

Using the Pilot Market

**An introduction to operation of the
Wholesale Electricity Market in the
Philippines**

Presented in Cooperation with



The WESM

- The Architecture.
- What you need to access it.
- The Front Screen
- Logging into the system
- Trading Participant (TP) Market Functions
- Help Desk

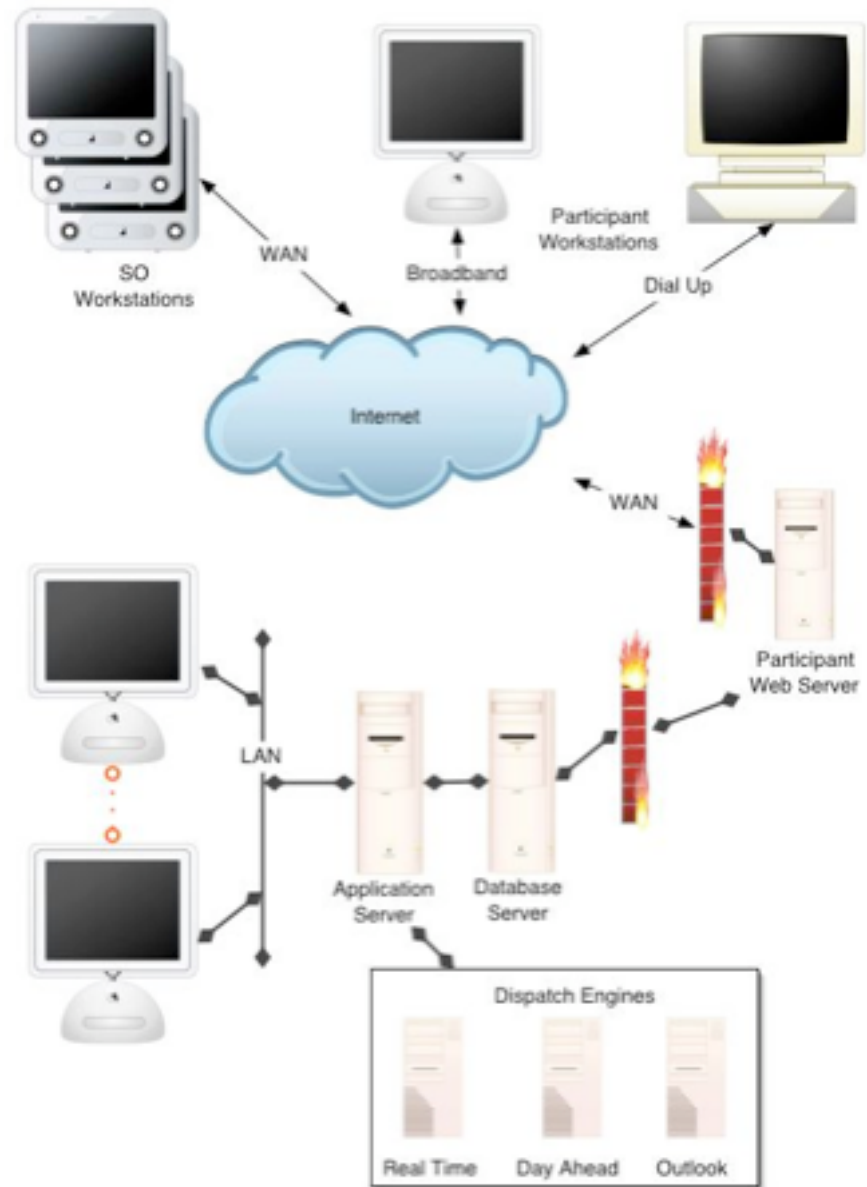
The Architecture 1

This is an overview of the Market systems.

The Architecture is fully multi tier housing Database Server, Application Servers and Dispatch Engines

The Architecture is designed from the ground up to be fully web enabled.

It provides a secure and robust interface for participants, the Market Operator and the System operator respectively.



