Cyber-Resilient Energy Systems

Digitalization as an enabler to a cleaner and more resilient system

Group of Expert on Cleaner Electricity System
Task Force on Digitalization
19th Session – October 4th 2023

DigiTransfo expertise
Electric Grid Digital Transformation and security | Energy Transition

Goals for a Cleaner Electricity Systems

Powering Canada Forward:
Building a clean, affordable and reliable electricity system for every region of Canada

Digitalization Benefits

Asset Knowledge

- Operations
- Assets Management
- Maintenance

Manage

- Load
- Charging

Integration (renewables + DER)

- Changing resources mix
- Active customers

Data

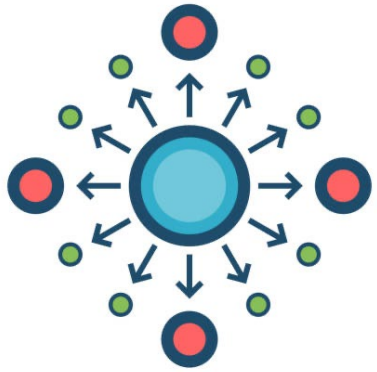
Digitalization Contributes to

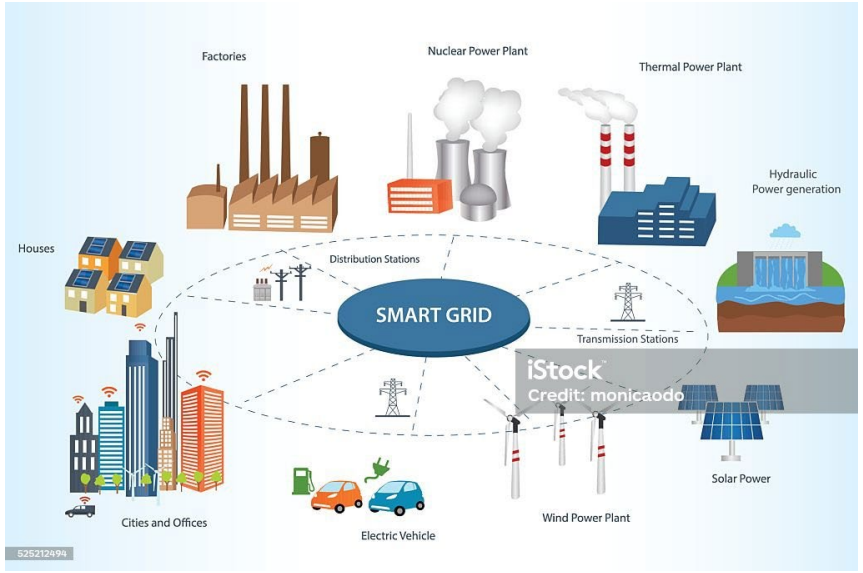
Cleaner Electricity System

+

More Resilient System

Digitalization as an enabler





Challenges

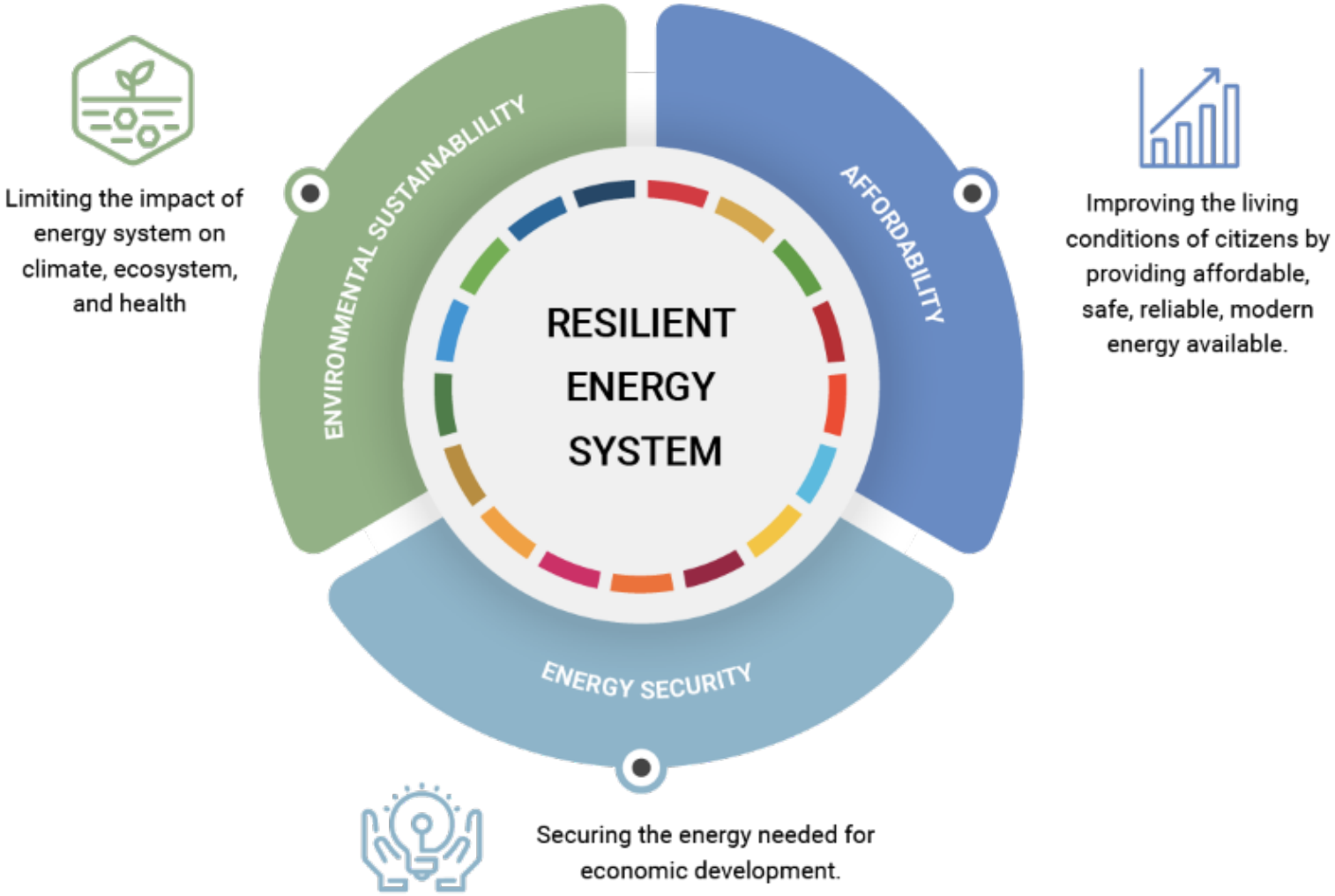
- Cybersecurity and data privacy
- Skilled workforce
- Literacy

