

Energy Planning Tool

USER GUIDE

Rev. November 2020



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Overview

The LAS Energy Planning Tool (EPT) is a robust online energy reporting and planning solution for the public sector designed to specifically help organizations track and report energy as required under O.Reg. 507/18 under the Electricity Act. It includes data input and planning functions to allow users quick access to their utility database, track energy projects, and update conservation plans.

The tool is a central repository of all facility/asset consumption data, energy policies, projects, and activities that is easily accessible across your organization.

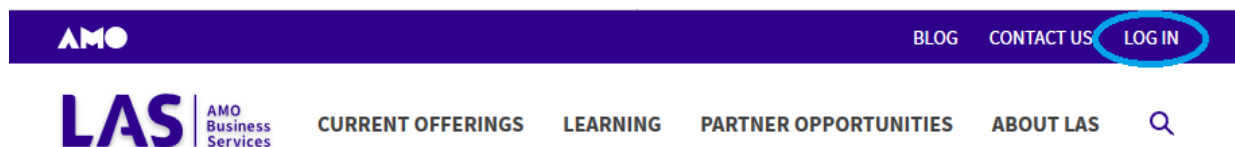
Outputs include annual energy consumption reports and five-year Energy Conservation and Demand Management (CDM) Plans, as well as a number of key functions that are beneficial to staff for energy planning, management, and reporting.

Key functions of the EPT include:

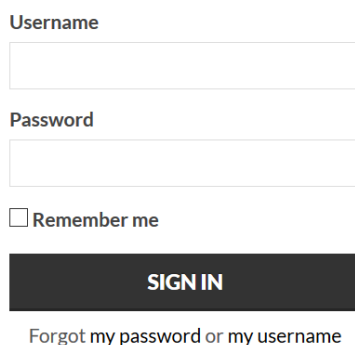
- ✓ Utility and Consumption Database
- ✓ Project Management – Ongoing tracking of Energy Conservation Measures
- ✓ Business Case Development to support the ongoing shift to lifecycle costing and asset management
- ✓ Custom reports for communicating energy data and meeting O.Reg 507/18 reporting requirements
- ✓ Benchmarking data for comparing your facilities within your portfolio and with others in the sector.

Log In and Out

1. Click on the **Login** access button at the top right corner of the LAS website (www.las.on.ca).



2. Enter your **Username** and **Password**. All Users require their own login credentials to prevent unauthorized access. To set up a new account, use the EPT contact resources at the end of this manual. In the event you forget your username or password, simply click **Forgot my password** or **my username**, and enter the username or email associated with your EPT Account.

A screenshot of the login form. It features two input fields: 'Username' and 'Password'. Below the 'Password' field is a checkbox labeled 'Remember me'. At the bottom of the form is a dark blue button with the text 'SIGN IN' in white, which is circled in red. Below the button is a link that says 'Forgot my password or my username'.

3. Click **Sign In** and navigate to the **Dashboard** in the top right corner of the screen



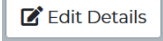
4. Click **ACCESS EPT** to launch the software.
5. To log out, simply click **Log Out** in the top right-hand corner of the page to exit your EPT account.

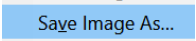
Home Page

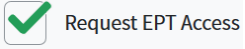
The Energy Planning Tool is rarely more than one screen/level away from the main Home page. The headings represent the functional tasks that you wish to work on and are always available for easy navigation of the tool. Clicking **Home** will bring you back to this page.

The home page is broken down into three zones.

1. Municipality
2. Dashboard
3. Contacts

To edit the basic contact information for your municipality, click  in the **Municipality** section.

The **Dashboard** section gives you a snapshot of your municipality's energy use. Default charts use data from the last full year of available data and can be customized to look at a specific year. *Total Energy Use by Building Type* can be switched between a pie chart or horizontal bar graph. Any of the charts can be downloaded by simply right-clicking on the chart and selecting the  option.

The **Contacts** section lists all staff who are part of the energy management team at your municipality. Individuals can be added or removed using the buttons at the top of the list. If any of the staff require access to EPT but do not yet have it, check the  box on their profile. Upon saving the profile, an email will be sent out and LAS staff will set them up with a username and a password to the account. (Note: EPT allows for unlimited number of users for an account.)

