BPA Energy Efficiency
Option 1 Custom Project Calculator Instructions

Version 1.0

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Purpose of Option 1 Custom Project Calculator

The Option 1 Custom Project Calculator is used to report all reportable custom projects completed by Option 1 utilities or any project using Progress Payments. Use this calculator to complete the Proposal and Completion Report. Funding sources for these projects will include Energy Efficiency Incentive (EEI), self-funding (i.e., not BPA funds). A specific Non-Reportable Calculator is available for submitting Non-Reportable invoice packages.

Versions

This revision of the Option 1 Customer Project Calculator Instructions supports the updated rules and procedures contained in the Oct. 1, 2017 Implementation Manual and is applicable to Version 4.11 and later. Versions 3.1, 3.2, 4.0 and 4.1 were officially expired by BPA.

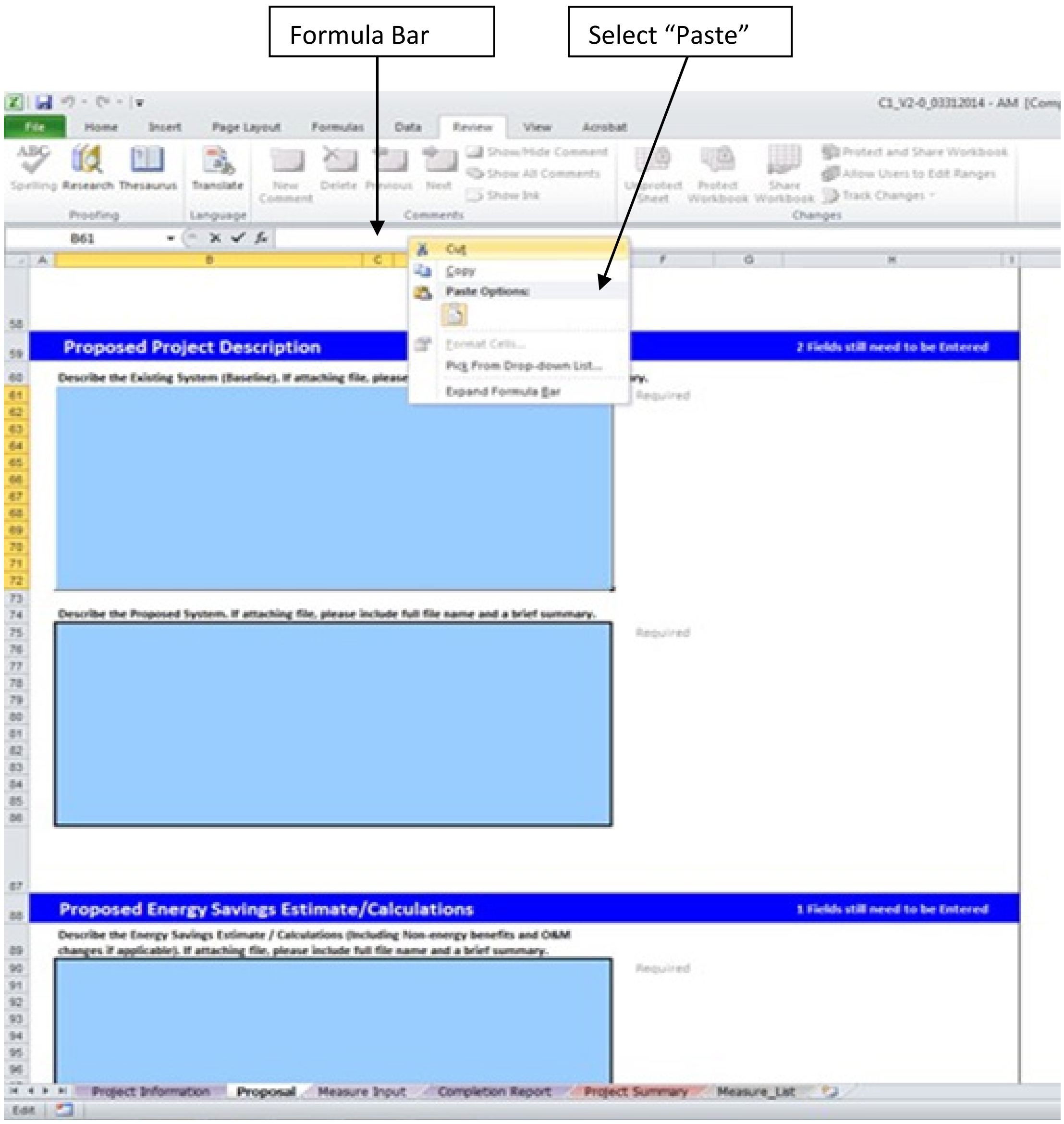
General Guidelines

- Required input cells are blue, prior to data entry and turn gray after data is entered. For the “Measure Inputs” tab, data should be input in the white cells (columns B-K).
- Fields with a ‘Required’ to the right of the cell must be completed for submission and are necessary to allow the calculator to complete all calculations.
- After project information is entered on the “Proposal” and/or “Completion Report” tabs, and measure information is entered on the “Measure Input” tab, the summary project calculations will auto-populate in the “Project Summary” tab.
- Some error checking is done within each input tab.
- Additional error checking can be found at the bottom of the “Project Summary” tab.
- As a best practice, the summarizer tool should be utilized. The tool was designed to review your invoice-related spreadsheets, perform some basic calculations and report any errors that may have occurred.

Data Entry Tips

- When entering information in a narrative box text field (Existing System, Proposed System, M&V Plan, etc.), please label measure specific information (i.e. Measure 1, Measure 2). Use “Alt-enter” to move to a new line and enter measure information.

- Be sure to include the required information in the narrative boxes, (i.e., description of modifications from approved proposal to actual installation in the Completion Report.)
- If attaching a file with additional information, please include its full file name in the appropriate text field. This will ensure reviewers associate the correct file with each field. If the supporting file is broken into sections, adding a note indicating where the information can be found in the file is useful during project review.
- Use drop-down boxes when prompted.
- Copy and Paste: highlight the text you would like to paste, right click and select copy. Click in the destination cell and click on the formula bar at the top, then right click and select paste. Attempting to copy and paste directly in the cell will produce errors. See the screenshot below.



