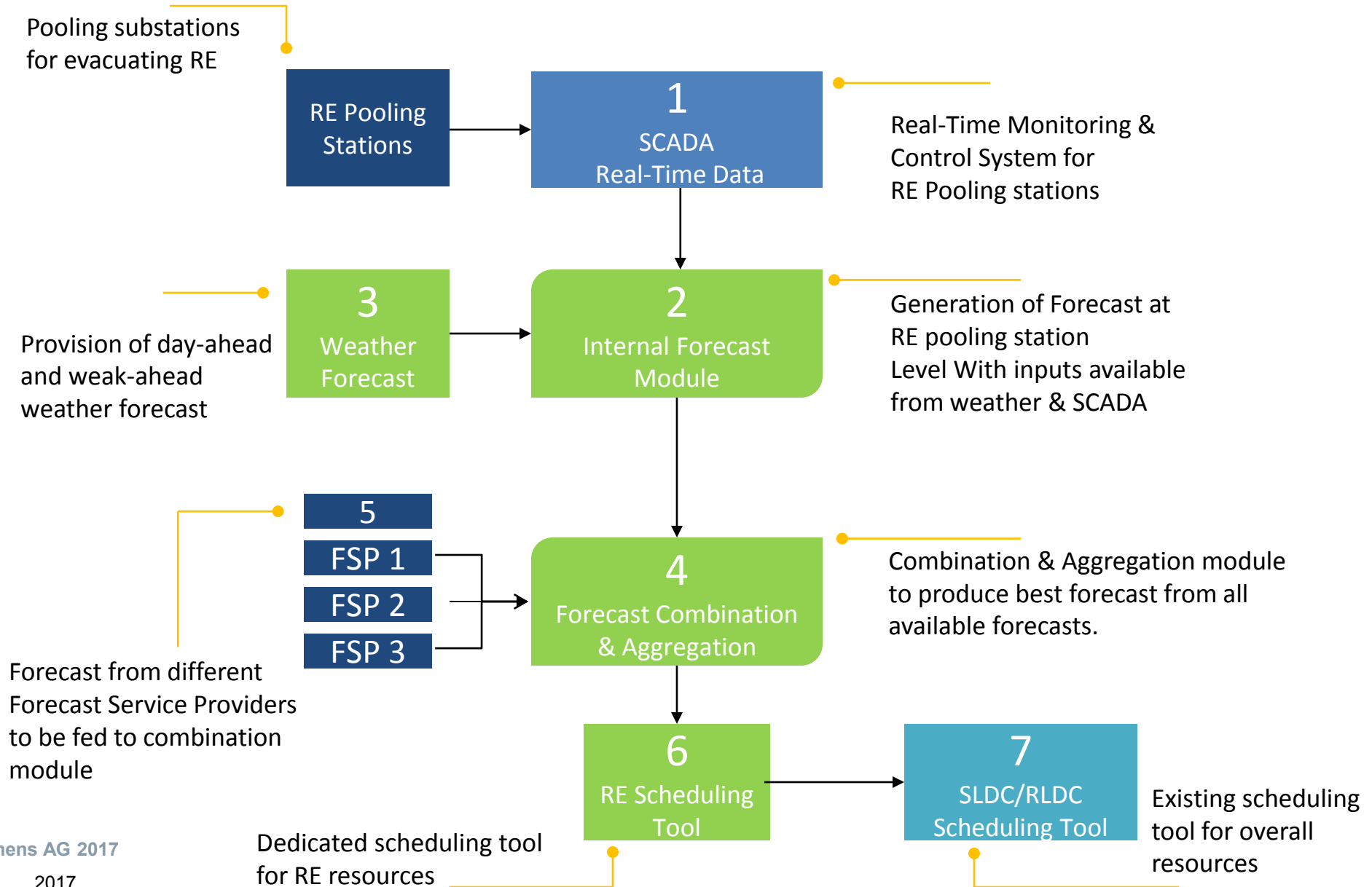




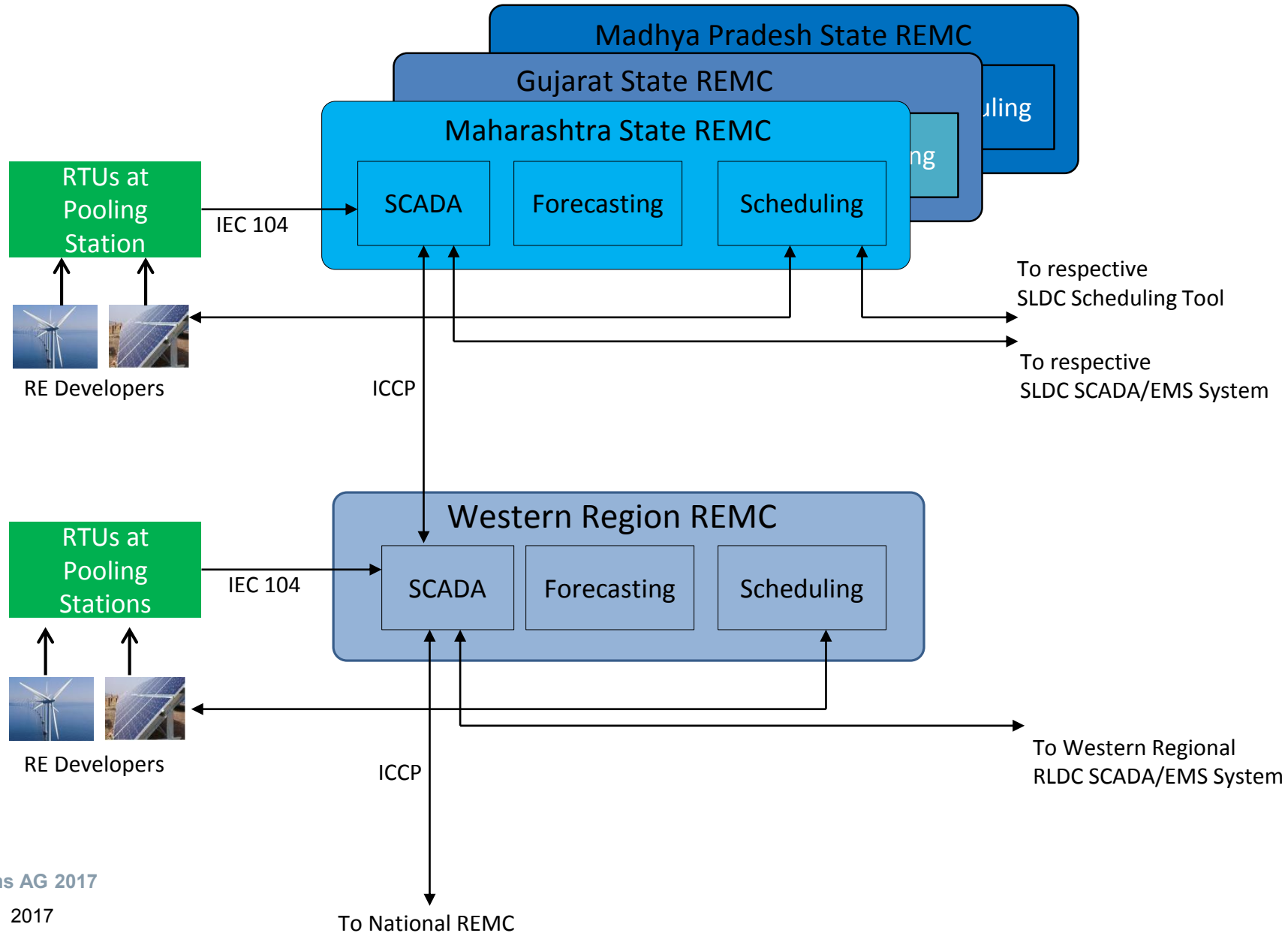
**“Western Regional Renewable Energy Management Center -  
System architecture, Handling of Challenges related to RE  
forecasting, scheduling & integration into grid and way ahead”**