Facilities

The Facilities section contains listings for each owned or managed facility/building/asset that will be included in your CDM Plan or annual reports. The page also includes customizable charts to allow for evaluation of overall energy consumption in your municipality.

Add a New Facility

Click under the Facilities header to create a new facility profile. This information can be edited at any time by double-clicking the entry in the facility list or highlighting the facility and clicking .

Facility Tab

- Name:** Enter the building name.
- Description:** Enter the building description.
- Address:** Enter the physical address of the building.
- Building #:** Enter a numbering system, if applicable
- Built:** Select the year the building was built.
- Operations Contact:** Select the appropriate person.
- Energy Team Contact:** Select the appropriate person.
- Hours of Operation:** Indicate the annual hours of operation by either filling in the number (if known) or selecting the hours of operation for each day of the week and clicking **Calculate**. For buildings that are occupied occasionally or have irregular hours of operation, select the average number of hours per day over the entire year.

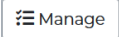
Energy/Composition Tab

Energy Types: Select all energy types used by the facility


Composition: Facilities are sorted based on their type. For buildings with more than one type, enter all different uses and the floor space dedicated to each use. The software will set the largest area as the default type, but this can be modified if desired.

Use the **Other** Category option to track those facilities/assets that are not required under the Provincial regulations but which you still wish to track.


Manage Energy Records


To view energy data for any facility select it from the list and click  in the list header.

The **Manage Facility** list will allow you to edit the basic information about the facility as entered in the last section.

The **Dashboard** section gives you both annual and monthly charts to show energy use of your facility over time. Use the drop-down menus to edit the look of the charts or to select the data year. To download the images, right click on the chart and select  from the menu.

Energy Budgets allows you to set energy budgets and reduction targets for each energy type under that facility.

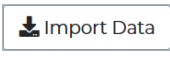
Energy Consumption shows each energy consumption data point associated with that facility. To manually enter data, click  in the menu and fill in the information fields shown in the pop-up. Each line of data can also be edited or deleted as required. For data imports from a spreadsheet or from LAS commodity programs, see instructions further in this manual.

Production/Flow is only required for water and wastewater facilities. Click  to enter information on the water processed by each facility.

Notes:

- ✓ Cost is included by user request but is not required under the regulations. It is up to individual users to determine if they want to enter the total cost as it appears on their utility bills or some other subtotal (such as commodity cost). LAS recommends that users make a note of which number is employed to ensure consistency year-over-year.
- ✓ Electricity consumption should be entered as **Unadjusted kWh** (not adjusted for line losses, as shown on the electricity bill).
- ✓ Natural Gas consumption should be entered as **Adjusted m3** (adjusted for pressure, as shown on the gas bill).
- ✓ One Megalitre = One Million Litres.

Import Energy Data

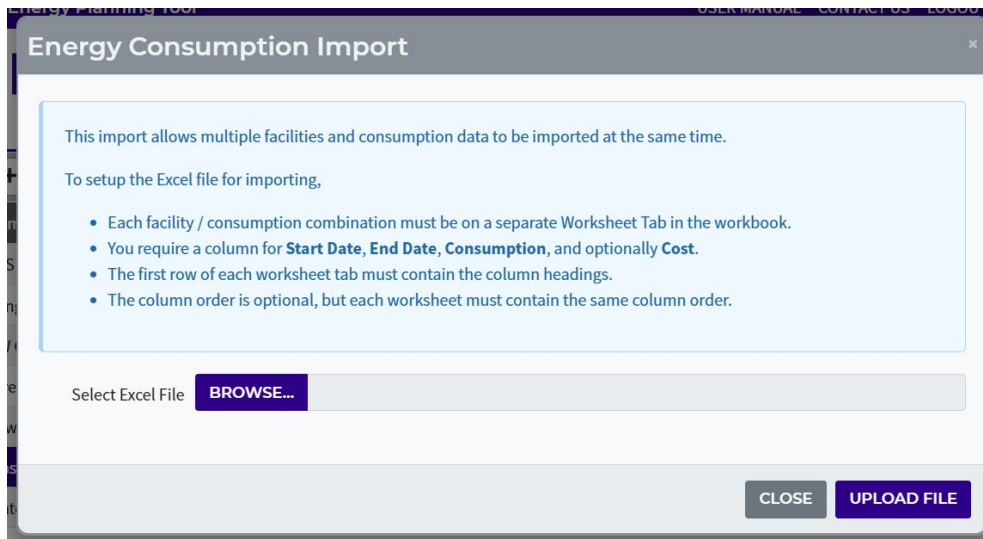
Navigate to the Facilities tab and select  .

