Chapter 3: Configuring the System

Setting Up Energy Provider Metrics

If you are using NetPower Billing, you are either an energy provider yourself, or you are passing energy costs from your energy provider on to your energy users. In either case, you need to configure NetPower Billing to generate bills according to the way that the consumption of energy incurs costs. The details that specify how energy consumption incurs costs are called energy provider metrics.

This section describes each item of information you need to configure NetPower Billing to match your energy provider, and takes you through the entire process step-by-step.

Important

If you are updating your NetPower Billing software from a previous version that supports the Export Configuration feature, you can save time by importing the configuration to the current version. For more information, see *Chapter 4: Maintaining the System.*

Gathering Setup Information

Setting up the energy provider metrics in your NetPower Billing system consists of entering information that NetPower Billing uses to determine how it manages the billing process. NetPower Billing has default settings for all of this information, but in most cases, you need to specify some information to match your energy provider.

Configuring energy provider metrics consists of three procedures:

◆ System Setup
The System Setup procedure defines values for various miscellaneous types of information including the names for seasons, rate periods, and holidays.

◆ Time Period Setup
The Time Period setup procedure establishes the relationships among these items and assigns ranges of time to them.

♦ Rate Schedule Setup (direct billing method only)

The Rate Schedule setup procedure defines the specific rates per kW and kWh to apply to energy usage. If you require a graduated rate schedule, that is, different rates for specific ranges of energy usage, you can also define that here.

System Setup Information

The following are the items of information that you need to complete System Setup. In many cases, you need to match your NetPower Billing Setup to your energy provider. Usually this information appears on your bill from your energy provider.

♦ Demand Window

The demand window is the time interval of energy usage data from which NetPower Billing computes demand usage. This can be 15, 30, or 60 minutes. A smaller demand window includes more data points in the calculation.

The demand window you set must match (or be larger than) the demand window used by the energy provider.

♦ Billing Method

The billing method can be Direct Billing or Cost Allocation. Direct Billing allows you to bill each energy user according to their metered consumption. Cost allocation allows you to bill not only for the metered consumption of each energy user, but also for shared energy costs (common usage), such as centralized heating, ventilation, and air-conditioning. The shared energy costs are distributed among the energy users who incur the costs according to an indirect criterion, such as weight points or according to the proportion of individual consumption.

The billing method you select must match the method that the energy provider uses.

♦ Seasons

Billing seasons allow energy providers to vary rates depending on the time of year. Examples of billing seasons are winter and summer. If your energy provider charges different rates according to seasons, you must configure your NetPower Billing system to match. To specify a season, you need to know the date (month and day) of the beginning and end of each season.

♦ Rate Periods

Rate periods allow energy providers to vary rates over portions of a 24-hour day. Examples of rate periods are High Peak, Low Peak, and Base. Eventually, you associate one or more rate periods to the weekday and weekend days of each season you have defined. For each of these, you set hour ranges during which the rate period is in effect. The rate periods you use should match the days, times, and rates of any rate periods that the energy provider uses.

♦ Weekday-Weekend definition

Among utility companies, the day and time of the beginning and end of the weekend/weekdays varies. If your energy provider's definition is different from the NetPower Billing default, you can change it to match.

♦ Holidays

If your energy provider applies different rates during certain holidays, you can indicate this to NetPower Billing by defining each of these holidays. Each holiday definition consists of the name of the holiday, the start date and time, and the end date and time.

♦ Address

You need to provide your energy users with an address to which they can send their payments. This is the return address of your company, which NetPower Billing prints on bills.

♦ Remittance Period

In addition to the address, NetPower Billing prints a remittance period on the bill. This is the number of days after you print a bill that the energy user has to return payment.

For worksheets you can use to gather the information you need for system, time period, and rate schedule setup, see *Appendix A: Configuration Worksheets*.

Time Period Information

Energy billing is based on energy usage over time. In the System Setup, you define the categories of time. In the Time Period Setup, you associate these categories and assign specific clock times to them.

In the Time Period Setup procedure, you select, in turn, each season you have defined. Within each season, you associate one or more of the rate periods you have defined with each of the day types (Weekday, Weekend, or Holiday). Then, for each of these rate periods, you assign clock time.

For a worksheet to use as a guide to help you visualize and gather the necessary time period information to set up your NetPower Billing system, see *Appendix A: Configuration Worksheets*.

Be careful as you assign clock time. Keep the following points in mind:

♦ All times must be in 24-hour format.

♦ Start times and end times must not overlap.

For example, if the start time for the "Evening" rate period is 5 PM, the end time of the previous rate period, "Day" for example, should be 1659 (not 1700). The start time for the Evening rate period would then be 1700.

♦ Start times and end times should not leave any gaps in clock time.

You must associate a rate period with every moment of the entire clock. If there is an interval of the day to which none of your rate periods apply, you must add a new rate period so that the entire clock is associated.

♦ Specify clock time in its natural sequence.

NetPower Billing will use *automatic completion* to ensure that all of the clock time is filled with rate period associations. Automatic completion calculates remaining clock times based on what you have entered. If you enter clock times out of sequence, automatic completion will not be able to calculate the remaining clock times correctly. Therefore, you might save time by writing down your associations in the correct sequence from the beginning.

♦ Split up any rate period associations that cross the day boundary.

For example if a "Night" rate period runs from 8 pm (20:00) to 7 am (06:59), you need to split the association into two segments. One segment would be 0000 to 0659. The other segment would be 2000 to 2359.

You should not specify these two segments together; one segment is first in clock sequence and the other is last. To enter the segments in natural clock sequence, specify the 0000 to 0659 rate period segment first. Then specify all the remaining time up to 2359. Last of all, specify the second segment of the original 8 pm-to-7 pm rate period.

Rate Schedule Information

> **Note**
> Support for rate schedule *ratcheting* is not available in this release of NetPower Billing, but is planned for a future release

The rate schedule assigns a specific rate to energy usage (per kW, per kWh, per kVA, or per kVAh).

NetPower Billing allows you to define different rates for each rate period in each day type (Weekday, Weekend, and Holiday) in each season. In addition, you can define a different rate for each range of usage (kW, kWh, kVA, or KVAh).

For worksheets you can use to gather the information you need for system, time period, and rate schedule setup procedures, see *Appendix A: Configuration Worksheets*.

Configuring Energy Provider Metrics

This section contains the procedures for configuring energy provider metrics in the NetPower Billing system. You should have the necessary information (described previously) ready before you begin.

Steps 2 and 3 of the configuration process depend on information you define in step 1, so you should perform the steps in order.

Step 1: System Setup

In this procedure, you define the number of minutes for the demand interval, the billing method, the names of rate periods, a remittance period, seasons, and holidays. Before you begin, you should have all the necessary information ready.

After you have completed this procedure, you can use the next procedure (*Step 2: Time Period Setup*) to associate times to rate periods, and rate periods to weekdays, weekend days, and holidays for each season.

To perform the system setup, do the following:

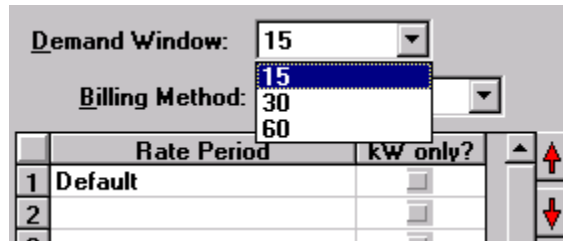1. On the NetPower Billing main window, click the System Configuration icon.

    The System Setup dialog box displays.
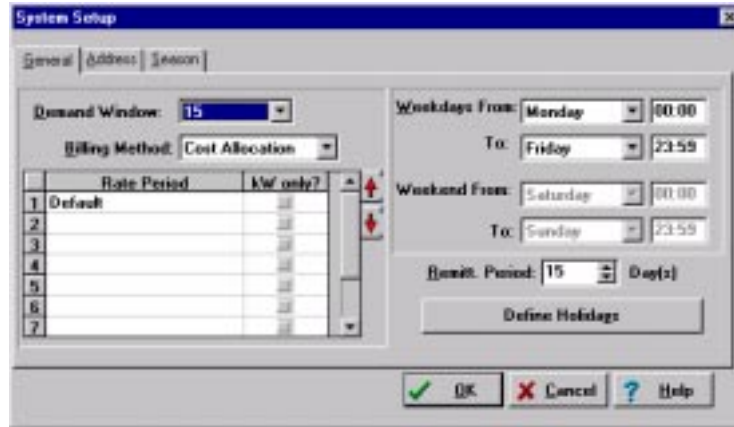
2. From the Demand Window drop-down list, select a period of time. The demand window is the time interval of periodic energy data that NetPower Billing uses to compute demand.


