

Dynamics EMT Models Homologation -Usage & Projection



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About EEMT

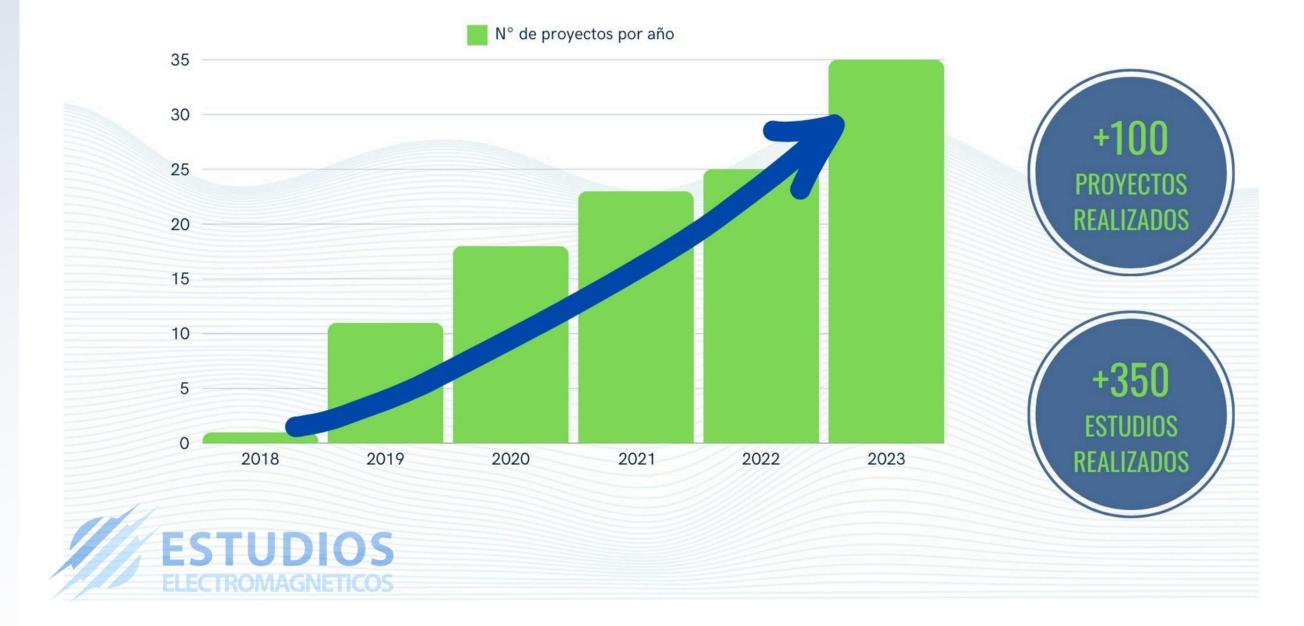
We are a chilean company dedicated to carrying out electrical studies.

We have 7 years of experience in different types of electrical studies, these can be traditional or specific, as determined by the client.

At EEMT we are specialists in EMT type studies.

Experience

EEMT - AN INTERNATIONAL VIEW





Chile

Most of our projects have been carried out in Chile. These have been executed in the Generation and Transmission areas.

International

Our gaze points abroad and we have had the opportunity to collaborate with important companies in Peru, Mexico and Brazil.

Contents

Impact on the system

Homologation in EMTP

Why EMT?

Generic model or manufacturer's model?