Electricity is vital for society

Extreme weather events + Energy transition + 3D = Grid is adapting

Decentralization
Decarbonation
Digitalization

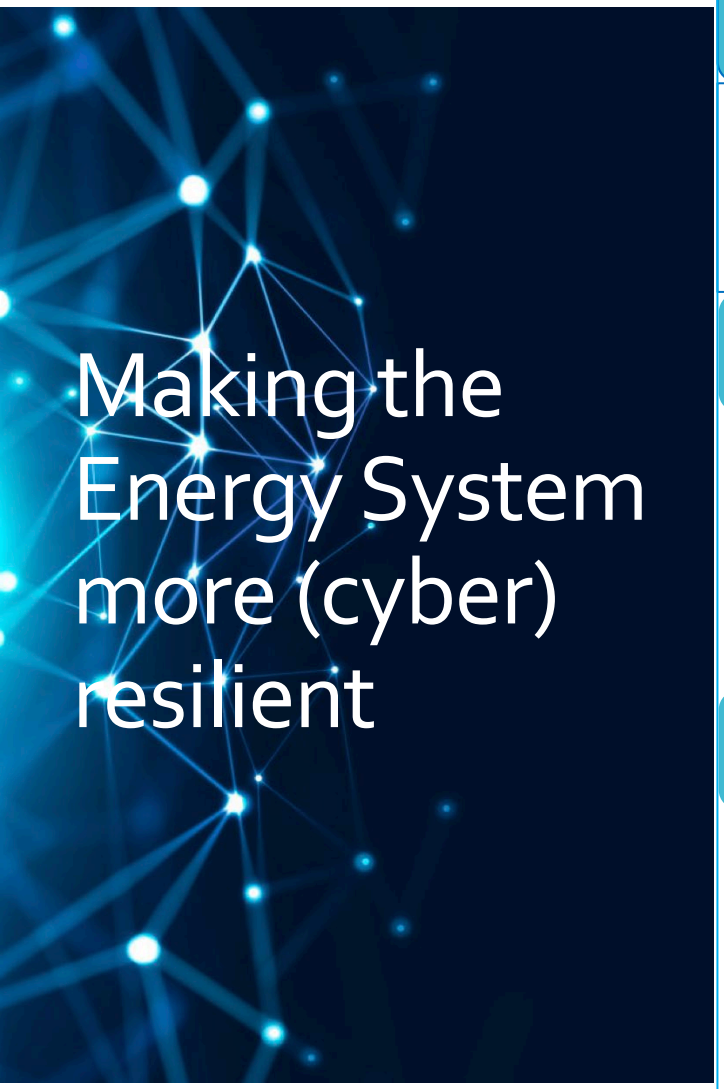
Building Resilient Systems



Meeting the Challenges: Yesterday's Session

Making the Energy System more (cyber) resilient:

- Dr Erlijn van Genuchten
- Stefan Zueger (Fortinet)
- Thomas Gereke (Siemens)
- Ryan Quint (NERC)



Cybersecurity for the Electric Grid

- Digitalization
- Cyber-crime = $
- Electric Grid is a Target

Pathways to Cyber-Resiliency

- Standards
- Best Practices
- 80% of defensive measures are in Identify, Protect and Detect
- Supply-Chain Management

Security Integration into Design and Operations

- Security Integration Framework
- Applying engineering practices into cybersecurity
- Suppliers offering integrating cybersecurity