Follow the directions shown to create a workbook/ spreadsheet containing energy information. The workbook can contain data for one or multiple facilities, and one or more energy types.

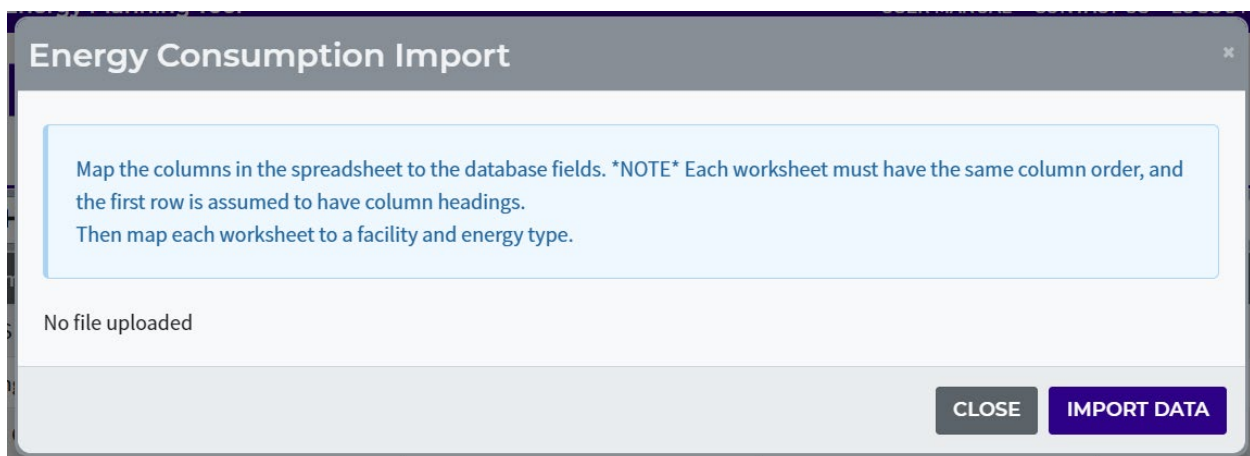
	A	B	C	D
1	Start Date	End Date	Consumption	Cost
2	2020-01-01	2020-01-31	1466	102.62
3	2020-02-01	2020-02-29	1636	114.52
4	2020-03-01	2020-03-31	1657	115.99
5	2020-04-01	2020-04-30	1129	79.03
6	2020-05-01	2020-05-31	1728	120.96
7	2020-06-01	2020-06-30	1285	89.95
8	2020-07-01	2020-07-31	2188	153.16
9	2020-08-01	2020-08-31	1300	91
10	2020-09-01	2020-09-30	1976	138.32
11	2020-10-01	2020-10-31	1683	117.81
12	2020-11-01	2020-11-30	1656	115.92
13	2020-12-01	2020-12-31	1101	77.07

Note: It is important to make sure your facility is set up in EPT with the appropriate Energy Types indicated prior to uploading any files/data.

Click **BROWSE...** to locate the spreadsheet file and **UPLOAD FILE** to transfer the file to EPT.



Follow the directions to tell EPT which columns contain which data point. Click **IMPORT DATA** to complete the process.



Export Energy Data

All data in EPT can be downloaded to an .xlsx spreadsheet for further analysis or as a backup.

Click **Export Data** under in the **Facilities** table to generate the file. The data will be included for any facilities highlighted. To select multiple facilities either hold down 'Ctrl' while clicking or hold down 'Shift' to select all facilities in a range.

View Energy Intensity and Consumption Charts

Charts showing energy information are available below the **Facilities** list. The drop-down menus above the chart allow you to filter the chart contents to show different facility types or years.

The Energy Intensity chart shows the energy intensity of each facility, with points included for benchmarks based on provincial data.

If the energy consumption for a facility falls outside the minimum/maximum values, it may be necessary to check the entered consumption data for accuracy.