Important
The demand window you select must be compatible with the demand window used in your energy data. Your Energy Logging demand interval must be a multiple less than or equal to your NetPower Billing demand interval. The following table shows compatible Energy Logging and NetPower Billing demand windows:

Energy Logging Demand Window	NetPower Billing Demand Window		
	15	30	60
1	Yes	Yes	Yes
5	Yes	Yes	Yes
10	No	Yes	Yes
15	Yes	Yes	Yes
30	No	Yes	Yes
60	No	No	Yes

3. From the Billing Method drop-down list, select a billing option.
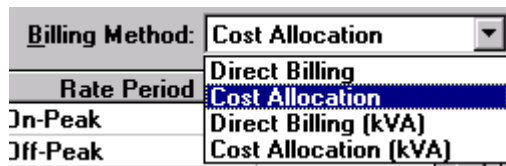
Direct Billing causes NetPower Billing to distribute cost according to actual metered energy use (either kW or kVA).

Cost Allocation allows NetPower Billing to distribute an overall cost among the energy users in a utility meter group according to one or more indirect criteria, such as weight points or a proportion of individual consumption(either kW or kVA).

4. In the boxes in the Rate Period column, type the names of all the rate periods in your billing system.

For each rate period, you can specify that the rate period apply only to kW usage (and not both kW and kWh) by clicking on the gray button in the kW only column.

5.	In the box on the upper left-hand side of the System Setup dialog box, specify the Weekend-Weekday definition. NetPower Billing computes the complementary segments of the week using automatic completion.

Note
Specifying the Week-Weekday definition is necessary only if your organization uses days and times for defining the weekdays and weekend from the default.

Weekdays From:	Monday	▼	00:00
To:	Friday	▼	23:59
Weekend From:	Saturday	▼	00:00
To:	Sunday	▼	23:59

Note
NetPower Billing uses an automatic completion process to compute the remaining days and times. This automatic completion ensures that no overlapping or gapping occurs in the definition.
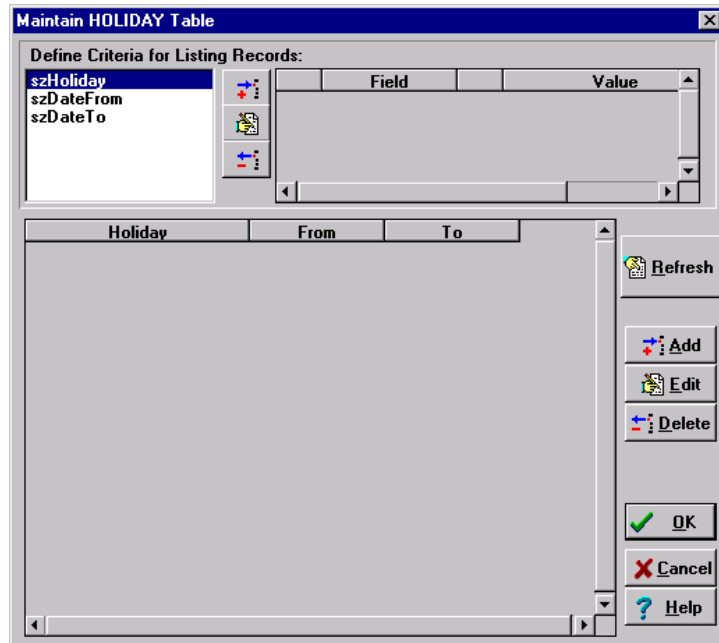
6.	In the Remitt. Period input field, enter the number of days for the remittance period.

Remitt. Period: 15 ⬍ Day(s)

The remittance period is the number of days after the bill print date that the energy user has to return payment. NetPower Billing increments the print date of the bill (Billing Date) by the number of days you enter for Remittance Period and prints the result on the bill as the Due Date.
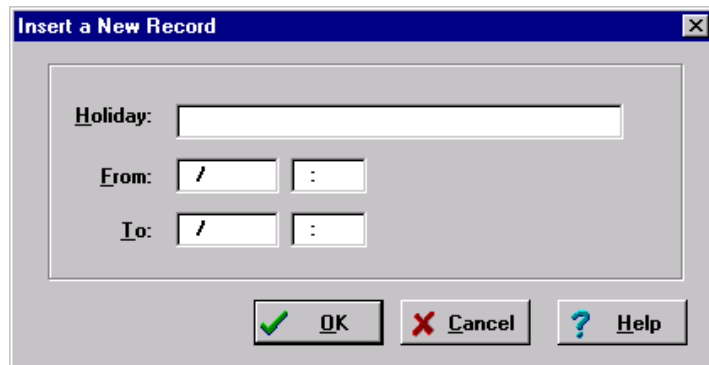
7. Click Define Holidays.

   The Maintain Holiday Table dialog box displays.

Maintain HOLIDAY Table

Define Criteria for Listing Records:

	Field	Value
szHoliday		
szDateFrom		
szDateTo		

Holiday	From	To

Refresh

Add

Edit

Delete

OK

Cancel

Help

8. Click Add.

   The Insert a New Record dialog box displays.

Insert a New Record

Holiday: [   ]

From: [/] [:]

To: [/] [:]

OK   Cancel   Help

9. In the Holiday field, enter the name of the holiday.

10. In the From boxes, type the beginning date and time of the holiday.

11. In the To boxes, type the ending date and time.

12. Click OK to accept the changes and return to the Maintain Holiday Table dialog box

OR

Click Cancel to return to the Maintain Holiday Table dialog box without making any changes.

13. Repeat steps 8 through 12 for each holiday.

14. When you have entered all the holidays you are using, click the OK button on the Maintain Holiday Table dialog box.

15. The Maintain Holiday Table dialog box closes.

16. On the System Setup dialog box, click the Address Tab.

    The Address Tab displays.

17. Type the billing return address in the appropriate fields.

18. Click on the Season tab.

    The Season tab displays.

19. Type the name of each season in the Season column.

20. Type the date of the beginning of the season in the From column.

Because Automatic Completion is in effect, NetPower Billing computes the implicit whole and determines the correct To date.

21. When you have specified all the seasons that your billing system is using, click OK.

22. Click OK to close the System Setup dialog box.

The System Setup dialog box closes.

After you have completed the System setup, you are ready to proceed to *Step 2: Time Period Setup*.

Step 2: Time Period Setup

Note
Before you can set up time periods, you must perform *Step 1: System Setup.*

In this procedure, you associate rate periods and their effective times of day with weekdays, weekends, and holidays for each season you have defined.

To set up the time periods, do the following:

1. From the System menu of the NetPower Billing main window, select Time Period.

The Time Period dialog box displays.
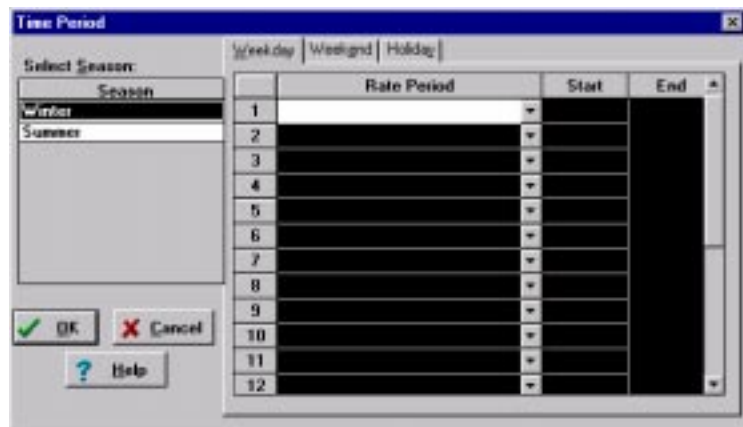
The seasons you defined in the System Setup procedure display in the seasons list.

