Predicting Control Energy Volumes for Grid Stability

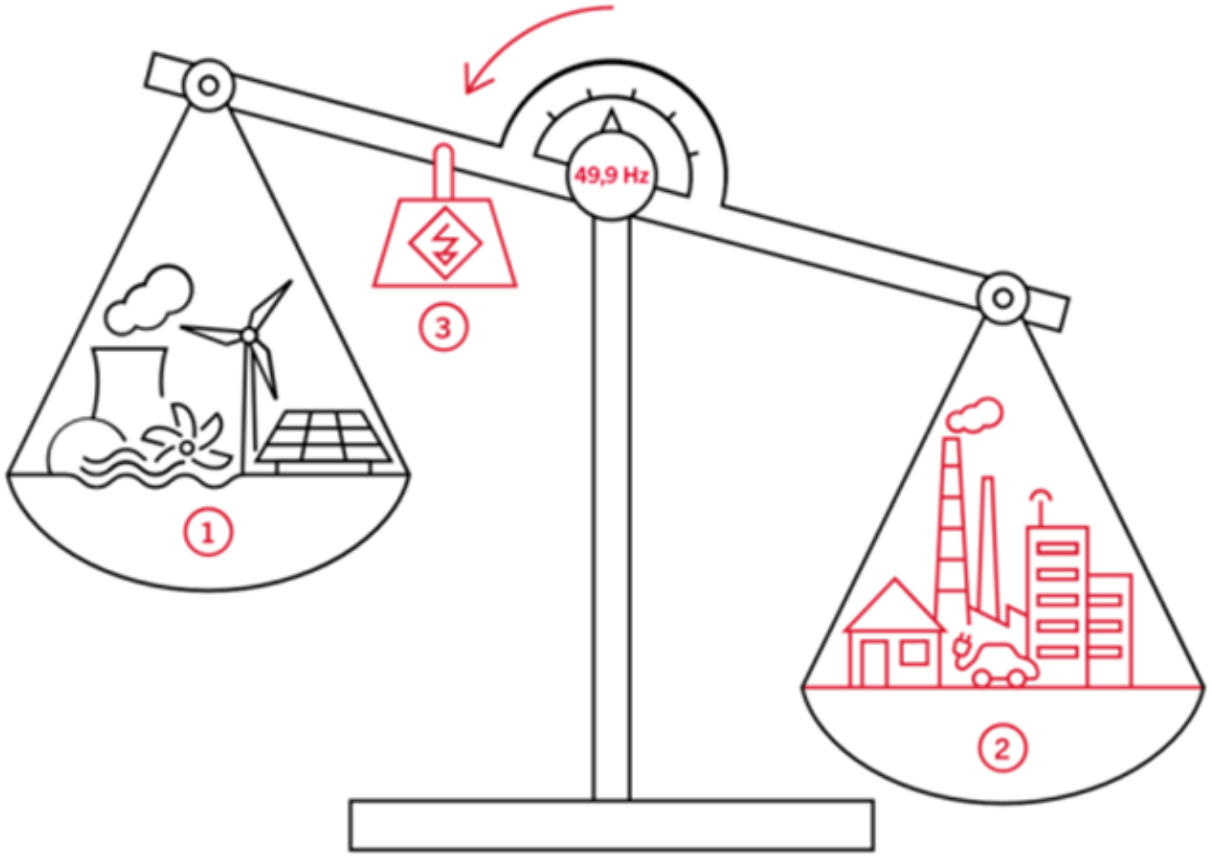
Team BKW

Challenge / Goal

Develope a predictive model to forecast **control energy activations** for grid stability.

Automatic Frequency Restoration Reserve (afrr)

Control Energy Activation?



Control Energy Activation?



Control Energy Activations?



Control Energy Activations?

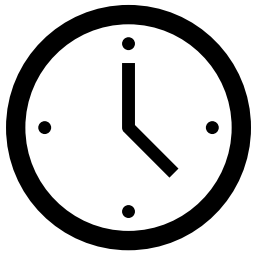


What is the Data about?

