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## APPROACHES AIMING AT PROVIDING SUSTAINABILITY IN DESIGN OF UNIVERSITY CAMPUS ELECTRICITY ENERGY SUPPLY AND DISTRIBUTION

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Effect of energy failures may vary according to sectors like manufacturing, hospitals, polyclinic services, call centers and shopping markets. Point of view about energy failure is certainly different for all of the above. In universities education, public services, scientific researches and applications, national and international educational, social, cultural and sportive activities etc. are being performed. In Hitit University campus energy infrastructure planning, apart from above services it was considered that labs in which high priority scientific studies which require continuity and especially after establishment of medical faculty, health services and many others should also be taken into consideration. In campus electricity energy planning, common point for each unit is continuity. Authors handled electricity energy planning fewer than three main headlines; physical design, production-supply, distribution and support systems. For continuity, from this point of view, they defined the risks and their approaches for each of them. In energy supply trigeneration system was planned so that it will primarily operate in case of urban network failure risk. There are some different cases and smart rules for each case. There is also categorization of the loads priority and load disposal system is designed. In case the energy consumption of campus is more than what is produced by gas generator when gas generator is online, additional energy will be supplied from urban network. In case of urban network failure again diesel generators and load disposal automation will be online. The reason-result relations of the failures that may be occurred system project was designed with approaches aiming at maintaining continuity. The aim was to prevent failures with a percentage of 95% and to reduce the area of effect in the campus below a percentage of 5% and accordingly priority was given to continuity and quality of education and scientific activities.

## BIOGRAPHY

Süleyman Altan works in Hittite University Directorate of Construction & Technical Works Department, in Çorum, Turkey as Director of Investments. He was graduated from Department of Electrical–Electronical Engineering, Pamukkale University, Turkey in 2000. He did his Master's degree in same university. He works in the subject's related to university campus networks, co-generation systems, solar power systems, green campus, designing energy networks and systems, renewable energy systems and recycling. In addition, he has studied in the fields of university campus planning, energy-efficiency in buildings and campus.

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