USAID FROM THE AMERICAN PEOPLE | ENERGY POLICY ACTIVITY

CYBERSECURITY DAY

Cybersecurity in the Energy Community Case Study – Bosnia and Herzegovina

June 1, 2021

Energy Community Secretariat

AGENDA

- Introduction USAID EPA Project
- Summary of report
- Specific EU Cyber Security regulation for the Energy Sector
- Specific Cyber Security standards relevant for the Energy Sector
- International good practices from EU member states
- Information Sharing and Analysis Center (ISAC)
- Recommendations

USAID Energy Policy Activity, Bosnia and Herzegovina

USAID Energy Policy Activity project activities

- Helping BiH to coordinate, manage, and improve transparency in the gas and electricity sectors
- Cooperation with the OSCE Mission in BiH (Organization for Security and Co-operation in Europe) – Neretva Cybersecurity Working Group
- Working group and SOW
- Road Map for the implementation of NIS Directive in the BiH energy sector
- Developed documents (Gap analysis and Int'l best practice)

Energy Policy Activity (EPA)

Policy and Technical Assistance Project

Total Funding: $7.5 million

Project Duration: September 2019 - 2024

Implementing Partner:
Advanced Engineering Associates International

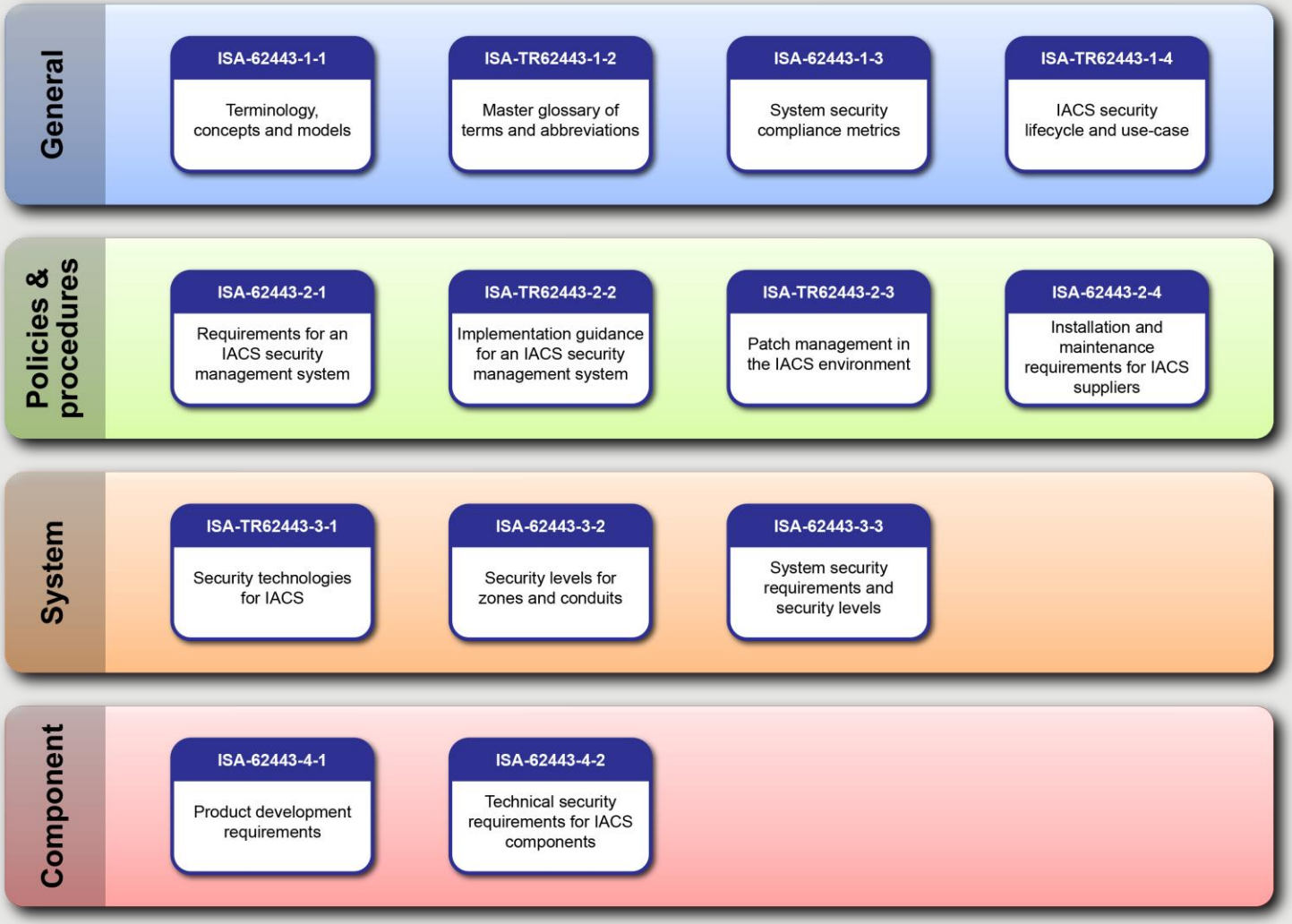
Draft report on International best practices

