

PowerMarket Client Instructions

Connecting to a Market

To begin, visit <http://people.tamu.edu/~weit1/> to access the PowerMarket Client. By default, this webpage redirects to the client side first, as seen in Figure 1.

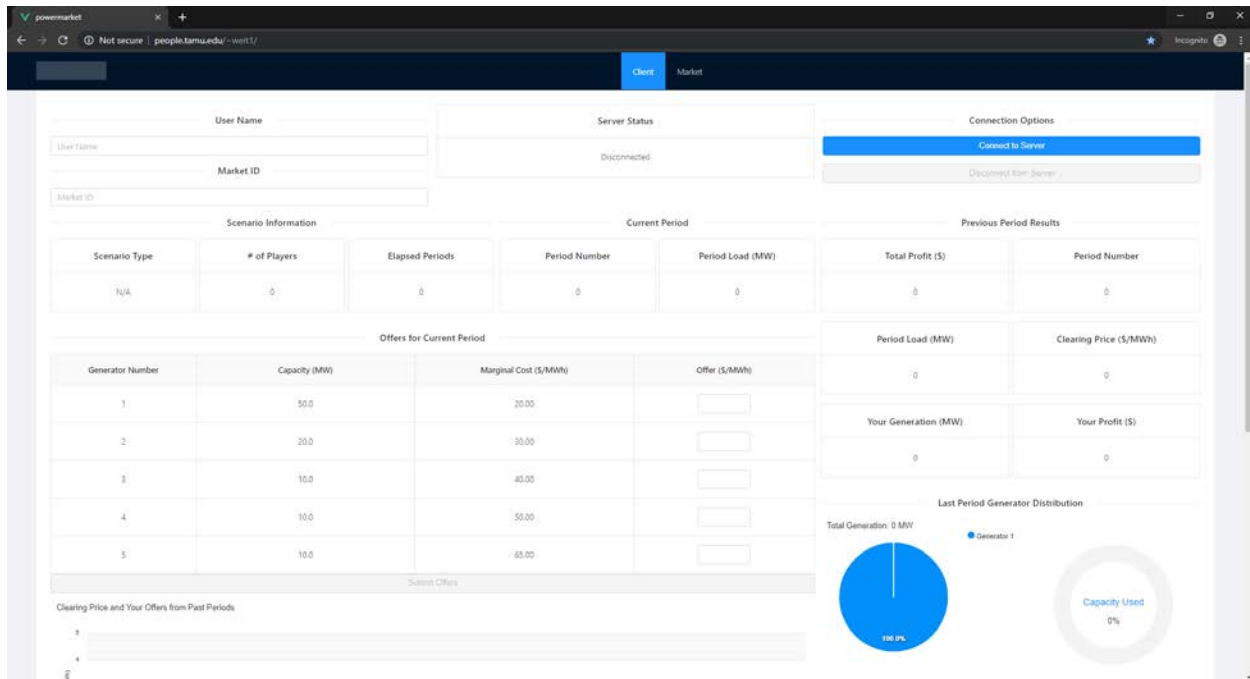


Figure 1: Client Window on Startup

- 1) The first two pieces of information you should provide are the **Market ID** and your **Username**. Whoever is operating your market will provide you the **Market ID**.
- 2) After being provided with the **Market ID** and entering a **Username**, you can click on the **Connect to Server** button, which will let you know whether you have properly connected to the server.

Display Cards

Several display cards show you relevant information to your market. This section describes each set of cards.

Scenario Information

The scenario information cards, shown in Figure 2, give you information about your market. There are two market types, Last Accepted Offer (LAO) and Pay As Offered (PAO). The cards also tell you how many players are in your market, along with how many periods have elapsed.

Scenario Information		
Scenario Type	# of Players	Elapsed Periods
N/A	0	0

Figure 2: Scenario Information Cards

Current Period

The current period cards show you both the current period number, and how much load your market is trying to serve during the current period. This information updates at the start of every period.

Current Period	
Period Number	Period Load (MW)
0	0

Figure 3: Current Period Cards

Previous Period Results

The previous period results show you a variety of information that you can use to make bids for successive period or to track your prior results.

- Total Profit: Totals your profit over all previous periods.
- Period Number: Tells you what the previous period number was.
- Period Load: Tells you what the load being served was for the previous period.
- Clearing Price: Tells you the clearing price for last period.
- Your Generation: Tells you how much generation you provided last period.
- Your Profit: Tells you how much money you made last period.

Previous Period Results	
Total Profit (\$)	Period Number
0	0
Period Load (MW)	Clearing Price (\$/MWh)
0	0
Your Generation (MW)	Your Profit (\$)
0	0

Figure 4: Previous Period Results

Submitting Offers

The **Offers for Current Period** card shows you the generators you have currently available to you, along with their capacities and their marginal costs. Note that the PowerMarket currently assumes that the marginal cost for each generator is a constant value. The **Offers** column is where you will input your offers, in units of (\$/MWh).

