IEEE Power & Energy Society
Seattle Chapter Meeting
Monday and Tuesday, 9-10 September 2019

Topic: **Two-day workshop under PES Distinguished Lecturer Program**: **Matching hydropower and renewables: an overview of hydroscheduling and renewable integration in competitive electricity markets with a significant hydro share**
Date: Monday and Tuesday, September 9 and 10, 2019
Time: Monday: 8:30 AM– 4:30 PM, lunch and refreshments, Tuesday: 8:30am-12pm
Place: Seattle City Light North Service Center, 1300 N 97th St, Seattle, WA 98103
(main entrance near the corner of N 97th St and N Stone Ave)
Speaker: Dr. Luiz Barroso, CEO of PSR Energy Consulting and Analytics, Brazil

Register online: https://events.vtools.ieee.org/event/register/202990
Registration limited to 25 attendees. IEEE members: $50; non-IEEE members: $75

Agenda

Monday
8:30 am – Networking and Refreshments
9:00 am – Welcome and Introductions
9:15 am – Presentation
12:00 pm – Lunch
1:00 pm – Presentation
2:30 pm – Refreshments
2:45 pm – Presentation
4:30 pm – Adjourn

Tuesday
8:30 am – Networking and Refreshments
9:00 am – Presentation
12:00 – Adjourn

Matching hydropower and renewables: an overview of hydroscheduling and renewable integration in competitive electricity markets with a significant hydro share

The objective of this workshop is to discuss the interplay between hydropower and renewables, under a market design and modeling perspectives. We will mostly discuss what will (and should) be the role of hydro power in a renewable dominated market and how will market design and regulation enable or interfere with this development. A modeling and policy-oriented approach, based on practical experience from the industry, will be deployed.

Main topics to be discussed:

- Hydropower as an enabler of the energy transition and renewable integration in electricity markets and the hydro renaissance
- Hydro development 2.0: planning new hydros with sustainability requirements
- Hydroscheduling in electricity markets
- Multi-stage decision making for storage in a probabilistic framework: the SDDP algorithm
- SDDP: from theory to practice - international experience, calibrating & validating models, probabilistic forecasting of renewable resources (inflows, wind & solar resources)
- Electricity Market Design and Hydropower: Transmission planning and energy auctions to integrate RES
- Role of hydro in integrating renewables
- International perspective on how different markets, regional generation portfolio, and water laws are influencing their model development: the hydroscheduling & the electricity market 2.0.

Non-IEEE PES members and students are welcome to attend.

Contact: Contact Marcelo A. Elizondo, m.elizondo@ieee.org, 206-528-3363 for information on this event.

IEEE Power & Energy Society
Seattle Chapter Meeting
Monday and Tuesday, 9-10 September 2019

Speaker:

Luiz Barroso is the CEO of PSR Energy Consulting and Analytics. From 2016 to 2018 he was the CEO of the Energy Research Office (EPE), a government company connected to the Ministry of Energy that runs all the energy planning studies in the country to support its energy policy decisions. In 2018 he was also a visitor in the International Energy Agency (IEA) in France working in the IEA's Clean Energy Transitions Program, a new multi-year, EUR 30 million plan backed by 13 countries to support clean energy transitions around the world. Before joining EPE he was a partner and managing director at PSR, where he worked for 17 years, coordinating studies on power-gas systems planning, economics, operation, risk management and market design in about 30 countries in the Americas, Europe and Asia. He is also a research affiliate of Comillas Pontifical University's Institute for Research in Technology (IIT) and a lecturer in Summer School of Regulation (FSR) of Energy Utilities, in Florence, Italy. He is a past Associated Editor of the IEEE Transactions on Power Systems and of the IEEE Transactions on Smart Grids. He chairs the Power Systems Operations, Planning and Economics Committee of the IEEE Power and Energy Society (PES), where he is a senior member. He was the recipient of the 2010 IEEE PES Outstanding Young Engineer Award. He was the Brazilian member of the C5 SC on electricity markets and regulations where he was also part of its steering committee. He graduated in mathematics and received in 2006 the PhD degree in operations research from COPPE/UFRJ, Brazil.

Lunch and refreshments will be provided.