The Energy Consumption chart shows annual data for each facility over time. The chart displays the last full year of data and any available data for the four years before that date. The chart can be modified to show overall energy consumption, specific energy types, or GHG emissions using the **Energy** drop down menu.

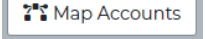
Any chart can be downloaded by simply right-clicking and selecting

 from the menu.

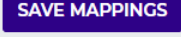
Account Mapping

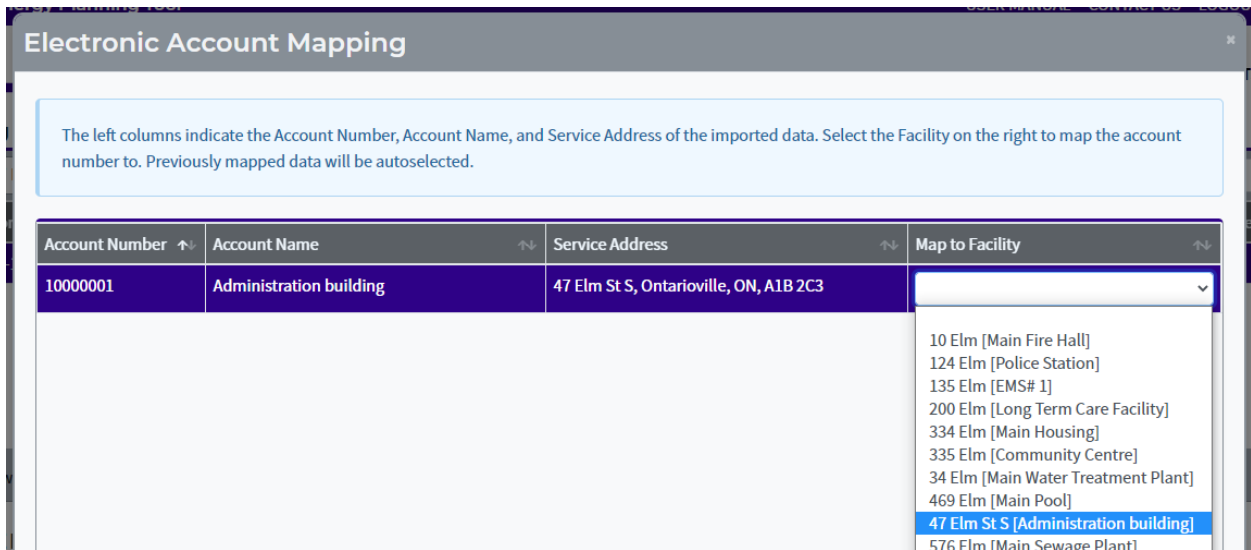
Municipalities who purchase their Electricity and/or Natural Gas through LAS have the added benefit of automatic data entry. Accounts only need to be mapped once to ensure EPT knows which accounts are associated with which facility/asset.

Unresolved Electronic Imports lists all electronic imports that have been sent to your municipality from the LAS database, but don't have an associated facility in EPT.


Select the unresolved record you would like to map and click  in the list header.

Use the drop down to link the commodity account to the correct facility.

Multiple accounts can be linked at the same time. Click  to save and close.



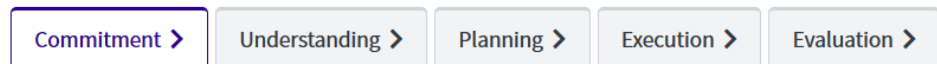
Electronic Mappings shows which Natural Gas or Electricity accounts have been connected to each facility. If an error is made select the mapping and click

. The Data point will move back to the **Unresolved Electronic Imports** list and is available to remap.

For more information on LAS commodity programs please visit <https://www.las.on.ca/current-offerings/commodity-programs>.


CDM Planning

This module creates Conservation and Demand Management (CDM) Plans, required by O.Reg. 507/18. Each tab is a functional stage of plan development.



Each tab contains mandatory and optional report Sections that, when completed, allow you to generate a comprehensive CDM Plan that aligns with the regulation. Users can select which of the optional Sections they wish to complete.

Each section has sample texts and reference documents.

To access additional information, click on the  symbol next to the Section title.


