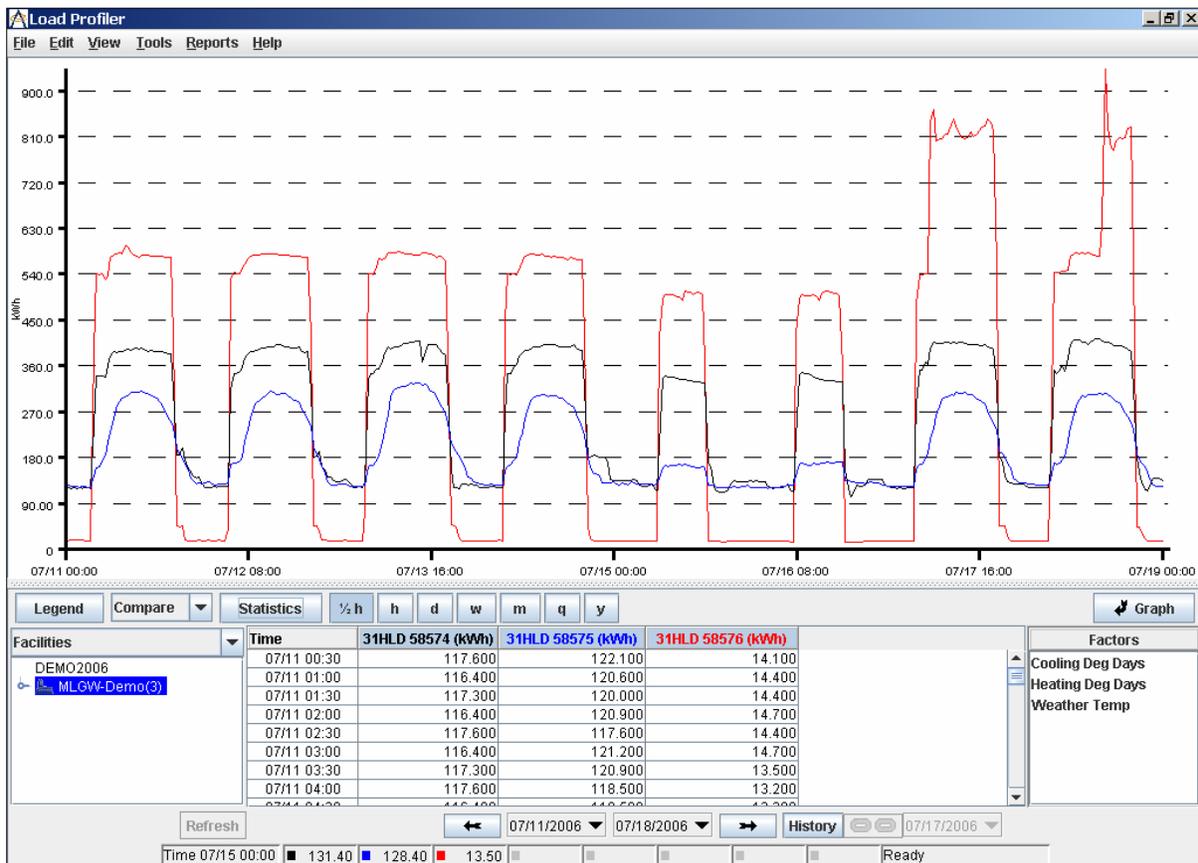


# Meter Intelligence: Turning Your Meter Data Into Energy Management Information

## Quick Guide for Users



June 2007



# Meter Intelligence

## Introduction

Meter Intelligence is a web-based interval meter data analysis service that enables energy managers to examine and track their electric and/or natural gas load profiles. Meter Intelligence is updated each business morning, using data obtained during MLGW's nightly meter reading process via telephone lines.

With Meter Intelligence, you can view, chart, download and analyze load profiles for enrolled meters, turning your meter data into energy management information. Alert Notification capabilities enable you to select parameters for each meter. Each morning, the previous day's activities are compared to the parameters and an email is sent if exceptions occurred, eliminating the need to monitor Meter Intelligence data on a daily basis without hampering access to timely information.

