

# National Energy Performance Rating System

## XML Data Transfer Application

### User's Guide

Version: 2.9

## Revision History

Revision	Release Date	Description
2.1	3/26/2004	Initial Release
2.2	4/2/2004	Made edits per ICF feedback in e-mail dated 3/30/2004
2.3	4/8/2004	Made edits per ICF feedback in e-mail dated 4/7/2004
2.4	4/15/2004	Updated Space use attributes and instructions for installing the zip file.
2.5	5/7/2004	Updated upper bound values for Supermarkets and Warehouses and added negative score (- 7) for invalid zip code.
2.6	5/25/2004	Made edits per ICF feedback in e-mail dated 5/25/2004
2.7	7/23/2004	Updated FAQ section per ICF edits.
2.8	8/18/2004	Updated space eligibility requirements and information regarding XML sample request and response documents.
2.9	9/8/2004	Referenced Section 7 in the FAQ section on deleting buildings. Added section 7.3 detailing the new webpage used to access documents.

## Table of Contents

1. OVERVIEW _____	4
2. HOW TO INSTALL THE VISUAL BASIC (VB) APPLICATION _____	6
3. HOW TO USE THE VB APPLICATION _____	7
4. CALLING THE WEB SERVICE DIRECTLY _____	12
5. COMMON XML MISTAKES _____	13
6. WEB ACCESS _____	15
7. GETTING HELP _____	17
8. APPENDIX A: FAQ _____	19
9. APPENDIX B: SPACE TYPE REQUIREMENTS _____	24
10. APPENDIX C: SAMPLE XML REQUEST & RESPONSE DOCUMENTS	26
11. APPENDIX D: BENCHMARKING ELIGIBILITY RULESETS _____	27

## 1. OVERVIEW

The XML Data Exchange (XMLDEX) project is part of the EPA National Energy Performance Rating System. The XMLDEX system provides for the submission of Facility data from XML participants and the retrieval of benchmark rating data back to the participants. The system utilizes two options for the submission of building energy and space information and the receipt of EPA benchmark ratings:

1. A Visual Basic desktop application based on the VB.Net specification is provided to facilitate a participant's understanding of the XML data transfer process. This application provides a simple, manual interface for participants to test the data submission and retrieval process. It is not intended to support long-term, high-volume data transfer over time.
2. A web service is provided for participants to use directly through an instantiation of the web service methods. This approach is intended to support the formal, automated data transfer relationship that is established by each participant via their hosting environment. Once a participant has successfully performed the data submission and retrieval steps manually using the VB application, the process should be automated using the web service.

Participants are also provided with a web access tool to view rating and Facility information. Users are notified via e-mail messages regarding the status of the processing of the XML documents, or for errors that might arise during processing.

### 1.1 Schema Locations

In order for the XMLDEX web service to validate the XML document against the new Benchmark schema, all XML document files must provide the proper namespace to the URL below.

