

Climate and Power System Reliability in the Aftermath of the Texas (ERCOT) Blackouts

Frank A. Felder

Agenda

10:00 – 10:05: Welcome and Opening Remarks,
Dave Williams, IAEE and Frank A. Felder, KAPSARC

10:05 – 10:20: “Types and Causes of Power Outages and
their Implications for Markets and Regulation”
*Frank A. Felder, Ph.D., Program Director, Energy
Transitions and Electric Power, KAPSARC*

10:20 – 10:35: “In Defense of Energy Only Markets”
*Rolando Fuentes, Ph.D., Research Professor of Economics
and Finance, EGADE Business School*

Reference: Climate and Power system Reliability in the Aftermath of the Texas
Blackouts, Marie Petitet, Burcin Unel, Rolando Fuentes, and Frank A. Felder, 3rd
Quarter 2021, IAEE, <https://www.iaee.org/newsletter/issue/109>

10:35 – 10:50: "Market designs with adequation and
renewable objectives: insights on interactions between
capacity market, carbon pricing and renewable
portfolio standard"
Marie Petitet, Ph.D., Senior Associate, KAPSARC

10:50 – 11:05: “Market and Regulatory Policy Design in the
Face of Climate Change”
*Burcin Unel, Ph.D., Energy Policy Director, Institute for Policy
Integrity, New York University School of Law*

11:05 – 11:25: Questions and Answers
Moderator, Frank A. Felder

11:25 – 11:30: Closing

Engineering

- Electricity is physically different from other commodities
 - Near instantaneous balancing required
 - Shortage for one is shortage for all
 - Storage of electricity is expensive
- Independent and dependent failures
- Reliability: security and adequacy & Resiliency

Economics

- Markets do not always clear
- Missing markets
- Centralized operations required
- System operator's principal-agent problem
- System operator may intervene too soon in markets

Political Economy

- Industry has a long history of regulatory overhang
- Electricity is considered by many to be a merit good
- Policymakers may not allow prices to rise sufficiently to clear markets
- Electric sector viewed as a public policy mechanism to achieve other political economic goals besides efficiency