Analysis in EMT

Challenges

Models

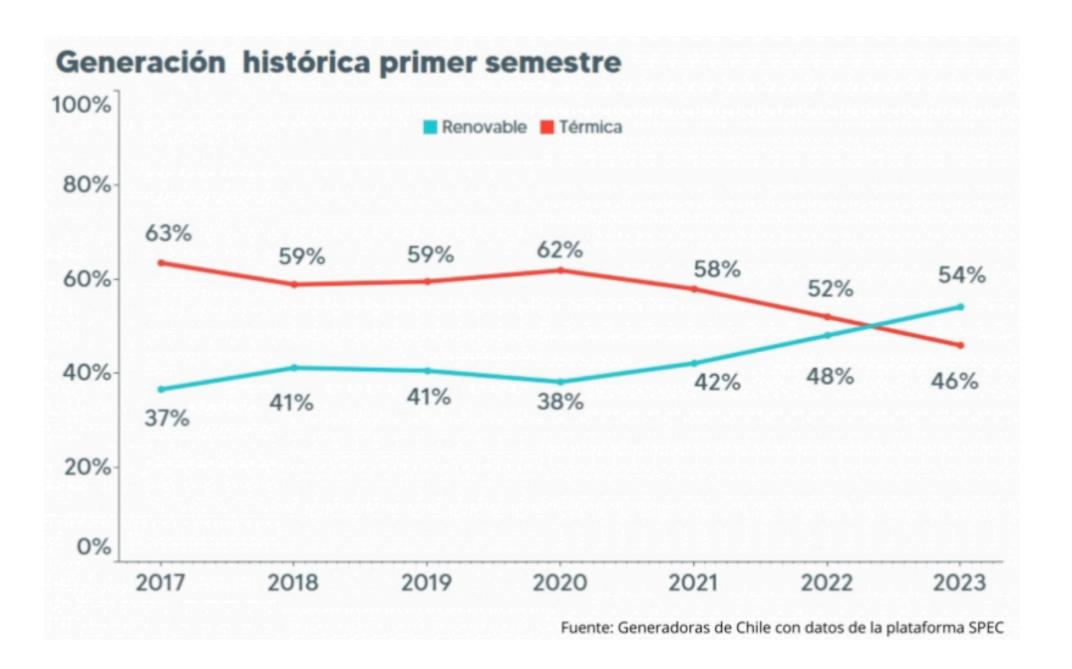


Impact on the system

Increase in generation from renewable energies

- Increase in the generation of renewable energy and retirement of synchronous plants in Chile.
- Weakening of the ElectricGrid
- Represent different contingencies

GENERATION IN CHILE IN 2023





Reasons for making models in EMT



Analysis of a short period of time

It allows simulations to be carried out covering very short periods of time, which cannot be done in RMS type simulations.



Representation of different contingencies

It is possible to carry out simulations representing line departures, load disconnections, among others. Oriented to what is electromagnetic transients.



Analysis in EMT



Specialized software for this type of analysis.

Effective tools for observing graphs of different variables.

The homologation in emtp of the different type of plants, allows the accomplishment of studies and/or analysis which are closer to reality and visualized them in a time period that RMS simulations won't cover.



