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## (57) Abstract:

Embodiments of the present disclosure relates to a system (102) and method (200) for managing communication network topology based on an associated electric grid topology. The system (102) comprises a processor (104) coupled to a memory (106). The memory (106) stores processor-executable instructions. The processor (104) is configured to acquire real-time data related to the electric grid topology. Next, the processor (104) is configured to establish a mapping between the electric grid topology and communication network elements. Thereafter, the processor (104) is configured to analyse real-time data of the electric grid topology and the communication network elements. In the end, the processor (104) is configured to anticipate grid failures and congestion events based on the analysis.

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