California Energy Commission

HANDBOOK

Proposition 39 K-12 Program:

California Clean Energy Jobs Act – 2016

Energy Expenditure Plan Handbook

California Energy Commission

Edmund G. Brown Jr., Governor

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California Energy Commission

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The staff members of the California Energy Commission's Local Assistance and Financing Office extends their deepest gratitude to Jai Agaram from Digital Energy, Inc., for his work on the Power Purchase Agreement Calculator and the accompanying instructions. The Power Purchase Agreement Calculator Instructions are included in Chapter 6 of this *Energy Expenditure Plan Handbook.*

ABSTRACT

The California Energy Commission has developed this *Energy Expenditure Plan Handbook* pursuant to the *Proposition 39 K-12 Program: California Clean Energy Jobs Act – 2016 Program Implementation Guidelines* in accordance with Proposition 39 (2012) and Senate Bill 73 (Stats. 21013, ch.29, §2).

The guidelines were initially adopted in 2013. Nonsubstantive revisions were made on April 20, 2014, and substantive changes were made on June 18, 2014, December 10, 2014, and July 13, 2016.

Keywords: Proposition 39, California Clean Energy Jobs Act, Job Creation Fund, Senate Bill 73, energy efficiency, clean energy, conservation, conservation corps, school, community college, districts, workforce training, education, local educational agency, Energy Expenditure Plan Handbook, Energy Expenditure Plan Online

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Energy Expenditure Plan Handbook Overview

The California Energy Commission has developed the *2016 Energy Expenditure Plan Handbook* (handbook), Energy Expenditure Plan Online, the Utility Data Release Authorization forms, and energy savings calculators to assist local educational agencies (LEAs) in preparing and submitting their energy expenditure plan applications online. These applications incorporate all the requirements of the *Proposition 39 K-12 Program: California Clean Energy Jobs Act – 2016 Program Implementation Guidelines*. LEAs, which include county offices of education, school districts, charter schools, and state special schools, are the only entities that may submit energy expenditure plan packages online. This handbook includes step-by-step instructions to assist the LEAs in submitting their energy expenditure plans online, explains program requirements and instructs LEAs in using the calculators for eligible energy projects.

What's New?

On July 13, 2016, the California Energy Commission approved substantive program changes to the *Proposition 39: California Clean Energy Jobs Act – 2016 Program Implementation Guidelines (2016 Guidelines).* Aside from the clarification language changes, the following revisions were made to the savings-to-investment ratio (SIR) cost-effectiveness evaluation criteria:

1) Minimum SIR for eligible energy projects – The SIR requirement has been reduced from 1.05 to 1.01. LEAs may now submit energy expenditure plans with eligible energy projects that achieve a minimum SIR of 1.01.

2) Assumption for maintenance cost savings – The maintenance cost savings assumption for energy efficiency measures used in the SIR calculation has now been increased from 2 percent to 3 percent of the project cost on an annual basis.

3) LEAs with annual zero net energy (ZNE) school sites – If prior to December 19, 2013, any school site within an LEA that had zero dollar utility bills or a utility bill credit from excess clean energy generation on an annual basis, the LEA may consider submitting an energy expenditure plan with eligible energy projects using the following process: An LEA shall submit a narrative describing the facility(ies) background(s), the clean energy generation project(s) and the energy saving information which demonstrates how the proposed eligible energy measures meet the Public Resources Code 26206(c) "All projects shall be cost effective: total benefits shall be greater than project costs over time." The LEA must describe its method for determining the energy cost savings which will be entered into the SIR calculations and provide supporting documents and calculations as required.

4) LEAs with "First Preference" power rates – LEAs in Calaveras, Tuolomne, and Trinity Counties who receive First Preference power rates can now submit an energy expenditure plan with eligible energy projects using an alternative electric rate of $0.132/kWh for their SIR calculations. This alternative electric rate was calculated by the First Preference public power agencies based on the "true cost" of electric power when considering the lost tax revenue due to the federal hydro projects located in these three counties.

5) Power Purchase Agreement (PPA), Terms and Conditions – In the past, PPA clean generation projects were required to be sized to produce no more than 70 percent of the kilowatt-hour (kWh) energy consumption at a school site. This limitation has been removed. When entering into a PPA contract, an LEA should fully understand the long-term consequences of self-generation and size clean generation projects accordingly. LEAs should consider weather variations, future energy efficiency improvements, and future energy efficiency programs that may have a cost-effectiveness requirement.

6) Photovoltaic (PV) warranty requirement for 25-year effective useful life – For LEAs to use a 25-year effective useful life in their PV calculations, a 25-year panel performance warranty must be submitted with their energy expenditure plans.

This handbook reflects the following revisions. The Energy Commission strongly encourages LEAs to read the handbook in full before starting energy expenditure plans online.

- Chapter 1: Energy Expenditure Plan. Revised the Authority, Who May Submit, and What to Include, Project Documentation sections. In addition, all eligible LEAs are now allowed to submit up to three energy expenditure plans per fiscal year.
- Chapter 2: Instructions for the Energy Expenditure Plan Online. Revised to include clarification language throughout the chapter.
- Chapter 3: Instructions for the Utility Forms. Revised to reflect changes to fillable forms as of November 2015.
- Chapter 4: Instructions for the Energy Savings Calculators. Revised to reflect additional calculators for CFL to LED replacement, window replacements, cool roof installations, roof insulation installations, and transformer measures. ECM 11 and ECM 12 calculators have also been revised to accommodate wall-mount air conditioning and heat pump unit replacements.
- Chapter 5: Information for Energy Audits. No changes.
- Chapter 6: Information for Power Purchase Agreements Applications. Revised to reflect removal of PV size limitations and clarification language.
- Chapter 7: Instructions for the Annual Progress Report. New chapter added to reflect changes as of June 2016.
- Chapter 8: Instructions for the Final Project Completion Report. New chapter added to reflect changes as of June 2016.
- Appendix A. No changes.
- Appendix B: Frequently Asked Questions. Deleted and incorporated into a separate document titled Frequently Asked Questions (FAQs), located on the Proposition 39 website: http://www.energy.ca.gov/efficiency/proposition39/documents/prop39_k-12_faq.pdf

CHAPTER 1:
Energy Expenditure Plan

Purpose

The Energy Expenditure Plan is the application package an LEA submits to request Proposition 39 program award funds to implement eligible energy projects. The Energy Expenditure Plan includes all the information specified in the *California Clean Energy Jobs Act – 2016 Program Implementation Guidelines.*

Authority

Proposition 39: California Clean Energy Jobs Act – 2016 Program Implementation Guidelines in accordance with Proposition 39 (2012) and Senate Bill 73 (Stats. 21013, ch.29, § 2).

The guidelines were initially adopted in December 2013. Nonsubstantive revisions were made on April 20, 2014, and substantive changes were made on June 18, 2014, December 10, 2014, and July 13, 2016.

Who May Submit

LEAs with Proposition 39 award funding appropriations may submit an energy expenditure plan to request funds to implement eligible energy projects. Eligible LEAs are listed at http://www.cde.ca.gov/fg/aa/ca/prop39cceja.asp and include county offices of education, school districts, charter schools, and state special schools.

An expenditure plan submittal typically includes, at least one eligible energy measure. The exception is when an LEA wishes to request funds for energy manager and training costs only. In this case, the LEA may submit an energy expenditure plan that does not include energy measures. Note: An LEA may now submit up to three energy expenditure plans per fiscal year.

In general, all facilities within the LEA are eligible to receive Proposition 39 award funding. If an LEA occupies a leased facility, the LEA needs to ensure the facility meets the conditions specified in the *2016 Guidelines*.

When to Submit

LEAs have been submitting their energy expenditure plans since January 2014 and may continue to do so throughout the term of this program. The Energy Commission strongly recommends that LEAs submit their energy expenditure plan before installing any eligible energy projects. If the LEA begins project implementation before receiving Energy Commission

approval, it does so at its own risk. The Energy Commission must approve the LEA's energy expenditure plan before the California Department of Education (CDE) releases Proposition 39 program award funds.

The Energy Commission offers LEAs flexibility for submitting their energy expenditure plans to request award funding. LEAs have the option to submit an energy expenditure plan each fiscal year or they may combine eligible energy measures that incorporate multiyear awards into a single energy expenditure plan submission.

The CDE calculates and allocates each LEA Proposition 39 award funding each fiscal year based on legislatively appropriated funds. LEAs can receive Proposition 39 award funding only as it becomes available each fiscal year of the five-year program**. If the LEA's available award is not fully encumbered each year, the balance will remain for future energy expenditure plan requests.** The final encumbrance date for the Proposition 39 program is June 30, 2018. The Energy Commission recommends that energy expenditure plans be submitted as early as possible for this encumbrance deadline to be met.

Effective immediately, LEAs may now submit up to three energy expenditure plans per fiscal year. LEAs are encouraged to submit their energy expenditure plans as soon as energy projects have been identified to allow timely review and approval by the Energy Commission. This early submission also allows for LEAs to meet their targeted eligible energy project implementation schedules and to achieve energy savings as soon as possible.

What Documents and Information to Compile Before Completing an Energy Expenditure Plan Online

LEAs must gather and compile the following documents and information to complete an energy expenditure plan online.

1. Detailed information for proposed energy efficiency measures including energy savings, energy cost savings, measure costs, rebates, and other non-repayable funds. This information is obtained using energy audits or the Energy Commission's energy savings calculator with an energy survey.

2. LEAs must collect electric and gas utility bills from the previous fiscal year for all schools or sites where eligible energy measures will be implemented to complete their energy expenditure plan. This means that if you are submitting an energy expenditure plan during fiscal year 2015-2016, you will need to collect the bills from fiscal year July 1, 2014 through June 30, 2015.

3. LEAs that requested and received energy planning funds must provide a financial breakdown of how the planning funds are budgeted and how planning funds were actually spent for each of the four allowed categories.

4. LEAs must submit their entity information, including but not limited to CDS codes, charter school CDS codes, and contact information of the LEA authorized representative and the LEA project manager.

5. An estimate of job creation benefits is required to be keyed into the system. These are mostly calculated fields based on the eligible energy project budgets entered by the LEA. If the LEA has already selected a contractor to implement its eligible energy project, it will need to obtain apprenticeship programs and trainee title information when completing its energy expenditure plan.

What to Include in the Energy Expenditure Plan

for approval. LEAs will use Energy Expenditure Plan Online to submit their projects for approval. The following supporting documents will still need to be uploaded into Energy Expenditure Plan Online:

1. Utility Data Release Authorization Form, CEC-12, in PDF, and the Facility and Service Account Information Form, CEC-24, in PDF – An LEA must complete a CEC-12 and a CEC-24 for every utility provider from which the LEA purchases electricity and/or natural gas. For example, if an LEA purchases electricity from the Sacramento Municipal Utility District (SMUD) and natural gas from Pacific Gas and Electric Company (PG&E), the LEA must complete two of each form, one for SMUD and another for PG&E. The Energy Commission requires that the Utility Data Release Authorization Form CEC-12 be submitted for the first energy expenditure plan that an LEA submits for approval. However the LEA's electric or natural gas utility may require the LEA to sign and submit an updated CEC-12, even if the LEA submitted a CEC-12 prior to March 1, 2015. The CEC-12 must be signed by an LEA employee that has been identified as having the authority to execute the energy expenditure plan and to direct or delegate implementation of the eligible energy projects on behalf of the LEA.

   In the CEC-24, LEAs must list every electric and gas account for all schools and facilities under a customer's jurisdiction, as a condition of receiving Proposition 39 funds. This includes the school or facility name, CDS number, electric and/or gas service account number, and service address. It is critical that the LEA provide this information for EVERY site in the LEA regardless of whether the school or facility is a recipient of Proposition 39 funds.

   It is not necessary for the LEA to submit a new CEC-24 if the LEA submitted a complete set of account information for the facilities under its jurisdiction prior to March 1, 2015, unless there have been changes to the number of facilities since the original submission (for example, new facilities have opened). The CEC-12 and CEC-24 must be completed using a computer and uploaded to Energy Expenditure Plan Online. The LEA must forward the original signed CEC-12 and the completed CEC-24 to the respective utility

providers. Designated contact information for utility providers is provided at http://www.energy.ca.gov/efficiency/proposition39/listing_utility_recipients.html.

2. Project Supporting Documents – Each energy expenditure plan must include back-up calculations/analysis supporting the energy measures included in the energy expenditure plan. Supporting documents shall be uploaded in formats such as Microsoft Word®, PDF, and Microsoft Excel®. Supporting documents shall consist of custom energy audits or Energy Commission energy savings calculators with an accompanying energy survey as described below. Use of the Energy Commission energy savings calculators without an accompanying energy survey will not be accepted.

    a. Energy Commission energy savings calculators with energy survey – The Energy Commission has developed energy savings calculators to evaluate several simple energy efficiency measures. **LEAs may only use the Energy Commission energy savings calculators for the measures listed in Chapter 4.**

    LEAs who choose to use the Energy Commission energy savings calculators to analyze proposed energy efficiency measures must also submit an energy survey. Energy surveys must include a description of existing energy-using equipment (that is, type, age, size, number of units, and operating hours), and the energy savings estimates from the online energy savings calculators.

    b. Energy Audit – When a calculation(s), other than the Energy Commission savings calculator, is used, the LEA must provide an energy audit. Upload any applicable energy audits, complying with the "Information Required for Energy Audits" in Chapter 5. An energy audit is required when estimates for energy savings are calculated with a source other than an Energy Commission energy savings calculator.

3. Building Owner Certification to Transfer Energy Cost Savings to LEA, if applicable – To ensure an LEA in a privately owned leased facility receives the energy savings cost benefit of the Proposition 39-funded eligible energy measures, a building owner certification is required if 1) an LEA leases a facility or building that does not have a separate meter; and/or, 2) an LEA leases a facility or building, and the lease payment includes the utility cost. If either conditions applies, the building owner must commit to transferring the energy savings of the eligible energy measures to the LEA tenant, either through a reduced lease payment or other form of monetary reimbursement. LEAs in a privately owned leased facility that meet the two conditions mentioned above shall submit a Building Owner Certification to Transfer Energy Cost Savings to the LEA, in writing, signed and dated by the lessor, that certifies energy savings cost benefit to the LEA.

What Internet Browsers to Use

To ensure optimal user experience, LEAs must only use Internet Explorer or Google Chrome to access Energy Expenditure Plan Online.

How and Where to Submit Energy Expenditure Plans to the Energy Commission via Energy Expenditure Plan Online

LEAs will use Energy Expenditure Plan Online to submit their energy expenditure plans for approval. Energy expenditure plans are NOT accepted by mail, email, fax, or courier delivery. Only energy expenditure plans entered into Energy Expenditure Plan Online and documents uploaded via this system will be accepted.

The Energy Commission has sent a "Welcome" email containing a link to Energy Expenditure Plan Online to all primary and secondary LEA contacts listed in the California School Directory. The person who submits the energy expenditure plan must obtain the link to Energy Expenditure Plan Online from those contacts.

The first time LEAs access the website via the link, they must register and follow the instructions in Chapter 2.

Whom to Contact for Assistance

The Energy Commission has established a Proposition 39 Hotline (toll-free for those in-state: 855-380-8722, and a toll line for those out of state: 916-653-0392.) LEAs may call with questions about the Proposition 39 program and Energy Expenditure Plan Online or email questions to the Energy Commission Hotline staff at Prop39@energy.ca.gov.

CHAPTER 2:
Instructions for Energy Expenditure Plan Online

Purpose

Energy Expenditure Plan Online is an online application system to assist LEAs in applying for Proposition 39 program award funds to implement eligible energy projects. LEAs must submit their energy expenditure plans using Energy Expenditure Plan Online. LEAs enter information and upload backup documentation directly into Energy Expenditure Plan Online.

The following are the instructions for Energy Expenditure Plan Online. To guide the reader through each section, there is a screen shot of the specific section of the system, followed by written instructions.

General Information and Tips

To navigate through the system, either click on a field or use the "Tab" key on your keyboard. The types of input fields vary. Drop-down menus are indicated by an arrow on the right side of the data field. Other fields allow LEAs to enter text or numbers based on what information is requested. Auto-calculated fields in the system are automatically calculated based upon entries in other input fields. Automatically calculated fields are shaded in gray and the LEA cannot click in to those fields to enter data. LEAs are required to complete only the input fields. These fields turn yellow when you click on them to enter your data.

Hovering your cursor over certain fields will bring up a pop-up box that provides general instructions for the field. Several fields will also show an "i" next to the field. This provides additional information about that field.

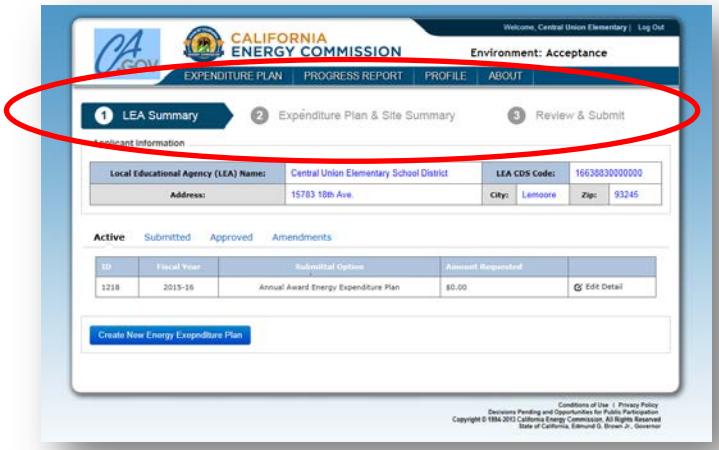
Information entered into Energy Expenditure Plan Online is not automatically saved. Be sure that you save your information by clicking on the Save Current Process button periodically while you are entering your energy expenditure plan.

General Overview and System Navigation

As an overview of Energy Expenditure Plan Online, there are three major sections:

1) LEA Summary
2) Expenditure Plan & Site Summary
3) Review & Submit

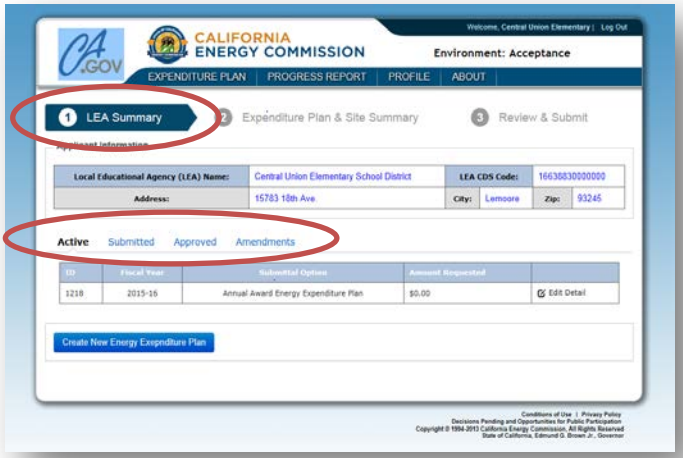
As you navigate through the system, the section bar at the top indicates the section you are working in.



Each major section has subsections.

1) LEA Summary has four subsection tabs:

- ✓ **Active** (energy expenditure plans being created by the LEA)
- ✓ **Submitted** (energy expenditure plans submitted to the Energy Commission)
- ✓ **Approved** (energy expenditure plans approved by the Energy Commission)
- ✓ **Amendments** (energy expenditure plans being amended by the LEA)



The LEA Summary section provides the map for accessing and reviewing all of an LEA's energy expenditure plans. Whether it is a current energy expenditure plan that is a draft or an energy expenditure plan approved in past fiscal years, all energy expenditure plans can be accessed from the LEA Summary section. Energy expenditure plans in the Submitted and Approved subsections can be viewed by the LEA. Information in these energy expenditure plans cannot be edited by the LEA.

To actually navigate through the system, you must click on these tabs. Each tab is typically in blue text. The tab text color changes to black

when you are in that tab section. To view/edit a specific energy expenditure plan, you must navigate to the appropriate subsection and select and click the energy expenditure plan from the list of energy expenditure plans included in that subsection.

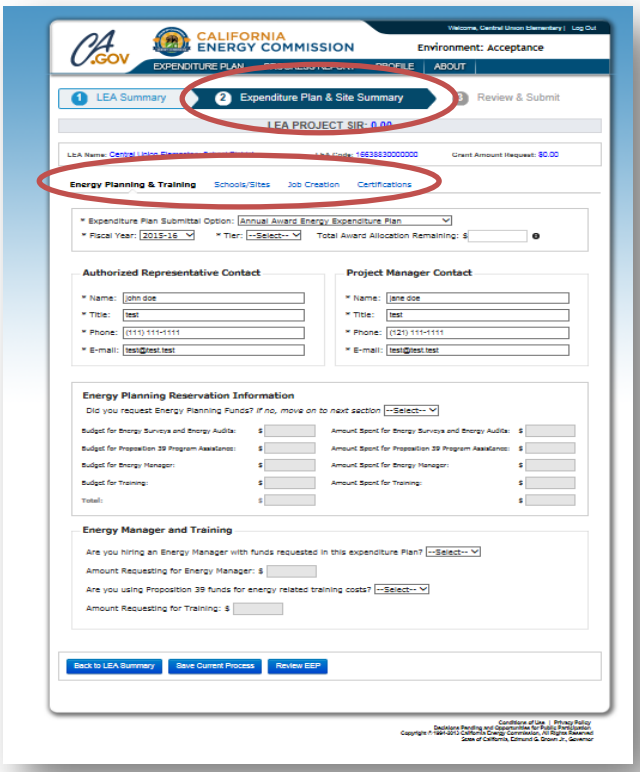
2) Expenditure Plan & Site Summary Section has four subsection tabs:

- ✓ Energy Planning & Training
- ✓ Schools/Sites
- ✓ Job Creation
- ✓ Certifications

The majority of the LEA information is entered into these four tabs.

Energy Planning & Training, Job Creation, and Certifications subsections relate to information in the old Form A.

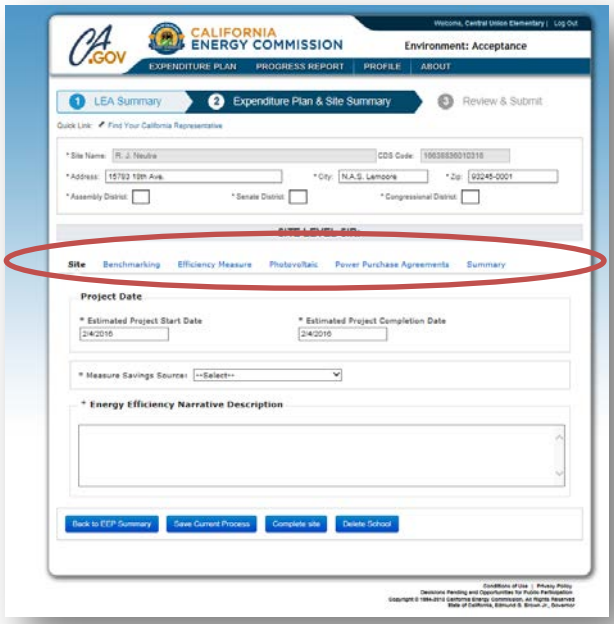
To enter specific site information, you must navigate to the Schools/Sites subsection and add a specific site or select a previously added site from a list of sites. Information entered into these specific Schools/Sites relates to information in the old Form B.



Schools/Sites Tab summarizes all the sites included in the energy expenditure plan. This tab includes the following additional subsection tabs:

- ✓ Site
- ✓ Benchmarking
- ✓ Efficiency Measure
- ✓ Photovoltaic
- ✓ Power Purchase Agreements
- ✓ Summary

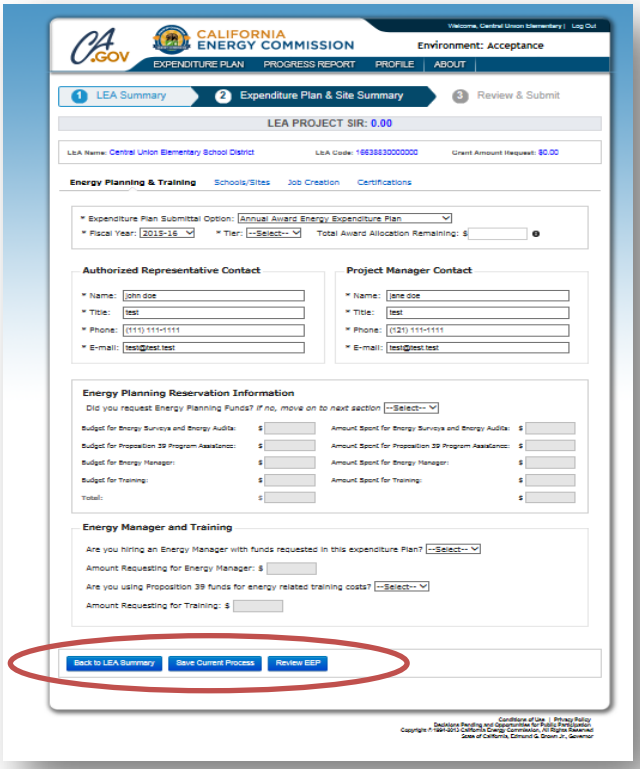
Benchmarking information and all eligible energy measures details for a specific school/site are entered using these additional School/Site tab subsection. These six subsections related to information in the old Form B.



Navigation Buttons in the Energy Plan & Site Summary Section:

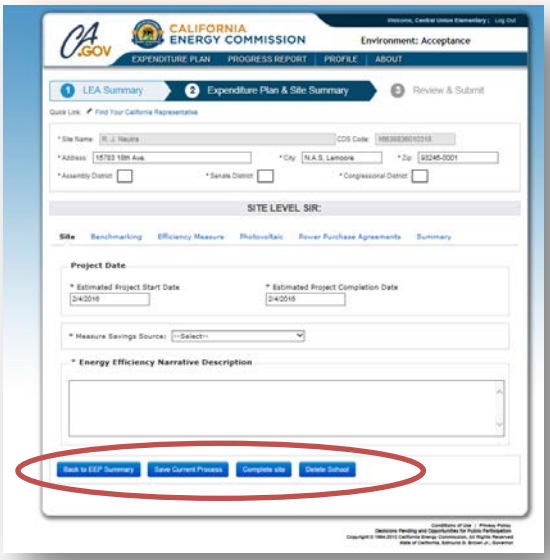
The Energy Planning & Training, Job Creation, and Certification Subsections:

- ✓ Back to LEA Summary – Brings you back to the list of energy expenditure plans in the LEA Summary Major Section.
- ✓ Save Current Process – Saves all the information you have keyed in so far. The information is not automatically saved and this button should be used often.
- ✓ Review EEP – Click this button to review your energy expenditure plan before submitting to the Energy Commission.



The Schools/Sites Subsection:

- ✓ Back to EEP Summary – Brings you back to your list of sites.
- ✓ Save Current Process – Saves all information you have entered so far. Please note that information is not automatically saved and this button should be used often.
- ✓ Complete Site – Click this button when all appropriate information for the specific school/site has been entered.
- ✓ Delete School – Deletes the specific school/site that has been entered in error.

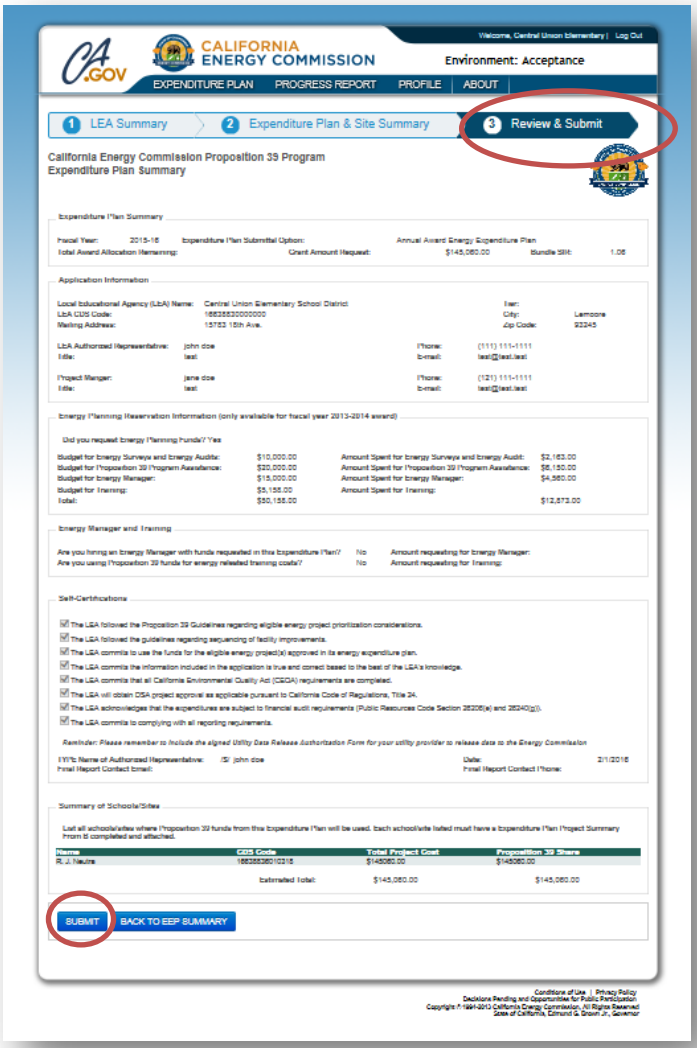


3) Review & Submit Section

The final section is accessible only after all the required information has been entered correctly into the energy expenditure plan. To access this page, you must select the Review EEP button. This page allows the LEA to see a summary of the general energy expenditure plan information (old Form A). From this page, the user can submit an energy expenditure plan to the Energy Commission or return to it to enter or edit information.

To return to the editable version of the energy expenditure plan, you must click on the BACK TO EEP SUMMARY button. This will return you to the Expenditure Plan & Site Summary section.

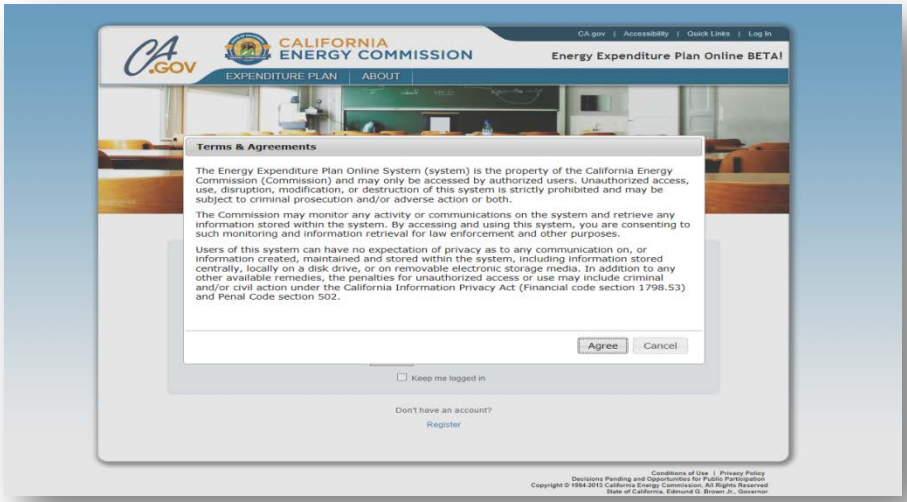
Finally, to submit the energy expenditure plan to the Energy Commission, you must click on the SUBMIT button. An acknowledgement of receipt will appear on the screen and your energy expenditure plan will appear under the Submitted tab in the LEA Summary.



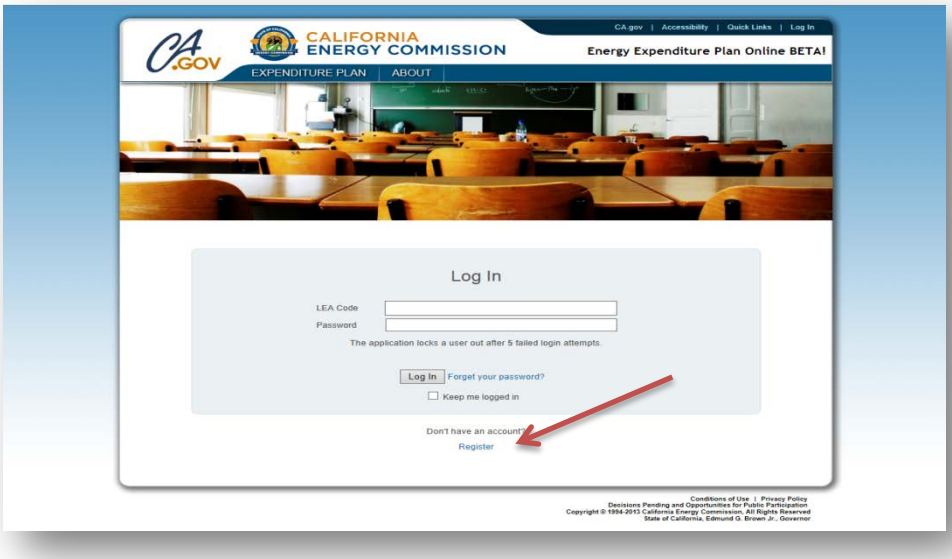
Getting Started

An LEA is required to register to create an account prior to being able to log in to the system. Below are the instructions for logging in and creating an account.

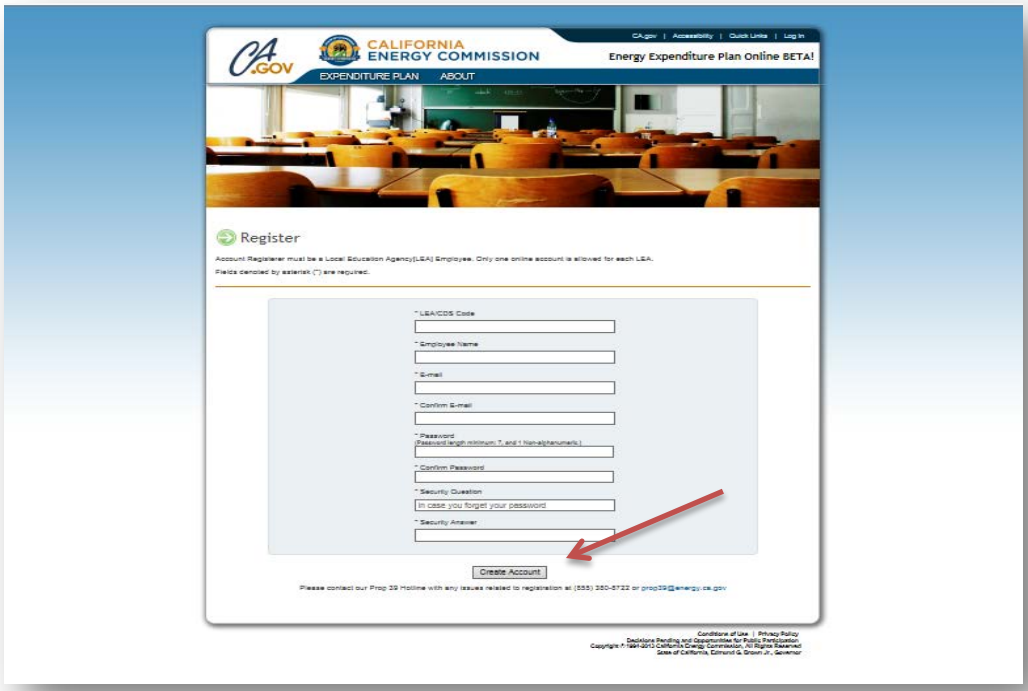
Note to Charter Schools: All charter schools receive a separate Proposition 39 award allocation. A charter school Proposition 39 award is not part of the district or county office of education award. Therefore, a charter school must create its own account separate from the district or county office of education.



The link provided to the LEA contact and secondary contact will bring the user to the Energy Expenditure Plan Online login page shown above. Anytime you log onto the system the Terms & Agreements statement will appear. To use Energy Expenditure Plan Online, you must read the Terms & Agreements and click “Agree.”



To register, click on the **Register** link located at the bottom of the page (see arrow above.)



Only an LEA employee can create an account and LEAs are only allowed to have only one online account. To create an LEA account, enter the following required fields:

LEA/CDS Code: Enter the LEA's 14-digit CDS code.

Employee Name: Enter the name of the person creating the account. The account must be registered to an employee of the LEA.

Email: Enter the email address of the person creating the account. This email address will be used to contact the LEA if a password reset request is made.

Confirm Email: Re-enter the email address.

Password: Select and enter a password. Passwords must have at least 7 characters and must include a non-alphanumeric character (e.g. @, #, ^).

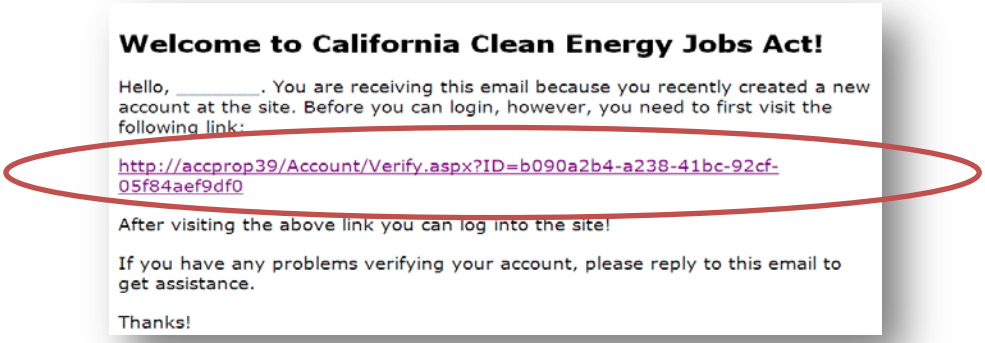
Confirm Password: Re-enter the selected password.

Security Question: Create a security question and enter it in this field. For example, "What is your favorite color?" There is no a drop-down list of possible security questions. The security question will be used to validate your log in if you forget your password.

Security Answer: Enter the answer to your security question above. For example, if your security question is "What is your favorite color?" Enter your favorite color in this field. For example, you may type in "blue." Tip: Security question answers are not case-sensitive.

Then, click on Create Account. At this point, your registration is not yet complete.

Final Registration Step: An account activation email will be sent to the above specified email address. On a separate window on your browser, log into the email address you entered when you registered to Energy Expenditure Plan Online. Look for an email that looks like the example below. To complete the account activation process, click on the link provided in the email. You will then be taken to a Webpage with a message saying, "Your account has been verified and you can now log into the site." Your registration is complete and you can now log in at this time using the LEA CDS Code and password. If you experience any difficulties, please reply to the email you received, like the example below and someone will contact you to provide assistance. Alternatively, contact our Prop 39 Hotline at (855) 380-8722 or prop39@energy.ca.gov . You must click on the link sent to your email address to complete the registration process.



Welcome to California Clean Energy Jobs Act!

Hello, _____. You are receiving this email because you recently created a new account at the site. Before you can login, however, you need to first visit the following link:

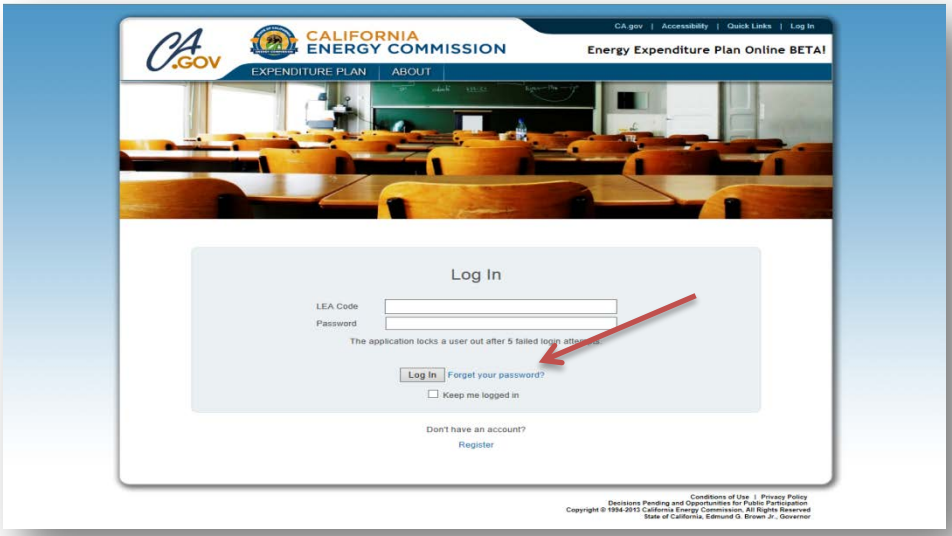
http://accprop39/Account/Verify.aspx?ID=b090a2b4-a238-41bc-92cf-05f84aef9df0

After visiting the above link you can log into the site!

If you have any problems verifying your account, please reply to this email to get assistance.

Thanks!

Forgot Your Password?

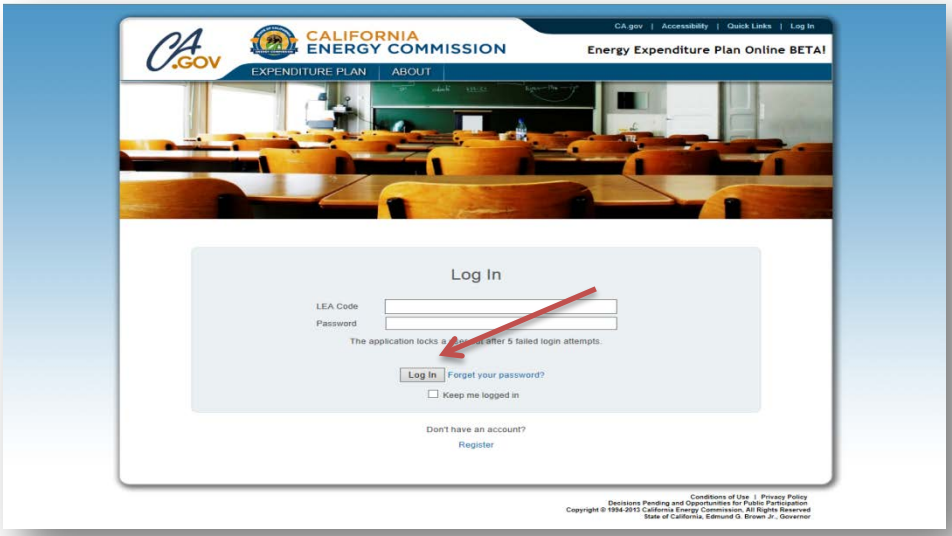


If you forget your password, click on the "**Forget your Password?"** link in the "Log In" page (see above.) Enter your LEA 14 digit CDS code and respond to your security question. The answer to your security question is not case-sensitive. A new password will be generated and sent to the email address registered for the LEA.

Next, log in at the "Log In" page using the password sent to your email address. This password is case-sensitive and can be copied and pasted from the email you received. The system will then ask you to select a new password.

Once you have successfully reset your password, you may log into the "Log In" screen and create an energy expenditure plan.

Logging In



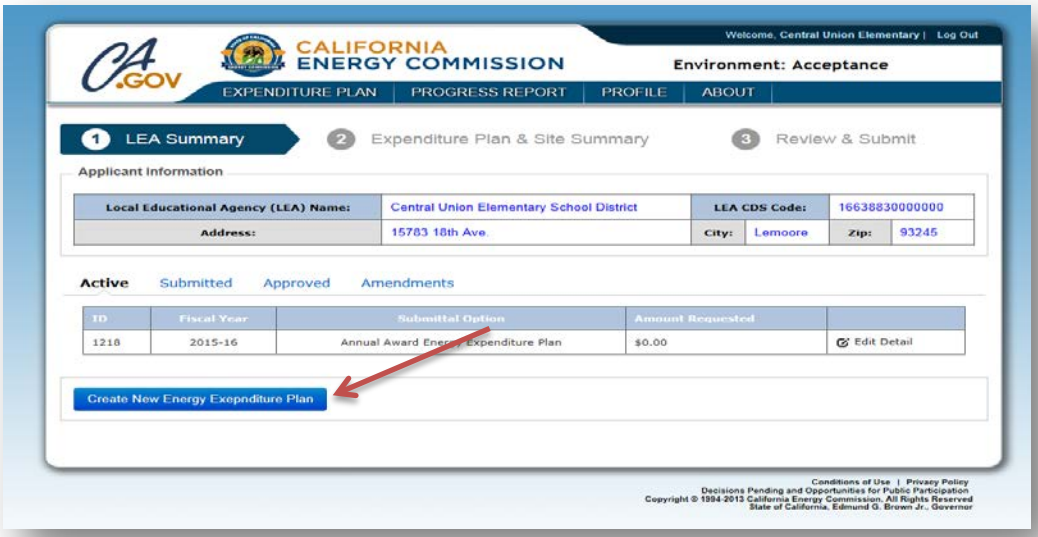
To log in to Energy Expenditure Plan Online, simply enter the LEA's CDS code, enter your password and click on the **Log In** button. The application locks you out after five failed login attempts. If this happens, an error message will appear and tell you how long you will need to wait before logging in again. If you forgot your password, follow the instructions in the "Forgot Your Password?" section above.

Important: To save data properly, log in to only one LEA per browsing session. Do not run Energy Expenditure Plan Online on multiple browsers at the same time – doing so will cause data to save incorrectly. **Because an LEA charter school receives a separate Proposition 39 award allocation from its district or county office of education, the LEA charter school must log in and enter its energy expenditure plan into its own account. If the LEA charter school submits its energy expenditure plan under the district's or county office of education's account, the Energy Commission will need to cancel the LEA charter school energy expenditure plan. and the LEA charter school will need to reenter and re-submit its energy expenditure plan under the LEA charter school's own account.**

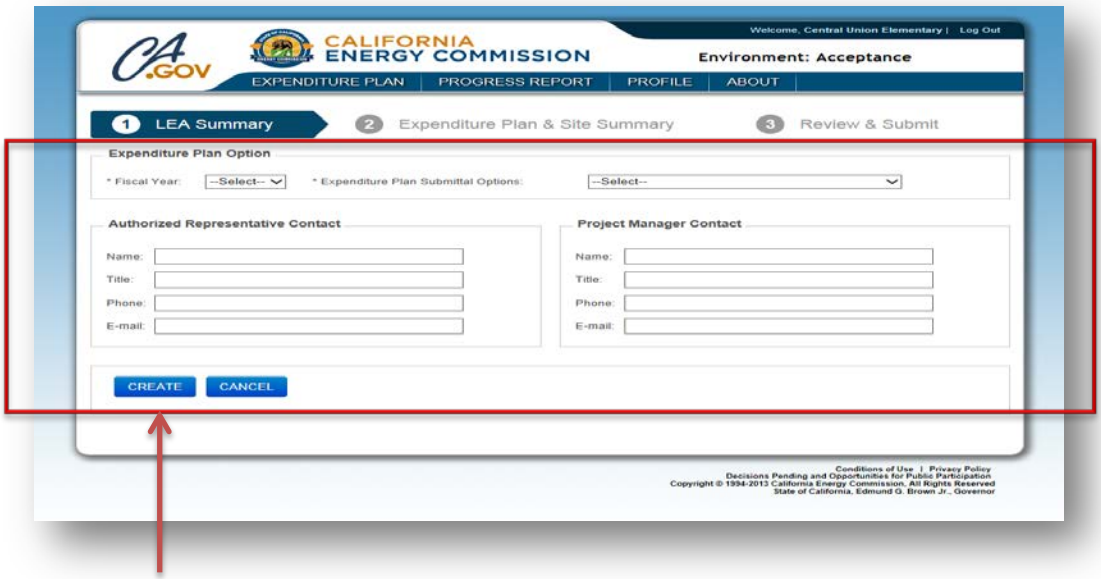
Creating a New Energy Expenditure Plan

Once you are logged in, you can now create a new energy expenditure plan. **Information entered into Energy Expenditure Plan Online is not automatically saved. Be sure that you save your information by clicking on the Save Current Process button periodically while you are entering your energy expenditure plan.**

1. Click on the Create New Energy Expenditure Plan button.



2. This will pull up the screen below and you must enter the following information:



Expenditure Plan Option (required):

a. ***Fiscal Year:*** This drop-down menu corresponds to the current fiscal year in which you are submitting the Energy Expenditure Plan. This is a required field.

b. ***Expenditure Plan Submittal Option:*** This is a drop-down menu. Select "Annual Award Energy Expenditure Plan" if this Energy Expenditure Plan covers one fiscal year. Select "Multiple-Year (bundled) Award Expenditure Plan" if this Energy Expenditure Plan covers two, three, four, or five fiscal years. This is a required field.

Authorized Representative Contact (required):

a. Enter the **name, title, phone number, and email address** of the person authorized by your LEA to sign and submit the energy expenditure plan(s) and other Proposition 39 documents to the Energy Commission. **The authorized representative is an LEA employee with authority to execute the energy expenditure plan and the Utility Data Release Authorization Form, and to direct or delegate the implementation of the eligible energy projects on behalf of the LEA.** Only one authorized representative may be entered in this section.

