456	Approved	
Solar	Captive generator solar	rty, ug	Pune	Pune	853193	Approved	
Solar	Reliance	Gujrat	Ahmedabad	Ahmedabad	380001	Approved	

Showing 1 to 5 of 6 entries

Figure 84:Energy Generator Request Report

5.3.3 ENERGY GENERATOR CONTRACT

Here, the OE can generate a report on contract with the Energy Generators . To generate a report, click on 'Energy Generator Contract' as shown in Figure 81 and then a new webpage will open as shown in Figure 85. Click on 'Generate Report' and the OE can view the report generated as shown in Figure 86 .

Figure 85: Energy Generator Contracts Generation Page

Figure 86: Energy Generator Contract Report

5.3.4 ENERGY TYPE WISE CONSUMPTION

This feature helps the Energy Generator to generate energy source wise specific reports . To generate reports, click on ‘Energy Type Wise Consumption’ as shown in Figure 81, then select ‘Energy Source’ as shown in Figure 87 and a report will be generated as shown in Figure 88 .

Energy Type Wise Consumption

Company Name* Financial Year*

Energy Source

[Generate Report](#)

Show entries Search:

Company Name	Financial Year	Quarter	Month	Energygy Source Vendor	Energygy Source	Contracted Load (MW)	Start Date	End Date	Total Consumption	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 4	January	Biomassgen	Biomass	30.0	01/04/2016	31/03/2017	2.2	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 4	February	Biomassgen	Biomass	30.0	01/04/2016	31/03/2017	2.0	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 4	March	Biomassgen	Biomass	30.0	01/04/2016	31/03/2017	2.0	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 1	April	Biomassgen	Biomass	30.0	01/04/2016	31/03/2017	5.5	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 1	May	Biomassgen	Biomass	30.0	01/04/2016	31/03/2017	2.2	Approved

Showing 1 to 5 of 33 entries

[Export to PDF](#) [Export to Excel](#)

Figure 87: Energy Type Wise Consumption Report

Energy Type Wise Consumption

Company Name* Financial Year*

Energy Source

[Generate Report](#)

Show entries Search:

Company Name	Financial Year	Quarter	Month	Energygy Source Vendor	Energygy Source	Contracted Load (MW)	Start Date	End Date	Total Consumption	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 1	April	OAGEN	Solar	30.0	01/04/2016	31/03/2017	1.5	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 2	July	OAGEN	Solar	30.0	01/04/2016	31/03/2017	5.6	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 1	June	OAGEN	Solar	30.0	01/04/2016	31/03/2017	3.3	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 1	May	OAGEN	Solar	30.0	01/04/2016	31/03/2017	0.2	Approved
CPP Urja Pvt. Ltd.	2016-17	Quarter 2	August	OAGEN	Solar	30.0	01/04/2016	31/03/2017	1.5	Approved

Showing 1 to 5 of 9 entries

[Export to PDF](#) [Export to Excel](#)

Figure 88: Energy Type Wise Consumption Generation Page

5.3.5 COMPLIANCE REPORT

The RPO Compliance Report is a major report generated by the RPO Web tool. This report shows the RPO category wise detailed report for the defined FY. A screenshot of 'Compliance Report' is shown in Figure 89.

To view the 'Compliance Report', UREDA shall select the 'Company Name', define the

Compliance Report

Fields marked with asterisk (*) are mandatory to fill in

Company Name* -- Select --

Financial Year* -- Select --

RPO Category -- All --

Quarter -- All --

Month -- All --

Generate Report

Figure 89: Compliance Report Generation Page

'Financial Year' and identify the 'RPO Category' along with 'Quarter' and 'Month' from the dropdown list. Click on 'Generate Report' and a list with detailed information of OEs will appear as shown in Figure 90. Click on 'Export PDF' to download the report in PDF.