The Architecture 2

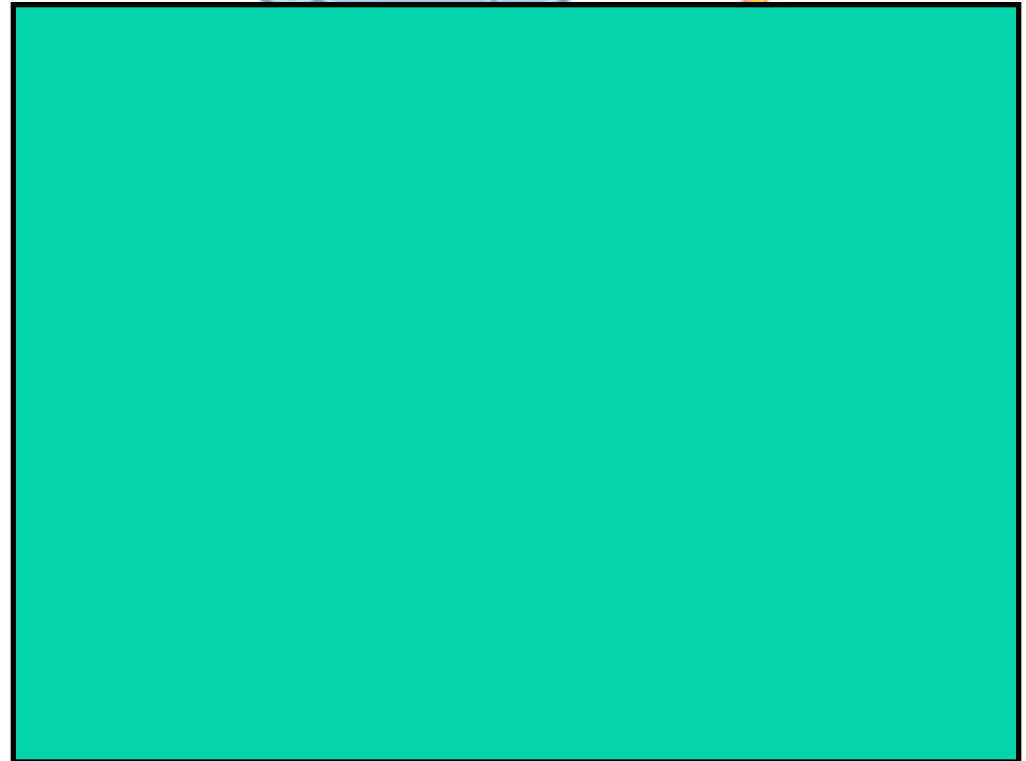
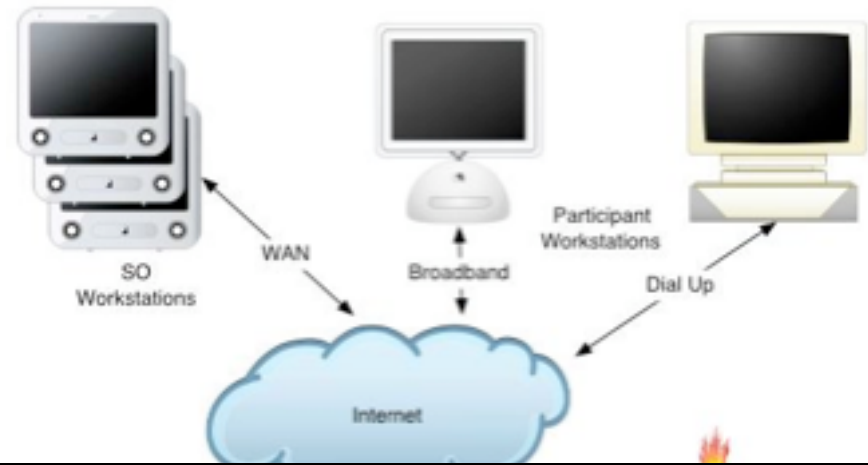
Here are the systems that reside at the Market Operator.

Market Operator Workstations interact with the MO Systems Application Server.

This in turn communicates with both the Database Server and the Dispatch Engines. It is the application knowledge base and scheduler for market operations.

The Participant Web server communicates with Participants and houses a Web Server, Database Server and Application Server.

The Participant interfaces with the Participant database only. The MO Application server moves data to and from the Participant Database and the MO Databases making sure all things are validated before being accepted.



