# Energy Efficiency: Option 2 Custom Project Calculator Instructions

## Version: 1.0

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## Purpose of Calculator

The primary purpose of the Option 2 Custom Project Calculator is to provide a single tool that can be used for: A) submitting all required and optional data for completed Option 2 custom projects into IS2.0; B) estimating the maximum amount of BPA reimbursement ($) for each project; and C) requesting reduced BPA reimbursement amounts for individual projects for EEI budget management purposes.

## About this Calculator

The Calculator includes three separate worksheets: "Measure and Project Input," "Funding Input and Summary" and "Measure List." The first two worksheets are used for input. The third tab "Measure List" is for reference when selecting a Reference Number and it contains all available measures and rebate amounts.

*Note: The "Measure and Project Input" tab allows up to 2000 measures. The "Funding Input and Summary"*

*Tab allows up to 500 projects. If a user attempts to add 2000 measures that result in 600 projects, the project data over 500 will not upload to the system. If a user needs to upload more than 2,000 measures or more than 500 projects, populate and submit another calculator to accommodate the additional data.*

## Measure and Project Input Tab

Row 1: Verify that cell "C1" is set to your utility name. If you are an Option 1 utility using this calculator to submit Non- Reportable savings, choose the "Option 1" utility in the drop-down.

Row 4: Option 2 Custom Project Required Fields indicates "Required" or "Optional" fields for Option 2 utilities.

Row 5: Indicates "Required" or "Optional" fields for Non-Reportable projects.

### Data Entry Tips

Columns B through AF are input fields. The majority of the input fields are free-text to allow for copy and pasting from utility databases. However, some fields, such as "Federal? (Yes/No)" in Column L, must match the type required as indicated in parentheses after each field name below. Please refer to Rows 4 or 5 of the calculator to determine if a field is optional, required or calculated.

## Tab Definitions

| Measure and Project Input | | |
|---|---|---|
| **Calculated** | | |
| **Column** | **Title** | **Description** |
| A | **Technology/Activity/Practice (TAP) (Calculated based on RefNo)** | Technology/Activity/Practice, calculated based on RefNo in Column A. |
| | | |
| **Column** | **Field** | **Type** | **Definition** |

| Column | Field | Type | Definition |
|---|---|---|---|
| B | **Utility Retail Rate ($/kWh)** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project<br>*(three digits to the right of the decimal)* | 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: $0.050 if rate is 5 cents per kilowatt hour). The system will accept three digits of precision. Each utility should define its methodology internally to calculate utility retail rate and apply it consistently across custom projects. BPA does not need to be informed on how the retail rate was determined. |
| **Site Information** | | | |
| **Column** | **Field** | **Type** | **Definition** |
| C | **Unique Site ID** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project | An ID that is unique to this site. Often the customer account number is used. Use this field for future projects at this site. |
| D | **Company Name** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project | Name of the utility's retail customer for the retail electric account applicable to this custom project measure. A numeric value is also acceptable as the Company Name. |
| E, F, G, H | **Facility Address, City, State, and Zip code** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project | The street address (not a Post Office Box), City, State, and Zip code where the project measure was installed. |

| Column | Field | Type | Definition |
|---|---|---|---|
| I | **Building Name(s)** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | If the site has multiple buildings, use this field to indicate the specific building where the measure was installed. |
| J | **Primary Building Use** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project<br>(Drop-down Selection) | Drop-down list provided. The text must match one of the standard customer types for the sector of the measure. The list of customer types is provided below. For example, "Large Office" in the commercial sector. Note: This column heading was previously labeled as "Sector Type" for the old PTR system. The new Primary Building Use list aligns with the building types used in the Seventh Power Plan. |
| K | **Secondary Building Use** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project<br>(Drop-down Selection) | Drop-down list provided. If this data is provided, the text must match one of the standard customer types for the sector of the measure provided below. For example, "Small Box Retail" in the commercial sector. This additional field has been added to collect data on secondary building uses in mixed use buildings for program and planning analysis. |
| L | **Federal? (Yes/No)** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project<br>("Yes"/"No" Selection) | Drop-down list provided. Input "Yes" or "No" to indicate if the measure was installed at a Federal facility. This field has been added to track energy savings at Federal facilities as most Federal facilities no longer receive reimbursement directly from BPA. |