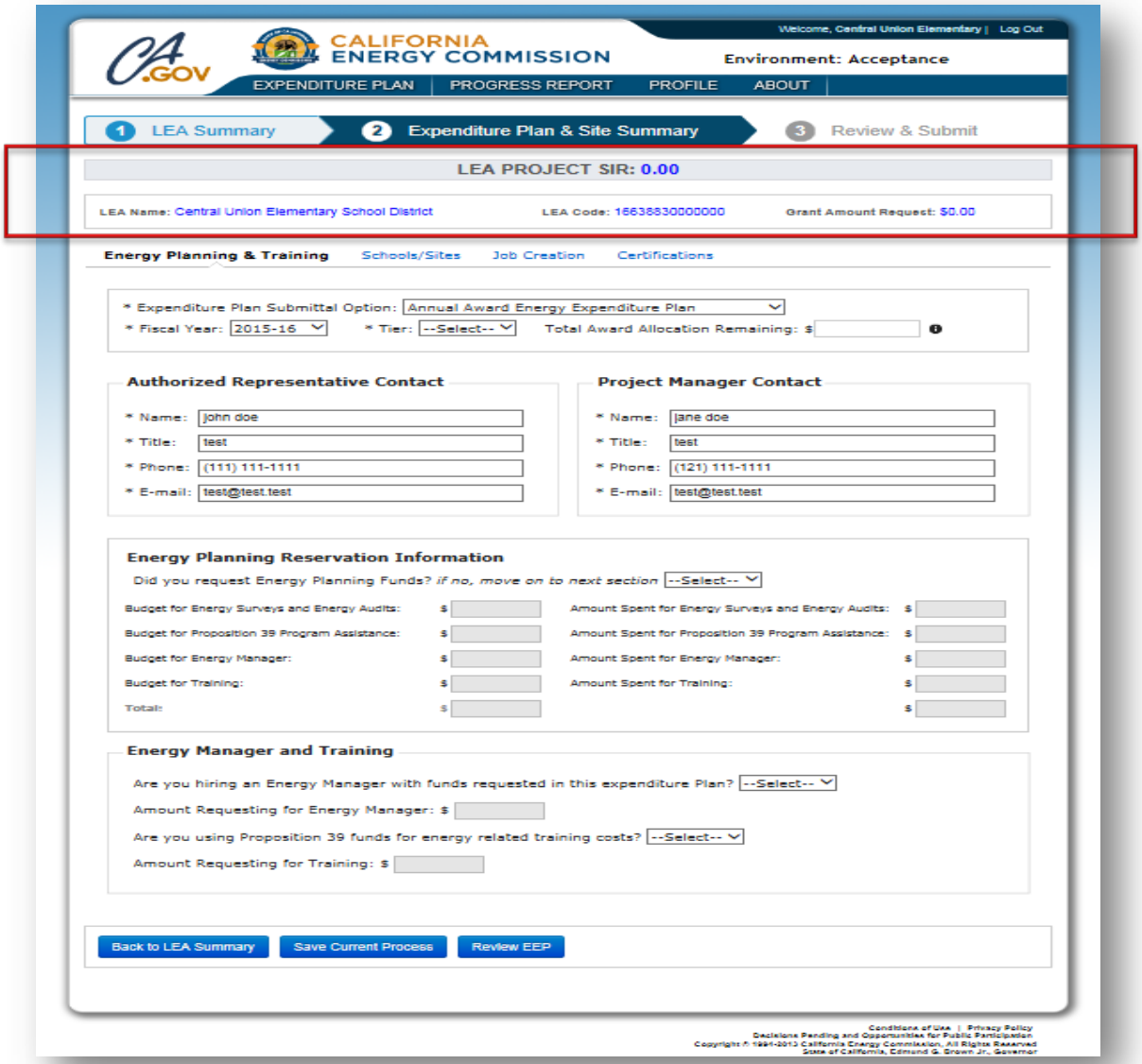
Project Manager Contact (required):

a. Enter the **name, title, phone number, and email address** of your LEA's project manager. **The project manager is the primary point of contact for this energy expenditure plan.** Only one project manager may be entered in this section.

Click CREATE once all fields are completed. To cancel the energy expenditure plan you just created, click on the CANCEL button. You will then be returned to the LEA Summary Section.

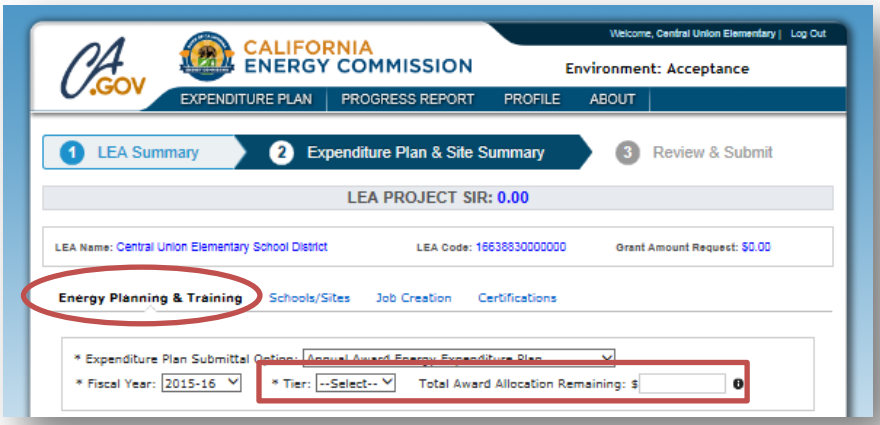
Entering Your Energy Expenditure Plan

Once you click CREATE, you will be brought to the Energy Planning and Training subsection. The screen will expand and look like the following:



The **LEA Name** and **LEA Code** will be automatically filled in, and the **Grant Amount Request** is automatically filled in based on the information you will be keying in.

The **LEA Project SIR** will be automatically calculated based on the energy measures and energy savings information keyed into the Schools/Site section. The LEA Project SIR is the SIR calculated based on the LEA's bundled energy efficiency measures and/or clean energy installations in or at one or more schools or sites within an LEA. This SIR is calculated at an LEA level. The LEA Project SIR must equal 1.01or higher to receive Proposition 39 award funds.



First Section: Energy Planning & Training Section

a. ***Expenditure Plan Submittal Option*** and ***Fiscal Year*** fields are automatically filled in when the energy expenditure plan was created.

b. ***Tier:*** This is a drop-down menu. Select the tier that matches your LEA's P-2 average daily attendance (ADA) listed in CDE's *Schedule of the Total Award Allocations for the Proposition 39 – California Clean Energy Jobs Act* for the fiscal year in which you are submitting this energy expenditure plan.

- Tier 1: 100 or fewer ADA
- Tier 2: 101-1000 ADA
- Tier 3: 1,001-1,999 ADA
- Tier 4: 2,000 or more ADA

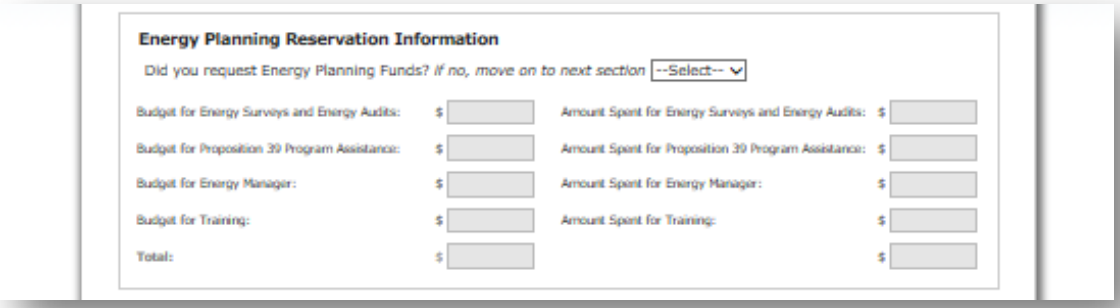
c. ***Total Award Allocation Remaining:*** Enter your LEA's available award allocation. This value can be found at http://www.cde.ca.gov/fg/aa/ca/prop39cceja.asp. Click on the Proposition 39 – Multi-year Schedule, and enter your LEA's amount that is in the "Award Allocation Remaining" column.

Energy Planning Reservation Information:

Note: This section applies to LEAs that have requested and received planning funds in Fiscal Year 2013-14 or their first year of Proposition 39 program eligibility.

For new schools commencing instruction in fiscal year 2013-14 or later, energy planning funds will be available in the first fiscal year of Proposition 39 funding eligibility, so long as prior year ADA counts are provided during the second principal apportionment reporting period. For

example, a school that begins instruction in fiscal year 2013-14 can use fiscal year 2014-15 award funds for planning activities, provided 2013-14 ADA counts are available. So, this section will also apply to schools that request and receive planning funds in the first fiscal year of Proposition 39 award eligibility.



a. ***Did you request Energy Planning Funds? If no, move on to next section*:** This is a drop-down menu. Select "yes" if your LEA requested planning funds during fiscal year 2013-2014 or the LEA's first year of Proposition 39 program eligibility. Select "no" if your LEA did not request planning funds. If you select "no," move to the Energy Manager and Training section.

b. ***Budget for Energy Surveys and Energy Audits:*** Of the total Proposition 39 award for planning funds allocated to your LEA, enter the portion budgeted for energy surveys and energy audits for all five years of the program.

c. ***Budget for Proposition 39 Program Assistance:*** If applicable, enter the total Proposition 39 grant planning funds budgeted for program assistance activities, including but not limited to putting together the energy expenditure plan as defined in the *2016 Guidelines* Table 2: Energy Planning Activities for all five years of the program.

d. ***Budget for Energy Manager:*** If applicable, enter the total Proposition 39 award planning funds budgeted for an energy manager(s) as defined in the *2016 Guidelines* Table 2: Energy Planning Activities, enter the amount of energy planning funds budgeted for an energy manager(s).

e. ***Budget for Training:*** If applicable, enter the total Proposition 39 award planning funds budgeted for energy-related training as defined in the *2016 Guidelines* Table 2: Energy Planning Activities. Enter the amount of energy planning funds budgeted for these training expenditures.

f. ***Amount Spent for Energy Surveys and Energy Audits:*** If applicable, enter the total amount of your Proposition 39 planning reservation spent to date on energy surveys and energy audits.

g. ***Amount Spent for Proposition 39 Program Assistance:*** If applicable, enter the total amount of your Proposition 39 planning reservation spent to date on program assistance activities.

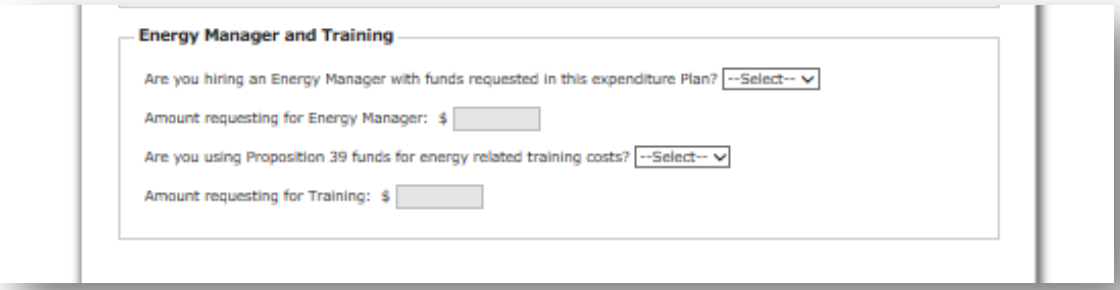
h. ***Amount Spent for Energy Manager:*** If applicable, enter the total amount of your Proposition 39 planning reservation spent to date on energy manager(s).

i. ***Amount Spent for Training:*** If applicable, enter the total amount of your Proposition 39 planning reservation spent to date on training.

j. ***Totals:*** The total amount of energy planning funds requested and the total amount of planning funds spent to date. These are automatically calculated fields, and the total amounts will be based on information provided in the input fields.

Energy Manager and Training:

Note: This section relates to the funds you are requesting under this current energy expenditure plan, not the planning funds entered in the previous section. This section should be completed for years 2 through 5 of the Proposition 39 program.



a. ***Are you hiring an Energy Manager with funds requested in this Expenditure Plan?*** This drop-down menu indicates whether the LEA is requesting award funds for energy manager (s) under this energy expenditure plan. Select "yes" if the LEA is requesting funds for energy manager(s) or "no" if the LEA is not.

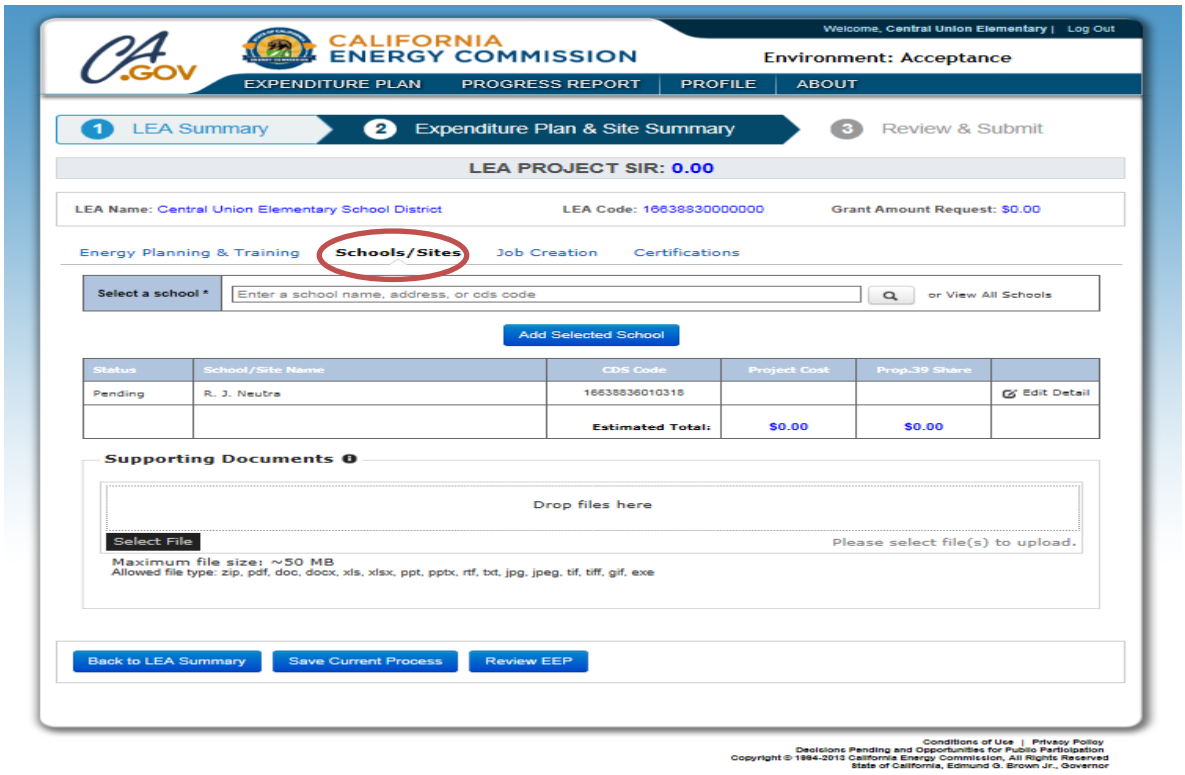
b. ***Amount requesting for Energy Manager:*** Enter the total amount of your LEA's Proposition 39 award funds requested for energy manager(s) in this energy expenditure plan. The maximum allowed amount is 10 percent of the annual award amount. This is for years 2 through 5 only. In year 1, funds for an Energy Manager are requested using planning funds.

c. ***Are you using Proposition 39 funds for energy-related training costs?*** This drop-down menu indicates whether the LEA is requesting award funds for energy related training costs under this energy expenditure plan. Select "yes" if the LEA is requesting funds for energy related training costs or "no" if the LEA is not.

d. ***Amount requesting for Training:*** Enter the total amount you are requesting for energy related training costs. The maximum allowed amount is 2 percent of the annual award amount. This is for years 2 through 5 only. In year 1, funds for an Energy Manager are requested using planning funds.

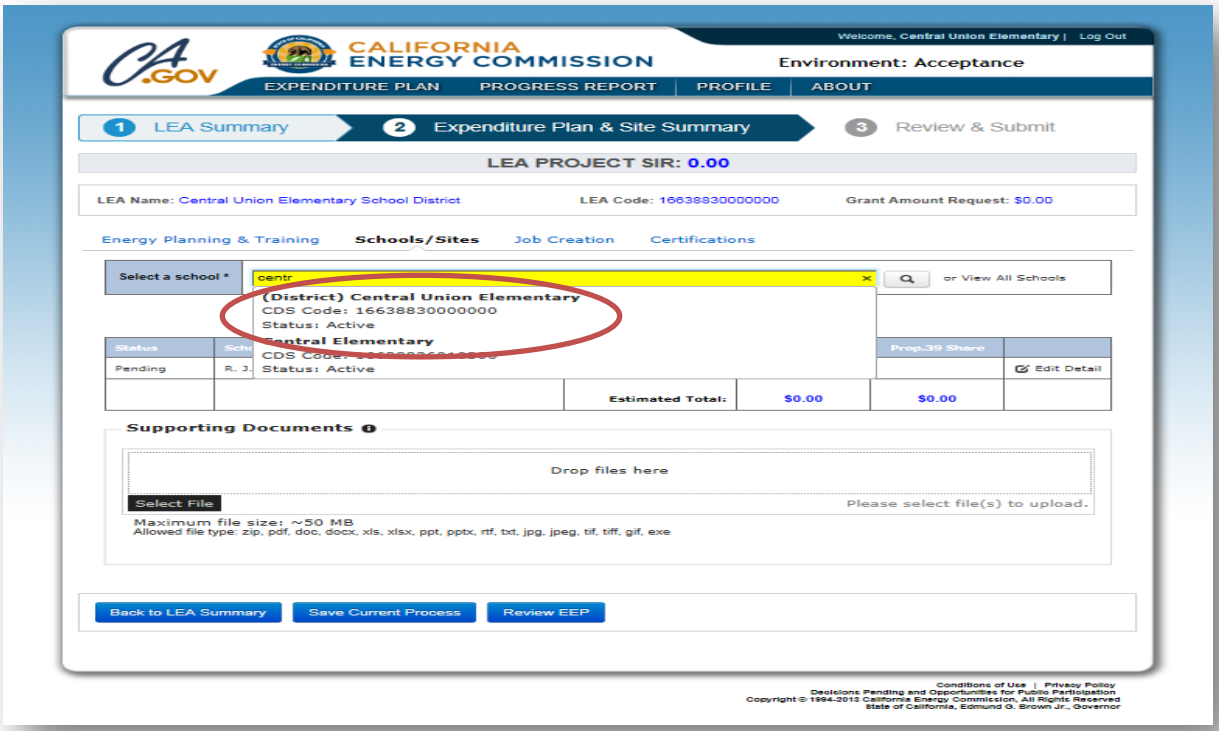
Second Section: Schools/Sites

After you have completed the Energy Planning & Training section of your energy expenditure plan, you may enter the information for each of your LEA's schools or sites. Click on the **Schools/Sites** tab heading.

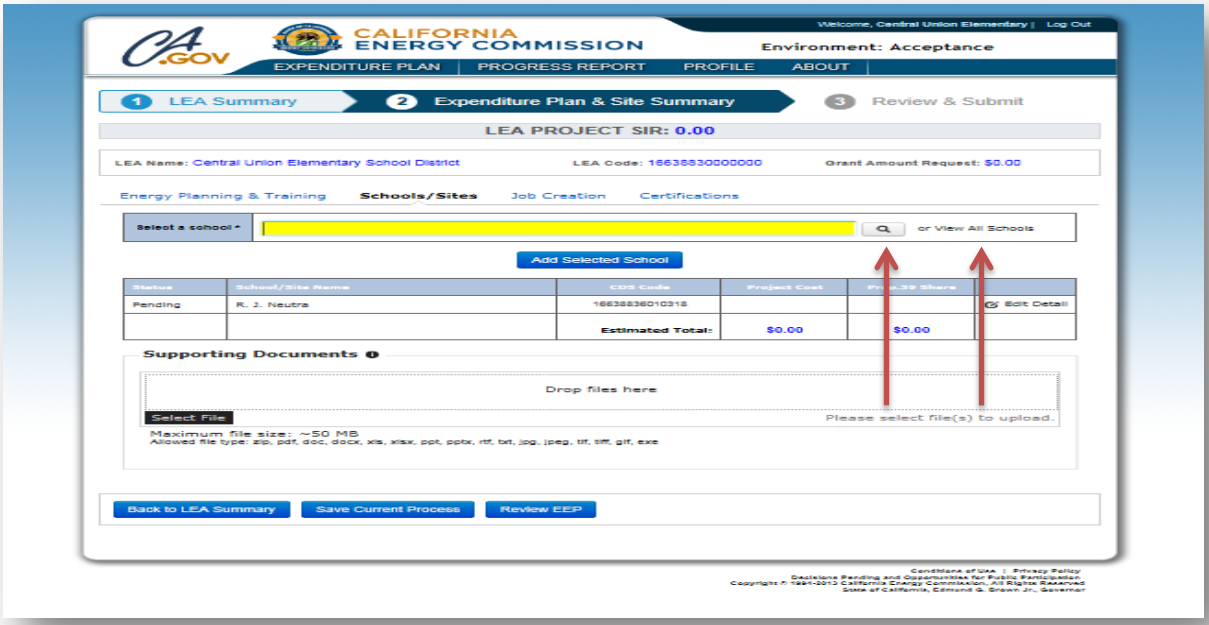


Enter the full or partial school name, address, or CDS code in the "Select a school" field of the school or site. If you are entering information for a non-school site such as the district's Administration Office or Maintenance Office, select the district in the drop down box. The district is designated by the word (District) in front of the district name. From the drop down box, select the school to be added to the energy expenditure plan as shown below.

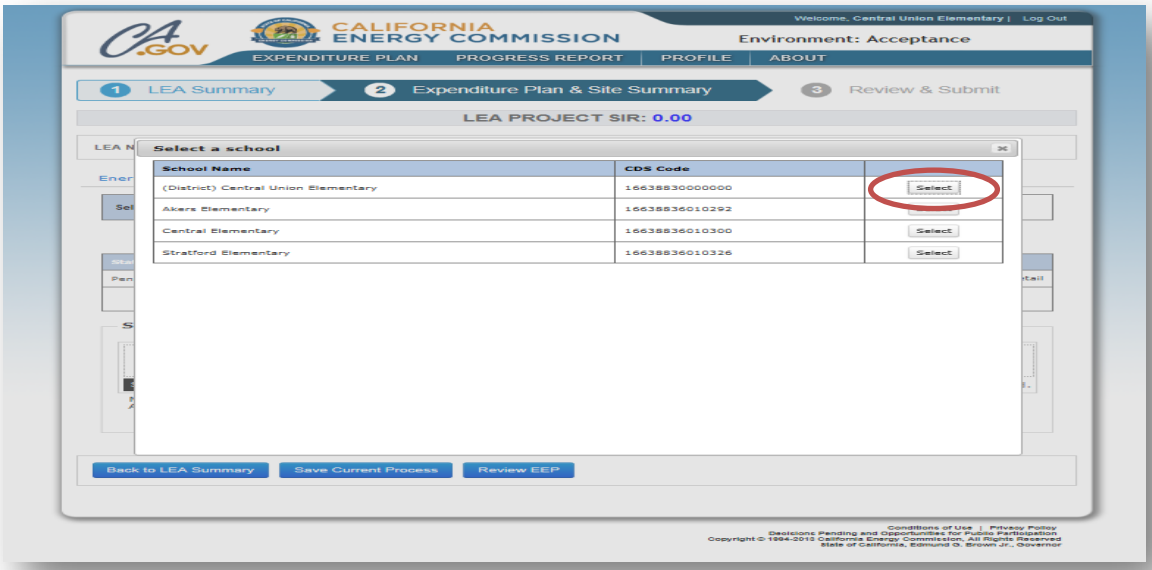
The schools listed in the drop down box are taken from CDE and may include some schools that may have already been closed. Do not enter the name of a closed school.



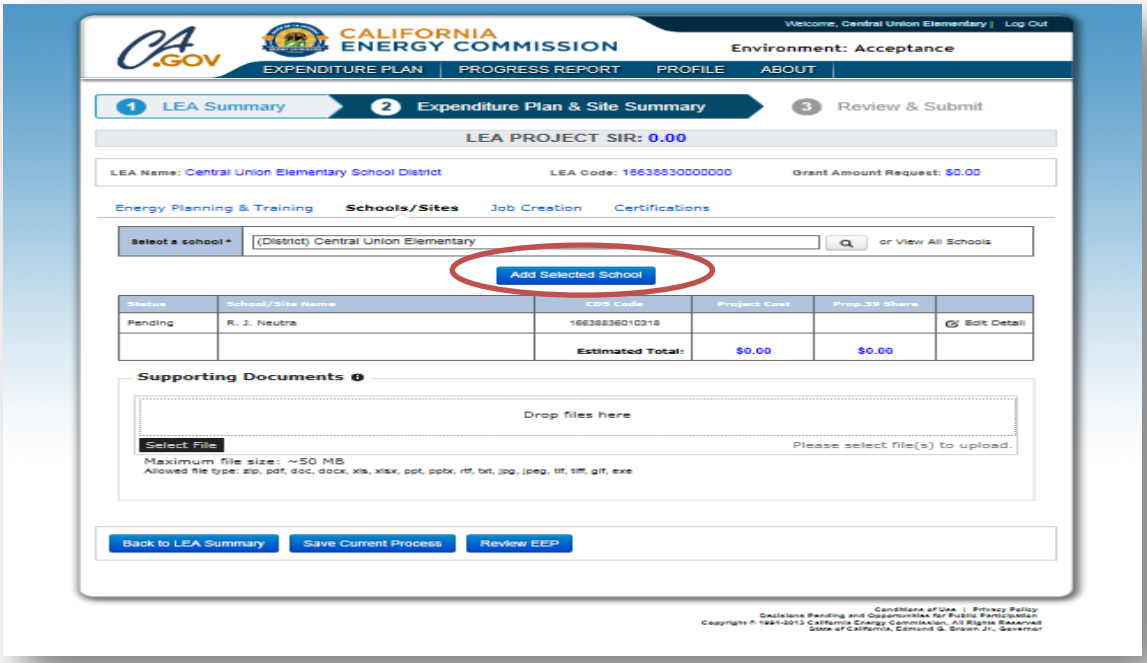
Alternatively, you may click the search icon or the “View All Schools” link for a list of all the schools in the LEA.



Then, click Select for the school or site you wish to add to the energy expenditure plan as shown below.

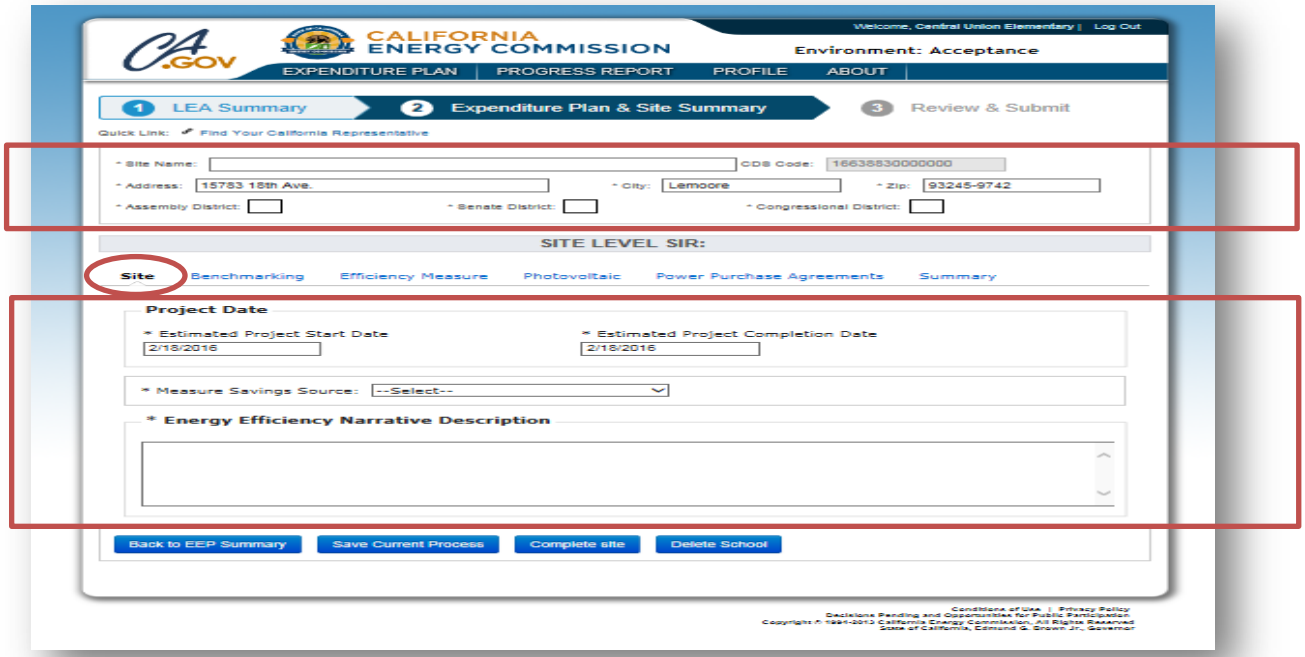


Then, click Add Selected School. As you add schools, the name of the school is removed from the list of schools so you do not select the same school/site again. If you added the district or a non-school site, the district will remain on the list. You may add in as many non-school sites as needed.



First Schools/Site Subsection: Site

Once you click Add Selected School, the Site screen will appear.



a. ***Site Name:*** This field is automatically populated if a school was selected and added from the Schools/Site section. If you have selected a district non-school, this field will be blank. You may then key in the name of the site. For example, if you are keying in information on the Administration Building, you may type in Administration Building in this field.

b. ***CDS Code:*** This field is automatically populated from your selection from the previous page.

c. ***Address:*** Enter the physical or mailing address of this school or site where your LEA plans to implement this energy project. The address entered in this field must be a street address.

d. ***City:*** This is an automatically populated field and shows the name of the city where this school or site is located.

e. ***Zip Code:*** This is an automatically populated field and shows the ZIP code of the school or site where this project is proposed.

f. ***Assembly District:*** Enter the Assembly District in which the school/site is located. If you don't know the LEA's Assembly District, click on the **Find Your California Representative** link on the upper left-hand corner or click on this link

http://findyourrep.legislature.ca.gov/. Complete the address information and the Assembly and Senate Districts are identified.

g. ***Senate District:*** Enter the Senate District in which the school/site is located. If you don't know the LEA's Senate District, click on the **Find Your California Representative** link on the upper left hand corner or click on this link http://findyourrep.legislature.ca.gov/. Complete the address information and the Assembly and Senate Districts are identified.

h. ***Congressional District:*** Enter the Congressional District in which the school/site is located. If you don't know the LEA's Congressional District, click on the following link in house.gov, http://www.house.gov/representatives/find/. You may have to enter your zip code + 4 or a specific address to find your specific Congressional District out of a possible list of Congressional Districts.

i. ***Site Level SIR***: The SIR is automatically calculated for you from other fields you will enter in subsequent subsections and reflects the combined SIR for all of the measures proposed for the energy project at this school or site. The site level SIR is for reference only.

Project Date:

j. ***Estimated Project Start Date:*** Enter the estimated date your LEA plans to begin implementing the eligible energy project. Please use the format mm/dd/yyyy to enter the date. A calendar pop-up has been provided. The Project Start Date should occur before the Project Completion Date. This will be validated by the system.

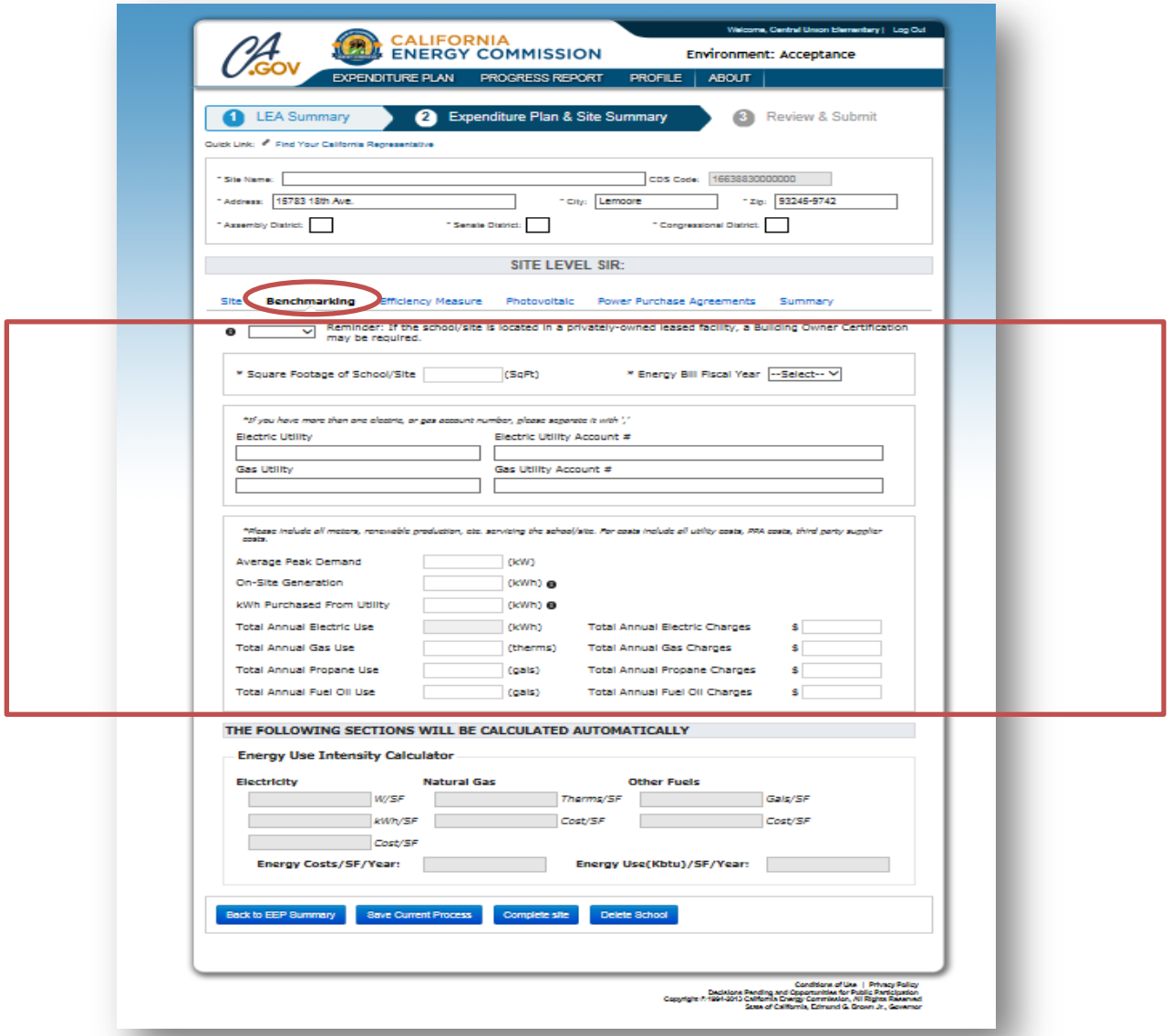
k. ***Estimated Project Completion Date:*** Enter the estimated date when your LEA plans to complete the eligible energy project at this school or site. Please use the mm/dd/yyyy format to enter the date. A calendar pop-up has been provided for your use. The Project Completion Date should occur after the Project Start Date. This will be validated by the system.

l. ***Measure Savings Source:*** From the drop-down menu, select the source your LEA used to identify the energy savings and costs for the listed energy measures for the school or site energy project.

Energy Efficiency Narrative Description:

Enter a description of the current condition of the school or site and the overall energy efficiency measures being implemented. If you are also proposing an LEA-owned Photovoltaic (PV) or Power Purchase Agreement (PPA) measure for this school or site, describe the energy efficiency measures previously implemented, and why this school or site is a good candidate for a LEA-owned PV or PPA measure.

Second School/Site Subsection: Benchmarking



a. ***Reminder: If the school/site is located in a privately-owned leased facility, a Building Owner Certification may be required.*** If the LEA is in a privately-owned or leased facility that does not have a separate meter or the lease payment includes the utility cost, submit a certification from the building owner committing to transfer the cost savings from the energy project to the LEA tenant, through a reduced lease payment or other form of monetary reimbursement. If the school/site includes privately-owned leased facilities, please use the drop-down menu and select "included" to indicate the Building Owner Certification is included in the energy expenditure plan.

b. ***Square Footage of School/Site:*** Enter the approximate gross square footage of the school or site where the LEA plans to implement this eligible energy project. "Gross square footage" is the area of the school or site within exterior walls less any courtyards or other outdoor areas.

c. ***Energy Bill Fiscal Year:*** Enter the fiscal year associated with the energy bills used to complete the Benchmarking section. Use the drop-down menu to select the fiscal year. The LEA should use the prior full fiscal year information. A fiscal year is designated as July 1 – June 30 of a certain year.

d. ***Electric Utility:*** Enter the name of the electric utility provider for this school or site. Multiple providers may be entered on this line. If the school or site does not have an electric utility, leave this field blank.

e. ***Electric Utility Account #:*** Enter the account number(s) of the school or site provided by the electric utility provider. Multiple account numbers may be entered on this line. If the school or site does not have an electric utility, leave this field blank.

f. ***Gas Utility:*** Enter the name of the natural gas provider for this school or site. Multiple providers may be entered on this line. If the school or site does not have a gas utility, leave this field blank. (Note: Do NOT enter the name of the propane or fuel oil provider in this field.)

g. ***Gas Utility Account #:*** Enter the account number(s) of the school or site provided by the natural gas, propane, or fuel oil utility provider. Multiple account numbers may be entered on this line. If the school or site does not have a gas utility, leave this field blank.

For items (h) thru (r) below, please include all meters, renewable production, and so forth servicing the school/site. For costs include all utility costs, PPA costs, and third-party supplier costs.

h. ***Average Peak Demand (kW):*** Enter the average monthly peak demand of this school or site from the previous fiscal year electric bills. To determine this number, review the previous fiscal year bills for the school or site. (For example, if the energy expenditure plan is submitted in fiscal year 2015-2016, use the bills from 2014-2015.) Calculate this number by averaging the peak demand values. If the school or site has multiple electric meters, then the peak demand of each meter should be summed before averaging. If the utility bills for this school or site do not include electric peak demand information, then leave this field blank.

i. ***On-Site Generation (kWh):*** If the school or site has PV on-site electric production, enter the total electric generation from the solar or PV systems at the school or site. If the solar installation is financed by a PPA, enter the purchased kWh from the PPA

bills. Also, many LEAs may have school-owned PV systems. In this case, your solar production tracking systems can provide this information. Enter the total annual electric usage value on this field. If the school or site does not have a PV system, enter 0.

j. ***kWh Purchased from Utility (kWh):*** Enter the total electricity consumption of this school or site that is purchased from your local utility provider in the previous fiscal year. Calculate this value by adding the electric usage stated in each of the previous fiscal year electric bills. If the school or site has multiple electric meters, then add the annual electric usage for all meters. If the school or site does not use electricity, enter 0 into this field.

k. ***Total Annual Electric Use (kWh):*** This is an automatically calculated field from the information entered from items (i) and (j).

l. ***Total Annual Gas Use (therms):*** Enter the total annual natural gas usage of the school or site from the previous fiscal year natural gas bills. Calculate this value by adding the natural gas usage from each of the previous fiscal year's bills. If the school or site has multiple natural gas meters, then add the annual natural gas usage for all meters at the school or site to obtain the correct natural gas usage value to enter on this field. If the school or site does not use natural gas, enter 0.

m. ***Total Annual Propane Use (gals):*** Enter the total amount of propane in gallons used by the school or site from the previous fiscal year propane bills. Calculate this value by adding the gallons of propane usage from the previous fiscal year's bills. If the school or site has multiple propane services, then add the annual propane usage for all services to obtain the correct number of gallons to enter in this field. If the school or site does not use propane, enter 0.

n. ***Total Annual Fuel Oil Use (gals):*** Enter the total amount of fuel oil used in gallons by the school or site from the previous fiscal year fuel oil bills. Calculate this value by adding the gallons of fuel oil usage from the previous fiscal year bills. If the school or site has multiple fuel oil services, then add the annual fuel oil usage for all services to obtain the correct number of gallons to enter on this line. If the school or site does not use fuel oil, enter 0.

o. ***Total Annual Electric Charges ($):*** Enter the total annual electricity cost for the school or site from the previous fiscal year electric bills. A fiscal year is designated as July 1 – June 30 of a certain year. The LEA should use the most recent full fiscal year information. Calculate this value by adding the dollar charges for electricity stated in the previous fiscal year bills. If the school or site has multiple electric meters, then add the dollar charges for electricity for all meters on the school or site to obtain the correct dollar amount to enter on this field. If the school or site has an existing PPA, then add the dollar charges for electricity from the existing PPA. If the school or site does not use electricity, enter 0.

p. ***Total Annual Gas Charges ($):*** Enter the annual total natural gas cost for the school or site from the previous fiscal year natural gas bills. A fiscal year is designated as July 1 – June 30 of a certain year. Calculate this value by adding the dollar charges for natural gas stated in the previous fiscal year bills. If the school or site has multiple natural gas meters, then add the annual dollar charges for natural gas for all meters on the school or site to obtain the correct dollar amount to enter on this line. If the school or site does not use natural gas, enter 0.

q. ***Total Annual Propane Charges ($):*** Enter the total annual propane cost of the school or site from the previous fiscal year propane bills. The LEA should use the most recent full fiscal year information. A fiscal year is designated as July 1 – June 30 of a certain year. Calculate this value by adding the dollar charges for propane stated in the previous fiscal year bills. If the school or site has multiple propane services, then add the annual dollar charges for propane for all services to obtain the correct dollar amount to enter on this field. If the school or site does not use propane, enter 0.

r. ***Total Annual Fuel Oil Charges ($):*** Enter the total annual fuel oil cost of the school or site from the previous fiscal year fuel oil bills. The LEA should use the most recent full fiscal year information. A fiscal year is designated as July 1 – June 30 of a certain year. Calculate this value by adding the dollar charges for fuel oil stated in the previous fiscal year bills. If the school or site has multiple fuel oil services, then add the annual dollar charges for fuel oil usage for all services to obtain the correct dollar amount to enter on this field. If the school or site does not use fuel oil, enter 0.

Energy Use Intensity Calculator (All automatically calculated fields):

This section is automatically calculated based on the information entered in the Benchmarking subsection.

s. ***W/SF*** (watts per square foot): This signifies the electricity demand intensity of the school or site. The value automatically calculates for you from the *Average Peak Demand* and *Square Footage of School/Site* you provide.

t. ***kWh/SF*** (kilowatt-hours per square foot): This signifies the electricity use intensity of the school or site. The value automatically calculates for you from the *Total Annual Electric Use* and *Square Footage of the School/Site* you provide.

u. ***Cost/SF*** (dollar cost of electricity per square foot): This signifies the electric cost intensity of the school or site. The value automatically calculates for you from the *Total Annual Electric Charges* and *Square Footage of School/Site* you provide.

v. ***Therms/SF*** (therms per square foot): This signifies the natural gas use intensity of the school or site. The value automatically calculates for you from the *Total Annual Gas Use* and *Square Footage of School/Site* you provide.

w. ***Cost/SF*** (cost of natural gas per square foot): This signifies the natural gas cost intensity of the school or site. The value automatically calculates for you from the *Total Annual Gas Charges* and *Square Footage of School/Site* you provide.

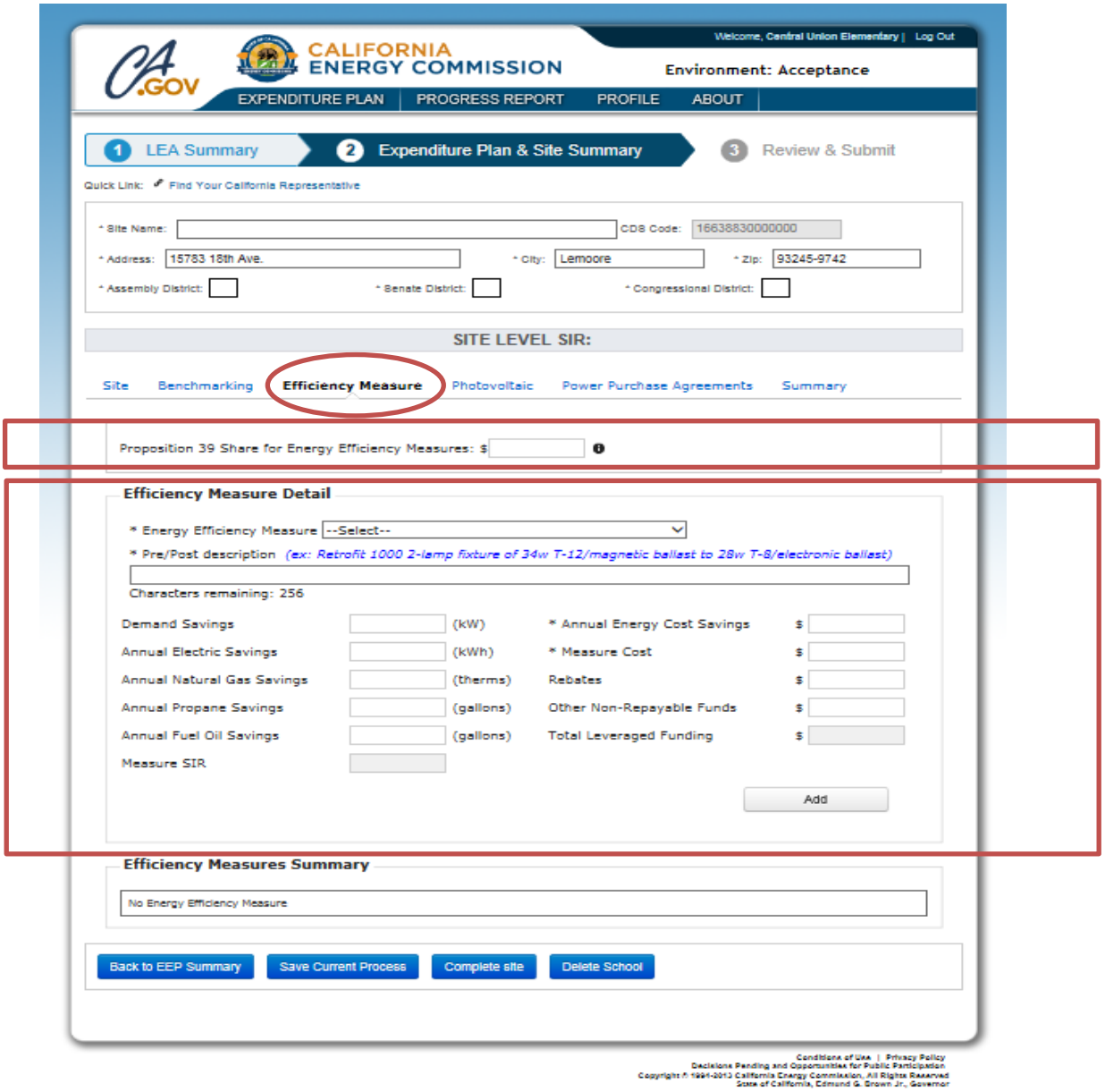
x. ***Gals/SF*** (gallons of propane and fuel oil per square foot): This signifies the propane and fuel oil use intensity of the school or site. The value automatically calculates for you from the *Total Annual Propane Use*, *Total Annual Fuel Oil Use*, and *Square Footage of School/Site* you provide.

y. ***Cost/SF*** (cost of propane gas or fuel oil per square foot): This signifies the propane and fuel oil cost intensity of the school or site. The value automatically calculates for you from the *Total Annual Propane and Fuel Oil Charges* and *Square Footage of School/Site* you provide.

z. ***Energy Costs/SF/Year*** (total energy costs per square foot per year): This equals the total energy cost intensity of the school or site. The value automatically calculates for you from the total charges for all energy sources and *Square Footage of School/Site* you provide.

aa. ***Energy Use (kBtu)/SF/Year*** (total energy usage from all sources per square foot per year): This equals the total source energy use intensity of the school or site. The value automatically calculates from the total energy use and *Square Footage of School/Site* you provide.

Third School/Site Subsection: Efficiency Measure



Note on Access Compliance Requirements: Some energy projects may be required to include accessibility upgrades outside the scope-of-work area. LEAs may include the costs of these accessibility upgrades to their Proposition 39 projects as long as the Savings-to-Investment Ratio (SIR) requirement of 1.01 is met. To help LEAs determine the various requirements for eligible energy measures and possible exemptions, the Division of State Architect (DSA) provides resources and *guidelines* on its website at http://www.dgs.ca.gov/dsa/Programs/progSustainability/prop39.aspx.

a. ***Proposition 39 Share for Energy Efficiency Measures ($):*** Enter the total dollar amount of Proposition 39 award funds your LEA proposes to use to implement all energy efficiency measures at this school or site.