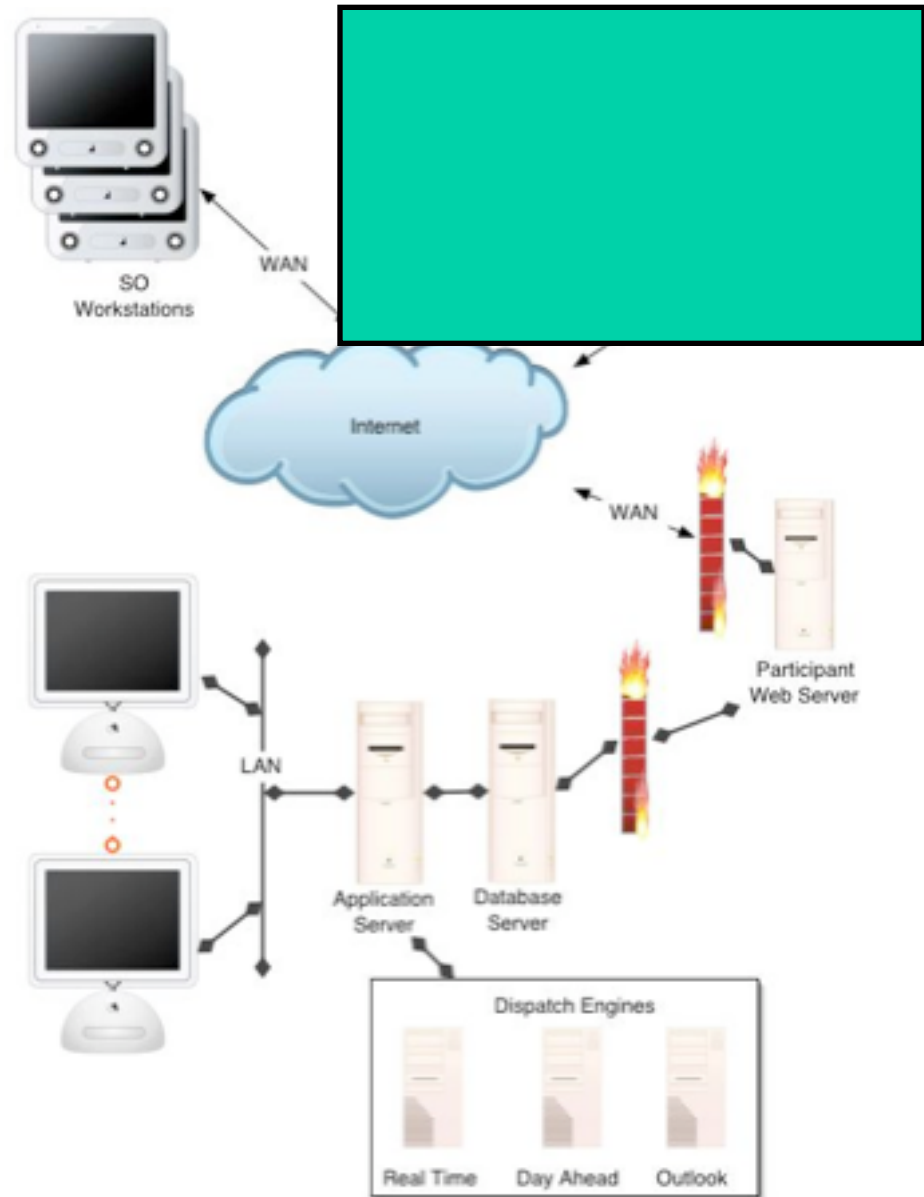
The Architecture 3

Here are the systems that reside with the Participants.

These systems can be any computer system capable of running a Web browser that is compatible with the market systems.

We recommend Microsoft Internet Explorer 6 or later.

The Participant systems can connect via the internet using Broadband or simple Modem connections. Obviously the better the connection the better will be the reliability and response times.