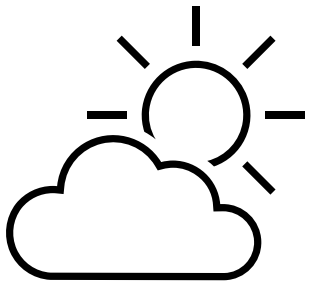
Fields:

- TimeStamps
- ActivatedBalancingVolume_CH_aFRR **Positive** and **Negative**
- Generation (HydroLake, HydroPumpedStorage, HydroRunOfRiver, Solar, Nuclear, WindOnShore, Lignite, HardCoal, Gas) for CH, DE, FR, IT, AT **where available**
- Consumption for CH, DE, FR, IT, AT
- Boarder Flows CH-DE, CH-FR, CH-IT, CH-AT
- NetTransferCapacity (NTC)

What did we explore?



Time / Calendar features

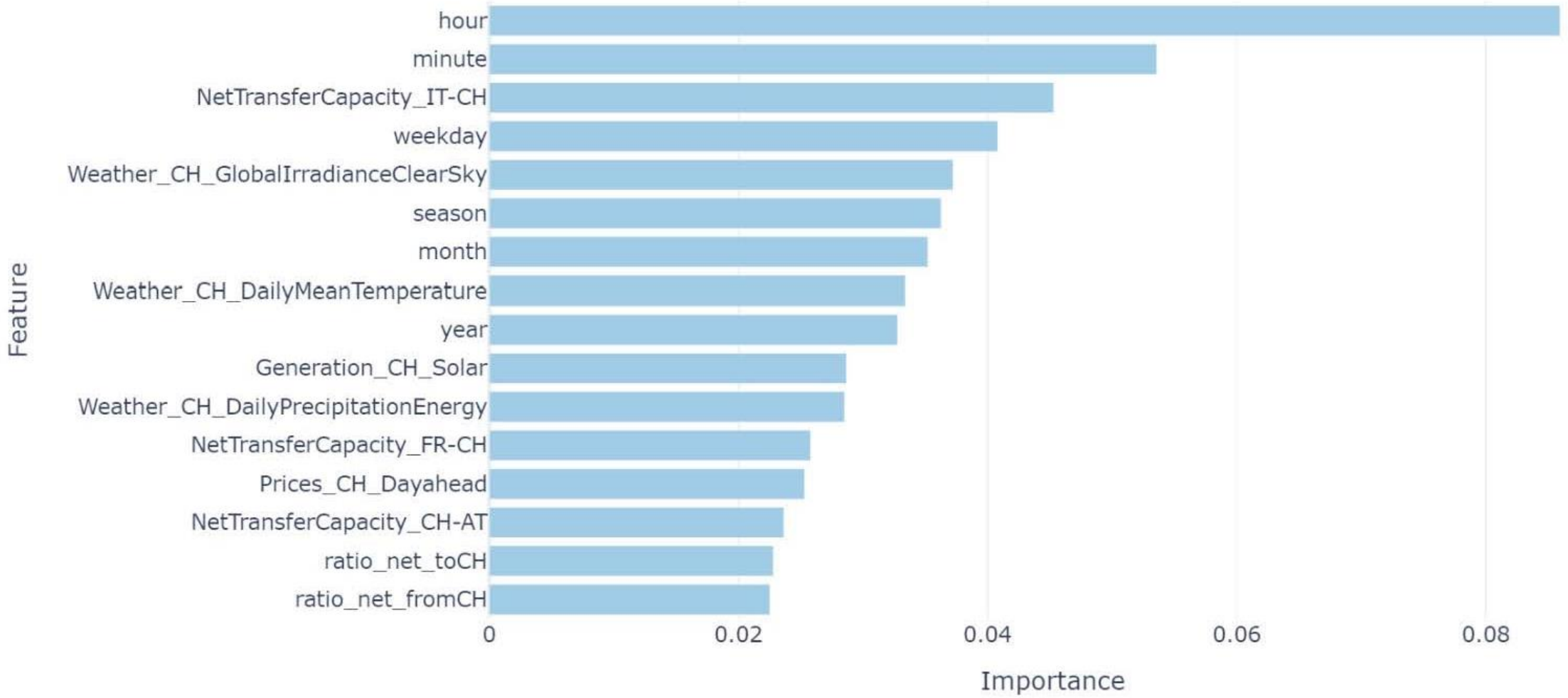


Weather

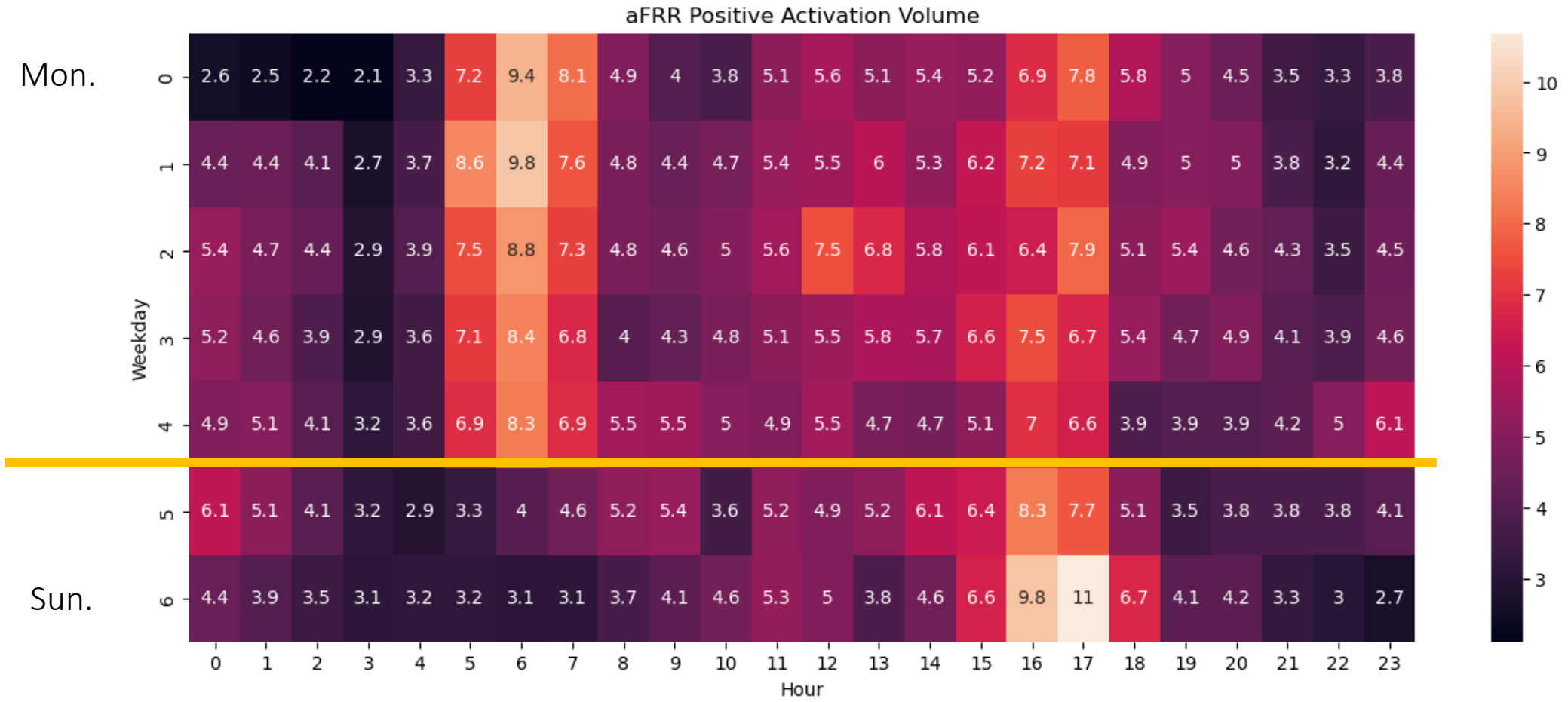


Cross-border

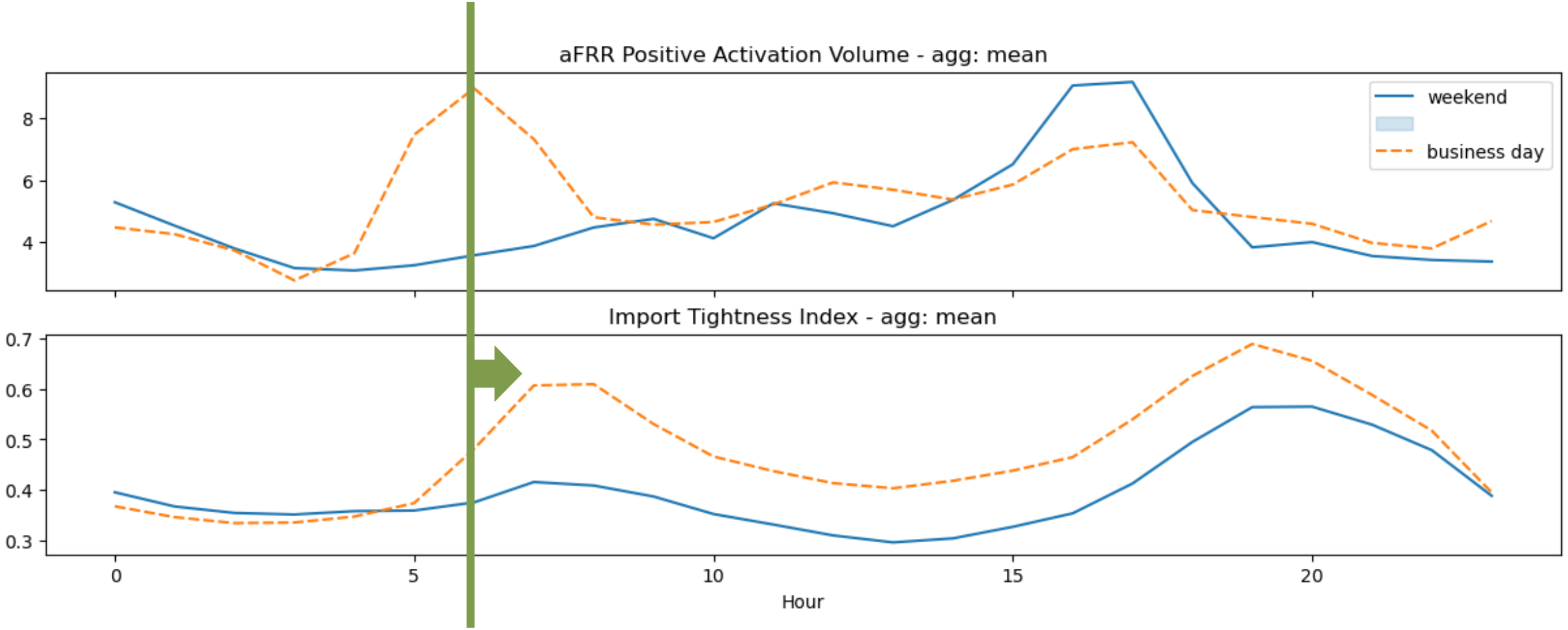
