Good morning Mr. Chairman and Commissioners,

Item E-19 is a draft Notice of Inquiry (NOI) seeking comments on the potential benefits and risks associated with the use of virtualization and cloud computing services in association with bulk electric system operations, as well as whether barriers exist in the Commission-approved Critical Infrastructure Protection (CIP) Reliability Standards that impede the voluntary adoption of virtualization or cloud computing services. The draft NOI seeks to build on the record concerning the potential benefits and risks associated with the adoption of virtualization and cloud computing services for bulk electric system operations that were raised in discussions at the Commission’s June 27, 2019 Reliability Technical Conference and the March 28, 2019 Commission/Department of Energy Security Investments for Energy Infrastructure Technical Conference.

The draft NOI seeks comments on four general topics: the scope of the potential use of virtualization and cloud computing services, the potential benefits and risks associated with virtualization and cloud computing services, the potential impediments to adopting virtualization and cloud computing services resulting from the CIP Reliability Standards, and potential new and emerging technologies beyond virtualization and cloud computing that responsible entities may be interested in adopting.

Item E-22 is a draft Order directing the North American Electric Reliability Corporation (NERC) to submit an informational filing describing the activity of two
NERC CIP standard drafting projects pertaining to virtualization and cloud computing services. Specifically, the draft Order directs NERC to submit a schedule for Project 2016-02 (Modifications to CIP Standards) and Project 2019-02 (BES Cyber System Information Access Management). The draft Order further directs that each schedule should include the current status of the project, interim target dates, and the anticipated filing date for new or modified Reliability Standards. The draft Order requires NERC to submit the informational filing within 30 days of the date of issuance of this order, as well as quarterly status updates, on an informational basis, until such time as new or modified Reliability Standards are filed with the Commission.

That concludes our presentation. We would be happy to answer any questions.