Compliance Report

Fields marked with asterisk (*) are mandatory to fill in

Company Name* Financial Year*

RPO Category

Quarter Month

[Generate Report](#)

Compliance Report

Obligated Entity	CPP Urja Pvt. Ltd.	RPO Category	All RPO Category
User Type	Captive Users	Period	Yearly
Financial Year	2016-17	Contracted Load (MW)	90

Quarter	Month	Total Conventional Energy Procurement (MUs)	Category	Renewable Energy Procurement (MUs)	REC Purchased (MWh)	REC Self-Retained (MWh)	Total Renewable Energy Procurement (MUs)	Target (%)	Target (MUs)	Surplus/Deficit (MUs)
		A		B	C	D	E = [B + (C/1000) + (D/1000)]	F	G = A x F	H = (E - G)
Quarter 1	April	4.000	Non-Solar	5.500	0	0	5.500	9.00 %	0.360	5.140
			Solar	1.500	0	0	1.500	0.30 %	0.012	1.488
	May	3.900	Non-Solar	2.200	0	0	2.200	9.00 %	0.351	1.849
			Solar	0.200	0	0	0.200	0.30 %	0.012	0.188
	June	4.000	Non-Solar	1.000	4902	0	5.902	9.00 %	0.360	5.542
			Solar	3.300	728	0	4.028	0.30 %	0.012	4.016
Quarter 2	July	3.300	Non-Solar	0.500	0	0	0.500	9.00 %	0.297	0.203
			Solar	5.600	0	0	5.600	0.30 %	0.010	5.590
	August	3.000	Non-Solar	1.500	4	0	1.504	9.00 %	0.270	1.234
			Solar	1.500	3	0	1.503	0.30 %	0.009	1.494
	September	3.000	Non-Solar	3.600	0	0	3.600	9.00 %	0.270	3.330
			Solar	0.500	0	0	0.500	0.30 %	0.009	0.491
Quarter 3	October	3.000	Non-Solar	5.500	0	0	5.500	9.00 %	0.270	5.230
			Solar	0.000	0	0	0.000	0.30 %	0.009	-0.009
	November	3.000	Non-Solar	5.400	0	0	5.400	9.00 %	0.270	5.130
			Solar	0.000	0	0	0.000	0.30 %	0.009	-0.009
	December	3.000	Non-Solar	4.000	0	0	4.000	9.00 %	0.270	3.730
			Solar	1.000	0	0	1.000	0.30 %	0.009	0.991
Quarter 4	January	6.000	Non-Solar	2.200	0	0	2.200	9.00 %	0.540	1.660
			Solar	0.200	0	0	0.200	0.30 %	0.018	0.182
	February	6.000	Non-Solar	2.000	0	0	2.000	9.00 %	0.540	1.460
			Solar	0.000	0	0	0.000	0.30 %	0.018	-0.018
	March	6.000	Non-Solar	2.000	0	0	2.000	9.00 %	0.540	1.460
			Solar	0.500	0	0	0.500	0.30 %	0.018	0.482
Yearly		48.200	Non-Solar	35.400	4906	0	40.306	9.00 %	4.338	35.968
			Solar	14.300	731	0	15.031	0.30 %	0.145	14.886

RPO Category	Previous Year Carry Forward (MUs)	Current Year Balance (MUs)
Non-Solar	0.000	35.968
Solar	0.000	14.886

[Export To Excel](#) [Export To PDF](#)

Figure 90: RPO Compliance Report

5.3.6 RPO COMPLIANCE ACHIEVED

This option generates a report showing the percentage of RPO compliance achieved by OEs. When this option is selected, a new page will open as shown in Figure 91.

