

# Master thesis / Bachelor thesis / Project work

## *Development of a modular cost model for the planning of a battery gigafactory*



Picture source: Solarserver

### Initial situation:

More and more battery cell gigafactories are currently being planned and built in Europe. The decisions made in the design of the process chain and the selection of technology have a major influence on the profitability and competitiveness of the gigafactory, as the design of the process has an impact on costs, process times, logistics processes, scrap rate, etc. As the process design of the gigafactory has a major impact on the profitability of the Gigafactory, a complete overview of capex and opex in the long term is a relevant information during the planning phase.

### Your task:

In this work, a modular cost model is to be built up in which, in particular, different technologies per process step can be compared with each other and their effects on process time, costs, size and rejects analyzed. In addition, peripheral elements and logistics will also be considered. Based on a literature research, all potential technologies, logistics and peripheral elements for a Gigafactory will be selected and the cost model will be developed in an intelligent tool (Excel, Python, etc.). Finally, a recommendation for the optimal process and technology chain for a gigafactory will be made.

### Requirements:

- Degree in engineering, computer science (or comparable)
- Structured way of working
- Good knowledge of PowerPoint, Word and Excel

### Offered:

- Fast processing
- Delimited tasks and flexible processing
  - Professional supervision and insight into industry and practice
  - Independent implementation with consultation via Microsoft Teams

### Interested?

Please send a current transcript of grades as well as your CV and references to the e-mail address below.

### Your contact at the PEM:

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