## Project Information

| Column | Field | Type | Definition |
|---|---|---|---|
| M | **Actual Project Start Date (mm/dd/yyyy)** | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project | Date custom project construction began. Typically this is the date the retail customer received authorization from the utility to begin the project. The eligible reimbursement is calculated based on the project start date. This date could vary by utility. |
| N | **Completion Date of Project (mm/dd/yyyy)** | **Option 2:** Required<br>**Non Reportable:** Required<br>**Level:** Project | Date that the measurement and verification (M&V) of the installed custom project measure energy savings was completed. If this is a multiple-measure project, this should be the date when the M&V for all measures that were completed. |
| O | **Project Name** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | Name assigned to project by the utility. |

| Column | Field | Type | Definition |
|---|---|---|---|
| P | Utility-Assigned Project ID | **Option 2:** Required<br>**Non Reportable:** Required<br>**Level:** Project | ID assigned to the project `by the utility. For a multiple-measure custom project (with multiple reference numbers), enter the same project ID for each reference number so that the measures can be grouped together in the "Funding Input and Summary" tab for project-level calculations. The Utility-Assigned Project ID must be in order from smallest to largest (e.g., 111, 333, 555, 777, 999) for the system to group measures appropriately. The system will not be able to group measures into the correct project if the Utility-Assigned Project ID is not in order (e.g., 777, 111, 999, 555, 333). |
| Q | Resource Opportunity Type | **Option 2:** Required<br>**Non Reportable:** Optional<br>**Level:** Project | Drop-down list provided. Enter the type of project from the following three choices:<br>1) Retrofit<br>2) New Construction<br>3) Major Renovation |
| R | Process Type | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | For industrial projects, the type of industrial process used in the building. Eligible process types are listed below. |
| S | Third Party Contract Number | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | This is for third party use. Enter the contract number for the Third Party Program implemented with this measure. |
| T | Lighting Wattage Reduction (%) | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | This field is required for lighting measures only. |
| U | Audit Tracking Number | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | For utility use. |
| V | Container Name | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | Name of associated container or shopping cart for measures, if desired. |

| Measure Inputs | | | |
|---|---|---|---|
| **Column** | **Field** | **Type** | **Definition** |
| W | **Measure RefNo from the Measures_List tab** | **Option 2:** Required<br>**Non Reportable:** Required<br>**Level:** Measure<br><br>(Column A of Measure_List Tab) | Measure Reference Numbers (RefNos) required for bulk-uploading Option 2 data to the Customer Portal are listed in Column A of the Measure List Tab. To find a RefNo, use the auto filtering abilities to filter first by Column B: Resource Opportunity Type (new construction/major renovation (L) or retrofit (R)), 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 W of "Measure and Project Input" tab. For a multiple measure project, all RefNos must have the same Resource Opportunity Type and Sector. Note: For multiple-measure projects, all measure RefNos uploaded into the Customer Portal for each project must have the same first letter and the same first and second numbers. For example, all measure RefNos uploaded for a commercial retrofit project must be C**X**XXX**92**###. The bolded/underlined characters must match for all measures within a single project. |
| X | **Measure Name** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | Measure Name is assigned by the utility. This field may be used to describe the measure and differentiate between measures of the same TAP installed in one project (e.g., T8 lighting and LED lighting). |
| Y | **Estimated Measure Cost ($)** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | The estimated total measure cost (equipment & labor) to install the measure before the project was implemented. This data is used to calculate the Estimated Simple Payback at the project level (see Column Z of the "Funding Input and Summary" sheet). This field is required in order to calculate simple payback, which is calculated based on estimated cost, as well as savings. |
| Z | **Actual Measure Cost ($)** | **Option 2:** Required<br>**Non Reportable:** Required<br>**Level:** Measure | The final total measure cost (equipment & labor) to install the measure. |