<http://ems-mx4.sradev.com/pmdxp/Benchmark-v.1.3.xsd>

***Example of where to put the URL inside an XML Document***

```
<?xml version="1.0" encoding="utf-8"?>
<!-- edited with XMLSPY v2004 rel. 3 U (http://www.xmlspy.com) by PHF (SRA International) -->
<XMLParticipant xsi:noNamespaceSchemaLocation="http://ems-mx4.sradev.com/pmdxp/Benchmark-
v.1.3.xsd" ID="81827451" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

The current version of the Benchmark schema is version 1.3 (Benchmark-v.1.3.xsd). Where appropriate, references to the Benchmark schema in this document have been made generic and are noted as Benchmark.xsd.

Once scores have been calculated they can be retrieved using a VB application or web service to retrieve the xml file. This file follows the latest version of the EPAScore schema which can be found here:

<http://ems-mx4.sradev.com/pmdxp/EPAScore-v.1.3.xsd>

The current version of the EPAScore schema is version 1.3 (EPAScore-v.1.3.xsd). Where appropriate, references to the EPAScore schema in this document have been made generic and are noted as EPAScore.xsd.

More information on these schemas and their use is found in this document.

### 1.2 Requirements and Conditions

MS Explorer and MS.NET must be installed on your computer. MS.NET is not included in the installation package but can be downloaded at

<http://msdn.microsoft.com/netframework/downloads/howtoget.asp>

MS.NET must be installed by someone with Administrative privileges. SRA is not responsible for the installation of MS.NET or consequences of that installation.

## 2. HOW TO INSTALL THE VISUAL BASIC (VB) APPLICATION

### 2.1 New Participants

For participants who do not already have the VB application installed, follow the steps below.

1. Copy the attached zipped file to your desktop
2. Unzip the 3 files contained therein to a folder of your choice
3. Run the Setup.exe file
4. Follow the instructions on the screen

By default, the install package will place the output and source files in C:\Program Files\EPA\National Energy Performance Rating System\. In addition, it will also create a shortcut to pmbInterface.exe on your desktop, and under Start/Programs/National Energy Performance Rating System/.

### 2.2 New and Current Users

Please note that the VB application provides a simple interface for testing out the data submission and retrieval process. Once you have successfully performed these steps manually, the process can be automated using the send and fetch methods of the web service. For information on how to call the web service directly, please see Section 4.

## 3. HOW TO USE THE VB APPLICATION

### 3.1 Overview of the Data Transfer and Score Retrieval Processes

Before beginning the data transfer process, it is important to understand the following:

The VB application provides a means for testing the data transfer process and serves two primary functions. First, the VB application is used to send data to EPA for scoring (see “How to Send Data for Scoring” outlined below) and provides any error messages related to username and passwords or invalid XML files. Second, the application is also used to retrieve benchmarking scores from EPA, allowing at least one day for processing (see “How to Retrieve Your Scores” outlined below).

A Login name and Password are required for web access to the scores.

Once data is submitted to EPA, it will be analyzed based on the following criteria:

- a. A well-formed XML file.  
If it is not in an acceptable format, an e-mail notification from EPA will be sent to the user indicating data or data format errors.
- b. Complete data.
- c. Data values are within acceptable ranges, (e.g. floor space of individual spaces does not exceed the total floor space of the building.)

If data does not meet criteria (b) and (c), you will be notified when you attempt to retrieve your benchmark scores. See the Section “Understanding the EPAScore Schema,” for a description of the format of the responses that you will receive from the Web service.

If data is successfully imported into the system and meets the above criteria, scores will be processed and available upon user retrieval.

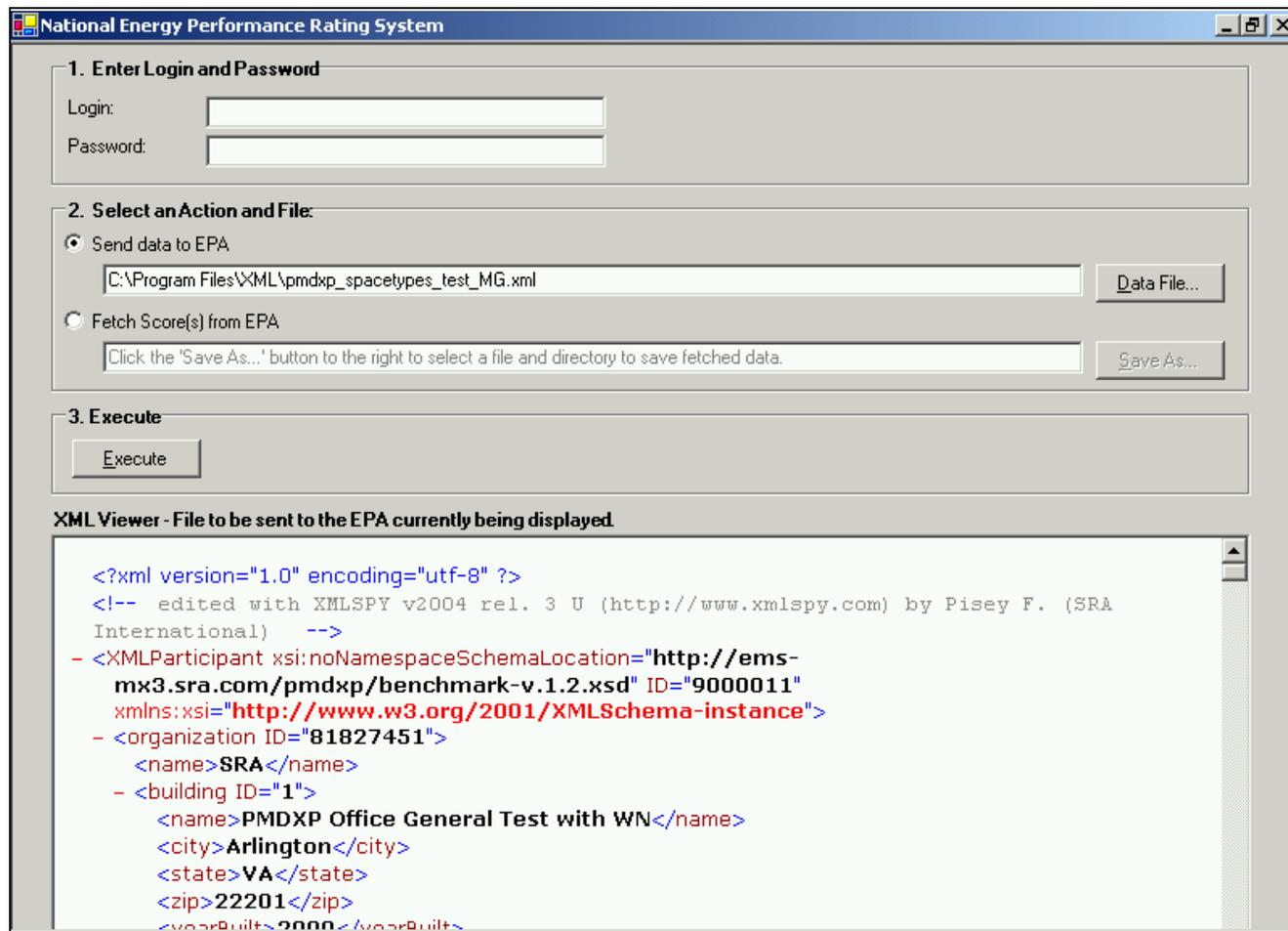
Data submitted to EPA can also be viewed via Web access any time by accessing the following URL and entering your user name and password:

<http://ems-mx4.sradev.com/pmdxp/xmldex/>

For more information on viewing scores via Web access, please see Section 7.

### 3.2 How to Send Data for Scoring

Refer to Figure 1 when reading the following sections.



8. If processing is not successful, the Java code obtains the email address assigned to the User ID and an e-mail is sent identifying the nature of the problem.

### 3.3 How to Retrieve Benchmarking Scores

1. Type in your login name in the **Login** text box.
2. Type in your password in the **Password** text box.
3. Select the **Fetch Score(s) from EPA** radio button.
4. Select the **Save As...** button to select the directory and to name the file to save. (Note: If you select an already existing file, this file will be overwritten).
5. Click the **Execute** button to retrieve the score file from EPA. The XML Viewer window will display your benchmarking scores if they are available, or messages indicating the following (the messages will take the EPAScore schema format described below):
  - a. There is currently no scored information to retrieve. The system may still be processing the score (see Figure 2 below).
  - b. Web services not responding and to try again later.
  - c. Login Name and Password were not recognized and to try again,
6. The user can also view Benchmark scores on-line at <http://ems-mx4.sradev.com/pmdxp/xmldex/> and using their username and password to log in.

### 3.4 Understanding the EPAScore Schema

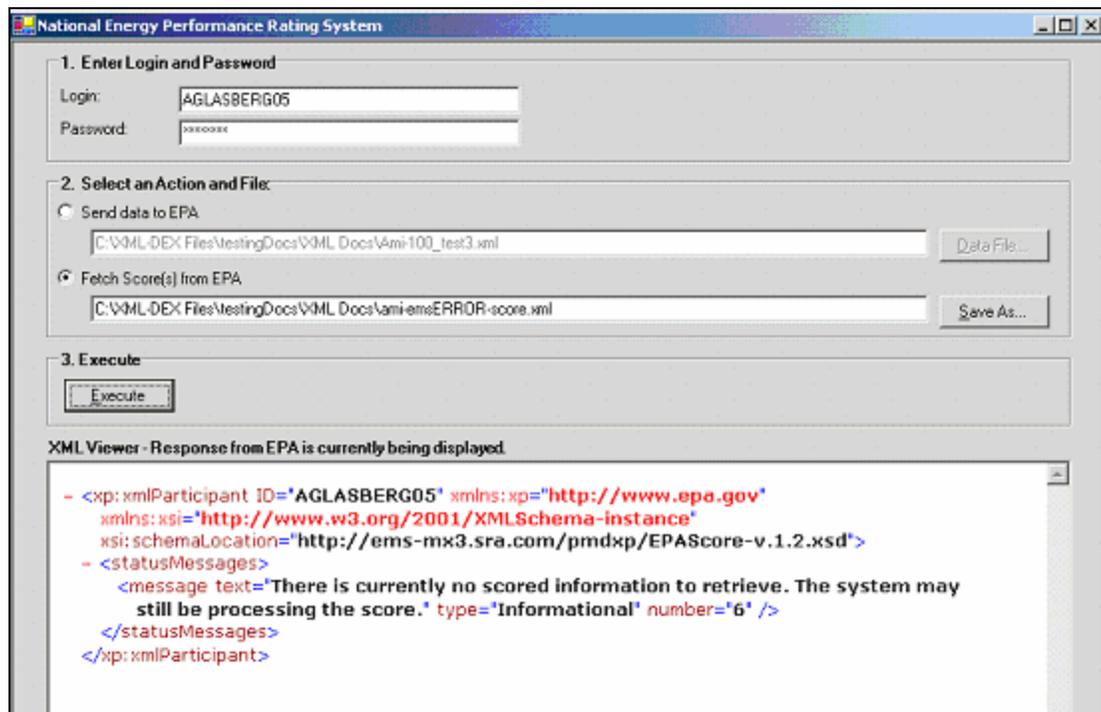
The EPAScore schema describes the format of responses from the web service back to you. This includes responses when sending and retrieving data. This XSD is used only for responses from the web service. You can view the EPAScore schema at <http://ems-mx4.sradev.com/pmdxp/EPAScore-v.1.3.xsd>.

Submissions of data must follow the benchmark XML schema.

#### 3.4.1 The <statusMessages> Node

The “statusMessages” node contains messages from the EPA web service concerning submissions or retrievals (see Figure 2). There are two Types of messages:

1. Error: These are messages of critical concern, such as a failure to send a valid login/password to the web service.
2. Information: These are non-critical messages, such as a successful transfer.



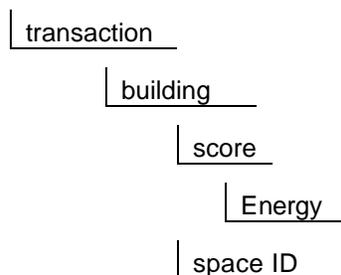
### 3.4.2 Submitting Data

When submitting data to the web service, the statusMessages node will be the only child node under the root node of the returned XML (The root node is xmlParticipant). The message nodes contained in the statusMessages node will inform you as to the success or failure of the submission. Success means only that the data was received by the EPA. It does not mean that it has been validated yet.

### 3.4.3 Retrieving Data

When retrieving data from the web service, the statusMessages node will contain information as to whether there were any scores returned. If no scores are returned (because they are still being processed) there will be no other nodes beneath the root node.

If scores are returned they will follow this hierarchy (abbreviated here from the EPAScore schema):



The information in the Energy node includes the following items that are associated with the score:

- kBtuTotal – The annual energy consumption, totaled across all meters, for the period of time being analyzed (year ending on the asOfDate). There is also an indicator showing if the value is weather

