**Summarize Feedback and next steps**

**Feedback**

* Normalize, select and squeeze features out of existing datasets (Features which make sense)
* Too many time features (with moving averages) can cause overfitting
* Describe why features + hyperparameters have been chosen
* “Formular” for energy prices (Influence e.g. weather, CO2 tax etc.)
* Explanation of data integration for the features was missing (Integration was done by datetime)
* More Statistical understanding is needed (which distribution)
* (Holistic view, features are the same)
* Logical background for story telling
  + Where did we start  
    🡪 Blank model with no features, we chose the features etc.
  + How did we get to where we are
  + Explain why the features have been chosen
  + Why did we choose 2 different models
    - XGBoost: Blank model as a baseline
    - Prophet: Time based series model for possible better results

**Summarize of our storyline**

* “Formular” for energy prices (Influences: Gas + Oil prices, Energy mix, Weather, CO2 tax)
* Scraping Data (Energy price, Weather, Energy mix data [daily] 🡪 later hourly for a better resolution)
* Baseline: XGboost 🡪 we wanted to improve up on this benchmark / baseline
* Using Prophet (Time based series model)
* Both models were blank at the beginning (no features, no hyperparameter)  
  🡪 Again Benchmark / baseline to improve from this
* Finding lower and upper bound for Gaussians distributions – (2 or 3 σ from μ)
* Use RMSE for validation
* Adding Hyperparameter
* Hyperparameter grid search
* Adding features
* Moving averages

**Next steps in general:**

* Research for new metrics (Move not just averages – Min and Max)
* Make some hypotheses and try to contradict them
* Consider how to combine models

**Next steps till next Thursday:**

* Validation with more errors functions
* Extract more features out of datasets
* Find more validate features
* Prophet: Optimize model and test with different error functions
* XGboost:
  + Normalize and select features
  + Optimize model and test with different error functions