

TECHNOLOGY ASSESSMENT CALCULATOR MANUAL

OVERVIEW OF CALCULATOR

The Caribbean Renewable Energy (RE) Technology Assessment Calculator is a web-based calculator which allows the user to conduct basic cost analyses of renewable energy technologies (RETs) under Caribbean-specific conditions, for instance as it relates to RE resource characteristics, technology costs and financing conditions. The calculator is intended for businesses or home-owners looking to produce energy, primarily for self-consumption, or for a utility or independent power producer looking to sell power to a third party(ies).

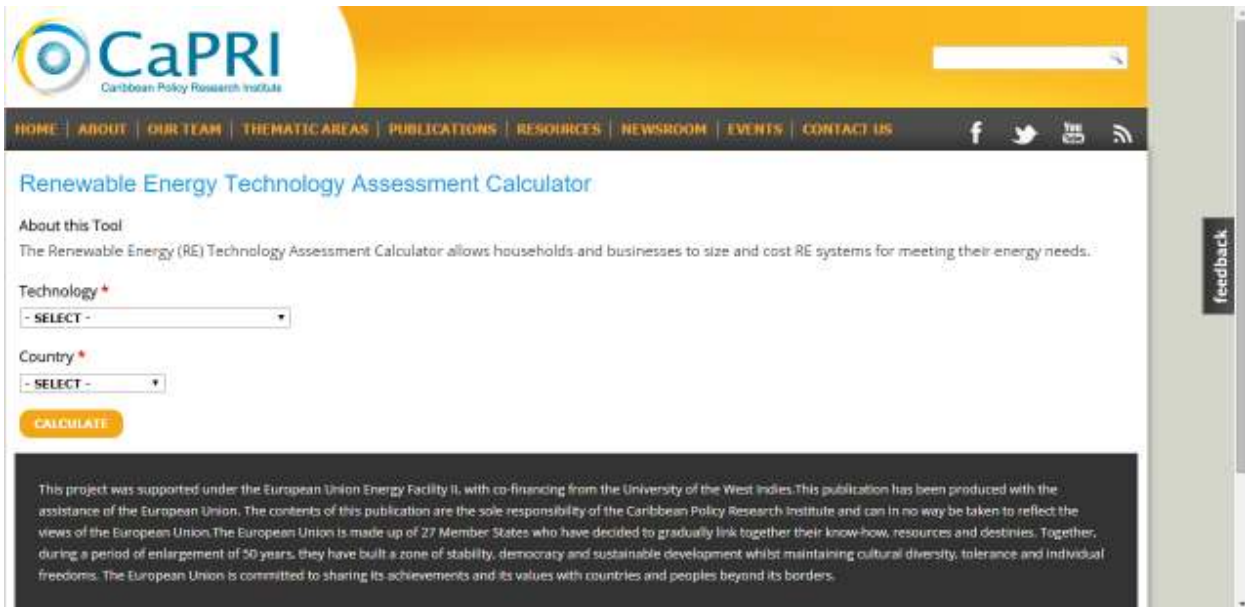
The calculator can be used to assess RE projects, according to: technology type, country of implementation and intended market application (e.g. residential, commercial, utility/IPP). The parameters used in calculations are specific to the target country of interest/selected. The user can also specify some of the parameters himself/herself, if desired, to reflect specific circumstances. With only a few basic inputs from the user, the calculator determines key technical and financial results that the user can use to determine the viability and suitability of the RE project for the desired market application and target country.

STRUCTURE OF CALCULATOR

The calculator functions with a set of inputs, provided by the user, to generate outputs. Inputs can be prompted either via drop down lists, from which the user selects amongst a limited set of pre-defined options, or via open entry, used for inputs that are very user-/situation- specific e.g. average energy consumption per month, where the user is required to enter his/her own data. Mandatory inputs are identified by a red asterisk to the right of the input field label. Instructive text has been included below several key entries, to guide the user on the type and range of input that is expected. The user is advised to read these to avoid incorrect or inaccurate outputs. All open entry inputs have been given a default value – considered to be the value most broadly applicable based on data collected by the CaPRI RE team.

HOW TO USE THE CALCULATOR

Your initial point of contact upon arrival to the calculator should be the calculator's landing page as shown in the screen shot below. This screen is your starting point where you are given the option of selecting a RET and your target country. You are required to select one of the RETs in the drop down list, then a target country before proceeding.



Screen shot of Landing page

TO START YOUR ANALYSIS

Both technology and target country must be selected before proceeding.

- Select your RET by clicking on the small arrow to the right of the “Technology” drop-down list, then select one of the options displayed
- Repeat the above for selecting “Country”. Not all RETs are applicable to all target countries, so the target countries available for selection will be dependent on the RET selected.



Screen shot of drop-down list country selection

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- After you have selected your RET and target country, a combination of drop-down lists and open entry inputs will be displayed, specific to the RET and country selected.