- EU Cybersecurity legislation/regulation/standards
- Specific EU Cyber Security regulation for the Energy Sector
- Specific Cyber Security standards relevant for the Energy Sector
  - EU
  - US
- International compliancy practices from similar (EU) Member State
  - Portugal
  - Italy
  - Austria
  - The Netherlands
  - Germany
- Information Sharing and Analysis Center (ISAC)
- Recommendations from the author

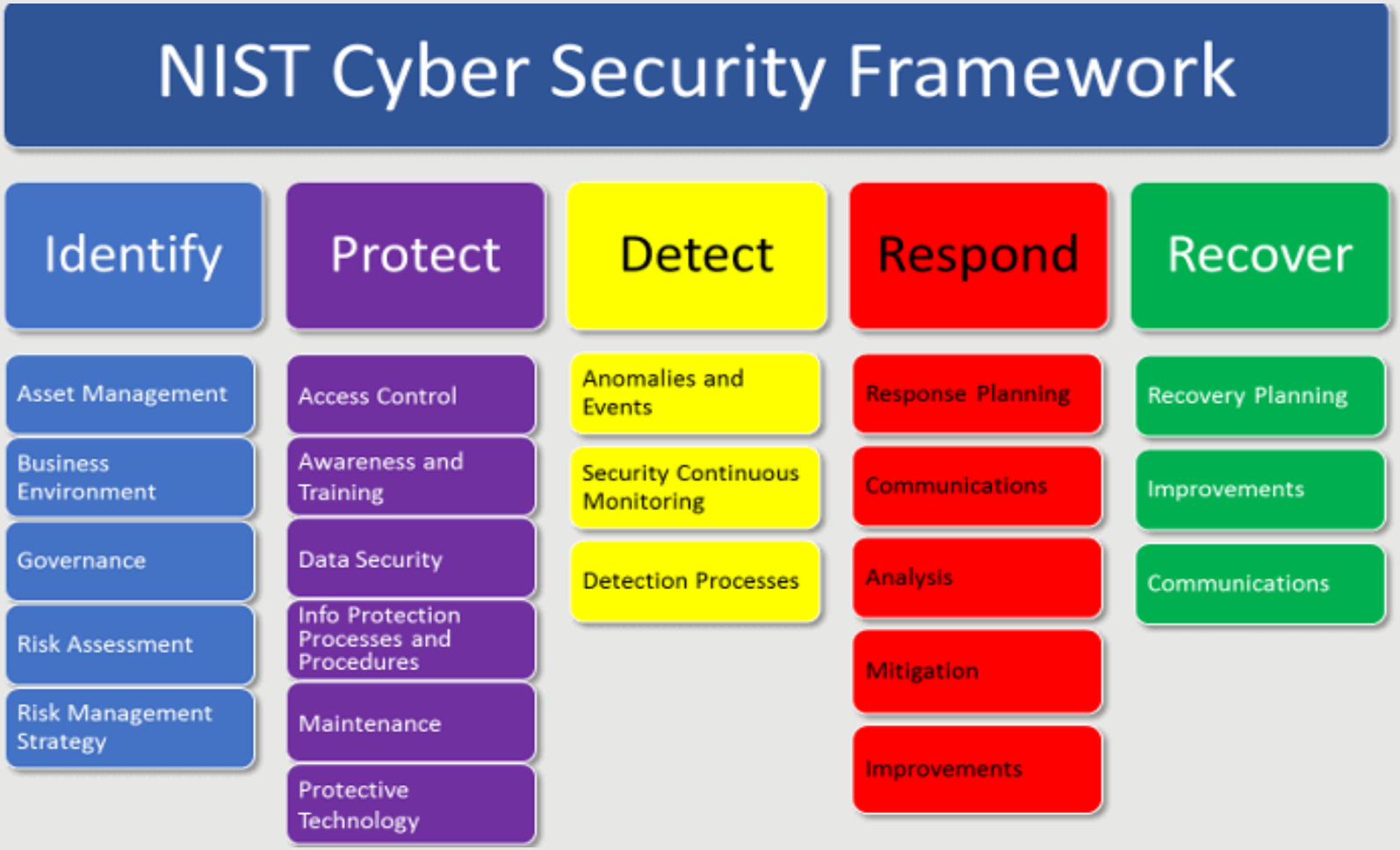
Specific EU Cyber Security standard relevant for the Energy Sector : ISO 27019 (additional controls)