## Who Do I Call for...?

Your designated MLGW Account Manager serves as your primary contact for all MLGW interactions. He or she can assist you in interpreting the meter data, training users, determining meter eligibility and handling billing questions. Please continue to use your MLGW Account Manager as your primary contact, so he or she is aware of all questions and concerns regarding your organization's utility accounts.

If your MLGW Account Manager is not available, you may contact Becky Williamson ( [bwilliamson@mlgw.org](mailto:bwilliamson@mlgw.org) ), who serves as Project Administrator for Meter Intelligence. She can provide assistance with the Meter Intelligence application, add new users, assist with Alert Notification set-up and handle questions about Meter Intelligence billing. She also archives the Meter Intelligence Service Agreements.

## Getting Started

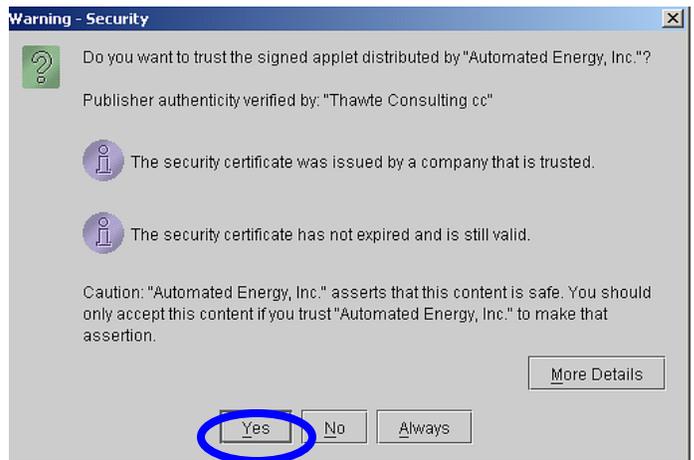
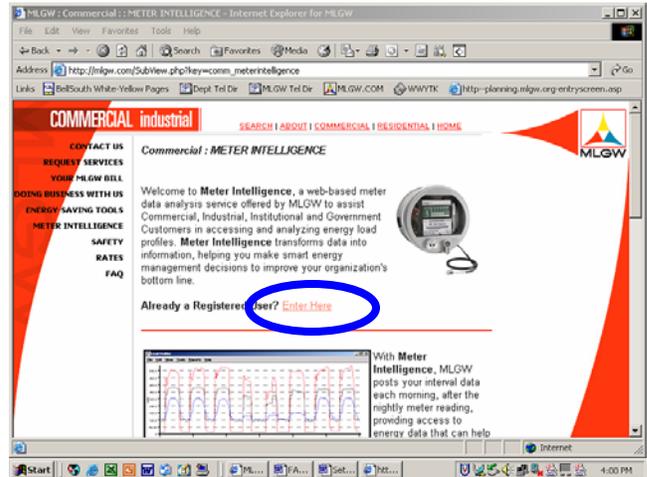
In order to view the Meter Intelligence application, each user's computer must have a specific Java applet, Java 1.4.2, installed. The download process for this free applet is simple and fast. Follow these directions:

1. Using Microsoft Internet Explorer v5.0 or higher, go to:  
<http://www.automatedenergy.com/java142.exe>
2. Select the prompt "Run program from current location" or "Open".
3. Select "Yes" when asked if you want to install and run the program. The installation will then begin.
4. Click "Accept" for the license agreement and click "Next."
5. Select "Typical" and click "Next." The program will then complete the installation process.
6. Click "Finish" to exit.
7. Reboot your computer.

## Accessing the Application

After you have loaded the Java applet on your PC, you are ready to use Meter Intelligence.

