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## Analysis of Max-Flow values for setting FACTS devices

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### **Analysis of Max-Flow values for setting FACTS devices.**

With all the work finding effective placements for FACTS devices in power grids, there is some question as to how many of the cascading outage scenarios can actually be solved. We discuss fourteen outage scenarios on the IEEE 118 bus system. We determine whether each scenario can be solved using the Max-Flow algorithm. If it can be solved, we determine what placement and setting will solve the scenario. We also discuss the use of the max-flow algorithm both in determining the solvability of each scenario and in finding FACTS settings that will solve a scenario.

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*Adam Lininger is a senior at the University of Missouri – Rolla majoring in Computer Science. Adam plans on perusing a career in academic research.*