normalized or not. The kBtuTotal value with the indicator of weatherNormalized="N" shows the actual energy consumption. The kBtuTotal value with the indicator of weatherNormalized="Y" shows the weather normalized energy consumption. If the weather normalized value is the same as the actual value, then no weather normalization occurred on the energy data.

- kBtuSF – The energy intensity, or energy consumption per square foot in a building. This is an annual value, calculated by taking the total energy consumption for the building in kBtu for the annual analysis period and dividing it by the total floorspace of the building for the same period. This item is also provided in both weather normalized and actual values.
- kbtuSF\_ForScoreOf50 – The energy intensity (kBtu/sf) that the building would produce if it received a benchmark rating of 50 (the average nationwide score). It is based on the building's current site energy intensity and other building characteristics that affect the benchmark rating. This is only provided as an actual (non-weather normalized) value.

**3.4.4 Negative Scores**

The XMLDEX web service will provide negative scores in the score element of the response message, in cases where a benchmark score cannot be calculated. The range of valid scores is 1 to 100.

If a benchmark score cannot be calculated for a building, one of the negative values will be returned and an explanation from the list below will be provided in the description element.

<b>Error Code</b> (stored in SYSTEM_MESSAGE table)	<b>Error Displayed to user</b>
-1	The meter data for this facility did not meet the requirements for a benchmark rating
-2	Electrical meter data is required for a benchmark rating
-3	The space definition for this facility did not meet the requirements for a benchmark rating
-4	No energy use for the 12 month period
-5	The energy consumption for this facility is beyond the maximum amount for a benchmark rating
-6	There was an internal error calculating a benchmark rating for this facility
-7	Invalid Zip Code

## 4. CALLING THE WEB SERVICE DIRECTLY

In addition to using the VB interface application to access the web service, users may also use the web service directly through an instantiation of the web service methods. It is expected that participants will implement this approach once the basics of the XML data transfer have been tested using the VB interface. The web service currently includes three methods for sending and retrieving data. The SendData and FetchData methods are the same methods that are used by the VB application when sending and retrieving data. The FetchBetween method is available only through the web service and provides a means for participants to retrieve data for specified buildings and time periods.

You may access the web service at <http://ems-mx4.sradev.com/pmdxp/pmb1.asm1>.

### SendData

**Purpose:** Allows the participant to send data to be scored.

**Inputs:**

*User:* This is the login the participant selected upon signing up for the service.

*Password:* This is the password the participant selected upon signing up for the service.

*xmlFile:* This is the xml data the participant is submitting. This data must conform to the “Benchmark-v.1.3.xsd”.

**Outputs:** Success or failure message for the data submission

### FetchData

**Purpose:** Allows the participant to fetch scores for submitted transactions.

**Inputs:**

*User:* This is the login the participant selected upon signing up for the service.

*Password:* This is the password the participant selected upon signing up for the service.

**Outputs:** A string conforming to “EPAScore-v.1.3.xsd”.

Be sure to read section 3.4 – Understanding the EPAScore Schema for details on the data that is returned as a result of the FetchData method

### FetchBetween

**Purpose:** Allows the participant to fetch multiple scores for a given building for a given period of time.

**Inputs:**

*User:* This is the login the participant selected upon signing up for the service.

*Password:* This is the password the participant selected upon signing up for the service.

*Organization:* This is the organization to which the building belongs. This is a unique participant supplied identifier (organization ID).

*Building:* This is the building for which the participant wants scores. This is a unique participant supplied identifier (building ID). It must be unique within the scope of the supplied organization.

*beginDate:* The date which defines the beginning of the period for which the participant wants to receive scores for the specified building.

*endDate:* The date which defines the end of the period for which the participant wants to receive scores for the specified building.

## 5. COMMON XML MISTAKES

The following are common mistakes when transcribing data into the accepted XML schema.

1. **XML Participant element is missing the ID attribute.** The XML Participant element or node is the root of the XML document. The ID attribute of this element must be populated with the Participant ID given to you when you signed up with this program.
2. **XML Participant and Organization names are not assigned correctly.** The XML Participant who registers to participate in the data exchange process is the entity that is actually submitting data via the data exchange process. Most often, this is not the owner of the buildings for which data is being submitted, but rather an energy information provider who is providing a service to its customers. This entity is identified by the XML Participant ID in the schema, using the participant ID that was assigned at the time of registration. The Organization element in the XML schema is intended to identify the customers of the XML Participant. These are the owners and operators of the buildings for which energy and space data is being submitted. For example, if ABC Provider provides energy information services to customer XYZ Supermarkets and begins to provide automated data upload and rating services, their data submissions should indicate XYZ Supermarkets as the Organization name.
3. **Improper capitalization.** XML is a case sensitive standard. For example, there is a difference between “Building” and “building”. Be sure that the proper case is used for the schema elements.
4. **Improper value for an enumerated Type.** Certain elements of the schema must only use values that have been enumerated. Values that are allowed for these enumerated Types can be found within the schema. An example is the “energyUnit” element under the “meter” element. This element is of Type “energyUnitType” and can only contain the values defined for “energyUnitType”. These values are as follows.

**For Electricity:**

kWh (thousand Watt-hours)  
 kBtu (thousand Btu)  
 MWh (million Watt-hours)  
 MBtu (million Btu)

**For Natural Gas:**

ccf (hundred cubic feet)  
 therms  
 kBtu (thousand Btu)  
 kcf (thousand Btu)  
 cf (cubic feet)  
 MBtu (million Btu)  
 Mcf (million cubic feet)

**For Steam:**

lbs (pounds)  
 kLbs (thousand pounds)  
 MLbs (million pounds)  
 kBtu (thousand Btu)  
 MBtu (million Btu)

**For Chilled Water:**

ton hours  
 daily tons  
 gallons  
 kBtu (thousand Btu)  
 MBtu (million Btu)

**For Fuel Oil (No. 2):**

a. gallons

**For Fuel Oil (No. 1):**

a. gallons  
 b. kBtu (thousand Btu)  
 c. MBtu (million Btu)

**For Fuel Oil (No. 5, 6):**

a. gallons  
 b. kBtu (thousand Btu)  
 c. MBtu (million Btu)

**For Coal (anthracite):**

a. lbs (pounds)  
 b. tons  
 c. kLbs (thousand pounds)  
 d. MLbs (million pounds)  
 e. kBtu (thousand Btu)  
 f. MBtu (million Btu)

**For Coal (bituminous):**

a. lbs (pounds)  
 b. tons  
 c. kLbs (thousand pounds)  
 d. MLbs (million pounds)  
 e. kBtu (thousand Btu)  
 f. MBtu (million Btu)

**For Coke:**

a. lbs (pounds)  
 b. tons  
 c. kLbs (thousand pounds)

- b. kBtu (thousand Btu)
- c. MBtu (million Btu)

