

Paris Session 2022



Reactive Power Management and Other Challenges with High Renewable Penetration: Case study of Indian grid

C2 – System Operation and Control

Question 1.1 There are a large set of tools and platforms made available to control room operators each one bringing their own benefits. Is there a limit of tools per control room operator and how is it measured?

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Tools for System Operators

- Large number of tools and platforms are available.
- Some of the tools and platforms are SCADA, PMU Visualization, forecasting, scheduling & reporting platforms, steady state & dynamic state study tools, EMS, contingency analysis tools, alarms, and telecommunication sets.



- Tools and platforms help the operator in augmenting his situational awareness and facilitate in taking well-informed decisions in Real Time.

Group Discussion Meeting

Tools for System Operators

- Theoretically there are no limits of on the number of tools that may be kept at the disposal of the control room operators, there are some practical limitations.
- Proposed practical considerations.
 - Presence of too many tools may be avoided as it could rather create distractions for the operators & shift focus from core functions.
 - Considering the number of audio and video alarms processed by a human brain, the number of alarms from the tools in a control room shall depend on the cognitive abilities of the operators.
 - There shall be constant training programs to improve the cognitive abilities of the operators.
 - Tools which are used for similar types of functionalities or which may affect control room operator's decisions may be avoided.
 - Limited number of tools may be used in real time and rest of them may be used for pre-dispatch and post facto analysis of grid events by offline operators. Accordingly tools for real time may be optimized.