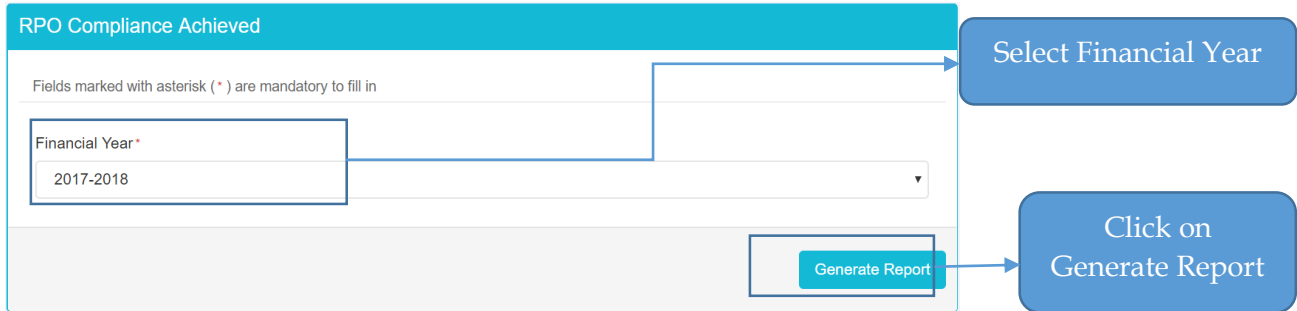


Figure 91: Select Financial Year To Generate Report For RPO Compliance Achieved

UREDA shall select the required financial year for which it needs to generate the report. A new webpage will open with the relevant report as shown in Figure 92.

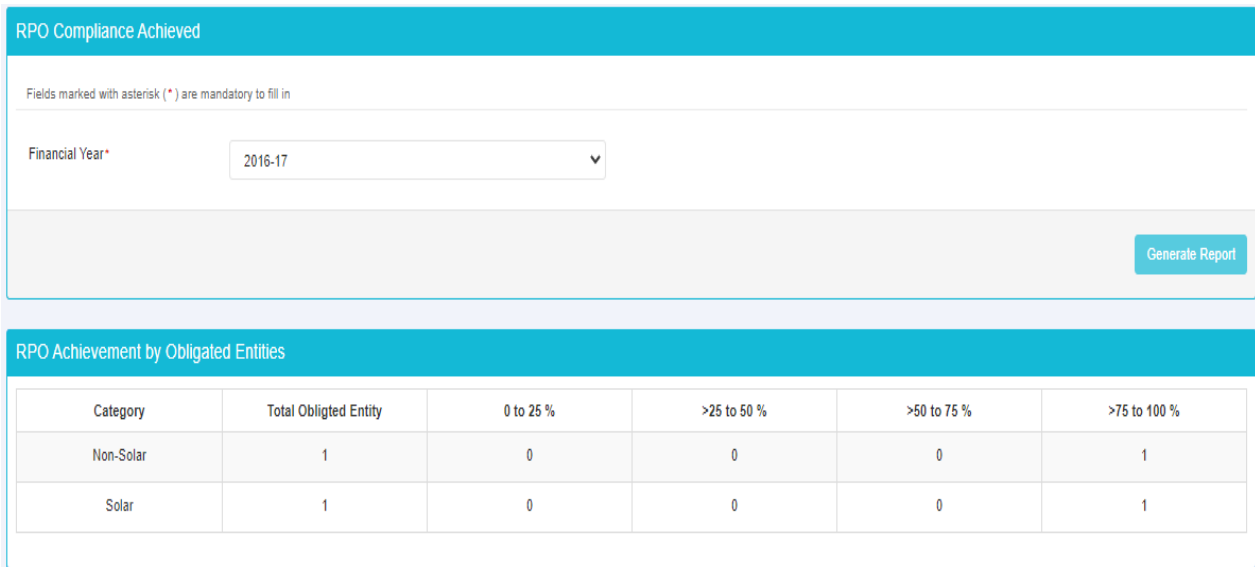


Figure 92: RPO Achievement By Obligated Entities Report

5.4 REFERENCE

The menu 'Reference' comprises of the following sub-menu as shown in Figure 93:

1. Documents
2. Links

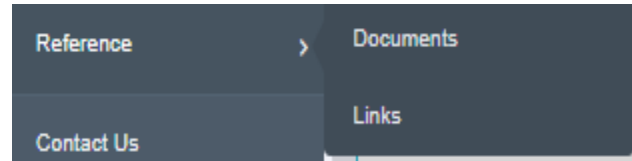


Figure 93: : Menu Bar — References

Only UREDA has the authority to upload information.

5.4.1 DOCUMENTS

This page displays the list of external documents, which has been uploaded by UREDA. Initially, the 'Reference' page displayed the list of REC Regulation or Order. To add a new document, UREDA shall click on 'Add' from the 'Reference Document' page, and 'Upload New Document' page will be opened as shown in Figure 94.