Relevant Features



Daily Trend short term pos. balance



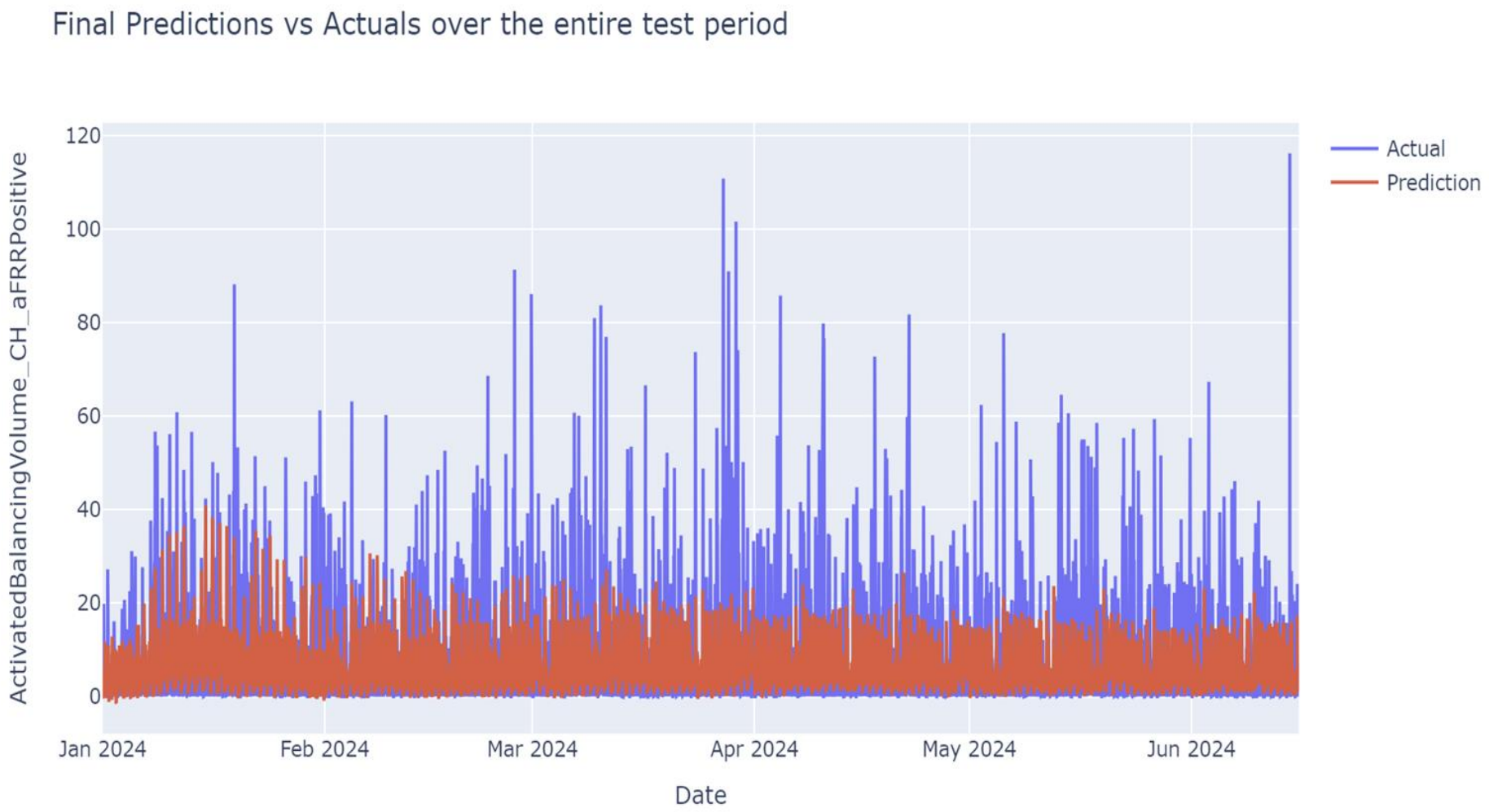
Imported Energy lags aFFR



Ramp-up, Ramp-down



Shorttime forecast



The End

Thanks