2. Click on the name of the season in the Season list.

3. Click on one of the day type tabs (Weekday, Weekend, or Holiday)

The selected day type tab displays.

4. Click on the down arrow to the right of the rate period box, and select a rate period.

5. Type the start time.

	Rate Period		Start	End	▲
1	Off-Peak	▼	22:00	05:59	
2	On-Peak	▼	06:00	21:59	
3	\<None\>				
	Off-Peak				
4	On-Peak				
5					▼

6. Repeat steps 4 and 5 for each day type (Weekday, Weekend, and Holiday).

   Automatic completion enters the end time. If more than one rate period applies for this season on the weekday, specify additional rate periods in the boxes provided.

7. Repeat steps 2 through 6 for each season you have defined.

   Click OK when you have finished associating rate periods and times to the weekdays, weekends, and holidays for each season.

The Time Period dialog box closes.

The rate periods you have defined are now associated with specific times for each day type in each season. When you have completed this step, you are ready to go on to *Step 3: Rate Schedule Setup*.

Step 3: Rate Schedule Setup

In this step, you define the rate schedule. The rate schedule tells NetPower Billing how much to charge for energy usage. The rate schedule consists of the contract period and the amounts to charge per kW and kWh, or per kVA and kVAh for each rate period in each season. In addition, you can define a graduated rate schedule that increases or decreases the charge based on how much energy is being consumed.

Note
Before you can set up a rate schedule, you must perform the System Setup and Time Setup. If you selected Cost Allocation as your billing method in the System Setup dialog box, you do not need to set up a rate schedule.

To define the rate schedule, do the following:

1. From the System menu of the NetPower Billing main window, select Rate Schedule.

   The Rate Schedules dialog box displays.

Note

The following figures show the associated rate schedual dialog boxes for kW direct billing. If you choose Direct Billing (kVA) for your billing method , your dialog boxes will display Energy (Per kVA) and Demand (Per kVAh) boxes rather than the Energy (Per kWh) and Damand (Per kW) boxes.

2. In the Contract Period From fields, type the beginning date and time of the contract.

3. In the To fields type the ending date and time of the contract.

4. Click on the down arrow to the right of the Season field, and select a season.

5. Click on the down arrow to the right of the Rate Period field and select a rate period.

6. In the Energy (Per kWh) or (Per kVAh) box, enter a value in the To column for each rate range. Automatic Completion computes the From value for the current range and the next range (if you choose to define it).

Energy (Per KWH):

	From	To	Rate [$]
1	0		
2			
3			
4			
5			
6			
7			
8			
9			
10			

Note
Support for rate schedule ratcheting is not available in this release of NetPower Billing, but is planned for a future release.

7. In the Rate ($) column, enter the dollar amount that applies to the range. Repeat this step for all ranges you define.

8. In the Demand (Per kW) or (Per KVA) box, enter a value in the To column for each rate range. Automatic Completion computes the From value for the current range and the next range (if you choose to define it).

Demand (Per KW):

	From	To	Rate [$]
1	0		
2			
3			
4			
5			
6			
7			
8			
9			
10			

9. In the Rate ($) column, enter the dollar amount that applies to the range. Repeat this step for all ranges you define.

10. Repeat steps 5 through 9 for each rate period that applies to the currently selected season.

> Note
> You can copy and paste values from period to period by clicking Copy, then selecting the destination period, and clicking Paste.
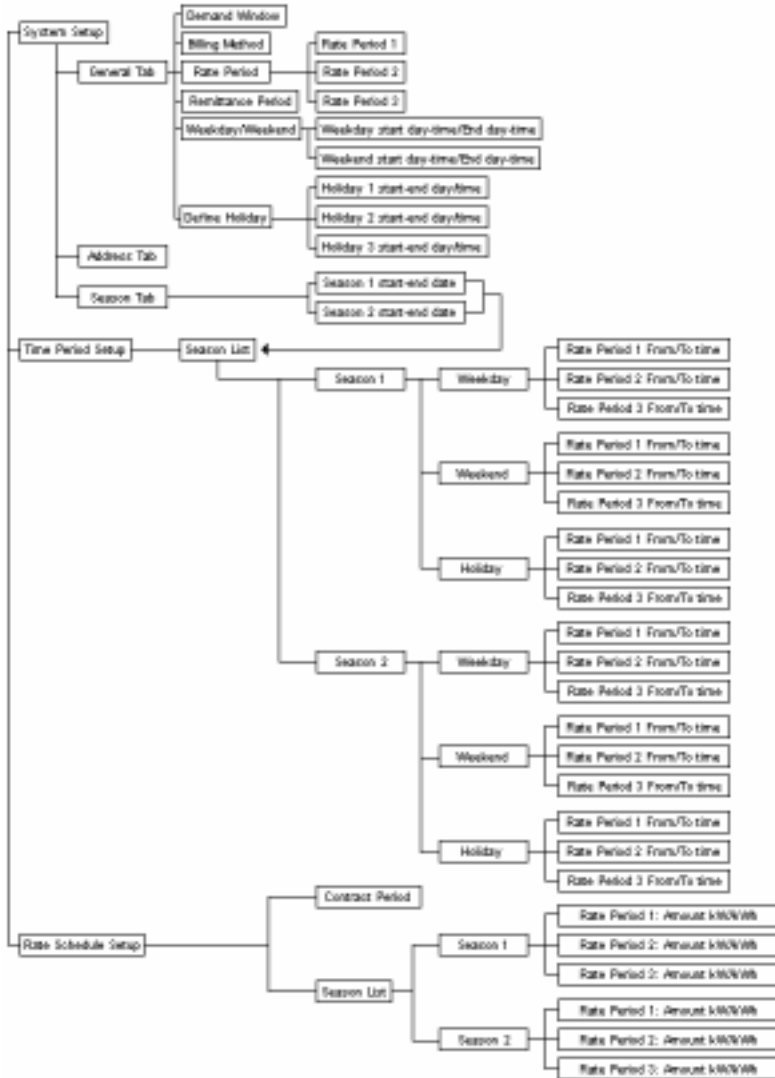
11. Repeat steps 4 through 10 for each season you want to define.

12   Click OK.

The Rate Schedules dialog box closes.

When you complete this step, your NetPower Billing system is fully configured. You are now ready to start generating bills.

Procedure Information Map

Setting Up Energy Usage Information

In NetPower Billing, all energy usage information is contained in utility meter groups. Utility meter groups are groups of energy users that are processed together for billing purposes. Generally, the energy users in a utility meter group share one or more energy usage characteristics in common.

Utility Meter Groups

NetPower Billing uses groups to contain all of the information about energy users it needs to track in order to generate bills and reports. NetPower Billing combines the user information you define in the groups with energy provider information and energy usage data (gathered by IMPACC or entered via NetPower Billing) and uses this information to generate bills. Utility meter groups are intended to represent multiple energy users whose energy usage is billed, on a single bill, to an institution or company. All users must be in a group.

Because NetPower Billing uses groups to contain all information about users, to define your energy users, you must first define one or more utility meter groups and then add your users to one of these utility meter groups. A utility meter group is a group of energy users who have one or more types of energy usage in common. The minimum characteristic that the energy users of a group must have in common is the billing period. Apart from the billing period, the energy users of a group need not have anything else in common; however, if you can identify other usage characteristics shared by your energy users, and define them in NetPower Billing, you could improve the efficiency and accuracy of your billing process by grouping the energy users accordingly.

Components of a Utility Meter Group Definition

A utility meter group is intended to account for energy usage by multiple users and relate that usage to a single bill from the energy provider. A utility meter group definition consists of the following:

♦   Identity of each of the multiple users.

♦   Any energy usage or other costs that energy users in the utility meter group share.

♦   Individual energy usage or costs incurred by each of the multiple energy users.

