

NRGISE

Python Simulation Framework for Energy Storage Systems

Tobias Rohrer

tobias.rohrer@ise.fraunhofer.de

Fraunhofer Institute for Solar Energy Systems
Group of Applied Storage Systems

Goal

Find optimal energy system configurations

- Optimal storage sizing
- Optimal control strategy
- Energy system configuration

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By

- Inclusion of detailed cost model
- Inclusion of storage aging
- Enabling easy controller transfer into the field

How is it (roughly) build?

Simulate One Arbitrary Energy System

NRGISE

Simulation

Energy System

- Battery
- PV System
- Grid
- ...

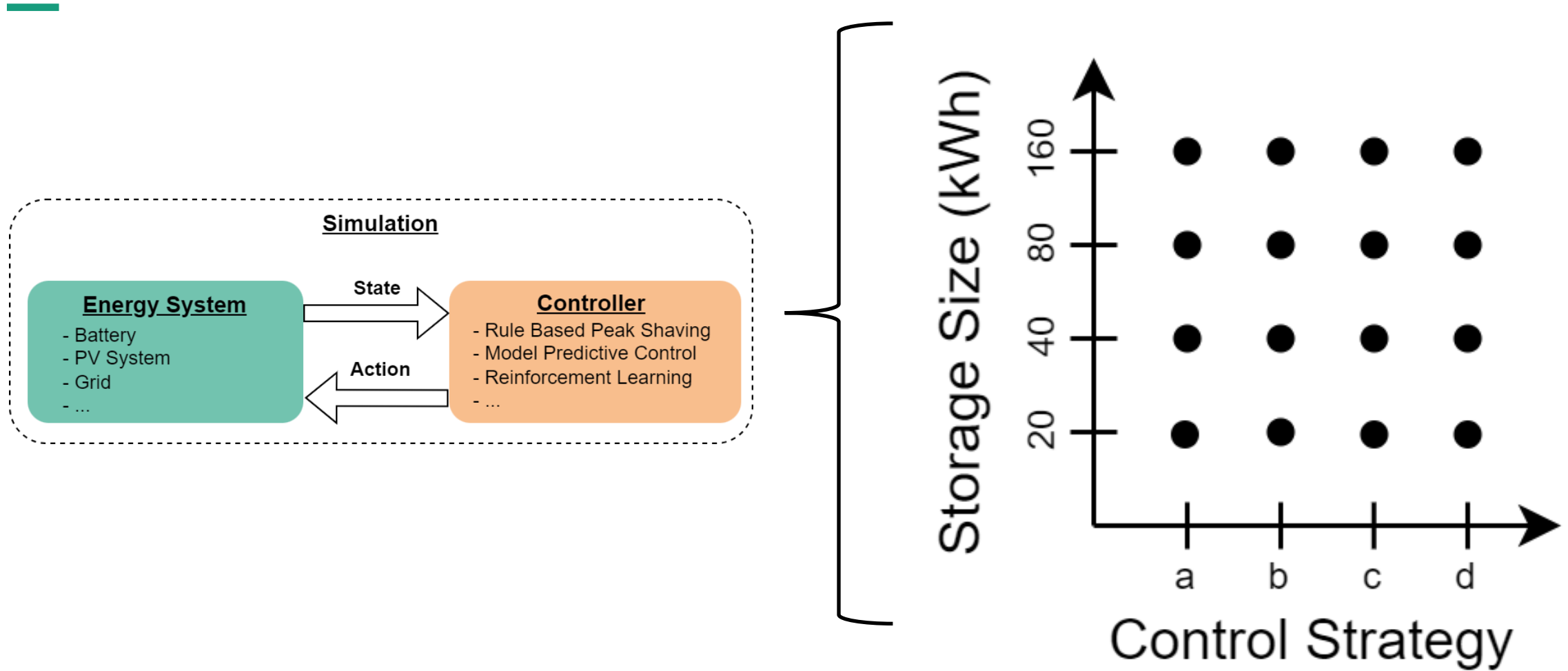
State

Action

Controller

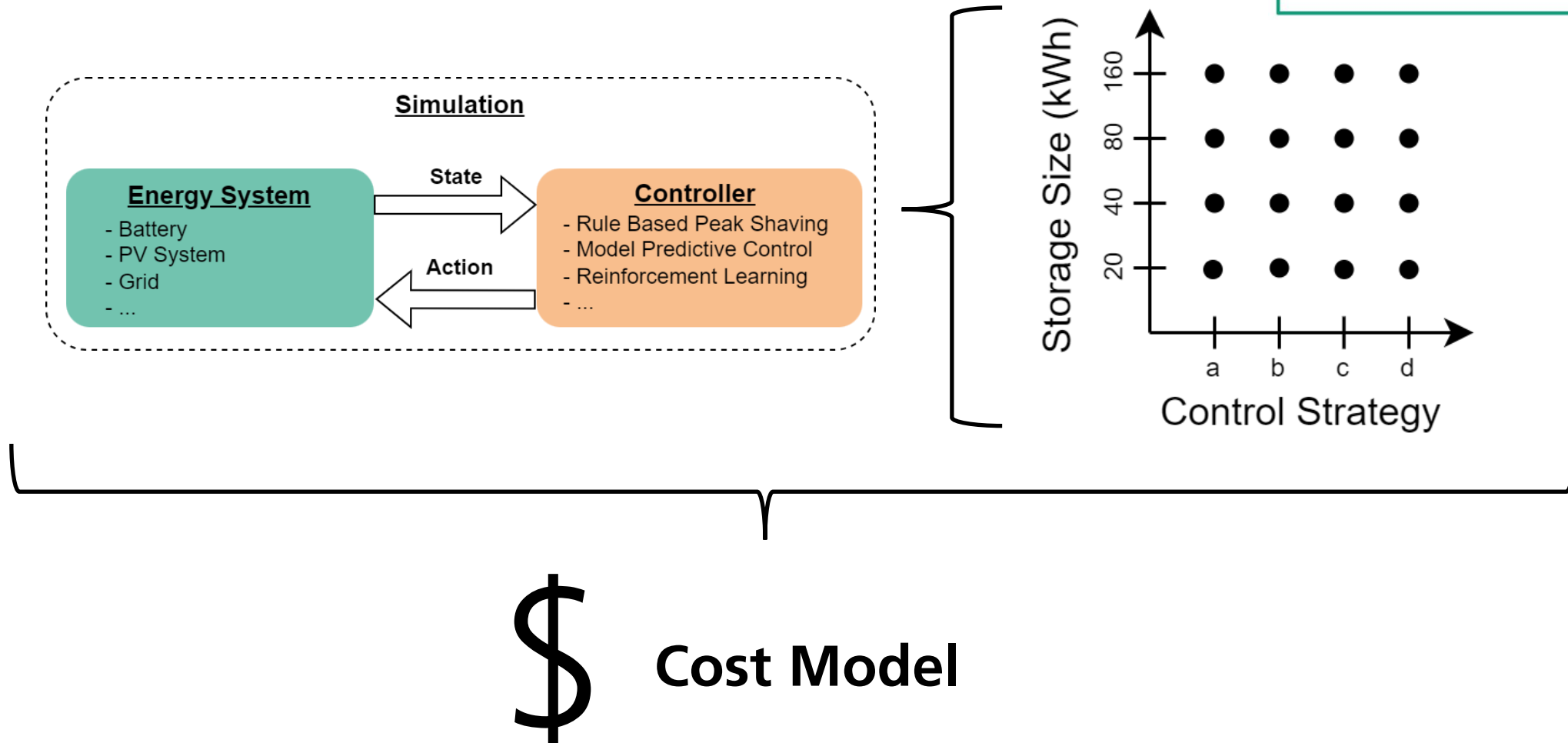
- Rule Based Peak Shaving
- Model Predictive Control
- Reinforcement Learning
- ...