Submitting a Proposal

Enter all required fields in “Project Information,” “Proposal,” and “Measure Input” tabs. You can review the resulting data in the “Project Summary.” The Measure RefNo(s) and estimated (Proposal) values in the “Measure Input” tab must be completed before the Proposal Eligibility Checklist can be completed.

Submitting a Completion Report for a Project With a Pre-approved Proposal

Use the C1 calculator approved by the COTR:

1. Add the actual cost and savings data into the “Measure Input” tab.
2. Fill out the fields and narrative boxes in the “Completion Report” tab. Many fields in the “Completion Report” tab are calculated and will pull information directly from the Proposal.

Submitting a Completion Report for a Project Without a Pre-approved Proposal

Complete tabs labeled “Project Information,” “Measure Input,” and “Completion Report.” In “Measure Input” tab, include the Measure RefNo and name (optional), but do not complete the “Estimated” fields.

Tab Definitions

Project Information			
Row	**Field**	**Type**	**Definition/Instructions**
2	**Are you submitting a Proposal?**	Required; Yes/ No drop-down selection	**Yes** - If a proposal is being submitted to BPA for pre- approval. **No** - If only a completion report is being submitted and there is no previously-approved proposal.
4	**Project Name**	Required	User-defined project name.
5	**Serving Utility**	Required; Drop-down selection	The serving utility providing power to the project site.
6	**Company Name**	Required	Name of the utility's retail customer for the retail electric account associated with the custom project measure.
7,8,9,10	**Company Mailing Address, City, State, Zip**	Required; State: drop-down selection	Mailing address of the retail customer applicable to this project.
11	**Facility Street Address**	Required	Physical street address of facility where project is located.
12,13,14	**Facility City, State, Zip**	Required; State: drop-down selection	Physical city, state and zip code of facility where project is located.
15	**Building Name**	Optional	Name of building in which project is located.
16	**Project Contact Name (employee at Facility)**	Required	Contact employee at facility where project is located.
17	**Project Contact Job Title**	Required	Job title of contact employee at facility.
18,19	**Project Contact Phone Number, Email**	Required	Contact information of contact employee at facility.
20	**Energy Smart Industrial Partner (ESIP) Field Engineer or Agriculture Program Specialist (APS) Name**	Optional	Industrial - Name of ESIP. Commercial - Name of field engineer. Agricultural - Name of APS supporting project, if any.
21	**Project Sector**	Required; Drop-down selection	Sector type the project building falls under.

Row	Field	Type	Definition/Instructions
22	**Primary Building Use**	Required; Drop-down selection	How the majority of the project building is being used (by square footage).
23	**Secondary Building Use**	Optional; Drop-down selection	Additional building use of the project building (use dropdown menu). For example, a mixed use building that is 75 percent office and 25 percent retail would select medium office as Primary Building Use and high-end retail as Secondary Building Use.
24	**Process Type (Industrial Sector Only)**	Required for industrial projects; Drop-down selection	The type of industrial process used in the building. Choose the type that most closely resembles the primary industrial process in the project.
25	**Resource Opportunity Type**	Required; Drop-down selection	Type of project (Retrofit, Major Renovation, New Construction). For additional guidance please see the Implementation Manual or contact your BPA representative.
26	**Federal? (Yes/No)**	Required; Yes/No drop-down selection	Yes - If the project is taking place in a federally owned facility.
27	**Utility-Assigned Project ID**	Required	A Project ID assigned by the utility. It may be an ID assigned for the utility's tracking system. This field must be entered to calculate savings on the "Project Summary" tab.
28	**Unique Site ID**	Required	An ID that is unique to this site. Often, the customer account number is used to pull billing data. This may be the same ID as row 27 (Utility-Assigned Project ID).
29	**Is this project associated with an Energy Project Manager via the Energy Smart Industrial Program?**	Optional; Yes/No drop-down selection	Yes - If there is an industrial Energy Project Manager through the BPA program associated with the project.
30	**Associated Energy Project Manager Name (First name, last name)**	Optional	If "Yes" is selected in row 29, enter the name of the energy project manager.
31	**Technical Service Provider (TSP) Number**	Optional	TSP-assigned number, if a TSP was used on the project.
32	**Brief Project Summary**	Required	Short summary of the project.
33	**Utility Retail Rate ($/kWh)**	Optional	Average retail rate for customer at project location. This rate is used to calculate the value of energy savings for the project simple payback. Format should be in $/kWh (Example: $0.05/kWh if rate is 5 cents per kilowatt hour).
BPA Use Only			
38	**BPA-Assigned Project ID**		BPA-Assigned Project ID generated by IS2.0 system. To be generated and populated by BPA after initial project submittal.