Analysis in EMTP

Comparison between both models

GENERIC

- Worked using WECC models
- Less detailed
- Less computanional burden

Models

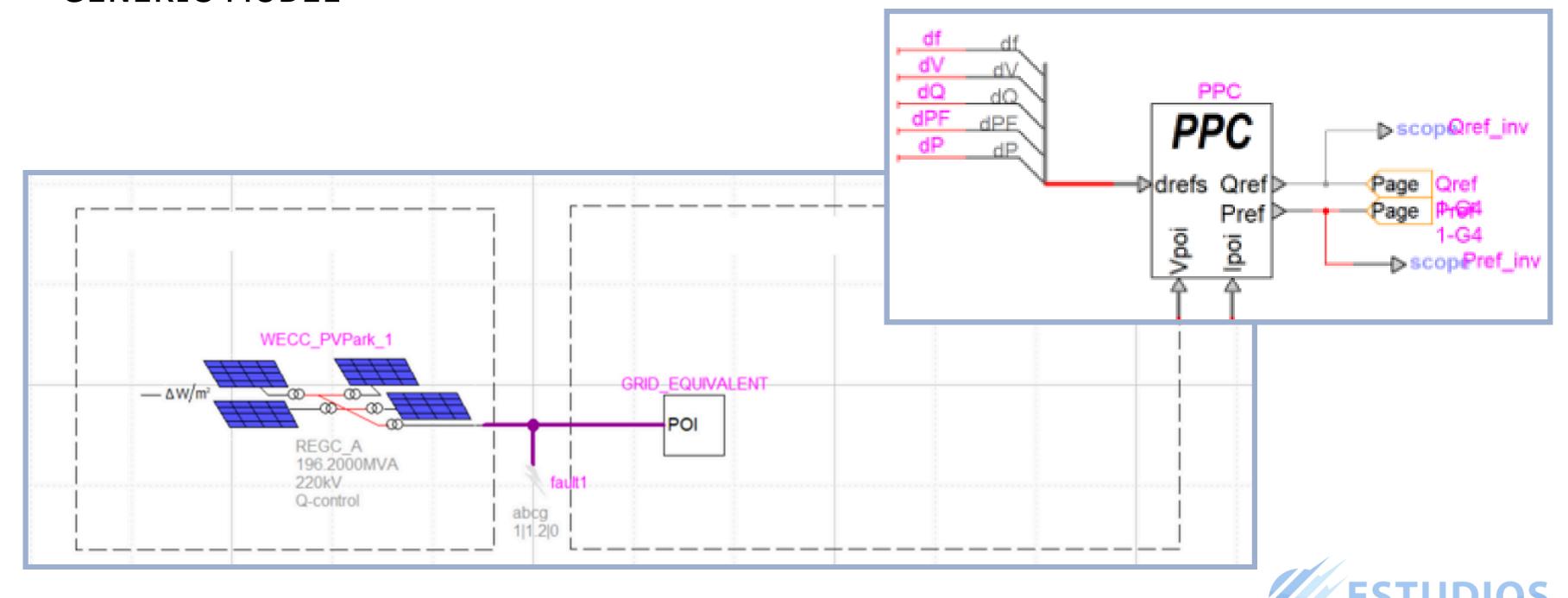
VENDOR