| Column | Field | Type | Definition |
|---|---|---|---|
| AA | Estimated SITE Savings (kWh) | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | The estimated annual SITE (not Busbar) energy savings (kWh) to be achieved from the installation of this custom project measure before the project is implemented. This data is used to calculate the Estimated Simple Payback at the project level (see Column Z of the "Funding Input and Summary" sheet). [Note: This is for SITE (not Busbar) energy savings.] This field is required in order to calculate simple payback, which is calculated based on estimated savings, as well as cost. |
| AB | Actual SITE Savings (kWh) | **Option 2:** Required<br>**Non Reportable:** Required<br>**Level:** Measure | The verified annual SITE (not Busbar) energy savings (kWh) achieved from the installation of this custom project measure. Note: The Busbar energy savings will be automatically calculated within the calculator. |
| AC | Estimated Annual Non-Energy Benefits ($/Year) | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | Enter the estimated value of non-energy benefits. Examples of non-energy benefits include water savings or gas savings. Do not include estimated O&M benefits here. They are broken out separately in Column AE. This data impacts the calculation of the project-level B/C ratio (not the calculation of the BPA Reimbursement ($)). |
| AD | Actual Annual Non-Energy Benefits ($/Year) | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | Enter the verified/actual value of non-energy benefits. These may include water savings, or gas savings. This data impacts the calculation of the project-level B/C ratio (not the calculation of the BPA Reimbursement ($)). |
| AE | Estimated Annual O&M Change ($/Year) | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This column is for reporting the estimated 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 B/C ratio 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 B/C ratio calculation. |

| Column | Field | Type | Definition |
|--------|-------|------|------------|
| AF | **Actual Annual O&M Change ($/Year)** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | 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 B/C ratio 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 B/C ratio calculation. |
| AG | **Space Use Type (SUT)** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure<br>(Drop-down Selection) | This optional column is for recording the non-residential space type that the measure was installed in. From the drop-down list, select the space use type that best represents where those measures were installed on the project. Other is an acceptable option if none of the space type options are applicable. |
| AH | **Hour of Operation** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for recording the annual hours of operation for the non-residential building or space use type that the measure is installed in. The value entered should be an average annual hours of use for the chosen space use type from column AG where the measure is installed. |

## Project Level – Lighting Measures Only

| Column | Field | Type | Definition |
|--------|-------|------|------------|
| AI | **Trade Ally Company** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | This optional column is for non-residential lighting projects, and records the Trade Ally company name, if a trade ally assisted on the project. |
| AJ | **Trade Ally Individual** | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project | This optional column is for non-residential lighting projects, and records the Trade Ally personnel's name, if a trade ally assisted on the project. |

| Column | Field | Type | Definition |
|---|---|---|---|
| AK | NWTAN Member | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project<br>("Yes"/"No" Selection) | This optional column is for non-residential lighting projects, and records whether the Trade Ally (if one assisted on the project) is part of the BPA Trade Ally Network. Enter "Yes" or "No" as appropriate. |
| AL | NEEA NXT Level 1 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project<br>("Yes"/"No" Selection) | This optional column is for non-residential lighting projects, and records whether the Trade Ally (if one assisted on the project) has successfully completed the NEEA NXT Level 1 training. Enter "Yes" or "No" as appropriate. |
| AM | NEEA NXT Level 2 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Project<br>("Yes"/"No" Selection) | This optional column is for non-residential lighting projects, and records whether the Trade Ally (if one assisted on the project) has successfully completed the NEEA NXT Level 2 training. Enter "Yes" or "No" as appropriate. |

## Project Level – Lighting Measures Only

| Column | Field | Type | Definition |
|---|---|---|---|
| AN | Existing Equipment Classification | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure<br>*(Drop-down Selection)* | This optional column is for non-residential lighting projects, and records what type of previous lighting equipment that the new measures are replacing. Select the appropriate category from the drop down menu. |
| AO | Efficient Equipment Category | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure<br>*(Drop-down Selection)* | This optional column is for non-residential lighting projects, and records the type of new measures that are being installed. Select the appropriate category from the drop down menu. |
| AP | Efficient Equipment Sub Category | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure<br>(Drop-down Selection) | This optional column is for non-residential lighting projects, and records the sub category of the new measures that are being installed. Select the appropriate category from the drop down menu. |
| AQ | Fixture Count | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the quantity of overall fixtures of the new measures being installed. Enter the total quantity of efficient fixtures installed for that measure type. |
| AR | Efficient Lamp Count | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total quantity of lamps installed as part of the new measures. Enter the total quantity of efficient lamps installed for that measure type. |
| AS | Lamp Wattage | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the wattage of the efficient lamps installed. Enter the wattage of the efficient lamps installed for that measure type |

