IEEE Task Force on Advanced Methods for Computational Intensive Power System Planning Applications (http://sites.ieee.org/pes-cipspa/)

Annual Task Force Meeting (Web Meeting)
2020 IEEE PES General Meeting, Atlanta, USA
Thursday, August 20, 2020 11AM-12PM US Eastern Time

Chair: Rui Bo, Missouri University of Science and Technology (rbo@mst.edu, rui.bo@ieee.org)
Vice Chair: Mihai Anitescu, Argonne National Laboratory (anitescu@anl.gov)
Secretary: Linquan Bai, University of North Carolina Charlotte (linquanbai@uncc.edu)

Attendees:

- Rui Bo, Mihai, Linquan Bai, Yousu Chen, Xin Fang, Siyuan Wang, Qifeng Li, Clayton Barrows, Jinxiang Zhu, Daniel Adrian Maldonado, Kibaek Kim, Jordan Bakke

Meeting Minutes

- Meeting started at 11am.
- Introduction and roll call.
- Rui Bo reviewed the background, scope, activity and expected deliverables of the task force. Reviewed and approved the 2019 annual meeting minutes.
- Rui Bo introduced the activities the task force has sponsored since last year
    - Sponsored panel session "Addressing Computational Challenges in Power System Planning" by Rui Bo and Wei Gu. Panelists include:
        - 20PESGM3521-Application of Cloud Computing at ISO New England - Experiences and Challenge, Song Zhang; ISO New England
        - 20PESGM3522-MIPLearn: A machine learning library for solving mixed-integer programming and its application to SCUC; Feng Qiu, Alinson Santos Xavier; Argonne National Lab
        - 20PESGM3520-Solutions to address computational challenges in economic transmission planning; Rui Bo; Missouri University of Science and Technology
        - 20PESGM3523-Probabilistic Analysis using Scalable ML for Planning with Renewables and Storage; Dimitry Gorinevsky; Stanford University
        - 20PESGM3524-Comprehensive Transmission Planning under High Penetration of Renewable Generation; Yaming Zhu; Siemens
    - An IEEE PES wide webinar has been scheduled for 11 AM US Eastern Time on October 7, 2020. The title is "A kinetic Monte Carlo approach for characterizing the distribution of cascading power network failures" and presenter is Mihai Anitescu.
- Rui Bo has maintained the task force website up to date with meeting announcements, meeting minutes, and officer contacts, and other related resources/activities (http://sites.ieee.org/pes-cipspa/). Discussed how the website may be used to disseminate more information such as panel presentations, reports, publications, datasets, etc.
- Attendees discussed possible future activities of the task force:

- Rui Bo called for volunteers and participation in writing the task force technical report. A draft report outline is below. We got a few volunteers: Xin Fang (4.1), Adrian (3.2), Mihai (5).

Section Title	Contributors
1 Scope	Lead: Name 1 Contributors: Name 2 Name 3
2 Background	Lead: Name 1 Contributors: Name 2 Name 3
3 Review of computational intensive applications in power system planning	Lead: Name 1 Contributors: Name 2 Name 3
3.1 Generation Sector	Lead: Name 1 Contributors: Name 2 Name 3
3.2 Transmission Sector	Lead: Name 1 Contributors: Name 2 Name 3
3.3 Distribution Sector	Lead: Name 1 Contributors: Name 2 Name 3
4 Current methods and Challenges	
4.1 Generation Sector	Lead: Name 1 Contributors: Name 2 Name 3
4.2 Transmission Sector	Lead: Name 1 Contributors: Name 2 Name 3
4.3 Distribution Sector	Lead: Name 1 Contributors: Name 2 Name 3
5 Emerging analytical methods and computing	Lead: Name 1 Contributors: Name 2

technology	○ Name 3
○ **6 Future Industry Needs and Research Needs**	○ Lead: Name 1 ○ Contributors: Name 2 ○ Name 3

- The attendees discussed the scope, structure and content of the report.
- The report is currently organized by application sector, and it can also be organized by methods.
- Concerns were raised that the scope is too broad and may need to be reduced. Also, the distribution sector can be removed as it does not fall under the scope of Bulk Power System Planning subcommittee. The report can be focused on a specific topic such as in transmission sector.
- Attendees discussed the engagement of members in the report writing. We should also reach out to software and solver vendors such as GUROBI. Coordinate with other SC/WG/TF on member engagement since there are overlapping interests.
- Briefly discussed other possible future activities
  - Panel sessions in the next GM, webinars, tutorials, and special sections on journals. Active and productive task force/working group will have priority in panel session proposals in future GMs. Didn't have extensive discussion on panel ideas due to time limit.
  - The panel session proposal is due by end of August, but may be extended. Rui Bo will check on that.
  - Create a google group for this task to help with communication and membership management.
  - Request to change the task force to a working group as there seems to be sustained need for it. Can create new task force under the working group to work on dedicated and narrowly scoped topic(s).
  - Attendees asked if it's possible to post the GM panel slides or recording to the task force website. Rui Bo will check on that.

- Meeting adjourned at 12:03pm.