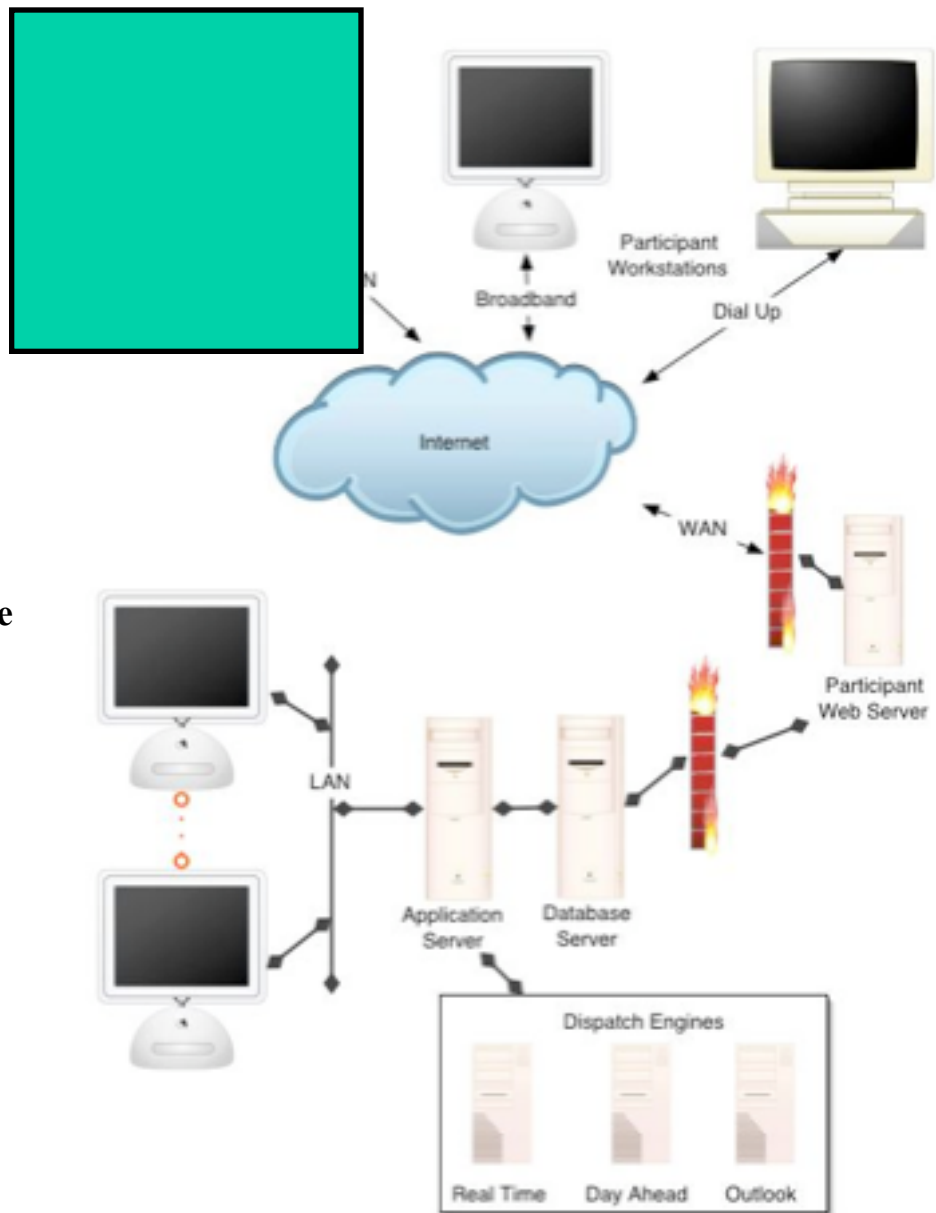
The Architecture 4

Here are the systems that reside at the System operator.

Once again these can be any computer system that operates a Web Browser that is compatible with the market.

These systems provide an interface for exchange of network data and metering data from the System Operator to the MO systems.

They also provide the SO with up to date dispatch information and demand forecasts from the MO systems.