**For Liquid Propane:**

- a. gallons
- b. cf (cubic feet)
- c. kcf (thousand cubic feet)
- d. kBtu (thousand Btu)
- e. MBtu (million Btu)

- d. kBtu (thousand Btu)
- e. MBtu (million Btu)

**For Propane:**

- a. gallons
- c. cf (cubic feet)
- d. kcf (thousand cubic feet)
- e. kBtu (thousand Btu)
- f. Mbtu (Million Btu)

**For Kerosene:**

- a. gallons
- b. kBtu (thousand Btu)
- c. MBtu (million btu)

**For Wood:**

- a. tons
- b. kBtu (thousand Btu)
- c. MBtu (million Btu)

**For Diesel (No. 2):**

- a. gallons
- b. kBtu (thousand Btu)
- c. MBtu (million Btu)

**For Other:**

- a. kBtu (thousand Btu)

5. **Incorrect date format.** The date format for the input follows the “mm-dd-yyyy” format.
6. **Overlapping meter periods.** Meter periods cannot overlap by more than one day.

## 6. WEB ACCESS

You can check the status of your submission, and view benchmark scores for the Facilities in your portfolio, by using web access and logging in to the following URL:

<http://ems-mx4.sradev.com/pmdxp/xmldex/>

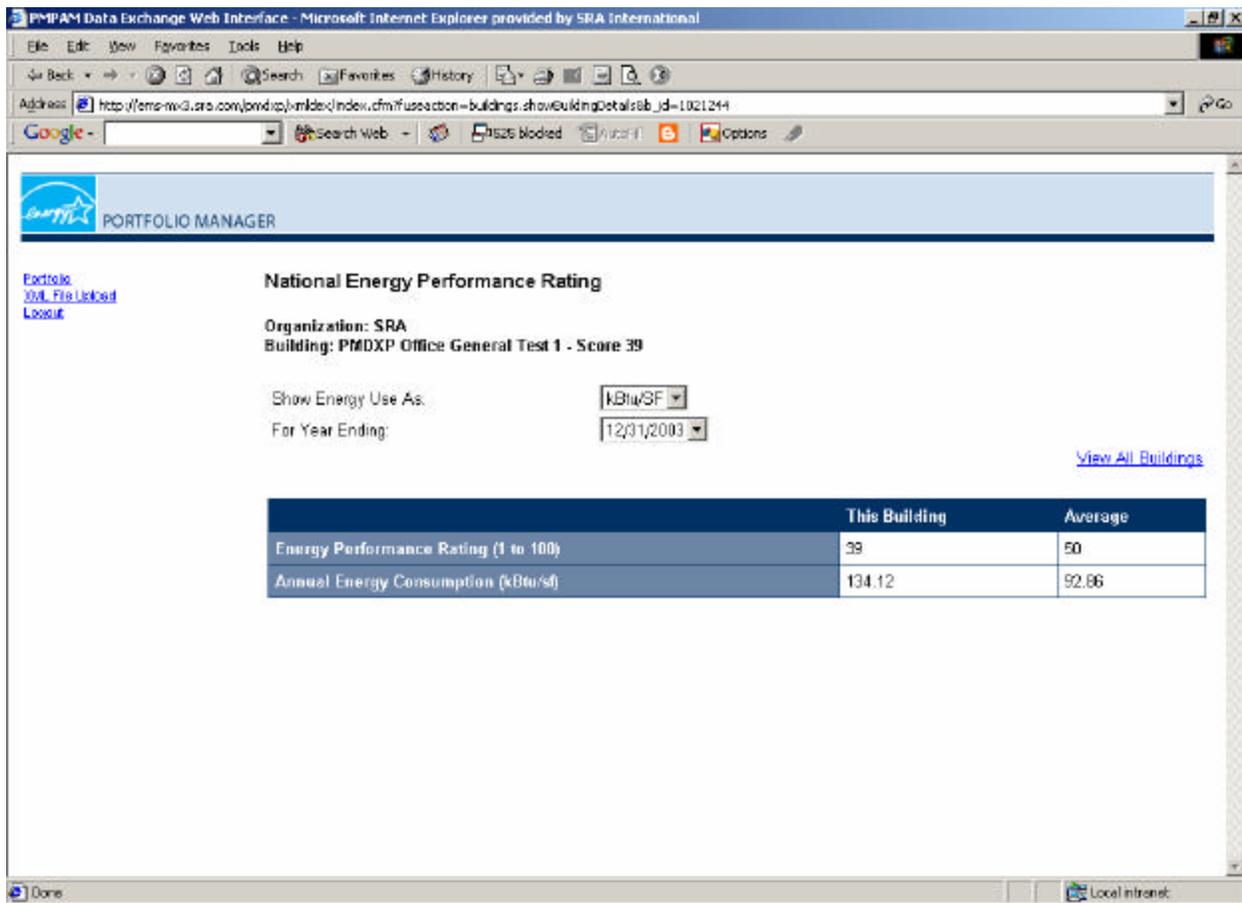
Enter your Login name and Password and click the LOGIN button. You will see a page listing all buildings submitted via your XML data uploads (see Figure 3).

The screenshot shows a web browser window titled "PMPAM Data Exchange Web Interface - Microsoft Internet Explorer provided by SRA International". The address bar shows the URL: <http://ems-mx4.sradev.com/pmdxp/xmldex/index.cfm?useraction=buildings&CFID=1006070&CFTOKEN=04747409>. The page content includes a "PORTFOLIO MANAGER" header and a "National Energy Performance Rating" section. The data is organized into four groups based on organization names: Company One, Company Three, Company Two, and Organization Four. Each group contains a table of buildings with their respective metrics.

Building	Floor Space	Actual Energy Intensity	Energy Performance Rating	Last Modified
<b>Org Name: Company One</b>				
<a href="#">Raleigh Regal Motel</a>	460,900 sf	48.40 kBtu/sf	24	04/05/2004
<b>Org Name: Company Three</b>				
<a href="#">Wilmington Regal Motel</a>	430,600 sf	54.01 kBtu/sf	83	04/06/2004
<b>Org Name: Company Two</b>				
<a href="#">Eckson Regal Motel</a>	330,900 sf	49.71 kBtu/sf	95	04/06/2004
<b>Org Name: Organization Four</b>				
<a href="#">Milton Center Motel</a>	360,600 sf	52.15 kBtu/sf	85	03/31/2004
<a href="#">Willard Conference Center</a>	360,600 sf	52.15 kBtu/sf	N/A	03/31/2004
<b>Org Name: Organization Three</b>				

**FIGURE 3** National Energy Performance Rating - Portfolio View

This view lists all buildings submitted by your organization, along with selected data items such as floor space, energy use and benchmark ratings. The range of valid scores is 1 to 100. Negative scores will be displayed as 'N/A.' Click on the building link to get more detailed information about a specific building (see Figure 4). At any time you can log out by clicking the Logout link in the upper left corner. The Portfolio link returns you to this page.



**FIGURE 4:** National Energy Performance Rating - Specific Building View

As shown in Figure 3, the benchmark rating and energy use per square foot for the chosen building are depicted. In addition, the average annual energy intensity for this building (i.e., the energy intensity that would be expected for this building if it achieved an average performance rating of 50) is also shown. Alternatively, you can change the “Show Energy Use As:” to kBtu, and get annual energy consumption data in the second row.

You can return to the whole portfolio view by clicking the “View All Buildings” or the “Portfolio” links. Click on the LOGOUT link in the upper left side to log out.

## 7. GETTING HELP

### 7.1 Problems or Questions

If at any time you encounter an error or a problem for which a solution is not addressed in this user's guide, you can e-mail [energystarbuildings@epa.gov](mailto:energystarbuildings@epa.gov). In order to facilitate a quick response, it is recommended that you provide as much as information in your e-mail as possible.

When e-mailing EPA support, please provide the following information:

- **Username**
- **XML Participant ID** used in the XML file
- **Organization Name** for which the file was sent, if applicable
- **IP Address** of the computer used to submit the XML file
- **Date and time** the file was sent
- **Size** (KB or MB) of the XML file sent
- **Description** of the **error** that was received
- **Date and time** the error was received
- **Phone number**
- **Number of** times you submitted the XML document
- The **Action** that was performed before receiving the error
- Was an **e-mail** sent to you indicating success or failure?
- Was the XML input file **validated** against the benchmark schema before submission?

It would also be helpful to include the words XML Data Upload in the subject of the e-mail.

### 7.2 Removing Data

A process has been developed to meet the needs of XML participants who need to clear out previously submitted data in order to make new submissions with modified or corrected data. For the short term, this will be done via a somewhat manual process. You will need to submit a request via e-mail for building data to be removed prior to your next submission. Data can be removed at the building level (including all meter, space, and general data) or at the meter level. In either case, all data at the specified level will be removed for the specified buildings.

To request for deletion of data, you can e-mail [energystarbuildings@epa.gov](mailto:energystarbuildings@epa.gov). In order to facilitate a quick response, it is recommended that you provide the information below in your e-mail:

- Indicate that you are an **XML participant** and that you would like to have data removed from your account
- **XML Participant ID**
- **Organization ID**
- **Building IDs** of all buildings that need to have data removed
- **Level at which you would like to have the data deleted** -- all building data or only meter data

Your request will be processed within 3 business days and you will receive an e-mail when the data has been removed. At that point, you will be able to submit the new dataset. This is a manual process so we need to limit the frequency of deletion requests per host participant to one every other week. However, multiple buildings can be included in a single request.

It would also be helpful to include the words XML Remove Data in the subject of the e-mail.

## 7.3 Supporting XMLDEX Documents

To access the latest version of this User’s Guide and all other documentation referenced in this User’s Guide, please visit the webpage below.

[http://www.energystar.gov/index.cfm?c=neprs.neprs\\_documentation](http://www.energystar.gov/index.cfm?c=neprs.neprs_documentation)

This webpage serves as a central resource for all documentation and all applications discussed in this document. The webpage will provide additional information and the necessary links to access all supporting documentation. Select the link above to access the:

- Data Exchange System User’s Guide
- Visual Basic .NET Desktop Client
- ASP.NET Web Service
- Web Access Page
- Request XML Schema
- Response XML Schema
- Sample XML Request file
- Sample Response XML file

## 8. APPENDIX A: FAQ

The following provides answers to frequently asked questions:

### 8.1 General Upload Issues

#### **Are there any limits to the number of buildings for which I can submit data?**

For the VB application, there is no limit to the number of buildings in the XML file that you submit just as long as the file is no larger than 3.5 MB.

If you choose to call the web service directly, there is no explicit limitation to the size of the file or number of buildings that can be submitted. A limitation may be imposed by the network, hardware, and/or software used to directly call the web service.

