

MINUTES OF THE REGULAR JOINT MEETING OF THE CYBER & PHYSICAL SECURITY COMMITTEE July 30, 2019

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Minutes of the regular joint meeting of the New York Power Authority and Canal Corporation's Cyber and Physical Security Committee held at the Authority's offices at 123 Main Street, White Plains, New York, at approximately 8:45 a.m.

Members of the Cyber & Physical Security Committee present were:

Michael Balboni - Chairman John R. Koelmel Eugene L. Nicandri Anthony Picente, Jr.

Tracy B. McKibben – Excused

Also in attendance were:

Anne Kress Trustee

Gil Quiniones President and Chief Executive Officer

Justin Driscoll Executive Vice President and General Counsel
Adam Barsky Executive Vice President and Chief Financial Officer

Soubhagya Parija Senior Vice President and Chief Risk Officer
Robert Piascik Senior Vice President & Chief Information Officer

Kenneth Carnes Vice President – Critical Secure Services and Chief Information

Security Officer

Karen Delince Vice President and Corporate Secretary

Daniella Piper Vice President – Digital Transformation/Chief of Staff

Saul Rojas Vice President – Technical Compliance

Victor Costanza Senior Director – Configuration Control and Deputy CISO Lawrence Mallory Senior Director – Physical Security & Crisis Management

Vera Pimpiano Senior Manager Payroll

Lorna Johnson Senior Associate Corporate Secretary

Sheila Quatrocci Associate Corporate Secretary

Lori DeMichele Board Travel Specialist

Chairman Balboni presided over the meeting. Corporate Secretary Delince kept the Minutes.

Introduction

Committee Chair, Michael Balboni, welcomed the committee members and the Authority's senior staff to the meeting. He said that the meeting had been duly noticed as required by the Open Meetings Law and called the meeting to order pursuant to Section B(4) of the Cyber and Physical Security Committee Charter.

1. Adoption of the July 30, 2019 Proposed Meeting Agenda

Upon motion made by member John Koelmel and seconded by member Eugene Nicandri, the agenda for the meeting was adopted.

2. CONSENT AGENDA

Upon motion made by member John Koelmel and seconded by member Eugene Nicandri, the Consent Agenda was adopted.

a. Adoption of the Meeting Minutes of January 30, 2019

Upon motion made and seconded, the Minutes of the joint NYPA/Canal Corporation meeting held on January 30, 2019 were unanimously adopted.

3. DISCUSSION AGENDA

a. Security Awareness and Partnerships

Mr. Kenneth Carnes, Vice President of Critical Secure Services and Chief Information Security Officer, provided an overview of the Authority's Security Awareness Program (Exhibit "3a-A").

NYPA Cyber Security Awareness Program

Mr. Carnes said that the Cyber Security team is focused on building out a program that will help employees understand cyber security and increase awareness. Given the continuous challenges related to cyber security in the industry, the team initiated the "Be Cyber Safe" program which teaches a proactive approach to cyber defense and focuses on helping staff understand cyber security not only in the workplace, but also at home. Each month, Cyber Security highlights a Cyber Security topic focusing on tips and desired behaviors. In addition, Cyber Security breaks down the regular assessments into topics to help target awareness to those risk categories. The program focuses on one human risk area every quarter. The risk areas include:

Malicious Insider – If Cyber Security have password control only for entry into NYPA's network and that was compromised on an employee's home device via VPN, that same access point could be used for an adversary to gain access to their work network.

Security of Intellectual Property – Cyber Security used an added control with a multifactor to confirm that a user's credential is matching the person that has been given access to an entry point throughout the business.

Mobile Device Security – With mobile devices, and other services, Cyber Security makes sure that employees are vigilant and understands cyber threats. Mobile devise security highlights: Work Device Security; Personal Device Security and Secure use of Social Media

Phishing & Social Engineering – Cyber Security performs regular assessments on phishing and social engineering.

Mr. Sal Rojas added that earlier this year, under the leadership of President Quinones and Joseph Kessler, Chief Operations Officer, Cyber Security launched the Enterprise Resilience Program. He said that cyber threats, especially in the electric industry, are evolving. Recognizing this, the team launched the Enterprise Resilience Program to ensure that NYPA will be prepared for these challenges in the future. Building on the strong competencies at NYPA, this program will take the traditional IT disaster recovery business continuity processes and crisis management to the next level and ensure that NYPA is able to respond to expected and unexpected events as they relate to both physical and cyber security.