To COMPLETE YOUR ANALYSIS

- Select your market application from the drop-down list
- Whether by drop-down list or manual entry, insert/change the remaining parameters below to entries that you believe are most accurate and relevant to the RET and country of interest. If you are not sure of a particular parameter, you may leave the default value. Please remember to always read and follow the guiding narrative below the input fields.
- You may ignore the last two input fields – “Scenario of penetration..” and “Carbon emissions price..”, as these fields work only with the [Socio-economic Analysis Tool](#).

The screenshot shows a form with the following fields and values:

- No. Dishwashers in establishment using hot water: 0
- Number of occupants (occupants/est.): 4
- Occupancy rate (%): 80
- Import duty policy: NORMAL RATE
- General consumption tax (GCT) policy: NORMAL RATE
- Proportion of own up-front capital (%): 0
- Interest rate (fixed) on debt (%): 7
- Loan financing period (yrs): 5

Below the fields, there is a note: "Please enter the % of the system cost the user will pay up-front i.e. not financing through loans. Use numbers between 0 & 100 (representing respectively 0% and 100%)".

Screen shot of following entries for Solar Water Heater RET

To GET YOUR RESULTS

- Check that you are satisfied with your entries or changes made to the input fields, then click “Calculate” at the bottom of the page

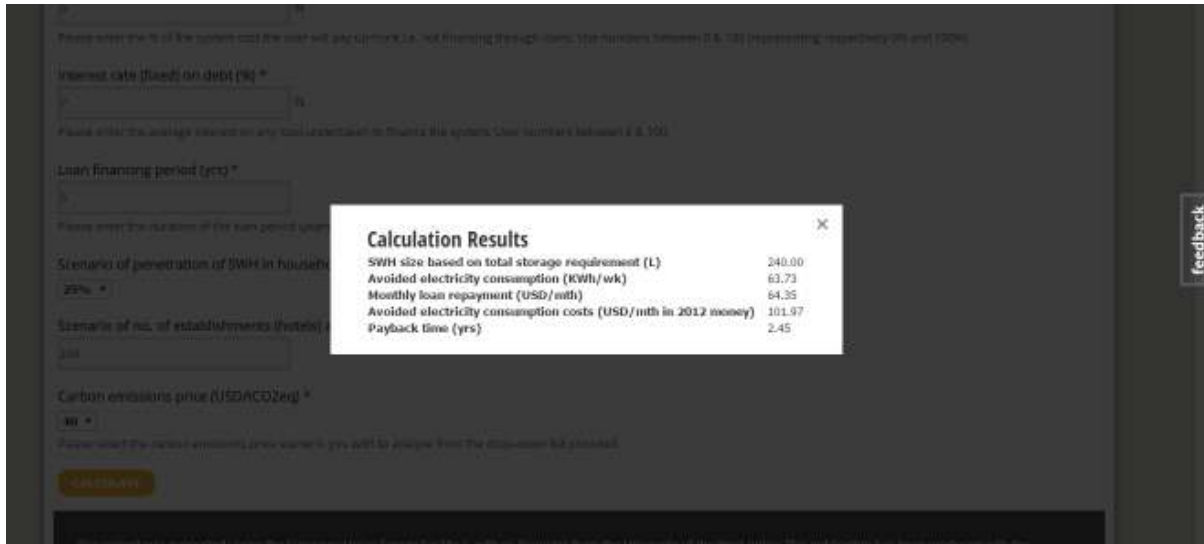
The screenshot shows the bottom of the form with the following elements:

- Scenario of no. of establishments (hotels) adopting SWH: 1000
- Carbon emissions price (USD/tCO₂eq): 40
- A "CALCULATE" button.
- A footer text block: "This project was supported under the European Union Energy Facility II, with co-financing from the University of the West Indies. This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of the Caribbean Policy Research Institute and can in no way be taken to reflect the views of the European Union. The European Union is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 30 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders."

Screen shot of “Calculate” button

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- Clicking “Calculate” will result in a pop-up “Calculation Results” window, centered in your screen, with all the results and viability indicators displayed. Please note that if a result window does not appear after clicking “Calculate”, you have most likely either failed to select/input a mandatory entry (in this case please scroll back up the page to check for an error message indicating missing entries), or pop-ups are being blocked by your browser.



Screen shot of results window

To close the “Calculation Results” window, simply click on the “x” at the top right of said window, or press the ‘Esc’ key on your keyboard. To start a new assessment, simply refresh your browser

FEEDBACK

Your feedback is valuable to us as we strive to make this tool as useful as possible. To access the feedback form, click on the feedback tab located to the right of the webpage, then select the appropriate feedback form. The feedback form consists of “rating” the calculator according to specific criteria (accuracy, user-friendliness etc.) and should take no more than a few seconds to complete.

CONTACTS

You may signal concerns or suggestions, by using the Contact Form in the “Contact the database team” section or by sending us an email: **renewable-energy@capricaribbean.org**