#### **How frequently can I submit data?**

For the VB application during the pilot phase, an organization can submit an XML file no larger than 3.5 MB once every two hours. There is not a limit on the number of submissions allowed per day, as long as the file is no larger than 3.5 MB.

If you choose to call the web service directly, the web service can be called once every two hours. There is not a limit on the number of submissions allowed per day.

#### **How can I check the status of the data that I have submitted? How often can I do this?**

You can check the status of your data and view benchmarking ratings anytime by going to <http://ems-mx4.sradev.com/pmdxp/xmldex/> and entering your Login Name and Password.

#### **How often is the data I submitted processed?**

Data processing begins immediately but the length of the process varies. It is based roughly on the amount of data submitted.

#### **How long are values available to be retrieved? Once retrieved, how often can they be retrieved again and for how long?**

Results are retrieved by the user via the FetchData method of the web service. After the results of a transaction are retrieved, the dataset will be marked as retrieved and will not be available to the user upon future calls to the web services via the FetchData method. To retrieve values that have been previously Fetched, the FetchBetween method of the web service should be used. It allows the user to retrieve the ratings for any building and any time period.

#### **Where do the ID attributes come from?**

The IDs for the organization, buildings, meters, and spaces are IDs that you provide and use to identify these items. We use our own internal IDs to map to those that you provide. The IDs can be text up to 30 characters long (as defined in the schema). The XMLParticipant ID is provided to you when you sign up to test the XML data transfer process and is unique to you.

#### **Can I change my organization, building, meter, or space type IDs?**

No, these IDs must remain static. In the case of the building ID, changing the ID value will either create a new building in the system, if the ID hasn't already been used, or update the data if the ID already exists.

#### **What is the degree of uniqueness for a given ID (building, meter, or space type)?**

The ID must be unique within the appropriate scope of the element. A meter ID must be unique within a building, and a building ID must be unique within an organization, etc. Two separate buildings can have the same ID for a meter (different scope).

The following provides an example of allowable IDs:

XML Participant ID 1234  
    Organization ID 234  
        Building ID 1  
            Meter ID 1  
            Meter ID 2  
        Building ID 2  
            Meter ID 1  
            Meter ID 2  
    Organization ID 456  
        Building ID 1  
            Meter ID 1

### **What encoding is preferable?**

Please limit submissions to US-ASCII (ISO 646).

### **If building data is submitted for testing purposes, is it possible for this data to be removed in order to clear out the account?**

Test data can be removed upon request. Send an e-mail to [energystarbuildings@epa.gov](mailto:energystarbuildings@epa.gov) to request that your account data be cleared out (see section 7 on "Removing Data").

### **What do you mean when you refer to this as a "pilot program" and when will this initiative leave the "pilot" stage?**

During this pilot phase, we are working closely with our third party hosts to solicit feedback regarding implementation. We will no longer be a pilot program when we have an offering that is proven over a variety of large ENERGY STAR Partner accounts and is comprehensive enough to be offered as a complete package to future hosts. All of our third party hosts are currently working with one or more ENERGY STAR Partners to formally implement the delivery of ratings. We have just upgraded our IT infrastructure, which required some adjustments to the XML schema and web service. We are making a variety of improvements within that new infrastructure, many at the request of our third party hosts, and plan to add new support for hosts in the form of messaging and technical guidance to offer customers. We are still getting important input from our third party hosts, and a few of our hosts have finalized the delivery of the rating. In addition, there are capabilities that EPA is interested in adding as part of this third party delivery channel that will require interaction with our hosts to select the most mutually advantageous approach. Our "pilot" status maximizes the interaction we can have with hosts as this offering is more fully defined.

### **Will we be able to help our customers obtain Labels and other ENERGY STAR recognition?**

Yes, in fact, many service providers have already found ways to assist their customers with recognition. While we are currently finalizing the data exchange approach required for the third party to deliver the rating, we are also investigating options for integrating ENERGY STAR recognition functions into third party environments. This may involve passing additional data, displaying forms generated by the EPA server, or both. Because we are still in "pilot" mode, we will have a chance to solicit your input regarding the most effective and desirable approach. We anticipate a proposed specification late this summer.

## **8.2 Building Issues**

### **Will existing data be overwritten if any of the building characteristics (building name, address, etc.) are different in an XML submission than in previously submitted data?**

If building data is submitted with the same organization ID and building ID as an existing building, and the general building information (such as the name, address, or year built) has changed, the system will overwrite the existing data and replace it with the newly submitted data.

**If a building is no longer active or in use, how can it be removed?**

It is currently not possible to remove a building via the XML process, but this is on the list of future enhancements. However, if the building still exists, it is preferable to keep it in the system, even if energy data is no longer being submitted. If a building has been duplicated or created by mistake or for testing purposes, it can be removed upon request (see section 7 on “Removing Data”).

**Can I submit data for buildings located outside of the United States?**

For the XML data transfer testing period, we are not accepting data for buildings located internationally. However, the on-line version of Portfolio Manager will provide benchmarking ratings for buildings located internationally.

**Can I change the name of a building that has previously been submitted?**

The building name can be changed at any time, as long as the building ID does not change. If you submit data with the same building ID, but change the basic building data, such as the name or address, this information will be updated. This is also true for the organization name, space name, and meter name.

## 8.3 Space Type Issues

**Will existing data be overwritten if any of the space characteristics (gross floor area, occupancy hours, etc.) are different in an XML submission than in previously submitted data?**

If data is submitted with the same organization ID, building ID, and space ID as an existing building in the system and the space information (such as space name, gross floor area, occupancy hours, number of occupants, etc.) has changed, the system will overwrite the existing data and replace it with the newly submitted data.

