

CHALLENGES AND OPPORTUNITIES OF LARGE-SCALE INTEGRATION OF RENEWABLE ENERGIES IN POWER SYSTEMS

March 3rd & 4th 2020
PROGRAM

Tuesday, **March 3rd**

Plenary Session

08:30 – 09:00 **REGISTRATION**

09:00 – 09:05 **Greetings & Welcome**
Hugh Rudnick, Pontificia Universidad Católica de Chile & SERC Chile

09:05 – 09:15 **Opening Words**
José Venegas, Comisión Nacional de Energía
Carlos Barría, Ministerio de Energía

09:15 – 09:30 **Objective of the Seminar**
Claudia Rahmann, Representative of the Local Organizing Committee

09:30 – 10:00 **Challenges for a Large-Scale Integration of Renewable Energies: The Role of the Academy, the Government and Private Companies**
Rodrigo Palma, Universidad de Chile & SERC Chile

10:00 – 10:30 **COFFEE BREAK**

Session I: Stability & Control

Technical Chair:
Claudia Rahmann, Universidad de Chile & SERC Chile

Moderator:
Hendrik Vennegeerts, University of Duisburg-Essen

Participants in the Panel:
Lilian García, Comisión Nacional de Energía
Héctor Chávez, Universidad de Santiago de Chile

Secretary:
Jorge Vega, Universidad de Chile

10:30 – 10:50 **Online-Monitoring of Stability in the Chilean Power System: Current State, Benefits and Challenges**
Jorge Vargas, Coordinador Eléctrico Nacional

10:50 – 11:10 **Control in Power Systems with Low Inertia: Challenges and Opportunities**
Claudia Rahmann, Universidad de Chile & SERC Chile

11:10 – 11:30 **Definition and Classification of Power System Stability Revisited - Conclusions of IEEE Task Force**
Claudio Cañizares, University of Waterloo, Canada

11:30 – 11:50 **Multi-Scale Modelling and Simulation of Next-Generation Sustainable Power Systems**
Kai Strunz, Technical University of Berlin, Germany

11:50 – 12:10 **Application of Intelligent Systems for On Line Dynamic Security Assessments**
Vijay Vittal, Arizona State University, USA

12:10 – 13:00 **Comments and Questions from the Participants of the Panel**

13:00 – 14:30 **FREE TIME FOR LUNCH (lunch is not included)**

Session II: Planning

Technical Chair:
Ricardo Álvarez, Universidad Técnica Federico Santa María & SERC Chile

Moderator:
Rodrigo Moreno, Universidad de Chile & ISCI

Participantes in the Panel:
María Isabel González, Energética
Johanna Monteiro, New York University
Rodrigo Solís, Generadoras de Chile

Secretary:
Danny Espín, Universidad de Chile

14:30 – 14:50 **Methodological Approach for Transmission Network Expansion Planning in Chile: Current State and Future Challenges**
Alfredo Cárdenas, Transelec

14:50 – 15:10 **Long-Term Energy Planning: Methodology, Last Results and the Carbon-Neutrality, New Challenges for Chile**
Carlos Toro, Ministerio de Energía

15:10 – 15:30 **Chilean NDC Mitigation Proposal: Challenges for a Large-Scale Integration of Renewables Energies**
Rodrigo Palma, Universidad de Chile & SERC Chile

15:30 – 15:50 **The Role of Flexible Technologies in the Design of Future Power Systems**
Ricardo Álvarez, Universidad Técnica Federico Santa María & SERC Chile

15:50 – 16:20 **COFFEE BREAK**

16:20 – 16:40 **Transmission Planning Strategies under European Market and Renewable Conditions with Reduced Inertia**
Christian Rehtanz, Technical University of Dortmund, Germany

16:40 – 17:00 **Impacts of Increasing Shares of Renewables on Power System Expansion Planning Criteria: The Case of Brazil**
Rafael Ferreira, Light S.A., Brazil

17:00 – 17:50 **Comments and Questions from the Participants of the Panel**

Wednesday, **March 4th**

Session III: Operation and Market

Technical Chair:
Rodrigo Moreno, Universidad de Chile & ISCI

Moderator:
Enzo Sauma, Pontificia Universidad Católica de Chile & SERC Chile

Participants in the Panel:
Juan Carlos Araneda, Coordinador Eléctrico Nacional
Carlos Finat, Acera
Francisco Muñoz, Universidad Adolfo Ibáñez & ISCI & SERC Chile
Matías Negrete, Pontificia Universidad Católica de Chile & ISCI

Secretary:
Álex Villamarín, Universidad de Chile

09:00 – 09:20 **An Evolving Regulatory Framework to Incentivize System Flexibility in Chile**
Fabián Barría, Comisión Nacional de Energía

09:20 – 09:40 **New Regime for Ancillary Services in Chile**
Rodrigo Espinoza, Coordinador Eléctrico Nacional

09:40 – 10:00 **Paving the Way for Flexible Operation and Smart Grid Technologies in Chile**
Rodrigo Moreno, Universidad de Chile & ISCI

10:00 – 10:20 **Operational Planning for Transmission Network with High Shares of Renewables: The German Experience**
Hendrik Vennegeerts, University of Duisburg-Essen, Germany

10:20 – 10:40 **Uncertainty, Uncertainty, Uncertainty: Who Should Carry the Risks in Electricity Markets?**
Daniel Kirschen, University of Washington, USA

10:40 – 11:10 **COFFEE BREAK**

11:10 – 12:00 **Comments and Questions from the Participants of the Panel**

12:00 – 12:30 **Main Conclusions & Closure**

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