**MEng Design Project Announcement – 2017-18 AY**

**Project title:** Power System Demand Response Modeling

**Brief Description of Design Project Goals:**

**Overview:** The overall goal of the project is to implement and design responsive load models for power systems using Matlab or any other general-purpose programming languages. Such a model would be integrated in a bigger project, aiming for the co-optimization of the transmission system and microgrids as a component. The goal of the project is to investigate the potential of responsive demand to mitigate the uncertainty in power system problems, induced by the intermittency of renewable generation and load uncertainty.

**Specific MEng Contribution:** The main contributions of the M.Eng students are: (1) collect demand response data from entities such as independent system operators, utility companies, demand response aggregators and national labs, (2) review existing demand response models in the literature, (3) program existing models in Matlab or any other languages, (4) test the performance of the models with the collected demand response data.

**ECE Field Advisor Name:**
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**Project Web Site:** [https://blogs.cornell.edu/sidr/](https://blogs.cornell.edu/sidr/)

**Number of MEng Students Needed:** 2

**Required Skills:** Self starting person, motivated, interest in learning about power systems, related experience with Matlab or any other programming language.

**Estimated Project Time Frame:**

2017-18 Academic Year, one semester