**If a data element for a specific space type (i.e. Office, etc.) is not included, what will happen?**

Certain space-level data elements are required, such as the total floorspace and space type for all spaces, and the hotel type for hotels. If one of these required data elements is not provided, the data transfer will fail. However, there are other non-required space data elements (such as the number of occupants and PCs for offices) that do not need to be included in the data transfer. If no value is provided for a non-required data element, the system will provide a default value in order for the building to receive a rating.

**How are the default values for each space type determined?**

Each space characteristic has a default value that is filled by the system if no value is provided. Some are set values (such as the weekly operating hours for a given space type), while others are calculated (such as occupants based on a density per thousand square feet).

## 8.4 Energy Meter Issues

**How does the system determine how many months of energy data have been submitted?**

The benchmarking calculations determine if there is sufficient data available based on the dates of the individual energy entries. All of the data submitted for a meter will be compiled, whether it was submitted in monthly, weekly, daily, or other increments. The system will then start at the end of the last full month (e.g., if data was submitted through February 12, the last full month would end on January 31) and count backwards to ensure that there are 12 full, consecutive calendar months of data. Then the system compares all submitted meters to determine if there are 12 full months of consecutive data that overlap for the required 12 month period. It does this by counting back from the last full month of the meter with the earliest end date. (i.e., if there are two meters, one ending March 15 and the other ending February 15, the system counts back from January 31, the last full month of the meter with the earliest end date).

**If a building has 12 months of meter data for a gas meter but the last month of the electric bill has not come in, leaving only 11 months, what affect will that have on the rating?**

Most likely, the building would not receive a rating for the latest gas meter date until the electric meter data is available for the same time period. The requirement is that there are at least 12 full calendar months of energy data across all meters in order to generate a rating for a year ending period.

**If the final meter entries for a building do not run to the end of the month, is that last month excluded?**

Yes, ratings are only calculated for full months of energy data, so any partial months would be excluded. For example, if you had data ending on March 15, the rating would be calculated based on the energy data through the end of February. A rating for March would not be available until data is submitted through a time period that covers the end of March (such as April 15).

**If we send 12 months of energy data for 2002, then a year later, we send another 12 months of new data, will the old data be overwritten?**

The system maintains all energy data submitted over time. If data for 2003 is subsequently submitted, it will be added to the building data and used to calculate a new rating. If revised data for 2002 is submitted (using the same identifiers as the 2002 data), it will overwrite the existing data and the rating for that time period will be updated.

**Is it necessary to send 12 months of energy data with each submission in order to receive a rating?**

No. Once an initial 12 month period of energy data has been established for a building, data can be submitted incrementally in weekly, monthly, quarterly, or annual segments. As soon as an additional calendar month of energy data is available, a rating for the latest time period will be provided.

**Does “energy cost” refer to the cost per unit of energy consumed or the overall cost for the total amount consumed?**

“Energy cost” refers to the overall cost for the total amount of energy consumed.

**Do the energy consumption and cost elements require 2 decimals?**

No, these numbers do not require 2 decimals, but they will be accepted if they are provided.

**What is the limit on how old the energy data can be and still be submitted via upload?**

There is no limit on the timeframe covered by the meter data that can be benchmarked. If you submit data for January 1999 through December 1999, you can still receive a rating as long as the building meets the benchmarking requirements.

**If a meter ID changes and subsequent energy data is submitted with a different ID, will that affect the ability for the building to receive a score?**

There is currently no way to indicate that the old meter ID is no longer active or that a new meter has become active. Therefore, the benchmarking calculations will interpret this as two incomplete meters, because they do not both cover a full 12 month period, and the building will no longer receive a score. An approach for addressing this problem is on the list of recommended enhancements.

**If a meter or meter reading is submitted by mistake, is there a way to remove them through the automated process?**

There is currently no way to delete a meter or meter reading via the automated process. A special request to remove the data element could be submitted to [energystarbuildings@epa.gov](mailto:energystarbuildings@epa.gov). Be sure to include the item that you want to remove, along with the Organization ID, Building ID, Meter ID, and/or meter reading period that you

would like to have removed (see section 7 on “Removing Data”). An automated approach for removing meter data is on the list of recommended enhancements.

### **How is the rating calculation affected when zero usage records are inserted for Natural Gas or Electricity?**

Meter readings with zero usage can be submitted for Natural Gas, Electricity or other fuel types. As long as the meter readings cover a sufficient period of time and the building is otherwise eligible, a rating will be provided. This is the recommended approach for indicating a period of non-use for a meter, rather than not submitting any usage for the time period at all.

## **8.5 Results Issues**

### **What is the definition of 'Energy Intensity' and what unit is it reported in?**

Energy Intensity is the energy consumption per square foot in a building. This is an annual value, calculated by taking the total energy consumption for the building in kBtu for the annual analysis period and dividing it by the total floorspace of the building for the same period. The units are in kBtu/sf.

### **Is it possible to receive a rating of 'null' or greater than 100?**

Valid benchmark ratings are in the range of 1 to 100. A negative rating could be received if the building data is not benchmarkable. Ratings of greater than 100 or Null will not be received.

## 9. APPENDIX B: SPACE TYPE REQUIREMENTS

There are several requirements for Space Type elements that must be included in XML documents submitted for benchmark scoring. Due to the limitation of extending conditional statements within an XML schema, the XML document may pass the schema validation stage without the inclusion of these Space Type elements. In order to internally validate required elements, the XMLDEX system will generate an error message and scores will not be calculated for the Facilities that are missing required Space Type elements for Hotel, Office, and Warehouse space types.

The following Space Type elements are required if there exists a Space Type of hotel, office, or warehouse:

Hotel Type – Upper Upscale, Upscale, Midscale w/Food and Beverage, Midscale w/o Food and Beverage, Economy and Budget

Office Type – General, Bank Branch, Financial Center, Courthouse

Warehouse Type – Refrigerated, Unrefrigerated

For example, the following section of an XML document shows the lines required in BOLD.

Example 1: Warehouse