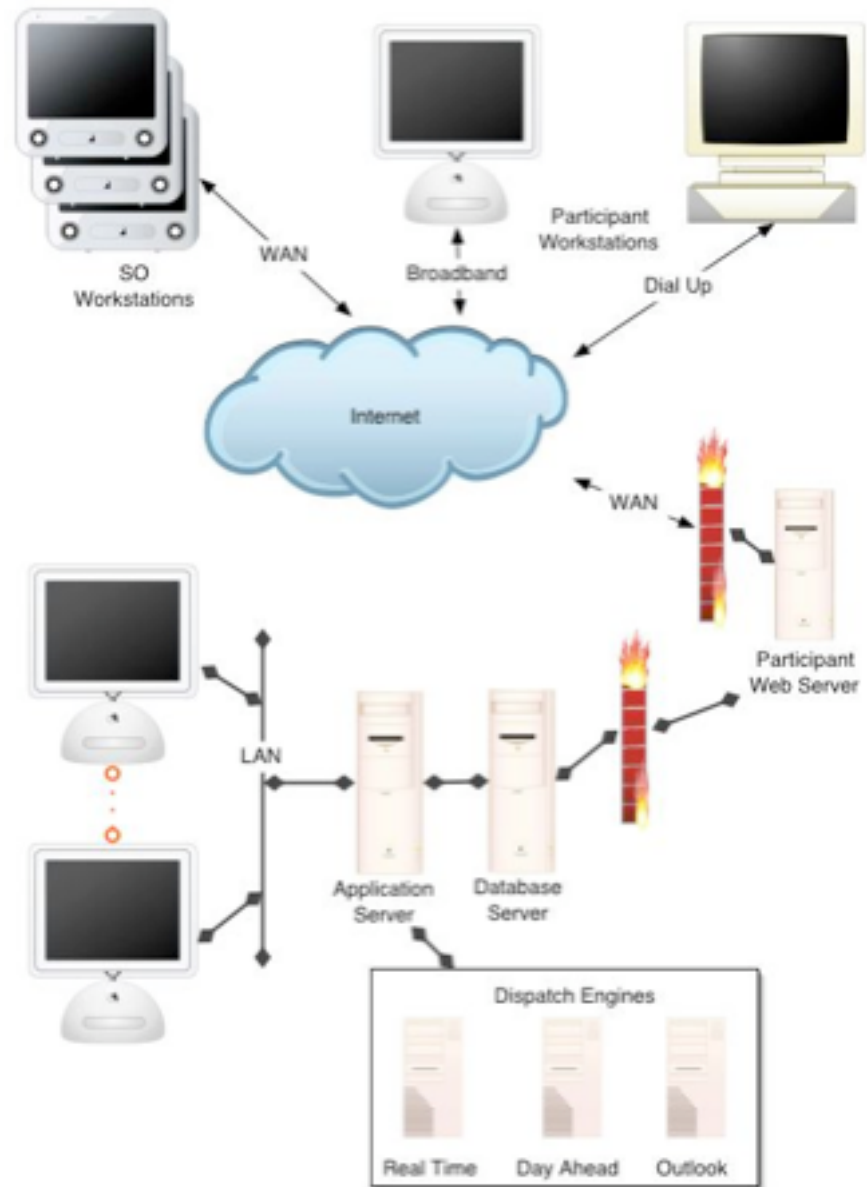
The Architecture 5

The overall systems are designed for scalability.

The Participant Systems can be configured with multiple application servers and separated database and web servers thereby providing almost limitless expandability.

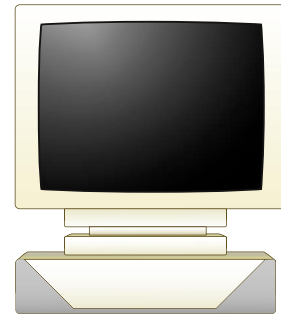
The MO systems similarly can house any number of Dispatch Engines and application servers.

The database servers can be clustered and make use of multi-processor technology to similarly provide the expandability to be expected in a market of this size.



What you need to access it.

- A PC Running Microsoft Internet Explorer



- Access to the Internet.
- A User Name and Password.
 - you can get this from the Market Operations Group.

The Front Screen 1



Philippine Demo Electricity Market

Serving The Developing Energy Markets

user: abb_user | Logout

Sunday May 25, 2003

SUBJECT

[Home](#)

[Log In](#)

[Market Overview](#)

[TP Operations](#)

[Market Training Course](#)

[Library](#)

[Contact](#)

Welcome to the Philippines Pilot Electricity Market

Overview

The Philippines Electricity industry remains predominantly in State hands. This means that all investment and development funds have to come from a combination of cash raised by the industry itself and taxes collected by the government. Additional to this competition in the marketplace for new players and or innovative developments is missing. This is broadly the state that most electricity businesses the world over were in until some 15 or so years ago. At that time it was generally considered that Electricity production, distribution, and supply was a matter of national interest and security and not something that could be left open to market forces. Electricity markets started to emerge in the late 1980s starting with the UK power pool closely followed by the Nord Pool between Norway and Sweden. They were seen to promote competition, facilitate privatisation and help reduce the price of energy to the end consumer. The Government of the Philippines plans to have a full electricity market operational by 2004. They have chosen a market model which is based on a Security Constrained Nodal Priced Gross Pool, with support for Bilateral contracts between participants, and a zonal charging regime. This model has a lot of detail that needs to be resolved before the rules most appropriate to the Philippines environment can be finalised. The Pilot market has been established as an efficient mechanism to fast track the market rules, pricing, operational and commercial issues so that the final market can be procured and installed in time.

The objectives of an electricity marketplace are to provide an infrastructure where normal commerce and competition in the exchange of electricity between producers, consumers, and traders can flourish in the same way as for many other commodities such as Oil and Grain.