Proposal			
Row	**Field**	**Type**	**Definition/Instructions**
3	**Date Proposal Submitted**	Required; Date format (mm/dd/yyyy)	Date submitted to EEdocs.
4	**Proposal Submitter Name**	Required	Name of the utility contact, submitting the proposal to BPA.
5	**Proposal Submitter Email**	Required	Email of the utility contact submitting the proposal.
6	**Proposal Submitter Phone**	Required	Phone number of the utility contact submitting the proposal.
7	**Estimated Project Start Date**	Required; Date format (mm/dd/yyyy)	Estimated date project will begin. For proposals, this date determines the eligible reimbursement rate.
Estimated (Proposal) Funding and Payment Information			
10	**Would you like to request EEI as a percentage of total available reimbursement? (if no, request based on dollar amounts)**	Required; Yes/No drop-down selection	Yes - To use percentages to designate how much of the total available BPA reimbursement you are requesting (i.e. 50 percent). No - To use dollar amounts to designate how much of the total available BPA Reimbursement you are requesting (i.e. $10,000). * If requesting the full BPA reimbursement, leave as "No."
14	**Percentage BPA Reimbursement requested in EEI**	Required, if "Yes" is entered in row 10	If "Yes" in row 10, enter the percentage of the total available BPA reimbursement that you plan to request from your EEI budget. You may wish to complete this percentage after completing the "Measure Input" tab and reviewing the "Project Summary." This is used for planning purposes only. The final request is input on the Completion Report.
15	**Percentage of funds not requested from BPA**	Calculated	The percentage of the total available BPA reimbursement that you will not request from BPA is calculated. If self-funding, this may equal the self-funding percentage.
18	**Dollar amount BPA Reimbursement requested in EEI**	Required, if "No" is entered in row 10	If "No" in row 10, enter the dollar amount of the total available BPA reimbursement that you plan to request from your EEI budget. This is used for planning purposes only. The final request is input on the Completion Report.
19	**Dollar amount of funds not requested from BPA**	Calculated	The amount of the total available BPA reimbursement that you will not request from BPA is calculated. If self-funding, this may equal the self-funding amount.
21	**Expected Total Payment to end user**	Optional	When the request for reimbursement from BPA, is less than the maximum BPA reimbursement, enter the total anticipated payment to the end user. It is suggested to complete this after completing the "Measures Input" tab and reviewing the "Project Summary."
22	**Total Available BPA Reimbursement (Estimated)**	Calculated	The amount of total available BPA reimbursement that you plan to request from your EEI budget.

Row	Field	Type	Definition/Instructions
23	**Are you requesting Progress Payments?**	Required; Yes/ No drop-down selection	Yes - If the project meets the eligibility requirements in the Implementation Manual for Progress Payments and you plan to request Progress Payments. If "Yes" is selected, complete the Request for Progress Payments Section, beginning in row 29.
25	**Utility End User payment rules/Caps to be applied to Payment**	Optional	Should be filled in when using rules different than the max BPA to determine if it was calculated correctly or if an error was made. Available for use if you would like to note internal utility rules used to calculate end user reimbursement. For example, 50 percent of project cost, $0.15/kWh.
Request for Progress Payments			
29	**1. The time period from the BPA Custom Project Proposal approval date to the Completion Report submittal date meets or exceeds 12 months**	Yes/No drop-down selection	"Yes" to be eligible for Progress Payments.
30	**2. The amount of each Progress Payment is $100,000 or greater**	Yes/No drop-down selection	"Yes" to be eligible for Progress Payments.
31	**3. The estimated incentive for the project is $250,000 or greater**	Yes/No drop-down selection	"Yes" to be eligible for Progress Payments.
32	**4. The sum of the Progress Payment does not exceed the lower of (a) 70% of actual expenditures of the project incurred up to the date of the Progress Payment invoice to BPA or (b) 50% of the estimated total project incentive**	Yes/No drop-down selection	"Yes" to be eligible for Progress Payments.
36-48	**Summary**	Optional	Provide a summary of the Progress Payment request, including how many milestones are expected, the total amount of reimbursement, and expected dates of milestones.
Additional Project Information			
53	**Third Party Contract Number**	Optional	This is for third-party use ONLY. The third party should enter the contract number for the third-party program implemented with the measure.
54	**Audit Tracking Number**	Optional	
55	**Container Name**	Optional	

Proposed Project Description			
Row	**Field**	**Type**	**Definition/Instructions**
59-70	**Describe the Existing System**	Required	Baseline conditions must be established for energy use, and, as needed, a baseline must be established for production levels, weather, operating schedules, etc. For existing equipment being replaced for energy savings, the baseline may be based on the existing equipment efficiency and hours of operation. For planned replacements, new construction, and major renovations, the baseline may be based on standard practice, energy codes, and related standards. In all cases, the chosen baseline must be appropriate to the situation and reasonable, in the context of providing a reliable basis from which to measure energy savings. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
73-84	**Describe the Proposed**	Required	Describe specifically what is to be done and how the proposed system will save energy. Describe the proposed equipment performance, quantities, and locations. The extent of this description should match the scale of the proposed system. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
Proposed Energy Savings Estimates/Calculation			
88-99	**Describe the Energy Savings Estimates/Calculations**	Required	Include complete calculations of estimated average annual electric energy savings in kilowatt hours per year (kWh/yr). Calculations should be based on commonly accepted standard engineering practices. Identify any periodic variations in plant operation causing changes in energy consumption of more than 10 percent from month to month. Show how production rates of estimated energy consumption (kWh/yr) were derived (e.g., theoretical calculations, field measurements, manufacturer's data, etc.) and what assumptions were made in determining the energy savings estimate. Calculations should be clear and easy to follow. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
92	**Total Estimated Project Savings (Site)**	Derived	The field is populated from the Total Project Savings – Site (kWh) field in the Project Summary tab.

Proposed Measurement and Verification (M&V) Plan			
Row	**Field**	**Type**	**Definition/Instructions**
103-114	**Describe the M&V Plan**	Required	If multiple M&V Plans will be used for different measures, include all plans or attach additional plans/documentation. Describe the M&V Plan. In the description, or in the supporting documentation, please include the following information: -Baseline conditions: current practice or precondition? -Pre-metering: whole building, affected end use or none? -Post-metering: whole building, affected end use or none? -Model type: engineering, regression or indexing? Include a detailed plan to measure the energy consumption at an average system output within a specified time period (e.g., 1 week) and extrapolate to an annual basis. If the energy consumption varies by more than 10 percent from month to month, sufficient measurements must be taken to document the differences. If applicable, include a one-line diagram showing proposed metering locations both before and after the installation. Include a brief description of the instrumentation to be used and the measurement duration and/or data sampling intervals. Also include details on who will perform verification and when it will be performed, including a detailed metering schedule. If measurement is not possible, a detailed explanation that justifies the request for variance from this requirement, is required. In addition, include a proposed factor, if required, for changes in production, weather, occupancy, or other factors which affect the actual energy savings. Refer to the "BPA M&V Protocol Selection Guide" and BPA M&V Protocols in the Implementation Manual Document Library. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
116	**Select M&V Protocol Utilized**	Required; Drop-down selection	Drop down list: Select the M&V Protocol used in the project. See link in row 117 to reference complete M&V Protocols.
118	**Estimated M&V Completion Date**	Required; Date format (mm/dd/yyyy)	Enter estimated date of M&V completion.