1. You can access Meter Intelligence from MLGW's website, [www.mlgw.com](http://www.mlgw.com). Select Commercial/Industrial, then select Meter Intelligence from the left, vertical navigation bar. Or, bookmark this URL: [http://mlgw.com/SubView.php?key=comm\\_meterintelligence](http://mlgw.com/SubView.php?key=comm_meterintelligence)
2. Click on "Enter Here," which will launch you into a login screen operated by MLGW's Meter Intelligence application service provider (ASP), Automated Energy.
3. You may see a screen that asks if you want to trust Automated Energy. Select "Yes" in order to proceed with login.
4. Click inside the fields to enter your username and password.  
Username: \_\_\_\_\_  
Password: \_\_\_\_\_  
(You may change your password after you've logged in the first time.)
5. Meter Intelligence application will open in a second Internet Explorer window, titled Load Profiler. You will need to keep both the Meter Intelligence/Load Profiler window and the window called <http://profiles.automatedenergy.com...> open during the session. Closing this window will terminate your user session. However, you may close the [www.mlgw.com](http://www.mlgw.com) window once you have accessed Meter Intelligence.



### NOTES:

- Your Internet connection speed will determine how quickly the login page appears on your screen.
- Remember, multiple coworkers can be enrolled at no extra cost and each will receive a separate login, so you will not need to share your personal login and each can view the data simultaneously. To request additional users, contact your MLGW Account Manager.
- Once you are logged in, the Meter Intelligence/Load Profiler application will open as a separate window.
- The Internet Explorer window, entitled <http://profiles.automatedenergy.com...>, will need to remain open while using Meter Intelligence. Closing this window will terminate your user session.

## How Do I ...? Quick Tips and Shortcuts for Using Meter Intelligence

Although Meter Intelligence is very user-friendly, you may desire help to get you started. The following quick tips will familiarize you with the primary functions of the Meter Intelligence application. A detailed, 65-page Users Manual is available in PDF from the Meter Intelligence application webpage. To access, click on Help, then Documentation, then Load Profiler User Manual. The illustration on page 55 provides a comprehensive description of the application screen and selection choices. Your MLGW Account Manager can also provide user training and assist you in getting the most from your Meter Intelligence subscription.

Please be aware that MLGW has not activated all options available in Load Profiler. Functions such as Rate Editor are not currently available to MLGW customers, so they will appear as inactive, grayed links in toolbars.

### Refresh

The Refresh button activates all the selections you make in Meter Intelligence. Remember to click on Refresh *every time* you complete a selection and are ready to see the resulting data.

### Access Facility Information

The meters you have access to are listed in the Facilities section, at lower left side of screen.

1. If you have multiple meters enrolled, there will be a number in parenthesis to right of your business name. For example, “ABC Corp(4)” indicates four meters are enrolled and accessible through Meter Intelligence.
2. Click on the drop down icon to the left of your business name to reveal the individual meter identifiers. If you provided meter aliases upon enrollment, the meter alias will be displayed. If you have multiple meters enrolled, you can click on the business name row—ie, Acme Corp(4)—to see all meters, or select them individually, as noted above.
3. Right click on any meter name or alias and select Properties, which will open a window containing three tabs—facilities, account and meter. The Meter tab contains the most information, including description (meter alias), reference ID (meter number) and native ID (interval meter identifier). You can enter square footage in the field named Area, to include that parameter in your analysis.

### Bin Sizes

Your interval meter data can be viewed in several timeframes, which appear as buttons in the middle of the screen. Bins include:

- ½ hour (the basis for MLGW electric meter interval recording), shown as ½ **h**
- hourly, shown as **h** (the basis for MLGW natural gas meter interval recording)
- daily, shown as **d**
- weekly, shown as **w**
- monthly, shown as **m**
- yearly, shown as **y**

While you can select any bin size you choose, it is important to realize that the application has simply performed a mathematical function to convert the MLGW interval data from its official time period to the chosen bin size. (For example, the gas interval is 1 hour. If viewed in the ½

hour bin, the official data is simply divided by 2 and reported in two 30-minute intervals. Likewise, when data is viewed as daily, weekly and other long-term periods, it is simply a sum of the original 30-minute electric or 60-minute gas values.)