- Developed by its manufacturers
- More detailed
- Greater computational demand



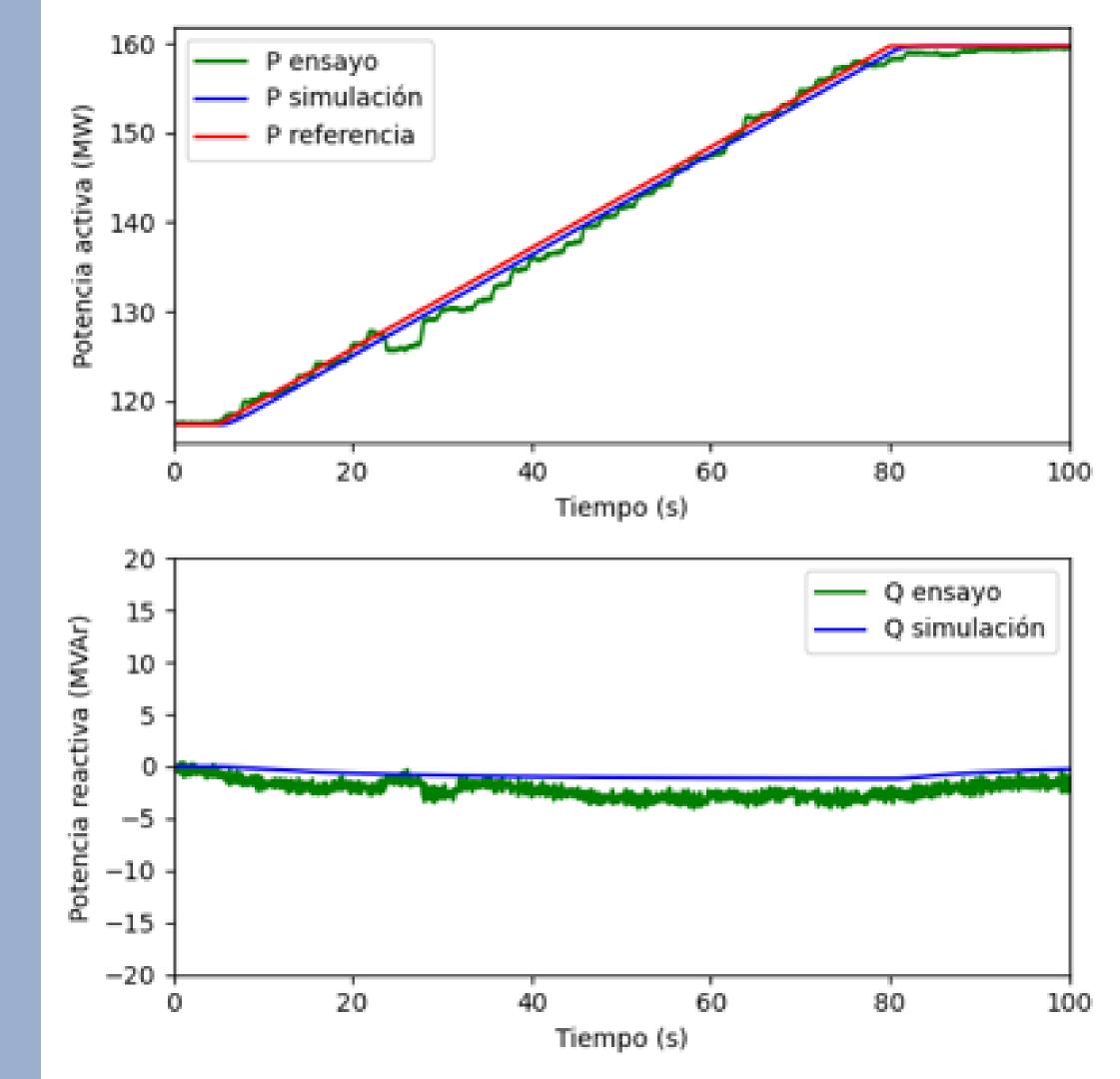


GENERIC MODEL





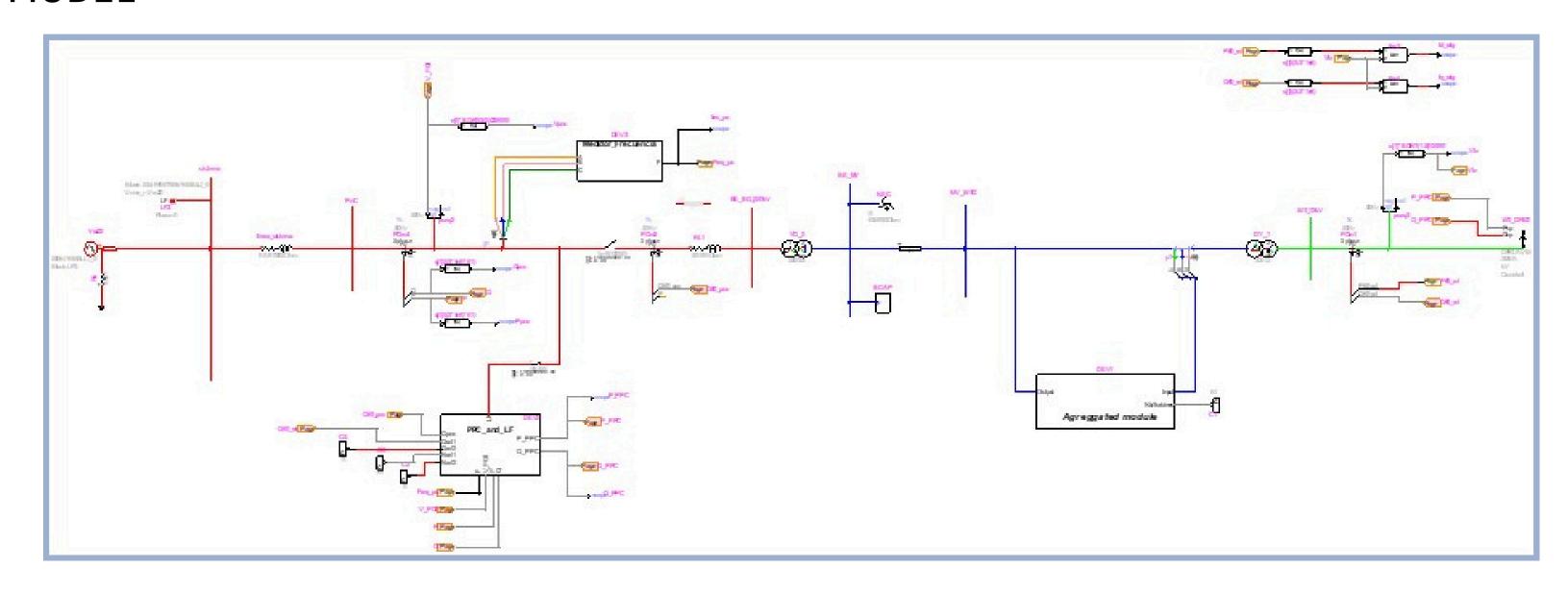