Estimated Project Costs			
Row	**Field**	**Type**	**Definition/Instructions**
122-134	**Describe the Estimated Project Costs**	Required	Include detailed estimates of the project costs. Itemize major pieces of equipment to be installed, removed, or replaced, and include quantities and costs associated with each piece of equipment. Customers are encouraged to submit (as Appendices to this Proposal) separately-generated Project Cost Estimate documents and/or written quotes from suppliers of the major pieces of capital equipment. Examples of Project Costs: 1. Solely allocated-administrative costs. 2. Energy-review costs including in-house engineering design (staff or contract) and Proposal preparation costs. 3. Equipment costs. 4. Equipment installation costs, including labor and overhead for facilities doing their own installation. 5. Equipment removal or abandonment-in-place costs. 6. Instrumentation and data collection costs to verify energy savings. 7. Permit or inspection fees. 8. Sales tax. If you have a project cost question, please contact your COTR. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
127	**Total Estimated Project Costs**	Derived	The field is populated from the Sum of Project Costs field in the Project Summary tab.
Eligibility Criteria Checklist			
138	**1. This project does not result in fuel switching.**	Required; Yes/ No Drop-down selection	Answer must be “Yes” to be eligible for reimbursement.
139	**2. The measures are designed to result in improvements in the efficiency of electricity generation, distribution or use.**	Calculated	Will populate “Yes” if the project has energy savings. Answer must be “Yes” to be eligible for reimbursement.
140	**3. The expected life of the energy savings for each measure is greater than one year.**	Required; Yes/ No Drop-down selection	Yes or No: Answer must be “Yes” to be eligible for reimbursement. Refer to Column AU in “Measure Input” tab to verify measure life.
141	**4. The proposed baseline for each measure is documented and provides a basis for establishing energy savings.**	Calculated	Calculated. Will populate “Yes” if baseline information is entered in rows 61-72. Answer must be “Yes” to be eligible for reimbursement.
142	**5. The Proposal includes an M&V Plan showing how energy savings will be verified.**	Calculated	Calculated. Will populate “Yes” if baseline information is entered in rows 105-116. Answer must be “Yes” to be eligible for reimbursement.

Row	Field	Type	Definition/Instructions
143	**6. The expected project benefit cost (B/C) ratio meets the current BPA minimum requirement.**	Calculated	Will populate "Yes" if project meets defined B/C ratio requirements or "NA" if it does not apply.
145	**Estimated TRC B/C Ratio at Proposal**	Derived	Derived from the Project TRC B/C Ratio field on the Project Summary tab.
BPA Proposal Approval			
149-170	**BPA Approval and Checklists**	Derived	BPA Approval section for BPA use only. The fields are derived from the succeeding section. BPA Project ID will be assigned by the BPA reporting system.
Review Checklist (BPA Use Only)			
175-204	**BPA Approval and Checklists**	Optional/ Required	Do not enter information here. The data in this section will populate the preceding section.

Measure Input Tab Instructions (at Proposal Stage)

The "Measure Input" tab is used to collect data on the individual measures within a project at the Proposal (optional) and Completion Report stages. Therefore, at the Proposal submission stage, there will be some blank columns for the Completion Report data. This section outlines the data to be input at the Proposal stage. Enter information in all white cells, starting with cell B8. See rows 4 and 5 of the "Measure Input" tab for instruction on which inputs are optional, required or same as Proposal (i.e., do not change the data from the Proposal stage). Enter multiple measures in a contiguous block of data. Do not have blank rows between measure data. Maximum number of allowable measures is 100. If the user has opted not to submit a Proposal and has selected "No" to "Are you submitting a Proposal" on the Project Information tab, all Proposal values on the "Measure Input" tab are optional.

Measure Input (Proposal Stage)			
Measure Inputs			
Column	**Field**	**Type**	**Definition/Instructions**
B	**Measure RefNo** (Reference Number)	Required	The RefNo can be found on the tab labeled "Measure List". To find a RefNo, use the auto filtering abilities to filter first by Column B: Resource Opportunity Type (New Construction/ Major Renovation or Retrofit), then Column C: Sector, then Column D: End Use, then Column E: Category and finally Column F: Technology/Activity/Practice. Select the appropriate RefNo in Column A and copy and paste into Column B of "Measure Input." For a multiple measure project, all RefNo's must have the same Resource Opportunity Type and Sector. RefNo's must match the sector of the project as input in the Proposal data.
C	**Measure Name**	Optional	This column is a user-defined name to refer to a specific measure.
Annual Non-Energy Benefits			
H	**Estimated (Proposal) ($/year)**	Optional	This column is for reporting the actual change in annual O&M cost (if any) resulting from the installation of this measure. If the change in O&M cost is periodic (e.g. occurs once every three years), the value entered should be an average annual amount over the pre-assigned life of the measure. A "savings" (reduction) in annual O&M cost should be reported as a negative (-) dollar amount and will be treated as a "benefit" in the TRC calculation. An increase in annual O&M cost should be reported as a positive (+) dollar amount, and will be treated as a cost in the TRC calculation.