The categories of energy usage characteristics are the following:

♦ Billing Period

All of the energy users in a utility meter group must have the same billing period. Energy users in the utility meter group need not have any other characteristics in common. The billing period is the time interval for which energy users in the group are billed for service. The billing period should match the billing period that the energy provider uses.

♦ Virtual Meters

If your energy users have meters that are not automated, that is, the meters do not record their readings electronically, a virtual meter is the means by which you enter the energy data that was read from a meter dial.

♦ Optional Charges

Optional charges are additional charges you can elect to assess to the group. You can enter your own optional charges or select from the list of predefined typical charges. The following are the typical (predefined) optional charges:

♦ Connection Charge

♦ Energy Cost Adjustment Charge

♦ Power Factor

♦ Taxes

You have a choice of cost allocation methods to associate with each optional charge. These cost allocation methods are the following:

<u>% of Total Energy Usage</u>

With this option, NetPower Billing allocates the cost of the optional charge among the energy users of the utility meter group according to the proportion of each energy user's energy consumption to that of the whole utility meter group as follows:

$$\left(\frac{i_c}{t_c}\right) \times g_o = o_i$$

where:

i_c is the individual user's consumption (kWh or kVAh)

t_c is the total group consumption (kWh or kVAh)

g_o is the amount of the group optional charge

o_i is the individual optional charge

% of Total Demand Usage

With this option, NetPower Billing distributes the cost of the optional charge according to the proportion of each energy user's demand consumption to that of the whole group.

$$\left(\frac{i_c}{t_c}\right) \times g_o = o_i$$

where:

i_c is the individual user's consumption (kW or kVA)

t_c is the total group consumption (kW or kVA)

g_o is the amount of the group optional charge

o_i is the individual optional charge

Equal Share

With this option, NetPower Billing distributes the cost of the optional charge evenly to each member of the group.

Weight Points

With this option, you can distribute the optional charge according to weight points you assign to each user (when you add each user to the group). NetPower Billing adds all the weight points assigned to all the energy users in the utility meter group and distributes the optional charge according to each energy user's proportion of weight points to the total as follows:

$$\left(\frac{i_c}{g_w}\right) \times g_o = o_i$$

where:

i_c is the individual weight points assigned

g_w is the total weight points assigned to the group

g_o is the amount of the group optional charge

o_i is the individual optional charge

♦ Common Usage

Common usage charges are charges that are shared among the energy users of a utility meter group, such as heating, ventilation, and air conditioning for energy users who share the same HVAC system. Common usage costs are distributed by dividing the amounts of consumption (kW and kWh or kVA and kVAh) according to cost allocation methods and adding the resulting amounts to the individual energy users' consumption amounts, as follows:

$$\left(\frac{i_c}{t_c}\right) \times g_c = c_i$$

where:

i_c is the individual consumption or weight points assigned

t_c is the group consumption or weight points assigned

g_c is the group common usage consumption (kW, kWh, kVA, or kVAh)

c_i is the individual charge

♦ IMPACC Meter

IMPACC meters correspond to IMPACC devices that are metering the energy consumption of your energy users and the corresponding data gathered by NetPower DeviceServer in PowerNet Software. You can associate IMPACC meters with Common Usage formulas in the definition of a utility meter group or with individual energy user formulas in energy user definitions.

Defining a Group

Defining the characteristics of a utility meter group consists of three steps:

1. Enter the basic group information.
2. Define common usage costs for the group.
3. Define IMPACC meters.

The second and third steps build upon information you enter in the first step, so you need to complete the steps in order.

Note
Before you can complete these steps, you must have all of the applicable information about your users.

Step 1: Entering Basic Group Information

This procedure defines the name of a utility meter group, indicates whether unmetered usage by energy users in the group is billed, defines an accuracy tolerance level for total energy, defines any virtual meters, and defines any optional charges.

To enter basic group information, do the following:
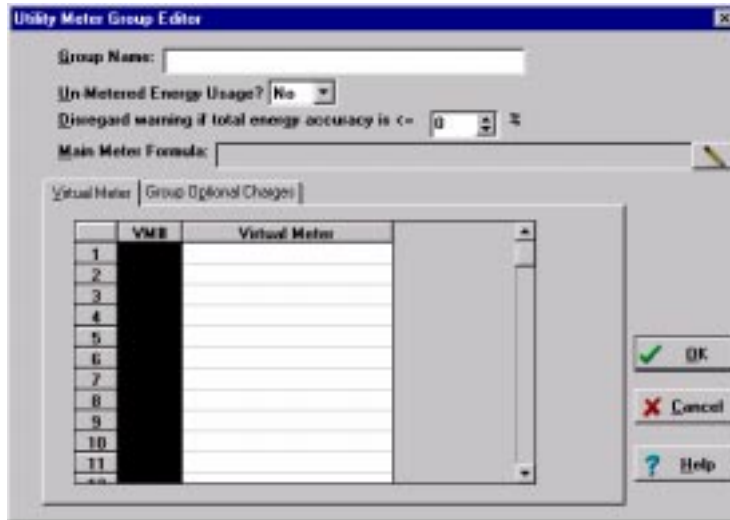
1. In the NetPower Billing main window, if it is not already active, click on the Utility Meter Group tab.

   The Utility Meter Group tab displays.
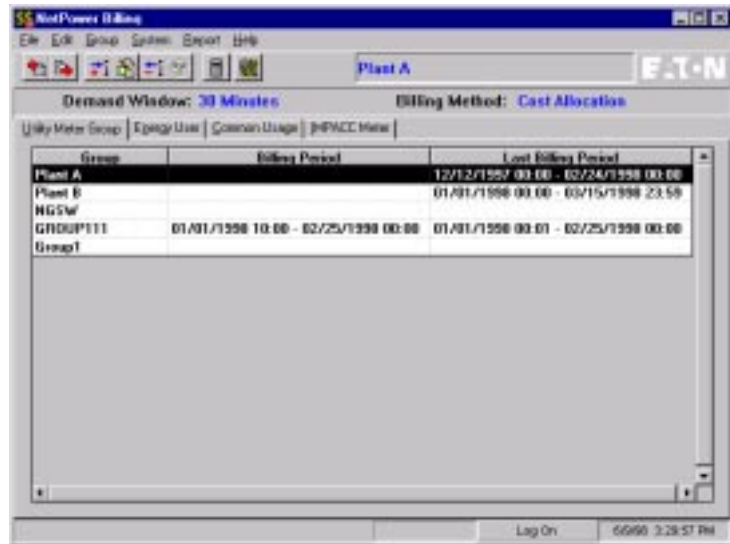
2. Click the Add icon.

   The Utility Meter Group Editor displays.

3. In the Group Name field, type the group name.

4. If the group has unmetered energy usage (resulting, for example, from a difference in accuracy between the energy supplier's meter and the meters used for the group), select Yes from the Un-Metered Energy Usage drop-down list. The default is No.

   Intuitively, the total energy consumption should equal the total of calculated energy user consumption. In practice, however, this is not always the case.

   If you selected No, you will receive a warning if the total consumption entered from your bill does not match the sum of the energy user consumption derived from each energy user's formula.

5. If you are using the cost allocation billing method, additional discrepancies between the bill from your energy provider and the billable usage by your energy users may result from the fact that individual usage is determined by a formula rather than a direct meter reading. To prevent losses from these billing discrepancies, you can specify a discrepancy tolerance level by typing a percentage for the amount of discrepancy below which you consider acceptable in the Disregard Warning if Total Energy Accuracy is <= field.

   If the total energy accuracy computation rises above this level, the system will generate a warning message and you can re-evaluate your formulas.


Note
The option to set a discrepancy tolerance level is available only if you set your system up for Cost Allocation billing. If you are using Direct billing, the option is not visible in the dialog box.

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6. To enter a Main Meter Formula, click the pencil button.

