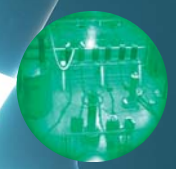


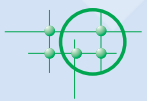
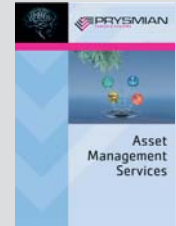
NETWORK Engineering



Network Engineering | Condition Assessment | Monitoring | Emergency

Load Flow
Optimal Power Flow
Technical Assessment
Financial Assessment
Feasibility Studies

Benefits: > Optimal Solution
> Optimal Exploitation



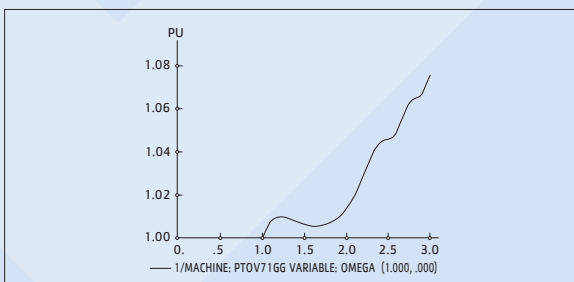
Applications

Our customers are actual or potential electrical networks' owners/managers, who need optimal solutions to widen and exploit their existing grids or to develop new links.

The real evolution of the demand for power does not always match predictions; therefore, some transmission and distribution network's portions may not be exploited properly.

The Network Engineering activity provides support for a better understanding of a network's potential. Is a new link really necessary? Which are the bottlenecks? Which are the realistic dispatching scenarios? What will the medium term network performance be?

Networks owners and managers frequently need to find a satisfactory answer to these questions and more, and the synergy between their network knowledge and our qualified cable systems experience provides the most reliable responses.

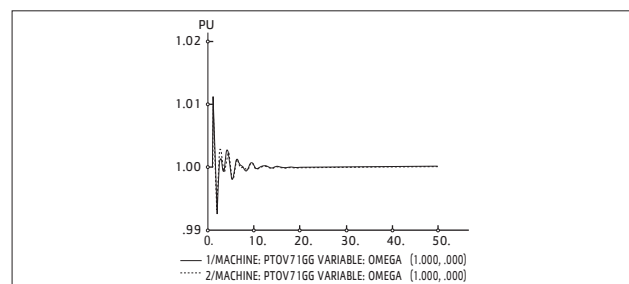


Transient in overhead line after generator tripping and following circuit closing

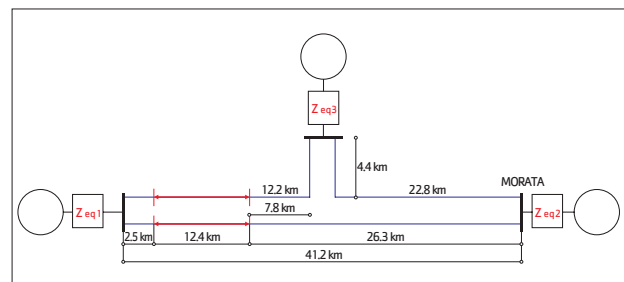
Benefits

Prysmian's cable systems' know-how provides a global approach to the optimisation of a network and to the choice of the optimal technological solution. Using Prysmian's resources and skills from the very beginning equals to relying on a highly qualified professional team, capable of proposing the most appropriate solutions for an optimal network's exploitation.

The feasibility studies feature incorporates the synthesis of an extensive selection activity of cable technologies and types - plus relevant accessories - installation methodologies and - where necessary - monitoring systems. Its main goal is to propose the most appropriate solution for an optimal asset's exploitation.



Transient in XLPE cable aftergenerator tripping and following circuit closing



Circuit opening

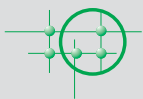
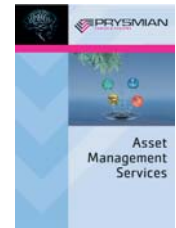
NETWORK Engineering

ASSET MANAGEMENT SERVICES

Network Engineering | Condition Assessment | Monitoring | Emergency

Load Flow
Optimal Power Flow
Technical Assessment
Financial Assessment
Feasibility Studies

Benefits: > Optimal Solution
> Optimal Exploitation



Services

The Network Engineering activity consists of two phases.

First of all, the check of the technical and financial adequacy for the network to meet current and future needs. Generally, the network managers themselves carry out this type of activity.

The second phase involves the assessment of the load conditions and utilization of each single link. This knowledge is essential for the optimal exploitation of a network's resources and for the development of optimal solutions.

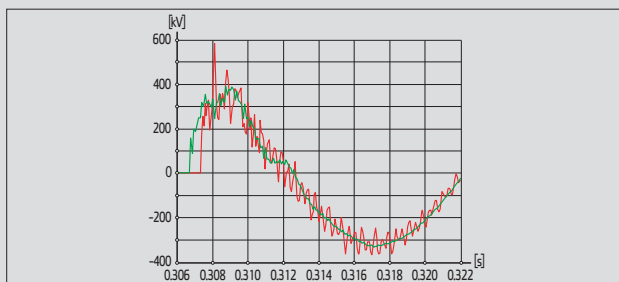
Network analyses, multi-scenario technical studies supported by dedicated software applications, together with an in-depth knowledge of cable technology are crucial to fully assess the results and provide tailor-made optimal solutions.

Steady-state, short circuit and transient stability analyses carried out by means of PTI - Load Flow® and EM transient analyses - opening/closing, lightning - by means of ATP - EMTP® represent load and power flow studies application examples.

The technical and financial assessment phases are - instead - developed, through probabilistic risk analysis approaches.

References

Prysmian guarantees privacy on its customer's strategic activities, therefore no customer name will be shown in this area.



Transient recovery voltage after circuit opening

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