Simulate Multiple Energy Systems



Select the „Best“ One

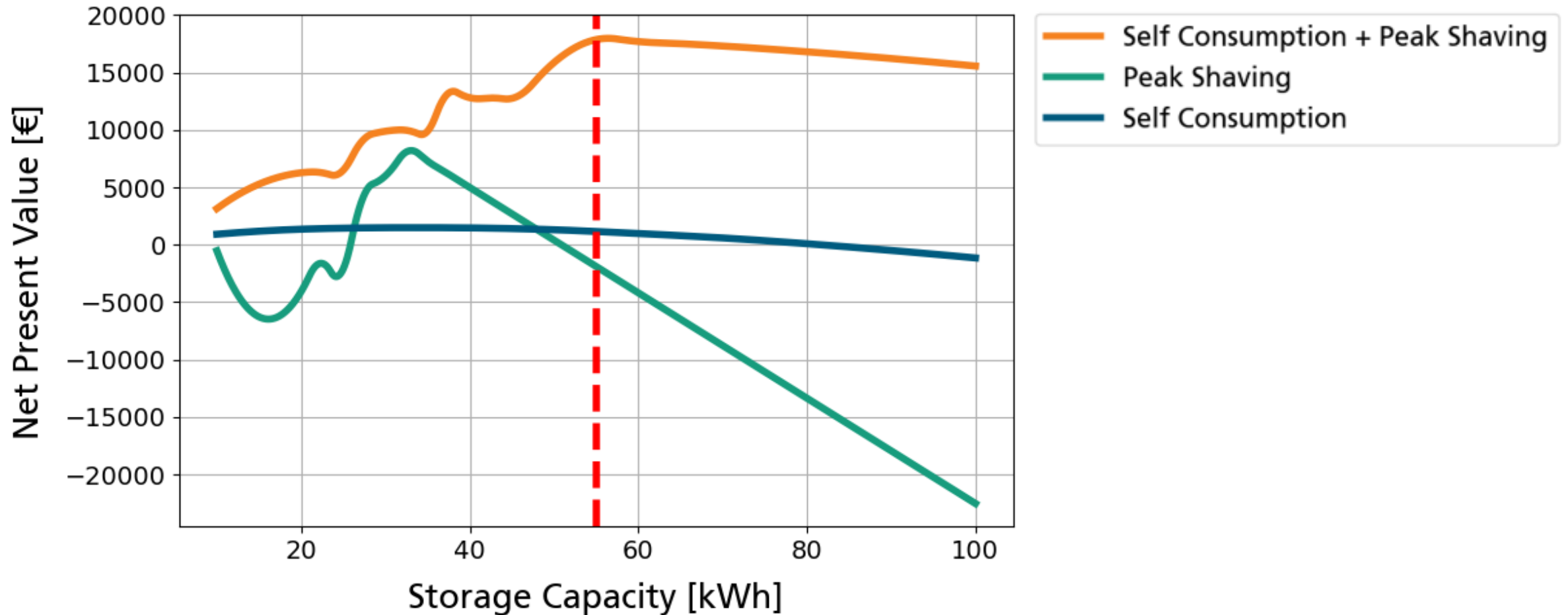
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Examples