Results Generic Model







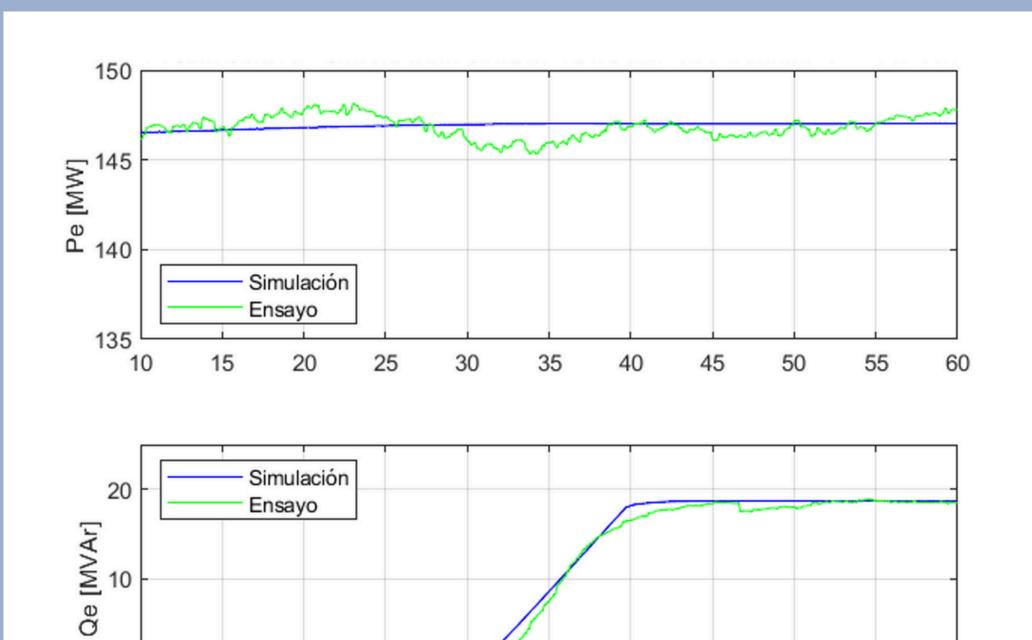
MAKER MODEL







Results Maker Model

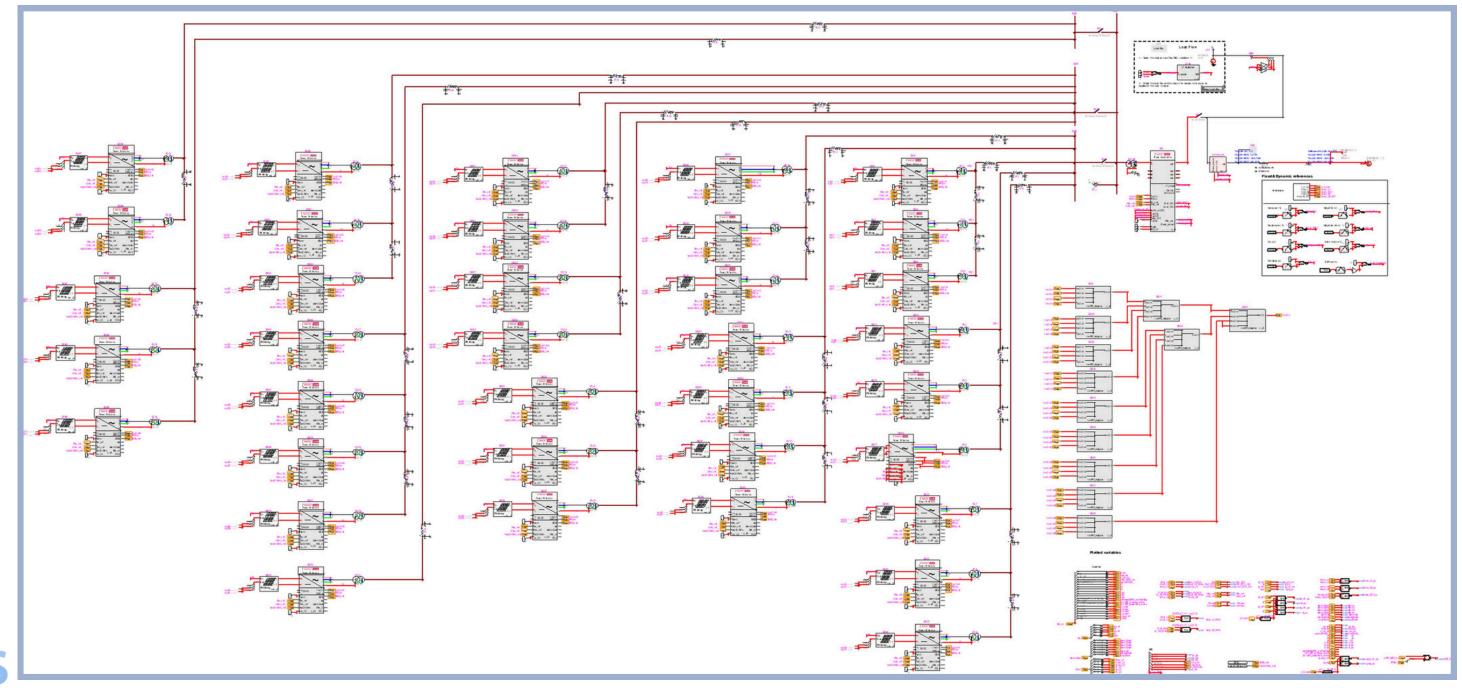


Tiempo [s]





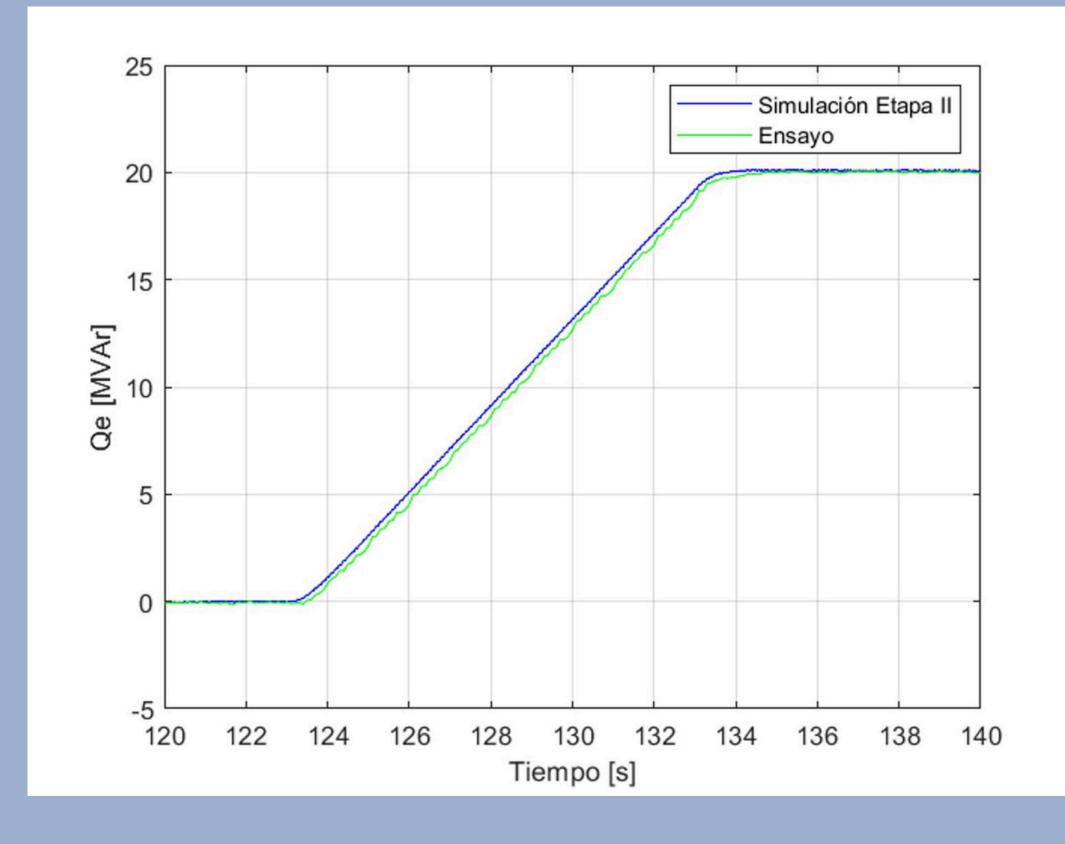
MAKER MODEL







Results Maker Model







Challenges

Projection towards the future





Thanks for watching!

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