PARKING and DRIVING INSTRUCTIONS:
Seattle City Light North Service Center, 1300 N 97th St, Seattle, WA 98103

Driving Directions:
From the North via I-5 S

1. Depart I-5 S 0.8 mi
2. At exit 173, take ramp right for Northgate Way Westbound toward 1st Ave NE 0.3 mi
3. Turn right onto N Northgate Way Chevron on the corner 0.5 mi
4. Turn left onto Ashworth Ave N 0.2 mi
5. Turn right onto N 100th St, and then immediately turn left onto Ashworth Ave N 0.1 mi

Non-IEEE PES members and students are welcome to attend.

Contact: Contact Marcelo A. Elizondo, m.elizondo@ieee.org, 206-528-3363 for information on this event.

IEEE Power & Energy Society
Seattle Chapter Meeting
Monday and Tuesday, 9-10 September 2019

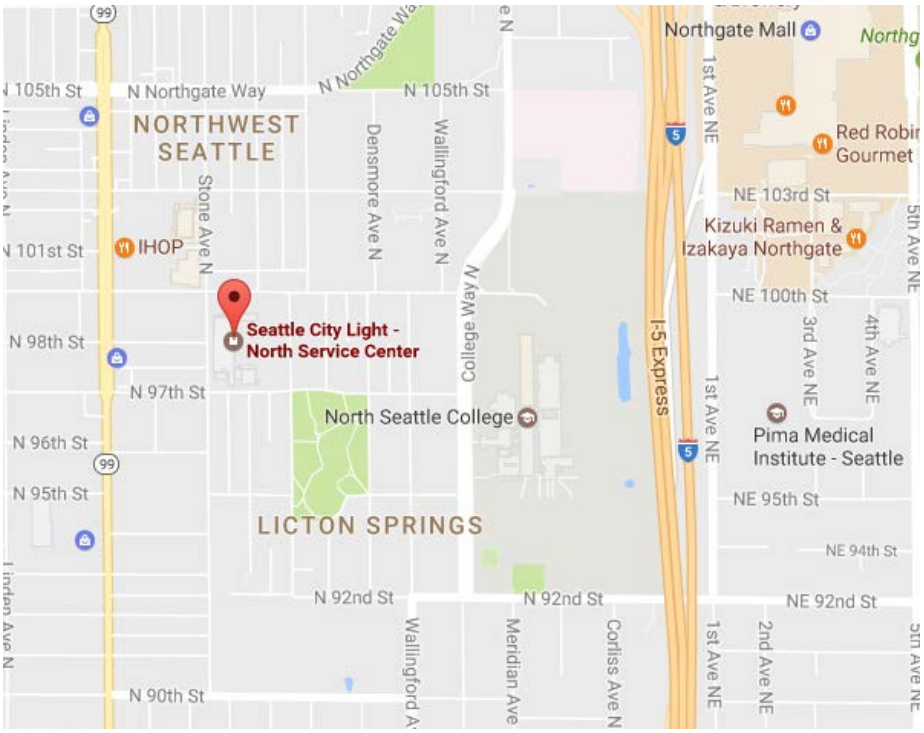
6. Turn right onto N 97th St 479 ft
7. Arrive at 1300 N 97th St, Seattle, WA 98103
The last intersection is Interlake Ave N. If you reach Stone Ave N, you've gone too far
The main entrance is near the corner of N 97th St and N Stone Ave

From the South via I-5 N

1. Depart I-5 N toward I-5 Express Ln 3.6 mi
2. At exit 172, take ramp right for N 85th St toward Aurora Ave N 1.1 mi
3. Turn right onto WA-99 / Aurora Ave N ARCO/ampm on the corner 0.6 mi
4. Turn right onto N 97th St 0.1 mi
5. Arrive at 1300 N 97th St, Seattle, WA 98103
The last intersection is Stone Ave N. If you reach Interlake Ave N, you've gone too far
The main entrance is near the corner of N 97th St and N Stone Ave

PARKING INSTRUCTIONS

Street Parking



Non-IEEE PES members and students are welcome to attend.

Contact: Contact Marcelo A. Elizondo, m.elizondo@ieee.org, 206-528-3363 for information on this event.