Energy Measure Detail:

b. ***Energy Efficiency Measure:*** From the drop-down menu, select the type of energy efficiency measure your LEA plans to implement. If the exact energy efficiency measure is not present, please choose the energy efficiency measure from the drop-down menu that most closely resembles the measure to be implemented. Select the efficiency measures carefully because the effective useful lives for each measure may be different. If no measure closely matches, please contact the Proposition 39 hotline for additional assistance.

c. ***Pre/Post Description:*** Enter further description of the energy efficiency measure. The maximum number of characters you can enter in this field is 256.

d. ***Demand Savings (kW):*** Enter the demand savings from the information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If this energy efficiency measure has no demand savings, leave this field blank.

e. ***Annual Electric Savings (kWh):*** Enter the electric savings from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If this energy efficiency measure has no electric savings, leave this field blank.

f. ***Annual Natural Gas Savings (therms):*** Enter the annual natural gas savings from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If the energy efficiency measure has no natural gas savings, leave this field blank.

g. ***Annual Propane Savings (gallons):*** Enter the annual propane savings from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If the energy efficiency measure has no propane savings, leave this field blank.

h. ***Annual Fuel Oil Savings (gallons):*** Enter the annual fuel oil savings from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If the energy efficiency measure has no fuel oil savings, leave this field blank.

i. ***Measure SIR:*** This is an automatically calculated field that reflects the SIR for each energy efficiency measure entered.

j. ***Annual Energy Cost Savings ($):*** Enter the total annual energy cost savings from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this energy efficiency measure. If the energy efficiency measure includes both electricity and fuel cost savings, include the total of these cost savings.

k. ***Measure Cost ($):*** Enter the total cost for implementing this energy efficiency measure at this school or site.

l. ***Rebates ($):*** Enter the total dollar amount of rebates your LEA will apply to this energy efficiency measure. Rebates are considered utility rebates or other incentives that reduce the project cost.

m. ***Other Non-Repayable Funds ($):*** Enter the total dollar amount of other non-repayable funds your LEA will apply to this energy efficiency measure (other than Proposition 39 award funds). Non-repayable funds include bond funding, deferred maintenance, general operation budgets, and other funds used to finance the project. This is funding that does not need to be repaid by the LEA.

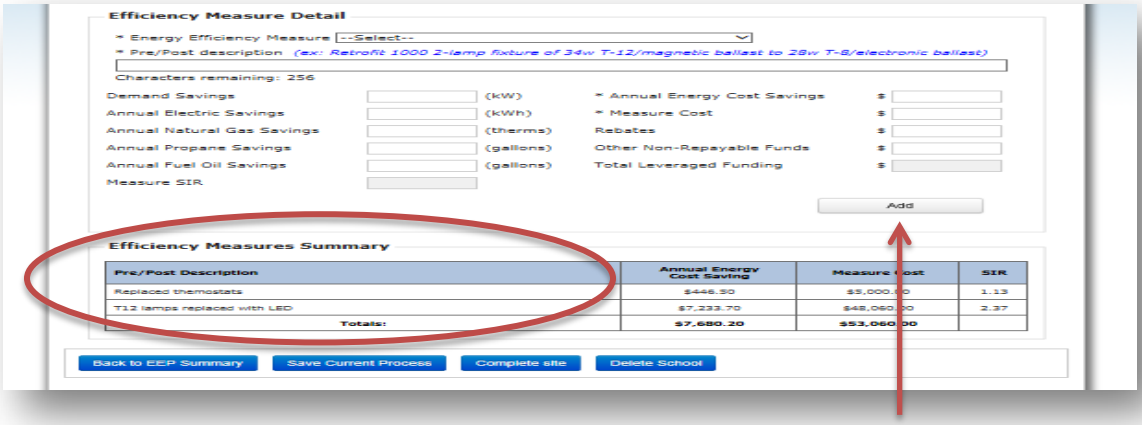
n. ***Total Leveraged Funding ($):*** This is an automatically calculated field. This is the total amount of rebates and other non-repayable funds entered.

Once all the information in the Efficiency Measure Detail has been entered, click Add as shown below. Then repeat the entire process until all the energy efficiency measures for this school or site have been entered.

A list of errors will be generated if any required information is not included when the Add button is clicked. These errors will need to be addressed before the energy efficiency measure can be added. **Important Note: Clicking Add does not save the changes to the energy expenditure plan. Please use the Save Current Process button to manually save changes. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of the added energy efficiency measures.**

It is important to click Add first before clicking the Save Current Process button or your measures will not be added and saved.

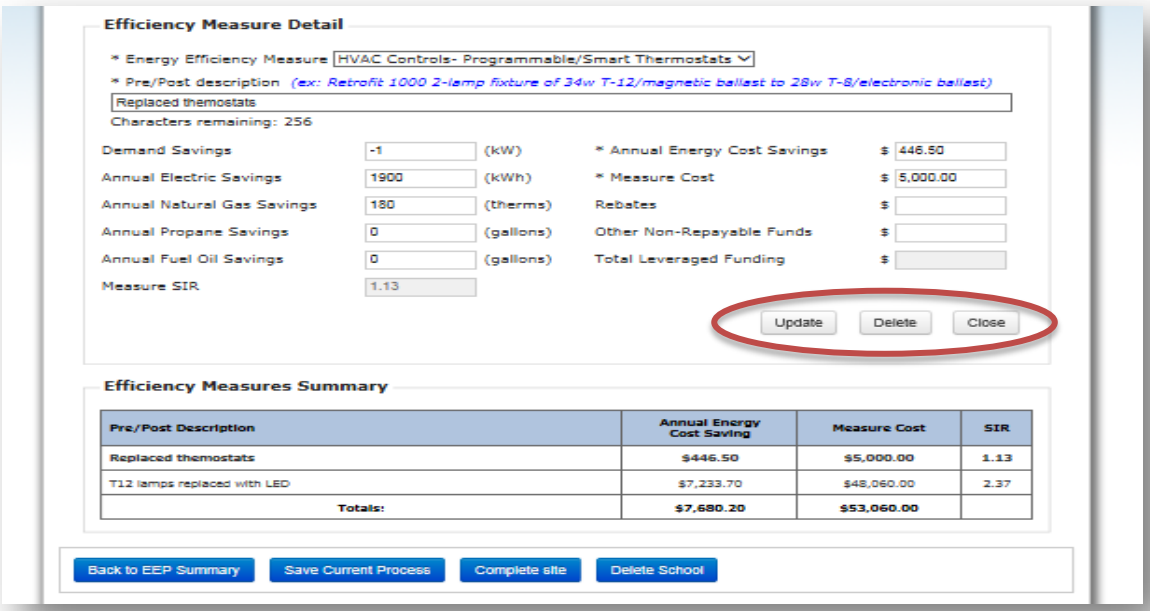
As new energy efficiency measures are entered, each will be listed in the Efficiency Measures Summary (see below.)



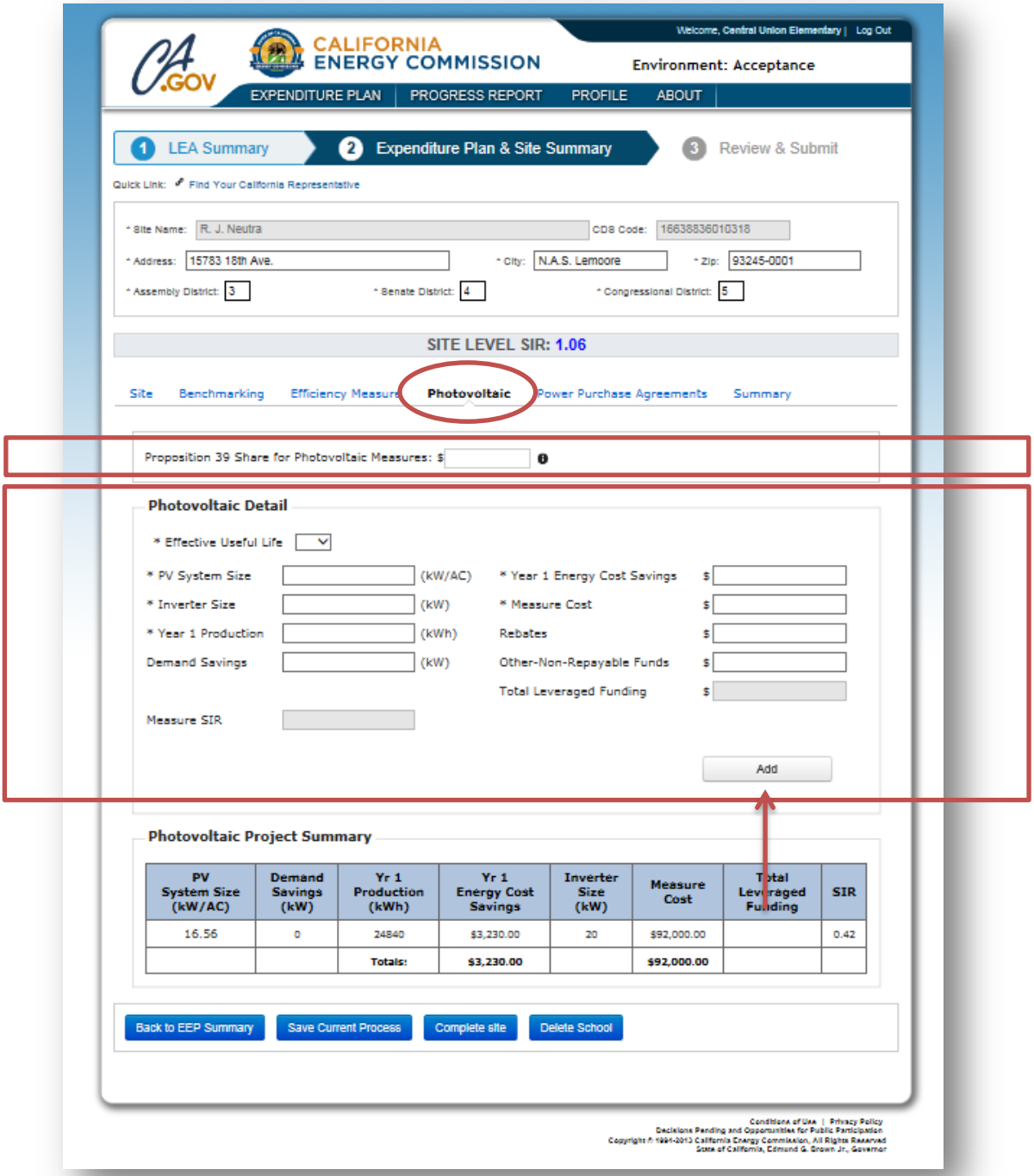
Update - To update or revise information in a measure, select the measure in the Efficiency Measures Summary. Make the necessary revisions in the data, then click Update. A list of errors will be generated if any required information is not included when the Update button is clicked. These errors will need to be addressed before the energy efficiency measure can be updated. Once the update has been completed, click Close.

Delete - To delete an efficiency measure that may have been keyed in error, select the measure in the Efficiency Measures Summary, then click Delete.

It is important to click Update , Delete or Close before clicking Save Current Process. However, updating and deleting energy measures does not automatically save changes to the energy expenditure plan. Be sure to use the Save Current Process button to manually save changes to the energy expenditure plan. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of all changes that have just been made.



Fourth School/Site Subsection: Photovoltaic



Note: This section is to be used only for *LEA-owned PV systems.* To complete this section, the LEA will need to obtain information from its measure savings source. An example of a measure saving sources is an energy audit from a solar consultant or vendor, or from the Energy Commission energy savings calculator.

Note on Access Compliance Requirements: Some energy projects may be required to include accessibility upgrades outside the scope-of-work area. LEAs may include the costs of these accessibility upgrades to their Proposition 39 projects as long as the SIR requirement of 1.01 is met. To help LEAs determine the various requirements for eligible energy measures and possible exemptions, the Division of State Architect (DSA) provides resources and guidelines on its website at http://www.dgs.ca.gov/dsa/Programs/progSustainability/prop39.aspx.

a. ***Proposition 39 Share for Photovoltaic Measures ($):*** Enter the total dollar amount of Proposition 39 award funds your LEA proposes to use to implement all photovoltaic measures at this school or site.

Photovoltaic Detail:

b. ***Effective Useful Life:*** Select the effective useful life for the LEA's PV system. If 25 years is selected, the LEA must include a 25-year panel performance warranty from the PV vendor with its supporting documents.

c. ***PV System Size (kW AC)***: Enter the alternating current (AC) power rating of the PV system proposed for installation at the school or site. Refer to the *Measure Savings Source* used for this PV measure.

d. ***Inverter Size (kW)***: Enter the total inverter capacity in kilowatts of all the inverters associated to the PV measure.

e. ***Year 1 Production (kWh)***: Enter the first-year energy production of this PV system as projected in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this PV measure. If the PV vendor provides a performance guarantee, enter the annual unit production consistent with your performance guarantee. If you do not have a performance guarantee, calculate your annual kWh production by multiplying 1,500 kWh/kWac by the system size (kWac.) This is a statewide average based on the California Public Utility Commission (CPUC) and the Energy Commission performance evaluations.

f. ***Demand Savings (kW):*** Enter the demand savings associated with this PV system from information contained in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this PV measure.

g. ***Measure SIR***: This is an automatically calculated field. This is the savings-to-investment ratio for the PV system measure based on the information you provide.

h. ***Year 1 Energy Cost Savings ($)***: Enter the first-year energy cost savings of this PV system as projected in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this PV measure.

i. ***Measure Cost ($)***: Enter the total cost to implement the PV system as projected in the *Measure Savings Source* (for example, energy savings calculator, energy audit, combination of both) your LEA is using for this PV measure.

j. ***Rebates ($)***: Enter the total amount of rebates and grant funds (other than Proposition 39 award funds) that will be applied to the PV measure. Rebates are considered utility rebates or other incentives that reduce the project cost.

k. ***Other Non-Repayable Funds ($):*** Enter the total dollar amount of other non-repayable funds your LEA will apply to this photovoltaic measure (other than Proposition 39 award funds). Non-repayable funds include bond funding, deferred maintenance, general operation budgets, and other funds used to finance the project. This is funding that does not need to be repaid by the LEA.

l. ***Total Leveraged Funding ($):*** This is an automatically calculated field. This is the total amount of rebates and other non-repayable funds entered.

Once all the information in the Photovoltaic Detail has been entered, click Add. Then repeat the entire process until all the PV measures for this school or site have been entered.

A list of errors will be generated if any required information is not included when the Add button is clicked. These errors will need to be addressed before the PV measure can be added. **Important Note: Clicking Add does not save the changes to the energy expenditure plan. Please use the Save Current Process button to manually save changes. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of the added PV measures.**

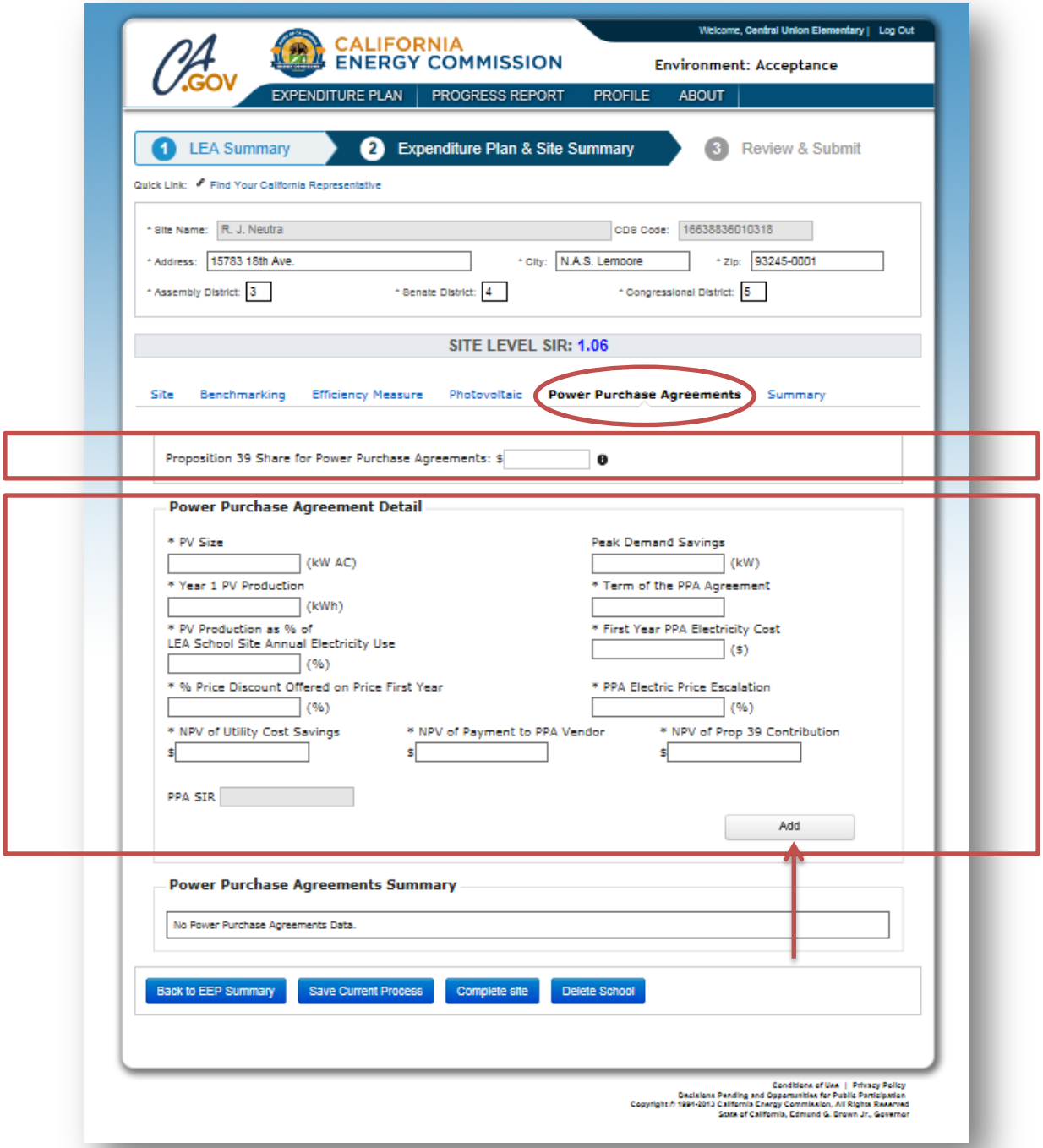
It is important to click Add first before clicking the Save Current Process button or your measures will not be added and saved.

As PV measures are entered, each will be listed in the Photovoltaic Project Summary.

To update or delete a PV measure, follow the same procedures for updating or deleting measures as shown in the Third School/Site Subsection: Efficiency Measure. A list of errors will be generated if any required information is not included when the Update button is clicked. These errors will need to be addressed before the PV measure can be updated.

It is important to click Update , Delete or Close before clicking Save Current Process. However, updating and deleting PV measures do not automatically save changes to the energy expenditure plan. Be sure to use the Save Current Process button to manually save changes to the energy expenditure plan. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of all changes that have just been made.

Fifth School/Site Subsection: Power Purchase Agreements



Note on Access Compliance Requirements: Some energy projects may be required to include accessibility upgrades outside the scope-of-work area. LEAs may include the costs of these accessibility upgrades to their Proposition 39 projects as long as the SIR requirement of 1.01 is met. To help LEAs determine the various requirements for eligible energy

measures and possible exemptions, the DSA provides resources and *guidelines* on its website at http://www.dgs.ca.gov/dsa/Programs/progSustainability/prop39.aspx .

a. ***Proposition 39 Share for Power Purchase Agreements ($):*** Enter the total dollar amount of Proposition 39 award funds your LEA proposes to use to implement all power agreement measures at this school or site.

Power Purchase Agreement Detail:

b. ***PV Size (kW AC):*** Enter the alternating current (AC) power rating of the clean energy generation system proposed at the school or site.

c. ***Peak Demand Savings (kW):*** Enter the estimated peak demand savings based on the proposed system size and location.

d. ***Year 1 Production (kWh):*** Enter the estimated annual electricity production in kWh based on the proposed system size and location.

e. ***Term of the PPA Agreement:*** Enter the number of years of the PPA between the PPA vendor and the LEA (for example, 15 years, 20 years, and so forth).

f. ***PV Production as % of LEA School Site Annual Electricity Use (%):*** Enter the percentage of the first year's (12-month) production estimate to the most recent 12-month annual electricity use of the site by dividing the former by the latter.

g. ***First Year PPA Electricity Cost ($):*** This is the electricity cost paid by the LEA to the PPA developer. This is considered to be the measure cost for the LEA to obtain the electricity cost savings from the PPA. Any non-electricity costs paid by the LEA using Proposition 39 funds, such as project development costs, must be included.

h. ***% Price Discount Offered on Price First Year (%):*** Calculate the weighted average electricity price for last year's utility bills and the weighted average price paid by the LEA for the purchased electricity, then calculate and enter the percentage discount of the electricity price savings. For example, if the weighted average of electricity price is 20 cents and the weighted average price paid by the LEA for the purchased electricity is 16 cents, the difference between the two is 4 cents. To get the percentage price discount, divide 4 cents by 20 cents, and you will get 20 percent. In this example, enter 20 in this field.

i. ***PPA Electric Price Escalation (%):*** Enter the energy cost escalation rate that was agreed to in the PPA. The escalation rate should not exceed 3 percent nominal.

j. **NPV of Utility Cost Savings ($):** Net present value of the difference between the annual electricity cost paid to the utility immediately before and after the PPA.

k. **NPV of Payment to PPA Vendor ($):** Net present value of electricity cost paid to the PPA vendor over the term of the PPA.

l. **NPV of Prop 39 Contribution ($):** Net present value of the total Proposition 39 contribution to this PPA. Future year contribution shall be discounted to the current year's value.

m. ***PPA SIR:*** This SIR will be automatically calculated based on the PV production and cost information provided in items j, k, and l above.

Once all the information in the PPA Detail has been entered, click Add. Then repeat the entire process until all the PPA measures for this school or site has been entered.

A list of errors will be generated if any required information is not included when the Add button is clicked. These errors will need to be addressed before the PPA measure can be added. **Important Note: Clicking Add does not save the changes to the energy expenditure plan. Please use the Save Current Process button to manually save changes. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of the added PPA measures.**

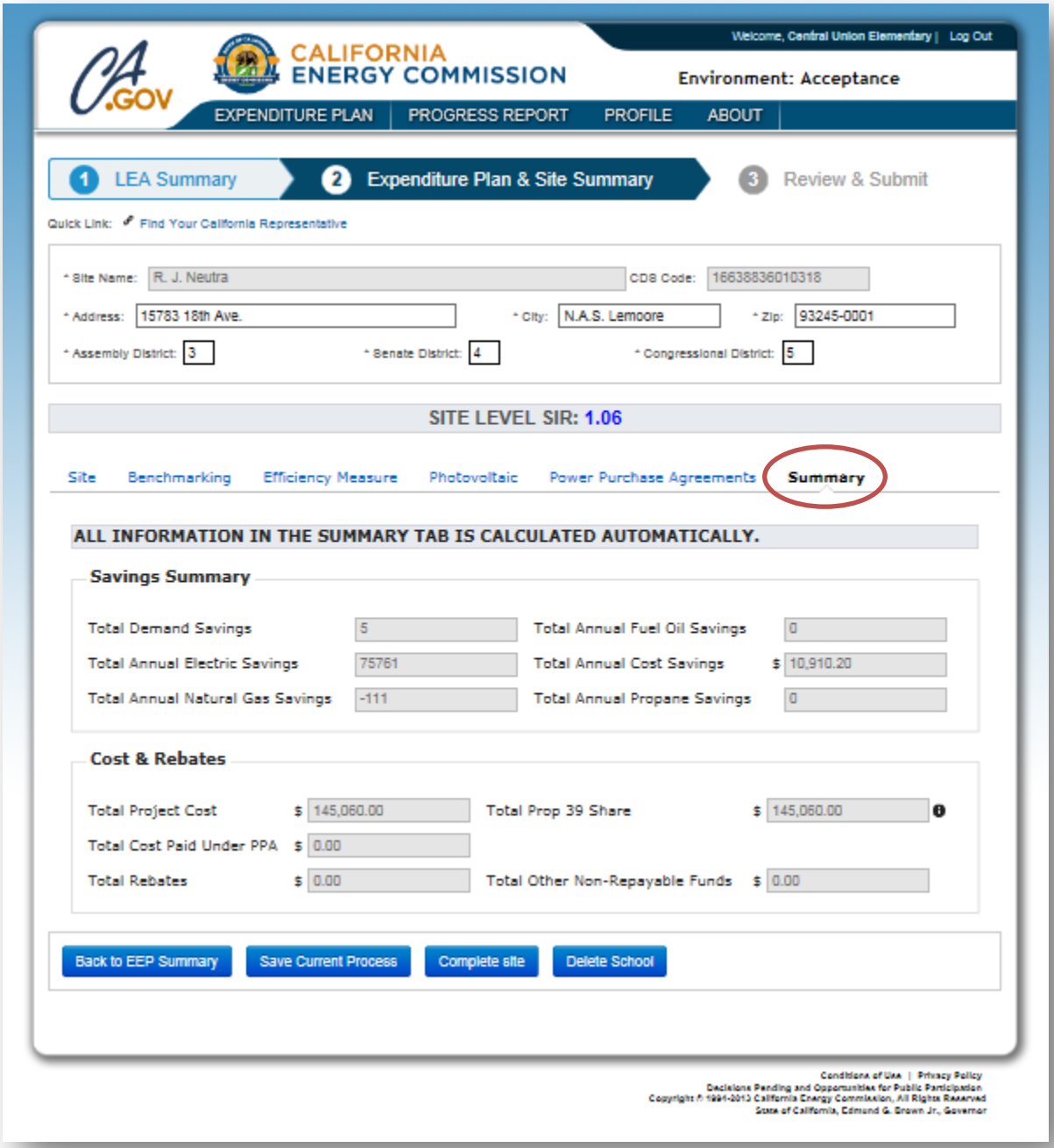
It is important to click Add first before clicking the Save Current Process button or your measures will not be added and saved.

As PPA measures are entered, each will be listed in the Power Purchase Agreements Summary.

To update or delete a PPA measure, follow the same procedures for updating or deleting measures as shown in the Third School/Site Subsection: Efficiency Measure. A list of errors will be generated if any required information is not included when the Update button is clicked. These errors will need to be addressed before the PPA measure can be updated.

It is important to click Update , Delete or Close before clicking Save Current Process. However, updating and deleting PPA measures do not automatically save changes to the energy expenditure plan. Be sure to use the Save Current Process button to manually save changes to the energy expenditure plan. Leaving the energy expenditure plan without using the Save Current Process button will result in the loss of all changes that have just been made.

Sixth Subsection: Summary



All information in the Summary Tab is calculated automatically based on the information keyed into the energy expenditure plan.

Savings Summary:

a. ***Total Demand Savings:*** This field is automatically calculated to reflect the total demand savings for the energy efficiency measures and PV system measures proposed for the school or site.

b. ***Total Annual Electric Savings:*** This field is automatically calculated to reflect the total electric savings for the energy efficiency measures and PV system measures proposed for the school or site.

c. ***Total Annual Natural Gas Savings:*** This field is automatically calculated to reflect the total natural gas savings for these energy efficiency measures proposed for the school or site.

d. ***Total Annual Fuel Oil Savings:*** This field is automatically calculated to reflect the total fuel oil savings for these energy efficiency measures proposed for the school or site.

e. ***Total Annual Cost Savings:*** This field is automatically calculated to reflect the total energy cost savings associated with energy efficiency measures, both electricity and fuel, and PV system measures proposed for the school or site.

f. ***Total Annual Propane Savings:*** This field is automatically calculated to reflect the total propane savings for these energy efficiency measures proposed for the school or site.

Cost & Rebates:

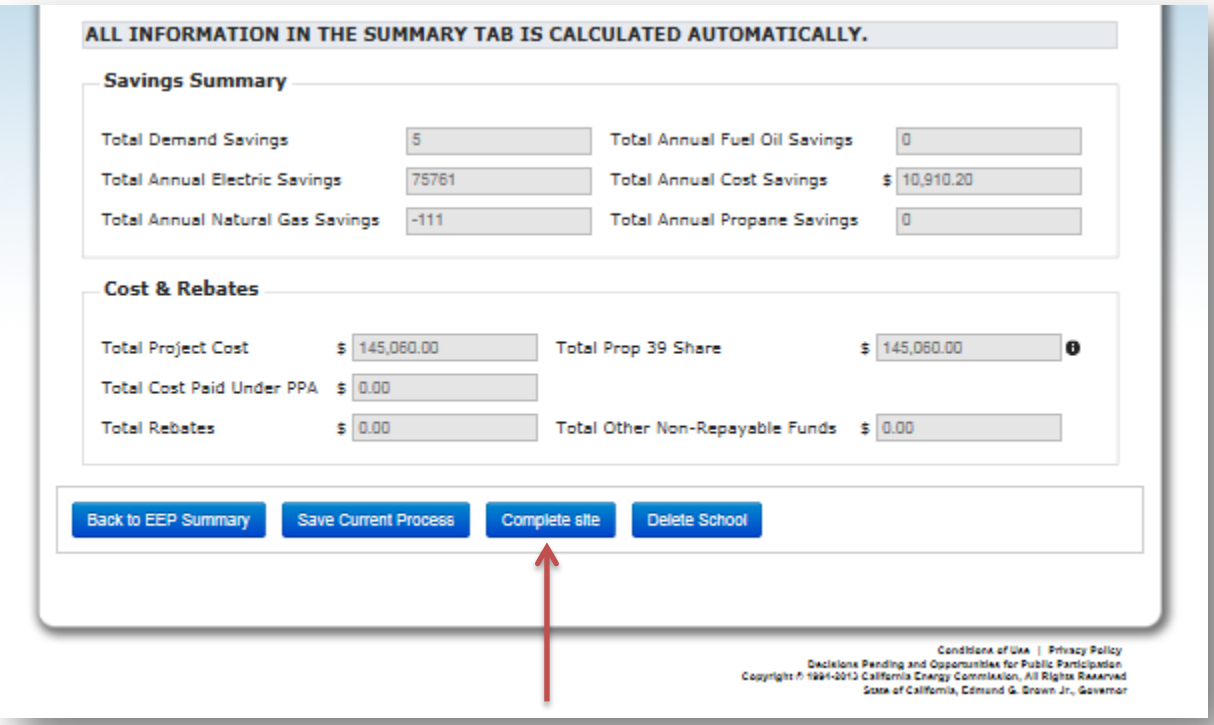
g. ***Total Project Cost:*** The total project cost of energy efficiency measures and PV measures proposed for the school or site. This field is automatically calculated based on information provided in the input fields.

h. ***Total Prop 39 Share***: This amount is automatically calculated to reflect the total amount of Proposition 39 award funds to be used for the energy measures proposed to be implemented for the energy project at this school or site.

i. ***Total Cost Paid Under PPA:*** This amount is automatically calculated to reflect the total amount spent under PPAs applicable to the school or site.

j. ***Total Rebates:*** This is automatically calculated to reflect the total amount of rebates for energy efficiency measures and PV measures proposed for the school or site based on the information you provide in the input fields.

k. ***Total Other Non-Repayable Funds:*** This is automatically calculated to reflect the total amount of other non-repayable funds for energy efficiency measures and PV measures proposed for the school or site based on the information you provide in the input fields.



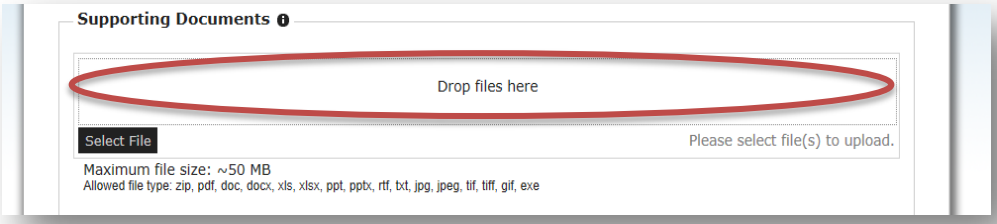
Once you have entered all the information for the school/site, click on the Complete site button. The system will go through a validation process and a list of errors will be generated if any required information is not included. These errors will need to be addressed before the site can be completed. If the site passes the validation process, the system will go back to the Schools/Sites summary screen and mark this site as "Completed." However, you may still go back and make changes to "Completed" sites before submitting the energy expenditure plan. If you make changes to a "Completed" site, click on Complete site again to run the validation. If you need to enter information for additional schools/sites, use the same procedure as listed in the Schools/Sites section in this handbook.

Uploading Supporting Documents

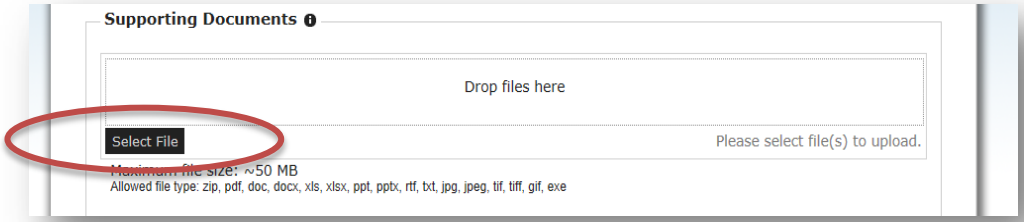
Once you have entered all the information for all schools/sites, you must upload all supporting documentation to validate all energy savings calculations in the Supporting Documents section. Appendix A lists examples of supporting documents that need to be uploaded with your energy expenditure plan.

You may upload supporting documents in two ways. Depending on what browser you are using, you may upload files by dragging and dropping files into the Supporting Documents section or clicking on the Select File button. Below are the two ways you may upload your supporting documents:

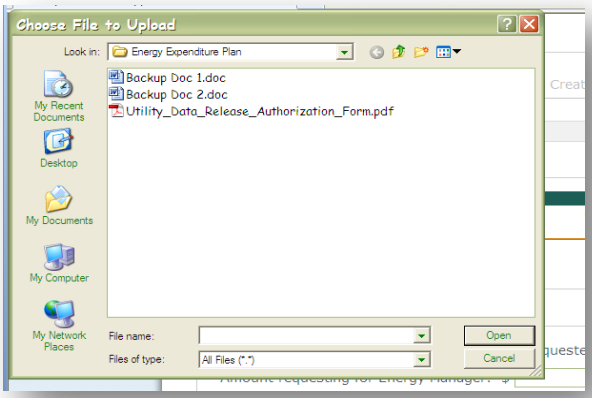
Drag and Drop Files – Drag and drop files simply by opening the folder on your computer that contains your energy expenditure plan documents and dragging and dropping the files into Energy Expenditure Plan Online where it says "Drop files here."



Select Files – The following is the process to upload files by selecting files from your computer.

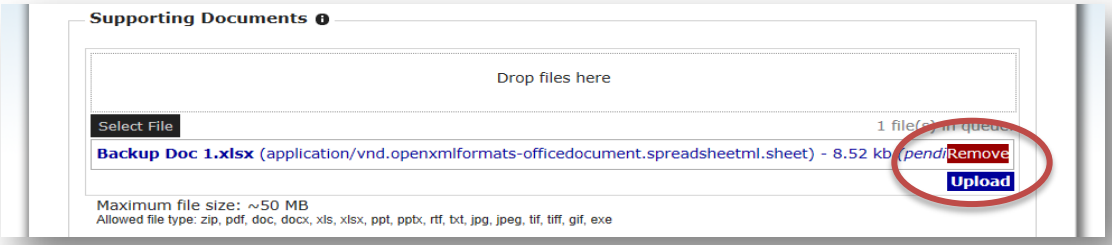


Click Select File

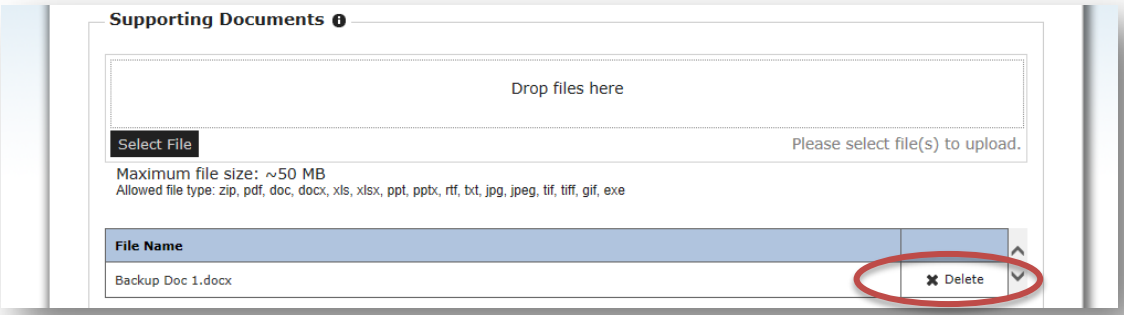


Select the file you need to upload. Then click Open.

Your files will appear in the system as shown below. Note that once the files are in Energy Expenditure Plan Online, you will not be able to change them. If you need to make changes to any of the files, make revisions to the files on your computer and then reupload those revised files. Note: Newer files with the same file name as the one in the upload screen will automatically overwrite the older file.

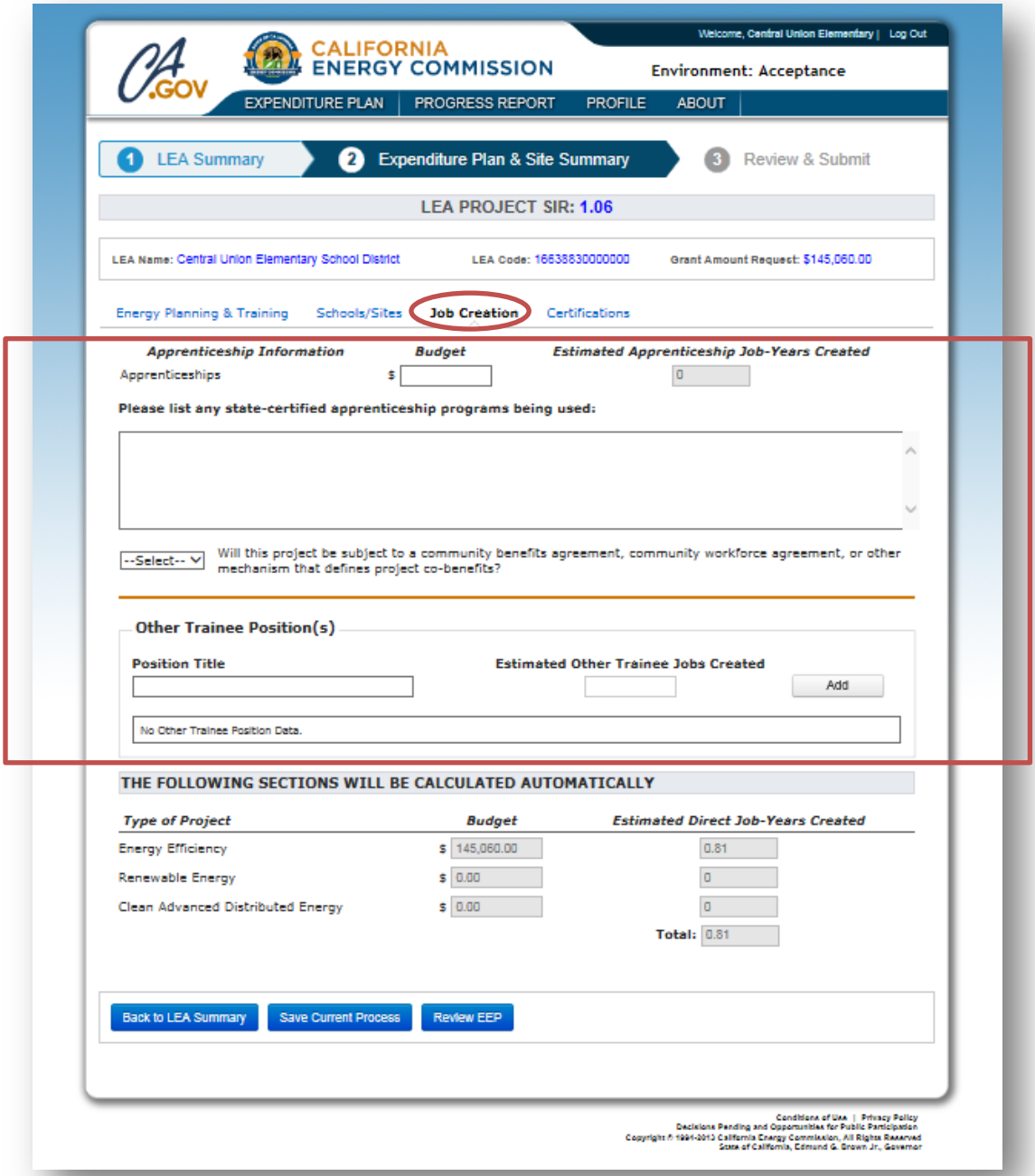


Click the Upload button to upload the supporting documents. Click the Remove button if you do not want to upload the selected file.



Once a file has been uploaded, you will still have the option to delete that file. Click on the XDelete button to delete files that have already been uploaded, but you do not want to submit.

Third Section: Job Creation



Once you have entered all of the school/site information and uploaded your supporting documentation, you are now ready to complete your energy expenditure plan. Click on the **Job Creation** section and enter the following:

a. ***Apprenticeships – Budget:*** Enter the estimated Proposition 39 funds your LEA plans to allocate to apprenticeship positions under this energy expenditure plan. If unknown, leave blank.

b. ***Estimated Apprenticeship Job-Years Created:*** This is an automatically calculated field based on the budget you entered.

c. ***Please list any state-certified apprenticeship programs being used:*** This field is for the LEA to list all state-certified apprenticeship programs being used to implement energy efficiency measures. If unknown, leave blank.

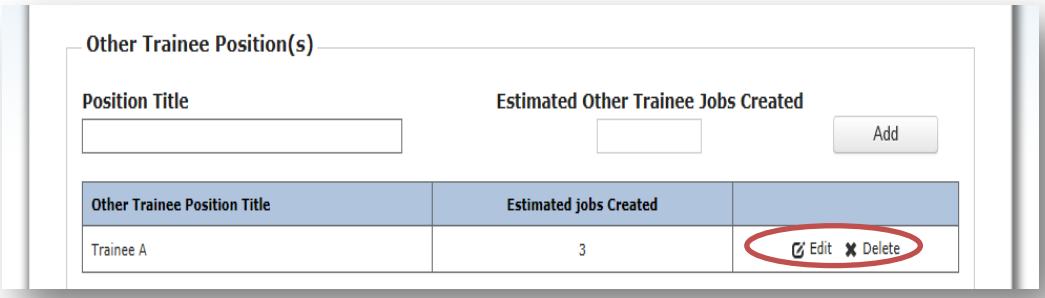
d. ***Will this project be subject to a community benefits agreement, community workforce agreement, or other mechanism that defines project co-benefits?*** This is a drop down menu. Please select "yes" on the drop down menu to indicate that the project is subject to community benefits agreements, community workforce agreements, or other mechanisms that define project co-benefits. If unknown, select "no."

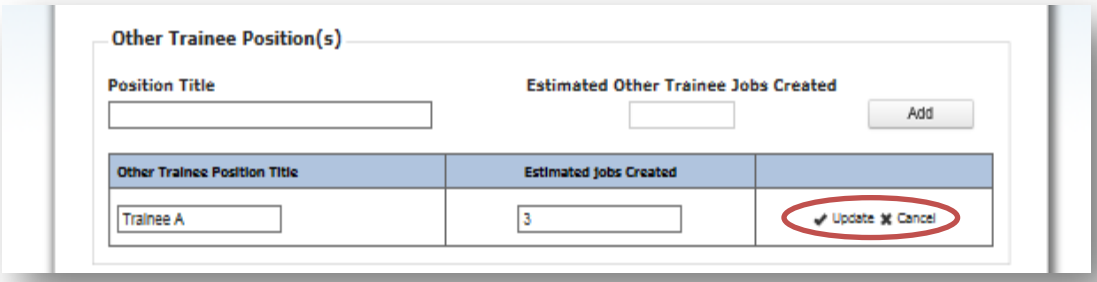
Other Trainee Position(s):

e. ***Position Title:*** Enter the titles of trainee positions your LEA will use in addition to apprenticeship positions. If unknown, leave blank.

f. ***Estimated Other Trainee Jobs Created:*** Enter the number of Other Trainee Jobs created for each trainee classification. If unknown, leave blank. Then click Add.

g. ***No Other Trainee Position Data:*** This field is automatically populated by the information entered in the "Other Trainee Position(s)" as shown below.





- To edit information that has been entered, click the Edit link and make the necessary revisions to the title and/or estimated jobs created. Then, click Update. To cancel an update, click Cancel.
- To delete information already entered, click Delete to delete. A pop-up saying "Are you sure you want to delete this position?" will appear. Click OK or Cancel whichever is appropriate.

The following are automatically calculated fields based on information entered in the Schools/Site section:

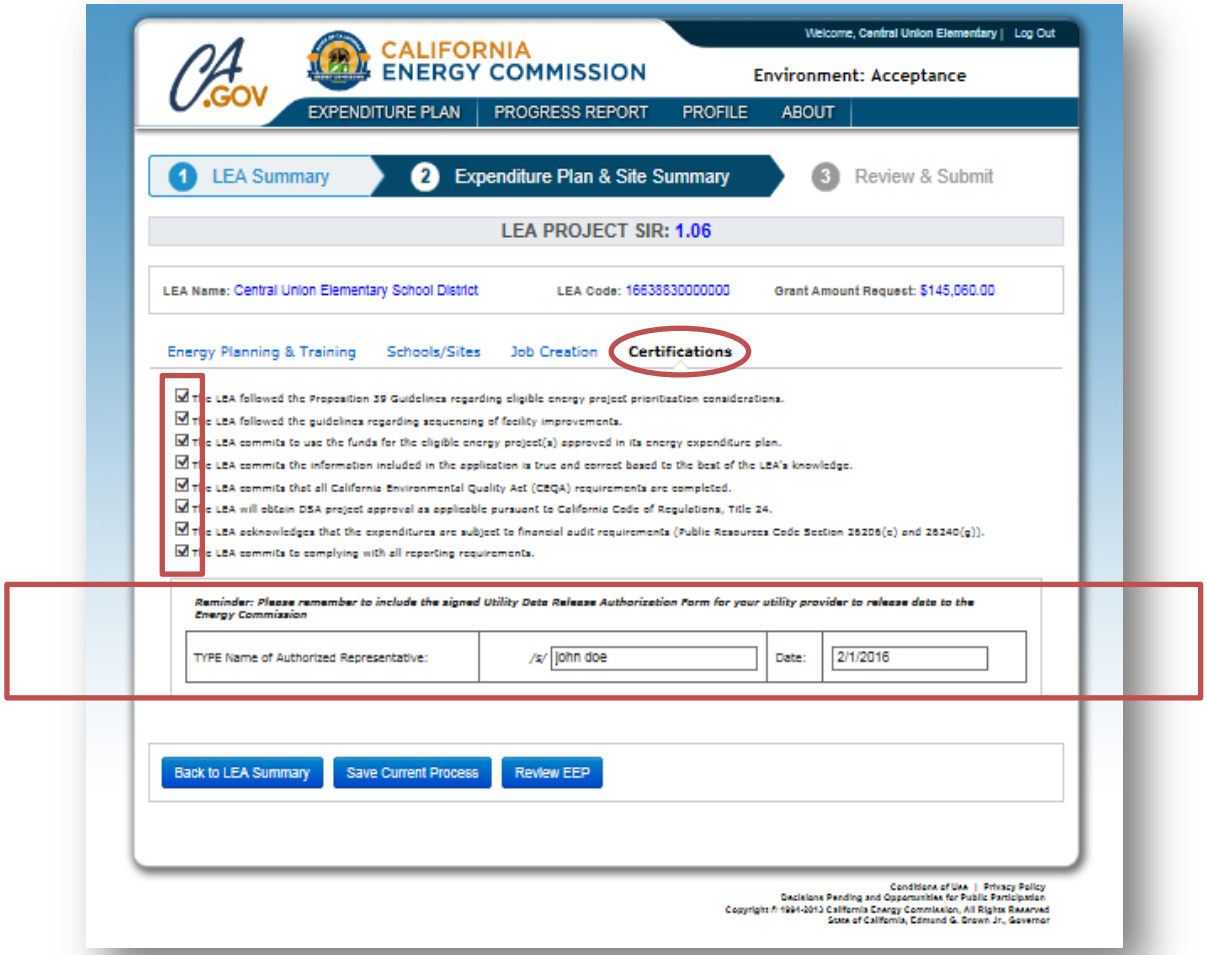
h. ***Energy Efficiency – Budget:*** This is an automatically calculated field. This is the sum of the amounts entered in the Proposition 39 Share for Energy Efficiency Measures in the Efficiency Measure section from all school/sites you entered in the energy expenditure plan.

i. ***Renewable Energy – Budget:*** This is an automatically calculated field. This is the sum of the amounts entered in the Proposition 39 Share for Photovoltaic Measures fields in the Photovoltaic section and the Proposition 39 Share for Power Purchase Agreements fields in the Power Purchase Agreements section for all school/sites.

j. ***Clean Advanced Distributed Energy – Budget:*** This is an automatically calculated field. This is the estimated Proposition 39 award funds allocated to Clean Advanced Distributed Energy measures under this Expenditure Plan.

k. ***Estimated Direct Job-Years Created:*** These fields will automatically calculate from the budgeted amounts in each Type of Project category.