The Formula Editor dialog box displays.
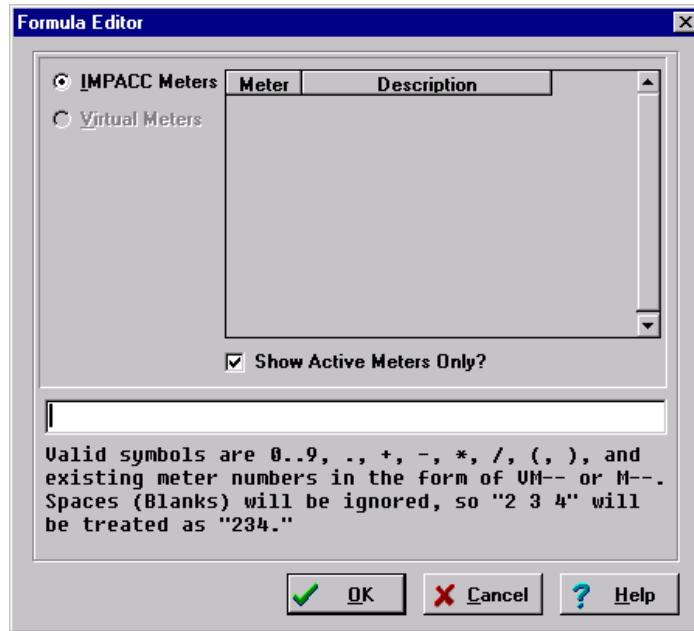
Note

If no meters display in the Formula Editor dialog box, you must first define the meters. See *Step 3: Defining IMPACC meters*.

7. In the field provided, enter an expression, using one of more of the following:

   ♦ meter references

   ♦ mathematical operators

   ♦ numbers

8. Click OK

The Formula Editor closes.
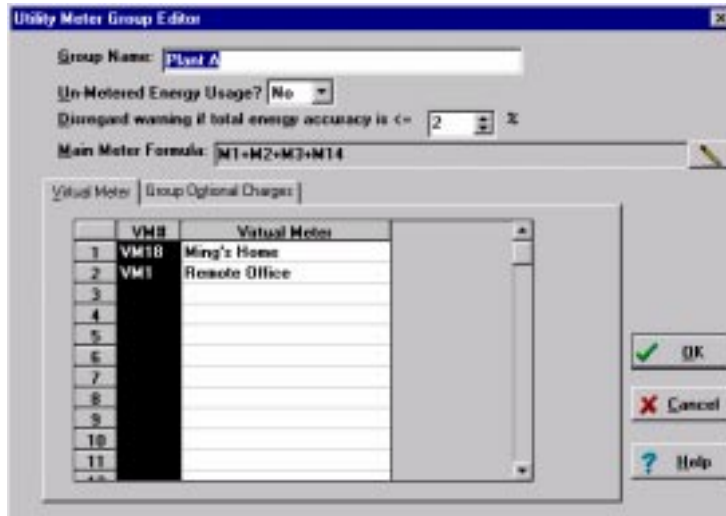
9. On the Virtual Meter tab, type the names for each virtual meter that your NetPower Billing system uses in this group.

10. If you will be billing for any of the NetPower Billing defined optional charges, click the Group Optional charges tab.

    The Group Optional Charges tab displays.
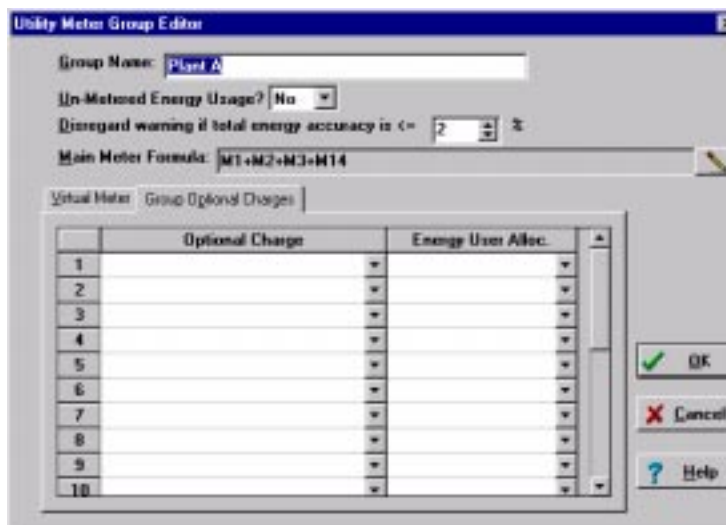
The predefined group optional charges are connection charge, energy cost adjustment charge, power factor, and taxes. You can also enter your own optional charges.

Note
If you are not billing any group for optional charges, skip to step 11.

11. Click the down arrow to the right of the first empty Optional Charge field and select an applicable optional charge from the list of alternatives.

OR

To enter your own charge, type the name of an optional charge in the blank Optional Charge field.

12. Click on the down arrow in the corresponding Energy User Alloc. field and select a cost allocation method from the list.

13. Repeat steps 10-12 for each group optional charge you want to apply to this group.

14. Click OK.

NetPower Billing returns you to the main window, and lists the new group in the group list.

Step 2: Defining Group Common Usage

This step defines common usage among the energy users in the utility meter group. Common usage is a type of energy consumption that is shared by the energy users in a utility meter group, such as the energy consumed by the centralized heating, ventilation, and air conditioning system for tenants of a building.

The definition of a common usage consists of a name for the common usage, the allocation method, and the billing formula.

The amount that each energy user in a group pays for common usage depends on the allocation method. NetPower Billing can allocate the measured common usage to energy users equally, according to their individual consumption (per kW, per kWh, per kVA, or per kVAh), or as a proportion of an arbitrary number of weight points you assign to each individual user.

NetPower Billing uses a formula to compute the total cost of each form of common usage. The formula consists of the meter or meters to use and any numeric manipulation required to compute the value accurately.
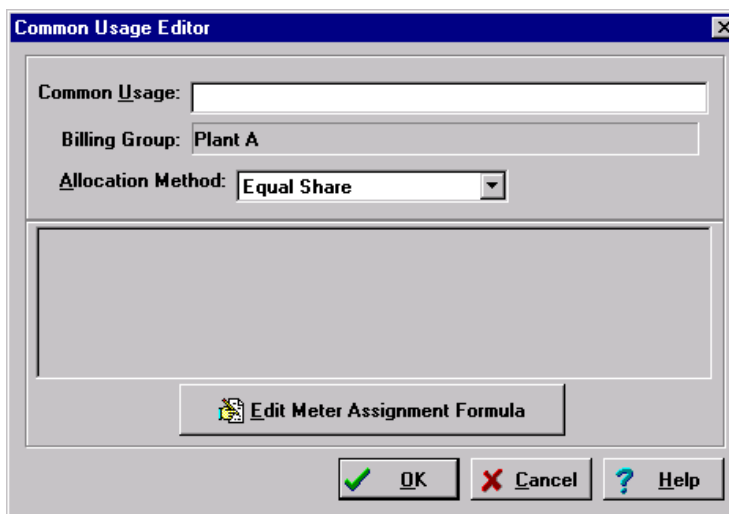
To define forms of group common usage, do the following:

1. In the NetPower Billing main window, if it is not already active, click on the Utility Meter Group tab.

2. In the group list, select the group for which you wish to define a type of common usage.

3. Click the Common Usage tab.

   The Common Usage tab displays.
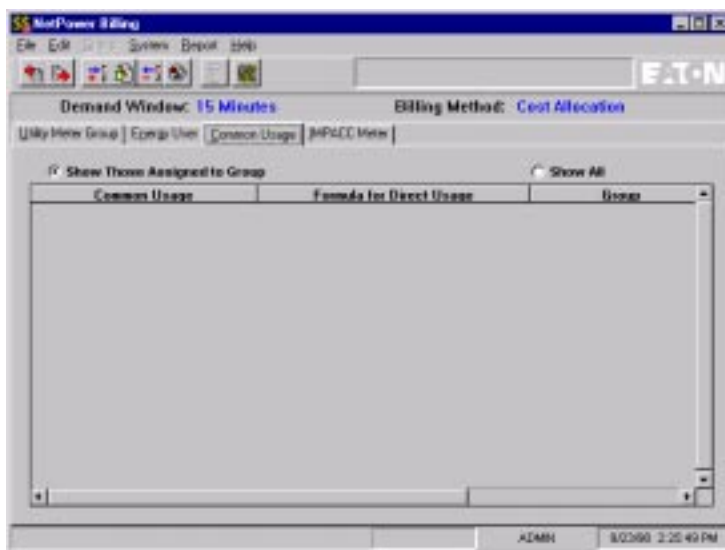
4. Click the Add icon.