- **Central and distributed process control**, monitoring and automation technology, and operational systems such as programming and parameterization devices;
- **Digital controllers and automation components** such as control and field devices or Programmable Logic Controllers (PLCs), including digital sensors and actuators;
- **Communication technology** used in process control e.g. networks, telemetry, telecontrol applications and remote control technology;
- **Advanced Metering Infrastructure** (AMI) components e.g. smart meters;
- **Digital protection and safety systems** e.g. protection relays, safety PLCs, emergency governor mechanisms;
- **Energy management systems** e.g. Distributed Energy Resources (DER) and electric charging infrastructures in homes and industrial situations;
- **Distributed components of smart grid** environments e.g. in energy grids, homes and industry.

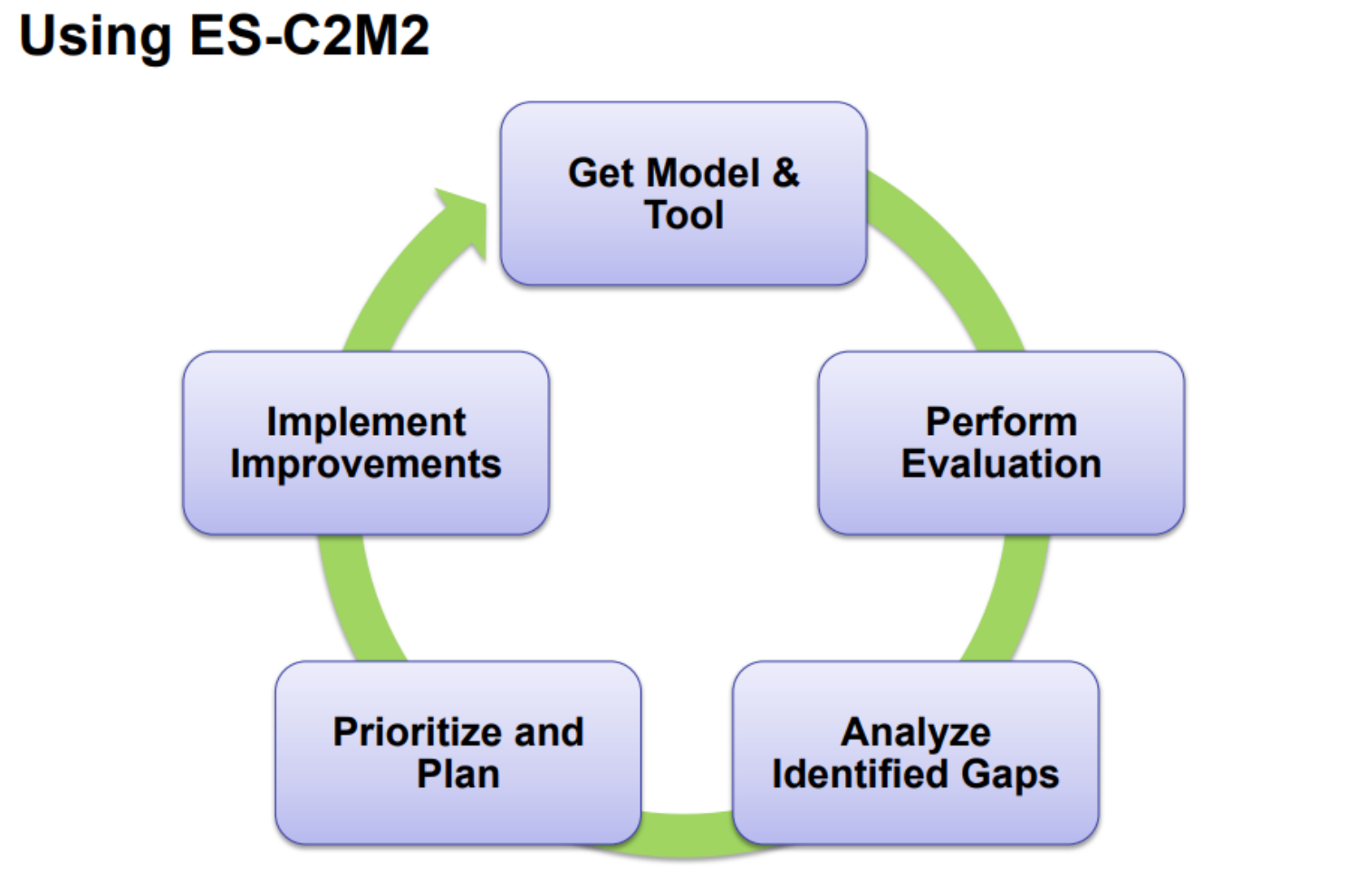
Specific global Cyber Security standard relevant for the Energy Sector : ISA / IEC 62443 (IACS controls)