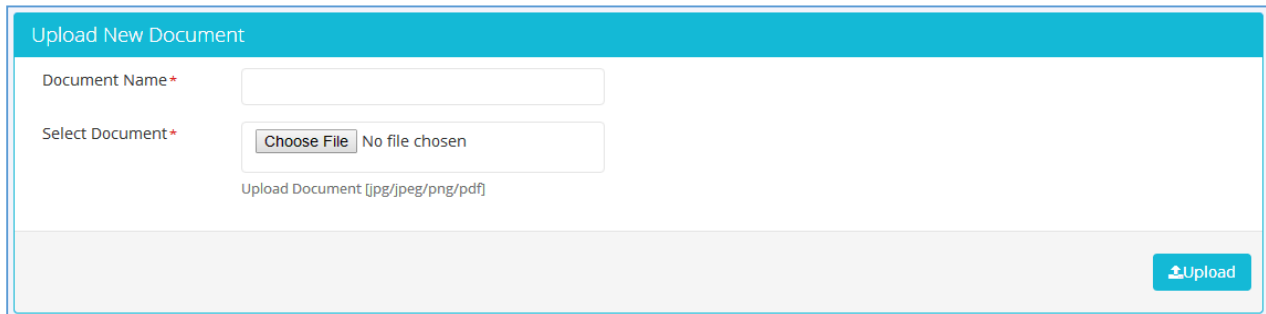
A form titled 'Upload New Document' with a light blue header. It contains two input fields: 'Document Name*' and 'Select Document*'. The 'Select Document*' field has a 'Choose File' button and the text 'No file chosen'. Below the fields is the text 'Upload Document [jpg/jpeg/png/pdf]'. At the bottom right is a blue 'Upload' button with an upward arrow icon.

Figure 94: Document Upload by UREDA

UREDA must enter the document name in the 'Document Name' field and click on 'Choose File' to select the appropriate document from the system and click on 'Upload' to upload the document. The uploaded document will be displayed in the list of 'Reference Documents' page.

Change Password

The OE can change/edit password any time by selecting the 'Change Password' option in the top right corner of the dashboard as shown in Figure 95. A new window will pop up as shown in Figure 96 wherein, the OE shall enter the old password and new password (also, re-enter the new password in 'Confirm Password') and then click on 'Change Password'.

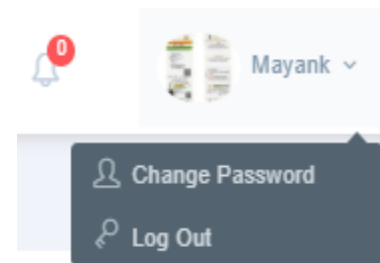
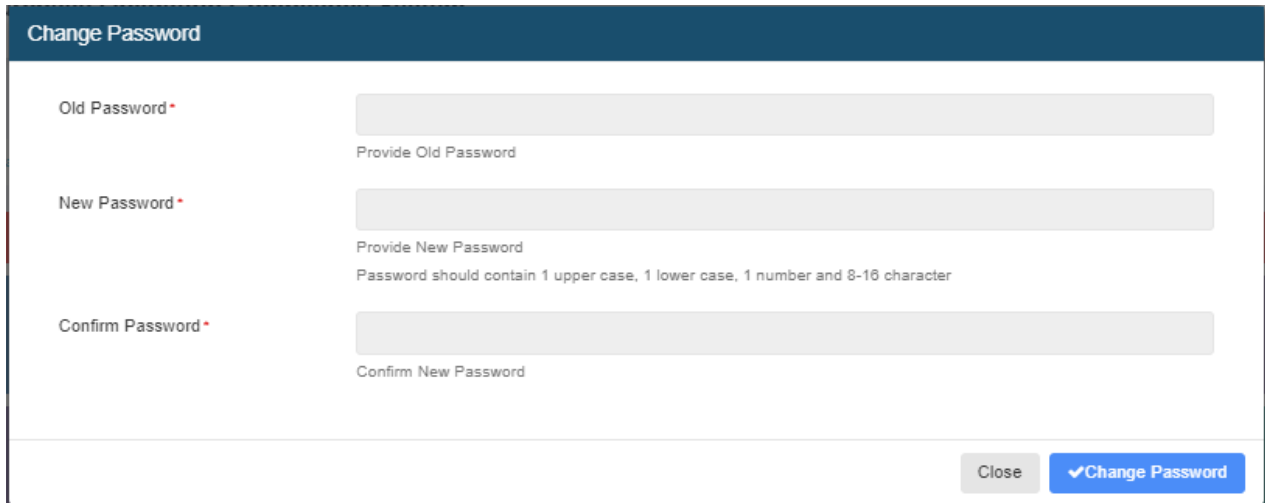