Mr. Carnes continued that "NYPA Secure" was launched last year; the focus was to bring awareness and understanding to staff that they have a role in NYPA's cyber security. To that end, the team conducted eight special events during the year which included cyber health and safety. In addition, the team continues to monitor phishing assessments and constantly monitor the success of the communications programs.

Security Awareness in Action

Mr. Carnes highlighted the result of the last phishing assessment which was a two-phase assessment. The first message came in at 7:00 a.m. on a regular workday telling employees that they had to update their "direct deposit" information. NYPA's Senior Manager of Payroll, Vera Pimpiano, saw this email and responded almost immediately, sending an email to the entire company instructing them not to click the message because it was a phish. By that action, and other unilateral actions by the email team, the firewall team and others, the phase two assessment scheduled for 8:00 a.m. was blocked

because, by then, the system was totally shut down. Mr. Carnes said that the Payroll Manager's response set a great example of how seriously employees should take cyber security and he wanted to commend Ms. Pimpiano on her quick response to that phishing assessment.

International and Local Partnerships

Mr. Carnes said that Cyber Security is a major issue for utilities throughout the world. On July 1, Governor Cuomo announced a series of economic development partnerships with Israeli cyber security and grid management companies to test and demonstrate their innovative solutions. He then highlighted the partnerships with NYPA.

NYPA is partnering with Israeli firms CY-OT and Siga OT Solutions, Inc. to test their innovative solutions in New York. The companies use a technology putting in cyber controls and monitoring network logs out of band from the network, but with an added electrical signal level. The teams are now deploying these advanced analytics in the NYPA's Agile Lab in order that the Authority can pilot and test that technology. This technology will give the Authority capabilities to change its controls and give it the ability to better monitor the entire network stack from this predigital analog.

NYPA plans to continue to build-out and test those technologies and determine how they fit in its cyber strategy for the long-term.

In partnerships with other utilities, NYPA staff attended training sessions to build employee skill set and capabilities. This focused training included incident response at the operational technology level.

In partnership with New York State Homeland Security and others, NYPA staff attended the Idaho National Labs Cyber Strike training. This training focused on how to respond to Operational Technology cyber event.

NYPA is also developing a partnership with the New York National Guard to build a model for the industry, leveraging skill set to augment or support recovery capabilities.

In addition, NYPA's Operations and cyber security team(s) went to Plum Island to support the Defense Advanced Research's program. That program assumes extreme cases and builds training and staff capabilities on how to respond and recover in a bad day cyber-attack against critical infrastructure.

Chair Michael Balboni responded that Ms. Pimpiano's actions underscores the fact that cyber security is a team effort and about persons who have a responsibility for their operator networks and take a proactive stance, when necessary. He said that leadership is also important and Robert Piascik's and Kenneth Carnes' interest, talent, and experience in cyber security is impressive. Also, President Quiniones, in addition to his other leadership skills, is an expert on cyber security. He continued that nine months ago, he and Mr. Carnes went to Israel to observe the technologies and he appreciated the fact that the Authority values this type of partnership. He ended by saying that he is very pleased with the work that NYPA's Security team is doing on a day-to-day basis, leveraging the technologies.

Member John Koelmel said that he agreed with Committee Chair Balboni's remarks. He applauded Ms. Pimpiano for being empowered enough to take the action she did and her quick response in the phishing assessment and Kenneth Carnes and the Cyber Security team in setting the tone for cyber security in a very positive and constructive way.

4. Next Meeting

Chairman Balboni said that the next regular meeting of the Cyber and Physical Security Committee is to be determined.

Closing

Upon motion made by member John Koelmel and seconded by member Anthony Picente, Jr., the meeting was adjourned by Chairman Balboni at approximately 9:10 a.m.