**Sept 4 – 6, 2019**

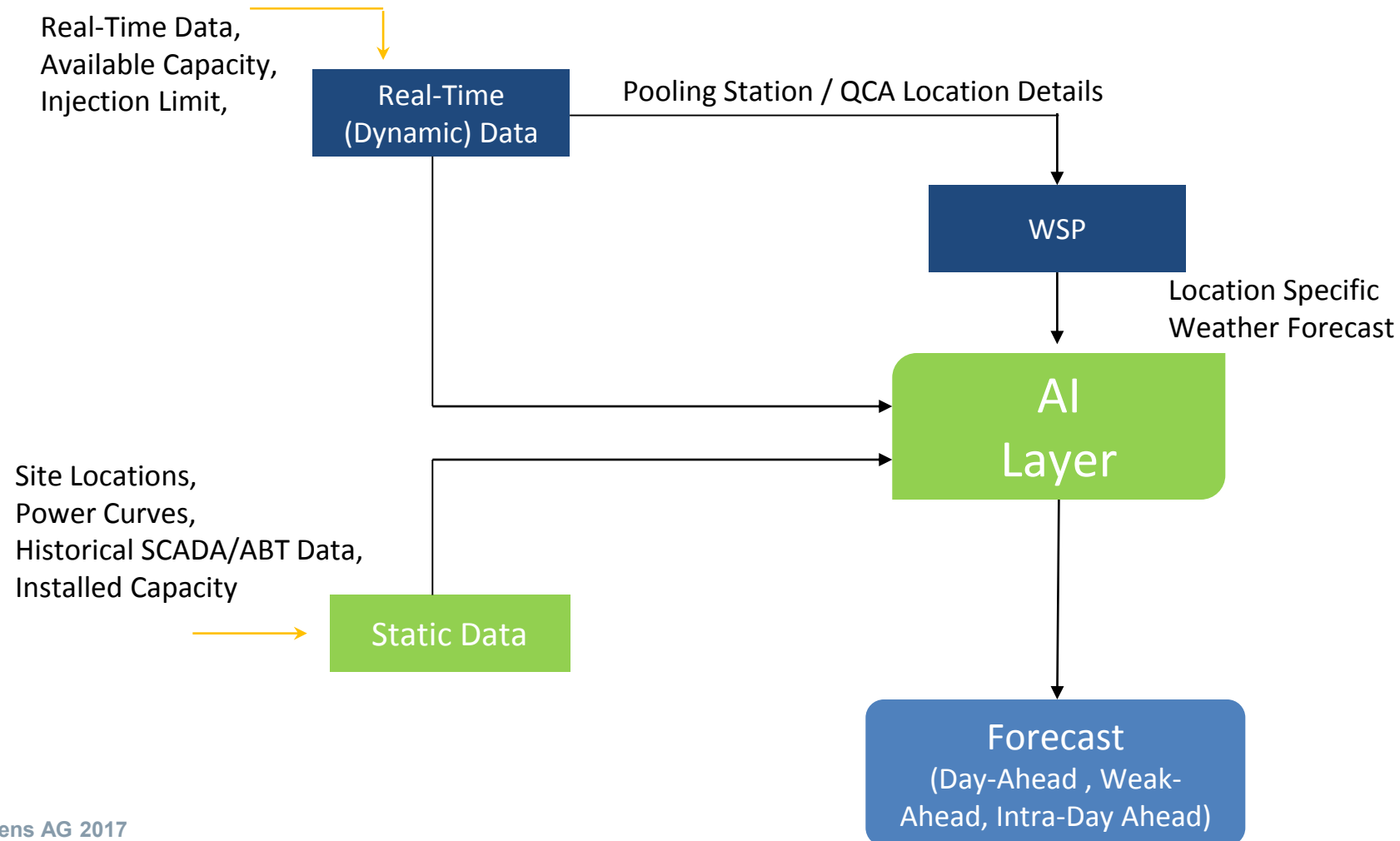
# WR REMC: Overall Architecture