Figure 95: Change Password



The image shows a 'Change Password' form with three input fields: 'Old Password', 'New Password', and 'Confirm Password'. Each field has a placeholder text below it: 'Provide Old Password', 'Provide New Password', and 'Confirm New Password'. A note below the 'New Password' field states: 'Password should contain 1 upper case, 1 lower case, 1 number and 8-16 character'. At the bottom right, there are two buttons: a grey 'Close' button and a blue 'Change Password' button with a checkmark icon.

Figure 96: Change Password Webpage

5.4.2 LINKS

This page displays the list of uniform resource locators (URLs) for referral website. The 'Links' page displays the website name along with their 'http://' links.

The Implementing Agency can add a new website link in the list or edit the existing information from the list as shown in Figure 97.



The image shows a 'Reference Links' table with a search bar and a dropdown menu. The table has three columns: 'Name of the Website', 'Website Url', and 'Action'. There are three rows of data. At the bottom, there is a pagination control showing 'Showing 1 to 3 of 3 entries' and a page number '1' with navigation arrows.

Name of the Website	Website Url	Action
Forum of Regulators	http://www.forumofregulators.gov.in/	 
Uttarakhand Electricity Regulatory Commission	http://www.uerc.gov.in/index.html	 
Uttarakhand Renewable Energy Development Agency	http://ureda.uk.gov.in/	 

Figure 97: Link List Webpage

Click on 'Add' icon to add a new website or click on 'Edit' icon to modify the existing one from the 'Reference Links' page. The page shown in Figure 98 will appear to add or edit the website link.

Figure 98: How to Add Link

UREDA is required to provide the name of the website in the 'Name of the Website' field and add the URL information in the field 'Website URL'. Click on 'Save' to save the website link information in the system.

5.5 CONTACT US

Contact Us is the communication information page of UREDA. Only UREDA has the authority to modify the details in the Contact Us page as other users or companies can only view the contact details of UREDA. The screenshot of 'Contact Details' page is shown in Figure 99.

Figure 99: Contact Details Webpage

UREDA shall click on 'Edit' icon on the top right side of the 'Contact Details' page to edit the details as shown in Figure 100.

Enter the information in the text box in 'Add Contact Details' page and click on 'Save' to save the information in the 'Contact Details' page. All different types of energy consumers and OEs can view the contact details from the 'Contact Us' page.