| Column | Field | Type | Definition |
|---|---|---|---|
| AT | Controls Category | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure<br>(Drop-down Selection) | This optional column is for non-residential lighting projects, and records the category type of controls installed on the measure, if applicable. Choose the appropriate control type from the drop down menu. |
| AU | Controls Count | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the quantity of controls used in conjunction with the efficient measure, if used. Enter the quantity of controls installed, if applicable. |
| AV | Equipment Savings Unadjusted | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total savings for the efficient equipment before adjustments for HVAC interactions, Market Average Baseline, Federal Standards, and Busbar. Enter the total unadjusted equipment savings. |
| AW | Equipment Savings Fully Adj | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total savings for the efficient equipment after adjustments for HVAC interactions Market Average Baseline, Federal Standards, and Busbar. Enter the total adjusted equipment savings. |
| AX | Controls Savings | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total savings for the controls connected to the efficient measures. Enter the total controls savings for that measure type. |
| AY | Equip Incentives | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total incentives for the non-controls efficient equipment installed. Enter the total equipment portion of incentives for that measure type. |
| AZ | Control Incentives | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | This optional column is for non-residential lighting projects, and records the total incentives for the controls used on the efficient equipment installed. Enter the total controls portion of incentives for that measure type. |

## Project Level – Lighting Measures Only

| Column | Field | Type | Definition |
|---|---|---|---|
| BA | Wildcard 1 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | These fields are optional fields for utility use as they see fit. Any values can be entered; for example, a Utility-specific project tracking identifier. |
| BB | Wildcard 2 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | These fields are optional fields for utility use as they see fit. Any values can be entered; for example, a Utility-specific project tracking identifier. |
| BC | Wildcard 3 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | These fields are optional fields for utility use as they see fit. Any values can be entered; for example, a Utility-specific project tracking identifier. |

| Column | Field | Type | Definition |
|---|---|---|---|
| BD | Wildcard 4 | **Option 2:** Optional<br>**Non Reportable:** Optional<br>**Level:** Measure | These fields are optional fields for utility use as they see fit. Any values can be entered; for example, a Utility-specific project tracking identifier. |

## Calculated Fields

Please note that all calculations on the Measure and Project Input Tab are at the measure level. All project-level calculations, which may roll-up measure level results, are done on the Funding Input and Summary Tab.

| Column | Field | Definition |
|---|---|---|
| BE | Measure Based Eligible Reimbursement Rate ($/kWh) | This is normally equal to BPA's reimbursement rate as of the date the project was started (Column M). For projects that started before Oct.1, 2011, this rate is based on the terms of BPA's non-standard agreement with each utility. For projects that started after Sept. 30, 2011, this rate is based on requirements in the BPA EE Implementation Manual. Note: As of Oct.1, 2011, BPA's reimbursement rate may vary by measure and/or sector. |
| **Estimated Calculations** | | |
| Column | Field | Definition |
| BF | Present Value of O&M Change | This formula uses the Present Value function in Excel with a 5% Discount Rate, the Measure Life (Column BD), and the Estimated Annual O&M Change (Column AE). [Note: Formula includes a (-1) multiplier.] |
| BG | Estimated – Total Costs | Sum of Estimated Measure Costs (Column Y) and Present Value of Estimated Annual O&M Change (Column AH), if O&M change is a positive value. |
| **Actual Calculations** | | |
| Column | Field | Definition |
| BH | Actual - B/C Ratio (Measure Level) | Total Present Value of Benefits (Column AP) / Actual - Total Costs (Column AQ). |
| BI | Calculated Reimbursement ($) | Calculated BPA reimbursement at the measure level (before project-cost caps). Equal to the Measure Based Eligible Reimbursement Rate (Column AG) multiplied by the Actual – Busbar kWh Savings (Column AL). |
| BJ | Actual - Busbar kWh Savings | Total savings at Busbar. Equal to the Actual Site kWh Savings (Column AB) multiplied by the Busbar factor. |
| BK | Present Value of Energy Savings | Avoided Cost per kWh Saved (Column AS) multiplied by Busbar kWh Savings (Column AL). |
| BL | Present Value of Non-Energy Benefits | This formula uses the Present Value (PV) function in Excel with a 5% Discount Rate, the Measure Life (Column BD), and the Annual Non-Energy Benefits (Column AD). [Note: Formula includes a (-1) multiplier as part of the PV formula in Excel.] |
| BM | Present Value of O&M Change | This formula uses the Present Value (PV) function in Excel with a 5% Discount Rate, the Measure Life (Column BD), and the Annual O&M Change (Column AF). [Note: Formula includes a (-1) multiplier.] |
| BN | Actual - Total Present Value of Benefits | Equal to Present Value of Energy Savings (Column AM) + Present Value of Non-Energy Benefits (Column AN) + Present Value of O&M Change (Column AO). If the Annual O&M Change (Column AF) is less than $0, then the Present Value of O&M Change (Column AO) is changed from a negative value to a positive value and is added to the total. [Note: If a measure reduces O&M costs, then the Present Value of O&M Change is treated as a "benefit."] |