Fourth Section: Certifications



Note: This section includes all certifications each LEA must certify to submit an energy expenditure plan. Each certification has a checkbox. Click the checkbox to confirm acceptance of each certification. The LEA must certify to ***all*** the certifications to receive their Proposition 39 award.

a. ***The LEA followed the Proposition 39 Guidelines regarding eligible energy project prioritization considerations.*** This certifies that your LEA followed the project prioritization considerations (11 factors listed in the *2016 Guidelines,* step 3, page 19) when analyzing energy projects included in this energy expenditure plan.

b. ***The LEA followed the guidelines regarding sequencing of facility improvements.*** This certifies that your LEA followed the sequencing guidelines (*2016 Guidelines*, step 4, page 20) when analyzing eligible energy projects included in this energy expenditure plan.

c. ***The LEA commits to use the funds for the eligible energy project(s) approved in its energy expenditure plans.*** This certifies that your LEA will commit to using the funds received for eligible energy projects approved in this energy expenditure plan.

d. ***The LEA commits that the information included in the application is true and correct based to the best of the LEA's knowledge.*** This certifies that your LEA has determined the provided information in this energy expenditure plan and supporting documents are accurate to the best of the LEA's knowledge.

e. ***The LEA commits that all California Environmental Quality Act (CEQA) requirements are completed.*** This certifies that the LEA has determined the eligible energy projects proposed in this energy expenditure plan meet CEQA requirements.

f. ***The LEA will obtain DSA project approval as applicable pursuant to California Code Regulations, Title 24.*** This certifies that all projects included in this energy expenditure plan meet DSA requirements, as applicable. DSA energy project construction compliance resources are found in page 34 the *2016 Guidelines*.

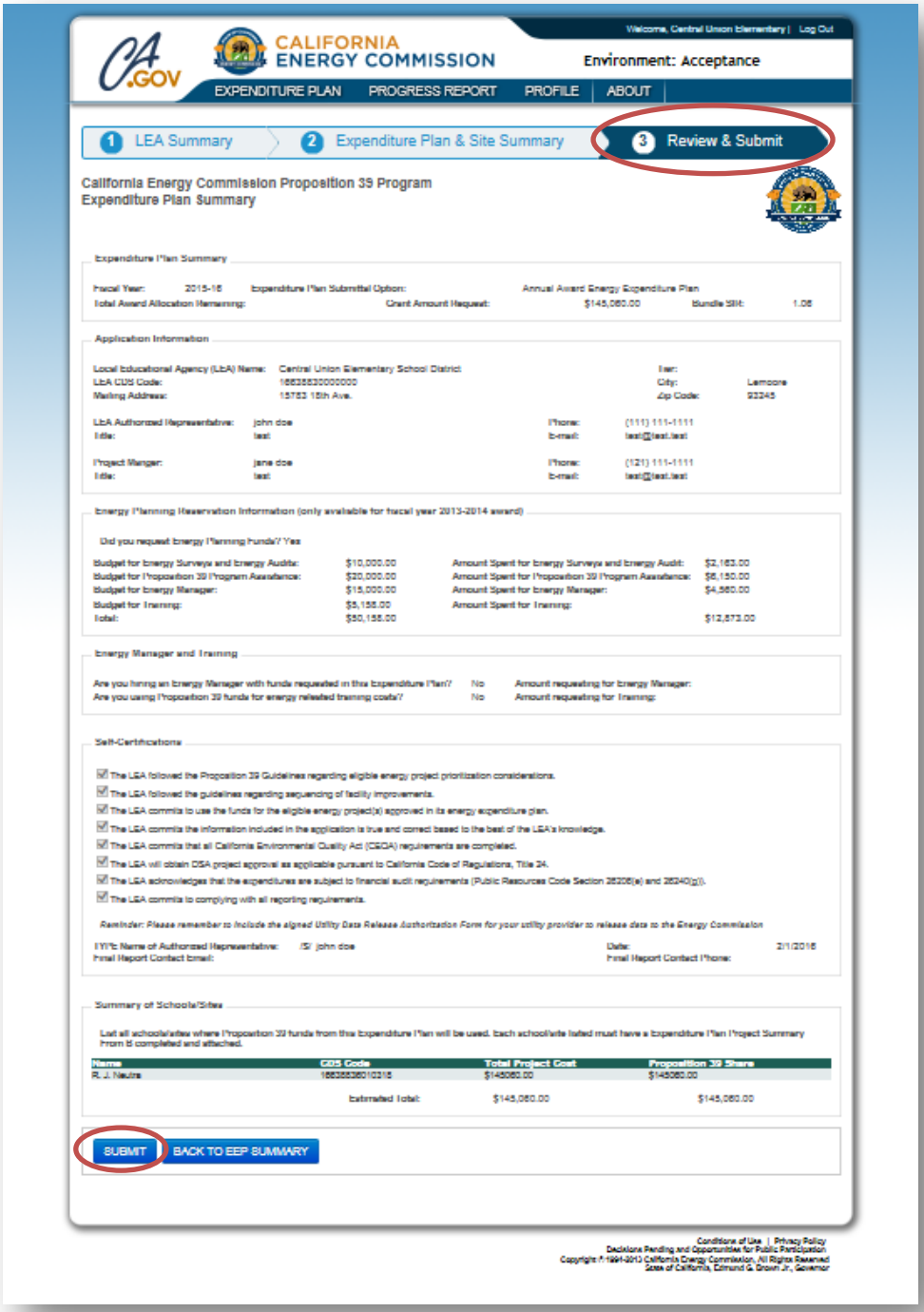
g. ***The LEA acknowledges that the expenditures are subject to financial audit requirements (Public Resources Code Section 26206(e) and 26240(g)).*** This indicates the LEA understands that expenditures are subject to financial audit requirements.

h. ***The LEA commits to complying with all reporting requirements.*** This indicates the LEA will comply with Proposition 39 reporting requirements in Step 8 of the *2016 Guidelines*, page 29-32.

i. ***TYPE Name of Authorized Representative: /s/:*** Type the name of the LEA authorized representative in the field provided. This should be the same authorized representative entered at the start of the energy expenditure plan (see Create a New Energy Expenditure Plan.) The Energy Commission accepts this name entry as an electronic signature. **The authorized representative is an LEA employee with authority to execute the energy expenditure plan and the Utility Data Release Authorization Form, and to direct or delegate the implementation of the eligible energy projects on behalf of the LEA. This field is case-sensitive, so the name typed here must exactly match the Authorized Representative specified in the Energy Planning & Training tab.**

j. ***Date:*** Enter the date the energy expenditure plan is signed by the LEA authorized representative. A calendar pop-up is provided that the LEA may use to fill in date.

Review and Submit Your Energy Expenditure Plan



Once you have completed your energy expenditure plan online, you may review and submit your energy expenditure plan package. Click on the Review EEP button and this will allow you to see a summary of the general information (the summary will look like the old Form A). The

above is a sample of what the review screen looks like. A list of errors will be generated if any required information is not included when the Review EEP button is clicked. These errors must be addressed before the energy expenditure plan can be reviewed.

Finally, once the energy expenditure plan has been completed and reviewed, the LEA must click the SUBMIT button to submit the energy expenditure plan to the Energy Commission.

Within a few days of receipt, your energy expenditure plan is assigned to an Energy Commission project manager, who will send an email receipt confirmation to the specified authorized representative and specified project manager listed in the energy expenditure plan.

Amending an Approved Energy Expenditure Plan

Eligible energy project changes are sometimes unavoidable. If an LEA changes an eligible energy project after the Energy Commission has approved its energy expenditure plan and the State Superintendent of Public Instruction (SSPI) has distributed funding, a revised energy expenditure plan may be required. Any significant change in the approved energy expenditure plan will require approval of an amended energy expenditure plan. Significant changes include:

- Adding energy efficiency measure(s) and/or clean energy generation not included in the approved energy expenditure plan.
- Deleting energy efficiency measure(s) and/or clean energy generation in the approved energy expenditure plan.
- Eligible energy project cost increase or decrease by more than 15 percent.
- A change of more than 15 percent in the approved equipment quantity installed per measure. For example, installing a larger or smaller number of lighting fixtures to adjust to conditions found during retrofits would require a “change of scope approval” if the number of fixtures is increased or decreased by more than 15 percent.
- Any increase in the grant amount requested.

Relocating an approved energy efficiency measure(s) and/or clean energy generation from one school site to another school site that is not included in the approved energy expenditure plan is not an allowable amendment. To put it simply, adding new sites that were not in the original approved energy expenditure plan is not an allowable amendment. In this situation, the LEA is required to submit a new energy expenditure plan.

Each energy expenditure plan can be amended once per fiscal year. The amended energy expenditure plan must meet Proposition 39 requirements in place at the time that the amendment is submitted to the Energy Commission. Similarly, any amended energy savings calculations using any savings calculators developed by the Energy Commission must be based on the most recent version.

To amend an approved energy expenditure plan, an LEA must take the following steps:

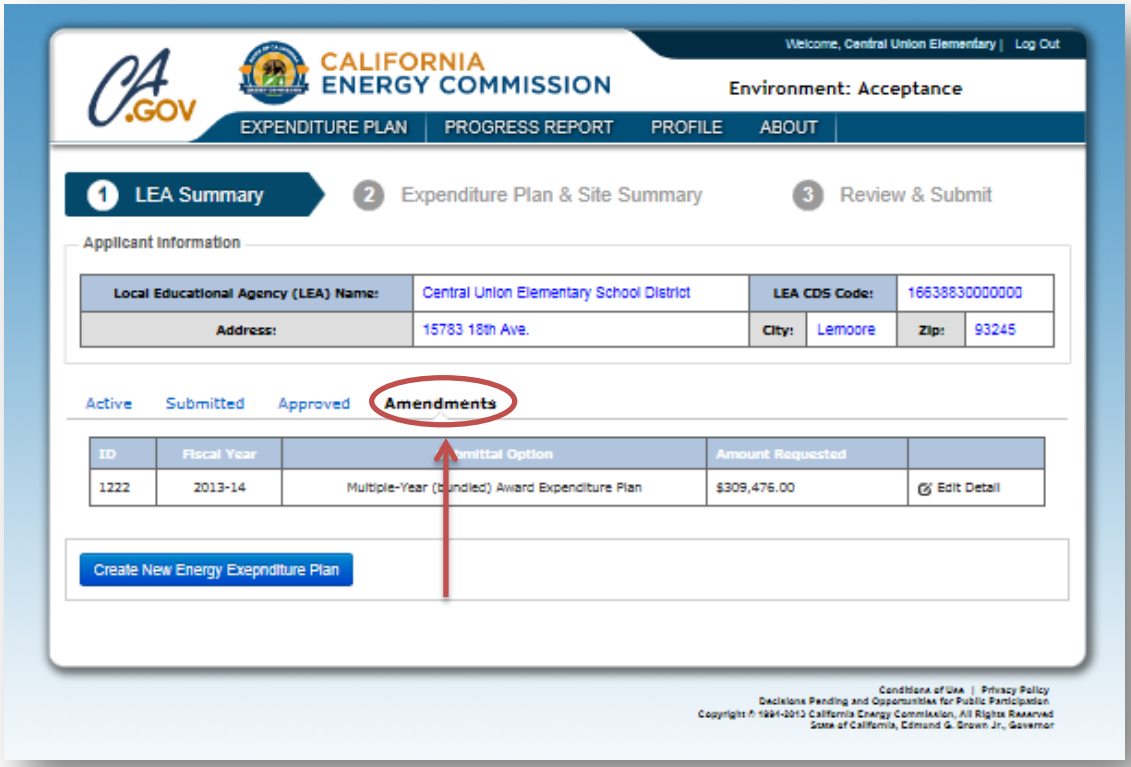
1. The LEA authorized representative must email the Energy Commission project manager who approved the energy expenditure plan the LEA is amending.

2. The Energy Commission Project Manager will email an amendment documentation request to the LEA's Project Manager and Authorized Representative on record.

3. The LEA will fill out the amendment documentation request indicating the changes it would like to make to the previously approved energy expenditure plan and email the completed amendment documentation request back to the Energy Commission Project Manager.

4. The Energy Commission Project Manager will review the amendment documentation and confirm that an amendment is required. If the identified changes require an amendment, the Energy Commission Project Manager will send the previously approved energy expenditure plan to Energy Expenditure Plan Online.

5. The LEA will find the energy expenditure plan it wants to amend listed in the Amendments tab as shown below.



6. The LEA must click on the Amendments tab and select the energy expenditure plan to be amended and make the changes it needs to make by following the same instructions in this chapter. Once again, please be reminded that new schools or sites cannot be added to an approved energy expenditure plan during the amendment process. In this situation, the LEA must submit a new energy expenditure plan.

7. After completing the changes, the LEA will submit the amended energy expenditure plan using the same instructions in the Review & Submit Your Energy Expenditure Plan section found in this chapter.

8. Once submitted, the amended energy expenditure plan will then be transmitted back to the Energy Commission Project Manager for review.

9. The Energy Commission Project Manager will inform the LEA when the energy expenditure plan is approved.

CHAPTER 3: Instructions for the Utility Data Release Authorization and Facility and Service Account Information Forms

Purpose and Background

Public Resources Code 26240(a) requires LEAs receiving Proposition 39 fund awards to authorize their electric and gas utilities to release past and ongoing energy usage and billing record data to the Energy Commission. There are two forms that are used to expedite this release of data, the Utility Data Release Authorization Form (CEC-12) and the Facility and Service Account Information Form (CEC-24). These forms must be completed for all utilities that provide the LEA with electricity or natural gas and must be submitted to both the **Energy Commission and to the LEA's utility provider(s)** before the LEA's first energy expenditure plan can be approved. These forms are not required to be submitted with subsequent energy expenditure plans unless there is a change in LEA facilities or a request from a utility provider.

The CEC-12 is used by the LEA to authorize and instruct its electric and/or gas utility/utilities to share the historical energy usage and billing data for the fiscal year (July 1-June 30) immediately preceding the submission of the LEA's first energy expenditure plan. This form also authorizes and instructs the utility to provide this data through the fiscal year ending in 2023. These data will be transmitted to the Energy Commission annually by December 31.

The CEC-24 is used by the LEA to provide the Utility with information on the site(s) under its jurisdiction and the account numbers corresponding to those site(s). This information is used to assist in the utility's identification of the proper data for each LEA. LEAs that have submitted a CEC-12 prior to March 1, 2015, will not be required to submit the revised CEC-24 unless there is a change in the number of facilities under their jurisdiction.

Instructions

Step 1: Locate and download the CEC-12 and CEC-24

The CEC-12 and CEC-24 can both be downloaded from the Energy Commission's Proposition 39 Web page at http://www.energy.ca.gov/efficiency/proposition39/. To avoid delays in processing their first energy expenditure plan, LEAs should ensure that they are using the most recent version of the Energy Commission's CEC-12 and CEC-24.

NOTE: Neither form can be filled out on a web browser. They must be downloaded and saved, and information filled out locally on a computer.

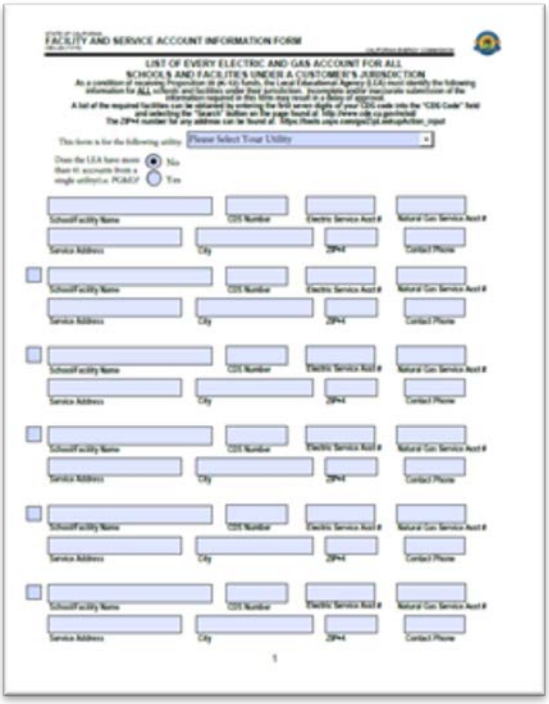
Step 2: Verify the version of Acrobat software

Both forms are in Adobe Acrobat pdf format. To ensure that typed input to the form can be saved. LEAs should verify that they are using the latest version of Acrobat software before inputting school and facilities' information; this software can be downloaded free at http://acrobat.adobe.com/is/en/ .

Step 3: Complete the CEC-12 and CEC-24 electronically

Follow the detailed instructions below to complete the CEC-12 and CEC-24

CEC-12 Form



CEC-24 Form

CEC-12: The Utility Data Release Authorization Form

NOTE: If an LEA has separate providers for gas and electricity, it must complete and save a separate CEC-12 for each utility provider.

All blanks, except Authorized Customer Signature circled in red above, must be filled electronically only.

The top four lines of the Utility Data Release Authorization Form (CEC-12) contain the following information fields:

- ***Name and Title***: Enter the name and the title of your LEA's authorized representative. This person should be the same individual who is identified as the authorized representative in the Energy Expenditure Plan Online application. Applicant Information (for example, George Smith, Superintendent).

- ***Name of Customer of Record***: Enter the name of the utility customer as it appears on the utility bills. This may be the name of the LEA, an individual, a school, or even another identifier (for example, XYZ Middle School).
- ***Mailing Address, City, State, and Zip Code***: Enter the appropriate mailing address at which the LEA or customer of record receives correspondence from the applicable utility.
- ***Name of Utility:*** Enter the name of your Utility (for example, Roseville Electric).

The first line of the final paragraph contains a space for the customer name. Enter the name of your LEA's authorized representative. This will be the same name entered in the first line of the form.

The bottom of the form contains five information fields:

- ***Authorized Customer Signature***: The authorized representative must print the CEC-12 and sign (wet signature) after the rest of the form is completed electronically (see Step 4).
- ***Telephone Number***: Enter the telephone number of the authorized representative.
- ***Day***: Enter the day this form was executed.
- ***Month and Year***: Enter the month and year this form was executed.
- ***City and State Where Executed***: Enter the name of the city and state where this form was signed.

CEC-24: Facility and Service Account Information Form

The CEC-24 provides a standard format for the LEA to provide information to help the Utility identify account information and provide the Energy Commission the required energy use and billing data.

NOTE:

1. **If an LEA has separate providers for gas and electricity, it must complete and save a separate CEC-24 for each utility provider.**
2. Incomplete and/or inaccurate submission of the information in the CEC-24 will result in a delay of the approval of the energy expenditure plan.
3. Complete information must be provided for ALL facilities under the LEA's jurisdiction. A list of the required facilities can be obtained by entering the first seven digits of your CDS code into the "CDS Code" field and selecting the "Search" button on the page found at: http://www.cde.ca.gov/re/sd/.

LEAs shall enter the following information into the CEC-24:

- ***Please Select Your Utility:*** Select the name of the utility provider.
- ***School/Facility Name***: List the name used by the CDE to identify the school or facility. A list of required facilities can be obtained by entering the first seven digits of your CDS code into the "CDS Code" field and selecting the "Search" button on the page found at:

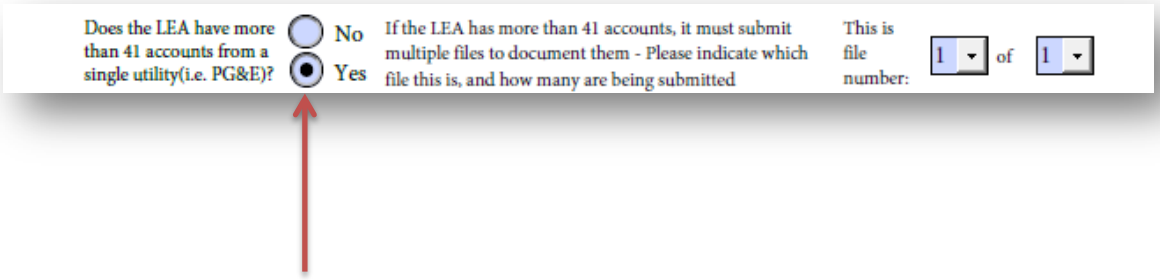
http://www.cde.ca.gov/re/sd. Any omission of schools or facilities found on this website will result in a delay of the approval of the energy expenditure plan.

- ***CDS Number:*** List the 14-digit County District School number used by CDE to identify the school or facility. This number should be entered with no dashes or spaces.
- ***Electric Service Account Number***: List the account number for the electric service associated with this school or facility.
- ***Natural Gas Service Account Number***: List the account number for the natural gas service associated with this school or facility.
- ***Service Address***: List the number and street name where the utility service is received.
- ***City***: List the city where the utility service is received.
- ***Zip+4:*** List the zip code +4 digits where the utility service is received. If you are unsure of your zip +4 digits, refer to https://tools.usps.com/go/ZipLookupAction_input to obtain the correct digits to enter.
- ***Contact Phone***: Enter the phone number at which either the facility manager or the person responsible for paying the utility bill(s) can be contacted.

If any changes to the number of facilities under its jurisdiction have occurred since the last energy expenditure plan was submitted, it is the LEA's responsibility to provide an updated CEC-24 to the Energy Commission along with its subsequent energy expenditure plan (for example, new facilities have opened.) The LEA must also submit an updated form to the utility/utilities.

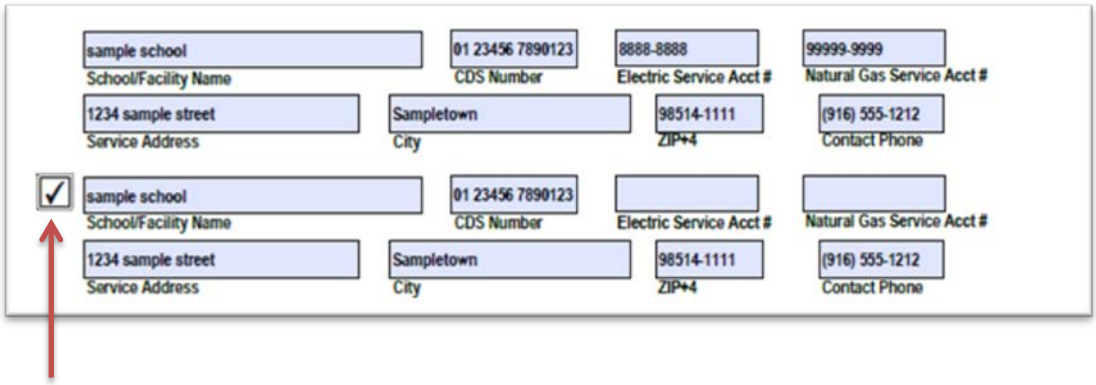
Entering data for a large numbers of facilities in the CEC-24

The CEC-24 is designed to accommodate information for up to 41 schools or sites in a single file. If the LEA has more than 41 schools or sites, it is necessary to submit the information in multiple files. For example, if the LEA has 60 sites, it will need to put the information for 41 of the schools or sites in the first file and the information for 19 of the schools or sites in the second. To accommodate this kind of situation, the CEC-24 contains an option to indicate the order of the files. If the LEA will be submitting multiple files, it should indicate the numbering of the files by selecting the "Yes" radio button.



Entering Multiple Accounts for a Single School or Site in the CEC-24

The CEC-24 has a feature that copies all the information except for the utility account numbers from the previous line. This is useful for schools or facility sites with multiple meter accounts from a single utility. This feature is activated by selecting the square box to the left of the entry line, shaded in green in the following figure.



If multiple accounts are being entered for the same School/Facility, check the box to copy facility information from the previous line. This box must be deselected if subsequent changes are to be made to the copied information.

Step 4: Submit the CEC-12 and CEC-24

CEC-12:

All CEC-12 forms must be **printed**, **signed** by the Authorized Representative, and **scanned**. The scanned copies must then be:

A. Electronically uploaded to the Energy Commission (using the Energy Expenditure Plan Online process).
B. **Emailed to the LEA's utility/utilities** via the designated email address. A list of contact information for submitting these forms to the utilities can be found at http://www.energy.ca.gov/efficiency/proposition39/listing_utility_recipients.html.

CEC-24:

All CEC-24 forms must be completed electronically and saved in the native pdf format. The forms must then be:

A. Electronically uploaded to the Energy Commission (using the Energy Expenditure Plan Online process).
B. **Emailed to the LEA's utility/utilities** via the designated email address. A list of contact information for submitting these forms to the utilities can be found at http://www.energy.ca.gov/efficiency/proposition39/listing_utility_recipients.html.

NOTE:

1. Handwritten CEC-24 forms will not be accepted

2. Printed or scanned CEC-24 forms will not be accepted.

CHAPTER 4: Instructions for the Energy Savings Calculators

Purpose and Background

The Energy Commission provides energy savings calculators to assist LEAs with their simple energy efficiency projects. These tools calculate energy use intensities (EUI) for benchmarking, energy savings, energy cost savings, simple payback, and SIRs. Designed in Microsoft Excel®, the calculators may be used by LEAs to implement simple projects without a professional energy audit.

LEAs may choose to use these energy savings calculators to estimate the energy savings of one or various energy efficiency measures. If LEAs decide to use these energy savings calculators for the simple measures listed below, an energy survey must be provided which consists of:

- A description of the proposed energy efficiency measures and the buildings or facilities that will be improved by these measures.
- A description of the existing energy-using equipment (that is, type, age of equipment, size, number of units and operating hours.

All assumptions and formulas used in the calculators comply with the *2016 Guidelines*. If the *2016* G*uidelines* are revised in the future, the Energy Commission will revise the calculators accordingly. Always use the most current version of the calculators.

The 28 calculators include 12 simple lighting measures; 9 heating, ventilation, and air-conditioning (HVAC) and mechanical measures; 2 plug-load measures; 3 building envelope measures; 1 energy efficient transformer measure; and 1 simple PV project. In addition, a calculator for energy use intensity is included to assist LEAs to benchmark their schools.

If an LEA opts to use the Energy Commission energy savings calculator for any measure listed below, the LEA must submit the entire calculator tool even if only one measure is used. An LEA must use one entire calculator tool for each school or site. Do not combine measures from different schools or sites in one calculator tool.

Energy savings is calculated based on the energy cost in the benchmarking tab. Therefore, when an LEA opts to use this energy savings calculator to quantify its savings, it must complete the benchmarking tab.

The LEA is responsible for using the latest version of the Energy Commission energy savings calculator.

The energy efficiency measures are listed in four categories as follows:

Lighting Energy Efficiency Measures:

ECM 1	Replace incandescent light with compact fluorescent
ECM 2A & 2B	Replace incandescent/CFL lights with light-emitting diode (LED) light
ECM 3 & 4	Convert incandescent/CFL exit sign to LED exit sign
ECM 5 & 6	Convert T12 fluorescent to T8 with electronic ballast or LED lamps
ECM 6A	Convert 4-foot 32-watt T8 fluorescent fixture to LED lamps
ECM 7	Replace 32 watt T8 lamps with 28 watt T8 lamps
ECM 8 & 9	Replace mercury vapor/HPS/Metal Halide with LED/induction lights
ECM 10	Install occupancy control for intermittently occupied rooms

HVAC/Mechanical Efficiency Measures:

ECM 11	Replace old packaged/split HVAC unit (up to 65KBtu) with high-efficiency HVAC
ECM 12	Replace old heat pump (up to 65 kBtu) with high-efficiency heat pump
ECM 13A	Replace boiler with high-efficiency condensing boiler
ECM 13B	Replace furnace with high-efficiency condensing furnace
ECM 14	Seal existing leaky duct
ECM 15	Install variable speed drive for pumps and fans
ECM 16	Replace manual thermostat with programmable thermostat
ECM 17	Replace old motor with premium efficiency motor
ECM 18	Replace storage water heater with gas-fired tankless water heater

Plug-Load Efficiency Measures:

ECM 19	Install smart strip/PC management to control computers/printers
ECM 20	Install vending machine occupancy control

Building Envelope Measures:

ECM 21	Windows Replacement
ECM 22	Install Cool Roof
ECM 23	Install Additional Insulation

Energy Efficient Transformer Measures:

ECM 24	High Efficiency Dry-Type Low Voltage Distribution Transformer

Simple Photovoltaic (PV) Self-Generation Project

ECM 25	Install PV System

The assumptions and energy impacts used in the calculator for lighting and HVAC measures were derived from energy impact data supplied by the Database for Energy Efficient Resources (DEER). In many cases, the baseline energy information was based on performance mapping conducted by each investor-owned utility (IOU). Many factors were considered in this baseline

performance mapping, including building type, building size, building vintage, equipment efficiency, operating hours, zip code, and climate zone for Education-primary schools, education-secondary schools, and Education-portable classroom buildings.

The latest energy savings calculator tool uses the average unit savings from the DEER database. The unit savings from DEER database is a statewide or utility service area average for school buildings. In addition, these unit energy savings are taken from the equipment replacement database. The unit energy savings may be high for some schools. In some cases, when an LEA uses the energy savings calculators for all 28 ECMs, the total energy and cost savings may exceed 80 – 90 percent of total energy use or energy cost at the school site. When this happens, the calculator will adjust the energy savings down to 50 percent of each end-use group.
Based on average school energy end-use profile, each end-use technology is expected to use a certain percentage of the total school site baseline energy use. Lighting technologies are estimated to use 30 percent of the school baseline energy use, HVAC equipment is estimated to use 50 percent of the school site baseline energy use, and the plug loads are estimated to use 10 percent of the school site baseline energy use. The remaining 10 percent of the school site baseline energy use is estimated for miscellaneous use and weather variation. The detail of the adjustment to each end-use group is explained in the following sections.

Lighting Measures Energy Savings Adjustment:

The energy savings calculator will compare the total energy savings for all lighting ECMs to the baseline energy usage for the site. If this total energy savings is greater than 15 percent of the total baseline energy usage, the savings will be adjusted. This threshold is based on the assumption that 30 percent of the total baseline energy usage of the site is allocated to lighting systems and saving more than half of this amount is considered unreasonable.

When lighting ECM savings exceeds 15 percent of the total baseline energy for the site, the kWh energy savings associated with lighting ECMs will be adjusted down to a maximum energy savings of 15 percent of the total baseline energy usage.

If savings of lighting ECMs are lower than 15 percent of the total baseline energy usage, no adjustment will be made.

HVAC Measures Energy Savings Adjustment:

The energy savings calculator will compare the total energy savings for all HVAC ECMs to the baseline energy usage of the site. If this total energy savings is greater than 25 percent of the total baseline energy usage, the savings will be adjusted. This threshold is based on the assumption that 50 percent of the total baseline energy usage of the site is allocated to HVAC systems and saving more than half of this amount is considered unreasonable.

When HVAC ECM savings exceeds 25 percent of the total baseline energy usage of the site, the kWh energy savings associated with HVAC ECMs will be adjusted down to a maximum energy savings of 25 percent of the total baseline energy usage. If savings of HVAC ECMs are lower than 25 percent of the total baseline energy usage, no adjustment will be made.

Plug Load Measure Energy Savings Adjustment:

The energy savings calculator will compare the total energy savings for all plug load ECMs included to the baseline energy usage of the site. If this total energy savings is greater than 5 percent of the total baseline energy usage, the savings will be adjusted. This threshold is based on the assumption that 10 percent of the total baseline energy usage of the site is allocated to plug load systems and saving more than half of this amount is considered unreasonable.

When plug load ECM savings exceed 5 percent of the total baseline energy usage of the site, the kWh energy savings associated with plug load ECMs will be adjusted down to a maximum energy savings of 5 percent of the total baseline energy usage. If savings of plug load ECMs are lower than 5 percent of the total baseline energy usage, no adjustment will be made.

Step 1: Benchmarking Calculator (Required)

Benchmarking helps LEAs determine how well schools or sites are performing in terms of energy efficiency. Benchmarks can quickly identify schools or sites with the greatest potential for energy savings based on energy usage.

The benchmarking calculator produces the EUI for electricity, natural gas, liquid fuel, and cost per square foot per year for each school or site. LEAs may use this calculator to compute EUI for benchmarking every school or site to identify and likely prioritize schools with the most energy savings potential.

Use the EUI calculator to benchmark electricity, natural gas, liquid fuels usage, and cost per square foot per year by entering the annual energy use data. Your LEA can perform the EUI calculation for each school or site and select the best candidate locations for energy efficiency retrofits. The calculator can also be used to calculate the average cost of electricity, natural gas, and liquid fuel for energy efficiency measure evaluations.

Based on information you enter for your LEA, the following tables are automatically produced:

1. Energy Use Intensity Calculator Table
2. Average Cost Table

Values generated from the Benchmarking calculator may be used to complete the Energy Expenditure Plan Online application.

Step 2: Energy Savings Calculator

The energy savings calculator is separated into six category tabs:

1. Lighting measure calculators
2. HVAC/mechanical measure calculators
3. Plug-load measure calculators
4. Building envelope
5. Energy Efficient Transformers
6. Simple PV calculator.

Each calculator contains a list of questions for the LEA. Most of the questions can be answered by school maintenance staff. Once the responses are filled in, the annual savings and cost savings, simple payback, and SIR are automatically calculated.

Based on the information your LEA provides, the following tables are automatically produced and appear to the right of the input calculators:

1. Adjusted Energy Savings Summary – a set of automatically calculated fields that show savings in peak demand, energy use, therms, gallons of propane and fuel oil, energy cost savings, simple payback in years, and SIR.
2. Annual Energy Savings Analysis – a summary of pre- and post- energy measure installation conditions.
3. Life-Cycle Cost Analysis/Net Present Values Analysis – summaries based on the Effective Useful Life (EUL) for each energy measure, taken from the DEER.
4. Total Summary Table (in a separate tab in the calculator) – a summary of all the energy efficiency projects your LEA proposes to implement. Once your LEA completes the calculators applicable to your proposed projects, all energy savings data will be automatically populated in the "Total-Summary" tab of the spreadsheet, and calculations for bundled energy measures will be obtained.

Values generated in the energy efficiency measure calculators may be used to complete your energy expenditure plan.

Instructions

The following are the instructions to use the energy savings calculators:

Step 1: Benchmarking Calculator (Required)

a. Gather Information: Before entering the required information into the benchmarking calculator, an LEA must perform the following steps.

- Gather the past fiscal year's 12-months of utility billing data for electricity and natural gas for the school or site where your LEA proposes to implement energy efficiency projects. If your electricity or natural gas is supplied by a third party, obtain the annual billing data from the third-party supplier.

- If the school or site uses liquid fuel such as propane or fuel oil for heating, gather the usage and cost data for the same 12-month period.

- If the school or site has multiple meters or third-party services (for example, propane), add the annual usage and costs to determine a total amount.

b. School Information:

School Information	
School Name	
School CDS Code	
Mailing Address	
Electric Utility:	
Gas Utility:	
Billing Period (Fiscal Year)	
Total Square Footage of School	-

1.) ***School Name:*** Enter the name of the school or site where your LEA proposes to implement the energy efficiency measures.

2.) ***School CDS Code:*** Enter the 14-digit county-district-school number of the school or site with no spaces or hyphens.

3.) ***Mailing Address:*** Enter the mailing address of the school or site where your LEA proposes to implement the energy efficiency measures.

4.) ***Electric Utility:*** Enter the name of the electric utility provider of the school or site.

5.) ***Gas Utility:*** Enter the name of the natural gas, propane, or fuel oil provider of the school or site. Leave this blank if the school uses propane or fuel oil.

6.) ***Billing Period (Fiscal Year):*** Enter the fiscal year associated with the energy bills used to fill out the calculators. A fiscal year is designated as July 1 – June 30. If your energy expenditure plan is submitted in fiscal year 2015-2016, use energy bills from fiscal year 2014-2015.

7.) ***Total Square Footage of School***: Enter the approximate total gross square footage of all the school buildings, excluding outside covered walkways or porch areas.

c. Electricity Information:

Electricity	
Average Maximum Demand (kW):	0
Annual PV Electricity Production(kWh)	0
Electricity Purchase from Utility(kWh)	0
Total Annual Electric Use (kWh):	0
Cost paid to PPA vendor & other supplier ($	$ -
Total Annual Electric Charges ($)	0

1.) ***Average Maximum Demand (kW):*** Enter the average maximum demand of the school from the previous fiscal year electric bills. Calculate this value by averaging the peak demand stated in the previous fiscal year bills. If a school or site has multiple electric meters, sum the peak demand of all the meters before averaging. If the demand information is not provided in the monthly bills, then leave this field blank.

2.) ***Annual PV Electricity Production (kWh):*** Enter the total electricity generated in the previous fiscal year from a PV system, if you have PV on-site. This information can be obtained from the solar tracking system, production data stored in the inverter, an energy monitoring system, or a PPA electric bill.

3.) ***Electricity Purchase from Utility (kWh):*** Enter the total electricity purchased in the previous fiscal year from your local utility. If the school or site has multiple meters, sum the total electricity purchased from your local utility from all meters.

4.) ***Total Annual Electric Use (kWh):*** Enter the total annual electric consumption of the school or site from the previous fiscal year. This is the sum of the Annual PV Electricity Production (#2 above), Electricity purchased from utility (#3 above), and Electricity purchased from third-party supplier.

5.) ***Cost paid to PPA vendor & other supplier ($):*** Enter the total annual cost paid to the PPA vendor or other third-party for electricity purchased under a PPA or other electricity purchase agreement.

6.) ***Total Annual Electric Charges ($):*** Enter the annual total utility electricity cost for the school or site from the previous fiscal year electric bills. Calculate this value by adding the electric utility charges stated in the previous fiscal year bills. If the school or site has multiple electric meters, include the electric utility charge for all meters at the school or site.

d. Natural Gas Information:

Natural Gas	
Total Annual Natural Gas Use (therms):	-
Total Annual Gas Charges ($):	$ -

Note: Due to DEER limitations, information on only one type of fuel can be keyed into the energy savings calculator. If an LEA uses multiple fuels, enter the information for the primary fuel and enter the fuel use (therms) and fuel charges ($) as a footnote in the spreadsheet. Energy Commission staff will make the necessary adjustments to the fuel savings.

1.) ***Total Annual Natural Gas Use (therms):*** Enter the annual total natural gas usage of the school or site from the previous fiscal year's natural gas bills. Calculate this value by adding the natural gas usage stated in the previous fiscal year bills. If the school or site has multiple natural gas meters, include the annual natural gas usage for all meters at the school or site. If the school or site does not use natural gas, enter 0.

2.) ***Total Annual Gas Charges ($):*** Enter the annual total natural gas cost for the school or site from the previous fiscal year natural gas bills. Calculate this value by adding the natural gas charges stated in the previous fiscal year bills. If the school or site has multiple natural gas meters, include the annual natural gas charges for all meters at the school or site. If a third-party supplier is used, enter the total cost from the third-party cost for commodity and the transportation cost from the local utility. If the school does not use natural gas, enter 0.

e. Other Fuels Information:

Other Fuels (if applicable)	
Total Annual Propane Use(gals):	0
Total Annual Propane Charges($):	$ -
Total Annual Fuel Oil Use(gals):	0
Total Annual Fuel Oil Costs($):	$ -

1.) ***Total Annual Propane Use (gals):*** Enter the total annual propane usage in gallons by the school or site from the previous fiscal year's propane bills. Calculate this value by adding the propane usage stated in the previous fiscal year bills. If the school has multiple propane services, include the annual propane usage for all services. If the school does not use propane, enter 0.

2.) ***Total Annual Propane Charges ($):*** Enter the total annual propane cost for the school from the previous fiscal year's propane bills. Calculate this value by adding the propane charges stated in the previous fiscal year bills. If the school or site has multiple propane services, include the annual propane charge for all services. If the school does not use propane enter 0.

3.) ***Total Annual Fuel Oil Use (gals):*** Enter the total annual fuel oil usage in gallons by the school from the previous fiscal year's fuel oil bills. Calculate this value by adding the fuel oil usage stated in the previous fiscal year bills. If the school or site has multiple fuel oil services, include the annual fuel oil usage for all services. If the school does not use fuel oil enter 0.

4.) ***Total Annual Fuel Oil Costs ($):*** Enter the total annual fuel oil cost for the school from the previous fiscal year's fuel oil bills. Calculate this value by adding the fuel oil usage stated in the previous fiscal year bills. If the school or site has multiple fuel oil services, include the annual fuel oil usage for all services. If the school does not use fuel oil enter 0.

Step 2: Measure Calculators

1. Lighting Measures Calculators:

To simplify the information required from the school or site staff, calculators for lighting measures use the "assumed lamp ratio" and "average lighting hours" from the DEER. Average energy impacts (that is, kWh, kW, and therms) were calculated from education buildings (such as, primary schools, secondary schools, and portable

classrooms) from the DEER in all four IOUs (Pacific Gas and Electric, Southern California Edison, Southern California Gas, and San Diego Gas & Electric) service territories.

To obtain the average energy impact for each measure, the Energy Commission performed baseline performance mapping, including building type, building size, building vintage, equipment efficiency, zip code, and climate zones. The interactive effects among energy efficiency measures were also considered in the energy savings calculation. For example, an interior lighting retrofit measure would reduce the building electricity consumption, but it also requires additional fuel to make up the heat loss from the lighting retrofit.

If your school or LEA can identify the proposed equipment quantity and wattage, the calculator will generate all the energy savings and SIR for the measures you are considering.

ECM 1: Replace incandescent lights with compact fluorescent

ECM 1	Replace incandescent light with compact fluorescent light	Fill in your answers
Measure 1	Quantity of incandescent lights to be replaced with CFLs?	0
	What is the total wattage of all new CFL lamps?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	0

Incandescent, halogen lamps, or flood lights are very inefficient. If a school or site uses incandescent or halogen lamps or flood lights, these lights can be replaced with compact fluorescent lights (CFL) to save energy. These replacement measures can save more than 70 percent of the energy from the existing light fixtures.

1.) ***Quantity of incandescent lights to be replaced with CFLs?*** Enter the quantity of the incandescent, halogen, and flood lights to be replaced with compact fluorescent light lamps. Both screwed-in and hardwired lamps are permitted.

2.) ***What is the total wattage of all new CFL Lamps?*** Enter the total wattage (in watts) of the CFL lamps you plan to install at the school or site. For example, if installing one 13 watt CFL and one 17 watt CFL, the total wattage is 30 watts.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the CFL lamps.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the CFL lamps, if known and available.

ECM 2: Replace incandescent/CFL lights with light-emitting diodes (LED) lights

ECM 2	Replace incandescent /CFL light with LED light	Fill in your answers
Measure 2A	Quantity of incandescent bulbs to be replaced with LED lights?	
	What is the total wattage of all new LED lamps?	
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	$ -
Measure 2B	Quantity of CFL bulbs to be replaced with LED lights?	
	What is the total wattage of all new LED lamps?	
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	$ -

A school or site uses incandescent, halogen lamps, flood lights, or CFL bulbs, these lights can be replaced with LED lights to save more than 70 percent of the energy from the existing light fixtures. In addition, LED lights have a long expected useful life.

Measure 2A:

1.) ***Quantity of incandescent lights to be replaced with LED lights?*** Enter the number of incandescent, halogen, and flood lights you plan to replace with LED lamps. Both screwed-in and hardwired lamps are permitted.

2.) ***What is the total wattage of all new LED lamps?*** Enter the total wattage (in watts) of the LED lamps you plan to install at the school or site. For example, if installing one 10-watt LED and a 30-watt LED, the total lamp wattage is 40 watts.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the LED lamps.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the LED lamps, if known and available.

Measure 2B:

1.) ***Quantity of CFL bulbs to be replaced with LED lights?*** Enter the quantity of the CFL bulbs you plan to replace with LED lamps.

2.) ***What is the total wattage of all new LED lamps?*** Enter the total wattage (in watts) of the LED lamps you plan to install at the school or site. For example, if installing one 10 watt LED and a 30 watt LED, the total lamp wattage is 40 watts.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the LED lamps.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the LED lamps, if known and available.

ECM 3 & 4: Convert incandescent/CFL exit sign to LED exit sign

ECM 3&4	Convert incandescent/CFL exit sign to LED exit sign	Fill in your answers
Measure 3	Quantity of CFL exit signs to be replaced with LEDs?	0
	What is the wattage of each new LED exit sign?	0
	What is the total installed cost for this measure?	0
	What is the utility rebate for this measure?	0
Measure 4	Quantity of incandescent exit signs to be replaced with LEDs?	0
	What is the wattage of each new LED Exit sign?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	0

Incandescent or compact fluorescent lights in exit signs are very inefficient. If the school or site uses incandescent or CFL lights in exit signs, these lights can be replaced with LED lamps to save more than 60 percent to 90 percent of the energy from the existing light fixtures.

Measure 3:

1.) ***Quantity of CFL exit signs to be replaced with LEDs?*** Enter the quantity of the CFL exit signs proposed to be replaced with LED exit signs. Both retrofit kits and fixture replacements are permitted.

2.) ***What is the wattage of the new LED exit sign?*** Enter the wattage of each new LED exit sign.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost for installing the LED exit signs, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the LED exit signs, if known and available.

Measure 4:

1.) ***Quantity of incandescent exit signs to be replaced with LEDs?*** Enter the quantity of the incandescent exit signs proposed to be replaced with LED exit

signs.

2.) ***What is the wattage of the new LED exit sign?*** Enter the wattage of each new LED exit sign.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost for installing the LED exit signs, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the exit signs, if known and available.

ECM 5 & 6: Convert T12 fluorescent to T8 with electronic ballast or LED lamps

ECM 5&6	Convert T12 fluorescent to T8 with electronic ballast or LED Lamps	Fill in your answers
	This ECM is for 4-foot linear fluorescent or 2 foot U-tube retrofit. If 8-foot fluorescent is converted to two 4-foot, multiply the quantity of lamp by two.	
Measure 5	Quantity of 34 watt T12 lamps to be replace with T8?	-
	How many 40 watt T12 lamps will be replaced with T8?	-
	What is the new T8 lamp wattage?	32
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -
Measure 6	Quantity of 34 watt T12 lamps to be replace with LED lamps?	0
	Quantity of 40 watt T12 lamps to be replaced with LED lamps?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

Linear T12 fluorescent lights (approximately 1½ inch in diameter) are an older generation technology and are very inefficient. If the LEA still uses T12 lamps with magnetic ballasts, they should be replaced with newer T8 lamps with electronic ballasts or LED lamps to save energy. T8 fluorescent lights are 1 inch in diameter. These measures can save more than 25 to 60 percent of the energy from the existing light fixtures. Use ECM 5 & 6 for 4-foot linear fluorescents or 2-foot U-tube fluorescent light retrofits only. If the school or site you are evaluating uses 8-foot fluorescents and would like to convert to two 4-foot T8 or LED lights, multiply the quantity of lamps by two.

Measure 5:

1.) ***Quantity of 34 watt T12 lamps to be replaced with T8?*** Enter the quantity of 34-watt T12 lamps with magnetic ballasts to be replaced with T8 lamps and electronic ballasts. These 34 watt lamps are labeled as 34-watt energy-saving (ES) or energy-efficient (EE) lamps. Both retrofit kits and fixture replacements are permitted. For example, if you plan to retrofit 50 2-lamp fixtures, enter 100. If there are no 34-watt lamps, enter 0.

2.) ***How many 40 watt T12 lamps will be replaced with T8?*** Enter the quantity of the 40-watt T12 lamps with magnetic ballasts you plan to replace with T8 lamps and electronic ballasts. Note that 40-watt T12 lamps were once typical but are no longer in common use. Both retrofit kits and fixture replacements are permitted. If there are no 40-watt lamps, enter 0.

3.) ***What is the new T8 lamp wattage?*** From the drop-down menu, select the wattage of the new T8 lamps you plan to install.

4.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the T8 lamps.

5.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the T8 lamps, if known and available.

Measure 6:

1.) ***Quantity of 34 watt T12 lamps to be replaced with LED lamps?*** Enter the quantity of 34-watt T12 lamps you plan to replace with LED lamps. If there are no 34 watt lamps, enter 0.

2.) ***Quantity of 40 watt T12 lamps to be replaced with LED lamps?*** Enter the quantity of the 40-watt T12 lamps you plan to replace with LED lamps. If there are no 40-watt lamps, enter 0.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the LED lamps.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the LED lamps, if known and available.

ECM 6A: Convert 4-foot, 32-watt T8 fluorescent fixture to LED lamps

ECM 6A	Convert 32 Watt T8 fluorescent fixture to LED lamps	Fill in your answers
	This ECM is for 4-foot linear fluorescent. If 8-foot fluorescent is converted to two 4-foot, multiply the quantity of lamp by two.	
	Quantity of 32 watt T8 lamps to be replaced with LED lamps?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

Linear 32-watt T8 lamps are an older generation T8 technology and can be replaced with higher-efficiency LED tube lamps. If a school would like to replace the existing T8 lamps and electronic ballasts with new LED lights with Proposition 39 funds, a calculator is added for this energy efficiency measure. This measure can save roughly 33 percent of the energy of each lamp from the existing light fixtures. Use ECM 6A for 4-foot linear fluorescents light retrofit only. If the school or site you are evaluating uses 8-foot fluorescents and would like to convert to two 4-foot T8 or LED lights, multiply the quantity of lamps by two.

1.) ***Quantity of 32 watt T8 lamps to be replaced with 4 foot LED lamps?*** Enter the quantity of 32-watt T8 lamps you plan to replace with LED lamps.

2.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor, to install the LED lamps.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the LED lamps, if known and available.

ECM 7: Replace 32 watt T8 lamps with 28 watt T8 lamps

ECM 7	Replace 32 Watt T8 lamps with 28 Watt T8 Lamps	Fill in your answers
	Quantity of 32 watt T8 lamps to be replaced?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

The newer generation fluorescent lamps use about 15 percent less energy and produce about the same amount of lumen output compared to older T8 lamps. Most of the 32-watt T8 lamps with instant start electronic ballast can be replaced with 28-watt energy-savings lamps.

1.) ***Quantity of 32 watt T8 lamps to be replaced?*** Enter the quantity of 32-watt T8 lamps to be replaced with 28-watt T8 lamps.

2.) ***What is the total installed cost for this measure?*** Enter the estimated total cost including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the lamps, if known and available.

