

Setup and run instructions:

- 1) Run "Utility_Battery_Programmer.exe" to initialize the setup wizard and proceed by pressing "Next". The wizard installs the package and Matlab's Runtime Compiler.
- 2) After the installation is complete, make sure your user account has the permission to read from and write to all the files in "/Utility_Battery_Programmer/application/Output" and "/Utility_Battery_Programmer/application/load_data".
- 3) To run the package, run "/Utility_Battery_Programmer/application/Utility_Battery_Programmer.exe". A dialoge window should open. Answer the questions by typing a value or name in the box below each question.
- 4) If your answer to Question 1 is NOT "3", then leave the box below Question "2" empty. If your answer to Question 1 is "3", then type down the name of your ".csv" file which contains the hourly retail load data (e.g., retail_load_15_to_17-July.csv). The datafile must have a single column containing the hourly retail load values in MW for any number of days. Example files can be found in the Folder: "/Optimal_Battery_Programmerapplication/load_data".
- 5) In Question 10, the data file containing the hourly market prices must have the same format as described in Item 4.
- 6) Please make sure that the data files for Questions 2 and 9 are located in the path: "/Utility_Battery_Programmer/application/load_data".
- 7) At this time, the algorithm may exhibit instability or take longer to converge for the cases where:
battery capacity < 100 MWh, charging rate < 30 MW, maximum arbitrage < 50 MW. Indeed for some of these cases the problem can be infeasible.