

**The 15th International Workshop on Electric Power Control Centers
Reykjavik, Iceland, May 12-15, 2019**

**Usage of CRIOP to verify and validate the ability of a control centre to safely and
efficiently handle all modes of operations**

Halla Katrín Svölu- and Arnardóttir

EFLA Consulting Engineers

CRIOP is short for CRisis Intervention and OPerability analysis. The method focuses on the interaction between people, technology and organisations. It is a method used to verify and validate the ability of a control centre to safely and efficiently handle all modes of operations including:

- Start up
- Normal operations
- Maintenance
- Revision maintenance
- Process disturbances
- Safety critical situations
- Shut down

The method is developed by SINTEF (one of the largest independent research institutes in Europe). CRIOP is proven and is a very common method used to verify the capabilities of the oil and gas industry control centres in Norway.

The key elements of CRIOP are checklists based on International and Norwegian standards, covering relevant areas in design of a control centre. The checklists are divided into seven main categories:

- Layout
- Working environment
- Control and safety systems
- Job organisation
- Procedures and work descriptions

- Training and competence
- E-operations

CRIOP is a systematic method used to identify typical problems that exist in control rooms today and test how multiple safety barriers function.

Please send the Abstract to dsobajic@gridengineering.com by April 12