    The Common Usage Editor displays.

5. In the Common Usage field, type a name or description for the type
    of common usage.

> **Note**
> The Common Usage name can be up to 254 characters; however, only the first 74
> characters print in reports.

6. From the Allocation Method drop-down list, select an allocation method.
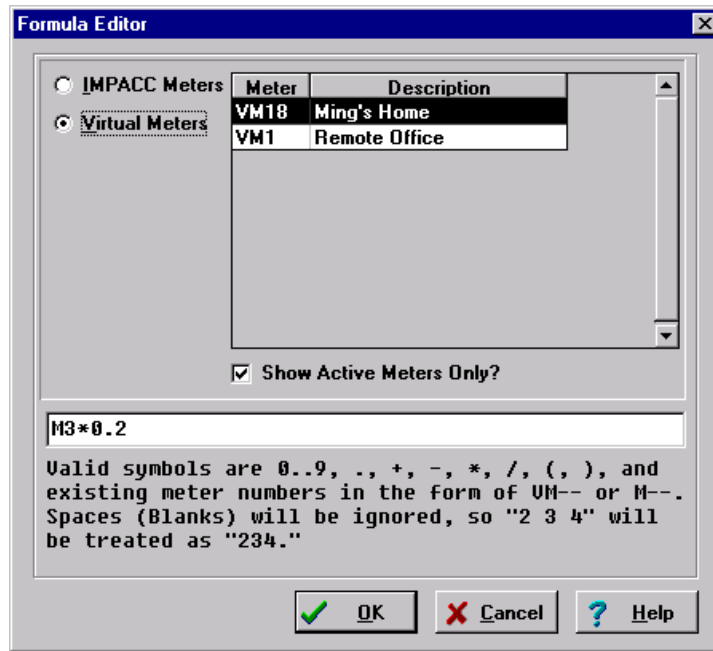
    The cost allocation method determines how you can distribute the common usage among the energy users in the group.

    The following list describes these alternatives:

    ♦   Weight Points
        This option distributes the common usage consumption (kW, kWh. kVA, or kVAh) according to an arbitrary proportion that you set for each user. When NetPower Billing generates a bill, it looks at the total number of weight points set for all the users in the group, divides the common usage cost by this number, and distributes the cost to each user according to the weight points set for that user.

    ♦   Equal Share
        This option distributes the common usage cost equally among the energy users in the group.

    ♦   % Energy Usage
        This option distributes the total cost of common usage according to the percentage of an individual energy user's kWh or kVAh consumption in relation to that of the entire group. For example, if an energy user consumed 50 percent of the total kWh usage of the entire group, then NetPower Billing distributes 50 percent of the common usage cost, regardless of what it is, to that particular user.

    ♦   % Demand Usage
        This option distributes the total cost of common usage according to the percentage of individual energy user's demand (kW or kVA) consumption in relation to the entire group.

7. Click on the Edit Meter Assignment Formula button.

    The Formula Editor dialog box displays.

Formula Editor

Meter	Description
VM18	Ming's Home
VM1	Remote Office

○ IMPACC Meters
● Virtual Meters

☑ Show Active Meters Only?

M3*0.2

Valid symbols are 0..9, ., +, -, *, /, (,), and existing meter numbers in the form of VM-- or M--. Spaces (Blanks) will be ignored, so "2 3 4" will be treated as "234."

✓ OK   ✗ Cancel   ? Help

The meter list displays both active and inactive meters. If the list is too large, click the Show Active Meters Only check box.

8. Specify the billing formula for the common usage category that you are defining. You can enter IMPACC meters or virtual meters directly into the formula box, or double-click on the meters in the meter list. Click the IMPACC meters or Virtual Meters option button to display the respective list.

Note
If there are no entries on either of the lists, the option button to display the list is disabled.

A formula is an expression consisting of meters (virtual or IMPACC), numbers, and mathematical operators. For example: (M1 + VM3)*0.5.

This formula consists of the sum of the consumption measured by an IMPACC meter (M1) and a virtual meter (VM3) multiplied by 0.5.

9. Click OK.

The Formula Editor dialog box closes.

10. Repeat steps 4 through 9 for each common usage cost you wish to define for the group.

11. In the Common Usage Editor dialog box, click OK.

NetPower Billing updates the Common Usage tab to list each usage category that you defined.

Step 3: Defining IMPACC Meters

Before you can define which IMPACC meters to use for a utility meter group, you must set up an energy merge in NetPower Tools, with energy logging (englog32.MDB) as the target database, and Elsys.ini file as the source DIR. This allows NetPower Billing to see the IMPACC meters on your system.

For information on creating Energy Merges with NetPower Tools, see *Chapter 11: NetPower Tools* in the *PowerNet Software User's Guide*.

To define which IMPACC meters to use for the utility meter group, do the following:

1. In the NetPower Billing main window, if it is not already the active tab, click on the Utility Meter Group tab.

2. In the group list, select the group for which you wish to define a type of common usage.

3. Click the IMPACC Meter tab.

   The IMPACC Meter tab displays.
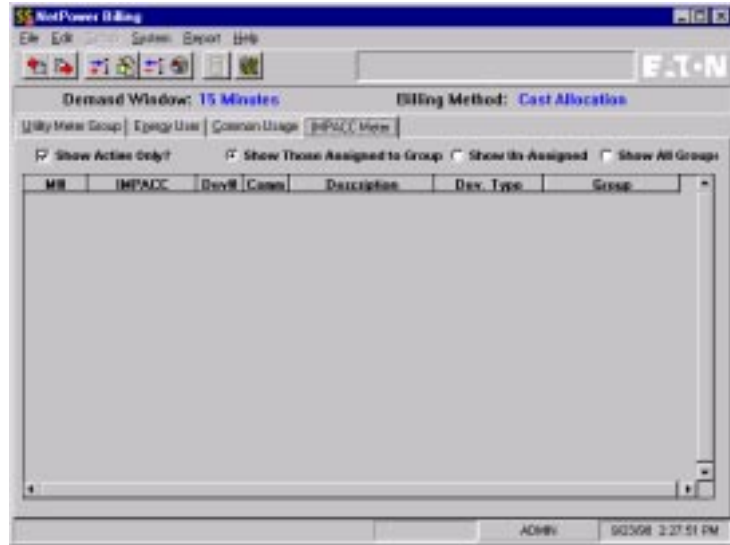
4. Click the Show Un-Assigned radio button.

   The IMPACC Meter tab displays all the unassigned meters.

5. Select the meters you wish to assign to the utility meter group.

6. Click the Add to Group icon.

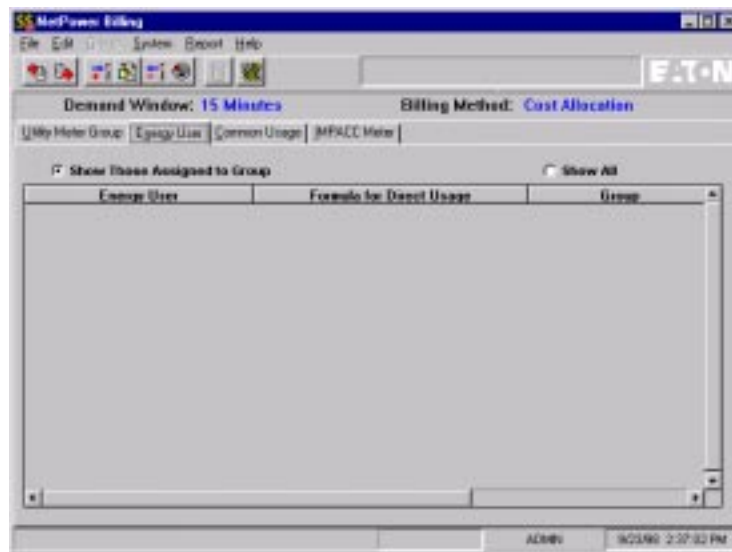NetPower Billing adds the meters to the utility meter group.