Offers for Current Period			
Generator Number	Capacity (MW)	Marginal Cost (\$/MWh)	Offer (\$/MWh)
1	50.0	20.00	<input type="text"/>
2	20.0	30.00	<input type="text"/>
3	10.0	40.00	<input type="text"/>
4	10.0	50.00	<input type="text"/>
5	10.0	65.00	<input type="text"/>
Submit Offers			

Figure 5: Current Period Offers

Visualizing Each Period

The PowerMarket also provides several visualizations for the convenience of the user, in order to make better predictions.

Bids and Clearing Prices

This plot shows users a historic line graph with their previous bids and the clearing price for each period. This information is particularly useful in identifying which of your bids were equal to or below the clearing price.

Clearing Price and Your Offers from Past Periods



Figure 6: Bids and Clearing Prices Plot

Period Profits and Total Profits

This plot shows users both their profits per period, along with the evolution of their total profit. This information can be used to identify in which periods were your bidding strategies successful, and in which periods they were not.

Total Profit and Previous Period Profits

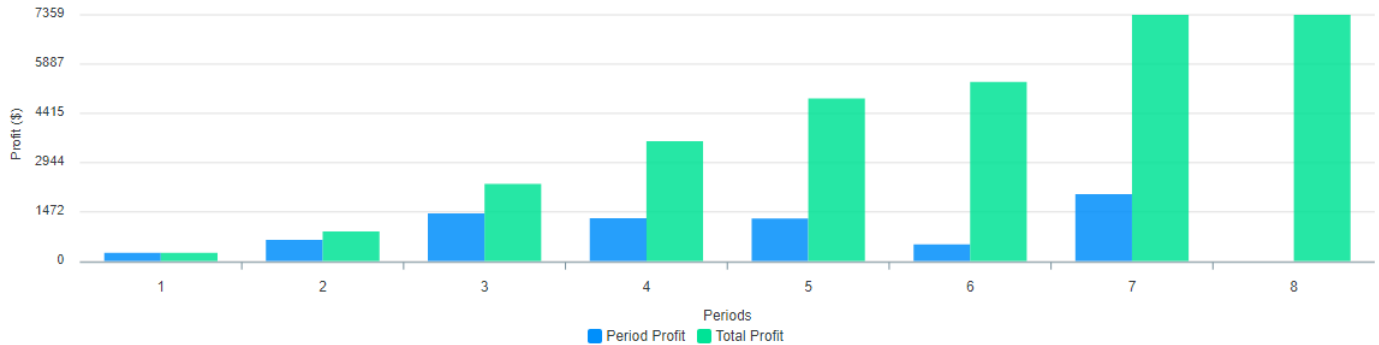


Figure 7: Profit Plots

Generator Distribution

The final two visualizations provided show you your generator distribution for the prior period. The first visualization shows you, out of all your generation, what percentage of your total generation was provided by what generators. The left circle shows you how much of your total capacity was purchased by the ISO in the last period.

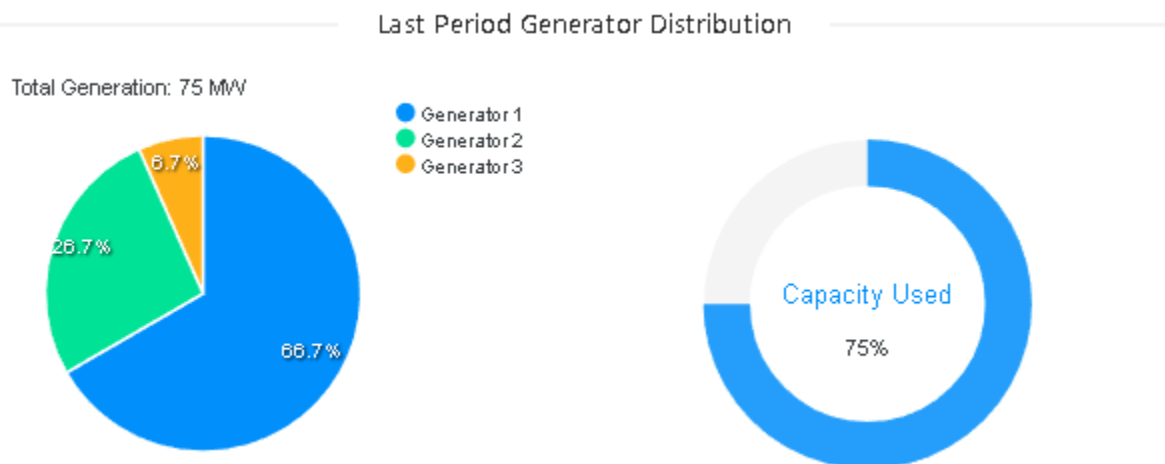


Figure 8: Generator Distribution Plots

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