ECM 8 & 9: Replace mercury vapor/HPS/Metal Halide with LED/induction lights

ECM 8&9	Replace mercury vapor/HPS/Metal Halide with LED/Induction light	Fill in your answers
Measure 8	Quantity of mercury vapor fixtures to be replaced?	0
	What is the total wattage of all new LED or Induction lamps?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -
Measure 9	Quantity of HPS/Metal Halide fixtures to be replaced?	0
	What is the total wattage of all new LED or Induction lamps?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

Older–generation, high-intensity discharge lights, such as mercury vapor, high-pressure sodium (HPS), and metal halide lights, are inefficient and cannot be used with dimming control. The new induction and LED lights are able to generate more visible lumens, have longer life, can work with staged or dimming controls, are more energy-efficient and can save from 30 to 50 percent of energy use.

Measure 8:

1.) ***Quantity of mercury vapor fixtures to be replaced?*** Enter the quantity of mercury vapor lights to be replaced with LED or induction lights.

2.) ***What is the total wattage of all new LED or Induction lamps?*** Enter the total wattage of the new LED or induction lights. For example, if installing one 30-watt LED light and one 70-watt LED light, the total wattage is 100 watts.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the lamps, if known and available.

Measure 9:

1.) ***Quantity of HPS/Metal Halide fixtures to be replaced?*** Enter the quantity of the high-pressure sodium lights to be replaced with LED or induction lights.

2.) ***What is the total wattage of all new LED or Induction lamps?*** Enter the total wattage of the new LED or induction lights. For example, if installing one 70-watt

LED light and one 100 watt LED parking lot light, the total wattage is 170 watts.

3.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the lamps, if known and available.

ECM 10: Install occupancy control for intermittently occupied rooms

ECM 10	Install occupancy control for intermittenly occupied rooms	Fill in your answers
	Quantity of occupancy sensors to be installed?	0
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

Many staff offices, break rooms, bathrooms, and classrooms are occupied intermittently. The lights in these rooms are often left on. Occupancy sensor controls can be used to turn off these lights when no movement or body heat is detected after an interval of time. The sensor can be wall-mounted or ceiling-mounted. The amount of achieved energy savings by turning off the lights in unoccupied spaces depends on the number of lights, type of lights, and hours of reduced usage in a space.

1.) ***Quantity of occupancy sensors to be installed?*** Enter the number of occupancy sensors to be installed (both wall-mounted and ceiling-mounted sensors of any sensing technology).

2.) ***What is the total installed cost for this measure?*** Enter the estimated total cost for installing the occupancy sensors, including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the occupancy sensors, if known and available.

2. HVAC and Mechanical Measures Calculators:

The following calculators can be used to calculate energy savings for some of the HVAC and mechanical energy efficiency measures.

The assumptions and energy impacts used in the calculators for HVAC measures were derived from data supplied by DEER. In many cases, the baseline energy information was based on the performance mapping conducted by each IOU. Many factors were considered in this baseline performance mapping, including building type, building size,

building vintage, equipment efficiency, operating hours, zip code, and climate zone for education-primary school, education-secondary school, and education-portable classroom buildings.

In general, the SIR for HVAC replacement measures is lower than 1.01. Stand-alone HVAC measures may not meet SIR requirements. An LEA has the option to bundle HVAC replacement measures with short-payback energy efficiency measures such as lighting to increase the total combined SIR for the LEA energy project. As long as the total combined SIR exceeds 1.01, the bundled measures may be approved.

ECM 11: Replace old packaged/split HVAC units with high efficiency HVAC

ECM 11	Replace old packaged/split HVAC unit with high efficiency HVAC	Fill in your answers
	This calculator only applies to AC up to 65KBtu/hr or 5.4 tons	
	Total quantity of AC and heat pump unit at school	10
	Total tonnage of air conditioner and heat pump unit at entire school	50
	Quantity of vertical wall mount AC to be replaced with EER 11 & IPLV 14 (or higher) unit?	2
	Quantity of packaged AC to be replaced with SEER 14 unit?	
	What is the total vertical wall mount AC tonnage to be replaced with EER 11 & IPLV 14 unit?	8
	What is the total AC tonnage to be replaced with SEER 14 unit?	
	What is the IOU (or nearest IOU)area the unit is installed?	PGE
	What is the total installed cost for this measure?	$ 16,000
	What is the utility rebate for this measure?	$ 1,500
	Are there other non-repayable funds applied to this measure?	$ 1,000

This calculator applies to air-conditioning (AC) units up to a cooling capacity of 65,000 Btu/hr (or roughly 5.4 tons) with a SEER 14 efficiency rating due to DEER database limitations. However, because there is no manufacturer's certification of equivalent SEER rating for wall-mounted AC units, the Energy Commission will allow the use of this calculator for wall-mounted AC units as long as all of the following conditions are met:

- Capacity of 5 tons or less
- Minimum two-stage compressor
- Minimum 11.0 EER at full load
- Minimum Integrated Part Load Value (IPLV) of 14.0
- Evaluation of system load (that is, justification and number of hours each stage is used)

1.) ***Total quantity of AC and heat pump unit at school?*** Enter the quantity of all the AC units at the school site including packaged units, split systems, and heat pump units.

2.) ***Total tonnage of AC and heat pump unit at entire school?*** Add the tonnage of the packaged units, split systems, and heat pump units and then enter the total tonnage of AC and heat pump units at the school site.

3.) ***Quantity of wall mount AC units to be replaced with EER 11 and IPLV 14 (or higher) unit?*** Enter the number of the wall mount AC units to be replaced with the high EER system.

4.) ***Quantity of AC to be replaced with SEER 14 unit?*** Enter the quantity of the AC units to be replaced with SEER 14 units. If not applicable, enter 0.

5.) ***What is the total wall mount AC tonnage to be replaced with EER 11 and IPLV 14 unit?*** Enter the total tonnage of the wall mounted AC units you plan to install.

6.) ***What is the total AC tonnage to be replaced with SEER 14 unit?*** Enter the total tonnage of the AC units with SEER 14 efficiency rating to be installed. If installing two 5 ton units, the total tonnage is 10 tons. If not applicable, enter 0.

7.) ***What is the IOU (or nearest IOU) area the unit is installed****?* Select the nearest IOU utility where the AC is to be installed. If you are in a San Diego Gas & Electric service territory (SDG&E), select SDG&E. If you are a SMUD customer, select PG&E.

8.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

9.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the HVAC units, if known and available.

10.) ***Are there other non-repayable funds applied to this measure?*** Enter the non-repayable fund amount for this measure. Non-repayable funds include bond funding, deferred maintenance, general operation budgets and other funds used to finance the project. This is funding that does not need to be repaid by the LEA.

ECM 12: Replace old heat pump (HP) with high efficiency heat pump

ECM 12	Replace old heat pump with high efficiency heat pump	Fill in your answers
	This calculator only applies to heat pump up to 65KBtu/hr or 5.4 tons	
	Total quantity of AC and heat pump unit at school	10
	Total tonnage of air conditioner and heat pump unit at entire school	50
	Quantity of vertical wall mount HP to be replaced with EER 11 & IPLV 14 (or higher) unit?	2
	Quantity of HP to be replaced with SEER 14 (HSPF 8.3) unit?	
	Quantity of HP to be replaced with SEER 15 (HSPF 8.8) unit?	0
	What is the total vertical wall mount HP tonnage to be replaced with EER 11 & IPLV 14 unit?	8
	What is the total HP tonnage to be replaced with SEER 14 unit?	
	What is the total HP tonnage to be replaced with SEER 15 unit?	0
	What is the IOU (or nearest IOU)area the unit is installed?	PGE
	What is the total installed cost for this measure?	$ 16,000
	What is the utility rebate for this measure?	$ 1,500
	Are there other non-repayable funds applied to this measure?	$ 1,000

The cooling energy savings calculation approach for heat pump systems is similar to that of the packaged AC systems. The heating seasonal performance factor (HSPF) for an AC SEER 14 unit is assumed to be increased proportionally to 8.3, and the HSPF for an AC SEER 15 unit is 8.8. The higher the HSPF, the more efficient it is.

This calculator applies only to heat pumps up to 65,000 Btu/hr (or about 5.4 tons) with a SEER 13, SEER 14, or SEER 15 efficiency rating.

Because there is no manufacturer's certification of equivalent SEER rating for the wall-mounted heat pump units, the Energy Commission will allow the use of this calculator for wall mount heat pump systems as long as all of the following conditions are met:

- Capacity of 5 tons or less
- Minimum two-stage compressor
- Minimum 11.0 EER at full load
- Minimum Integrated Part Load Value (IPLV) of 14.0
- Evaluation of system load (that is, justification and number of hours each stage is used)

1.) ***Total quantity of AC and heat pump unit at school?*** Enter the quantity of all the AC units at the school site including packaged units, split systems and heat pump units.

2.) ***Total tonnage of AC and heat pump unit at entire school?*** Add the tonnage of the packaged units, split systems and heat pump units and then enter the total tonnage of AC and heat pump units at the school site.

3.) ***Quantity of vertical wall mount HP units to be replaced with EER 11 and IPLV 14 (or higher) unit?*** Enter the number of the wall mount heat pump units you plan to replace with high EER systems.

4.) ***Quantity of HP to be replaced with SEER 14 (HSPF 8.3) unit?*** Enter the quantity of heat pump units with a SEER 14 efficiency rating to be installed.

5.) ***Quantity of HP to be replaced with SEER 15 (HSPF 8.8) unit?*** Enter the quantity of heat pump units with a SEER 15 efficiency rating to be installed.

6.) ***What is the total vertical wall mount HP tonnage to be replaced with EER 11 and IPLV 14 unit?*** Enter the total tonnage of the vertical wall-mounted HP units you plan to install.

7.) ***What is the total HP tonnage to be replaced with SEER 14 unit?*** Enter the total tonnage of the heat pump units with SEER 14 efficiency rating to be installed. For example, if installing two 5 ton and two 4 ton units, the total tonnage is 18 tons.

8.) ***What is the total HP tonnage to be replaced with SEER 15 unit?*** Enter the total tonnage of the heat pump units with SEER 15 efficiency rating to be installed. For example, if installing two 5 ton and two 4 ton units, the total tonnage is 18 tons.

9.) ***What is the IOU (or nearest IOU) area the unit is installed in?*** Select the nearest IOU utility where the AC is to be installed. For example, if you are in an SDG&E service territory, select SDG&E. If you are a SMUD customer, select PG&E.

10.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

11.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the HVAC units, if known and available.

12.) ***Are there other non-repayable funds applied to this measure?*** Enter the non-repayable fund amount for this measure. Non-repayable funds include bond funding, deferred maintenance, general operation budgets and other funds used to finance the project. These funds do not need to be repaid by the LEA.

ECM 13A: Replace boiler with high efficiency condensing boiler

ECM 13A	Replace boiler with high efficiency condensing boiler	Fill in your answers
	Quantity of boiler(s) to be replaced with AFUE 92-94 unit?	0
	Quantity of boiler(s) to be replaced with AFUE 95-97 unit?	0
	What is the total kBtu/hr of the new AFUE92-94 units?	-
	What is the total kBtu/hr of the new AFUE95-97 units?	-
	What is the IOU (or nearest IOU)area the unit is installed in?	PGE
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

Older boilers are noncondensing and have lower heat recovery exchangers. The efficiency of the old noncondensing boilers varies from 78 to 80 percent. A new condensing boiler is able to recover additional heat from the flue gas and can achieve annual fuel use efficiency (AFUE) of up to 97 percent. To simplify the efficiency category, the calculator segregates the new condensing boiler into two categories: condensing boilers with an AFUE from 92 to 94 percent and condensing boilers with an AFUE from 95 to 97 percent. This efficiency rating can be obtained from the equipment vendor's boiler cut sheet.

1.) ***Quantity of boiler(s) to be replaced with an AFUE 92-94 unit?*** Enter the quantity of condensing boilers to be installed with an AFUE or heat recovery efficiency from 92 to 94 percent. If none, enter 0.

2.) ***Quantity of boiler(s) to be replaced with an AFUE 95-97 unit?*** Enter the quantity of condensing boilers to be installed with an AFUE or heat recovery efficiency from 95 to 97 percent. If none, enter 0.

3.) ***What is the total kBtu/hr of the new AFUE 92-94 units?*** Enter the total kBtu/hr of the new AFUE 92-94 unit. For example, if installing two 250,000 Btu/hr condensing boilers with an AFUE of 92 to 94 percent, the total kBtu/hr is 500. If there are no boilers to be installed in this category, enter 0.

4.) ***What is the total kBtu/hr of the new AFUE 95-97 units?*** Enter the total kBtu/hr of the new AFUE 95-97 units. If there are no boilers to be installed in this category, enter 0.

5.) ***What is the IOU (or nearest IOU) area the unit is installed in?*** Select the nearest IOU utility where the boiler is to be installed. For example, if you are in an SDG&E service territory, select SDG&E. If you are a SMUD customer, select PG&E.

6.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

7.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the boiler units, if known and available.

ECM 13B: Replace furnace with high efficiency condensing furnace

ECM 13B	Replace furnace with high efficiency condensing furnace	Fill in your answers
	Quantity of furnace(s) to be replaced with AFUE 92-94 unit?	0
	Quantity of furnace(s) to be replaced with AFUE 95-97 unit?	0
	What is the total kBtu/hr of the new AFUE92-94 units?	-
	What is the total kBtu/hr of the new AFUE95-97 units?	-
	What is the IOU (or nearest IOU)area the unit is installed in?	PGE
	What is the total installed cost for this measure?	$ -
	What is the utility rebate for this measure?	$ -

This calculator is very similar to the condensing boiler calculator (ECM 13A). The only difference is that the EUL for furnaces is 15 years rather than 20 years for boilers.

1.) ***Quantity of furnace(s) to be replaced with an AFUE 92-94 unit?*** Enter the quantity of condensing furnaces to be installed with an AFUE or heat recovery efficiency from 92 to 94 percent. If none, enter 0.

2.) ***Quantity of furnace(s) to be replaced with an AFUE 95-97 unit?*** Enter the quantity of condensing furnaces to be installed with an AFUE or heat recovery efficiency from 95 to 97 percent. If none, enter 0.

3.) ***What is the total kBtu/hr of the new AFUE 92-94 units?*** Enter the total kBtu/hr of the new AFUE 92-94 unit. For example, if installing three 75,000 Btu/hr condensing furnaces with an AFUE of 92 to 94 percent, the total kBtu/hr is 225. If there are no furnaces to be installed in this category, enter 0.

4.) ***What is the total kBtu/hr of the new AFUE 95-97 units?*** Enter the total kBtu/hr of the new AFUE 95-97 units. If there are no furnaces to be installed in this category, enter 0.

5.) ***What is the IOU (or nearest IOU) area the unit is installed in?*** Select the nearest IOU utility where the AC is to be installed. For example, if you are in an SDG&E service territory, select SDG&E. If you are a SMUD customer, select PG&E.

6.) ***What is the total installed cost for this measure?*** Enter the estimated total cost, including materials and labor.

7.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount for the furnace units, if known and available.

ECM 14: Seal existing HVAC leaky ducts

ECM 14	Seal existing HVAC leaky duct	Fill in your answers
	How many total tons of AC where ducts will be sealed?	0
	What is the total installed cost?	0
	What is the utility rebate for this measure?	0

Many old single-zone packaged AC and heat pump systems use duct tape for all the joints and registers. In many leakage tests, the leaked volume could be as high as 40 percent among the supply and return ducts. These leaky ducts could be tested and sealed to reduce the leaked volume down to as low as 18 percent. Many local utilities also provide rebates to perform this service.

1.) ***How many total tons of AC where ducts will be sealed?*** Enter the total tonnage of single-zone AC units where air ducts or distribution systems will be sealed. For example, for four 5-ton AC units where ducts will be sealed, the total tonnage is 20 tons.

2.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

ECM 15: Install variable speed drives for pumps and fans

ECM 15	Install variable speed drive for pumps and fans	Fill in your answers
	What is the total motor horsepower that will have VSD?	0
	What is the total installed cost?	$ -
	What is the utility rebate for this measure?	0

Constant-speed motors for pumps and fans run continuously, whether the zone temperature has been achieved or not. Variable-speed drives (VSD) can reduce the speed of the pumps and fans when the zone temperature is achieved. Therefore, a significant amount of energy savings can be realized. VSDs can reduce the energy consumption

during part-load operating conditions. Therefore, the lower the motor speed, the higher the energy savings.

1.) ***What is the total motor horsepower that will have VSD****?* Enter the total motor capacity in horsepower (hp) where variable-speed drive controls will be installed. If installing VSDs for two 10 hp motors, the total motor horsepower is 20 hp.

2.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

ECM 16: Replace manual thermostat with programmable thermostat

ECM 16	Replace manual thermostat with programmable thermostat	Fill in your answers
	Quantity of old thermostats to be replacd?	0
	What is the total installed cost?	0
	What is the utility rebate for this measure?	0

Many facilities still use old on/off thermostats. The HVAC equipment controlled by the on/off thermostats could be running continuously if they are not turned off manually. The new setback, programmable, smart, or network thermostat can be programmed to turn these HVAC units off according to facility schedules or by resetting the zone temperature set point so the HVAC units can be controlled when the zone is not occupied. Significant energy savings can be realized for both heating and cooling operations.

1.) ***Quantity of old thermostats to be replaced?*** Enter the quantity of old thermostats to be replaced with setback, programmable, or network thermostats.

2.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

ECM 17: Replace old motors with premium efficiency motors

ECM 17	Replace old motor with premium efficiency motor	Fill in your answers
	What is the total premium motor horsepower capacity to be installed?	0
	What is the total installed cost?	0
	What is the utility rebate for this measure?	0

Even if older motors still operate, they are not energy-efficient. Because of technology improvements, new premium efficiency motors are more efficient and more compact. Motors that run continuously for 24 hours a day, such as swimming pool pumps or hot water circulation pumps, are good candidates for this retrofit.

1.) ***What is the total premium motor horsepower capacity to be installed?*** Enter the total premium efficiency motor capacity in horsepower to be installed. For example, if installing two 20-hp motors, the total motor horsepower capacity is 40 hp.

2.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

3.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

ECM 18: Replace storage water heater with gas-fired tankless water heater

ECM 18	Replace storage water heater with gas-fired tankless water heater	Fill in your answers
	Quantity of storage heater to be replaced with new instantaneous water heater?	0
	What is the total Btu per hour capacity of the old water heater?	0
	What is the total installed cost?	0
	What is the utility rebate for this measure?	0

Some facilities use storage hot water heaters for small hot water use. The standby loss alone is significant. By converting to instantaneous or tankless hot water heaters, the facility can improve the thermal recovery efficiency and reduce the standby loss of the hot water heater.

1.) ***Quantity of storage heater to be replaced with new instantaneous water heater?*** Enter the quantity of storage heaters to be replaced with a new instantaneous water heater.

2.) ***What is the total Btu per hour capacity of the old water heater?*** Enter the estimated total capacity of the storage water heater. For example, if replacing

two 50,000-Btu/hr units, enter 100,000.

3.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

3. Plug Load Measures Calculators:

ECM 19: Install smart strip/PC management to control computers/printers

ECM 19	**Install smart strip/PC management to control computers/printers**	Fill in your answers
Measure 19	How many smart strips or PC management tools will be installed?	0
	What is the proposed computer control?	Smart strip
	What is the total installed cost?	$ -
	What is the utility rebate for this measure?	$ -

Some computers and printers are not turned off at the end of the day or during weekends and are left running continuously. By installing a computer management software or "smart strip," the computers or printers can be turned to sleep mode when they are not used over a certain period.

1.) ***How many smart strips or PC management tools will be installed?*** Enter the quantity of smart strips or PC management tools to be installed.

2.) ***What is the proposed computer control?*** Select the type of control device to be installed.

3.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

ECM 20: Install vending machine occupancy control

ECM 20	Install vending machine occupancy control	Fill in your answers
Measure 20	Quantity of vending miser controls to be installed in beverage machines?	0
	Quantity of vending miser controls to be installed in snack machines?	0
	What is the total installed cost?	$ -
	What is the utility rebate for this measure?	$ -

Typical vending machines for beverages and snacks run continuously. In addition to lights, beverage machines have a small refrigerator to keep the beverages cold. Vending miser controls can be installed to reduce energy use when there is no occupancy detected.

1.) ***Quantity of vending miser controls to be installed in beverage machines?*** Enter the quantity of vending misers to be installed in beverage machines.

2.) ***Quantity of vending miser controls to be installed in snack machines?*** Enter the quantity of vending misers to be installed in snack machines.

3.) ***What is the total installed cost?*** Enter the estimated total cost, including materials and labor.

4.) ***What is the utility rebate for this measure?*** Enter the utility rebate amount, if known and available.

4. Building Envelope

ECM 21: Windows Replacement

ECM 21	Windows Replacement	Fill in your answers
	Square footage of EAST facing window replaced	
	Square footage of SOUTH facing window replaced	
	Square footage of WEST facing window replaced	
	What is the IOU (or nearest IOU)area the unit is installed?	SDGE
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	
	Are there other non-repayable funds applied to this measure?	

The windows replacement energy savings data were obtained from the new fenestration measure data with 30 percent better than the 2005 Title 24 codes in the DEER database for primary education, secondary education, and relocatable buildings. There are no energy savings data for north facing windows. Therefore, energy savings cannot be claimed with this calculator if replacing north facing windows.

The windows energy saving data was a utility area wide average and were grouped into three main utility service areas PG&E, SCE, and SDG&E. Any LEA located in other utility service areas may use the nearest IOU service area.

1.) ***Square footage of EAST facing window replaced?*** Enter the total square feet of window area facing east to be replaced with new windows. If the window orientation is facing between north and east or south and east, use the orientation that is closest to that direction.

2.) ***Square footage of SOUTH facing window replaced?*** Enter the total square feet of window area facing south to be replaced with new windows. If the window orientation is facing between south and west or south and east, use the orientation that is closest to that direction.

3.) ***Square footage of WEST facing window replaced?*** Enter the total square feet of window area facing west to be replaced with new windows. If the window orientation is facing between north and west or south and west, use the orientation that is closest to that direction.

4.) ***What is the IOU (or nearest IOU) area the unit is installed?*** Enter the utility service area of the school site. Any LEA located in utility service areas other than PG&E, SCE, and SDG&E may use the nearest IOU service area.

5.) ***What is the total installed cost for this measure?*** Enter the total project cost of removing the old windows and installing the new ones, including materials and labor.

6.) ***What is the utility rebate for this measure?*** Enter the total utility rebate associated with the new windows installation.

7.) ***Are there other non-repayable funds applied to this measure?*** Since the SIR for the window replacement project may be low, the LEA may use its own funds to buy down the project cost. Enter non-repayable funds for the installation of the new windows.

ECM 21: Install Cool Roof

ECM 22	Install Cool Roof	Fill in your answers
	Square footage of cool roof installed	
	Increased R value of cool roof installation	
	What is the IOU (or nearest IOU)area the unit is installed?	SDGE
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	
	Are there other non-repayable funds applied to this measure?	$ -

The cool roof energy savings data were obtained from the cool roof installation of the 2005 Title 24 codes in the DEER database for primary education, secondary education, and relocatable buildings. It is common for LEAs to install a cool roof with additional roof insulation. The calculator will calculate combined energy savings if both cool roof and insulation are installed.

The cool roof energy saving data were a utility area wide average and was grouped into three main utility service areas, PG&E, SCE, and SDG&E. Any LEA located in other utility service areas may use the nearest IOU service area.

1.) ***Square footage of cool roof installed?*** Enter the total square feet of roof area for additional roof insulation installation.

2.) ***Increased R value of cool roof installation?*** Enter the average R value increase of the insulation to be installed. For example, if the increased cool roof insulation is an average of R4, enter 4.

3.) ***What is the IOU (or nearest IOU) area the unit is installed?*** Enter the utility service area of the school site. LEAs located in utility service areas other than PG&E, SCE, and SDG&E may use the nearest IOU service area.

4.) ***What is the total installed cost for this measure?*** Enter the total project cost for this measure, including materials and labor.

5.) ***What is the utility rebate for this measure?*** Enter the total utility rebate associated with the new cool roof installation.

6.) ***Are there other non-repayable funds applied to this measure?*** Since the SIR for insulation replacement project may be low, the LEA may use its own funds to

buy down the project cost. Enter the non-repayable funds for the installation of the roof insulation.

ECM 23: Install Additional Insulation

ECM 23	Install Additional Insulation	Fill in your answers
	Square footage of roof insulation installed	10000
	Increased R value of roof insulation	20
	What is the IOU (or nearest IOU)area the unit is installed?	PGE
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	$ -
	Are there other non-repayable funds applied to this measure?	$ -

The insulation energy savings data were obtained from the roof insulation measure data in the DEER database for primary education, secondary education, and relocatable buildings. This measure is only for roof insulation installation. The roof insulation energy saving data were a utility area wide average and was grouped into three utility service areas, PG&E, SCE and SDG&E. LEAs located in other utility service areas may use the nearest IOU service area.

1.) ***Square footage of roof insulation installed?*** Enter the total square feet of roof area for additional roof insulation installation.

2.) ***Increased R value of cool roof installation?*** Enter the average R value increase of the insulation to be installed. If average R4 of batt or blow in insulation is planned, enter 4.

3.) ***What is the IOU (or nearest IOU) area the unit is installed?*** Enter the utility service area of the school site. LEAs located in utility service areas other than PG&E, SCE, and SDG&E may use the nearest IOU service area.

4.) ***What is the total installed cost for this measure?*** Enter the total project cost for installation of new roof insulation, including materials and labor.

5.) ***What is the utility rebate for this measure?*** Enter the total utility rebate associated with the new insulation installation.

6.) ***Are there other non-repayable funds applied to this measure?*** Since the SIR for insulation replacement project may be low, the LEA may use its own funds to buy down the project cost. Enter the non-repayable funds for the installation of the roof insulation.

5. Simple Low Voltage Distribution Transformer Project

ECM 24: High Efficiency Dry-Type Low Voltage Distribution Transformer

ECM 24	High Efficiency Dry-Type Low Voltage Distribution Transformer	Fill in your answers
KVA level		
1000	Quantity of 1000 kVA Transformer to be replaced with Premium Eff. Transformer?	
750	Quantity of 750 kVA Transformer to be replaced with Premium Eff. Transformer?	
500	Quantity of 500 kVA Transformer to be replaced with Premium Eff. Transformer?	
300	Quantity of 300 kVA Transformer to be replaced with Premium Eff. Transformer?	
225	Quantity of 225 kVA Transformer to be replaced with Premium Eff. Transformer?	
150	Quantity of 150 kVA Transformer to be replaced with Premium Eff. Transformer?	
112.5	Quantity of 112.5 kVA Transformer to be replaced with Premium Eff. Transformer?	
75	Quantity of 75 kVA Transformer to be replaced with Premium Eff. Transformer?	
45	Quantity of 45 kVA Transformer to be replaced with Premium Eff. Transformer?	
30	Quantity of 30 kVA Transformer to be replaced with Premium Eff. Transformer?	
15	Quantity of 15 kVA Transformer to be replaced with Premium Eff. Transformer?	
	What is the total installed cost for this measure?	
	What is the utility rebate for this measure?	

This calculator is based on the Department of Energy 10 CFR Part 431/TP1 and C802.2 approved efficiency standards. All new distribution transformer installations need to meet the minimum efficiency requirement. The energy saving calculation is based on these new standards. Only three-phase dry type voltage levels are listed here.

If an LEA intends to install transformers that are the same or higher than NEMA premium efficiency standards, it can perform its own savings calculation.

If the transformer capacity in kVA (assuming a power factor of one) is three times greater than the entered benchmarking demand, the calculator will return an error.

1.) ***Quantity of 1000 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 1000 kVA Transformers to be replaced.

2.) ***Quantity of 750 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 750 kVA Transformers to be replaced.

3.) ***Quantity of 500 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 300 kVA Transformers to be replaced.

4.) ***Quantity of 300 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 300 kVA Transformers to be replaced.

5.) ***Quantity of 225 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 225 kVA Transformers to be replaced.

6.) ***Quantity of 150 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 150 kVA Transformers to be replaced.

7.) ***Quantity of 112.5 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 112.5 kVA Transformers to be replaced.

8.) ***Quantity of 75 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 75 kVA Transformers to be replaced.

9.) ***Quantity of 45 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 45 kVA Transformers to be replaced.

10.) ***Quantity of 30 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 30 kVA Transformers to be replaced.

11.) ***Quantity of 15 kVA Transformer to be replaced with Premium Eff. Transformer?*** Enter the quantity of 15 kVA Transformers to be replaced.

12.) ***What is the total installed cost for this measure?*** Enter the total project cost for installation of new roof insulation, including materials, and labor.

13.) ***What is the utility rebate for this measure?*** Enter the total utility rebate associated with the new insulation installation.

6. Photovoltaic System (PV) Calculator:

ECM 25	Installing Photovoltaic System	Fill in your answers
	How many PV panels will be installed?	200
	What is the PTC (PVUSA Test Con.) Wattage of each panel?	200
	What is the name plate efficiency of the inverter?	97.0%
	What is the total name plate capacity of the inverter?	40
	*For PV < 30 kW, What is the approved EPBB rebate amount?	$ -
	*For PV >= 30 kW, What is the approved PBI rebate amount?	$ -
	Other Non-repayable funds	$ -
	What is the total project cost without rebate?	$ 120,000
	Does PV vendor provide 25 year system warranty?	No

This simple calculator for installing PV systems applies only to school-owned PV projects. Because of the initial costs, low or no rebate amounts and the inability of schools to claim tax credits, the SIR for a PV project may not pass the requirement of 1.01. However, a school has the option to bundle a PV system with short payback energy efficiency measures to increase the total SIR. As long as the total LEA combined SIR exceeds 1.01, the bundled measures may be approved and funded up to the grant amount.

The calculator assumes that the potential PV project is sized properly (that is, sized only to save up to the prior-year electricity bill of the facility, excluding customer and meter charges). In addition, the calculator also assumes that a net energy metering agreement will be signed with the utility.

For a PV system to maintain maximum production, regular maintenance and cleaning are required. It further assumes annual maintenance cost to be 0.3 percent of project cost. Based on PV monitoring data and on the PV vendor warranty, annual PV production degradation rate is assumed to be 0.7 percent. The life-cycle cost analysis assumes that inverters will be replaced every eight years. The calculator uses a statewide average of 1,500 kWh for each installed kWac.

1.) ***How many PV panels will be installed?*** Enter the quantity of PV panels to be installed.

2.) ***What is the PTC (PVUSA Test Con.) Wattage of each panel?*** Enter the PVUSA test condition (PTC) rating in direct current (DC) watts for the selected panels. This PTC DC wattage rating is generally used for rebate calculations.

3.) ***What is the name plate efficiency of the inverter?*** Enter the nameplate efficiency rating of the inverter(s) to be installed. For example, if installing a certified inverter with 95 percent efficiency rating, enter 95.

Note: Determining PV capacity:
PV capacity in alternating current (AC) will be automatically calculated using this formula:

PV Capacity (Energy Commission AC rating) = Number of panels x PTC panel wattage x inverter efficiency

Electricity production will be calculated using this AC capacity based on an average generation per kW from Energy Commission and CPUC monitoring data.

4.) ***What is the total name plate capacity of the inverter?*** Enter the nameplate capacity of the inverter(s) to be installed. For example, if installing two 20-kW inverters, enter 40 kW. The inverter capacity for continuous operation has to be greater than the maximum capacity of the PV panels.

5.) ***For PV < 30 kW, what is the approved EPBB rebate amount?*** If an Expected Performance Based Buydown (EPBB) rebate is approved for a PV system less than 30 kW for the school site, enter the rebate amount.

6.) ***For PV >= 30 kW, what is the approved PBI rebate amount?*** If you have a (Performance Based Incentive) PBI rebate approved by utility, enter the total approved rebate amount. This total PBI rebate will be adjusted by discount rate for NPV.

7.) ***Other non-repayable funds?*** Enter the non-repayable fund amount for this measure. Non-repayable funds include bond funding, deferred maintenance, general operation budgets and other funds used to finance the project. This funding does not need to be repaid by the LEA.

8.) ***What is the total project cost without rebate?*** Enter the estimated total cost for installing the PV system, including material and labor, excluding the rebate.

9.) ***Does PV vendor provide 25 year system warranty?*** Select “yes” if the PV vendor provides a signed 25-year system warranty and “no” if they do not. If the PV vendor does not provide a 25-year system warranty, you will need to select 20 years as the effective useful life of the PV system when you are entering information in the Photovoltaic subsection in the Energy Expenditure Plan Online.

CHAPTER 5:
Information Required for Energy Audits

Purpose

The Energy Commission uses energy audits submitted by the LEA to review and validate the energy savings and SIR calculations in the energy expenditure plan. To expedite the review of proposed eligible energy projects for which energy audits have been completed, the Energy Commission has prepared a concise format for LEAs to use when submitting these energy audits as back-up documentation. Audit documentation submitted in a format different from that described below will result in the need to resubmit the information or a much longer review time, resulting in delay in energy expenditure plan approvals. LEAs not using the Energy Commission energy savings calculators as backup documentation to validate their energy savings and SIR calculations must use the format outlined below.

Information Required

Prepare one audit or savings analysis for each school in the energy expenditure plan and keep the analysis for each school in a separate file.

An energy audit must consist of:

1. Facility Background.
2. Energy Efficiency Measure (EEM) Summaries.
3. Grants and Incentives.
4. Appendices.
    a. Appendix A
    b. Appendix B

The following are instructions for and a description of each part of the energy audit:

Facility Background

Based on the survey of the school buildings and interviews with the school staff, provide brief descriptions of the existing condition of the facility, all major energy-using equipment and end-use areas. These descriptions shall provide general information on each of the following categories:

- Utility costs, rate schedule, and consumptions for each school
- Age, square footage, and typical hours of the building

- Age, efficiency, current hours of operation and controls of the energy-using equipment
- Size, age, annual production, and condition of the onsite generation equipment (such as PV and cogeneration), if applicable.
- Benchmarking data.

Energy Efficiency Measure (EEM) Summaries

Provide a description of the proposed EEMs here. Describe, separately, the EEMs in each end-use category as listed below. If the EEM is recommended in only one end-use area, skip other end-use areas.

Please include one section describing the existing equipment problems and associated energy use and one section describing the recommended retrofit to address the problem and how the energy savings are obtained. Prepare a table for each EEM summarizing the energy and energy cost savings (as shown in following table).

Energy Efficiency Measure	Demand Savings (kW)	Electricity Savings (kWh/yr)	Electricity Cost Savings ($/yr)	Natural Gas or Fuel Savings (therms or gal/yr)	Natural Gas or Fuel Cost Savings ($/yr)	Annual Cost Savings	Installed Measure Cost
Total							

For each end-use area where energy efficiency measures are being analyzed, detailed information must be provided. If no energy efficiency measures are being recommended in a particular end-use area then detailed information does not need to be provided. The following information is required for the end-use areas:

- Building Envelope
    - A detailed model or engineering calculation of insulation, window shade, window replacement, cool roof or other building envelope measures.
    - A description of the existing building envelope condition and the proposed retrofit or replacement measure in the study, including quantity, square footage, orientation, U-value and/or shading heat gain coefficient improvement, and so forth
    - Assumptions and output for the calculation method and the cost savings.
    - A summary of the model run for the pre- and post-retrofit case and/or backup calculations shall be included in the Appendix B of the energy audit.

- Lighting

    - A complete survey of all lighting systems at each school site.
    - A description of quantity, wattage, operating hours and current controls of the existing lighting systems and recommended modifications in the study. Separate fixture retrofit measures from lighting control measures and relamping measures as each measure has a specific Effective Useful Life (EUL).
    - Backup calculations, calculation spreadsheets and/or the simulation model runs for the pre- and post-retrofit cases for each lighting measure type (for example, fixture retrofit, occupancy sensors, or relamping measure, and so forth) shall be included in Appendix B of the energy audit. If a calculator is used, please attach the calculator in Appendix B as well.

  If the baseline kWh use for all lights exceeds 35 percent of the annual kWh consumption, please provide a brief energy balance for the school and a description of why the lighting load is above average at the specific site. Energy loads for end-use areas not included in the audit shall be based on general assumptions and detailed in Appendix A. The energy balance calculation will make sure the baseline energy use and energy savings are reasonable.

- HVAC

    - A survey of all HVAC system and associated equipment (such as circulation pumps, air handlers, economizers, cooling tower and controls) for each school.
    - A discussion of the condition, age, quantity, size, efficiency, and controls (or operating hours) of the existing HVAC equipment and problems obtained from the school staff in the pre-retrofit section.
    - A description of how the recommended measure(s) or proposed modifications would improve the system efficiency and save energy. If a retro-commissioning measure is considered, it needs to be linked to a hardware installation measure. Soft energy savings from resetting indoor temperature or schedule may be temporary and could be easily lost due to school override. However, continuous commissioning with a written contract with the school to maintain the operation of the equipment is allowed.
    - Engineering calculation, Bin model analysis, and/or hourly simulation models shall be used to calculate energy savings. The backup calculation, calculation spreadsheet and/or the simulation model runs for the pre- and post-retrofit case must be provided in the Appendix B of the energy audit. If a calculator is used, please attach the calculator in Appendix B as well.

  Select the efficiency measure from Appendix E, Effective Useful Life for Energy Measures in Years, in the *2016 Guidelines* carefully because the EUL for each measure may be

different. Premium efficiency motor and variable speed drive are classified under the "Other" category in the efficiency measure pull down menu.

If the baseline kWh use for all HVAC equipment exceeds 50 percent of the annual kWh consumption, provide a brief energy balance for the school and a description of why the HVAC load is above average at the specific site. Energy loads for end-use areas not included in the audit shall be based on general assumptions and detailed in Appendix A. The purpose for the energy balance calculation is to make sure the baseline energy use and energy savings are reasonable.

If an HVAC measure has multiple sources of savings such as savings from SEER efficiency improvement and reduced hours of operation, provide incremental savings after each savings function. Many control and VFD measures save energy during part load operation or an unoccupied period and do not save demand charge. Cost savings should be calculated based on energy savings only. Compare your EEM savings with the utility bills. If the savings are too high (for example, more than 20 percent of total utility bills), please make the necessary adjustment.

- Domestic Hot Water

    - A survey of all domestic hot water (DHW) system and associated equipment (such as circulation pumps, storage tanks or cooling towers).
    - A discussion of the age, quantity, size, efficiency and controls (or operating hours) of the existing DHW equipment and problems in a pre-retrofit section.
    - A description of how the recommended measure(s) or proposed modifications would improve the system efficiency and save energy.
    - Backup calculations, calculation spreadsheets and/or the model runs for the pre- and post-retrofit case shall be provided in Appendix B. If a calculator is used, please attach the calculator in the Appendix B as well.

Select the efficiency measure from Appendix E, Effective Useful Life for Energy Measures in Years, in the *2016 Guidelines* carefully because the EUL for each measure may be different. An instantaneous hot water heater and a variable speed drive have different EULs.

- Clean Generation Measures

    - A discussion of the existing conditions and energy efficiency measure(s) implemented in existing condition section.
    - A detailed description of quantity, size, energy savings or production, capacity factor and maintenance in this section.

- Backup calculations based on the current or proposed rate schedule must be included in the Appendix B of the energy audit. If a calculator is used, please attach the calculator in the Appendix B as well.

All schools need to consider energy efficiency measures before implementing any clean generation measure. A school can end up with an oversized generation project if it does not consider and implement the EEMs first.

- Other Measures (Plug loads, energy storage, and so forth)
    - A discussion of the existing conditions and proposed modifications for other measures not covered in the above sections such as plug load measures, energy storage or power factor improvement measures.
    - A detailed description on quantity, size, energy savings or production, capacity factor and maintenance in this section.
    - Backup calculations must be included in Appendix B of the energy audit. If a calculator is used, please attach the calculator in the Appendix B as well.

Grants, Incentives, and Non-Repayable Funds

If the LEA intends to use grants, incentives, and non-repayable funds (including general operation budgets, maintenance funds, capital project funds, bond funds, and other funds that do not need to be repaid by the LEA) in the SIR calculation, provide the funding source and amount of the grants and financial incentives information here. For bond-funded grants, indicate the source of funding and why the interest or debt service will not be repaid by the LEA. Describe what measures are eligible for utility rebate and how utility rebates are calculated.

Appendices

Appendix A

Baseline Energy Use, Benchmarking and Energy Balance (if lighting or HVAC kWh energy use exceeds 50 percent of baseline)

Baseline Energy Use

Provide monthly and annual energy use by each account. If the school has a PV system onsite, obtain the annual kWh production from the PV monitoring system or inverter.

Benchmarking

Based on total annual energy use data from all meters serving the school and square footage of the school, create a benchmarking table for all energy uses. (such as $/sf/yr, kWh/sf/yr, therms/sf/yr, and so forth).

Energy Balance

If lighting energy use exceeds 35 percent of baseline or HVAC kWh energy use exceeds 50 percent of baseline, provide the percentage estimate for each end-use category. Provide all assumptions and calculations for each end-use category.

Appendix B

Energy Efficiency Measure Calculations

Provide the pre-and post-retrofit energy use for the recommended equipment and control measures by school. Discuss how assumptions are used and energy savings are obtained. Compare the demand and energy use for pre- and post-retrofit conditions. Attach analyses documentation and calculations here including spreadsheets, simulation model analysis and/or engineering calculations, as appropriate. Cost savings shall be calculated based on demand and energy charges provided in the applicable electric rate schedule. A detailed cost breakdown for each measure shall be provided including material and installation labor costs listed separately. If the cost is much higher than the commercial market cost, a detailed justification is required.

Chapter 6: Information Required for Power Purchase Agreement Application

Purpose

An LEA may include a clean energy generation Power Purchase Agreement (PPA) as part of the Proposition 39 energy expenditure plan application. To expedite the review of a proposed eligible PPA, the Energy Commission has prepared a concise format for LEAs to use when submitting the PPA project information as supporting documentation to the Energy Expenditure Plan. A sample life-cycle cost analysis tool is also provided for LEAs to calculate cost savings, Net Present Value (NPV) and SIR for the proposed PPA based on energy production from the proposed PV project. This format allows Energy Commission staff to evaluate and validate the energy cost savings from the PPA proposals.

Facility Background Information

Prepare the following information for each school site where the LEA proposes a PV installation utilizing a PPA contractor. Each LEA must provide a brief description of the existing condition of the facility, energy-using equipment, and energy use, including but not limited to:

- Facility kWh Consumption: Demand, electricity cost (by time of use where applicable), and rate schedule for each school site where PV is proposed
- Facility Information: Age, square footage, and typical hours of buildings operation;
- Facility Operation and Control: Age, efficiency, current hours of operation and type and effectiveness of existing controls of the energy using equipment
- Existing PV/Generation System Information, if applicable: Size, age, annual production and condition of the onsite generation equipment (such as PV and cogeneration)
- Energy Efficiency Measures Installed: Provide a description of the energy efficiency measures implemented over the last five years and the estimated energy and demand savings at the school site. If energy audits have been performed during the last five years, indicate who performed the study and describe the energy efficiency measures in each end-use category separately such as lighting, lighting control, HVAC, HVAC control, and plug load measure.

Proposed Clean Energy Generation System Information

For each school site where the PV system is proposed, the LEAs must provide the proposed PV system information, including:

- Proposed PV System: Type of system (ground mount, carport, roof mount, and so forth) Describe where the PV is proposed on the building site, describe age and general condition of the location and describe the existing building structure and the structural adequacy to support additional loads. Provide calculations where applicable to demonstrate that additional roof weight will not be detrimental to the building structure.
- PV System Production: Number of panels, PV system size (AC rated), an overall layout of proposed installation, inverter capacity, inverter conversion efficiency, system degradation rate, estimated annual production.
- PV System Savings: Energy cost savings, effective electricity rate to be paid to PV vendor and the electric price discount. PPA contractor must also provide the estimate of PV production as a percentage of latest year (fiscal or calendar) electricity use at the school site. If the LEA is using a time-of-use rate, an hourly simulation model for on-peak, mid-peak, and off-peak kWh production and time-of-use rates shall be used to calculate PV system cost savings. If the LEA plans to switch to a new rate schedule, perform cost-saving analysis based on the new rate schedule.

NOTE: When entering into a PPA contract, LEAs should fully understand the long-term consequences and size clean generation projects accordingly. LEAs should consider weather variations, future energy efficiency improvements, and potential programs that may have a cost-effectiveness requirement.

Letter of Intent

If an LEA intends to use Proposition 39 funds to finance a clean energy project using a PPA, the LEA must include a commitment letter signed by the LEA authorized representative to indicate why the clean energy PPA project could not be implemented without using Proposition 39 program funds.

No Sole Source Agreement

A PPA shall not be awarded through a sole source process as required by Public Resources Code Section 26235(c), which states, “A community college district or LEA shall not use a sole source process to award funds pursuant to this chapter. A community college district or LEA may use the best value criteria as defined in paragraph (1) of subdivision (c) of Section 20133 of the Public Contract Code to award funds pursuant to this chapter.” (Note: Senate Bill 785 [Chapter 931, Statutes of 2014], adopted by the Legislature and signed into law by Governor Edmund G. Brown, Jr. on September 30, 2014, repealed Section 20133 of Chapter 1, Part 3, Division 2 of the

Public Contract Code and further amended the statute.) The LEA shall defer to their own procurement regulations and procedures, as long as they reflect applicable state and local laws and regulations and do not conflict with the minimum legal standards specified above.

PPA Contract Information

For all proposed PPAs, the following must be included in the draft PPA contracts to comply with the following PPA Terms and Conditions as described in the *2016 Guidelines*:

- A performance guarantee ensuring at least 95 percent of estimated production over at least a five-year period and must have a performance and production guarantee for the life of the PPA term with an appropriate degradation rate.
- A performance guarantee that includes language that in the event actual production falls below the guaranteed threshold, the PV vendor will reimburse or compensate an LEA (at the applicable PPA rate) for the short fall.
- a statement that it will be responsible for designing, installing, operating and maintaining the energy generation project during the contract terms. If a roof mounted PV system is proposed, the PPA provider shall be responsible for the damage to the roof over at least a five year period.
- a statement that the PV vendor shall be responsible for all required permits (DSA, CEQA, fire marshal, and so forth) and shall meet the current version of all applicable California Building Code including structural, electrical and fire protection.
- define who owns the renewable energy certificates and include a statement, initialed by the LEA's authorized representative, that the PPA provider has informed the LEA of all greenhouse gas attributes and value benefits.

Energy Production and Cost Savings Summary for Energy Expenditure Plan Online Application

Energy production and cost savings of the proposed clean generation project must be calculated based on the provided sample PPA SIR calculation spreadsheet, or other PV simulation models using the same method. The calculation spreadsheet contains the instructions to use the tool, required data entry for online application, Proposition 39 contribution, estimated energy production and cost savings and life cycle analysis. The following table shows the required information for an energy expenditure plan that includes a request for approval of a PV project, which includes a PPA.

Energy Production and Cost Savings Summary for Energy Expenditure Plan Submission

Clean Energy Generation Size (kW AC)	Peak Demand Saving (kW)	Year 1 Electricity Production (kWh)	Term of the PPA	PV Production as % of LEA School Site Annual Electricity Use (%)	First Year PPA Electricity Cost ($)	% Price Discount Offered on Price First Year (%)	PPA Electric Price Escalation (%)	NPV of Utility Cost Savings ($)	NPV of Payment to PPA Provider ($)	NPV of Prop 39 Contribution ($)	PPA SIR

Definitions:

1. PV Size (kW AC): Enter the alternating current (AC) power rating of the clean energy generation system proposed at the school.
2. Peak Demand Savings (kW): Enter the estimated peak demand savings based on the proposed system size and location.
3. Year 1 Production (kWh): Enter the estimated annual electricity production in kWh based on the proposed system size and location.
4. Term of the PPA: Enter the number of years of the PPA between the PPA provider and the LEA. For example, 15 years, 20 years, and so forth.
5. PV Production as Percentage of LEA School Site Annual Electricity Use (%): Enter percentage of the first year's (12-month) production estimate and the most recent 12-month annual electricity use of the site by dividing the former by the latter.
6. First Year PPA Electricity Cost ($): This is the electricity cost paid by the LEA to the PPA provider. This is considered to be the measure cost for the LEA to obtain the electricity cost savings from the PPA. Any non-electricity costs paid by the LEA using Proposition 39 funds, such as project development costs, must be included.
7. % Price Discount Offered on Price First Year (%): Calculate the weighted average electricity price for last year's utility bills and the weighted average price paid by the LEA for the purchased electricity, then calculate and enter the percentage discount of the electricity price savings. For example, if the weighted average of electricity price is 20 cents and the weighted average price paid by the LEA for the purchased electricity is 16 cents. The difference between the two is 4 cents. To get the percentage price discount, divide 4 cents by 20 cents, and you will get 20 percent. In this example, enter 20 in this field.
8. PPA Electric Price Escalation (%): Enter the energy cost escalation rate that was agreed to in the PPA. The escalation rate should not exceed 3 percent nominal.
9. NPV of Utility Cost Savings ($): NPV of the difference between the annual electricity cost paid to the utility immediately before and after the PPA.
10. NPV of Cost Payment to PPA Provider ($): NPV of electricity cost paid to the PPA provider over the term of the PPA.