## Viewing Meter Data

Meter Intelligence offers three primary data views, along with related features:

- **Compare** mode enables you to view consumption data in kWh or MCF from multiple interval meters simultaneously, so you can see differences. This is the default mode.
- **Aggregate** mode enables you to view total consumption data in kWh or MCF for all meters, provided you have more than one meter enrolled. Aggregate view mode also activates the Slider Bar, which allows you to quickly calculate how much a percentage reduction would mean in energy use and operating time (ie, a 5% reduction would equal 9,560 kWh and 6.5 hours)
- **Detail** mode enables you to view kW, KVA, KVA<sub>r</sub> and PF columns, as well as kWh. Detail is the only mode that activates these additional data fields. For gas meters, it provides consumption detail in MCF.
- **Zoom In** by clicking in the graph area and holding down your mouse button, then dragging left or right to box in the area. To zoom out, click anywhere in the graph and it will return to its original state.
- **Switch from Graph to Data Table View** by using the Graph arrow button on the right, middle side of the screen. The timeframe and fields will remain the same, but the graph and data table will trade places on the screen. This is especially helpful if you want to increase the width of the data columns to view the entire heading.
- **Normal** mode, available from the View option in Toolbar, allows you to add an average baseline to your graph and table. This mathematical average is based on the last five weeks of consumption data and weather.

## Statistics

The Statistics button in the middle of the Meter Intelligence screen opens a window containing the pertinent usage statistics—peak, minimum, total and average—for the date range shown. There are separate tabs in this window for electric and gas meter statistics.

## Units of Measurement

- Electric consumption data is presented in kilowatt hours (kWh)
- Electric demand data is presented in kilowatts (kW)
- Natural gas data is presented in million cubic feet (MCF), rather than the hundred cubic feet (CCF) unit of measurement shown on the utility bill. Multiple MCF by 1,000 to convert to CCF.

## Date Range

Up to 24 months of your meter data has been preloaded into Meter Intelligence, allowing you to benchmark current operations to historic. The date range selection fields are located along the bottom center of the window.

- The default date is always yesterday, showing just one day of data.

- The first date field represents the “start date,” while the second date field represents the “end date” for the period you are querying.
- The large arrows buttons left and right of the date fields will move you forward or backward one day at a time.
- The small pulldown arrows in the date fields allow you to access the calendar icon to make specific selections.
- **Special Date Range information for Gas Data:**
  - Natural gas interval data is based on a “gas day” of 9:01am to 9:00am the following day. To determine consumption for a “gas day”, sum the interval readings of 10:00am through 9:00am the following day. (For example, daily gas use for June 1 would be determined by adding values from the June 1, 10:00am reading through the June 2, 9:00am reading.)
  - As a result of the gas day time, when viewing natural gas meter data, yesterday’s 24-hour data period will appear incomplete. This is not an error; it is a difference in the way electric and natural gas meter interval data is collected and posted in the Meter Intelligence application.

## History

The History button enables you to compare one time period to another, including week-to-week and month-to-month. This is especially useful if you have made energy improvements and want to compare before-and-after profiles.

- Select the first (most recent) time period using the date range buttons discussed above.
- Click on the History button and select the start date for the historic comparison period. (There is no end date field as that will be automatically reflected based on the duration of the more recent time period.)
  - For example, let’s compare consumption in June 2006 to May 2006. In the basic start date field, select 6/1/06 and 6/30/06 for the basic end date field. Click on History and select 5/1/06 using the pulldown arrow in the history date field.

## Weather

Weather information is stored in Meter Intelligence for adding to your analysis at any time. Heating Degree Day (HDD) and Cooling Degree Day (CDD) are calculated based on the standard Certified Energy Manager formula of 65 degrees. Temperature data is sourced from Accuweather for the Memphis area.

To add weather factors to your load profile, simply click on the desired items in the Factors section, at the lower right of the screen, then click Refresh. To remove, hold CTRL and click on whatever factor in the Factors section you wish to remove, then click on Refresh.

## Downloading

You can download interval data from Meter Intelligence into an Excel spreadsheet for further analysis and manipulation. To do so:

1. Access the data of interest to you—meter, timeframe and view (combined, aggregate or detail), and any weather factors, depending on what fields you want to export—so the screen shows the data fields you wish to download.