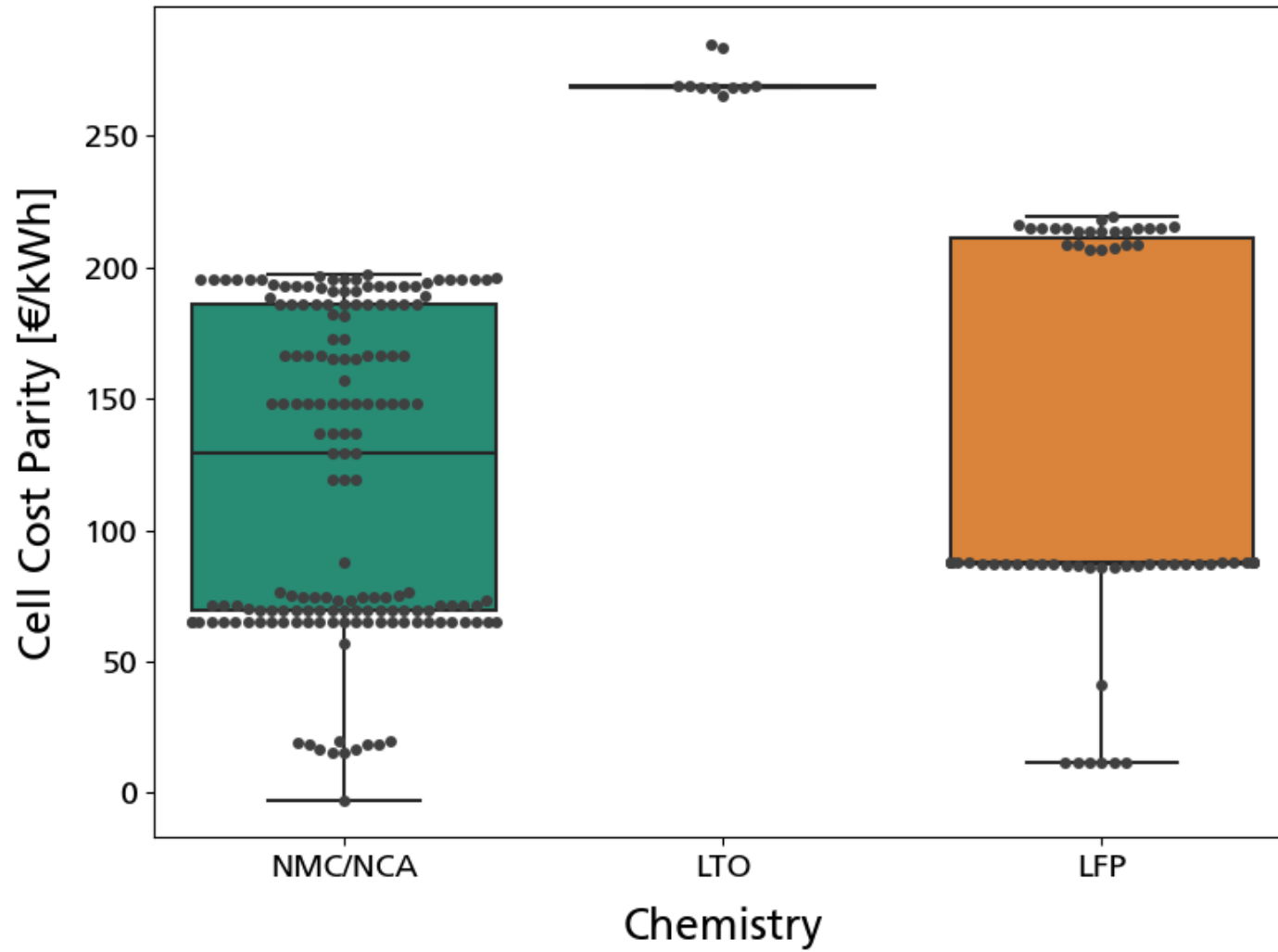
What is the Best Control Sizing Combination?

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How Expensive Can a Battery Be?

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The End

The logo for NRGISE, featuring the text "NRGISE" in a stylized, handwritten font. The "NRG" is in black and the "ISE" is in a teal color. The logo is enclosed in a thin teal rectangular border.

- Interested or questions?
 - Contact me: tobias.rohrer@ise.fraunhofer.de
 - Visit me at my poster
- We are open sourcing soon 😊