| Column | Field | Definition |
|---|---|---|
| BO | Actual - Total Costs | Actual - Total Costs represent the first year cost of installing the measure/project. Equal to Actual Measure Cost (Column Z) + Present Value of O&M Change (Column AO). However, if the Annual O&M Change (Column AF) is less than $0, then the Total Costs (Column AQ) is simply = Actual Measure Cost (Column Z). [Note: If a measure increases O&M costs, then the Present Value of O&M Change is treated as a "cost."] |
| BP | Annual Energy Cost Savings | Equal to Actual SITE Savings (kWh) (Column AB) multiplied by avoided cost/kWh. |
| BQ | Avoided Cost per kWh Saved | Avoided cost per kWh saved. |

| Data Pulled from Measure RefNo | | |
|---|---|---|
| **Column** | **Field** | **Definition** |
| BV | Sector | Pulled from Column C of "Measure List." |
| BW | End Use | Pulled from Column D of "Measure List." |
| BX | Category | Pulled from Column E of "Measure List." |
| BY | Technology/ Activity/ Practice | Pulled from Column F of "Measure List." |
| BZ | Lost Opportunity Type | Pulled from Column B of "Measure List." |
| CA | Default Load Shape | Pulled from Column G of "Measure List." |
| CB | Default Measure Life | Pulled from Column H of "Measure List." |
| CC | Row Reference on List Minus 1 | |
| CD | Unique Project Indicator | |
| CE | Cumulative Project Number | |
| CF | Array Match | |

**Note: Columns CC - CM are used for project-level calculations.**

| Error Fields | | |
|---|---|---|
| **Column** | **Field** | **Definition** |
| CG | Refno Check: 1 = Error | Displays if an invalid measure Refno (W) has been entered. An invalid Refno is any Refno not included in the measure list. |
| CH | Sector Check: 1 = Error | Displays if the sector of the selected measure Refno does not match the sector of other measures within the project. |

| Column | Field | Definition |
|---|---|---|
| CI | **Resource Opp Check: 1 = Error** | Displays if the sector of the selected measure Refno does not match the resource opportunity type of other measures within the project. |
| CJ | **Project Start Date Check: 1 = Error** | Displays if the project start date (M) has not been entered for the measure. |
| CK | **Different Date Check: 1 = Error** | Displays if the project start date (M) varies for measures within a single project. |
| CL | **Sector or Date Error** | Displays if sector or project start date is not applicable to the non-standard agreement. Column AG will show "NA" if incorrect sector or date is chosen. |
| CM | **Zero Savings or Cost Warning** | Displays if there are no savings or costs input into the measure input fields (Y,Z, AA or AB) |

## Funding Input and Summary Tab

The main purpose of this Tab is to identify and input the funding source used for each project. The "Funding Input and Summary" Tab rolls up measure-level data from the "Measure and Project Input" Tab to project level data. **Please refer to Rows 2-3 of the calculator to determine if a field is optional, required or calculated.**