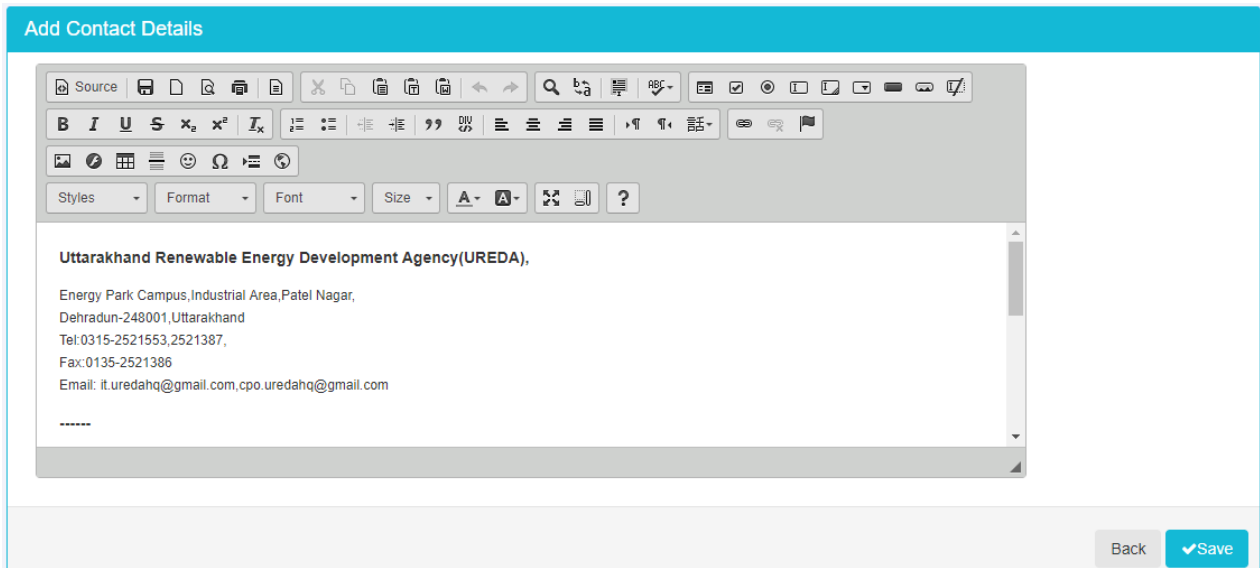


Figure 100: Contact Edit Page

6 OTHER INFORMATION

6.1 MINIMUM TROUBLESHOOTING GUIDELINES

In case a user is not able to access the web tool, or encounter an issue while making a submission at any stage; the User shall perform the following steps to troubleshoot:

1. Please ensure that the device is connected with a Hotspot/ Wi-Fi/ or Ethernet, and the Internet connectivity in enables. It is preferred that the system should be connected with a Wi-Fi.
2. In case of any operational issues in the application, kindly log out and log in again and check Internet connectivity .
3. From the server end, application should run in Internet Information Server (IIS) , email services should always start in MOOD and Windows Task Scheduler should be running .

In case of any issue (s) , please contact SNA Helpdesk for further assistance .

6.2 DO' S AND DON' TS OF THE WEB TOOL

Below are the 'Do' s' and 'Don'ts' of web-based RPO compliance Web tool .

Do' s :

1. The username is a one-time input which cannot be modified at any stage, and it is case sensitive. Therefore, it is advised to select a username which is unique and easily remembered by the user. The User will not be able to login to the web tool, in case the Username and password are forgotten. The password can be modified through the login only.
2. Use Browser (Internet Explorer [IE], Firefox, Google Chrome, Opera, and Safari) for the web tool.
3. Ensure uninterrupted Internet connectivity, to experience smooth operation of the web tool.
4. Upload relevant supporting documents against each entry in "Energy Consumption" and "RECs Purchased" . The RECs shall be entered in numbers only; it is not required by the user to convert the RECs in energy.
5. Enter relevant energy consumption data in Million Units only .

Don' ts :

1. Do not share your username and password with any other entity .
2. Ensure all the data parameters are updated, before submitting a form at each stage.
3. Please avoid duplication of consumption data in the application.
4. File size of the supporting documents should not be more than 5 MB/file . It is advised to update smaller size documents as it will take lesser time to upload and download.
5. Avoid using application on mobile devices for printing report . The login credentials may be saved in devices which could be accessed by others and the information in the web tool could be altered.

6.3 WEB HOSTING REQUIREMENTS

Following are the prerequisites to host RPO compliance Web tool application on the user's PC/Laptop:

1. Operating system should be at least Windows Server 2008 .
2. IIS should be of version 6.1 or higher .
3. System should be developed on ASP.NET Framework 4.5 .
4. Database should be PostgreSQL Version 9.5 .
5. System should have external Internet Protocol .
6. Provision to increase space without formatting the server .
7. Application: Model-View-Controller (MVC) 4, Microsoft .NET Framework 4.5, Web Application Programming Interface (API) , Windows Service.
8. Compatibility: PCs, Laptops, and Mobile Browser.
9. Annual Expiry/Subscription: None.