Karen Delince

Karen Delince Corporate Secretary

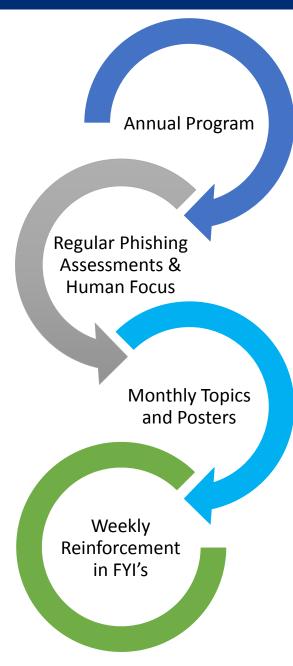
EXHIBITS

For
July 30, 2019
Meeting Minutes



Security Awareness & Partnerships Kenneth Carnes

VP Critical Secure Services & Chief Information Security Officer



The theme for this year has been "Be Cyber Safe" which teaches a proactive approach to cyber defense. This campaign spotlights one human risk area every quarter.

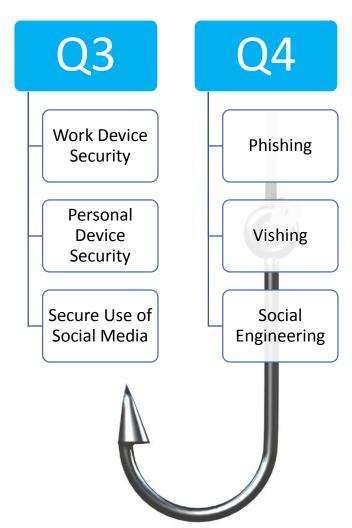
Malicious Insider

Security of Intellectual Property

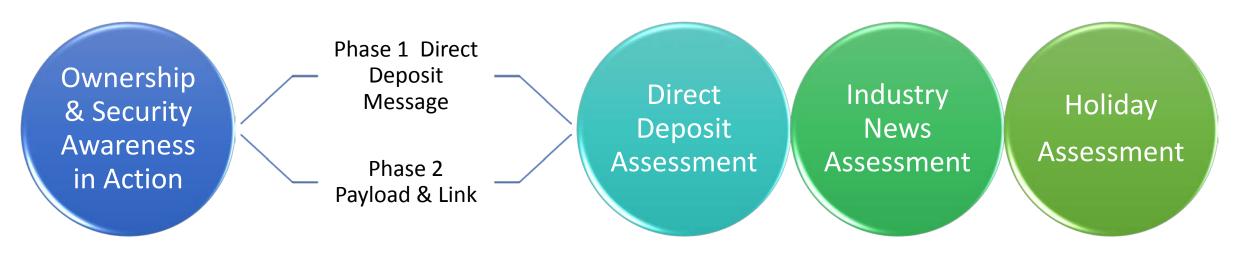
Q3 Mobile Device Security

Q4 Phishing & Social Engineering

Monthly we highlight a Cyber Security topic focused on tips and desired behaviors.



Ownership & Security Awareness in Action



Thanks for your Security Awareness!

Vera Pimpiano

Senior Manager Payroll



July 1,2019 Governor Cuomo Announces sweeping series of economic Development Partnership Between NY and Israel.

CEO and founder of Cybergym is Ofir Hason said, "CyberGym is honored to partner with NYPA, a key player in NY energy market. The mutual cooperation will assist CyberGym in expanding its foothold in NY, while significantly improving the cyber security level of the local power companies. We believe that the recently signed MoU will result a long term work plan and a more secured life,

NYPA Partners with Israeli Cyber Security and Grid Management Companies to Test and Demonstrate their Innovative Solutions in New York: NYPA will partner with Israeli firms CY-OT and Siga OT Solutions Inc. as cybersecurity is a major issue for utilities throughout the world. Agreements in this area help position New York as a leader in this critical area. NYPA also will partner with Israeli grid sensor firms EGM and Vocal Zoom. Grid sensors systems enable utilities such as NYPA to take full advantage of emerging digital technologies.



Building Community

NYPA Hosted the Annual InfraGard Energy Security Summit

Support of various
Department of Energy Initiatives



Focused Training & Partnerships

Idaho National Labs Cyber Strike Training

Cybergym

New York National Guard Cyber teams Research & Development

without investing in additional security products."

Tabletops ,
Practical's &
Specialized Training

Lessons Learned

Partnerships &

Information Sharing





NEW YORK STATE OF OPPORTUNITY. Authority Canal Corporation