Energy Users

After you define a group, you must add at least one energy user. In the process of adding an energy user to a group, you associate energy usage characteristics defined for the group with the individual user. This is also where you define any unique energy usage characteristics, such as the particular meters and billing formula you will use with the user.
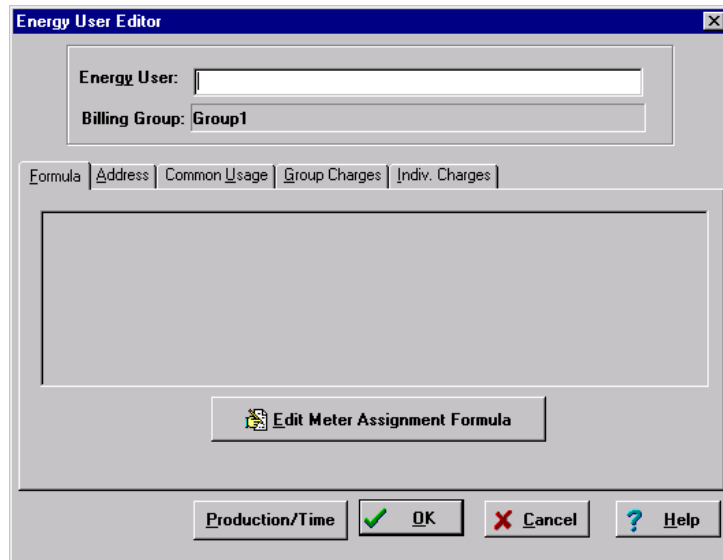
Defining an Energy User

To define an energy user, do the following:

1. In the NetPower Billing main window, if it is not already active, click on the Utility Meter Group tab.

2. In the group list, select the group for which you wish to add an energy user.

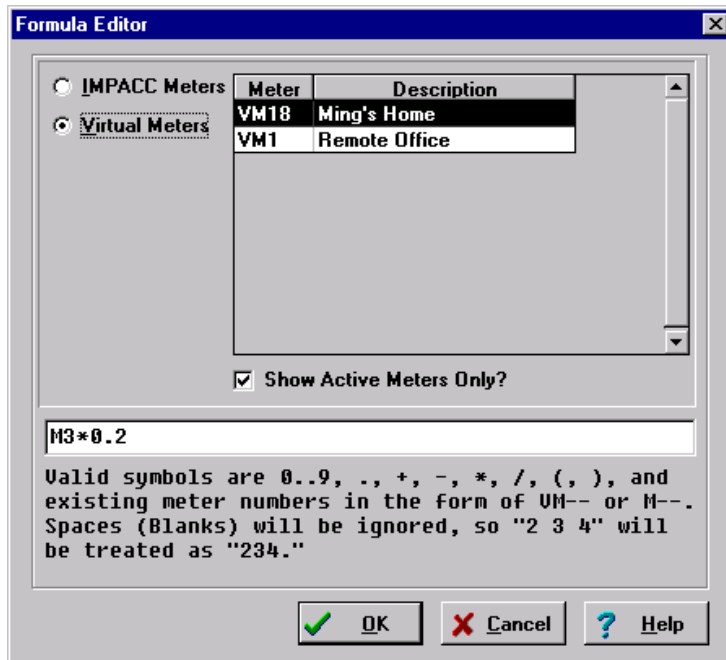3. Click the Energy User tab.

    The Energy User Tab displays.

4. Click the Add icon.

   The Energy User Editor dialog box displays.

Energy User Editor

Energy User: [   ]

Billing Group: Group1

| Formula | Address | Common Usage | Group Charges | Indiv. Charges |

[Edit Meter Assignment Formula]

[Production/Time] [✔ OK] [✘ Cancel] [? Help]

Note
The Production/Time options are only available if you have NetPower Track
installed.

4. In the Energy User field, type the name of the energy user.

5. Click Edit Meter Assignment Formula.

    The Formula Editor dialog box displays.

Formula Editor

○ IMPACC Meters

● Virtual Meters

Meter	Description
VM18	**Ming's Home**
VM1	Remote Office

☑ Show Active Meters Only?

`M3*0.2`

Valid symbols are 0..9, ., +, -, *, /, (,), and existing meter numbers in the form of VM-- or M--. Spaces (Blanks) will be ignored, so "2 3 4" will be treated as "234."

✓ OK   ✗ Cancel   ? Help

6. Enter IMPACC meters, virtual meters, numbers, and operators to specify the billing formula for the energy user.

7. When you finish entering the billing formula, click OK.

    The Formula Editor closes.

8. In the Energy User Editor dialog box, click the address tab.
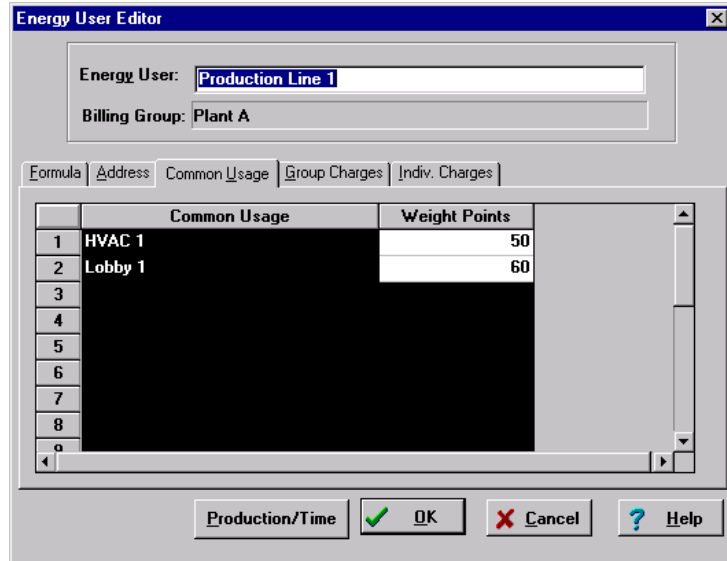
    The Address Tab displays.
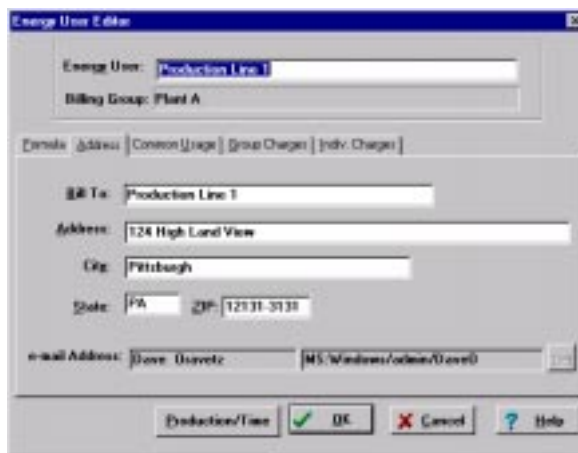
9. Type the billing name and address in the fields provided.

If you plan to distribute energy bills using the e-mail system, be sure to enter the e-mail address information also.

10. Click the Common Usage tab.

The Common Usage Tab displays.

If there are common usage categories that are allocated using weight points, they display on this tab.

> **Note**
> The Common Usage tab in the Energy User Editor displays only those common usage categories for which costs are distributed via weight points. Common usage categories distributed via Equal share, per kW, per kWh, per kVA, or per kVAh may apply to this user, but do not require you to define any additional information at the user level.

11. If applicable, type the number of weight points you want to assign to this user for each type of common usage cost in the corresponding field in the Weight Points column.