```
<space ID="1">
  <name>Fairfield Warehouse</name>
  <Type>Warehouse</Type>
  <floorSpace>50000</floorSpace>
  <operatingHours>80</operatingHours>
  <effectiveDate>01-01-1980</effectiveDate>
  <bwhseType>Refrigerated</bwhseType >
  <whseWorkers>25</whseWorkers>
  <whseFreezers>5</whseFreezers>
  <whseLighting>Y</whseLighting>
  <whsePercentAirConditioned>50</whsePercentAirConditioned>
  <whsePercentHeated>100</whsePercentHeated>
</space>
```

Example 2: Warehouse

```
<space ID="1">
  <name>Edgewater Warehouse</name>
  <Type>Warehouse</Type>
  <floorSpace>50000</floorSpace>
  <effectiveDate>01-01-1980</effectiveDate>
  <bwhseType>Unrefrigerated</bwhseType >
</space>
```

Example 3: Hotel

```
<space ID="1">
  <name>Westfield Hotel</name>
  <Type>Hotel/Motel</Type>
  <floorSpace>25000</floorSpace>
  <effectiveDate>01-01-1980</effectiveDate>
  <bhotelType>Economy and Budget</bhotelType >
  <hotelRooms >70</hotelRooms >
  <occupancyRate>65</occupancyRate>
  <foodFacility >Y</foodFacility >
  <hotelLaundryFacility>Y</hotelLaundryFacility >
</space>
```

Example 4: Hotel

```
<space ID="1" >
  <name>Newmarket Hotel</name>
  <Type>Hotel/Motel</Type>
  <floorSpace>100000</floorSpace>
  <effectiveDate>01-01-1980</effectiveDate>
  <hotelType>Upscale</hotelType>
  <hotelRooms >200</hotelRooms >
  <occupancyRate>75</occupancyRate>
  <foodFacility >Y</foodFacility >
  <hotelLaundryFacility>Y</hotelLaundryFacility >
</space>
```

## 10. APPENDIX C: SAMPLE XML REQUEST & RESPONSE DOCUMENTS

### 10.1 Sample XML Request Document

The following is a sample XML document that a Participant Host (PH) identified by ID 81827451 (test PH account) makes on behalf of Company A when requesting benchmark ratings. This is referred to as the “request inquiry” message of a Web services application.

This sample XML document contains fifteen buildings and five space types (Office General, K-12 School, Hospital, Hotel, and Supermarket). Each Facility may have one or more meter-specific records indicated by a unique identifier called “meter ID” in the meter element. The meter element information may contain the meter name, energy type, energy unit, and meter readings.

Select the link below to access the sample XML request document.

<http://ems-mx4.sradev.com/pmdxp/sampleXMLdocument.xml>

Section 10.2 indicates two possible acknowledgment messages via the VB client interface for the request inquiry XML document sample above.

### 10.2 Client Interface Acknowledgement Message

Message 1: “Data transferred successfully” indicates a client has successfully submitted an XML document to the DXP system. A customer will later receive an email indicating that the XML document completed processing.

```
- <xp:xmlParticipant ID="frederph" xmlns:xp="http://www.epa.gov"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://ems-
mx4.sradev.com/pmdxp/EPAScore-v.1.3.xsd">
- <statusMessages>
  <message text="Data transferred successfully." type="Informational" number="5" />
  <message text="frederph8102004142218" type="Informational" number="8" />
</statusMessages>
</xp:xmlParticipant>
```

Message 2: The message below is displayed when a client attempts to retrieve the score when the system may still be processing. The customer should wait a little while before attempting to retrieve the rating again.