The Front Screen 2

The Main Menu is shown on the right.

Home will take you back to here from wherever you happen to be.

Log in presents you with the login screen. You need to log in before you can use the system. Some information is available, however, without logging in such as the market documentation etc.

When you log in the system will recognize your user type and the company to which you belong. Based on this you will be presented with a set of options and information which you are allowed to see. This will limit the confidential data to that which is related to your company and will limit the functions available to you depending on your user class.

The Market Overview menu option will provide you with an outline of the market at a high level so you can understand roughly what it is trying to do.

The TP operations option will only become available to you once you are logged into the system successfully. Until then you will not see this menu option on your screen.

The Market Training Course will help you understand the market.

The Library option will take you to sets of useful documents. These are available to view online or down load to your computer system on demand.

Contact option will email the MO.



Logging In 1

- To Log in select the login option from the menu on the front page.
- Enter your username and password in the boxes provided.
- Click The Log In Button.
 - If successful you will see the message “Logged in OK, Click Here to Continue”
 - This will take you to the main menu where the TP Operations menu option will now be available.

Logging In 2



- When you are logged in successfully you will see your login name and the logout option at the top right hand side of the screen.
- If you do not access the system for some time you will be automatically logged out and will need to start again.
- You can Log out by clicking on the logout header shown above or by going back to the login option on the main menu

Trading Participant Functions

The screenshot displays the website for the Philippine Demo Electricity Market. At the top left is the logo of the Department of Energy (DOE). The main header reads "Philippine Demo Electricity Market" with the tagline "Serving The Development". Below the header, the date "Sunday May 25, 2003" is shown. On the left side, there is a "SUBJECT" menu with the following items: Home (highlighted in yellow), Registration, Offers and Dispatch, Settlements, and Meter. The main content area features a diagram illustrating the market structure. It shows "Transmission" (represented by two power lines) at the top, with a blue arrow pointing up from a yellow box labeled "TUOS Payments". To the right, there is a yellow box labeled "Electricity" with a blue arrow pointing up from a yellow box labeled "Offers / Pool". The "onLine SYSTEMS LIMITED" logo is visible in the top right of the diagram area.

- When you select Trading Participant Functions you will be presented with the screen shown on the left.

Trading Participant Options 1 Registration.

- Selecting the Registration Option will take you to the information about your company, its power stations, and the generating units it owns.
- You can view this information on-line and down load it to your own systems.
- You can also upload new registration information which will be processed by the MO.

Registration 2

- The Screen shown below shows your on-line registration information.
- To download it click on the rows you want to have from the buttons on the Right hand Side of the list.
- To update it upload a valid registration file.
- These are shown in turn on the following pages.



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Sunday May 25, 2003

- SUBJECT
- Home
- TP Operations
- Upload Registration
- View Participant
- View Stations
- View Station Meters
- View Gensets
- View Genset Meters
- View Consumer Meters

Selected Menu Option

Search Box
Enter search
Criteria to
find your files.
Note The % sign is
a wild card just like
* in windows.

Registration Documents

Search Filters	Values
id	<input data-bbox="1373 482 1779 525" type="text" value="%"/>
File Name	<input data-bbox="1373 539 1779 582" type="text" value="%"/>
Date Received From	<input data-bbox="1373 596 1779 639" type="text" value="2001-01-01"/> 
Date Received To	<input data-bbox="1373 654 1779 696" type="text" value="2003-05-25"/> 

Registration Files
Already Uploaded
Click to Download

id	Version	File Name	Date Received	Status
1	1	abb_req.xml	2003-05-22 15:25:05	authorised

Browse to select a
registration file to
upload, or type the
file name in the text
box

File to upload



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user: abb_

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Selected Menu Option

Participant

Company

Company ID	Version	Effective Date	Name	Address Line 1	Address Line 2	Address Line 3	Company
abb	1	2003-05-01 00:00:00	ABB				ABB

Participant Details

Contact

Country	Postcode	Tel 1	Tel 2	Fax	Sort Code	Account Number	email	Status	Status Change Date	Download
Philippines									0000-00-00 00:00:00	<input type="checkbox"/>

Selection Box to Download

Click here to start the download process

Download



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user: abb_user | Logout

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Selected Menu Option

Stations

Search Criteria

Search Filters	Values
Station ID	%

Search

Station ID	Version	Effective Date	Station Name	Address 1	Address 2	Address 3	Postal Code	Zone ID	Download
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>
Limay	1	2003-06-01 00:00:00	Limay					LUZON	<input type="checkbox"/>