Specific US Cyber Security standard relevant for the Energy Sector : NIST Cyber Security Framework



Specific US Cyber Security standard relevant for the Energy Sector : Cybersecurity Capability Maturity Model



International good practices from EU member states

	Austria	Croatia	Georgia	Germany	Italy	Netherlands	Portugal
NRA Energy	E-Control	HERA	DEA	Federal Network Agency	ARERA	ACM	ERSE
NRA Cyber Sec	Federal Chancellery	HAKOM		BSI	DIS	AP, ACM	
NCA Cyber Sec	Federal Chancellery	Ministry of Environment & Energy, ZSIS	NSC	BSI	DIS	NCSC	NCSC
National Cyber Security Strategy	✓	✓	✓	✓	✓	✓	✓
National Cyber Security Policies	✓		✓	✓	✓	✓	✓ (not enforced)
National Cyber Security Policies for the Energy Sector	✓			✓		✓	
Smart metering requirements	✓			✓	✓	✓	
Implemented security standards			ISO 27001 ISO 27002 ISO 15408-1	ISO 27001 ISO 27002 ISO 27019	ISO27001 NIST FW (custom.)	ISO27001 ISO27002 ISO27019 IEC62443 ISF GP	ISO27001 NIST FW

International good practices from EU member states

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NRA Energy	E-Control	HERA	DEA	Federal Network Agency	ARERA	ACM	ERSE
NRA Cyber Sec	Federal Chancellery	HAKOM		BSI	DIS	AP, ACM	
NCA Cyber Sec	Federal Chancellery	Ministry of Environment & Energy, ZSIS	NSC	BSI	DIS	NCSC	NCSC
National Cyber Security Strategy	✓	✓	✓	✓	✓	✓	✓
National Cyber Security Policies	✓		✓	✓	✓	✓	✓ (not enforced)
National Cyber Security Policies for the Energy Sector	✓			✓		✓	
Smart metering requirements	✓			✓	✓	✓	
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Information Sharing and Analysis Center (ISAC)

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Recommendations (summary)

1. Appoint the **Regulatory Authority** role to the current **State Electricity Regulatory Commission.**
2. Initiate an independent **State Energy Cybersecurity Competent Authority** that can play an advisory- and supporting role.
3. Initiate a **State Energy Cybersecurity Incident Response Team** unit.
4. Set up a **State Energy Cybersecurity Strategy** led by an **Executive Cyber Security Board** that consists of key players from government, industry and individuals.
5. Join the European CSIRT network to create a broader network of partners and collection of (threat) information
6. Create a list of **Operators of Essential Services (OES)** to identify who must comply with the European Cybersecurity regulations.
7. Set up a **BiH State Energy ISAC** to collaborate under public-private-partnership (PPP) and share valuable information on IT/OT vulnerabilities, threats and incidents according to Traffic Light Protocol (TLP) protocol.
8. Contact the EnC and/or EE-ISAC for advice and support in setting up an ISAC.

THANK YOU FOR YOUR ATTENTION!

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