```
- <xp:xmlParticipant ID="frederph" xmlns:xp="http://www.epa.gov"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://ems-
mx4.sradev.com/pmdxp/EPAScore-v.1.3.xsd">
- <statusMessages>
  <message text="There is currently no scored information to retrieve. The system may still be processing the
score." type="Informational" number="6" />
</statusMessages>
</xp:xmlParticipant>
```

### 10.3 Sample XML Result Document

The following is a sample result XML document that a customer may receive when retrieving the data or response from the previous request inquiry. If a benchmark score cannot be calculated for a building, a negative value will be returned (as shown in building ID = 11210) along with an error message. For additional information on negative scores, see section 3.4.4. If a benchmark score can be calculated, a positive benchmark rating will be returned in the score element followed by the energy use information.

Select the link below to access the sample XML response document.

<http://ems-mx4.sradev.com/pmdxp/sampleXMLresult.xml>

## 11. APPENDIX D: BENCHMARKING ELIGIBILITY RULESETS

In order to receive a score for each Space Type, the Space Type must conform to the Benchmarking eligibility rulesets specified below.

### 11.1 Eligibility Rulesets for Benchmarking Office Spaces

The following information is required for an Office Space.

- Zip code
- Gross floor area
- Weekly operating hours
- Number of occupants
- Number of personal computers

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Office buildings must meet the following criteria:

1. The Facility must have the gross floor area that falls within the following parameters depending on the Office type:
  - a. Office (General Administrative): greater than or equal to 5,000 square feet and less than or equal to 10,000,000 square feet
  - b. Office (Bank Branch): greater than or equal to 1,000 square feet and less than or equal to 20,000 square feet
  - c. Office (Financial Center): greater than or equal to 20,000 square feet and less than or equal to 10,000,000 square feet
  - d. Office (Courthouse): greater than or equal to 5,000 square feet and less than or equal to 10,000,000 square feet
2. The Facility must have 50% or more of its gross floor area (not including Garages and Parking Lots) designated as a primary Office space.
3. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
4. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
5. The Facility must be operating 35 or more hours per week.
6. The Facility must contain at least 1 personal computer, but no more than 25,000.
7. The Facility must contain at least 1 occupant, but no more than 25,000.
8. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
9. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

### 11.2 Eligibility Rulesets for Benchmarking Hospital Spaces

The following information is required for a Hospital Space.

- Zip code
- Number of licensed beds
- Gross floor area
- Number of floors
- Presence or absence of tertiary care
- Presence or absence of above ground parking facilities

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Hospitals must meet the following criteria:

1. The gross floor area must be greater than or equal to 20,000 square feet, but no more than 5,000,000 square feet.

2. The gross floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
3. The Facility must have 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Hospital space.
4. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
5. The Facility must have at least 16 licensed beds, but no more than 1,510.
6. The Facility must contain no more than 40 floors.
7. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
8. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

### 11.3 Eligibility Rulesets for Benchmarking Hotel/Motel Spaces

The following information is required for a Hotel Space.

- Zip code
- Number of rooms
- Gross floor area
- Presence or Absence of On-site cooking

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Hotels/Motels must meet the following criteria:

1. The gross floor area must be greater than or equal to 5,000 square feet, but no more than 10,000,000 square feet.
2. The Facility must contain the number of rooms that fall within the following parameters depending on the Hotel type:
  - a. Hotel (Upper Upscale) – at least 20 rooms, but no more than 2,500.
  - b. Hotel (Upscale) – at least 30 rooms, but no more than 2,000 rooms.
  - c. Hotel (Midscale w/Food and Beverage) – at least 50 rooms, but no more than 665 rooms.
  - d. Hotel (Midscale without Food and Beverage) – at least 40 rooms, but no more than 320 rooms.
  - e. Hotel (Economy and Budget) – at least 20 rooms, but no more than 700 rooms.
3. The Facility has 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Hotel/Motel space.
4. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
5. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
6. The Facility has an average annual hotel/motel occupancy rate greater than 45%.
7. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
8. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

### 11.4 Eligibility Rulesets for Benchmarking K-12 School Spaces

The following information is required for a K-12 School Space.

- Zip code
- Gross floor area
- Weekly operating hours
- Number of students
- Number of months in operation
- Percent of the gross floor area of the facility that is air-conditioned
- Percent of the gross floor area of the facility that is heated
- Number of personal computers
- Presence or absence of on-site cooking facilities
- Presence or absence of mechanical ventilation

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, K-12 Schools must meet the following criteria:

1. The gross floor area must be greater than or equal to 5,000 square feet, but no more than 1,000,000 square feet.
2. The Facility is primarily used for academic instruction including Kindergarten, Elementary, Junior High, and Senior High (College or university classroom facilities and laboratories, and vocational, technical, and trade schools **cannot** be benchmarked at this time)
3. The Facility must be occupied for at least 8 of the last 12 months.
4. The Facility must have at least 50% of its gross floor area designated for primary (K-12) space.
5. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
6. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
7. The Facility must be operating 35 or more hours per week.
8. The Facility contains at least 1 student, but no more than 1,000,000 students.
9. The Facility contains at least 1 personal computer, but no more than 250,000 personal computers.
10. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
11. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

## 11.5 Eligibility Rulesets for Benchmarking Medical Office Spaces

The following information is required for a Medical Office Space.

- Zip code
- Number of workers
- Weekly operating hours
- Gross floor area
- Percent of the gross floor area of the facility that is air-conditioned
- Percent of the gross floor area of the facility that is heated

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Medical Offices must meet the following criteria:

1. The gross floor area must be greater than or equal to 5,000 square feet, but no larger than 1,000,000 square feet.
2. The Facility has 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Medical Office space.
3. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
4. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
5. The Facility contains at least 2 workers, but no more than 3,500 workers.
6. The Facility must be operating 35 or more hours per week.
7. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
8. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

## 11.6 Eligibility Rulesets for Benchmarking Supermarkets and Grocery Stores Spaces

The following information is required for Supermarkets and Grocery Store Spaces.

- Zip code
- Gross floor area
- Weekly operating hours
- Main shift staffing

- Presence or absence of on-site cooking facilities
  - Number of registers/PCs
  - Number of walk-in freezers/coolers
  - Number of refrigerated/freezer cases
  - Number of floors
1. To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Supermarkets and Grocery Stores must meet the following criteria:
  2. The gross floor area must be greater than or equal to 5,000 square feet, but no larger than 250,000 square feet.
  3. The Facility must be operating 35 or more hours per week.
  4. The Facility has 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Supermarket/Grocery or Other eligible space.
  5. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
  6. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
  7. The Facility has at least 1 main shift staffing, but no more than 400.
  8. The Facility can have no more than 3 floors.
  9. The Facility must have at least one refrigerator and freezer case, but no more than 350 refrigerated and freezer cases.
  10. The Facility can have no more than 100 registers/personal computers.
  11. The Facility can have no more than 35 walk-in coolers and freezers.
  12. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
  13. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

## 11.7 Eligibility Rulesets for Residence Hall and Dormitory Spaces

The following information is required for Residence Hall and Dormitory Spaces.

- Zip code
  - Number of rooms
  - Gross floor area
  - Percent of the gross floor area of the facility that is air-conditioned
  - Percent of the gross floor area of the facility that is heated
1. To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Residence Hall and Dormitories must meet the following criteria:
  2. The gross floor area must be greater than or equal to 5,000 square feet, but no larger than 1,000,000 square feet.
  3. The Residence Hall/Dormitory contains at least 5 rooms but no more than 800 rooms.
  4. The Facility has 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Residence Hall/Dormitory space.
  5. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
  6. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
  7. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
  8. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

## 11.8 Eligibility Rulesets for Refrigerated and Unrefrigerated Warehouse Spaces

The following information is required for refrigerated and Unrefrigerated Warehouse Spaces.

- Zip code
- Gross floor area
- Number of walk-in coolers and refrigerators
- Weekly operating hours
- Total number of workers on main shift
- Presence or absence of high-intensity discharge (HID) or halogen lighting systems that primarily light the facility
- Percent of the gross floor area of the facility that is air-conditioned
- Percent of the gross floor area of the facility that is heated

To be eligible to receive an energy performance rating on EPA's Portfolio Manager, Refrigerated and Unrefrigerated Warehouses must meet the following criteria:

1. The gross floor area must be greater than or equal to 5,000 square feet, but no larger than 1,000,000 square feet.
2. The Facility must be operating 40 or more hours per week.
3. The Facility must have 50% or more of its gross floor area (not including Garages and Parking Lots) designated as Warehouse space.
4. The Facility can have no more than 4,000 workers.
5. The facility can have no more than 35 walk-in coolers and freezers.
6. The floor area of a Computer Data Center (if one is present) cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).
7. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.
8. At least 11 full consecutive calendar months of user-entered data is present for all active meters in the facility. If there is more than one meter, these months must be overlapping.
9. A minimum of 10 electrical meter entries between 15 and 45 days each over the 12 month evaluation period.

## 11.9 Secondary Space: Rulesets for Ambulatory Surgical Center Spaces

The following information is required for Ambulatory Surgical Center Spaces.

- Gross floor area
- Weekly operating hours

Data entered for Ambulatory Surgical Centers must meet the following criteria:

1. The gross floor area must be no larger than 1,000,000 square feet.
2. The Facility must be occupied 0 or more hours per week.
3. The floor area of an Ambulatory Surgical Center cannot be greater than 50% of the Facility's gross floor area (not including Garages and Parking Lots).

## 11.10 Secondary Space: Rulesets for Computer Data Center Spaces

The following information is required for Computer Data Center Spaces.

- Gross floor area
- Weekly operating hours

Data entered for Computer Data Centers must meet the following criteria:

1. The gross floor area must be no larger than 200,000 square feet.
2. The Facility must be occupied 0 or more hours per week.
3. The floor area of a Computer Data Center cannot be greater than 10% of the Facility's gross floor area (not including Garages and Parking Lots).

### **11.11 Secondary Space: Eligibility Rulesets for Garage Spaces**

The following information is required for Garage Spaces.

- Gross floor area
- Floors above ground
- Floors below ground
- Weekly operating hours
- Number of workers

Data entered for Garages must meet the following criteria:

1. The gross floor area must be no larger than 1,000,000 square feet.
2. The Facility can have no more than 10 workers.
3. The Facility must be occupied 40 or more hours per week.
4. The Facility must have at least 0 floors above ground, but no more than 15 floors.
5. The Facility must have at least 0 floors below ground, but no more than 10 floors.
6. The floor area of a Garage (if one is present) cannot exceed 100% of the gross floor area of the entire Facility.

### **11.12 Secondary Space: Eligibility Rulesets for Open Parking Lots**

The following information is required for Open Parking Lots.

- Gross floor area
- Weekly operating hours

Data entered for Open Parking Lots must meet the following criteria:

1. The gross floor area must be no larger than 1,000,000 square feet.
2. The Facility must be occupied 30 or more hours per week.

### **11.13 Secondary Space: Eligibility Rulesets for Swimming Pools**

The following information is required for Swimming Pools.

- Months in use
- Size of Swimming Pool

Data entered for Swimming Pools must meet the following criteria:

1. The number of months in use must be at least 1, but no more than 12.