PoliNRG
Robust eNergy desiGner

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1 What is PoliNRG

PoliNRG is a novel procedure for the robust design of off-grid electric power system that exploits a bottom-up approach. Parameters' uncertainties deeply affect the design of the system, so an heuristic optimization method is used to find the most robust design according to different load evolution scenarios. The procedure developed is devoted to map uncertainties and provide information for decision makers.

2 How to use PoliNRG

You need Matlab 2018 to run PoliNRG because the graphic user interface is not supported in previous versions. In the intallation folder you can find a file called PoliNRG.mlappinstall. With a double click on this file, the installation procedure will add PoliNRG to the list of you Matlab apps.
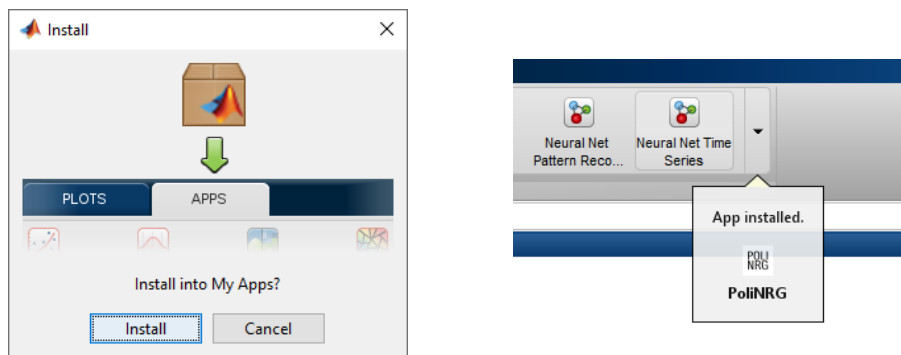

Figure 1: PoliNRG installation procedure

When you open *PoliNRG* the GUI showed in Figure 2 should appear on your screen. You can find many information buttons that can indicate you how to fill correctly the forms. Before running your own case study, we suggest you to open one already created. To do this, click on the *open* button and open the file called *NRG_Input_Tanzania* that you can find in the folder *CaseStudy_Tanzania*. Explore all the tabs, you can see that five scenarios have been considered for

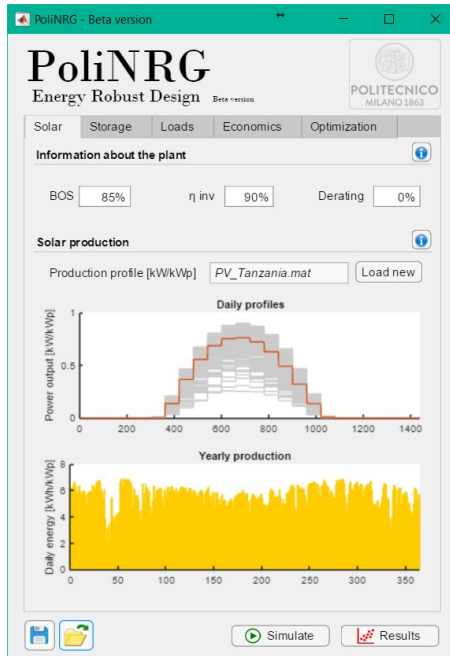this case. You already have the results for this case, to see them click on the button *Results* and a new windows shoud open (Figure 3).
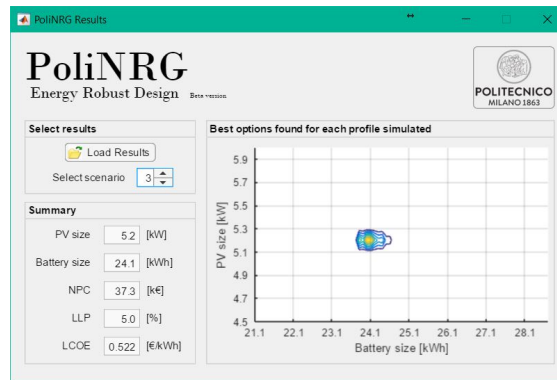

Figure 2: PoliNRG input window

Figure 3: PoliNRG Results