Create Your Plan

Each tab has the same layout and options and includes help options and sample text. Users can follow the five steps in order or jump around as desired.

The options and processes are the same in each of the five stages. Using **Commitment** as an example:

Select  EDIT to edit the **Declaration of Commitment** section.

Commitment

 Declaration of Commitment [Mandatory]



Action

Council Resolution: We will allocate the necessary resources to develop and implement a strategic energy management plan that will reduce our energy consumption and its related environmental impact.

Sample Doc: 

Fill in the boxes displayed, detailing the response, staff person accountable, timeline, reference documents, and initiative status. Click **SAVE** to save changes and exit the dialogue box.

The content box will be outlined in green when all the mandatory elements have been completed.

NOTE: To maintain the integrity of the submission, EPT tracks and records which users upload documents and which user completes each compliance plan element.

The screenshot shows a web form titled "Municipal Level". It has a header bar with the title and a close icon. Below the header, there are several sections:

- Action:** A text area containing the text: "We will carry out the required development of business procedures and communication programs and implement them methodically according to the planned time lines within the resources constraints that apply." There is a help icon (question mark) and a "Sample Doc" link with a document icon.
- Response:** A large, empty text area for entering a response.
- Accountability:** A dropdown menu.
- Timeline:** A text input field.
- Reference Document:** A text input field with a "BROWSE..." button.
- Status:** A dropdown menu currently showing "Unopened".

At the bottom right of the form, there are two buttons: "CLOSE" and "SAVE".

Conservation Measures

The Conservation tab enable Users to develop concrete energy conservation measures that will fulfill the target and objectives identified in the commitment section of the Energy Conservation and Demand Management Plan.

Users can use this tool to update, track, and modify the various Programs, Processes, and Projects undertaken by their organization as part of their 5-year CDM plan. The intent is for this section of EPT to become an active database to monitor the progress of energy-saving initiatives.

Programs are energy conservation measures related to human behaviour or interaction.

Examples: Participate in energy training, identify unnecessary plug loads, create an employee participation program to encourage conservation, develop case studies.

Processes are energy conservation measures related to operation of a building or regular actions/steps taken to achieve energy savings in a facility.

Examples: Generate monthly energy reports, implement building start-up and shut-down schedules, run dishwasher in off-peak hours, include efficiency considerations in procurement.

Projects are energy conservation measures and upgrades related to technology and equipment.

Examples: Tune HVAC system to increase efficiency, upgrade equipment to higher efficiency, install VFDs, lighting upgrades, enhance building envelope, install occupancy sensors for lighting.

Add a New Conservation Measure

To add a new measure, click in the Conservation Measures table header. To modify or update an existing Program, select in the table header.

Conservation Information

Description: Provide a title description for the measure.

Measure Type: Define if the measure is a Program, Project, or Process (Optional).

Category: Select the appropriate timeline from the drop-down selection if applicable. This is simply a way to categorize measures for convenience.

Facility: If the measure is directly related to a specific facility, select it from the drop down menu

Contact: Select the principal person in charge of the measure from the drop down menu, if applicable.

Start/End Date: Input an implementation date or due Date.

Details: Enter a detailed description of the measure.

Status: Select the status of the program and a percent complete. Note: Measures labelled as 0% complete will be automatically considered 'pending', and those labelled as 100% complete will be considered 'completed'.

The screenshot shows a web form titled "New Conservation Measure". It is divided into two main sections: "Conservation Information" and "Financial Information".

Conservation Information:

- Description: Text input field.
- Measure Type: Drop-down menu.
- Category: Drop-down menu.
- Facility: Drop-down menu.
- Contact: Drop-down menu.
- Start Date: Text input field with a calendar icon.
- End Date: Text input field with a calendar icon.
- Details: Large text area for a detailed description.
- Status: Drop-down menu.
- Percent Complete: Text input field with a value of "0".
- Last Updated: Text input field.

Financial Information:

- Life (years): Drop-down menu with a value of "0".
- Estimated Cost (\$): Text input field.
- Simple Payback (y): Text input field.
- Savings (\$): Text input field.
- Savings (eKwh): Text input field.
- IRR (%): Text input field.
- Inflation (%): Text input field.
- Discount (%): Text input field.
- NPV (\$): Text input field.