Annual O&M Cost Change (cost savings is negative)			
J	**Estimated (Proposal) $/year**	Optional	This column is for reporting the actual change in annual O&M cost (if any) resulting from the installation of this measure. If the change in O&M cost is periodic (e.g. occurs once every three years), the value entered should be an average annual amount over the pre-assigned life of the measure. A "savings" (reduction) in annual O&M cost should be reported as a negative (-) dollar amount and will be treated as a "benefit" in the TRC calculation. An increase in annual O&M cost should be reported as a positive (+) dollar amount and will be treated as a "cost" in the TRC calculation.
Measure Error Flags			
AW	**Measure RefNo Error**	N/A	"Error" will appear when the RefNo entered in Column B does not match a measure on "Measure List". Please re-enter a valid RefNo.
AX	**Sector Error Flag**	N/A	Sector "Error" flag will appear when the sector of the measure entered does not match the sector of the project (Project Information D21). Please re-enter a valid RefNo.
AY	**Resource Opportunity Error Flag**	N/A	Resource Opportunity "Error" flag will appear when the Resource Opportunity Type (Project Information D25) does not match the Resource Opportunity Type of the measure RefNo (Measure List Column B). Check cell D25 on Project Information page to verify if new construction, major renovation or retrofit. Also check the measure reference number on the Measure Input page to confirm that the reference number is for the same type of project as on Project Information page.

Measure Input Tab Instructions (at Completion Report)

Measure Input (Completion Stage)			
Measure Cost			
Column	**Field**	**Type**	**Definition/Instructions**
E	**Actual (Completion Report) ($)**	Required	Enter the actual measure cost in dollars.
Site Savings			
G	**Actual (Completion Report) (kWh)**	Required	Enter the actual verified site savings over baseline in kWh.
Annual Non-Energy Benefits			
I	**Actual (Completion Report) ($/year)**	Optional	This column is for reporting the value of non-energy benefits. These may include water savings, or gas savings.

Annual O&M Cost Change (cost savings is negative)			
Column	**Field**	**Type**	**Definition/Instructions**
K	**Actual (Completion Report) ($/year)**	Optional	This column is for reporting the actual change in annual O&M cost (if any) resulting from the installation of this measure. If the change in O&M cost is periodic (e.g. occurs once every three years), the value entered should be an average annual amount over the life of the installed measure. A "savings" (reduction) in annual O&M cost should be reported as a negative (-) dollar amount and will be treated as a “benefit” in the TRC calculation. An increase in annual O&M cost should be reported as a positive (+) dollar amount and will be treated as a cost in the TRC calculation. Enter the actual change in O&M cost. If cost savings result, the change should be entered as a negative quantity.

* Columns L-AU will auto fill as information is entered in other parts of the calculator. It is best practice to review and verify that the cells have done so. Especially review columns L, N, O, P if submitting a proposal. If submitting a completion report, or a completion report only, review columns AB, AC, AD and AE. For all submissions, review columns AO through AY.

Completion Report Tab Instructions

Completion Report			
Custom Project Completion Report			
Row	**Field**	**Type**	**Definition/Instructions**
3	**Project Name**	Derived	Calculated from Project Information tab.
4	**Date Submitted**	Required; Date format (mm/dd/yyyy)	Date submitted to EEdocs.
5	**Actual Project Start Date**	Required; Date format (mm/dd/yyyy)	Date project installation began.
6	**M&V Completion Date**	Required; Date format (mm/dd/yyyy)	Date M&V was completed.
7	**Completion Report Submitted by**	Required	Name of contact at utility submitting Completion Report to BPA.
8	**BPA Assigned Project ID**	Derived	Calculated from Proposal tab.
Completion Report Funding and Savings Information			
11	**Would you like to request EEI as a percentage of total available reimbursement? (If “No,” request based on dollar amounts)**	Yes/No drop-down selection	Yes - If you would like to use percentages to designate how much of the total available BPA Reimbursement you are requesting (i.e., 50 percent). No - If you would like to use dollar amounts to designate how much of the total available BPA Reimbursement you are requesting (i.e., $10,000).
14	**Total Available BPA Reimbursement (using project cost caps)**	Calculated	The total available BPA Reimbursement based on data input in the “Measure Input” tab. Equal to the lesser of the project cost cap (“Project Summary” cell C24) or sum of measure level reimbursement (“Project Summary” cell C23).

Column	Field	Type	Definition/Instructions
17	**Percentage BPA Reimbursement requested in EEI**	Conditional; Optional	If "Yes" selected in row 11, enter the percentage of the total available BPA Reimbursement that you are requesting in EEI from BPA. The percentage entered in this cell will calculate the Requested BPA Reimbursement – EEI in row 21. Changing this percentage will change the amount of EEI you receive from BPA. You may wish to complete this percentage after completing the "Measure Input" tab and reviewing the "Project Summary".
18	**Percentage of funds not requested from BPA**	Calculated	The percentage of the total available BPA Reimbursement that you will not request from BPA is calculated. If self-funding, this may equal the self-funding percentage.
21	**Requested BPA Reimbursement – EEI ($)**	Conditional; Required	If "No" selected in row 11, enter the dollar amount of the total available BPA Reimbursement that you plan to request from your EEI budget.
22	**Funds Not Requested from BPA ($)**	Calculated	The dollar amount of the total available BPA Reimbursement that you will not request from BPA is calculated. If self-funding, this may equal the self-funding amount.
25	**Requested BPA Reimbursement – EEI ($)**	Calculated	The dollar amount of the total requested EEI, based on inputs in rows 17 or 21.
26	**Total Payment to End User ($)**	Optional	When you request a reimbursement amount from BPA that is less than the maximum BPA Reimbursement. Check cell F30 to determine if it is required. Enter total anticipated payment to the end user. You may wish to complete this after completing the "Measure Input" tab and reviewing the "Project Summary."
27	**Reimbursement already paid through Progress Payments (EEI)**	Optional	If the project received Progress Payments, enter the dollar amount of reimbursement here.
28	**Adjusted BPA Reimbursement – EEI ($)**	Calculated	The adjusted BPA Reimbursement which adjusts requested EEI based on paid Progress Payments or end user payments. Equal to the requested BPA Reimbursement – EEI (D27) minus the reimbursements already paid through Progress Payments (D31).
30	**Utility End user payment rules**	Optional	Should be filled in when using rules different than the max BPA to determine if it was calculated correctly or if an error was made. Available for use if you would like to note internal utility rules used to calculate end user reimbursement. For example, 50 percent of project cost, $0.15/kWh.
Completion Report Savings Allocation			
36	**Total Project kWh**	Derived	Total project kWh savings at the Busbar, calculated based on data in "Measure Input" tab.
37	**EEI Allocated kWh**	Calculated	Total kWh allocated to EEI. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.
38	**Self-funding Allocated kWh**	Calculated	Total kWh allocated to self-funding. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.
39	**Self-funding Allocated kWh %**	Calculated	Percent of total kWh allocated to self-funding. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.

