

Athens, 1 June 2021

Dear Madams/Sirs,

I would like to mention the actual and expected costs for Battery Energy Storage Systems (BESS).

A BESS comprise battery pack units (cells + electronics + packaging), the PCS (power conditioning system), cabling / auxiliary devices and housing (usually a 40 feet container).

In your table you refer only to power of the storage unit and not to its storage capacity. A BESS of rated power of 1 MW could have storage capacity of 1 MWh, 2 MWh or even more. I will refer to the cost of a 1 MW / 2 MWh BESS (two hours of storage) because it is the most common type of BESS unit used today.

According to Bloomberg NEF, Lithium battery pack units reached in year 2020 prices below 100 \$/kWh.

<https://about.bnef.com/blog/battery-pack-prices-cited-below-100-kwh-for-the-first-time-in-2020-while-market-average-sits-at-137-kwh/>

The cost for PCS is less than 35.000 €/MW. The cost for cabling, auxiliaries and housing is less than 25.000 €/MW.

According to the above, the cost for a 1 MW / 2 MWh BESS is on the average 284 k€ and has even reached prices below 222 k€.

Please noted that personal experience from relevant contract negotiations is that Bloomberg published prices are realistic.

In addition to the above, please note that big photovoltaic companies are entering the storage market and we expect significant cost drop in the next two years. Therefore, for bigger systems (e.g. 50 MW / 100 MWh) we can expect in year 2022 a cost of less than 250 k€ per 1 MW / 2 MWh BESS installed.

CONE also includes connection costs, which in our case will not be over 30 k€/MW, project development costs, which should not be over 40 k€/MW, and financial and other costs, which should be less than 20 k€/MW.

Therefore, CONE for battery storage in 2022 should be less than 340 k€ per 1 MW / 2 MWh.

In year 2023 the cost is expected to drop even more as we expect the market entry of new big suppliers.

Finally, operational costs are note expected to be over 15 k€ per 1 MW / 2 MWh.

Sincerely,

Dr. Platon Baltas

