Power System of the Future

AGI Industry Advisory Board Panel
August 30, 2023 | Uzma Siddiqi, PE
Vision — Adaptations for the Morphing Grid

• Transformational changes driven by the policy in WA state
  • Clean Energy Transformation Act (CETA)
  • Climate Commitment Act (Cap-and Invest program)
  • Clean Fuels Program

• Grid Operations altered by climate change
  • Variability in hydropower generation
  • Changing load patterns – extreme weather events: high temps, low temps, rain, etc.
  • Wildfires

• Reshaping within utilities
  • People challenges – engineers, technicians, line-workers, Specialized IT
  • Increased need for optimized real time operation
  • Flexible load solutions to offset intermittent generation (GEBs, DR, Managed Charging, etc.)
  • Renewable Distributed Energy generation
  • Energy Storage Systems
  • Increased Cybersecurity for connected systems
Technology Needs

• Field Sensing Devices
  • Communicating
  • Data sources

• Decision making
  • Improved processing of data

• Real-Time Ops
  • DSO Tools for optimized operations

• Modeling
  • Integrated Planning with Scenarios
Gaps that need to be addressed

• Frameworks that work for most utilities (2500+)
• New Protection and Construction that minimize wildfire risks
• Culture change at some utilities – new ways of doing things
• Secure communication for utilities
• Educating and training for the new technology driven grid
• Improved modeling and operations tools that are integrated
• Computation aids for solving large problems
• Equitable solutions
THANK YOU

Seattle City Light
Mission

Seattle City Light provides our customers with affordable, reliable and environmentally responsible energy services.

Vision

Create a shared energy future by partnering with our customers to meet their energy needs in whatever way they choose.

Values

- Customers First
- Environmental Stewardship
- Equitable Community Connections
- Operational and Financial Excellence
- Safe and Engaged Employees