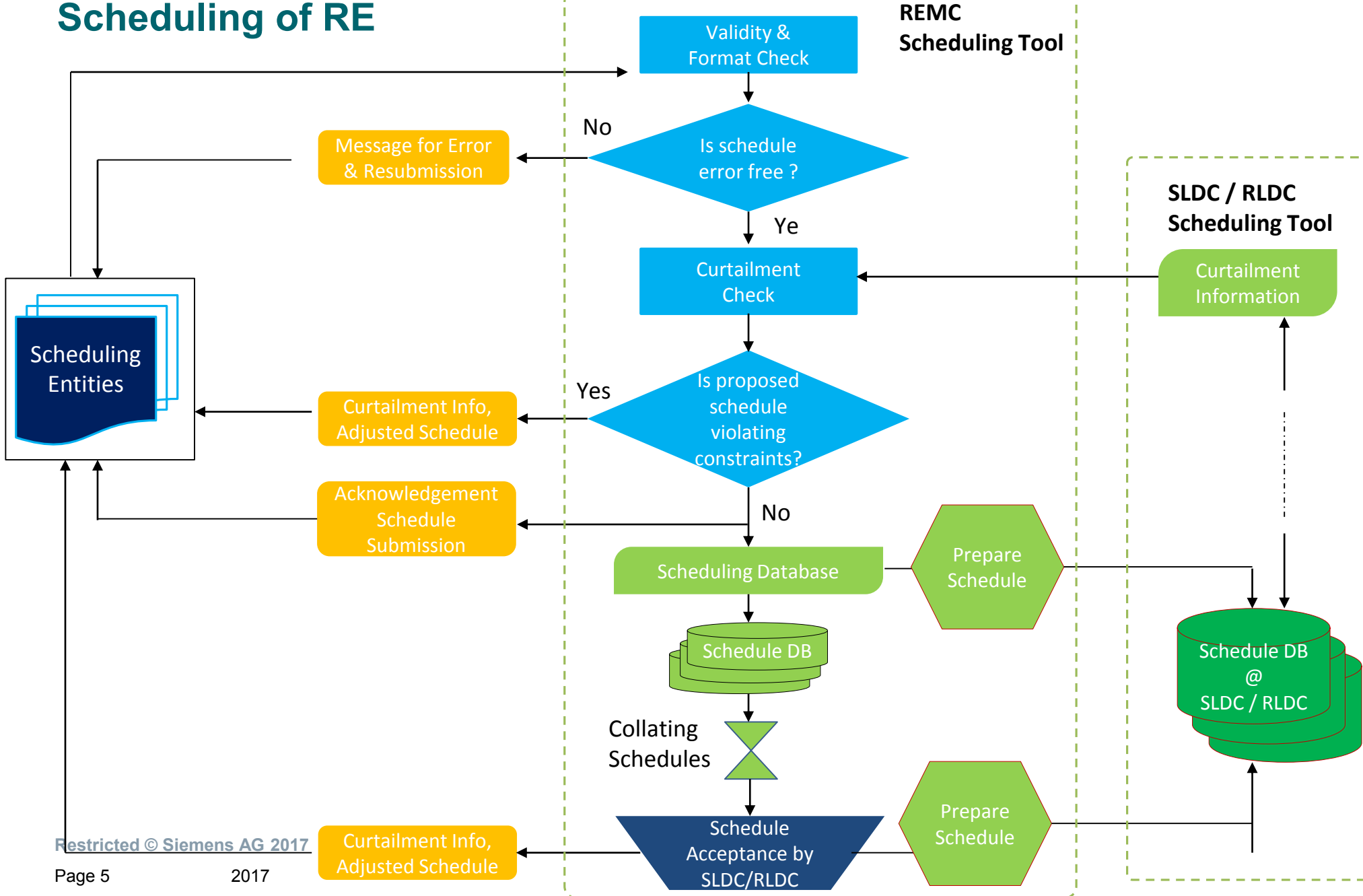
# WR REMC: Communication within Control Centers



