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Working Group

CIRED WG 2016-1

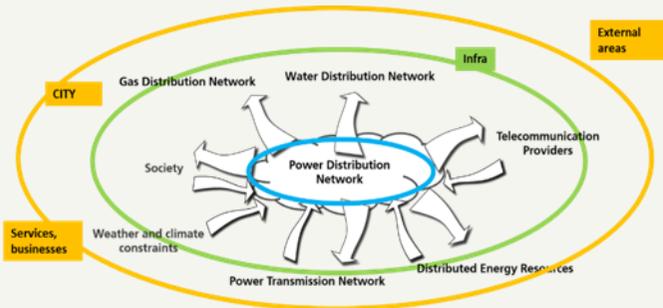
“Resilience of Distribution Grids”



31 May 2018

Summary

Due to climate change the number and strength of events and hazards affecting critical infrastructures increased during the last years. Storms, flood, earth quakes lead to large damage of these infrastructures and life-sustaining goods and services cannot be provided. Although in the electrical grids case, they are already planned, operated and controlled to provide an economical, safe and reliable supply, in most likely events, for “High Impact Low Probability” events a complete strategy must be developed including the crisis strategies of utilities as a part of local and regional crisis management. The working group will investigate this thematic.

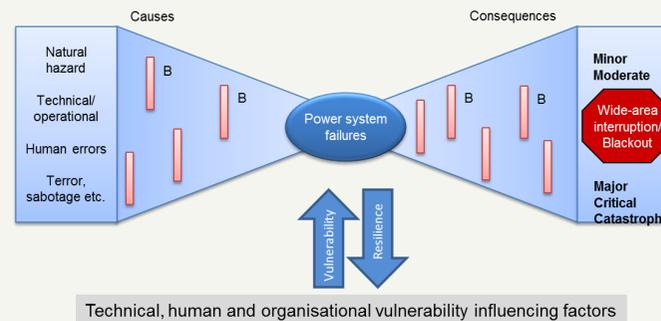


Jose Sanchez Torres, EDF

Report Elaboration

The main goal of the WG is to present a report that promote the work that the different companies and countries are doing and that already have implemented, thru benchmarking and case studies, relating to "Resilience of Distribution Grid ", because sharing experiences and learning from the good practices will serve as reflection or guidance in order to improve efficiency and effectiveness of the companies.

Vulnerability analysis using the bow tie model



Gerd Kjølle, SINTEF

Structure of the final report

The report will have a structure which consider six main chapters:

- i) Impact of different events to the electrical supply system;
- ii) Interdependence of the electrical infrastructure and others;
- iii) Evaluation of needs and the existing resilience;
- iv) Strategies for planning, control and operation;
- v) Overall strategies for cities in case of an HILP event including crisis strategies of utilities;
- vi) Role of innovative networks, energy storage devices and dispersed generation towards resiliency, and will present the theoretical framework, the state of the art and case studies related to each subject.

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