

**Special Section on
COVID-19 Impact on Electrical Grid Operation: Analysis and Mitigation**

The recent COVID-19 related shutdowns have made significant impacts on the electric grid operation worldwide, as governments put strict mitigation and suppression measures in place. The global electrical demand plummeted around the planet in March, April, and May 2020, with countries such as Spain and Italy experiencing more than 20% decrease in their usual electric consumption. On the other hand, countries like Canada experienced unusually high summer peaks due to the increase in demand by the residential HVAC systems. In view of such massive electric demand changes, electricity network operators are facing unprecedented challenges in scheduling energy resources, as energy forecasting systems struggle to provide an accurate demand prediction. In fact, power systems operational reliability highly depends on an accurate projection of the future demand and scheduling an appropriate mixture of generation resources accordingly. Thus, recent changes expose operators to technical and financial risks, further reinforcing the adverse economic impacts of the pandemic.

This Special Section aims at providing a detailed analysis of the impacts of the COVID-19 related measures on electricity demand, calling for strategies to mitigate the impact on forecasting techniques performance. Furthermore, the Special Section will gather state-of-the-art research in power systems resiliency to global pandemics or similar emergencies. Given that the topic of the Special Section is of great interests for not only academics, but also industry experts, IEEE Open Access Journal of Power and Energy is an ideal venue that all interested readers can openly access.

Finally, IEEE DataPort is organizing a data competition on the same topic, co-sponsored by the IEEE PES PSOPE WG on Energy Forecasting and Analytics. While the Special Section is open to public submissions, it will be requested to conditionally pre-approve the winners to publish, subject to regular review process and fees; conditional pre-approval here refers to eliminating the need for abstract submissions. Given the high standard and quality of the IEEE Open Access Journal of Power and Energy, such a connection between the Special Section and the IEEE DataPort competition would be a strong incentive for interested researchers in both academia and industry to participating in this call.

Topics of interest for this Special Section include, but are not limited to:

1. COVID-19 Impact on Electric Grid Operation, Lessons Learned and Mitigation Techniques
2. COVID-19-Related Demand Forecasting
3. Power Systems Resiliency in view of Global Pandemics or Similar Emergencies

This Special Section solicits original works that must not be under consideration for publication in other venues. Two-page extended abstracts are solicited for the first round of reviews. Authors of selected abstracts will be invited to submit the full papers in the second round. Authors should refer to the IEEE Open Access Journal of Power and Energy author guidelines at <http://www.ieee->

pes.org/publications/information-for-authors for information about content and formatting of submissions. Please submit a PDF version of the abstracts including a cover letter with authors' contact information to the Guest Lead Editor of this Special Section, Dr. Chongqing Kang via e-mail at: cqkang@tsinghua.edu.cn.

Important Dates:

07/15/2021: Deadline for extended abstract submission

08/15/2021: Completion for first-round of reviews

10/01/2021: Deadline for full paper submission

12/01/2021: Final decision notification

12/15/2021: Publication materials due

Publication of Special Section – Early 2022

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