Installed Project Description			
Column	**Field**	**Type**	**Definition/Instructions**
44-54	**Describe the existing system (Baseline)**	Required	Auto-fills from “Proposed Project Description – Describe the Existing System” in Proposal. Can be overwritten for changes.
58-70	**Describe the installed system**	Required	Include detailed description of completed project including, equipment installed and modifications to the project from the project description in the accepted Proposal. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.
M&V and Energy Savings Calculation			
74	**Was M&V Plan completed in the Proposal?**	Derived	Calculated. Will populate with “Yes” if the proposal was approved by a COTR.
76	**Select M&V Protocol utilized**	Required; Drop-down list	Select the M&V Protocol used in the project. See link in row 82 to reference complete M&V Protocols.
79-90	**Describe the M&V Plan**	Required	If the M&V Plan was not approved in a Proposal. If multiple M&V Plans will be used for different measures, include all plans here or attach additional plans. Describe the M&V performed. In the description, please include the following information: -Baseline conditions: current practice or precondition? -Pre metering: whole building, affected end use or none? -Post metering: whole building, affected end use or none? -Model type: engineering, regression or indexing? Include a detailed plan for how the energy consumption was measured at an average system output within a specified time period (e.g., one week) and extrapolate to an annual basis. If the energy consumption varies by more than 10 percent from month to month, sufficient measurements must be taken to document the differences. If applicable, include a one-line diagram showing metering locations both before and after the installation as an attachment. Include a brief description of the instrumentation to use and the measurement duration and/or data sampling intervals. Also include details on who performed verification and when it was performed, including a detailed metering schedule. If measurement is not possible, a detailed explanation justifying request for variance is required. In addition, include a proposed factor, if required, for changes in production, weather, occupancy, or other factors which affect the actual energy savings. Refer to the “BPA M&V Protocol Selection Guide” and BPA M&V Protocols in the Implementation Manual Document Library. If attaching files with additional information, please provide a brief summary of the contents and include the full file name.

Column	Field	Type	Definition/Instructions
83	**Total Actual Project Savings (site)**	Derived	This value is derived from the Measure Input tab, cell G8.
93-104	**Describe the changes to the M&V Plan if proposal was submitted**	Optional	If an M&V Plan was approved in a Proposal, include a description of changes to M&V Plan or Energy Savings Calculation, if any. Enter "No changes" if none occurred.
Actual Project Costs Verification			
108-120	**Provide summary of total project cost.**	Required	Enter summary of actual project costs. Submit all supporting documentation to COTR with Custom Project Calculator. If attaching files, please include full file name.
113	**Total Actual project Costs**	Derived	Sum of actual cost for all measures. This value is derived from the Measure Input tab, cell E8.
Reimbursement Payment Table			
133-141	**Reimbursement table**	Calculated/ Derived	Pulls in data from the "Project Summary" tab to summarize requested reimbursement.
Eligibility Criteria Checklist			
148	**1. This project does not result in fuel switching.**	Required; Yes/ No Drop-down selection	Answer must be "Yes" to be eligible for reimbursement.
149	**2. The measures are designed to result in improvements in the efficiency of electricity generation, distribution or use.**	Calculated	"Yes" if the project has energy savings. Answer must be "Yes" to be eligible for reimbursement.
150	**3. The expected life of the energy savings for each measure is greater than one year.**	Required; Yes/ No Drop-down selection	Answer must be "Yes" to be eligible for reimbursement. Refer to Column AU in "Measure Input" tab to verify measure life.
151	**4. The baseline for each measure is documented and provides a basis for establishing energy savings.**	Calculated	"Yes" if baseline information is entered in rows 49-59 or in Proposal. Answer must be "Yes" to be eligible for reimbursement.
152	**5. The project includes a metering and verification plan showing how energy savings will be verified.**	Calculated	"Yes" if M&V Plan information is entered in rows 84-95 or in Proposal. Answer must be "Yes" to be eligible for reimbursement.
153	**6. The actual project benefit/cost ratio meets the current BPA Minimum requirement.**	Calculated	"Yes" if project meets defined B/C ratio requirements. "NA" if it does not apply.
155	**Actual TRC B/C Ratio at completion**	Derived	Derived from the Project TRC B/C Ratio field on the Project Summary tab.
BPA Completion Report Approval			
161-179	**BPA Approval and Checklists**	Derived	BPA Approval section for BPA use only. The fields are derived from the proceeding section. BPA Project ID will be assigned by the BPA reporting system.
Review Checklist (BPA Use Only)			
186-216	**BPA Approval and Checklists**	Optional/ Required	Do not enter information here. The data in this section will populate the preceding section.

Project Summary Tab Definitions

All values in the “Project Summary” tab are calculated based in inputs in the “Proposal,” “Measure Input” and “Completion Report” tabs. The “Project Summary” tab also includes an “Errors” section that will populate with error messages. If no Proposal was submitted, Column B cells will remain blank.