| | Measure and Project Input | | |
|---|---|---|---|
| **Column** | **Field** | **Type** | **Definition** |
| A | Utility Assigned Project ID | Calculated | Calculated from Column P in "Measure and Project Input" tab. Utility-assigned Project ID is used to sum all measures/values from the "Measure and Project Input" tab for a single project. |
| B | Project Name | Calculated | Calculated from Column O in "Measure and Project Input" |
| **Column** | **Field** | **Type** | **Definition** |
| C | Reportable to BPA | Required ("Yes"/"No" Selection) | Drop-down list provided. Indicate whether or not a project is reportable to BPA. Refer to the Implementation Manual for definitions of reportable projects. |
| D | Percentage EEI Funding | Required if Reportable | 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 Column X. Changing this percentage will change the amount of EEI you receive from BPA. The user may input the required precision to achieve the resulting reimbursement requested (e.g., can input multiple digits after the decimal to conduct the calculation). Percentage of EEI is now required to determine the funding source of the project. |
| E | Total Project Payment to End User | Optional | Required for all industrial projects after April 1, 2010, and for all projects after February 1, 2013, when you request a reimbursement amount from BPA that is less than the maximum BPA reimbursement. Check Column G to determine whether or not this is required. Enter total payment to the end user. This will ensure proper crediting of reportable self-funded savings. |
| F | Simplified B/C Ratio | See Column H if Required | Enter the simplified B/C ratio for those projects started before October 1, 2011. This value must be calculated off-system. Check Column H to determine if this is a required field. |
| G | Total payment to end user (Column E) required? | | This column will show "Required" if the total payment to end user is required for the project. |

| Column | Field | Type | Definition |
|---|---|---|---|
| H | Simplified B/C ratio (Column F) Required? | Calculated | This column will show "Required" if the simplified B/C ratio is required for the project. |
| I | Any Errors? | Calculated | Will display whether any errors are occurring in Columns AH through AV. If "Yes," check Column AH – Column AV to identify the source of the error. |
| J | Percentage of funds not requested from BPA | Calculated | Percentage of funds not requested through EEI. Equal to 100% minus Percentage EEI Funding (Column D). |
| K | Total Actual Site Savings (kWh) | Calculated | Sum of total savings for all measures in a project. Sum of Actual Site savings ("Measure and Project Input" Column AB). |
| L | Total Actual Project Busbar Savings | Calculated | Sum of total savings at Busbar for all measures in a project. Sum of Actual – Busbar kWh Savings ("Measure and Project Input" Column AL). |
| M | EEI Funded Savings | Calculated | Equal to Total Actual Project Busbar Savings (Column L) minus the Self-funded Savings (Column N). |
| N | Self-funded Savings | Calculated | Equal to Total Actual Project Busbar Savings (Column L) times the Self-funding allocated kWh (%) (Column O). |
| O | 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. |
| P | Non-Reportable Savings | Calculated | Non BPA-funded activities that are indicated as Non-Reportable in Column C. Equal to Total Actual Project Busbar Savings (Column L) if Column C = "No." |
| Q | Sum of Present Value of Project Benefits ($) | Calculated | Sum of present value of project benefits for all measures for the project. Equal to the sum of "Measure and Project Input" Actual – Total Present Value of Benefits (Column AP) for all measures in project. |
| R | Sum of Project Costs ($) | Calculated | Equal to the sum of "Measure and Project Input" Actual Measure Cost (Column Z) for all measures in project. |
| S | Sum of Total Project Costs ($) | Calculated | Sum of total measure costs for project, including O&M costs if applicable. Equal to the sum of "Measure and Project Input" Actual - Total Costs (Column AQ) for all measures in project. |
| T | Project TRC B/C Ratio | Calculated | Equal to the Sum of Present Value of Project Benefits (Column Q) divided by the Sum of Total Project Costs (Column S). The B/C Ratio for the sum of all projects must be at least 1.0 in cell T1. |

| Column | Field | Type | Definition |
|--------|-------|------|------------|
| U | Project Cost Cap ($) | Calculated | Cap for project reimbursement. Typically 70%; see the Custom Projects section of the EE Implementation Manual for project cost cap requirements. |
| V | Sum of Measure-Level Reimbursement ($) | Calculated | Equal to the sum of "Measure and Project Input" Calculated Reimbursement (Column AK) for all measures in a project. |
| W | Maximum Project BPA Reimbursement ($) | Calculated | Maximum eligible BPA reimbursement. Equal to the lesser of Sum of Measure Level Reimbursement (Column V) or Project Cost cap (Column U). |
| X | Requested BPA Reimbursement – EEI ($) | Calculated | Total requested BPA reimbursement. Equal to Maximum Project BPA Reimbursement multiplied by the minimum of 100% or Percentage EEI Funding (Column D). |
| Y | Adjusted Project BPA Reimbursement ($) | Calculated | The adjusted BPA reimbursement. For projects where Total Payment to End User is required (Column E), equal to the lesser of the Total Payment to End User (Column E) or the Requested BPA Reimbursement – EEI (Column X). For projects where Total Payment to End User is NOT required (Column E), equal to the Requested BPA Reimbursement – EEI (Column X). |
| Z | Estimated Simple Payback (Years) | Calculated | Estimated project simple payback. Equal to the sum of estimated total costs divided by the estimated savings times the retail rate. |
| AA | Actual Simple Payback (Years) | Calculated | |

