

Forecaster



Planner



Controller

Probabilistic forecasts

Day-ahead decision-making

Intraday decision-making

Scenarios

- Deep learning generative models
- Gaussian copula



Stochastic planner

Quantiles

- Quantile regression:
  - Neural networks
  - Gradient boosting



Robust planner

Decomposition technique:

- Benders-type cutting plane
- Column and constraints generation

Value function

Coordination of planner and controller

Density forecasts

- Gaussian processes
- Statistical approach



Probabilistic metrics: univariate and multivariate



- capacity firming
- energy retailer



- microgrid

*Quality evaluation*

*Value evaluation*

**Part I**

**Part II**