

The Future of Nuclear Cybersecurity

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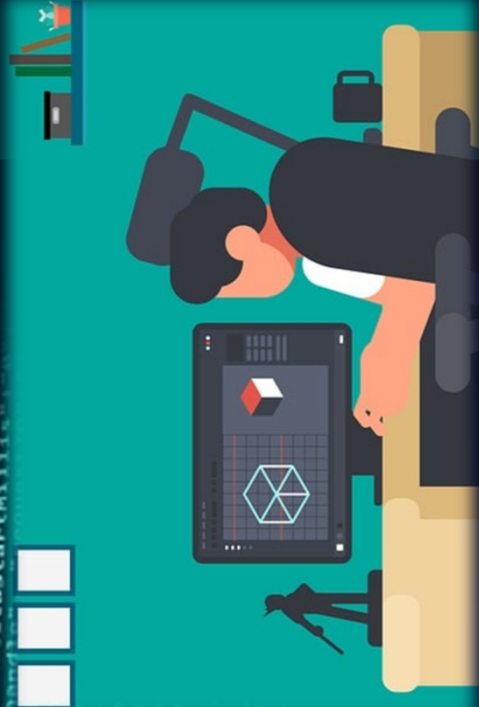


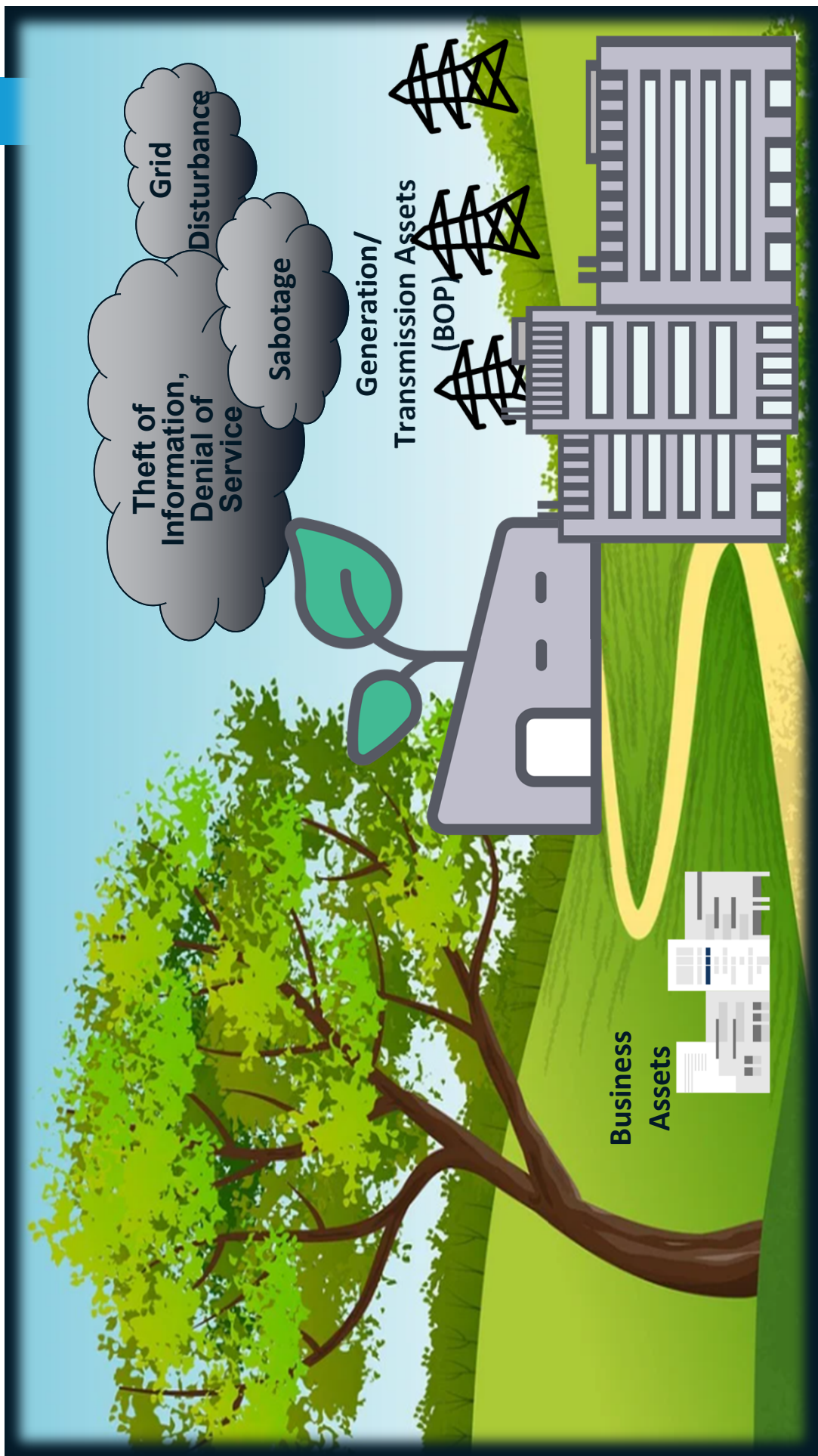
Two Decades of Nuclear Cybersecurity: What Does the Future Hold?