2. Select Reports from the toolbar, and select either:
  - CSV (for electric data, which will encompass interval readings from 1:00am through 12:00am, reflecting usage from 12:01am through 12:00am)
  - Gas CSV (for natural gas data, which will encompass interval readings from 10:00am through 9:00am the following day, which reflects the Henry Hub gas day that begins at 9:01am).
3. Use the < and > arrows to include or exclude data from the download.
4. Select whether to Open CSV File or Save CSV File, then click Finish.
5. If you opted to Open CSV File, and you have Excel software, the computer will automatically open the file in Excel. (If your PC does not operate on Excel, you will need to Save CSV File and then open the file in another spreadsheet application.)

### **Saving as PDF**

You can capture a quick report, based on the fields shown on the screen, and save as a PDF for sharing. To do so:

1. Access the data of interest to you—meter, timeframe and view (combined, aggregate or detail), and any weather factors, depending on what fields you want to export—so the screen shows the data fields you wish to save.
2. Select Reports from the toolbar, and select Load Profile. A Load Profile Report will open in a Print Preview screen. Click the Print button to print the report. Click the PDF button to save the report as a PDF for storing or sharing.

### **Changing Password**

Since data in Meter Intelligence cannot be manipulated by the user, passwords exist simply to ensure that authorized users are the only ones who can view your company data. Users are authorized to change their own passwords, while MLGW can also require a mandatory password change at next login. To change your password:

- Click on Tools, then Change Password.
- Enter your old password, then your new password (twice). *Passwords must contain between 5 and 20 characters, otherwise an error message will appear.*
- Click “OK” and you will receive a “password changed” message on the screen.

### **Clear Cache**

As you navigate Meter Intelligence, you will build a cache of online views. You can improve the speed and performance of the application by clearing the cache file periodically. (One sign that it is time to clear cache is if the Refresh button is grayed out, or you have clicked Refresh but have not gotten action.) To do this, select Tools, then Clear Cache.

### **Alert Notification set-up**

Meter Intelligence includes a function that will issue email notification if your previous day’s operations exceeded user-established parameters. This helps ensure you receive important data in a timely manner without having to monitor the application daily. (Please note that this is not

a real-time notification, but one based on an occurrence during the previous business day.)

EXAMPLE OF ALERT NOTIFICATION MESSAGE

From: [alertservice@automatedenergy.com](mailto:alertservice@automatedenergy.com)  
To: (Contact Persons specified)  
Subj: Alert Service Notification

Acme Corp  
Selection: 31GLX59333 (Meter number or alias)

Maximum setpoint 593 ; consecutive failures: 5 (Parameter type you established)  
Occurred: (Date and time)  
May 5, 2006 from 11:30 am to 12:00pm  
May 5, 2006 from 12:00pm to 12:30pm.....

1. It is recommended that you spend a few days reviewing your data before establishing the alert parameters in order to determine the most appropriate values. This will help you avoid setting levels that are too low and, as a result, generating unnecessarily frequent emails.
2. Alerts are established for each meter, so you can individualize your parameters based on:
  - a. Low Reading for consumption (kWh or Mcf), as in “Reading below # for # consecutive periods”
  - b. High Reading for consumption (kWh or Mcf), as in “Reading above # for # consecutive periods”
  - c. No Reading, as in “Zero reading for consumption (kWh or Mcf) for # consecutive periods”
  - d. Percentage # above or below “normal,” with normal defined as the average kWh based on the last five weeks of readings, also factoring in temperature during that period.
3. Alerts can be sent to multiple recipients, including your MLGW Account Manager. Simply provide MLGW with email addresses for each staff person and indicate whether you wish to include your MLGW Account Manager in the alert.
4. You can revise your parameters at any time by contacting your MLGW Account Manager and providing the new values, so feel free to experiment with settings as your operations and needs change.
5. Page 3 of the Meter Intelligence Service Agreement contains a template for submitting alert parameters. You can send your completed list to your MLGW Account Manager or simply email or call in the information.

***Thank you for enrolling in Meter Intelligence. If you have questions please contact your MLGW Account Manager for assistance.***