At the bottom right of the form, there are two buttons: "CLOSE" and "SAVE CHANGES".

Financial Information

Life (years): Enter the estimated measure life (in years) (maximum 20 years)

Estimated Cost (\$): Enter the estimate cost in Dollars (\$CAD)

Savings (\$): Enter the estimated first-year cost savings

Savings (ekWh): Enter the estimated first year energy savings

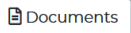
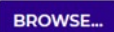

Inflation (%): Enter an estimated value for calculating future returns

Discount (%): Enter an estimated value for calculating future returns

The following calculations are automatically generated:

- **Simple Payback** in years
- **IRR %** = Internal Rate of Return
- **NPV \$** = Net Present Value

Add Documents

Support documents for conservation measures (such as Council reports, resolutions, proposals, etc.) can be added to the EPT database. Select  from the Conservation Measures header, select  to locate the file on your computer, and click  to add the document to the directory. Documents can also be viewed, downloaded, or deleted using the buttons in the table header.

Library & Reports

The Library & Reports tab allows for quick access to important reports and documents.

Generate a Report

Data entered in the EPT is used to create custom reports, including the Annual Energy Consumption Reports and the 5-year Energy Conservation and Demand Management Plan (CDM).

To generate the report, select a Starting Year from the drop-down menu located in the table header. Click **DOWNLOAD** to save the appropriate report to your computer.

REPORTS

Name	Starting Year <input type="text" value="Latest Data"/>
5-Year Conservation and Demand Management Plan	<input type="button" value="DOWNLOAD"/>
Annual Consumption and GHG Emission Report	<input type="button" value="DOWNLOAD"/>
Energy Report - All Facilities	<input type="button" value="DOWNLOAD"/>
Energy Report - Facility Types	<input type="button" value="DOWNLOAD"/>

5-Year Conservation and Demand Management Plan

This plan utilizes data from the CDM Planning and Conservation Measures tabs. The created Word document that can be further edited and customized to produce the final version that may be presented to Council and posted on your website.

Annual Consumption & GHG Emissions

The Annual Energy Consumption and GHG Emission Report combines your data and conversion factors from Environment Canada for tracking and reporting. Further information is provided on the next page.

Energy Report – All Facilities

This report provides a listing of the annual energy consumption of all municipal facilities in an .xlsx spreadsheet. This report is useful for creating an archive of energy use, as well as creating reports to share energy information with Council or members of the public.

Energy Report – Facility Types

This report operates similar to ‘Energy Report - All Facilities’, but shows totals based on the facility category. This can be useful for municipalities with large numbers of similar building types, or those wishing to compare energy use by facility type.

Emissions Factors

This simple report lists the emissions factors used for each fuel type in EPT.

Submit Your Annual O. Reg 507/18 Report

The proper location for municipalities to post their annual Regulation 507/18 energy consumption reports is on the portal designed and maintained by the Ministry of Energy.

<https://remote.sdc.gov.on.ca/sites/ENERGY-ECE/>

Historically, public agencies log-in to the web portal to access the electronic reporting template that is used to submit their report. The Ministry of Energy should have emailed your municipal clerk with the necessary login information to access their reporting portal.

For help with accessing the web portal, contact BPSSupport@ontario.ca.

EPT users may generate the EPT's *Annual Consumption & GHG Emissions* report and copy the information from that excel sheet into the template provided by the Ministry of Energy on their BPS portal. This is a requirement of the Ministry to maintain security parameters and the integrity of their Portal. **Important Note: Do NOT upload the EPT generated file to the Ministry's BPS Portal as this will result in errors.**

Previously reported data submitted by public agencies is available on the Province of Ontario's website.

<https://www.ontario.ca/data/energy-use-and-greenhouse-gas-emissions-broader-public-sector>

View Sample Files

Municipalities can learn a lot by looking at what their peers do. The Sample Files section contains a listing of sample CDM plans from municipalities across Ontario. These plans have not been vetted by LAS and are provided for informational purposes only.

Program Support

For program support please contact:

Tanner Watt
Municipal Energy Specialist
647-456-5516
email: [EPT Program Support](#)

Additional Documentation

[AMO – 2019 Energy CDM Plan Update Webinar](#)

[Ontario Regulation 507/18](#)