<table>
<tr><th colspan="4">Project Summary</th></tr>
<tr><th colspan="4">Custom Project Completion Report</th></tr>
<tr><th>Row</th><th>Field</th><th>Project Proposal Definition</th><th>Completion Report Definition</th></tr>
<tr><td>4</td><td>Utility-Assigned Project ID</td><td colspan="2">This is derived from the field Utility-Assigned Project ID in the Project Information tab. A project ID assigned by the utility. This ID may be an ID assigned for the utility’s tracking system. This field must be entered to calculate savings on the “Project Summary” tab.</td></tr>
<tr><td>5</td><td>Project Name</td><td colspan="2">This is derived from the field “Project Name” in the Project Information tab. User-defined project name.</td></tr>
<tr><td>6</td><td>Total Project Savings - Site (kWh)</td><td>Sum of estimated site savings for all measures (“Measure Input” Column F).</td><td>Sum of actual site savings for all measures (“Measure Input” Column G).</td></tr>
<tr><td>7</td><td>Total Project Savings - Busbar (kWh)</td><td>Sum of estimated Busbar savings for all measures (“Measure Input” Column Q).</td><td>Sum of actual Busbar savings for all measures (“Measure Input” Column AE).</td></tr>
<tr><td>8</td><td>Percentage EEI Funding</td><td>Percentage EEI requested at Proposal stage (calculated from “Proposal” inputs).</td><td>Percentage EEI requested at Completion Report (calculated from “Completion Report” inputs).</td></tr>
<tr><td>9</td><td>Percentage of Funds Not Requested from BPA</td><td>Percentage of the total potential available BPA Reimbursement not requested from BPA at Proposal stage (calculated from “Proposal” inputs).</td><td>Percentage of the total potential available BPA Reimbursement not requested from BPA at Completion Report (calculated from “Completion Report” inputs).</td></tr>
<tr><td>10</td><td>Requested BPA Reimbursement – EEI ($)</td><td>The dollar value of the EEI funds requested from BPA, equal to total available BPA Reimbursement (B26) multiplied by the percentage BPA Reimbursement requested from EEI (B8).</td><td>The dollar value of the EEI requested from BPA, equal to total available BPA Reimbursement (C26) multiplied by the percentage BPA Reimbursement requested from EEI (C8).</td></tr>
<tr><td>11</td><td>Funds Not Requested from BPA ($)</td><td>The dollar value of the funds not requested from BPA, equal to total available BPA Reimbursement (B26) minus the requested BPA Reimbursement – EEI (B11) and the requested BPA Reimbursement – LPP (B12).</td><td>The dollar value of the funds not requested from BPA, equal to total available BPA Reimbursement (C26) minus the requested BPA Reimbursement – EEI (C11) and the requested BPA Reimbursement – LPP (C12).</td></tr>
<tr><td>12</td><td>EEI Allocated kWh</td><td>Total kWh allocated to EEI at Proposal. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.</td><td>Total kWh allocated to EEI at Completion Report. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.</td></tr>
<tr><td>13</td><td>Self-Funding Allocated kWh</td><td>Total kWh allocated to self-funding at Proposal. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.</td><td>Total kWh allocated to self-funding at Completion Report. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.</td></tr>
</table>

Row	Field	Project Proposal Definition	Completion Report Definition
14	**Self-funding Allocated kWh (%)**	Percent of total kWh allocated to self-funding at Proposal. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.	Percent of total kWh allocated to self-funding at Completion Report. Refer to Funding Sources and Savings Allocation in the Implementation Manual for the calculation methodology.
15	**Total Present Value of Benefits**	Sum of the estimated total present value of benefits for all measures (“Measure Input” Column U). Equal to the sum of estimated present value of energy savings, estimated value of non-energy benefits, and negative estimated present value of O&M change if O&M change is less than 0 (“Measure Input” Column R+S-T, if T<0).	Sum of the total present value of benefits (“Measure Input” Column AI). Equal to the sum of present value of energy savings, value of non-energy benefits, and negative present value of O&M change if O&M change is less than 0 (“Measure Input” Column AF+AG-AH, if AH<0).
16	**Sum of Project Costs**	Sum of estimated cost for all measures (“Measure Input” column D).	Sum of actual cost for all measures (“Measure Input” column E).
17	**Sum of Total Costs**	Sum of estimated cost of all measures and the estimated present value of O&M change if O&M change is greater than 0 (“Measure Input” Column D+T, if T>0).	Sum of actual cost of all measures and the actual present value of O&M change if O&M change is greater than 0 (“Measure Input” Column E+AH, if AH>0).
18	**Project TRC B/C Ratio**	Estimated project total resource cost benefit cost ratio. Equal to the total estimated present value of benefits divided by the sum of estimated total costs (“Project Summary” cell B18/B20).	Actual project total resource cost. Equal to the total present value of benefits divided by the sum of total costs (“Project Summary” cell C18/C20).
17	**Sum of Total Costs**	Sum of estimated cost of all measures and the estimated present value of O&M change if O&M change is greater than 0 (“Measure Input” Column D+T, if T>0).	Sum of actual cost of all measures and the actual present value of O&M change if O&M change is greater than 0 (“Measure Input” Column E+AH, if AH>0).
18	**Project TRC B/C Ratio**	Estimated project total resource cost benefit cost ratio. Equal to the total estimated present value of benefits divided by the sum of estimated total costs (“Project Summary” cell B18/B20).	Actual project total resource cost. Equal to the total present value of benefits divided by the sum of total costs (“Project Summary” cell C18/C20).
20	**Estimated Simple Payback (Years)**	Estimated payback in years. Equal to the sum of estimated total costs divided by the estimated savings times the retail rate (“Project Summary” cell B19/B6*“Project Information” D33).	Estimated payback in years. Equal to the sum of total costs divided by (savings times the retail rate) (“Project Summary” cell C19/ C6*“Project Information” D33).
21	**Project Cost Cap**	The estimated project cost cap per the Implementation Manual. “Project Summary”B19*70 percent.	The actual project cost cap per the Implementation Manual. “Project Summary”C19*70 percent.