In The Beginning...



Fast Forward to Today.





From The Beginning

● 2002 – 2004

NEI Cyber Security Task Force Formed

Interim Compensatory Measures Order

NRC Completes Cyber Assessment Pilot Program

NUREG/CR-6847, “Cyber Security Self-Assessment Method”

● 2005 – 2007

NEI 04-04 “Cyber Security Program for Power Reactors”

NRC Endorses NEI 04-04

NEI, NERC MOA, NEI 04-04

Equivalent to CIPS 002-009

NSIAC Voluntary Initiative for Cyber Security Programs

Cyber Attack Added to Design Basis Threat

● 2008 - 2010

NEI 04-04 Implemented

NRC Cyber Rule Issued

NRC Endorses NEI 08-09, Cyber Plan Template

● 2011 – 2013

NRC Endorses Cyber Plan Implementation Schedule Template

All Cyber Security Plans Approved

Milestones 1-7 Implemented

Initial Inspections Begin

● 2014 – Now

Cyber Event Notification Rule Issued and Implemented

Plants Achieved Full Program Implementation

Full Program Inspections by NRC Through 2021

New Cyber Security Program NRC Inspection Procedure Finalized

Cyber Security Performance Objectives

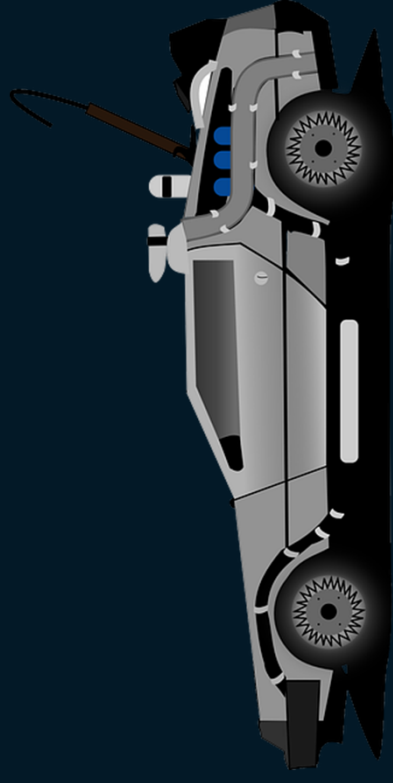


Cyber security is an integrated component of the physical protection program

Like the physical protection program, the cyber security program must prevent radiological sabotage

The cyber security program is designed to evolve to account for changes to the cyber threat landscape

Back to The Future



The Future of Nuclear Cybersecurity



Continuous Improvement and Focus of Current Operating Fleet

- Updated Cyber Security Plan
- Updated NRC Inspector Guidance
- Industry Cybersecurity Inspection Information Sharing Forum
- Cyber Security Conferences and Training Forums
- Incorporate principles of the Very Low Safety Significance Issue Resolution (VLSSIR) Process



The Future of Nuclear Cybersecurity

- U.S. is embarked on an unprecedented effort to decarbonize the electrical sector and the broader economy
 - Could be many NRC applications in the next few years