11. NPV of Proposition 39 Contribution ($): NPV of total Proposition 39 contribution to this PPA. Future year contribution shall be discounted to the current year's value.
12. PPA SIR: PPA SIR shall be calculated using the following equation:

$$\text{PPA SIR} = \frac{\textbf{NPV of LEA Utility Cost Savings}}{\textbf{NPV of LEA Electricity Cost Paid under PPA+NPV of P39 Contribution}}$$

Present value (NPV) calculation assumptions

- PPA Energy Escalation Rate = maximum up to 3% (nominal)
- Energy Cost Escalation Rate = 4% (nominal)
- Discount Rate = 5%
- Effective Useful Life (EUL) = up to 20 years
- Performance degradation Rate 0.7%. (if lower than 0.7%, a performance guaranty shall be provided in writing.)

Note: Where an LEA proposes PV installations at multiple sites, the PPA contractor must provide the above information for each school or site where PV is planned. The Proposition 39 Funding requested may be allocated across each site based on energy production estimated at each site.

Instructions for the Power Purchase Agreement Calculator

Purpose

The PPA Calculator may be accessed on the Proposition 39 website at http://www.energy.ca.gov/efficiency/proposition39/. Scroll to the end of the page and click on the PPA Calculator. The PPA Calculator provides a PPA SIR calculation tool using standardized assumptions and user defined photovoltaic (PV) project information. It will provide a consistent basis for the evaluation of the savings and cost effectiveness associated with PPA-funded Solar Photovoltaic (PV) or clean energy generation project(s) proposed to be developed at LEA sites. The PPA calculator presents a consistent data input format for the existing site, existing utility rate schedules, proposed PV scope and power production, PPA proposed electricity rates as well as applicable utility rates with PV installed. It also allows the LEA to input the annual Proposition 39 funding contribution by fiscal year.

Given the large number of possible utility rate schedules and structures that could apply, it is possible that the input structure provided in the current version could require slight modification to handle some of the unique rate structures. Users should contact the Energy Commission staff with such examples and the Energy Commission may post updates to this calculator.

The calculator's rate calculation and NPV is protected and users are allowed to enter data in only the cells that are highlighted in red color. Depending on the user's input, certain sections of the calculator have conditional formatting applied to greyed-out areas that do not apply. Also, under certain "out of range" input situations, the calculation areas are blacked out to alert the user that the input is not within a reasonable range. For example, if the implied PV production per kW of installed capacity exceeds 1,725 kWh/kWac (1.15 * 1500 kWh/kWac), the user is alerted that the PV production entered is out of range.

The purpose of this calculator is not to generate estimated PV production based on a given installed capacity and project configuration. Rather, the time of use PV production used by the model is simply one of the inputs. There are public domain PV models such as PVWatts as well as others in the market which may be used for determining hourly PV production. Time-of-use aggregated numbers may thus be estimated separately by the user based on the applicable utility rate schedule and the hourly PV generation estimates generated by such other models.

This PPA calculator is divided into seven sections (tabs). Only 3 tabs require user data input (highlighted in red), all other sections are auto calculated based on assumptions in the P39 guidelines:

Tab 1: No user input – Instruction: Calculator user manual
Tab 2: User input – General: Site information, utility bill and PV production information.
Tab 3: User input – Price: User to select starting PPA electricity price or electricity price discount or stipulated yearly price.
Tab 4: User input – Proposition 39 Funding Request: annual and total Proposition 39 contribution requested.
Tab 5: No user input – Rate Calculation: this tab is locked. Automatic calculation for PPA life cycle cost analysis
Tab 6: No user input – NPV Calculation: this tab is locked. Automatic calculation for Net Present Values.
Tab 7: No user input – Input for Proposition 39 Online: This tab is locked. Automatic calculation. Data input for online PPA grant application.

The calculator also has two hidden charts showing sensitivity analyses and annual PPA price escalation which will allow the Energy Commission Project Manager to compare different options of PPA electric rates with utility rates.

For bugs, problems, or questions, please contact the Proposition 39 Hotline at (855) 380-8722 (toll-free in-state), (916) 653-0392 (toll-line out-of-state) or by email at Prop39@energy.ca.gov.

The following paragraphs provide explanatory notes for the various inputs.

Input Instructions – Tab 2: General Information

SECTION A – GENERAL INFORMATION

A.1 – A.5 Provide general information on the LEA and the specific school site where PV is proposed. If a school has multiple buildings or locations where PV is proposed, all such locations can be grouped within a given school as a single "site," so long as they use the same utility rate schedule. However, if a given site has multiple buildings grouped under multiple rate schedules, a calculator is required for each rate schedule since calculation of savings is highly rate-dependent.

Note: If PV is proposed at multiple schools, each school shall have a separate SIR calculation.

SECTION B – PROJECT SITE EXISTING ENERGY USE AND COST

B.1 Provide the total gross square footage (GSF) of buildings at the school site. Include all buildings that are on the same electrical grid or network as that served by the proposed PV project.

B.2 Indicate the month and year time period (start and end) corresponding to the base case energy use information provided herein.

B.3 Input the electric utility name (for example, PG&E, SCE) that provides base case energy to the LEA

B.4 Input the rate schedule used to price out the base case electricity cost paid to the electric utility

SECTION C – PROPOSED PV PROJECT INFORMATION AT SITE

C.1 Enter the type of PV installation. This is a narrative information item.

C.2 Input the term of the PPA contract (in years not to exceed 20 years.

C.3 Provide the rated name plate net rating of the PV project (AC kW). This amount is used in conjunction with the kWh output also provided in the calculator to determine the average kWh per kW of installed PV capacity. If the PV production input in Section H exceeds 1,725 kWh/kWac, calculation will not proceed.

C.4 Input the PV "guaranteed maximum percent degradation." This annual degradation is applied to reduce the available energy (kWh) from the PV project during the life cycle of 20 years. Degraded energy production in Year "n" is calculated as = First year energy production * (1 – "percentage degradation" expressed as a fraction) ^ (n-1). To prevent overly optimistic estimates, values below 0.5 percent are not accepted.

C.5 The Price Proposal tab is to be populated to specify the pricing terms associated with the sale of PV produced electricity to the LEA.

SECTION D – BALANCE OF ELECTRICAL PURCHASES FROM UTILITY WITH PV

D.1 Input the utility rate schedule that will apply once the proposed PV project is implemented. In several cases, LEAs would benefit from migrating from the base case rate schedule to a time-of-use (TOU) (and non-demand-based) schedule to reduce their overall electricity costs. This can be particularly helpful since PV projects cannot be guaranteed to save demand charges.

SECTION E – UTILITY RATE SCHEDULE UNDER BOTH BASE CASE AND WITH PV

This section captures input applicable to utility rate schedules for the "before PV' and "after PV" utility electricity purchase scenarios. Since a PV project does not completely offset the base case electricity purchases from the utility, it becomes necessary to simulate the effective applicable rates under both the "Base Case" and "With PV" scenarios. The following provides explanatory notes on the rate components.

E.1 Input name of the applicable rate schedule

E.2 Because the rates are a function of Primary, Secondary and Transmission-level service available from a given utility, input the applicable voltage service level noted on the rate schedule for a given utility service at the proposed site.

Fixed Charges (As Applicable)

E.3-E.5 Fixed charges are independent of demand or energy use. They may include customer charges, meter charges, or other charges. If the proposed project includes other significant charges, note them as well. Typically, all charges should be converted to a monthly amount for input in these cells.

TOU Monthly Demand Charges

E.6-E.8 To the extent the proposed project has TOU demand charges, input the same. Generally, TOU demand charges are seasonal (that is, summer and winter rates differ) and generally there are no winter off-peak demand charges.

Seasonal Demand Charges (As Applicable)

E.9-E.10 In many cases, rather than TOU, the demand charges may be seasonal (that is, one rate for summer demand and another rate for winter demand). Input the same in these cells. Rarely are there both the TOU demand (E.6 through E.8) as well as seasonal demand charges (E.9 and E.10).

Other Maximum Demand Charges

E.11 a.-E.12 Enter the other applicable charges such as billing demand charges or facilities demand charges that are based on highest demand experienced in a given month. The inputs allow for potentially one rate for the summer months and a different rate for the winter months.

In some cases rate schedules entail a ratcheted demand charge for facilities/billing demand. Select 1 in the cell provided to reflect the same.

TOU Energy Charges (As Applicable)

E.13-E.18 Input the TOU energy charges for each TOU period in the cells provided.

NON-TOU Energy Charges (as applicable)

E.19-E.20 In the event the LEA or school site has other energy charges enter the same in these cells. An example may be seasonal energy charges. It is rare for a site to have both TOU energy charges (E.13 – E.18) as well as seasonal energy charges (E.19 – E.20).

12-Month Ratchet In cases where the demand charges for a given month are based on highest demand over 12 months, select 1 in the cell provided

E.21 **Other Energy surcharges.** In some cases, an electric utility may have other surcharges linked to energy use. Input the same under E.21.

SECTION F – TIME OF USE SEASON DEFINITION

For each month, specify whether the given month is summer (1) or winter (0) by Utility Rate Schedule definition. If the utility bill has split summer/winter days, define that month using the season with majority days. If there is only one season, input all as “0” or “1”.

SECTION G – BASE CASE SITE ENERGY USE

G.1 Select “1” if the Base Case energy purchased from the utility is based on TOU energy usage data. The calculator requires either TOU prices or seasonal prices for energy.

Note: If "1" is selected and TOU energy base case prices are not provided, the calculator will black out the NPV calculation tab area. Likewise, if "0" is selected and seasonal energy prices are not provided, the NPV calculation area will be blacked out.

G.2 Select "1" if the PPA case energy purchased from the utility with the PV project is based on TOU energy usage data.

Note: If "1" is and TOU energy prices for the PPA case are not provided, the calculator will black out the NPV calculation tab area. Likewise, "0" is selected and seasonal energy prices are not provided, the NPV calculation area will be blacked out.

G.3 This is an instruction pertaining to input provided under G.1 and G.2. Fill out the table under G.3. If either the Base Case or PPA Case electricity is purchased under TOU rates, it is important to provide base case energy usage information for each TOU period.

Input Instructions – Tab 3: Price

SECTION H– TIME OF USE PV OUTPUT AVAILABLE TO SITE

Use this section to provide PV generation by TOU period applicable to the rate schedule defined in the calculator. If either G.1 or G.2 is input as "1," it is necessary to input PV output for each TOU period. Typically, a program such as PVWatts is able to provide hourly PV output for each hour of the year. Users should combine the PV hourly output into time of use periods and enter the same in this section.

SECTION I– PPA PRICE PROPOSAL

The calculator allows computation of THREE types of PPV Price offers.

I.1 Select "1", "2," or "3" to designate the type of price proposal that is being proposed by the PPA to the LEA.

1. Under Price Proposal Type-1, input the fixed starting price ($/kWh) charged for sale of power from PPA to the LEA. Provide both a short term and long term escalation rate (which shall not exceed 3 percent per the *2016 Guidelines*). Also, input the duration of the short term (for example, first five years).

2. Under Price Proposal Type-2, input the starting "% discount" over the Base Case electricity price currently being paid to the utility. Provide the long-term discount % as well, along the

duration over which the short term (for example, the first five-year) discount is applicable.

3. Under Price Proposal Type-3, input year by year electricity price proposed by the PPA.

Under each Price Proposal Type, there is an upper limit on the duration of the short term. The long-term is basically determined as duration of PPA contract minus the short-term duration. The short term escalation rates and price discount rates may be different from long-term values provided in these tables.

I.2 This item confirms whether the proposed price structure has an implied rate that does not exceed the *2015 Guidelines*-based limit of 3 percent of annual escalation rate.

Input Instructions – Tab 4: Prop 39 Funds

SECTION J – SCHEDULE OF PROPOSITION 39 FUNDS TO BE USED AT THIS SITE FOR PPA

This section is used by the LEA to input by fiscal year the amount of Proposition 39 funding (in nominal $$) proposed to be allocated to the PPA project at the specific site.

Note: The proposed funding is discounted in the calculations by the standard discount rate specified in the Proposition 39 Guidelines to compute the NPV of Proposition 39 funds. SIR calculations require the use of NPV values.

Tab 5: Rate Calculation Tab

K. Base Case Utility Cost Simulation

No user input is required in the Rate Calculation tab. The calculator performs calculations to determine the First Year Utility costs with and without the project. Effective rate ($/kWh) is determined for the “Before” and “After” utility purchase rates.

Tab 6: NPV Calculation Tab

No user input is required in the NPV Calculation tab. The calculator performs calculations to determine the NPV and SIR values based on all the inputs provided.

Tab 7: Input – Proposition 39 Online

Input Summary

No user input is required in this the Proposition 39 Online tab. Values shown in this tab are used for the online input application.

CHAPTER 7:
Instructions for the Annual Progress Report

Purpose

LEAs are required to submit an annual progress report for each approved energy expenditure plan to the Energy Commission, until all energy measures in a plan are completed. In addition, LEAs are required to submit a final project completion report 12–15 months after the completion of all energy measures in an energy expenditure plan.

In November 2015, the Energy Commission made the reporting module available on Energy Expenditure Plan Online. This includes the annual progress report, which is made available on July 1 for the previous fiscal year. The annual progress report asks LEAs to identify the project completion date if the project is complete. A project is defined as one energy expenditure plan.

LEAs will complete the annual progress report and final project completion report using the Energy Expenditure Plan Online system. On July 1 of each year, the Energy Commission will make the annual progress report for the previous fiscal year available on Energy Expenditure Plan Online. In addition, the final project completion report is made available to the LEA 12 months after the project completion date. The final project completion report is discussed in further detail in the final project completion report instructions.

The following are instructions for completing the annual progress report using Energy Expenditure Plan Online.

The annual progress report must be submitted no later than September 30 each year.

General Information and Tips

LEAs need to log in to Energy Expenditure Plan Online to access the annual progress report and final project completion report. For registration and log in instructions please refer to Chapter 2 of this handbook.

All previous annual progress reports must be approved before the most recent annual progress report is submitted.

To navigate through the system, either click on a field or use the “Tab” key. The types of input fields vary. Drop-down menus are indicated by an arrow on the right side of the data field. Other fields allow LEAs to enter text or numbers based on what information is requested. Automatically calculated fields in the system are calculated based upon entries in other input fields. Values that are in blue are for reference only and do not need to be edited by the LEA.

LEAs are required to complete only the input fields. Input and selection fields turn yellow when selected to help the LEA keep track of what is being input or selected.

Hovering the cursor over certain fields will make a pop-up box appear that provides general instructions for the field. Several fields will also show an "i" next to the field. This provides additional information about that field.

Information entered into Energy Expenditure Plan Online is not automatically saved. Be sure to save information by clicking on the Save Current Process button periodically while entering annual progress report data.

General Overview of Report Navigation

Upon log in the LEA is brought to the LEA Summary page.

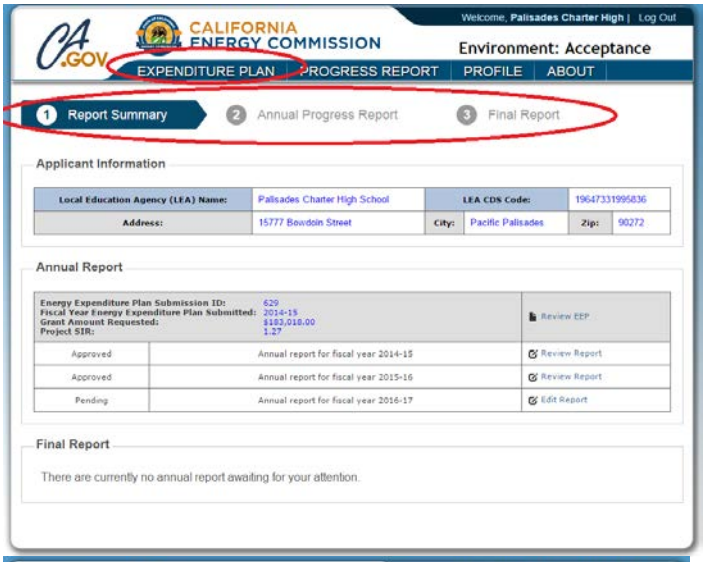
On the top of the LEA Summary page a notification is displayed when annual progress reports or a final project completion report is available for the LEA to complete.

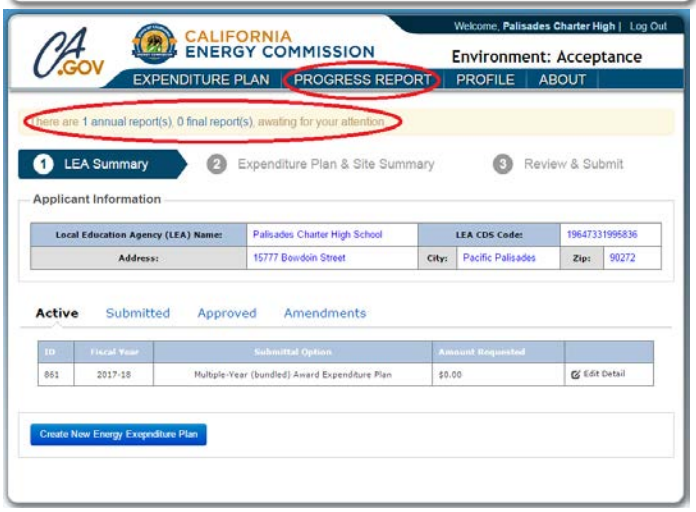
To navigate to the reports the LEA can use the "Progress Report" link on the top ribbon, or select the "annual progress report" or "final project completion report" notification links.

There are three major sections in the reporting page:

1) **Report Summary** –The LEA uses this section to navigate to a report or review their approved EEP.
2) **Annual Progress Report** –The LEA uses this section to enter information associated with their annual progress report.
3) **Final Report** –The LEA uses this section to enter information associated with their final project completion report.

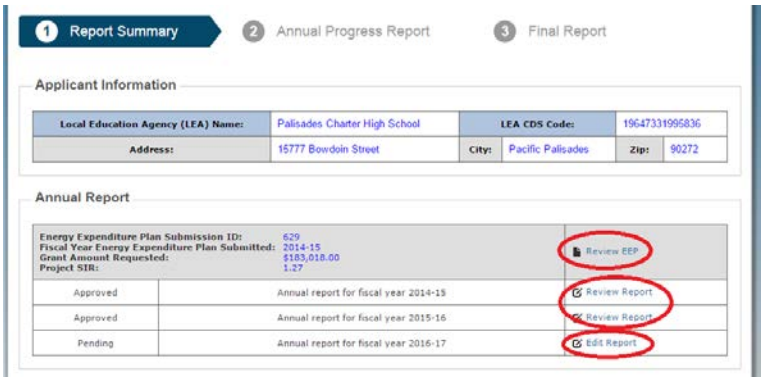
The LEA can navigate back to their EEPs by using the "Expenditure Plan" link in the ribbon.





1) Report Summary:

- ✓ **Review EEP** – This link will bring the LEA to the approved EEP for the associated report.
- ✓ **Edit Report** – This brings the LEA to the annual progress report or final project completion report to enter data.
- ✓ **Review Report** – This allows the LEA to view a submitted or approved report.



The Report Summary section allows the LEA to access various annual progress reports and final project completion reports. This includes reports to be submitted and reports previously submitted or approved. Additionally the LEA can navigate to their approved EEP to view the information associated with an annual progress report or final project completion report.

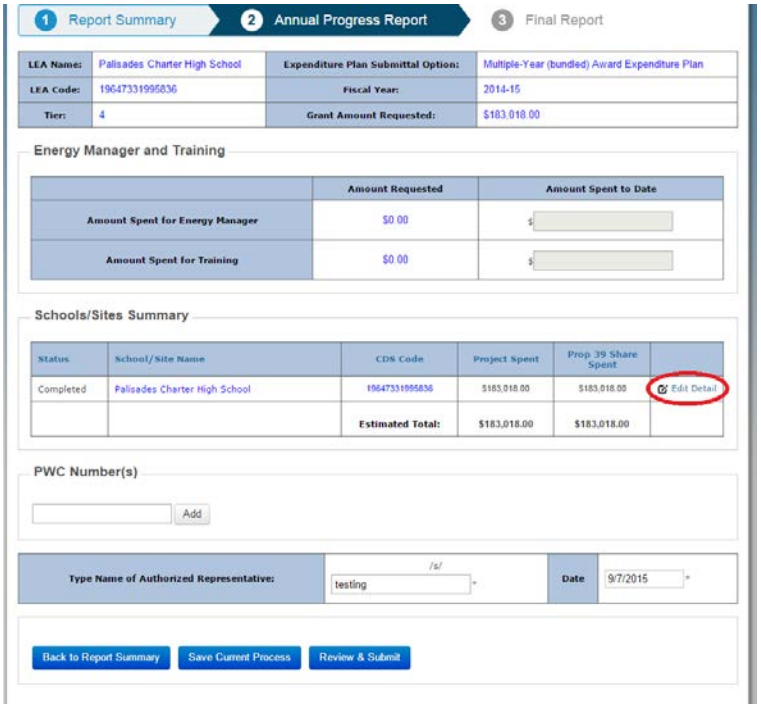
2) Annual Progress Report:

- ✓ **Edit Detail** – This link brings the LEA to a specific site to enter site progress data.

The LEA will enter progress information using the annual progress report pages. If an annual progress report has been submitted or approved the LEA will be able to view information but not make any changes.

Further direction for each field will be provided in the annual progress report section.

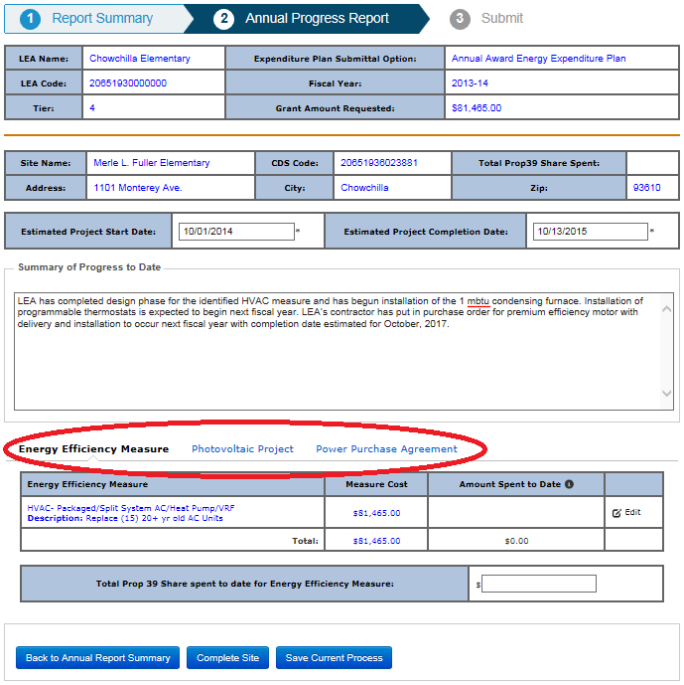
To enter specific site information the LEA must navigate to the site by using the "Edit Detail" link next to the appropriate site.



When the edit detail link is selected the specific site information and several subsections are displayed:

- ✓ **Energy Efficiency Measure** – This displays annual progress report fields for energy efficiency measures.
- ✓ **Photovoltaic Project**– This displays annual progress report fields for photovoltaic measures.
- ✓ **Power Purchase Agreement**– This displays annual progress report fields for power purchase agreement measures.

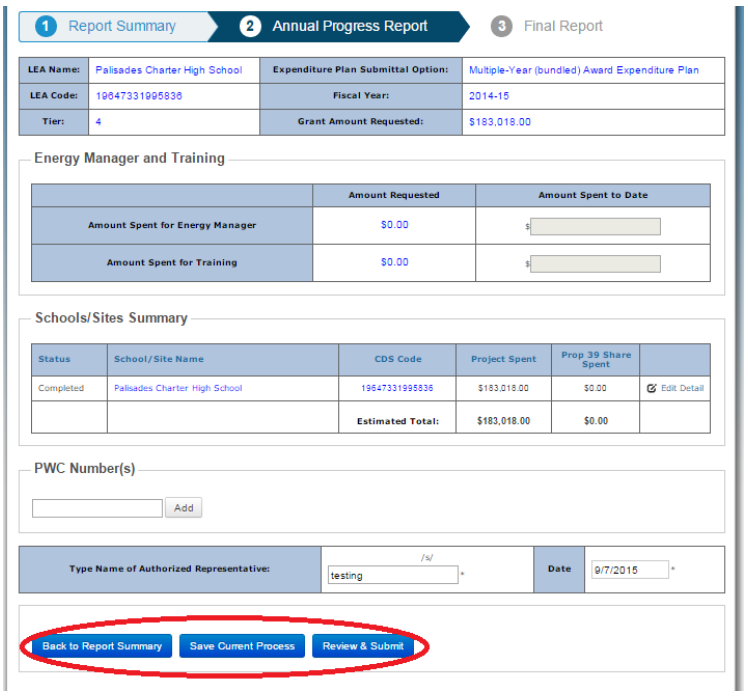
Measure installation information at the site will be provided using these subsections.



Navigation buttons for Annual Progress Report Section:

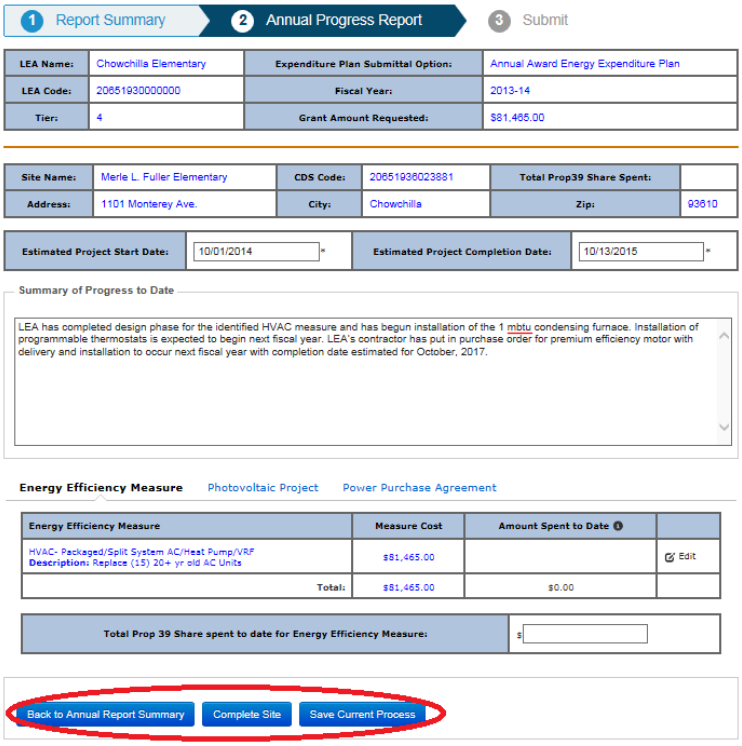
The Annual Progress Report Summary page:

- ✓ Back to Report Summary – This brings the LEA back to the list of reports in the Report Summary Major section.
- ✓ Save Current Process – This saves all the information the LEA has keyed in so far. The information is not automatically saved and this button should be used often.
- ✓ Review & Submit – This allows the LEA to send the annual progress report to the Energy Commission for review.



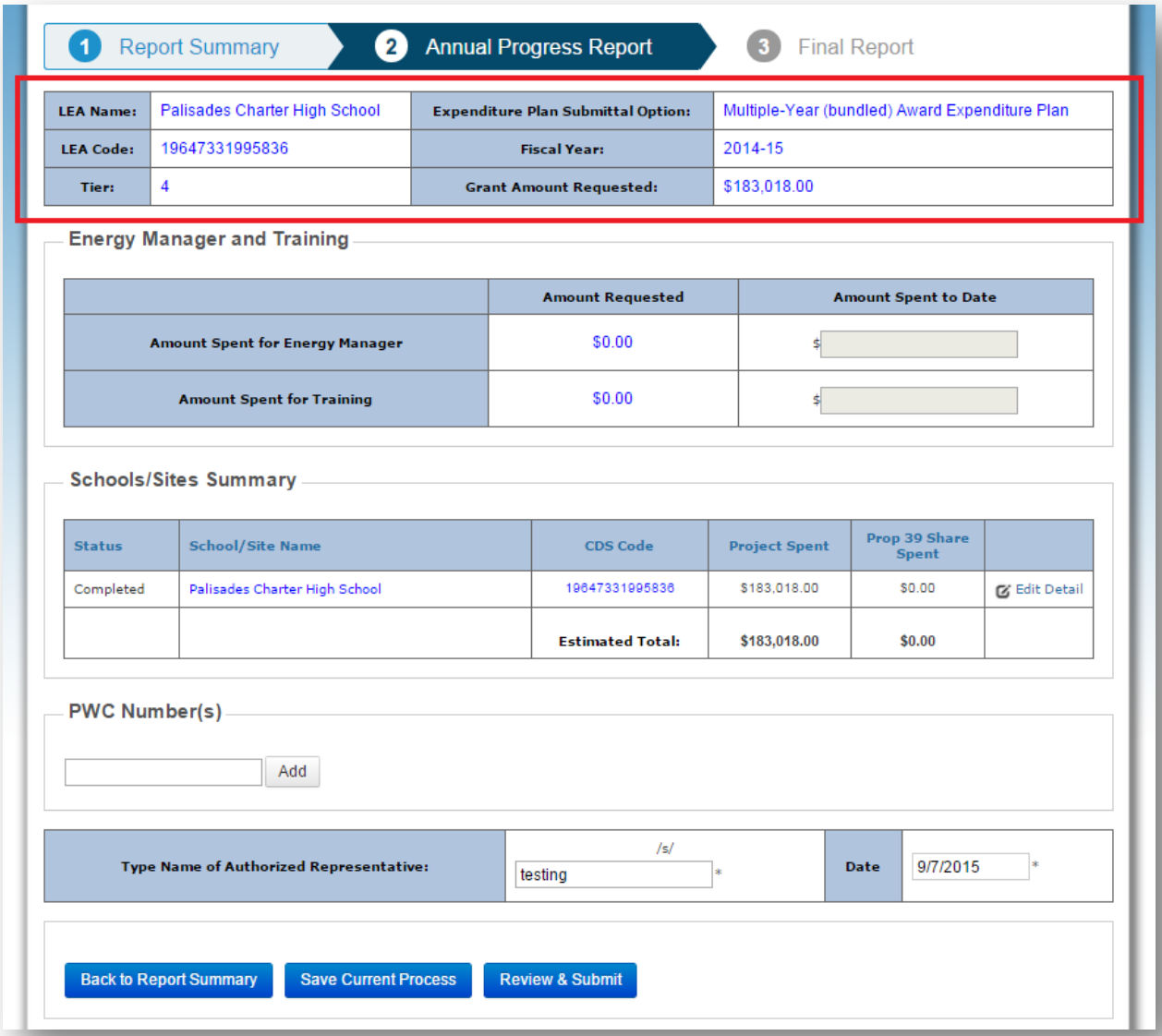
The Site page:

- ✓ Back to Annual Report Summary – This brings the LEA back to the Annual Progress Report summary page.
- ✓ Complete Site – Use this button when all appropriate information for the specific school/site has been entered.
- ✓ Save Current Process – This saves all information the LEA has entered so far. Please note that information is not automatically saved and this button should be used often.



Filling Out an Annual Progress Report

Use the “Edit Report” link in the Report Summary section, to navigate to the Annual Progress Report Summary page.



1 Report Summary | 2 Annual Progress Report | 3 Final Report

LEA Name:	Palisades Charter High School	Expenditure Plan Submittal Option:	Multiple-Year (bundled) Award Expenditure Plan
LEA Code:	19647331995836	Fiscal Year:	2014-15
Tier:	4	Grant Amount Requested:	$183,018.00

Energy Manager and Training

	Amount Requested	Amount Spent to Date
Amount Spent for Energy Manager	$0.00	$
Amount Spent for Training	$0.00	$

Schools/Sites Summary

Status	School/Site Name	CDS Code	Project Spent	Prop 39 Share Spent	
Completed	Palisades Charter High School	19647331995836	$183,018.00	$0.00	Edit Detail
		Estimated Total:	$183,018.00	$0.00	

PWC Number(s)

Add

Type Name of Authorized Representative:	/s/ testing *	Date	9/7/2015 *

Back to Report Summary | Save Current Process | Review & Submit

ANNUAL PROGRESS REPORT SUMMARY PAGE

The **LEA Name, LEA Code, Tier, Expenditure Plan Submittal Option, Fiscal Year, and Grant Amount Requested** will be automatically filled in based on the approved EEP information.

Energy Manager and Training:

LEAs that requested grant funds for Energy Manager or Training as part of an energy expenditure plan (not via a planning funds request through CDE) in the approved EEP must provide expenditure progress of these funds in the Amount Spent to Date column. The Amount Requested column will display the amount requested in the approved EEP for reference. If there were no funds requested the Amount Spent to Date column will be greyed out and the LEA will not be able to enter any information. The LEA can move to the next section without entering any data in that field.

Energy Manager and Training

	Amount Requested	Amount Spent to Date
Amount Spent for Energy Manager	$0.00	$
Amount Spent for Training	$0.00	$

k. ***Amount Spent for Energy Manager (Amount Spent to Date):*** If applicable, enter the cumulative amount of Proposition 39 grant funds spent to date on energy manager positions. If the LEA did not request grant funds for energy manager positions, this field will be greyed out and the LEA will not be able to enter any information. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and revise this amount if necessary.

l. ***Amount Spent for Training (Amount Spent to Date):*** If applicable, enter the cumulative amount of Proposition 39 grant funds spent to date on training activities. If the LEA did not request grant funds for training activities, this field will be greyed out and the LEA will not be able to enter any information. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and revise this amount if necessary.

Schools/Sites Summary:

The Schools/Sites Summary will list all sites that were included in the approved EEP. The LEA can navigate to the each individual site by using the "Edit Detail" link in the last column. When the LEA selects a site to report on the LEA will be brought to the Site Information page. Once in the Site Information page, the LEA can enter progress information for that site. The Site Information page will be discussed in more detail in the following sections. The LEA can only provide information for schools that are listed in the approved EEP.

Schools/Sites Summary

Status	School/Site Name	CDS Code	Project Spent	Prop 39 Share Spent	
Completed	Palisades Charter High School	19647331995836	$183,018.00	$0.00	Edit Detail
		Estimated Total:	**$183,018.00**	**$0.00**	

DIR Project ID(s):

If an energy measure is classified as a public works project, the LEA should have registered the project with the California Department of Industrial Relations (DIR). Public works projects are assigned a DIR Project ID which DIR uses to identify job creation associated with Proposition 39 K-12 projects.

DIR Project ID(s)

Add

123456465

The LEA can enter the DIR Project ID associated with this EEP by entering the number in the field in using the Add button. The LEA can repeat this process if multiple DIR Project IDs are associated with the EEP. If the LEA needs to delete an entered DIR Project ID simply select the "x" in the blue box containing the DIR Project ID.

The LEA can use the public search utility on the DIR website (https://www.dir.ca.gov/pwc100ext/ExternalLookup.aspx) to search for a specific public works project and associated DIR Project ID.

Completion/Certification:

In the final section the LEA identifies whether or not the EEP is complete and certifies the information entered into the Annual Progress Report.

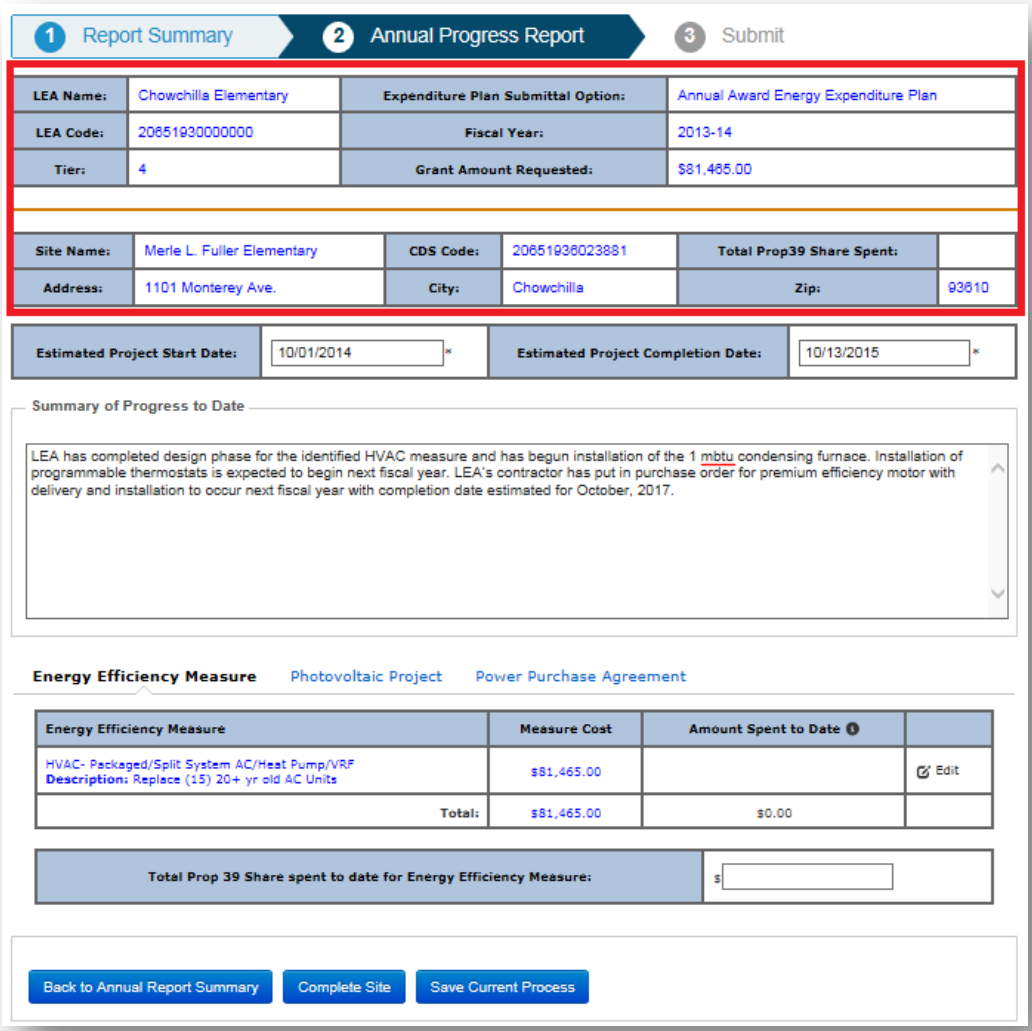
Type Name of Authorized Representative:	/s/ testing *	Date	9/7/2015 *

a. ***Type Name of Authorized Representative /s/:*** Type in the name of the authorized representative that is identified for this EEP. By typing in the authorized representative the LEA certifies that the information entered in this annual progress report is complete and accurate.

b. ***Date:*** Enter the date of that the LEA is submitting the annual progress report using the mm/dd/yyyy format.

SITE INFORMATION PAGE

When the "Edit Detail" link is selected in the Schools/Sites Summary section of the Annual Report Summary page the LEA will be brought to the Site Information page to enter in specific site progress.



1 Report Summary | 2 Annual Progress Report | 3 Submit

LEA Name:	Chowchilla Elementary	Expenditure Plan Submittal Option:	Annual Award Energy Expenditure Plan
LEA Code:	20651930000000	Fiscal Year:	2013-14
Tier:	4	Grant Amount Requested:	$81,465.00

Site Name:	Merle L. Fuller Elementary	CDS Code:	20651936023881	Total Prop39 Share Spent:	
Address:	1101 Monterey Ave.	City:	Chowchilla	Zip:	93610

Estimated Project Start Date:	10/01/2014 *	Estimated Project Completion Date:	10/13/2015 *

Summary of Progress to Date

LEA has completed design phase for the identified HVAC measure and has begun installation of the 1 mbtu condensing furnace. Installation of programmable thermostats is expected to begin next fiscal year. LEA's contractor has put in purchase order for premium efficiency motor with delivery and installation to occur next fiscal year with completion date estimated for October, 2017.

Energy Efficiency Measure | Photovoltaic Project | Power Purchase Agreement

Energy Efficiency Measure	Measure Cost	Amount Spent to Date	
HVAC- Packaged/Split System AC/Heat Pump/VRF **Description:** Replace (15) 20+ yr old AC Units	$81,465.00		Edit
Total:	$81,465.00	$0.00	

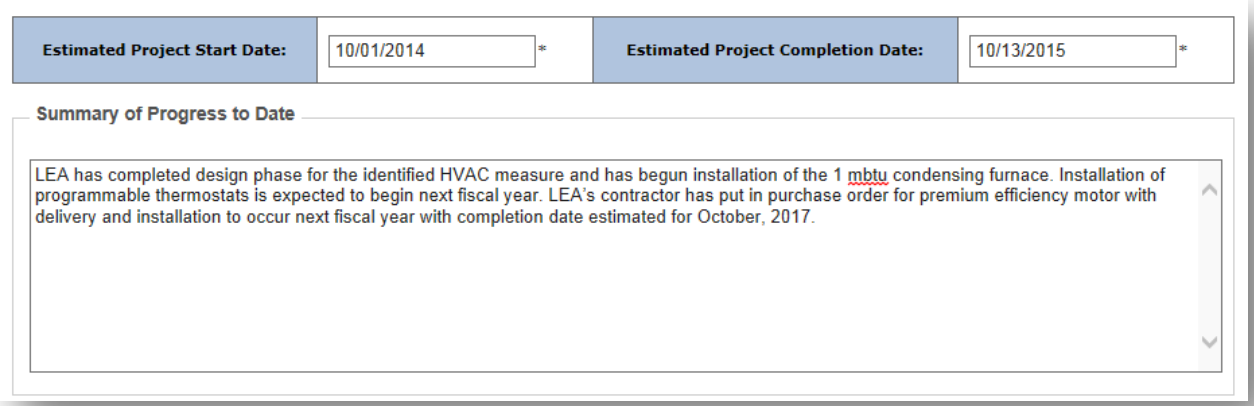
Total Prop 39 Share spent to date for Energy Efficiency Measure:	$

Back to Annual Report Summary | Complete Site | Save Current Process

The **Site Name, CDS Code, Address, City,** and **Zip** are automatically populated based on the approved EEP information. The **Total Prop 39 Share Spent** field is automatically calculated based on information entered into the annual progress report. The LEA can navigate back using the Back to Annual Report Summary button, or if all information for the site has been filled out, use the Complete Site button to finish the site and navigate back to the Annual Report Summary page.

Summary of Progress to Date:

The LEA is required to provide updated information regarding the estimated project start and completion dates, and information regarding any progress on project implementation.



Estimated Project Start Date:	10/01/2014 *	Estimated Project Completion Date:	10/13/2015 *

Summary of Progress to Date

LEA has completed design phase for the identified HVAC measure and has begun installation of the 1 mbtu condensing furnace. Installation of programmable thermostats is expected to begin next fiscal year. LEA's contractor has put in purchase order for premium efficiency motor with delivery and installation to occur next fiscal year with completion date estimated for October, 2017.

a. ***Estimated Project Start Date:*** Enter the start date for the measures associated with this site using the mm/dd/yyyy format. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and revise this date if necessary. Eligible energy projects must have a start date after December 19, 2013.

b. ***Estimated Project Completion Date:*** Enter the expected completion date for the measures associated with this site using the mm/dd/yyyy format. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and revise this date if necessary. The end date must be before June 30, 2020.

c. ***Summary of Progress to Date:*** Enter a narrative description of progress made on measures being implemented at this site. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and the LEA will need to review and add on to the description if necessary.

    a. *Sample HVAC progress narrative – LEA has completed design phase for the identified HVAC measure and has begun installation of the 1 mbtu condensing furnace. Installation of programmable thermostats is expected to begin next fiscal year. LEA's contractor has put in purchase order for premium efficiency motor with delivery and installation to occur next fiscal year with completion date estimated for October, 2017.*

    b. *Sample lighting progress narrative – The LEA has begun installation of interior and exterior lighting measures. The conversion of 30 Exit signs to LEDs*

has been completed. 40% of interior lighting retrofits to 28 watt T8 lamps has been completed with work at Building A, Building B, and the Music facility completed. Exterior lighting upgrades to LEDs for 100 exterior lamps have been installed representing 70% of the approved exterior lighting measure.

c. *Sample photovoltaic measure narrative – Design of the 20 kW PV system has been completed. The permitting process is currently underway with construction planned to begin July 2016. The installation is expected to complete before the 2016-17 school year begins.*

Energy Efficiency Measure:

The Energy Efficiency Measure section allows the LEA to report progress for each energy efficiency measure that is included in the approved EEP. Additionally, the LEA can provide updates to the amount of Proposition 39 K-12 funds spent on energy efficiency measures. **Note: If no Energy Efficiency Measures were included in the approved EEP this table will be blank.**

Energy Efficiency Measure Photovoltaic Project Power Purchase Agreement

Energy Efficiency Measure	Measure Cost	Amount Spent to Date	
HVAC- HVAC and Air Handler Repairs **Description:** Repair of HVAC and programmable thermostat	$6,160.00		Edit
Lighting Controls **Description:** (ECM 2) Repair of 30 broken mechanical time clocks with astronomical time clocks	$23,025.00		Edit
Lighting Controls **Description:** (ECM 4) Occupancy Sensors	$66,058.00		Edit
Lighting- Retrofit Interior Lamps to LED **Description:** (ECM 6) Exterior LED lighting retrofit	$46,791.00		Edit
Building Envelope- Shading Devices/Window Film **Description:** (ECM 10) Reflective Solar films along windows	$40,984.00		Update Cancel
Total:	$183,018.00	$0.00	

Total Prop 39 Share requested for Energy Efficiency Measure:	$183,018.00
Total Prop 39 Share spent to date for Energy Efficiency Measure:	$

The **Energy Efficiency Measure**, **Measure Cost**, and **Total Prop 39 Share requested for Energy Efficiency Measure** are automatically populated based on information from the approved EEP and should be used for reference.

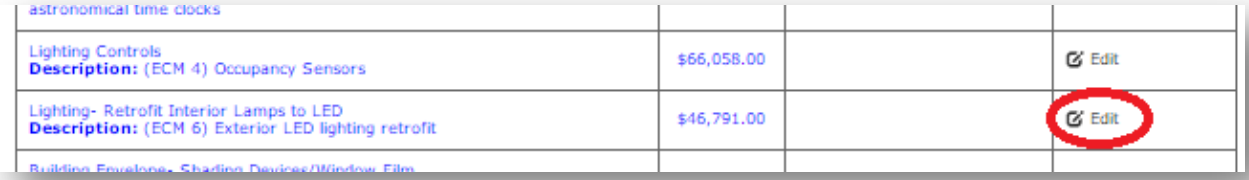
a. ***Amount Spent to Date:*** For each energy efficiency measure enter the cumulative amount spent to date on the measure. This includes Proposition 39 grant funds, repayable funds, and non-repayable funds spent. If a previous annual progress

report was approved, then this information will be automatically populated into the current report and the LEA will need to review and increase the amount spent if necessary.

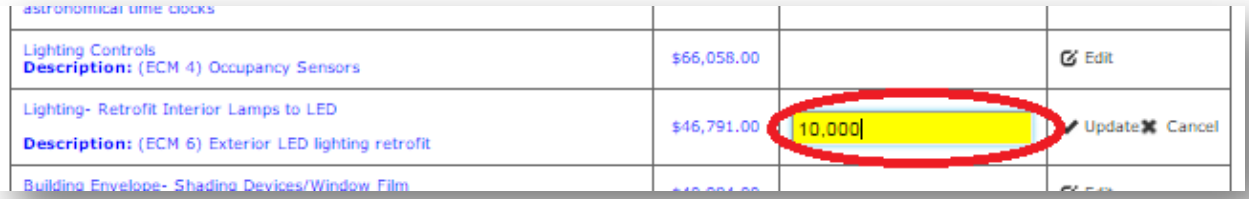
b. ***Total Prop 39 Share spent to date for Energy Efficiency Measure:*** Enter the total amount of Proposition 39 grant funds spent on energy efficiency measures for this site. If a previous annual progress report was approved, then this information will be automatically populated and the LEA will need to review and increase this amount if necessary.

To enter the Amount Spent to Date, first determine which measure to update (1). Next select "Edit" next to the appropriate energy efficiency measure (2). When the field becomes available click into the field and enter the amount spent to date (3). Finally select "Update" to complete the process or "Cancel" to cancel the process (4). The updated information will then be shown in the Energy Efficiency Measure table (5). **Important Note: Please "update" the amount before using the Save Current Process button.**

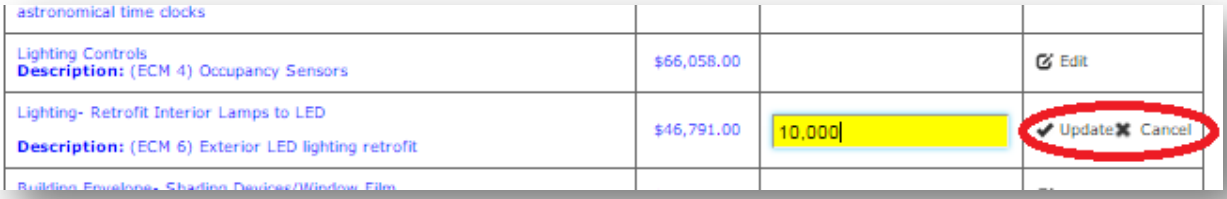
1.



2.



3.