22	**Sum of Measure-Level Reimbursement**	The sum of the total estimated potential BPA Reimbursement for all measures before the cost cap is applied. Calculated based on the BPA Reimbursement rate ("Measure Input" Column P).	The actual project cost cap per the Implementation Manual. "Project Summary"C19*70 percent.
23	**Total Available BPA Reimbursement**	The estimated project cost cap per the Implementation Manual. "Project Summary"B19*70 percent.	The actual project cost cap per the Implementation Manual. "Project Summary"C19*70 percent.
24	**Payment to End User**	Total payment to end user ("Proposal" D24).	Total payment to end user ("Completion Report" D30).
25	**Reimbursement already paid through Progress Payments**	Not applicable.	Total amount already paid in Progress Payments ("Completion Report" cell D31).
26	**Final Requested BPA Reimbursement**	The final requested BPA Reimbursement from EEI.	The final requested BPA Reimbursement from EEI.
27	**M+V Completion Date**	The estimated date of measurement and verification completion ("Proposal" cell D118).	The actual date the measurement and verification was completed ("Completion Report" cell D6).

Errors		
Custom Project Completion Report		
Row	**Error Message**	**Troubleshooting Suggestion**
30	Invalid RefNo (Measure Input Tab)	Check to ensure that the selected RefNo is on the current "Measure_List" tab and is entered correctly in Column B of the "Measure Input" tab. Contact your COTR if you have any questions about valid RefNo.
31	Measures(s) do not match the project sector (Measure Input tab)	Check that the RefNo in Column B of the "Measure Input" tab matches the sector chosen in cell D21 of the "Project Information" tab. The first letter of the RefNo denotes the sector: R=Residential, C=Commercial, I=Industrial, A=Agricultural, U=Utility System Efficiency.
32	Measure(s) do not match the project resource opportunity type (Retrofit, New Construction, Major Renovation) (Measure Input tab)	Check that the RefNo in Column B of the "Measure Input" tab matches the Resource Opportunity Type in cell D25 in the "Project Information" tab. Column B in the "Measure_List" tab denotes the Opportunity Resource Type: L=Lost Opportunity or Major Renovation, R=Retrofit.
33	Proposal submission date is required (Proposal tab)	Ensure that cell D2 in the "Project Information" tab is accurate—if "Yes" is selected there, then make sure cell D3 in the "Proposal" tab has a date entered into it.
34	Utility Assigned Project ID is required (Project Information tab)	Ensure that cell D27 on the "Project Information" tab has a value entered into it.
35	Retail Rate cannot be less than $0.01	If entered, ensure that cell D33 in the "Project Information" tab has a value above $0.01.
36	Estimated B/C ratio is less than 0.5	Check that Estimated Measure Costs, Site Savings, Annual Non-Energy Benefits, and Annual O&M Cost Change inputs on the "Measure Input" tab are entered correctly. If error persists, contact your COTR.
37	Actual B/C ratio is less than 0.5	Check that Actual Measure Costs, Site Savings, Annual Non-Energy Benefits, and Annual O&M Cost Change inputs on the "Measure Input" tab are entered correctly. If error persists, contact your COTR.
38	COTR Proposal Approval date prior to proposal submission date	Check that the Date Proposal Submitted is entered correctly in cell D3 on the "Proposal" tab. If correct, contact your COTR.

Row	Error Message	Troubleshooting Suggestion
39	Engineer Review Proposal approval date prior to proposal submission date	Check that the Date Proposal Submitted is entered correctly in cell D3 on the "Proposal" tab. If correct, contact your COTR.
40	COTR Completion Report Approval date prior to completion report submission date	Check that the Date Submitted is entered correctly in cell D4 on the "Completion Report" tab. If correct, contact your COTR.
41	Engineer Review Completion Report Approval date prior to completion report submission date	Check that the Date Submitted is entered correctly in cell D4 on the "Completion Report" tab. If correct, contact your COTR.
42	Please Enter Valid Date Submitted on Completion Report Tab	Check that the Date Submitted is entered correctly in cell D4 on the "Completion Report" tab. If correct, contact your COTR.
43	Please Enter Valid COTR Completion Report Approval Date	To be completed by BPA staff. Contact your COTR.
44		
45	BPA ESI Engineer Name for Technical Review on Completion Report Missing	To be completed by BPA staff. Contact your COTR.
46	Date of BPA ESI Engineer Technical Review on Completion Report Missing	To be completed by BPA staff. Contact your COTR.

Measure List

Reference Number	Resource Opportunity Type	Sector	End Use	Category	Technology/Activity/Practice	Default Load Shape	Default Measure Life	Project Cost Cap	4/1/2008
CHVEN82015	R	Commercial	HVAC	Envelope	Air Sealing	ExComm	15	70%	0.13
IPLWS83116	R	Industrial	Process Loads	Wastewater System Improvements	Piping and Valves	IndOther	20	70%	0.12
CHVEN92015	L	Commercial	HVAC	Envelope	Air Sealing	NewCOMM	15	70%	0.20
RHVEN91007	L	Residential	HVAC	Envelope	Air Sealing	ResSector	15	70%	0.20
RHVEN81007	R	Residential	HVAC	Envelope	Air Sealing	ResSector	15	70%	0.20
IHVEN93018	L	Industrial	HVAC	Envelope	Air Sealing	IndOther	30	70%	0.12
CHVHI82025	R	Commercial	HVAC	HVAC System Improvements	Air-Source Heat Pumps	CommHEAT	15	70%	0.13
IHVHI83028	R	Industrial	HVAC	HVAC System Improvements	Air-Source Heat Pumps	IndOther	15	70%	0.12
CHVHI92025	L	Commercial	HVAC	HVAC System Improvements	Air-Source Heat Pumps	CommHEAT	15	70%	0.20
IHVHI93028	L	Industrial	HVAC	HVAC System Improvements	Air-Source Heat Pumps	IndOther	15	70%	0.12

This is the list of custom project measure reference numbers. There are both new construction/major remodel reference numbers as well as retrofit measure reference numbers by sectors. Use these reference numbers for entry on the Measure Input tab column B. This will enter the measure reimbursement rate, measure life as well as other information on the line where entered. If you do not find an appropriate measure reference number; work with your engineer to choose the closest appropriate measure reference number.

Document Version Control

Version Number	Date	Author/Owner	Change Description
1.0	**10/30/2018**	Alan M. Garton	This is NOT the original version of the instruction document. This document was updated from the original to better match the calculator and improve the visual aspects.