12. Click the Group Charges tab.

The Group Charges tab displays.
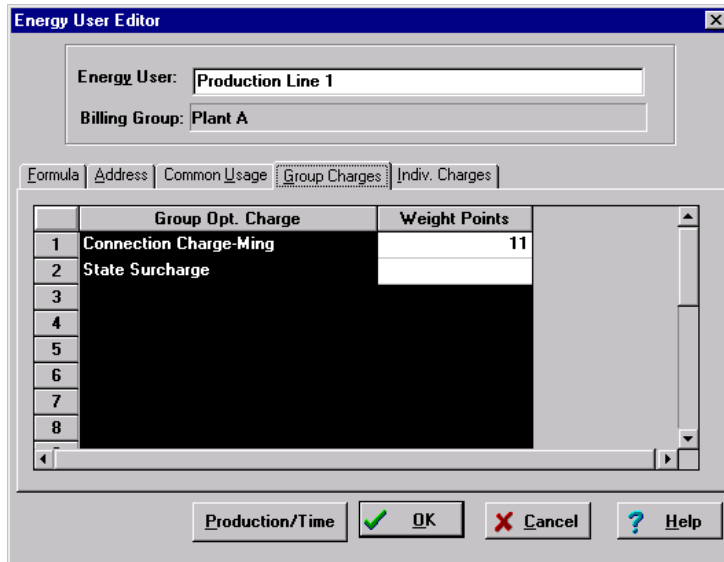
Note
Only group charges that are distributed according to weight points display on the Group Charges tab.

13. If applicable, type the number of weight points you want to assign to this energy user for each type of group optional charge in the Weight Points column.

14. Click the Individual Charges tab.

The Individual Charges tab displays.
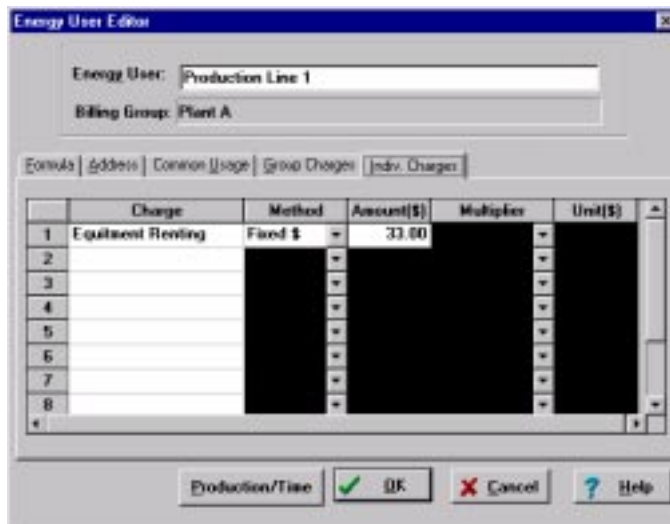
15. In the charge column, type a name or description for each individual charge.

16. From the Method drop-down list, select a cost computation method for each individual charge.

    The cost computation method can be one of the following:

    ♦ Fixed
    A fixed charge is a charge that you set explicitly in this dialog box and is unrelated to energy consumption. Consequently, you need only enter an amount after selecting this option.

    ♦ Per Usage
    With the Per Usage method, NetPower Billing computes the individual charge dynamically, based on individual kWh or kVAh consumption.

    ♦ Per Demand
    With the Per Demand method, NetPower Billing also computes the individual charges dynamically, but based on individual kW or kVA consumption.

17. If applicable, type the amount in the Amount column.

    The Amount field applies only if the calculation method is "Fixed $." This is the exact amount that NetPower Billing bills to the energy user.

18. If applicable, choose a multiplier from the Multiplier drop-down list.

    The multiplier applies only to individual charges calculated according to one of the consumption categories (per Demand or per Usage). The multiplier can be Total, Minimum, Maximum, or one of the defined rate period.

    ♦ If you select Total for the multiplier, NetPower Billing multiplies the total for the type of consumption you select by the Unit you enter in the Unit column.

    ♦ If you select one of the rate periods you defined, NetPower Billing multiplies the amount of the type of consumption that occurred during that rate period by the Unit you enter in the Unit column.

    ♦ If you specify Minimum or Maximum as the Multiplier, NetPower Billing selects the rate period dynamically, based on the energy usage (kW, kWh, kVA, kVAh). If you specify Minimum, NetPower Billing selects the rate period containing the smallest energy usage and calculates the charge based on the number of kilowatts or kilowatt hours used in that rate period. If you specify Maximum, NetPower Billing selects the rate period with the largest energy usage to determine the charge.

19. If applicable, type the units in the Units column.

   The unit applies only to individual charges calculated according to one of the consumption categories (per demand or per usage). The unit is a dollar amount. If you set the calculation method to per demand and the unit value to 1.0, the amount of the individual charge is $1 per kW or kVA.

20. When you have finished specifying the energy user, click OK.

NetPower Billing saves the information you entered and closes the Energy User Editor dialog box.

Procedure Information Map
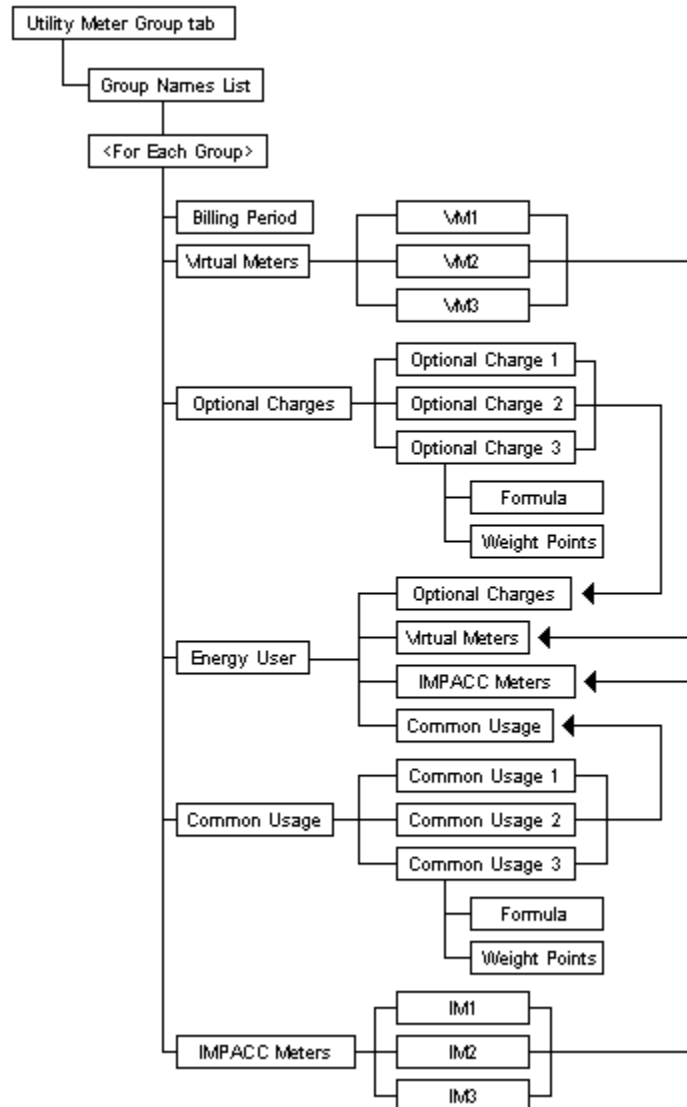
Setting Up NetPower Billing for E-Mail Distribution

You can set up NetPower Billing to distribute NetPower Billing reports and bills to your energy users via e-mail. Currently, NetPower Billing only supports Microsoft Exchange®.

To set up NetPower Billing to be able to distribute reports via e-mail, do the following:

1. Set up an e-mail Post Office or connect to an existing Post Office to which the NetPower Billing system is connected. For more information on setting up or connecting to a Microsoft Exchange Post Office, see the documentation for Microsoft Exchange. To find out the name of an existing Post Office, see your network system administrator.

2. If they are not already established, create e-mail mailboxes for each NetPower Billing energy user that you wish to receive NetPower Billing generated reports via e-mail.

3. Logon to Microsoft Exchange by clicking the Inbox on the desktop.

4. From the File menu of the NetPower Billing main menu, select the Logon to E-Mail option.

   NetPower Billing displays a small mail envelope icon at the bottom of the main window to indicate that mail is available.

5. Edit each NetPower Billing energy user who will receive reports by e-mail and enter the e-mail address in the appropriate edit box.

When you have completed this procedure, the reports for the energy users that you set up for e-mail distribution are sent to their mail boxes on the Microsoft Exchange system instead of being printed out.

Currently, only the Bills for Last Billing Period and Product Energy Bill(s) can be distributed by e-mail.