| Errors | | | |
|--------|-------|------|------------|
| **Column** | **Error Title** | **Type** | **Definition** |
| AH | Error: Requested EEI Percentage Exceeds 100% or is less than 0% | Derived | Displays if Column D > 100%. |
| AI | Must insert payment to End User | Derived | Displays if Column G = "Required" and E (Total Project Payment to End User) is blank. |
| AJ | Invalid RefNo in Measure Input Tab | Derived | Displays if an invalid Refno has been entered in the Measure and Project Input tab for one or more measures within a project (Check Measure and Project Input Errors to identify which measure). |
| AK | Must input "Reportable" or "EEI %" | Derived | Displays if Non-Reportable (Column C) has been left blank or Percentage EEI Funding (Column D) has been left blank. |

| Column | Error Title | Type | Definition |
|---|---|---|---|
| AM | Measure RefNos do not match Resource Opportunity Type | Derived | Displays if the Resource Opportunity Type of one or more of the measure Refnos (from Measure List tab, Column A) do not match the Resource Opportunity Type for the project (Measure and Project Input tab, Column Q). (Check Measure and Project Input Errors to identify which measure). |
| AN | Project Includes Multiple Sectors | Derived | Displays if the selected measures within a single project include measures from more than one sector. (Check Measure and Project Input Errors to identify which measure). |
| AO | Must Enter Project Start Date for Each Measure within Project | Derived | Displays if the project start date (Measure and Project Input tab, Column M) has not been entered for a measure within that project. (Check Measure and Project Input Errors to identify which measure). |
| AP | Project Dates Differ within Single Project in Measure Input Tab | Derived | Displays if the project start date (Measure and Project Input tab, Column M) and completion date of project (Measure and Project Input tab, Column N) vary for measures within a single project. (Check Measure and Project Input Errors to identify which measure). |
| AQ | Must Enter Actual Measure Cost in Measure Input Tab | Derived | Displays if actual SITE savings (kWh) (Measure and Project Input tab, Column AB) has not been entered. |
| AR | Must Enter Actual Measure Savings in Measure Input Tab | Derived | Displays if actual measure cost (Measure and Project Input tab, Column AL) has not been entered. |
| AS | Duplicate Project ID | Derived | Displays if a duplicate utility-assigned project ID appears within the calculator. |
| AU | Dates or Sector Chosen Not Applicable | Derived | Displays if project start day or sector is not applicable to a utilities non-standard agreement. |
| AV | Project is Non-Reportable but EEI funds are requested | Derived | Displays if "No" is chosen in Column C and there is also a % greater than 0 included in Column D. |

## Measure List Tab

The "Measure List" tab includes all measures and their reference numbers for all sectors, end uses, categories, and technology/activity/practice (TAP). Whenever possible, it is recommended to select the measure at the most granular level of detail. However, interactive measure TAPs exist for most categories to accommodate measures with interactive savings. The new level of measure detail captured through the TAP provides BPA with the information needed to better analyze regional savings achievements, gather information to calculate market saturation and remaining potential, plan and develop programs around energy savings opportunities, and to provide information needed for the development of the Council Power Plan. In addition, a key outcome of the Post-2011 process was a shift to more regional consistency amongst all utilities. The inclusion of the same measure TAPs for both Option 1 and Option 2 customers brings consistency to custom project reporting.

## Document Version Control

| Version Number | Date | Author/Owner | Change Description |
|---|---|---|---|
| 1.0 | 5/22/2019 | Alan M. Garton | This is NOT the original version of the instruction document; version documenting will commence with this version (1.0) and will be documented in this section going forward. This document was updated from the original to better match the calculator and improve the visual aspects. |
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