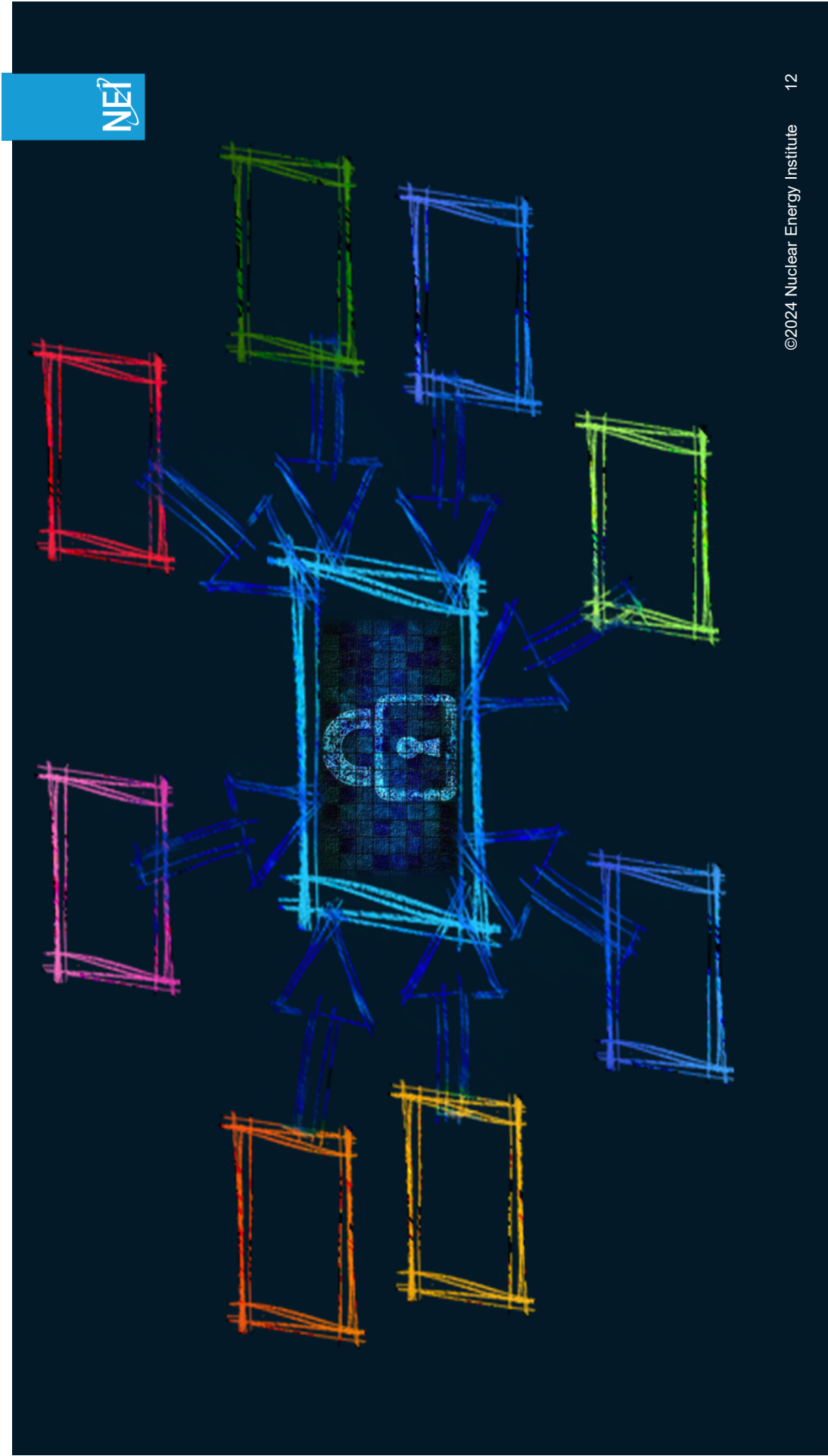
*Part 53 is NRC's
opportunity to enable
safe, reliable advanced
nuclear*



The Future of Nuclear Cybersecurity



- A regulatory framework that is “used” and “useful”
- Risk-informed
- Technology-inclusive
- Performance-based
- Safety is assured without unnecessary regulatory burden
- Efficient and timely licensing approvals
- Greater licensee flexibility
- Long-term regulatory stability



Thank you!

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