Winter Outlooks 2019/2020

European Network of Transmission System Operators for Electricity (ENTSO-E)

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Different risks addressed with different timeframes

- **Long term**
  - TYNDP
  - >10 years

- **Mid term**
  - MAF
  - 10 years
  - 5 years

- **Short term**
  - Seasonal
  - 1 year
  - 6 months
  - 1 week

**Policy decisions**
- Long term
- Mid term

**Investment decisions**
- Mid term
- Short term

**Operational decisions**
- Short term
- REAL TIME

**UNCERTAINTY INCREASES**
What do the outlooks tell us?

- Role of interconnections and exchanges at European level
- Influence of external factors: weather, unplanned outages...
- Stress test analysis: look for very severe case scenario (1 out of 20 years) & see how system reacts
- Review of the previous season for a deeper understanding and improvements
Seasonal Outlooks—Stepwise approach

- Inputs from TSOs and Pan-European databases
- European constraining scenarios
  - Synchronous peak (upward) → Wednesdays 7 PM
  - Low demand with high RES (downward) → Sundays 5 AM and 11 AM
- Focused analysis on weeks flagged at risk
  - Probabilistic approach using numerous situations (temperature, wind...)
  - Aim is to estimate the probability that an issue could occur
  - Main drivers are identified
Stress test—Adequacy under Severe Conditions (weeks 2–3)

- Cold spell
- Low wind
- Extra outages
- European peak
- No out-of-market measures

- Self-sufficient country
- Country needs imports
- Self-sufficient country in region with scarcity
- Country needing import in region with scarcity
- Congestion

Extra outages: Poland Virtual Congestion
Self-sufficient country: Poland Virtual Self-sufficient country
Country needs imports: Poland Virtual Country needs imports
Self-sufficient country in region with scarcity: Poland Virtual Self-sufficient country in region with scarcity
Country needing import in region with scarcity: Poland Virtual Country needing import in region with scarcity
Congestion: Poland Virtual Congestion
Winter Outlook—week 3, 2020

Risk probability in Europe

Belgium

France

- No need to import
- No deficit after import
- Deficit after imports
Seasonal Adequacy – Going probabilistic (parallel runs)

Supply

Deterministic Information:
• Capacities
• Planned outages
• Storage

Uncertainties:
• Wind generation
• Solar generation
• Forced outages
• Hydro

Network Infrastructure

Deterministic Information:
• Network topology
• Planned outages
• NTCs / FB domains

Uncertainty:
• Forced outages

Demand

Deterministic Information:
• Demand profiles
• Demand-side response

Uncertainty:
• Weather conditions (e.g. temperature-dependency of demand)
Methodology Revision and Submission

Draft new adequacy methodology

By 5 January 2020

1. Public consultation (closed)
2. ECG
3. ACER
ENTSOs seasonal outlooks are unique pan-European, system wide, security of supply analysis.

Methodologies are continuously improving and cooperation is enhancing.

Adequacy assessed in:
Electricity system under severe conditions.

Adequacy situation: close monitoring needed in case of cold spell in January–February.
Thank you for your attention