# WR REMC: Forecast of RE



# Scheduling of RE



# Key Inputs & Factors

## Inputs

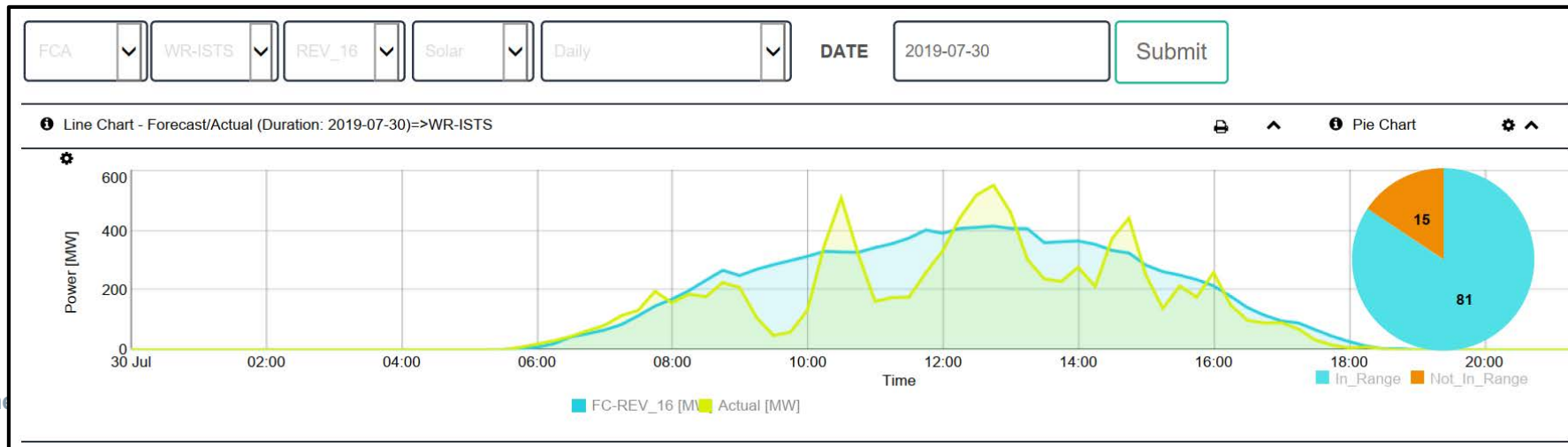
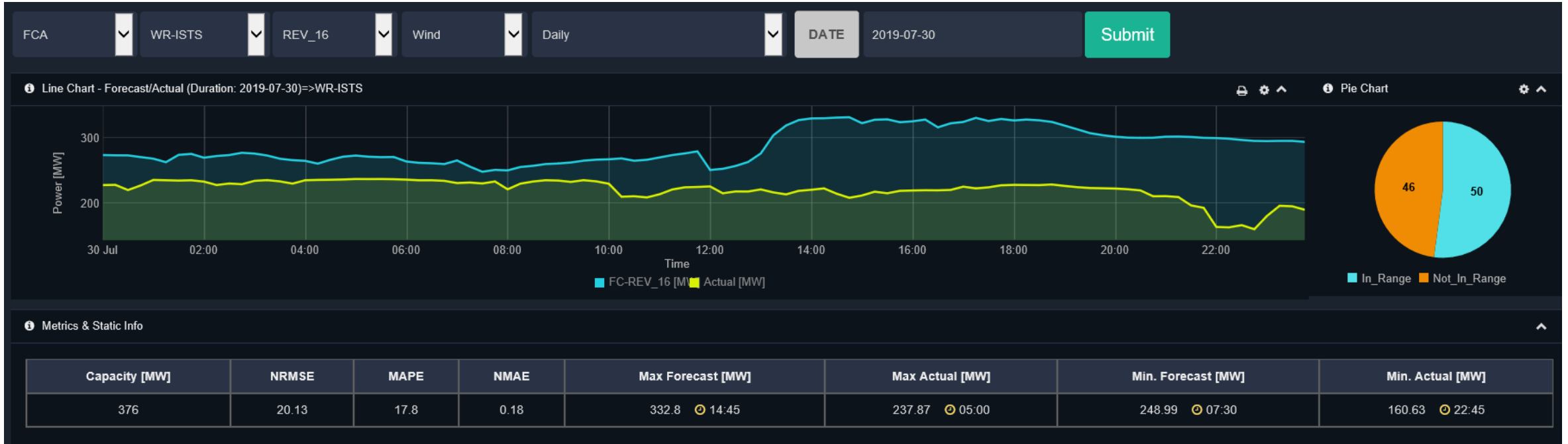
- Static Data from PV Panels
- Static Data from Wind Turbines
- Topological arrangement of Pooling Stations
- Historical Generation Data
- Consistent SCADA Data
- Real-Time Weather Data
- Historical Weather Data



