

University of New Brunswick

The Emera & NB Power Research Centre for Smart Grid Technologies of the University of New Brunswick, Canada invites applications for Postdoctoral Fellowships.

The Centre is seeking to fill two PDF positions to conduct research under an externally funded project that is working in the development novel smart grid technologies for load forecasting and control of embedded energy resources.

The steady increase in demands for electric energy have motivated the power system industry to shift its operation and control procedures to optimize the generation, transmission and distribution of electric power. On the distribution level, many power system companies have started implementing smart grid functions to achieve demand response, peak-load management, and direct load control. Such functions are anticipated to offer effective means for optimizing the generation and delivery of electric power. The large-scale implementation of different smart grid functions can face several challenges, including environmental impacts, capital expenditure, public participation, economic constraints, and different levels of de-regulated operation of power systems. This PDF fellows will work on the development of innovative tools that can optimize the implementation of smart grid functions for ancillary services and peak load shifting to meet the growing demands for electric power. Successful candidate will work with a team of researcher and students on some of the following topics:

1. Develop innovative technologies of direct load control for creating alternative power system resources for ancillary services and peak load reduction.
2. Develop innovative forecasting techniques for estimating the shitting capacity of Embedded Energy Resources (EER).
3. Develop innovative algorithms to control heterogeneous load aggregators to achieve peak shaving function.
4. Work with industry partners to transfer the developed technologies for exploitation and commercialization.

The center is seeking applicant with:

- A PhD degree in Electrical, Computer or Software Engineering (or equivalent).
- Some experience in the smart grid area.
- Ability to organize, plan and communicate in a team setting.
- Ability to help with the guidance of master and PhD students.
- Excellent language and communication skills.

Interested candidates can send an email to Dr. Eduardo Castillo Guerra (eduardo.castillo@unb.ca) with a: (1) letter of interest, (2) CV(resumé); and (3) PhD degree documentation.