Chair Suzanne Keenan called to order a duly noticed open meeting of the Technology and Security Committee (the “Committee”) of the Board of Trustees (“Board”) of the North American Electric Reliability Corporation (“NERC” or the “Company”) on May 8, 2019, at 10:00 a.m. Central, and a quorum was declared present. The agenda is attached as Exhibit A.

Present at the meeting were:

<table>
<thead>
<tr>
<th>Committee Members</th>
<th>Board Members</th>
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<tr>
<td>Suzanne Keenan, Chair</td>
<td>Frederick W. Gorbet</td>
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<td>Janice B. Case</td>
<td>David Goulding</td>
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<tr>
<td>Kenneth W. DeFontes, Jr.</td>
<td>Robin E. Manning</td>
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<td>George S. Hawkins</td>
<td>James B. Robb, President and Chief Executive Officer</td>
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<td>Roy Thilly</td>
<td>Jan Schori</td>
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<td>Colleen Sidford</td>
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Committee Members Not Present
Robert G. Clarke

NERC Staff
Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Tina Buzzard, Associate Director
Stan Hoptroff, Vice President, Chief Technology Officer, and Director of Information Technology
Scott Jones, Senior Vice President, Chief Financial and Administrative Officer, and Corporate Treasurer
Bill Lawrence, Vice President, Chief Security Officer, and Director of the E-ISAC
Mark G. Lauby, Senior Vice President and Chief Reliability Officer
Janet Sena, Senior Vice President and Director of Policy and External Affairs

Introduction
Ms. Keenan welcomed the Committee members to the meeting. She acknowledged members of the Committee and thanked Mr. Hawkins for his assistance during the leadership transition.

NERC Antitrust Compliance Guidelines
Ms. Keenan directed the participants’ attention to the NERC Antitrust Compliance Guidelines included in the agenda, and indicated that all questions regarding antitrust compliance or related matters should be directed to Mr. Berardesco.
Minutes
Upon motion duly made and seconded, the Committee approved the minutes of the February 6, 2019 meeting as presented at the meeting.

Chair’s Remarks
Ms. Keenan reported that Mr. Hawkins attended the E-ISAC Member Executive Committee (“MEC”) and working group meetings on April 10, 2019 in Washington, D.C. Mr. Hawkins provided an overview of these meetings, highlighting the excellent attendance and in-depth discussion. He noted several takeaways from the MEC meeting, including communicating the value added by new E-ISAC capabilities and providing information on threats more quickly. Mr. Hawkins also noted that the MEC will consider a metrics proposal at its next meeting. Ms. Keenan noted the positive and improved relationship between the E-ISAC and MEC due to the leadership of Messrs. Robb and Lawrence.

Ms. Keenan reported that the Committee plans a closed session later this year to focus on NERC’s cybersecurity posture. She noted that information from this closed session will be shared in open session as appropriate.

E-ISAC Update
Mr. Lawrence provided an update on recent E-ISAC activities, referencing the materials that had been included in the advance agenda package. His presentation highlighted updates in the E-ISAC strategic goals, placing emphasis on relationships and engagement across interdependent sectors. Mr. Lawrence provided an update on E-ISAC’s progress executing its long-term strategy, including the areas of member engagement, information sharing, threat analysis, and key activities for 2019-2020. He shared feedback received from the MEC and thanked Mr. Robb and the NERC officer team for their strong support of the E-ISAC.

Mr. Lawrence discussed a recent OE-417 form reporting a “denial of service” incident involving several routers at a registered entity in the WECC region. He reported that the incident does not appear to be the result of a cyber attack, and that the E-ISAC shared relevant information on its portal after the incident was reported.

Mr. Lawrence also provided an update on NERC’s November 2019 Grid Security Exercise (“GridEx”). He stated that this GridEx is projected to be the largest, most inclusive event to date, with expected participation from representatives in Australia and New Zealand. He noted the planned improvements for the executive tabletop portion of the exercise.

Mr. Robb thanked Scott Aaronson, Michael Ball, Manny Cancel, and others in industry who are helping the E-ISAC improve its capabilities.

Mr. Jones provided an overview of the preliminary 2020 E-ISAC budget, referencing the materials that had been included in the advance agenda package. He noted that 2020 represents year three in the
execution of the E-ISAC long-term strategy, and the proposed 2020 budget is on track with prior projections and estimates.

ERO Enterprise Information Technology Strategy and Projects Update and Budget Forecast
Mr. Hoptroff provided an update on the ERO Enterprise information technology projects, referencing the materials that had been included in the advance agenda package. With respect to the Align project, he highlighted the key benefits, security features, and expected functionality of the Align system and described NERC’s plans for continued stakeholder outreach and training. Mr. Hoptroff also highlighted the key benefits of the common registration tool (“CORES”) and the situational awareness tool (“SAFNR”) upgrade projects. He reported that NERC held a webinar on March 21, 2019 to discuss the benefits of the SAFNR upgrade project and plans to launch the project by the end of 2019. Mr. Hoptroff concluded his presentation with a discussion of ongoing work on E-ISAC portal enhancements.

Ms. Keenan stated her appreciation for NERC’s holistic approach to its technology projects, including change management and outreach.

Mr. Robb reported that he represented NERC at a recent joint FERC/DOE Technical Conference examining security investments for energy infrastructure. Topics included: (1) the role of mandatory Reliability Standards and the need for security investments beyond those measures required by the standards, including for infrastructure not addressed by the standards; (2) cost recovery for such investments; and (3) whether additional incentives for investments are needed, and if so, how those incentives should be designed. Mr. Robb reported that the technical conference also included discussion of the forthcoming GridEx and how to expand participation in the CRISP program.

Adjournment
There being no further business, and upon motion duly made and seconded, the meeting was adjourned.

Submitted by,

Charles A. Berardesco
Corporate Secretary
Agenda
Technology and Security Committee
May 8, 2019 | 11:00 a.m.-12:00 p.m. Central
(Please note the Schedule may be adjusted real-time should meetings conclude early and/or extend past their scheduled end time.)

The Ritz-Carlton, St. Louis
100 Carondelet Plaza
St. Louis, MO 63105

Conference Room: Ritz-Carlton Ballroom (Lobby Level)

Introductions and Chair’s Remarks

NERC Antitrust Compliance Guidelines and Public Announcement*

Agenda Items

1. Minutes* — Approve
   a. February 6, 2019 Meeting

2. E-ISAC Update* — Review
   a. Strategic Plan Update
   b. Draft 2020 E-ISAC Budget

3. ERO Enterprise Information Technology Strategy and Projects Update and Budget Forecast* — Review
   a. NERC System Security Update


5. Adjournment

*Background materials included.