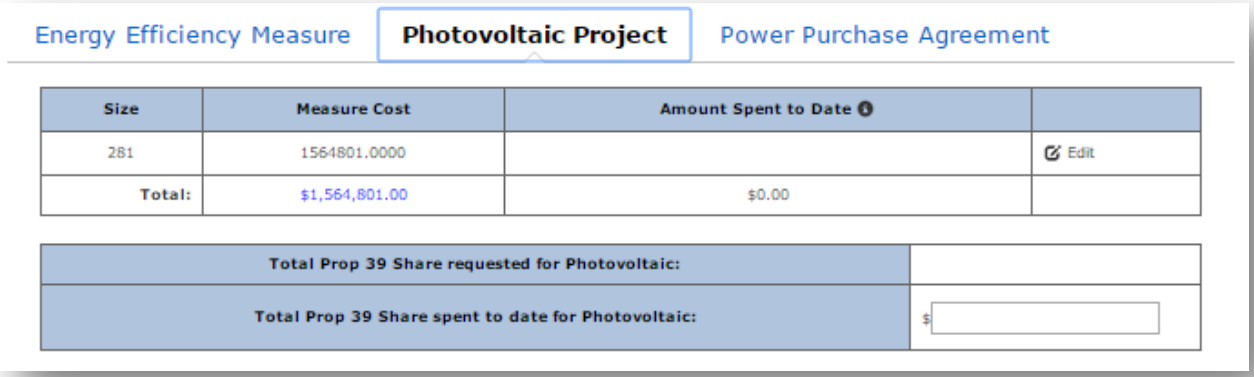
4.

5.

Once the LEA has entered all the information for the site, click on the Complete Site button. A list of errors will be generated if any required information is not included. These errors will need to be addressed before the site can be completed. If the LEA needs to enter information for additional sites, use the same procedure as listed in these sections. All sites must be completed to submit the annual report.

Photovoltaic Project:

The Photovoltaic Project section allows the LEA to report progress for each photovoltaic measure that is included in the approved EEP. Additionally, the LEA can provide updates to the amount of Proposition 39 K-12 funds spent on energy efficiency measures. **Note: If no Photovoltaic Measures were included in the approve EEP this table will be blank.**



The **Size**, **Measure Cost**, and **Total Prop 39 Share requested for Photovoltaic** are automatically populated based on information from the approved EEP and should be used for reference.

a. ***Amount Spent to Date:*** For each photovoltaic measure enter the cumulative amount spent to date on the photovoltaic measure. This includes Proposition 39 grant funds, repayable funds, and non-repayable funds spent. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and increase the amount spent if necessary.

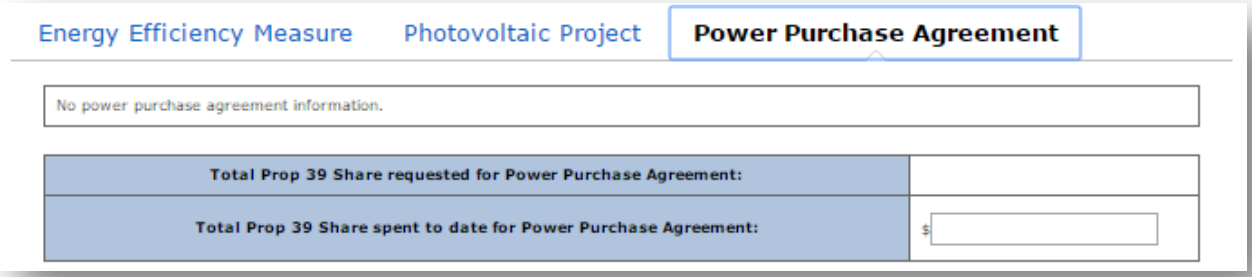
b. ***Total Prop 39 Share spent to date for Photovoltaic:*** Enter the total amount of Proposition 39 grant funds spent on photovoltaic measures for this site. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and increase this amount if necessary.

To enter the Amount Spent to Date first select "Edit" next to the appropriate photovoltaic measure. When the field becomes available click into the field and enter the amount spent to date. Finally select "Update" to complete the process. This process is described in more detail in the Energy Efficiency Measure section. **Important Note: Please "update" the amount before using the** Save Current Process **button.**

Once the LEA has entered all the information for the site, click on the Complete Site button. A list of errors will be generated if any required information is not included. These errors will need to be addressed before the site can be completed. If the LEA needs to enter information for additional sites, use the same procedure as listed in these sections.

Power Purchase Agreement:

The Power Purchase Agreement section allows the LEA to report progress for each power purchase agreement measure that is included in the approved EEP. Additionally, the LEA can provide updates to the amount of Proposition 39 K-12 funds spent on power purchase agreements. **Note: If no Power Purchase Agreement Measures were included in the approved EEP this table will be blank.**



The **Size**, **Prop39 Contribution**, and **Total Prop 39 Share requested for Power Purchase Agreement** are automatically populated based on information from the approved EEP and should be used for reference.

a. ***Prop39 Share Spent to Date:*** For each power purchase agreement measure enter the cumulative amount spent to date on the power purchase agreement measure. This includes Proposition 39 grant funds, repayable funds, and non-repayable funds spent. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and increase the amount spent if necessary.

b. ***Total Prop 39 Share spent to date for Power Purchase Agreement:*** Enter the total amount of Proposition 39 grant funds spent on power purchase agreement measures for this site. If a previous annual progress report was approved, then this information will be automatically populated into the current report and the LEA will need to review and increase this amount if necessary.

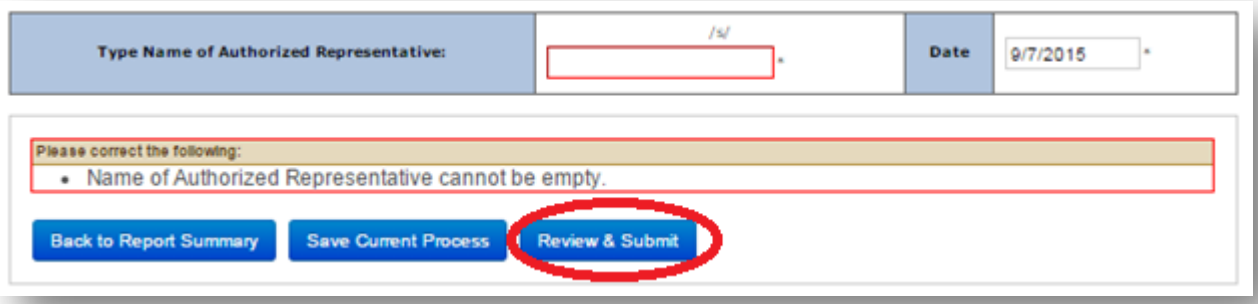
To enter the Amount Spent to Date first select "Edit" next to the appropriate power purchase agreement measure. When the field becomes available click into the field and enter the amount spent to date. Finally select "Update" to complete the process. This process is described in more detail in the Energy Efficiency Measure section. **Important Note: Please "update" the amount before using the** Save Current Process **button.**

Once the LEA has entered all the information for the site, click on the Complete Site button. A list of errors will be generated if any required information is not included. These errors will

need to be addressed before the site can be completed. If the LEA needs to enter information for additional sites, use the same procedure as listed in these sections.

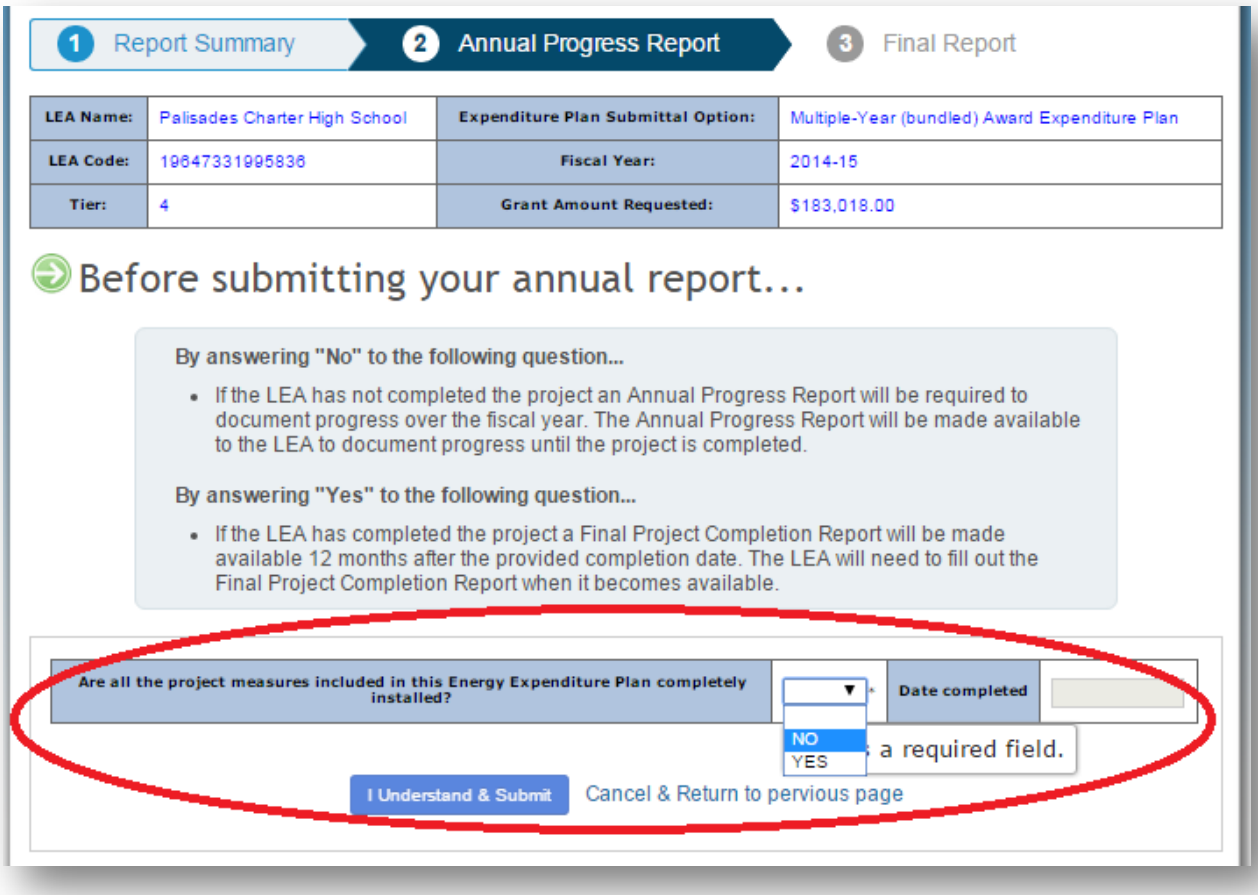
SUBMITTING

The submission process is a two-step process. First, after the LEA finishes entering all appropriate data the LEA can select the Review & Submit button.



When the Review & Submit button is selected the annual progress report is checked to ensure that all required information has been provided. If any required information is missing a notice is provided identifying the missing information.

Once all of the required information is provided the LEA must answer one final question regarding the project status.



The LEA will use the drop down menu to indicate whether the EEP is complete. The EEP is considered complete when all measures included in the EEP are completed.

The LEA should select “No” if the EEP is not completed. This will result in the LEA receiving an annual progress report for the next fiscal year.

The LEA should select “Yes” if the EEP is completed. If “Yes” is selected the LEA will need to provide the completion date for the Energy Expenditure Plan. This will result in the LEA receiving a final project completion report 12 months after the identified completion date.

Once the status of the Energy Expenditure Plan is provided, the LEA can select the I Understand & Submit button to submit the annual progress report to the Energy Commission for review. The LEA can select “Cancel & Return to previous page” link to continue making changes to the annual progress report.

CHAPTER 8:
Instructions for Final Project Completion Report

Purpose

Local Educational Agencies (LEAs) are required to submit a final project completion report 12 – 15 months after the energy expenditure plan is completely installed. An energy expenditure plan is considered complete when the LEA has completed all measures in the approved energy expenditure plan. A final project completion report is required for each approved energy expenditure plan. LEAs will fill out the final project completion report using the Energy Expenditure Plan Online system.

The final project completion report will be made available on Energy Expenditure Plan Online a minimum of 12 months after the completion date identified in the annual progress report. The following are instructions for completing the final project completion report using Energy Expenditure Plan Online.

The final project completion report must be submitted within three months after it becomes available on Energy Expenditure Plan Online.

General Information and Tips

LEAs need to log in to Energy Expenditure Plan Online to access the annual progress report and final project completion report. For registration and log in instructions refer to Chapter 2 of this handbook.

To navigate through the system, either click on a field or use the "Tab" key. The types of input fields vary. Drop-down menus are indicated by an arrow on the right side of the data field. Other fields allow LEAs to enter text or numbers based on the information requested. Automatically calculated fields in the system are calculated based upon entries in other input fields. Values that are in blue are for reference only and do not need to be edited by the LEA. LEAs are required to complete only the input fields. Input and selection fields turn yellow when selected to help the LEA keep track of what is being input or selected.

Hovering the cursor over certain fields will make a pop-up box appear that provides general instructions for the field. Several fields will also show an "i" next to the field. This provides additional information about that field.

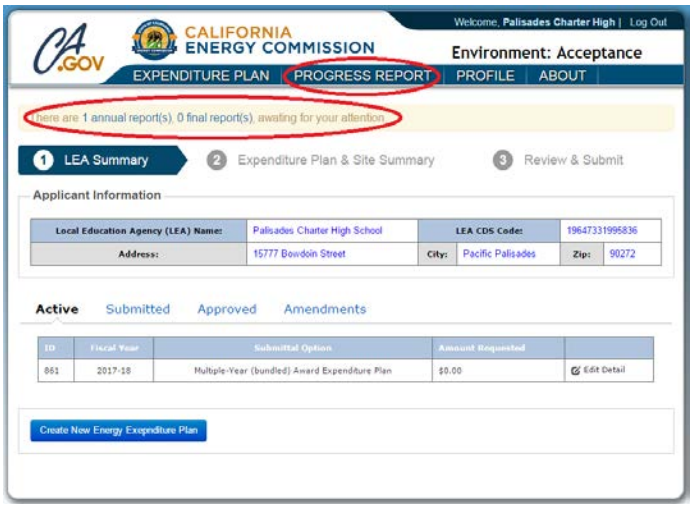
Information entered into Energy Expenditure Plan Online is not automatically saved. Be sure to save information by clicking on the SAVE CURRENT PROCESS button periodically while entering final project completion report data.

General Overview and System Navigation

Upon log in the LEA is brought to the LEA Summary page.

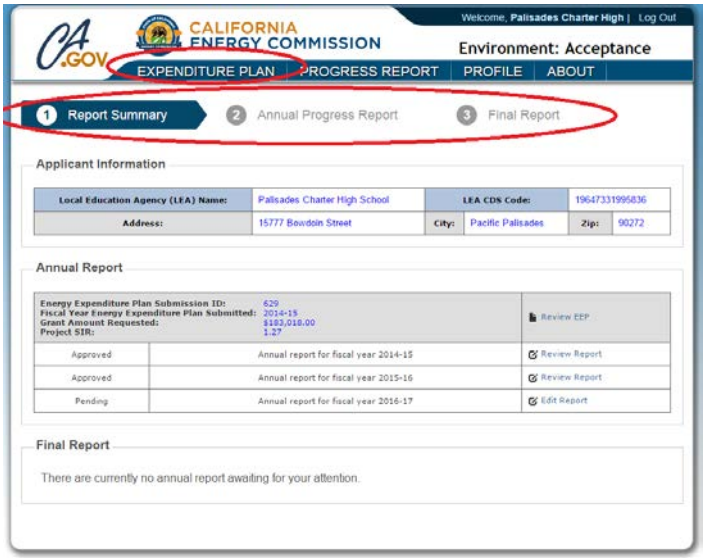
On the top of the LEA Summary page a notification is displayed when annual progress reports or a final project completion report is available for the LEA to complete.

To navigate to the reports the LEA can use the "Progress Report" link on the top ribbon, or select the "annual progress report" or "final project completion report" notification links.



There are three major sections in the reporting page:

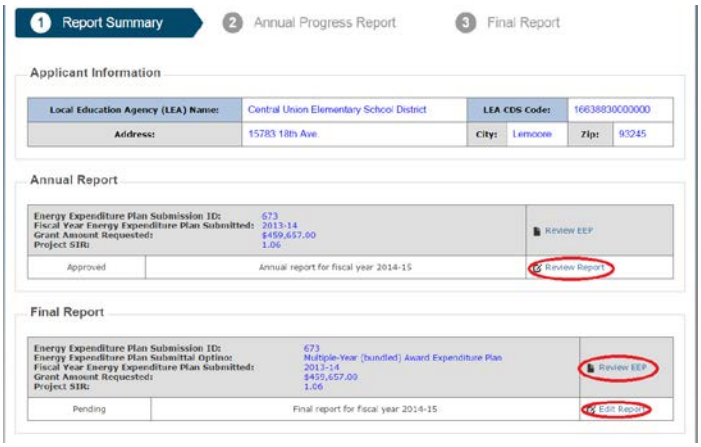
- ✓ **Report Summary** –The LEA uses this section to navigate to a report or review their approved EEP.
- ✓ **Annual Progress Report** –The LEA uses this section to enter information associated with their annual progress report.
- ✓ **Final Report** –The LEA uses this section to enter information associated with their final project completion report.



The LEA can navigate back to their EEPs by using the "Expenditure Plan" link in the ribbon.

1) Report Summary:

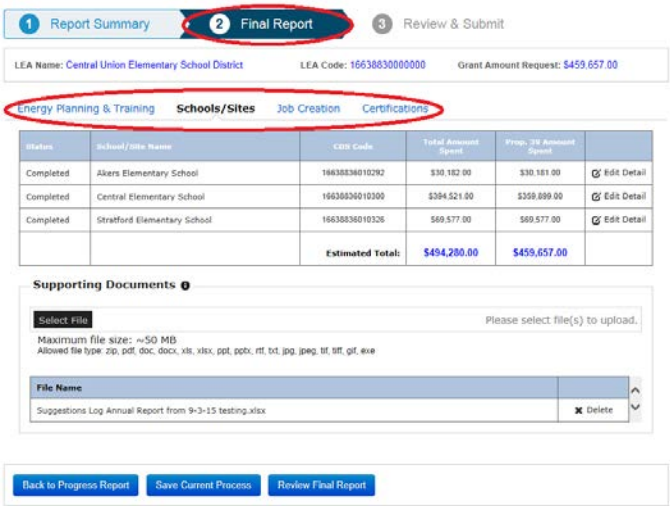
- ✓ **Review EEP** – This link will bring the LEA to the approved EEP for the associated report.
- ✓ **Edit Report** – This brings the LEA to the annual progress report or final project completion report to enter data.
- ✓ **Review Report** – This allows the LEA to view a submitted or approved report.



The Report Summary section allows the LEA to access various annual progress reports and final project completion reports. This includes reports to be submitted and reports previously submitted or approved. Additionally the LEA can navigate to their approved EEP to view the information associated with an annual progress report or final project completion report.

2) Final Report Summary section has four subsection tabs:

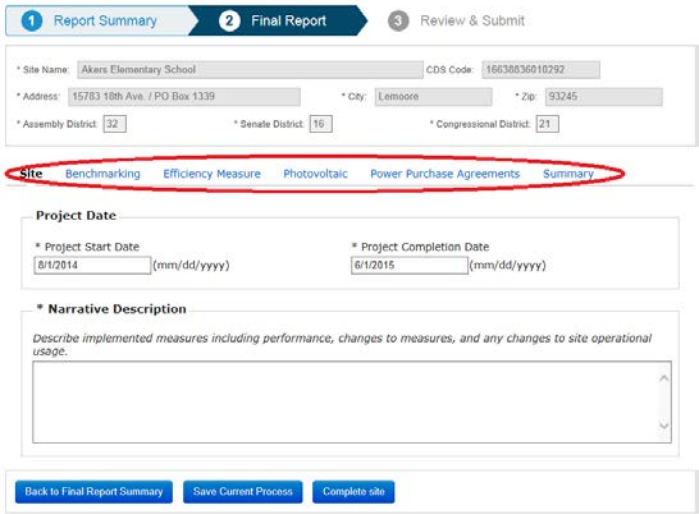
- ✓ *Energy Planning & Training* –The LEA provides information regarding planning funds and additional energy manager and training funds expenditures.
- ✓ *Schools/Sites* – The LEA navigates to sites included in the approved EEP and can upload backup documentation, including pictures of completed measures.
- ✓ *Job Creation* – The LEA provides information regarding funds spent on apprenticeships.
- ✓ *Certifications* – The LEA certifies information using an electronic signature.



In these tabs the LEA provides actual expenditures. The LEA is able to navigate to upload backup documentation and navigate to specific sites on the Schools/Sites tab.

Schools/Sites subsection tab summarizes all the sites included in the approved EEP. Selecting a site from the list of approved sites will bring up the following additional subsection tabs:

- ✓ *Site* –The LEA provides general measure implementation information.
- ✓ *Benchmarking* – The LEA provides updated energy usage information based on the most recent 12 month period.
- ✓ *Efficiency Measure* – The LEA updates information regarding energy efficiency measures including actual savings and costs.
- ✓ *Photovoltaic* – The LEA updates information regarding photovoltaic measures including actual savings and costs.
- ✓ *Power Purchase Agreements* – The LEA updates information regarding power purchase agreements including actual savings and costs.
- ✓ *Summary* – The LEA is provided a summary of site information entered in the final project completion report.



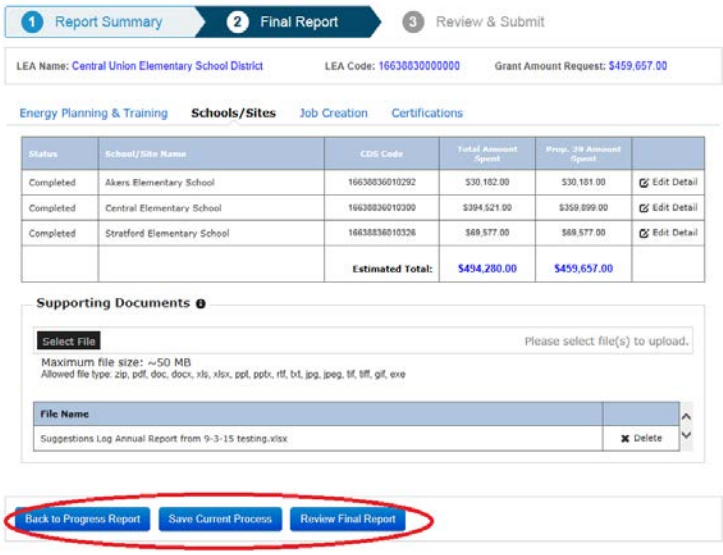
The LEA enters specific site information using these tabs. Benchmarking information must be based on the most recent 12 months energy data. Savings information is provided using one of the four methods described in Chapter 2, Step 8, of the *2016 Guidelines*.

Navigation Buttons in the Energy Plan & Site Summary Section:

The Energy Planning & Training, Schools/Sites, Job Creation, and Certification Subsections:

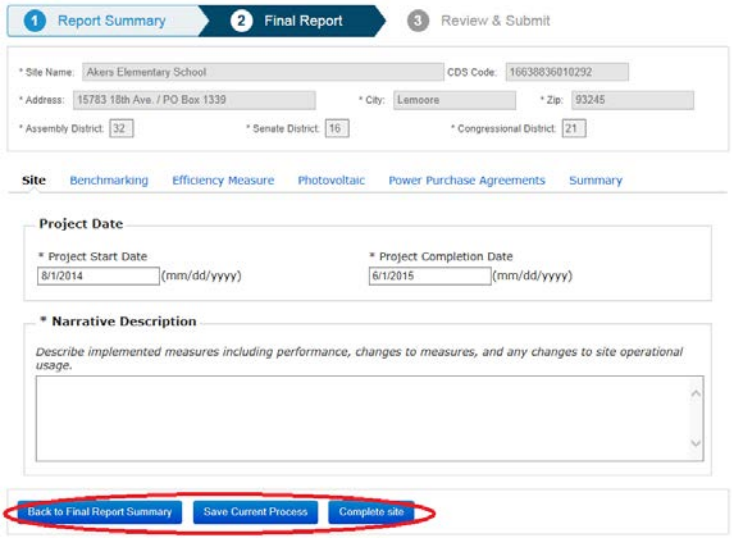
- ✓ Back to Progress Report – This brings the LEA back to the list of reports in the Report Summary section.

- ✓ Save Current Process – This saves all the information the LEA has keyed in so far. The information is not automatically saved and this button should be used often.
- ✓ **Review Final Report** – This allows the LEA to send the final project completion report to the Energy Commission for review.



The Schools/Sites Subsection:

- ✓ Back to Final Report Summary – This brings the LEA back to the list of sites in the schools/sites subsection tab in the Final Report Summary section.
- ✓ Save Current Process – This saves all information the LEA has entered so far. Please note that information is not automatically saved and this button should be used often.
- ✓ Complete Site – Use this button when all appropriate information for the specific school/site has been entered.

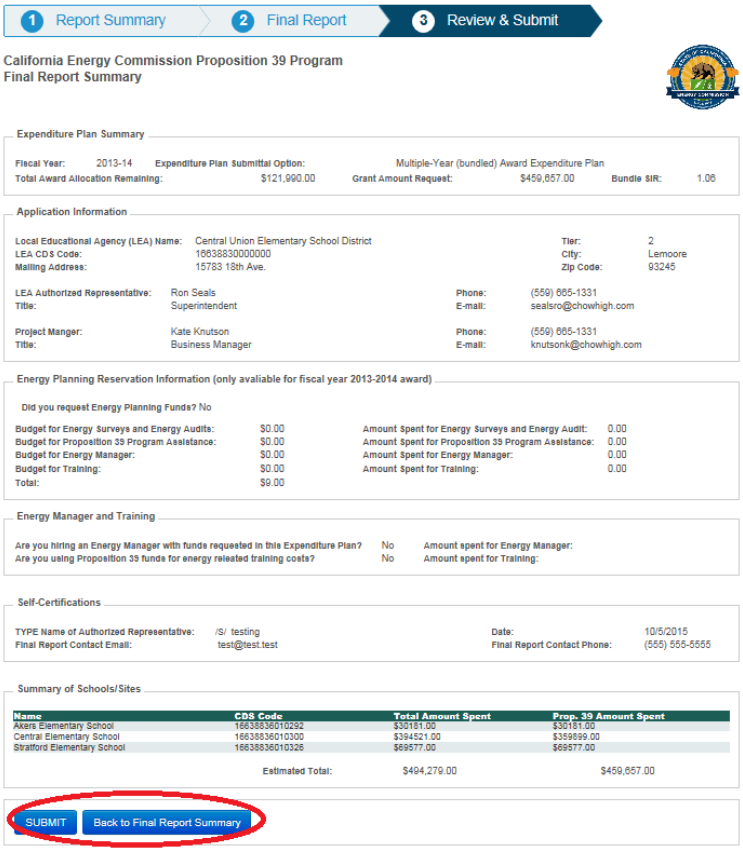


3) Review & Submit section

The final section is accessible only after all the information has been entered correctly into the final project completion report. To access this page, the LEA must select the Review Final Report button in any of the subsections. This page allows the LEA to see a general summary of the final project completion report. From this page, the LEA can submit a final project completion report to the Energy Commission or return to the final project completion report to enter or edit information.

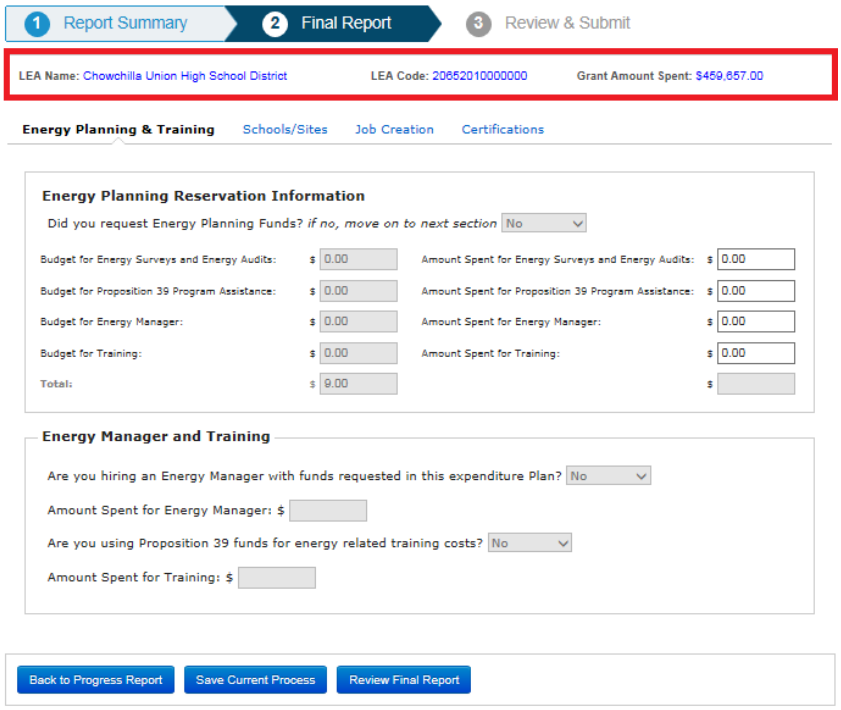
To return to the editable version of the final project completion report, the LEA must use the Back to Final Report Summary button. This will return the LEA to the Final Report section.

Finally, to submit the final project completion report to the Energy Commission, the LEA must use the SUBMIT button. An acknowledgement of receipt will appear on the screen and final project completion report status will show as submitted on the Report Summary page.



Filling Out a Final Project Completion Report

Use the “Edit Report” link in the Report Summary section to navigate to the Final Report Summary section.



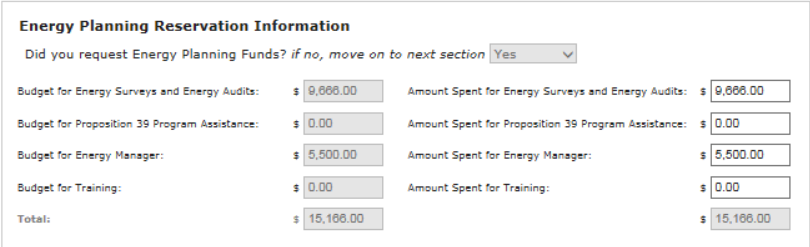
The **LEA Name**, **LEA Code**, and **Grant Amount Spent** are automatically populated based on the approved energy expenditure plan information.

First Subsection: Energy Planning & Training Subsection

In the Energy Planning & Training Subsection the LEA must provide actual cost information for planning funds requested from the California Department of Education (CDE). Additionally, the LEA must provide actual costs for energy manager and training activities if funds were requested as part of the approved energy expenditure plan.

Energy Planning Reservation Information:

Note: This section applies to LEAs that have requested and received planning funds directly from the CDE.



Energy Planning Reservation Information

Did you request Energy Planning Funds? *if no, move on to next section* Yes

Budget for Energy Surveys and Energy Audits:	$ 9,666.00	Amount Spent for Energy Surveys and Energy Audits:	$ 9,666.00
Budget for Proposition 39 Program Assistance:	$ 0.00	Amount Spent for Proposition 39 Program Assistance:	$ 0.00
Budget for Energy Manager:	$ 5,500.00	Amount Spent for Energy Manager:	$ 5,500.00
Budget for Training:	$ 0.00	Amount Spent for Training:	$ 0.00
Total:	$ 15,166.00		$ 15,166.00

a. ***Did you request Energy Planning Funds? If no, move on to next section*:** This is populated based on the LEA's approved energy expenditure plan. The LEA does not need to edit this field.

b. ***Budget for Energy Surveys and Energy Audits:*** This is populated based on the LEA's approved energy expenditure plan and can be used for reference by the LEA.

c. ***Budget for Proposition 39 Program Assistance:*** This is populated based on the LEA's approved energy expenditure plan and can be used for reference by the LEA.

d. ***Budget for Energy Manager:*** This is populated based on the LEA's approved energy expenditure plan and can be used for reference by the LEA.

e. ***Budget for Training:*** This is populated based on the LEA's approved energy expenditure plan and can be used for reference by the LEA.

f. ***Amount Spent for Energy Surveys and Energy Audits:*** If applicable enter the total amount of Proposition 39 planning reservation spent on energy surveys and energy audits. For reference this field is pre-populated with the "amount spent for energy surveys and energy audits" that was provided in the approved energy expenditure plan. The LEA will need to update this amount spent if necessary.

g. ***Amount Spent for Proposition 39 Program Assistance:*** If applicable, enter the total amount of Proposition 39 planning reservation spent on program assistance activities. For reference this field is pre-populated with the "amount spent for program assistance" that was provided in the approved energy expenditure plan. The LEA will need to update this amount spent if necessary.

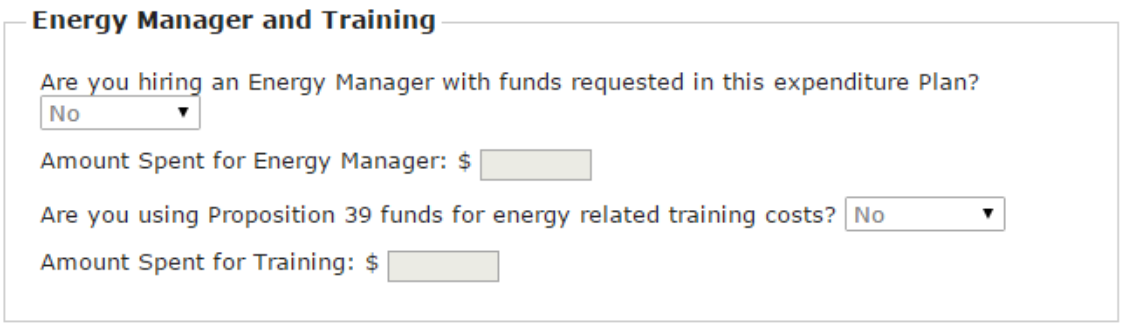
h. ***Amount Spent for Energy Manager:*** If applicable, enter the total amount of Proposition 39 planning reservation spent on energy manager(s). For reference this field is pre-populated with the "amount spent for energy manager" that was provided in the approved energy expenditure plan. The LEA will need to update this amount spent if necessary.

i. ***Amount Spent for Training:*** If applicable, enter the total amount of Proposition 39 planning reservation spent on training. For reference this field is pre-populated with the "amount spent for training" that was provided in the approved energy expenditure plan. The LEA will need to update this amount spent if necessary.

j. ***Totals:*** The total amount of energy planning funds requested and the total amount of planning funds spent to date. These are automatically calculated fields, and the total amounts will be based on information provided.

Energy Manager and Training:

Note: This section relates to the funds requested in the approved energy expenditure plan for Energy Manager and Training activities.



a. ***Are you hiring an Energy Manager with funds requested in this Expenditure Plan?*** This is automatically filled out based on the LEA's approved energy expenditure plan. The LEA does not need to edit this field.

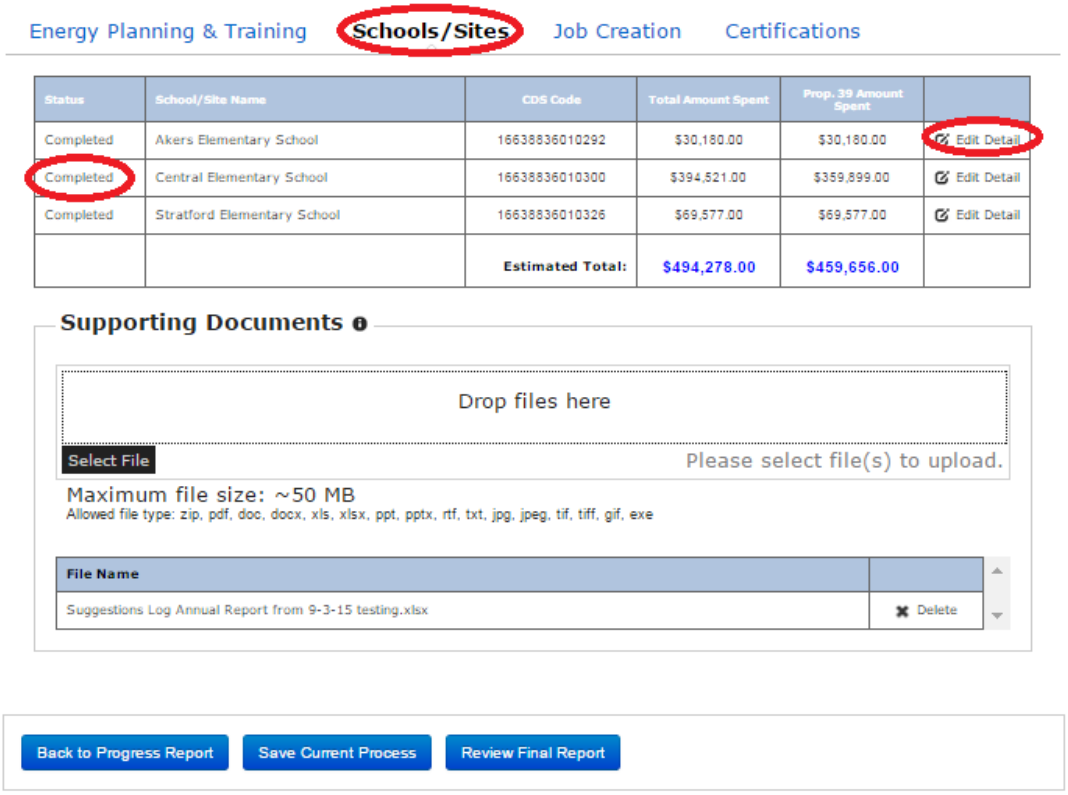
b. ***Amount Spent for Energy Manager:*** Enter the total amount of the LEA's Proposition 39 award funds spent for energy manager(s). This amount does not include planning funds requested from CDE and spent on the same category. For reference this field is pre-populated with the "amount requested for energy managers" that was requested and approved in an energy expenditure plan. The LEA will need to update this amount spent if necessary. If the LEA did not request funds for an energy manager the LEA does not need to fill out this field.

c. ***Are you using Proposition 39 funds for energy-related training costs?*** This is automatically filled out based on the LEA's approved energy expenditure plan. The LEA does not need to edit this field.

d. ***Amount Spent for Training:*** Enter the total amount of the LEA's Proposition 39 award funds spent for training activities. This amount does not include planning funds requested from CDE and spent on the same category. For reference this field is pre-populated with the "amount requested for training" that was requested and approved in an energy expenditure plan. The LEA will need to update this amount spent if necessary. If the LEA did not request funds for an energy manager the LEA does not need to fill out this field.

Second Subsection: Schools/Sites

The LEA can navigate to a specific school or site by using the "Edit Detail" Link in the Schools/Sites subsection. The list of sites is based on the sites included in the approved energy expenditure plan.

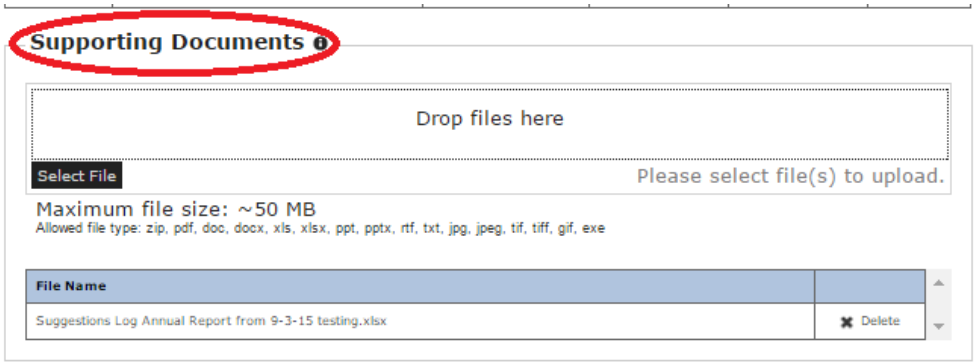


Instructions for providing specific site information will be discussed in more detail in the following sections. The LEA must only provide information for schools that are included in the approved energy expenditure plan. The status of all sites must be "Completed" before the LEA can submit the final project completion report.

Uploading Supporting Documents:

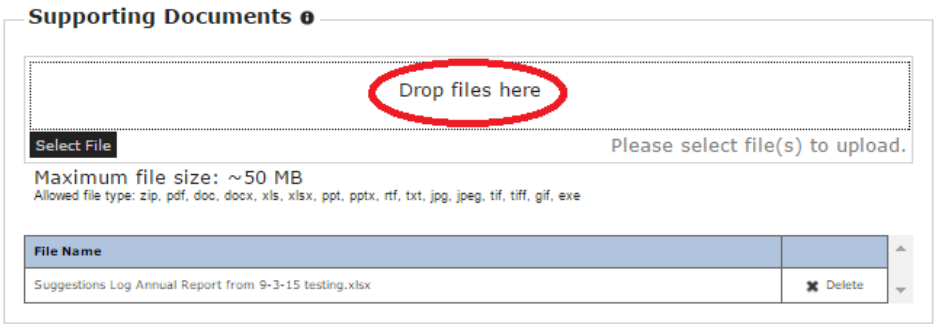
In efforts to assist in document the successful completion of projects, the Energy Commission is requesting that pictures of installed measures be included in the Final Project Completion

Report. Other supporting documents can be uploaded as well, such as updated engineering calculations, Energy Commission calculators, and or any type of post-project energy savings report.

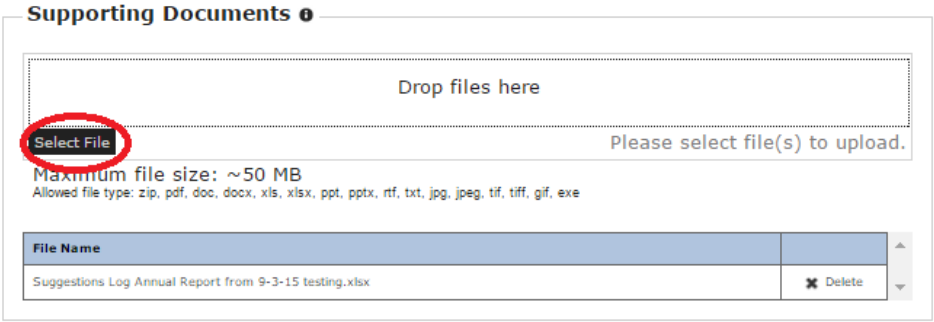


Depending on the browser being used the LEA has two options for uploading supporting documents. The LEA may upload files by dragging and dropping files into the Supporting Documents section or clicking on the Select File button. Below are the two ways to upload supporting documents:

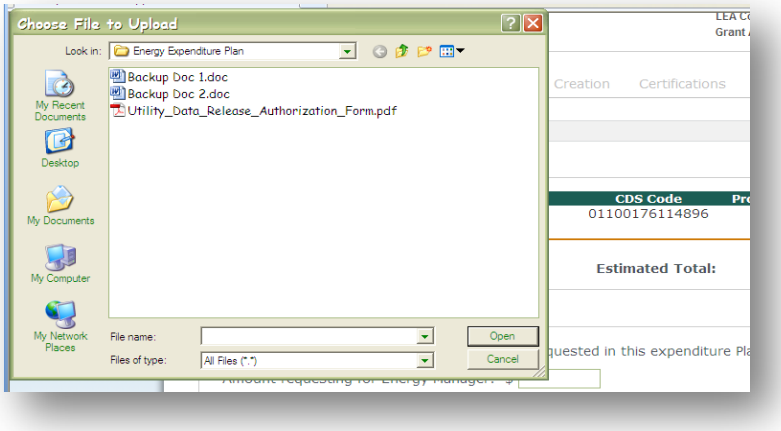
Drag and Drop Files – The LEA can drag the file from the desktop or folder and drop the file into Energy Expenditure Plan Online final project completion report template where it says "Drop files here."



Select Files – The following is the process to upload files by selecting files from a computer.

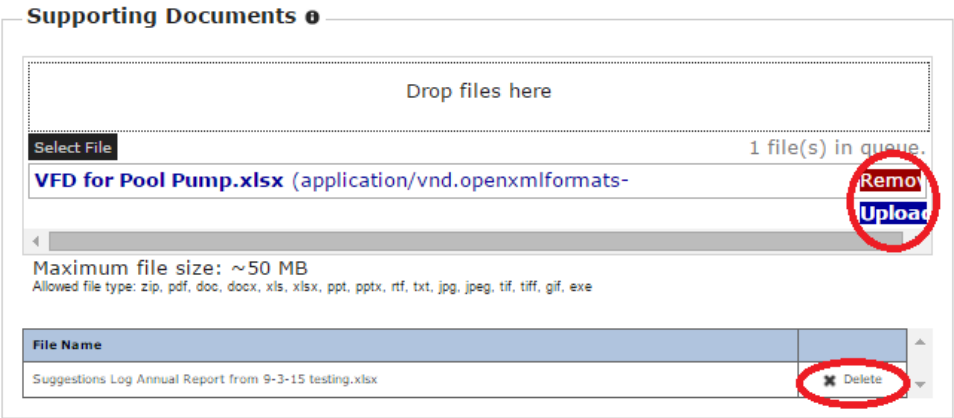


The LEA must use Select File button.



Navigate to and select the file for upload and select Open.

The LEA's files will appear in the system as shown below. Note that once the files are in Energy Expenditure Plan Online, the LEA will not be able to change the uploaded file. If the LEA makes changes to the original file stored locally on the LEA's personal computer the file should be re-uploaded to Energy Expenditure Plan Online. Note: Newer files with the same file name as the one in the upload screen will automatically overwrite the older file.

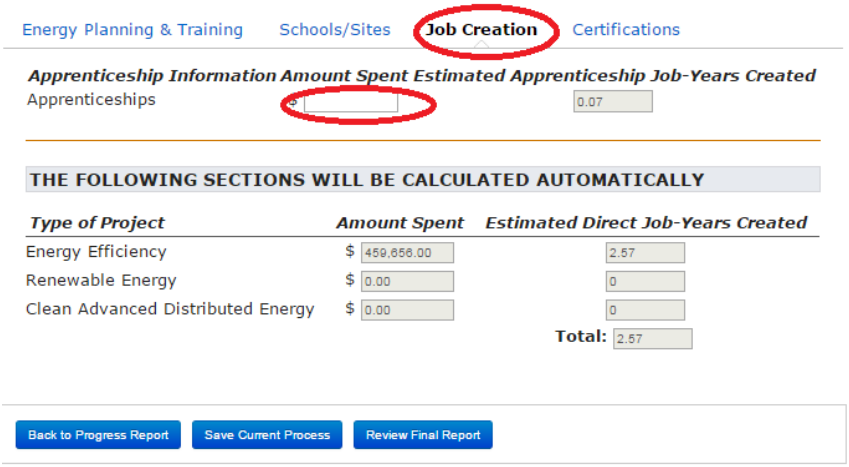


Use the Upload button to upload the supporting documents. Use the Remove button if an incorrect file was selected.

Once a file has been uploaded, the LEA may delete that file from the list of supporting documents by using the Delete button.

Third Subsection: Job Creation

The Job Creation subsection provides estimated job creation estimates based on information entered into the final project completion report. The LEA will only need to enter data into one field when filling out the final project completion report. All other fields are automatically filled out.



a. ***Apprenticeships – Amount Spent:*** Enter the actual Proposition 39 K-12 funds the LEA spent on apprenticeship positions under this EEP.

The following are automatically calculated fields based on information entered in the Schools/Site section:

b. ***Estimated Apprenticeship Job-Years Created:*** This is an automatically calculated field based on the Apprenticeships – Budget provided in the approved energy expenditure plan.

c. ***Energy Efficiency – Amount Spent:*** This is an automatically calculated field. This is the sum of the amounts entered in the Proposition 39 Share Spent for Energy Efficiency Measures in the Efficiency Measure section from all school/sites included in the final project completion report.

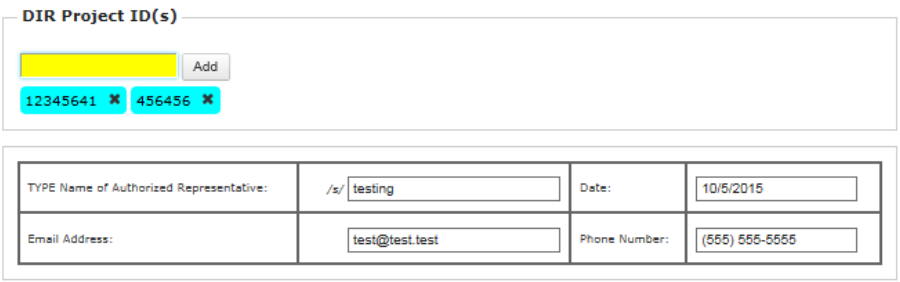
d. ***Renewable Energy – Amount Spent:*** This is an automatically calculated field. This is the sum of the amounts entered in the Proposition 39 Share Spent for Photovoltaic Measures fields in the Photovoltaic section for all schools/sites included in the final project completion report and the Proposition 39 Share Spent for Power Purchase Agreements fields in the Power Purchase Agreements section for all school/sites included in the final project completion report.

e. ***Clean Advanced Distributed Energy – Amount Spent:*** This is an automatically calculated field. This is the estimated Proposition 39 award funds allocated to Clean Advanced Distributed Energy measures under this Expenditure Plan.

f. **Estimated Direct Job-Years Created:** These fields will automatically calculate from the budgeted amounts in each Type of Project category.

