

## for Energy Planning & Trading

### Automated Forecasting of Electricity/Utility Markets

#### Energy & Utilities Business Challenges :

Energy transition brings more renewable production (incl. local production). Market deregulation enables more market players and competition. Enterprise & residential consumers take control of their consumption and auto-production (incl. Demand / Response) and competing energy tariffs.

This drives more volatilities in market demand, market balance and market prices. Moreover, there is huge margin pressure on energy & utilities value chain.

***Anticipating precisely short-term energy demand and market imbalance is a source of large potential cost savings and margin gains for energy planning & trading.***

#### Predictive Layer Solution :

- Automated short-term forecasting of Net Demand & Losses
- Optimize Day-Ahead purchase
- Forecasting Day-Ahead market prices on EPEX, APX,...
- Electricity Market Imbalance Forecast H-18, H-6, H-1
- Electricity Market Forecast : high low med, H-18->H-1

#### Predictive Layer Technologies:

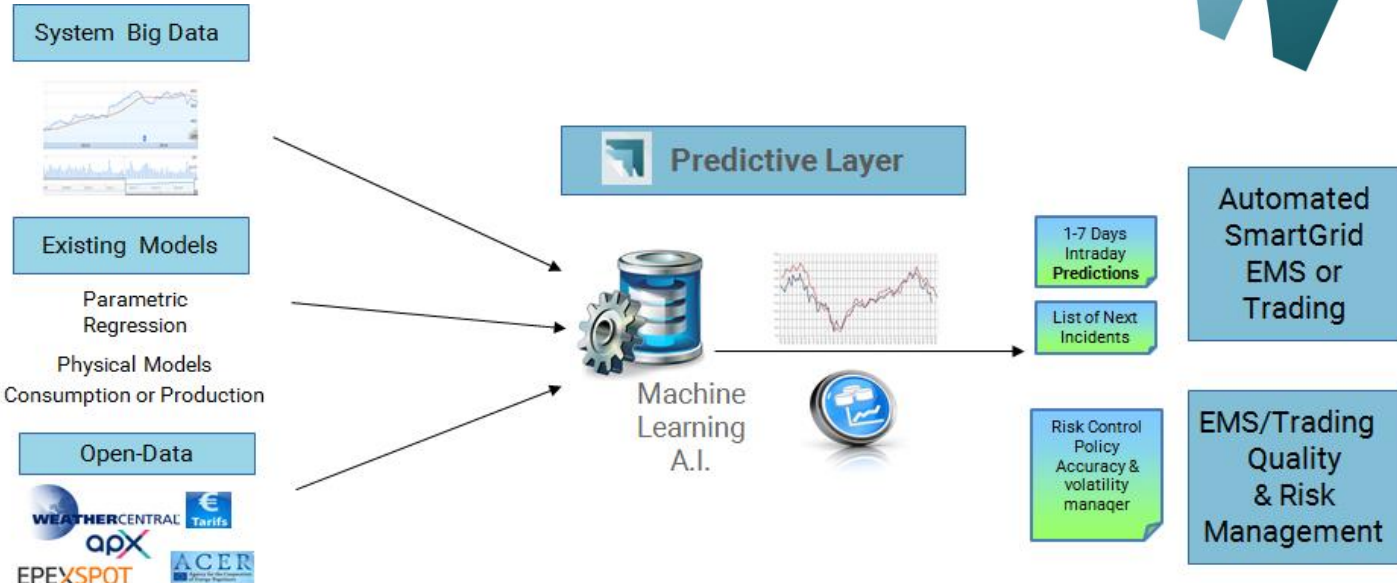
- Automated Machine Learning Artificial Intelligence
- Market-Data and Open-Data automated correlation
- Accurate Statistical Forecasts D-1->D-15, H-16>H-18
- Precision & reliability monitoring for Risk Management

#### Energy Planning & Trading Benefits :

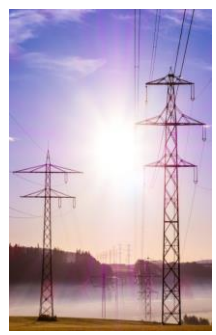
- Improve planning precision for Net-Demand & Losses
- Optimize Day-Ahead forecasts for Net-Demand & Losses
- Reduce Imbalance Day-Ahead Costs
- Optimized Intraday Adjustment of Day-Ahead positions
- Intraday investment & trading Strategies
- Optimize Time & Sell Price of D/R or Storage resources



# Predictive Layer for Energy Planning & Trading



- Automated Correlation of Historical Records with Public Markets and external Open-Data (including weather, events, regulation signals,...)
- Automated Machine Learning for high precision & reliability forecast, outperforming by ~35% existing expert models
- Model Fusion to allow multi-experts decision blending
- Enrich existing Models with Open Data & Market dynamics
- Automated Modelling for fast international market adaptation
- IT flexibility to implement artificial intelligent service on in-house Data-Center or in Secured Hybrid Clouds
- Standard APIs to existing EMS Management, Trading and Risk & Compliance management applications
- Fast Proof of Concept & Pilot to validate immediate ROI
- Performance based pricing



## Only Benefits to Try Predictive Layer !