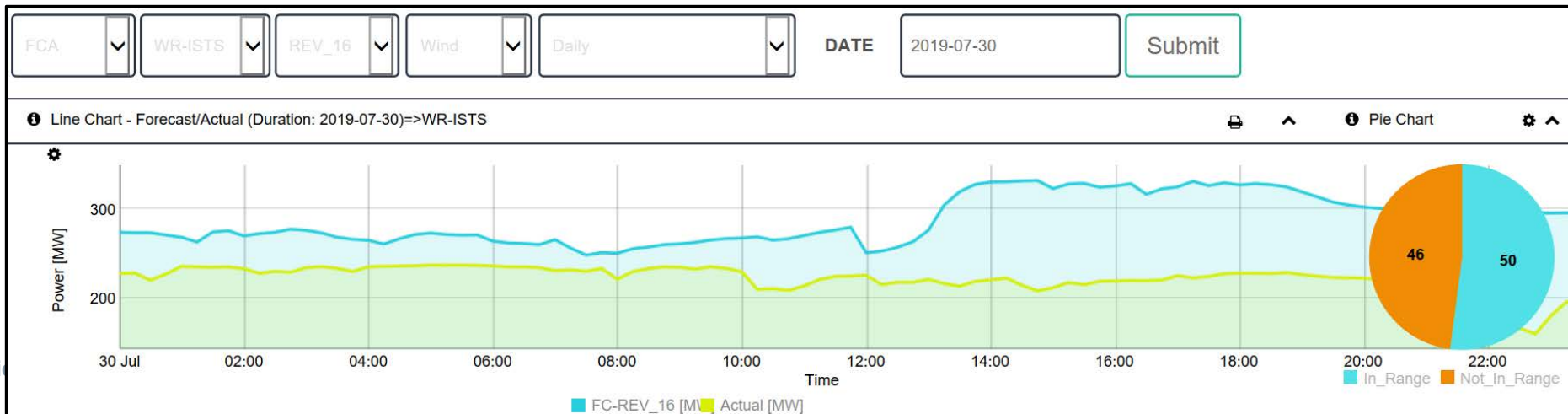
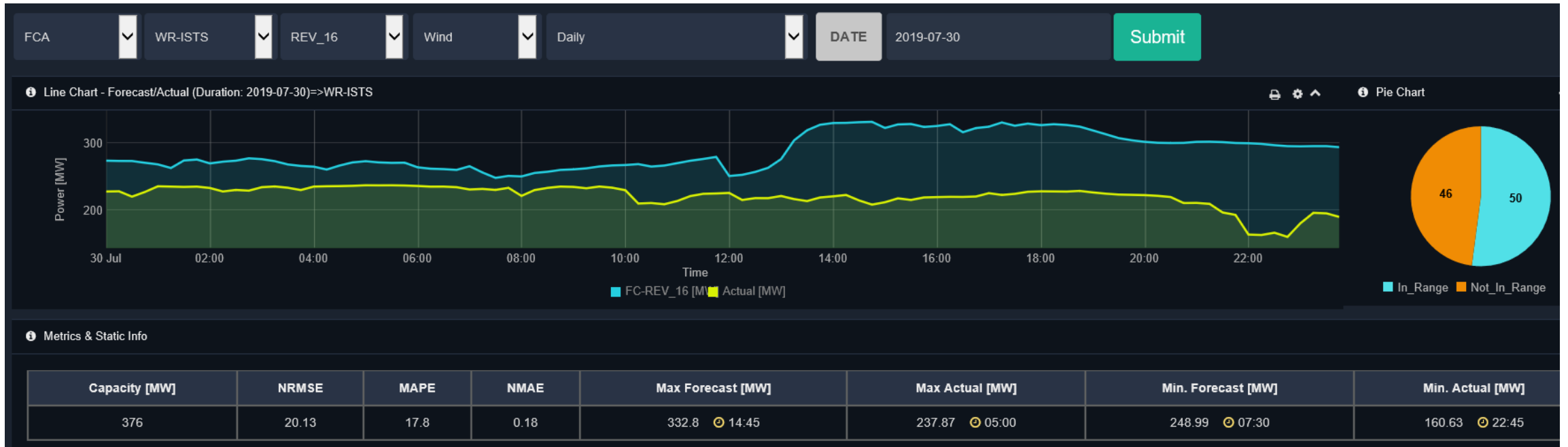
## Factors

- State specific regulations
- Availability of Meters
- DSM Mechanisms
- Power Purchase Agreements
- Plant Level Infrastructure

# Forecasts Results












# Forecast Results





# Key Lessons Learned

Issues		Way Ahead
Data Exchange between Internal Systems		Data Flows can be optimized
Data Exchange between Internal Systems		Use of Industry Standard Protocols
Availability of real-time Data		Improvement in Feeder level infrastructure
Availability of real-time Data		Improvement in last mile connectivity
Missing Parameters		Incorporation of Meter Data
Addressing Revenue Issues		Incorporation of DSMs
Evolving Regulation		Allow change in scope and back-to-back agreements
Evolving Regulation		Awareness about regulations and its impact
Topological Arrangements		Definition & Consistency for Point-of-forecast & point-of-forecast

An aerial night view of a city with light trails from traffic and buildings. Overlaid on the city are several technical diagrams: a sine wave graph, a square wave graph, and a transformer symbol. The background is a dark blue sky with some clouds.

# Thank You!

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