Download

Selection Box to Download

Click here to start the download process



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user: abb_user

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Selected Menu Option



Station Meters

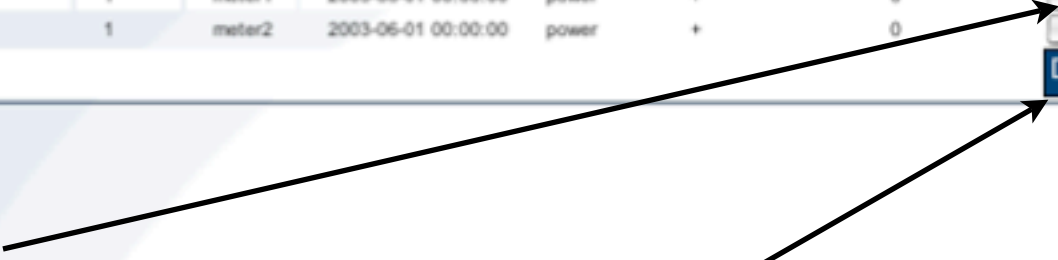
Search Filters	Values
Station ID	%
Meter ID	%

Search Criteria



Station ID	Version	Meter ID	Effective Date	Meter Type	Summation Rule	Loss Factor	Download
	1	meter1	2003-06-01 00:00:00	power	+	0	<input type="checkbox"/>
	1	meter2	2003-06-01 00:00:00	power	+	0	<input type="checkbox"/>

Selection Box to Download



Click here to start the download process





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Selected Menu Option

Gensets

Search Filters	Values
Station ID	%
Genset ID	%
Search	

Search Criteria

Genset ID	Version	Station ID	Effective Date	Node	Type Gen or Load	Minimum Load	Maximum L
Limay Combined Cycle Power Plant A-1	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant A-2	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant A-3	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant A-4	1	Limay	2003-06-01 00:00:00	7	g	30	100
Limay Combined Cycle Power Plant B-1	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant B-2	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant B-3	1	Limay	2003-06-01 00:00:00	7	g	30	70
Limay Combined Cycle Power Plant B-4	1	Limay	2003-06-01 00:00:00	7	g	30	100

Selection Box to Download

Effective Date	Node	Type Gen or Load	Minimum Load	Maximum Load	Minimum Runup Rate	Maximum Runup Rate	GLF	Download
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	100	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	70	300	300	0	<input type="checkbox"/>
21 00:00:00	7	g	30	100	300	300	0	<input type="checkbox"/>

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Selected Menu Option

Genset Meters

Search Filters	Values
Genset ID	%
Meter ID	%
Search	

Search Criteria

Genset ID	Version	Meter ID	Effective Date	Meter Type	Summation Rule	Loss Factor	Do
Limay Combined Cycle Power Plant A-1	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-1	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-2	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-2	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-3	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-3	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-4	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant A-4	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-1	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-1	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-2	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-2	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-3	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-3	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-4	1	meter1	2003-06-01 00:00:00	unit export	+	0	<input type="checkbox"/>
Limay Combined Cycle Power Plant B-4	1	meter2	2003-06-01 00:00:00	unit aux load	+	0	<input type="checkbox"/>

Selection Box to Download

Click here to start the download process





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Selected Menu Option

Consumer Meters

Search Filters	Values
Meter ID	<input data-bbox="1400 611 1798 649" type="text" value="%"/>
<input data-bbox="1433 658 1564 711" type="button" value="Search"/>	

Search Criteria

NOTE: All other information as per Genset Meters

Offers and Dispatch

- These functions allow you to
 - Upload a Standing Offer
 - Upload an Offer Variation
 - View Offers Uploaded
 - View Current Dispatch
 - View Dispatch Forecasts
 - View nodal and Zonal Prices
 - View Nodal Demand Forecast

Settlements

- These options allow you to
 - View Settlement Totals
 - View System Prices
 - View Settlement Reports

Metering

- These options allow you to view your meter readings as used by the MO systems in settling your accounts.
- In addition to viewing you can download these in CSV format for use in your own validation systems.

Summary

- The System will guide you through the process.
- The Menu options are clear and self explanatory.
- All functions are implemented in a consistent way.
- Next steps are to get started.