Fourth Subsection: Certifications

In the Certifications subsection the LEA will provide an electronic signature and the contact information for the LEA's authorized representative. The LEA can also manage applicable (Department of Industrial Relations) DIR Project ID associated with the energy expenditure plan. The LEA can use the public search utility on the DIR website (https://www.dir.ca.gov/pwc100ext/ExternalLookup.aspx) to search for a specific public works project and associated DIR Project ID.



a. ***DIR Project ID(s) Add:*** The LEA can add additional DIR Project IDs associated with the EEP by entering the DIR Project ID into the field and using the Add button. Existing DIR Project IDs can be deleted by selecting the "x" next to the appropriate DIR Project ID.

b. ***TYPE Name of Authorized Representative: /s/:*** Type the name of the LEA authorized representative in the field provided. The Energy Commission accepts this name entry as an electronic signature. **The authorized representative is an LEA employee with authority to execute** the energy expenditure plan and **to direct or delegate the implementation of the eligible energy projects on behalf of the LEA. This field is case-sensitive so the name typed here must exactly match the Authorized Representative specified in the Energy Planning & Training tab.**

c. ***Date:*** Enter the date the final project completion report is signed by the LEA authorized representative. A calendar pop-up is provided that the LEA may use to fill in the date.

d. ***Email Address:*** Type the email address for the authorized representative.

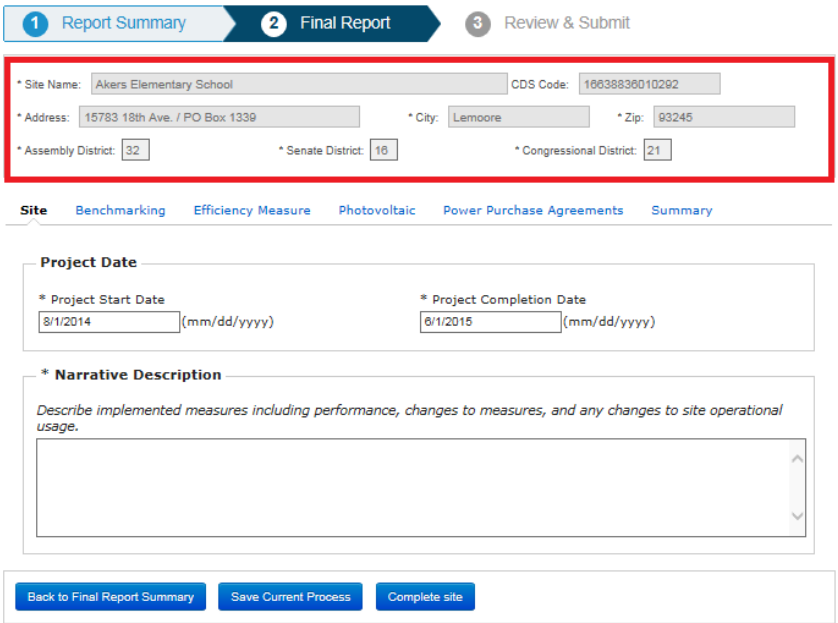
e. ***Phone Number:*** Type the phone number for the authorized representative.

Filling Out a Final Project Completion Report: Site

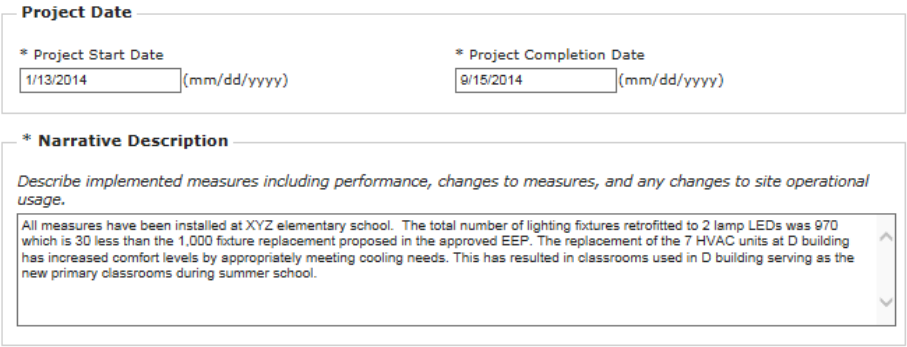
In the Schools/Site subsection, using the "Edit Detail" link will bring up six additional subsections pertaining to the specific site. The LEA will need to provide information for each site as part of the final project completion report.

First Schools/Site Subsection: Site

In the Site subsection the LEA must provide general information regarding the implementation of measures at the site.



The ***Site Name***, ***CDS Code***, ***Address***, ***City***, ***Zip Code***, ***Assembly District***, ***Senate District***, and ***Congressional District*** are automatically filled out based on the approved energy expenditure plan.



Project Date:

a. ***Project Start Date:*** Enter the date that the LEA began implementation of measures at the site. Please use the format mm/dd/yyyy to enter the date. A calendar pop-up

has been provided. The Project Start Date should occur before the Project Completion Date and no earlier than December 19, 2013.

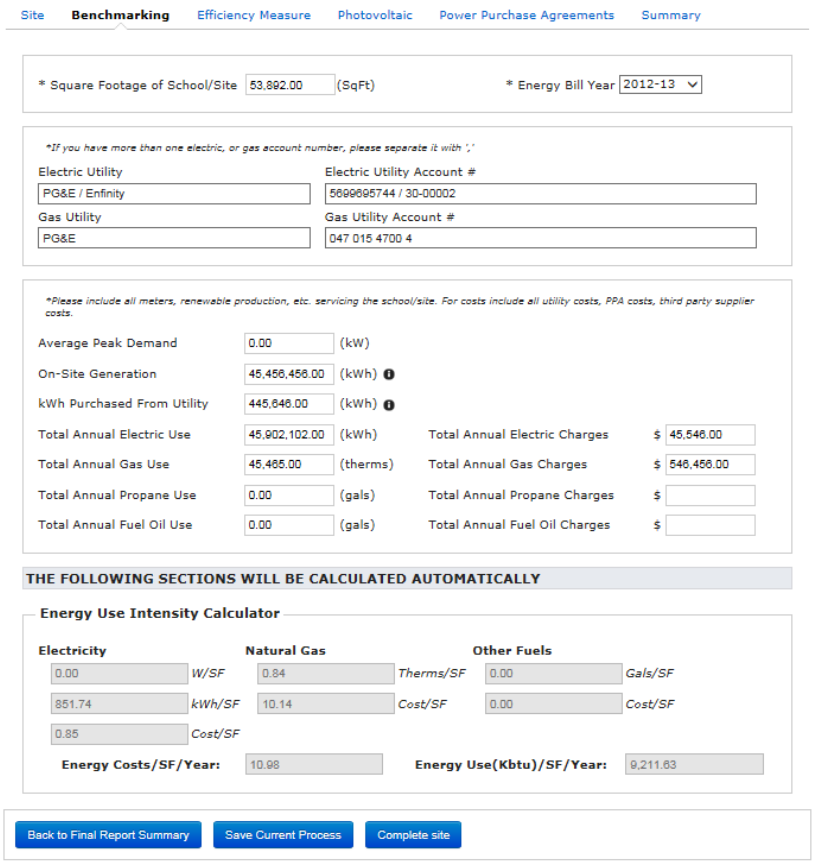
b. ***Estimated Project Completion Date:*** Enter the date when all measures at the site have been completed. Please use the mm/dd/yyyy format to enter the date. A calendar pop-up has been provided. The Project Completion Date should occur after the Project Start Date and no later than June 30, 2020.

c. ***Narrative Description:*** Provide a narrative description of measures implemented at the site. The description shall include any performance benefits/issues, changes to measures (i.e. quantity changes from the approved energy expenditure plan), and any operational changes at the site (i.e. expansions, hours of operation changes). It is essential to provide a detailed description, especially when there are changes in heating and cooling load due to weather variances, occupancy, hours of operation, building usage, and so on from what was submitted in the original energy expenditure plan.

a. ***Sample Description:*** *All measures have been installed at XYZ elementary school. The total number of lighting fixtures retrofitted to 2 lamp LEDs was 970 which is 30 less than the 1,000 fixture replacement proposed in the approved* energy expenditure plan*. The replacement of the 7 HVAC units at D building has increased comfort levels by appropriately meeting cooling needs. This has resulted in classrooms used in D building serving as the new primary classrooms during summer school*

Second School/Site Subsection: Benchmarking

In the benchmarking section the LEA will need to provide energy usage information for the most recent 12 months.



a. ***Square Footage of School/Site:*** Enter the approximate gross square footage of the school or site where the LEA implemented the eligible energy measures. "Gross square footage" is the area of the school or site within exterior walls less any courtyards or other outdoor areas. For reference the area is pre-populated based on the approved energy expenditure plan. The LEA should update this value if necessary.

b. ***Energy Bill Year:*** Enter the year associated with the energy bills used to complete the Benchmarking section. Use the drop-down menu to select the appropriate year range. The LEA should use the most recent prior 12 month information, which should reflect 12 months of post project completion utility data.

c. ***Electric Utility:*** Enter the name of the electric utility provider for this school or site. Multiple providers may be entered on this line. If the school or site does not have an electric utility, leave this field blank. For reference this field is pre-populated based on the utilities identified in the approve energy expenditure plan. The LEA should update this information if necessary.

d. ***Electric Utility Account #:*** Enter the account number(s) of the school or site provided by the electric utility provider. Multiple account numbers may be entered on this line. If the school or site does not have an electric utility, leave this field blank. For reference this field is pre-populated based on the accounts identified in the approve energy expenditure plan. The LEA should update this information to reflect any changes.

e. ***Gas Utility:*** Enter the name of the natural gas provider for this school or site. Multiple providers may be entered on this line. If the school or site does not have a gas utility, leave this field blank. (Note: Do NOT enter the name of the propane or fuel oil provider in this field.) For reference this field is pre-populated based on the utilities identified in the approve energy expenditure plan. The LEA should update this information if necessary.

f. ***Gas Utility Account #:*** Enter the account number(s) of the school or site provided by the natural gas, propane, or fuel oil utility provider. Multiple account numbers may be entered on this line. If the school or site does not have a gas utility, leave this field blank. For reference this field is pre-populated based on the accounts identified in the approve energy expenditure plan. The LEA should update this information to reflect any changes.

For items (g) thru (q) below, please include all meters, including renewable on-site electric generation servicing the school/site. For costs include all utility costs, PPA costs, and third party supplier costs.

g. ***Average Peak Demand (kW):*** Enter the average peak demand of this school or site from the previous year electric bills. To determine this number, review the previous year bills for the school or site. Calculate this number by averaging the peak demand values. If the school or site has multiple electric meters, then the peak demand of each meter should be summed before averaging. If the utility bills for this school or site do not include electric peak demand information, then leave this field blank.

h. ***On-Site Generation (kWh):*** If the school or site has PV on-site electric production, enter the total electric generation from the solar or PV systems at the school or site. If the solar installation is financed by a PPA, enter the purchased kWh from the PPA bills. Also, many LEAs may have school-owned PV systems. In this case, the LEA's solar production tracking systems can provide this information. Enter the total annual electric usage value on this field. If the school or site does not have a PV system, enter 0.

i. ***kWh Purchased from Utility (kWh):*** Enter the total electricity consumption of this school or site that is purchased from the local utility provider in the previous 12 months. Calculate this value by adding the electric usage stated in each of the previous 12 months of electric bills. If the school or site has multiple electric meters,

then add the annual electric usage for all meters If the school or site does not use electricity, enter 0 into this field.

j. ***Total Annual Electric Use (kWh):*** This is an automatically calculated field from the information entered from items (i) and (j).

k. ***Total Annual Gas Use (therms):*** Enter the total annual natural gas usage of the school or site from the previous year natural gas bills. Calculate this value by adding the natural gas usage from each of the previous 12 months of bills. If the school or site has multiple natural gas meters, then add the annual natural gas usage for all meters at the school or site to obtain the correct natural gas usage value to enter on this field. If the school or site does not use natural gas, enter 0.

l. ***Total Annual Propane Use (gals):*** Enter the total amount of propane in gallons used by the school or site from the previous 12 months of propane bills. Calculate this value by adding the gallons of propane usage from the previous 12 months of bills. If the school or site has multiple propane services, then add the annual propane usage for all services to obtain the correct number of gallons to enter in this field. If the school or site does not use propane, enter 0.

m. ***Total Annual Fuel Oil Use (gals):*** Enter the total amount of fuel oil used in gallons by the school or site from the previous 12 months of fuel oil bills. Calculate this value by adding the gallons of fuel oil usage from the previous 12 months of bills. If the school or site has multiple fuel oil services, then add the annual fuel oil usage for all services to obtain the correct number of gallons to enter on this line. If the school or site does not use fuel oil, enter 0.

n. ***Total Annual Electric Charges ($):*** Enter the total annual electricity cost for the school or site from the previous 12 months electric bills. The LEA should use the most recent 12 months information. Calculate this value by adding the dollar charges for electricity stated in the previous 12 months of bills. If the school or site has multiple electric meters, then add the dollar charges for electricity for all meters on the school or site to obtain the correct dollar amount to enter on this field. If the school or site has an existing PPA, then add the dollar charges for electricity from the existing PPA. If the school or site does not use electricity, enter 0.

o. ***Total Annual Gas Charges ($):*** Enter the annual total natural gas cost for the school or site from the previous 12 months natural gas bills. Calculate this value by adding the dollar charges for natural gas stated in the previous 12 months of bills. If the school or site has multiple natural gas meters, then add the annual dollar charges for natural gas for all meters on the school or site to obtain the correct dollar amount to enter on this line. If the school or site does not use natural gas, enter 0.

p. ***Total Annual Propane Charges ($):*** Enter the total annual propane cost of the school or site from the previous 12 months of propane bills. The LEA should use the most recent full 12 months information. Calculate this value by adding the dollar

charges for propane stated in the previous 12 months bills. If the school or site has multiple propane services, then add the annual dollar charges for propane for all services to obtain the correct dollar amount to enter on this field. If the school or site does not use propane, enter 0.

q. ***Total Annual Fuel Oil Charges ($):*** Enter the total annual fuel oil cost of the school or site from the previous 12 months of fuel oil bills. The LEA should use the most recent full 12 months information. Calculate this value by adding the dollar charges for fuel oil stated in the previous 12 months of bills. If the school or site has multiple fuel oil services, then add the annual dollar charges for fuel oil usage for all services to obtain the correct dollar amount to enter on this field. If the school or site does not use fuel oil, enter 0.

Fields in the Energy Use Intensity (EUI) Calculator are automatically calculated based on information entered into the Benchmarking subsection.

r. ***W/SF*** (watts per square foot): This signifies the electricity demand intensity of the school or site. The value automatically calculates using the provided *Average Peak Demand* and *Square Footage of School/Site*.

s. ***kWh/SF*** (kilowatts hours per square foot): This signifies the electricity use intensity of the school or site. The value automatically calculates using the provided *Total Annual Electric Use* and *Square Footage of the School/Site*.

t. ***Cost/SF*** (dollar cost per square foot): This signifies the electric cost intensity of the school or site. The value automatically calculates using the provided *Total Annual Electric Charges* and *Square Footage of School/Site*.

u. ***Therms/SF*** (therms per square foot): This signifies the natural gas use intensity of the school or site. The value automatically calculates using the provided *Total Annual Gas Use* and *Square Footage of School/Site*.

v. ***Cost/SF*** (cost of gas per square foot): This signifies the natural gas cost intensity of the school or site. The value automatically calculates using the provided *Total Annual Gas Charges* and *Square Footage of School/Site*.

w. ***Gals/SF*** (gallons of propane and fuel oil per square foot): This signifies the propane and fuel oil use intensity of the school or site. The value automatically calculates using the provided *Total Annual Propane Use*, *Total Annual Fuel Oil Use*, and *Square Footage of School/Site*.

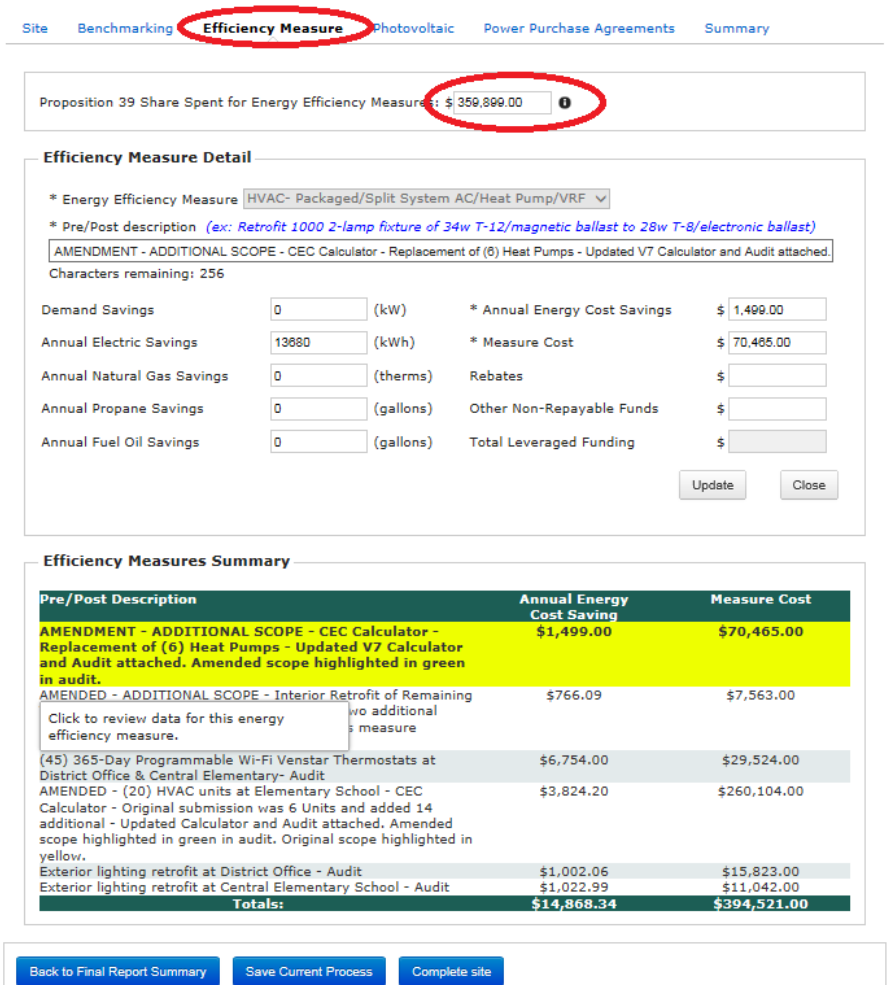
x. ***Cost/SF*** (cost of gas per square foot): This signifies the propane and fuel oil cost intensity of the school or site. The value automatically calculates using the provided *Total Annual Propane and Fuel Oil Charges* and *Square Footage of School/Site*.

y. ***Energy Costs/SF/Year*** (total energy costs per square foot per year): This equals the total energy cost intensity of the school or site. The value automatically calculates using the provided charges for all energy sources and *Square Footage of School/Site*.

z. ***Energy Use (kBtu)/SF/Year*** (total energy usage from all sources per square foot per year): This equals the total source energy use intensity of the school or site. The value automatically calculates using the provided energy use and *Square Footage of School/Site*.

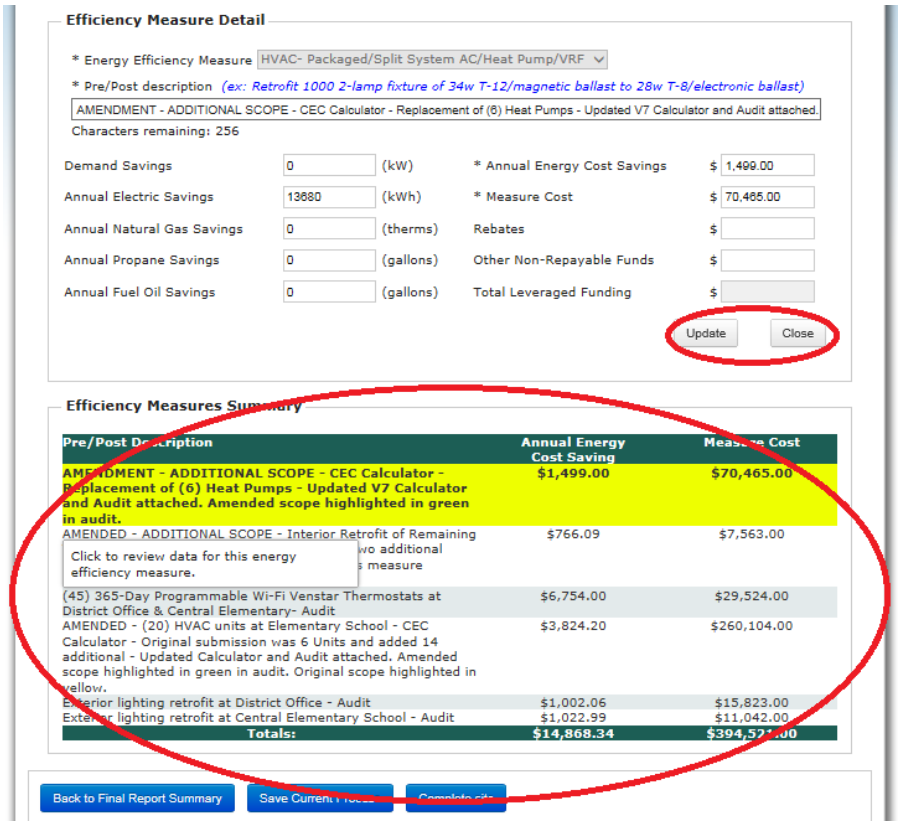
Third School/Site Subsection: Efficiency Measure

For each energy efficiency measure included in the approved energy expenditure plan the LEA must provide post installation energy savings and cost information. To determine post installation measure savings the LEA must use one of the four options provided in Chapter 2, Step 8, of the *2016 Guidelines*.



a. ***Proposition 39 Share Spent for Energy Efficiency Measures ($):*** Enter the total dollar amount of Proposition 39 award funds the LEA used to implement all energy efficiency measures at this school or site. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the Proposition 39 share spent if necessary.

To enter the cost and savings information first select the appropriate measure from the list in the Efficiency Measures Summary. Next fill out the appropriate fields for the measure. Finally, use the Update button to keep the entered information, or the Close button to exit the measure without keeping the entered information.



When the LEA selects a specific energy efficiency measure, the Efficiency Measure Details section is populated based on the data in the approved energy expenditure plan. The LEA must update the Efficiency Measure Details based on determined measure savings and costs from post installation. To determine measure savings the LEA must use one of the four options provided in Chapter 2, Step 8, of the *2016 Guidelines*.

Energy Measure Detail:

b. ***Energy Efficiency Measure:*** This field is automatically filled out based on the approved energy expenditure plan. The LEA cannot make changes to the energy efficiency measure.

c. ***Pre/Post Description:*** Enter further description of the energy efficiency measure. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update this description if necessary. The maximum number of characters the LEA can enter in this field is 256.

d. ***Demand Savings (kW):*** Enter the post installation demand savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the demand savings based on the method chosen to calculate savings. If this energy efficiency measure has no demand savings, leave this field blank.

e. ***Annual Electric Savings (kWh):*** Enter the post installation electric savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the electric savings based on the method chosen to calculate savings. If this energy efficiency measure has no electric savings, leave this field blank.

f. ***Annual Natural Gas Savings (therms):*** Enter the post installation annual natural gas savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the natural gas savings based on the method chosen to calculate savings. If the energy efficiency measure has no natural gas savings, leave this field blank.

g. ***Annual Propane Savings (gallons):*** Enter the post installation annual propane savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the propane savings based on the method chosen to calculate savings. If the energy efficiency measure has no propane savings, leave this field blank.

h. ***Annual Fuel Oil Savings (gallons):*** Enter the post installation annual fuel oil savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the fuel oil savings based on the method chosen to calculate savings. If the energy efficiency measure has no fuel oil savings, leave this field blank.

i. ***Annual Energy Cost Savings ($):*** Enter the post installation total annual energy cost savings based on the post installation calculated savings. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the cost savings based on the method chosen to calculate savings. If the energy efficiency measure includes both electricity and fuel cost savings, include the total of these cost savings.

j. ***Measure Cost ($):*** Enter the actual total cost for implementing this energy efficiency measure at this school or site. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the measure cost to reflect actual costs. This includes all grants, rebates, repayable, and non-repayable costs.

k. ***Rebates ($):*** Enter the actual total dollar amount of rebates the LEA receives for this energy efficiency measure. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update rebates on actual data. Rebates are considered utility rebates or other incentives that reduce the project cost. If the energy efficiency measure did not receive rebates, leave this field blank.

l. ***Other Non-Repayable Funds ($):*** Enter the actual total dollar amount of other non-repayable funds the LEA used to implement this energy efficiency measure (other

than Proposition 39 award and rebate funds). For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update this field based on actual costs. Non-repayable funds include bond funding, deferred maintenance, general operation budgets, and other funds used to finance the project that does not need to be repaid by the LEA. If the energy efficiency measure was not implemented with other non-repayable funds, leave this field blank.

m. ***Total Leveraged Funding ($):*** This is an automatically calculated field. This is the total amount of rebates and other non-repayable funds entered.

Once all the information in the Efficiency Measure Detail has been entered, click Update to keep the information. Repeat this process to report on all energy efficiency measures at the site. Using the Close button will exit the selected energy efficiency measure without keeping revised information.

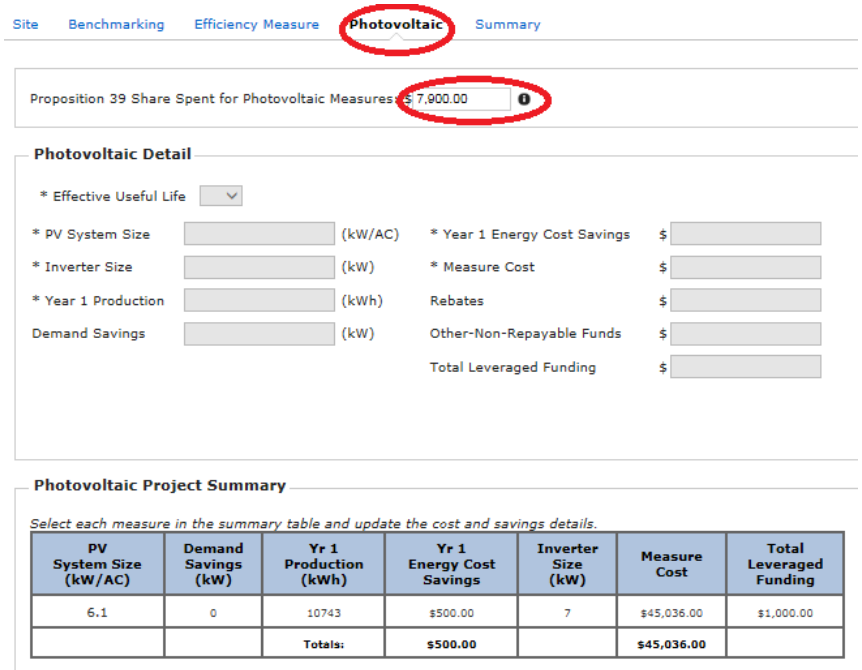
A list of errors will be generated if any required information is not included when the Update button is used. These errors will need to be addressed before the energy efficiency measure can be updated.

Important Note: Using Update does not save the changes to the final project completion report. Please use the Save Current Process button to manually save changes. Leaving the final project completion report without using the Save Current Process button will result in the loss of the added energy efficiency measures.

It is important to click Update first before clicking the Save Current Process button or the measures will not be added and saved.

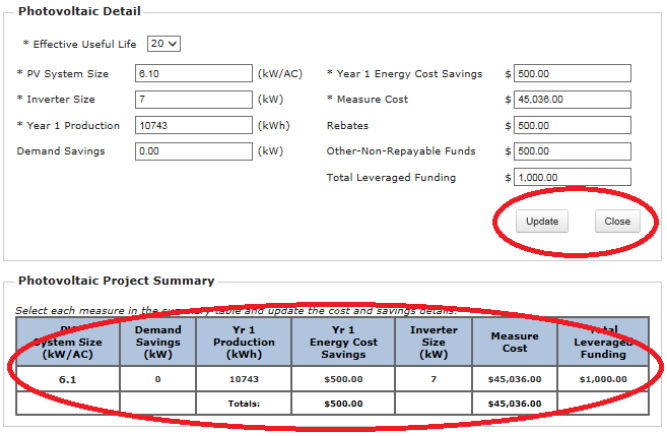
Fourth School/Site Subsection: Photovoltaic

For each photovoltaic measure included in the approved energy expenditure plan the LEA must provide actual savings and cost information. To determine post installation energy savings the LEA must use one of the four options provided in Chapter 2, Step 8, of the *2016 Guidelines*.



b. ***Proposition 39 Share for Photovoltaic Measures ($):*** Enter the total dollar amount of Proposition 39 award funds the LEA used to implement all photovoltaic measures at this school or site. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the Proposition 39 share if necessary.

To enter the post installation cost and energy savings information first select the appropriate measure from the list in the Photovoltaic Project Summary. Next fill out the appropriate fields for the measure. Finally use the Update button to keep the entered information, or the Close button to exit the measure without keeping the entered information.



When the LEA selects a specific photovoltaic measure, the Photovoltaic Details section is populated based on the data in the approved EEP. The LEA must update the Photovoltaic Details based on determined measure savings and costs from post installation. To determine post installation measure savings the LEA must use one of the four options provided in Chapter 2, Step 8, of the *2016 Guidelines*.

Photovoltaic Detail:

m. ***Effective Useful Life:*** Select the effective useful life for the LEA's PV system. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the estimated useful life if necessary. If 25 years is selected, the LEA must include a 25-year panel performance warranty from the PV vendor with its supporting documents.

n. ***PV System Size (kW AC)***: Enter the alternating current (AC) power rating of the PV system proposed for installation at the school or site. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the system size if necessary.

o. ***Inverter Size (kW)***: Enter the total inverter capacity in kilowatts of all the inverters associated to the PV measure. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the inverter size if necessary.

p. ***Year 1 Production (kWh)***: Enter the actual first year energy production of this PV system. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the annual production based on the post installation calculated savings.

q. ***Demand Savings (kW):*** Enter the post installation demand savings associated with this PV system. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the demand savings based on the post installation calculated savings.

r. ***Year 1 Energy Cost Savings ($)***: Enter the actual first year energy cost savings of this PV. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the cost savings based on the method chosen to calculate savings.

s. ***Measure Cost ($)***: Enter the actual total cost to implement the PV system. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the costs based on the actual measure costs.

t. ***Rebates ($)***: Enter the actual total amount of rebates used to implement the PV measure. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the rebates based on actual rebate amounts. Rebates are considered utility rebates or other incentives that reduce the project cost.

u. ***Other Non-Repayable Funds ($):*** Enter the actual total dollar amount of other non-repayable funds the LEA used to implement the photovoltaic measure (other than Proposition 39 award and rebate funds). For reference this field is pre-populated based on the approved EEP. The LEA will need to update this field based on actual non-repayable funds used. Non-repayable funds include bond funding, deferred maintenance, general operation budgets, and other funds used to finance the project that does not need to be repaid by the LEA. If the measure was not implemented with other non-repayable funds, leave this field blank.

v. ***Total Leveraged Funding ($):*** This is an automatically calculated field. This is the total amount of rebates and other non-repayable funds entered.

Once all the information in the Photovoltaic Details has been entered, click Update to keep the information. Repeat this process to report on all photovoltaic measures at the site. Using the Close button will exit the selected photovoltaic measure without keeping revised information.

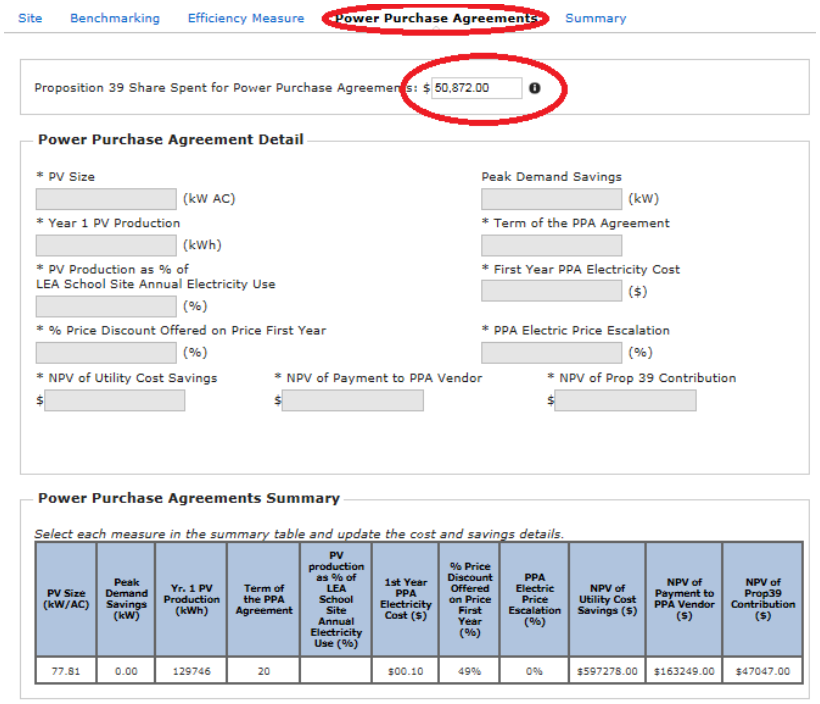
A list of errors will be generated if any required information is not included when the Update button is used. These errors will need to be addressed before the energy efficiency measure can be updated.

Important Note: Using Update does not save the changes to the final project completion report. Please use the Save Current Process button to manually save changes. Leaving the final project completion report plan without using the Save Current Process button will result in the loss of the added measures.

It is important to click Update first before clicking the Save Current Process button or the measures will not be added and saved.

Fifth School/Site Subsection: Power Purchase Agreements

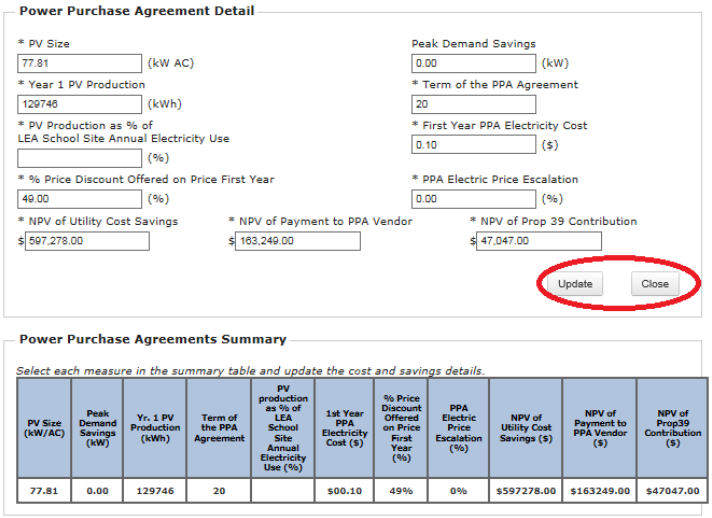
For each power purchase agreement measure included in the approved EEP the LEA must provide actual savings and cost information. To determine actual measure savings the LEA must use one of the four options provided in Chapter 2, Step 8, of the *2016 Guidelines*.



PV Size (kW/AC)	Peak Demand Savings (kW)	Yr. 1 PV Production (kWh)	Term of the PPA Agreement	PV production as % of LEA School Site Annual Electricity Use (%)	1st Year PPA Electricity Cost ($)	% Price Discount Offered on Price First Year (%)	PPA Electric Price Escalation (%)	NPV of Utility Cost Savings ($)	NPV of Payment to PPA Vendor ($)	NPV of Prop39 Contribution ($)
77.81	0.00	129746	20		$00.10	49%	0%	$597278.00	$163249.00	$47047.00

a. ***Proposition 39 Share for Power Purchase Agreements ($):*** Enter the actual total dollar amount of Proposition 39 award funds the LEA used to implement all power agreement measures at this school or site. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the Proposition 39 share if necessary.

To enter the cost and savings information first select the appropriate measure from the list in the Power Purchase Agreements Summary. Next fill out the appropriate fields for the measure. Finally use the Update button to keep the entered information, or the Close button to exit the measure without keeping the entered information.



When the LEA selects a specific power purchase agreement measure, the Power Purchase Agreement Details section is populated based on the data in the approved EEP. The LEA must update the Power Purchase Agreement Details based on determined measure savings and costs from post installation. To determine measure savings the LEA must use one of the four options provided in in Chapter 2, Step 8, of the *2016 Guidelines*.

Power Purchase Agreement Detail:

b. ***PV Size (kW AC):*** Enter the post installation alternating current (AC) power rating of the clean energy generation system installed at the school or site. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the PV system size if necessary.

c. ***Peak Demand Savings (kW):*** Enter the post installation peak demand savings based on the installed system size and location. For reference this field is pre-populated based on the approved energy expenditure plan. The LEA will need to update the actual demand savings based on the post installation calculated savings.

d. ***Year 1 Production (kWh):*** Enter the annual electricity production in kWh based on the system size and location. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the annual production based on the method chosen to provide post installation energy savings.

e. ***Term of the PPA Agreement:*** Enter the number of years of the PPA agreement between the PPA vendor and the LEA (for example, 15 years, 20 years, and so forth). For reference this field is pre-populated based on the approved EEP. The LEA will need to update the term of the agreement if necessary.

f. ***PV Production as % of LEA School Site Annual Electricity Use (%):*** Enter the percentage of the first year's (12-month) production estimate to the most recent 12-month electricity use of the site by dividing the first year's production by the most recent 12 months electricity use. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the annual production based on the method chosen to calculate savings.

g. ***First Year PPA Electricity Cost ($):*** This is the actual electricity cost paid by the LEA to the PPA developer. This is considered to be the measure cost for the LEA to obtain the electricity cost savings from the PPA. Any non-electricity costs paid by the LEA using Proposition 39 funds, such as project development costs, must be included. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the cost based on actual first year costs.

h. ***% Price Discount Offered on Price First Year (%):*** Calculate the weighted average electricity price for last year's utility bills and the weighted average price paid by the LEA for the purchased electricity, then calculate and enter the percentage discount of the electricity price savings. For example, if the weighted average of electricity price is 20 cents and the weighted average price paid by the LEA for the purchased electricity is 16 cents, the difference between the two is four cents. To get the percentage price discount, divide four cents by 20 cents to obtain 20 percent. In this example, enter 20 in this field. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the percent discount based on average first year costs.

i. ***PPA Electric Price Escalation (%):*** Enter the energy cost escalation rate that was agreed to in the PPA. The escalation rate should not exceed three percent nominal. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the escalation rate if necessary.

j. **NPV of Utility Cost Savings ($):** Net present value (NPV) of the difference between the annual electricity cost paid to the utility immediately before and after the PPA . For reference this field is pre-populated based on the approved EEP. The LEA will need to update the NPV of utility cost savings based on the method chosen to calculate savings.

k. **NPV of Payment to PPA Vendor ($):** Net present value of electricity cost paid to the PPA vendor over the term of the PPA. For reference this field is pre-populated based on the approved EEP. The LEA will need to update the NPV of payment based on actual costs.

l. **NPV of Prop 39 Contribution ($):** Net present value of the total Proposition 39 contribution to this PPA agreement. Future year contribution shall be discounted to the current year's value. For reference this field is pre-populated based on the

approved EEP. The LEA will need to update the Proposition 39 contribution based actual grant amount used.

Once all the information in the Power Purchase Agreement Details has been entered, click Update to keep the information. Repeat this process to report on all PPA measures at the site. Using the Close button will exit the selected measure without keeping revised information.

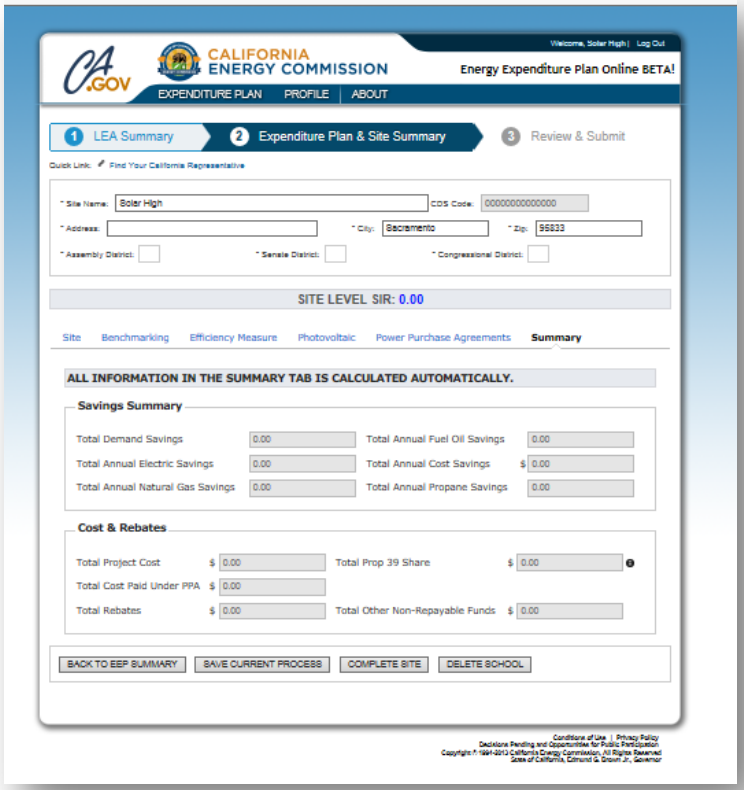
A list of errors will be generated if any required information is not included when the Update button is used. These errors will need to be addressed before the energy efficiency measure can be updated.

Important Note: Using Update does not save the changes to the final project completion report. Please use the Save Current Process button to manually save changes. Leaving the final project completion report without using the Save Current Process button will result in the loss of the added measures.

It is important to click Update first before clicking the Save Current Process button or the measures will not be added and saved.

Sixth Subsection: Summary

All information in the Summary Tab is calculated automatically based on the information keyed into the final project completion report.



Savings Summary:

a. ***Total Demand Savings:*** This field is automatically calculated to reflect the post installation total demand savings for the energy efficiency measures and PV system measures proposed for the school or site.

b. ***Total Annual Electric Savings:*** This field is automatically calculated to reflect the post installation total electric savings for the energy efficiency measures and PV system measures proposed for the school or site.

c. ***Total Annual Natural Gas Savings:*** This field is automatically calculated to reflect the post installation l total natural gas savings for these energy efficiency measures proposed for the school or site.

d. ***Total Annual Fuel Oil Savings:*** This field is automatically calculated to reflect the post installation total fuel oil savings for these energy efficiency measures for the school or site.

e. ***Total Annual Cost Savings:*** This field is automatically calculated to reflect the post installation total energy cost savings associated with energy efficiency measures, both electricity and fuel, and PV system measures proposed for the school or site.

f. ***Total Annual Propane Savings:*** This field is automatically calculated to reflect the post installation total propane savings for these energy efficiency measures proposed for the school or site.

Cost & Rebates:

g. ***Total Project Cost:*** The actual total project cost of energy efficiency measures and PV measures proposed for the school or site. This field is automatically calculated based on information provided in the input fields.

h. ***Total Prop 39 Share***: This amount is automatically calculated to reflect the actual total amount of Proposition 39 award funds to be used for the energy measures proposed to be implemented for the energy project at this school or site.

i. ***Total Cost Paid Under PPA:*** This amount is automatically calculated to reflect the actual total amount spent under PPAs applicable to the school or site.

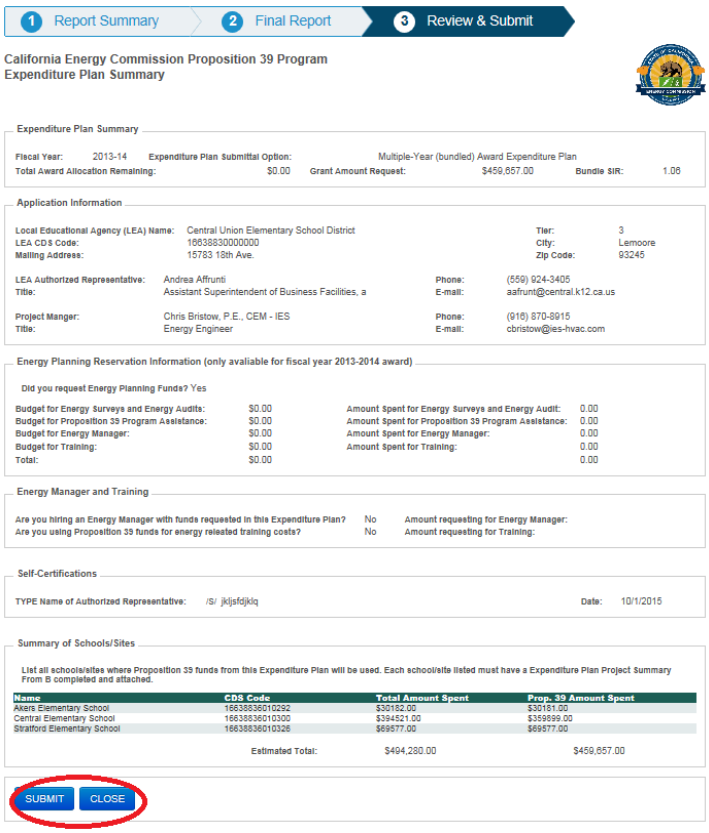
j. ***Total Rebates:*** This is automatically calculated to reflect the actual total amount of rebates for energy efficiency measures and PV measures proposed for the school or site based on the information provided in the input fields.

k. ***Total Other Non-Repayable Funds:*** This is automatically calculated to reflect the actual total amount of other non-repayable funds for energy efficiency measures and PV measures proposed for the school or site based on the information the LEA provides in the input fields.

Review and Submit the Final Project Completion Report

The LEA will need to submit the final project completion report to the Energy Commission for review.

When the LEA is prepared to submit the final project completion report the LEA must use the Review Final Report button in any of the subsections. A series of checks will be made to ensure that all required data has been provided. If all required information has been entered, the LEA will be provided a general review screen as shown below. The LEA should review their information one last time.



1 Report Summary | 2 Final Report | 3 Review & Submit

California Energy Commission Proposition 39 Program
Expenditure Plan Summary

Expenditure Plan Summary

Fiscal Year: 2013-14 Expenditure Plan Submittal Option: Multiple-Year (bundled) Award Expenditure Plan
Total Award Allocation Remaining: $0.00 Grant Amount Request: $459,657.00 Bundle SIR: 1.06

Application Information

Local Educational Agency (LEA) Name: Central Union Elementary School District
LEA CDS Code: 16638830000000
Mailing Address: 15783 18th Ave.
Tier: 3
City: Lemoore
Zip Code: 93245

LEA Authorized Representative: Andrea Affrunti
Title: Assistant Superintendent of Business Facilities, a
Phone: (559) 924-3405
E-mail: aafrunt@central.k12.ca.us

Project Manger: Chris Bristow, P.E., CEM - IES
Title: Energy Engineer
Phone: (916) 870-8915
E-mail: cbristow@ies-hvac.com

Energy Planning Reservation Information (only avaliable for fiscal year 2013-2014 award)

Did you request Energy Planning Funds? Yes

Budget for Energy Surveys and Energy Audits:	$0.00	Amount Spent for Energy Surveys and Energy Audit:	0.00
Budget for Proposition 39 Program Assistance:	$0.00	Amount Spent for Proposition 39 Program Assistance:	0.00
Budget for Energy Manager:	$0.00	Amount Spent for Energy Manager:	0.00
Budget for Training:	$0.00	Amount Spent for Training:	0.00
Total:	$0.00		0.00

Energy Manager and Training

Are you hiring an Energy Manager with funds requested in this Expenditure Plan? No Amount requesting for Energy Manager:
Are you using Proposition 39 funds for energy relealed training costs? No Amount requesting for Training:

Self-Certifications

TYPE Name of Authorized Representative: /S/ jkljsfdjklq Date: 10/1/2015

Summary of Schools/Sites

List all schools/sites where Proposition 39 funds from this Expenditure Plan will be used. Each school/site listed must have a Expenditure Plan Project Summary From B completed and attached.

Name	CDS Code	Total Amount Spent	Prop. 39 Amount Spent
Akers Elementary School	16638836010292	$30182.00	$30181.00
Central Elementary School	16638836010300	$394521.00	$359899.00
Stratford Elementary School	16638836010326	$69577.00	$69577.00
	Estimated Total:	$494,280.00	$459,657.00

SUBMIT CLOSE

After the LEA review the information, the LEA can choose to submit the final project completion report to the Energy Commission for review or continue working on the final project completion report. If the LEA would like to continue working on the final project completion report select the CLOSE button to return to the Final Report Summary section. To send the final project completion report to the Energy Commission for review select the SUBMIT button.

When the final project completion report is submitted the status shown in the Report Summary page will be updated to “Submitted.” The LEA will be able to review the submitted report using the “Review Report” link.

APPENDIX A: Examples of Backup Information to be Uploaded

Please use this checklist to ensure that you have uploaded all the necessary supporting documentation in Energy Expenditure Plan Online.

- ☐ Utility Data Release Authorization Form (CEC-12) –Submitted with the LEA's first energy expenditure plan
- ☐ Facility and Service Account Information Form (CEC-24) – Submitted with the first energy expenditure plan unless any changes to the number of facilities under the LEA's jurisdiction have occurred.
- ☐ Energy Audit (if applicable)
- ☐ Energy Commission Energy Savings Calculators with Energy Survey (if applicable)
- ☐ Power Purchase Agreement Documentation (if applicable)
- ☐ Building Owner Certification to Transfer Energy Cost Savings to LEA (if applicable)