National Electrical Manufacturers Association

The Association of Electrical Equipment
and Medical Imaging Manufacturers
www.nema.org

September 13, 2021

Mark Przybocki
National Institute of Standards and Technology
Applied Cybersecurity Division, Information Technology Laboratory
100 Bureau Drive
Gaithersburg, MD 20899

Via email: AIframework@nist.gov

RE: NEMA Comments on the Artificial Intelligence (AI) Risk Management Framework

Dear Mr. Przybocki:

The National Electrical Manufacturers Association (NEMA) is submitting comments on the Artificial Intelligence Risk Management Framework. NEMA represents more than 325 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems. NEMA supports the overall direction taken by NIST in developing a consensus-driven risk management framework for Artificial Intelligence (AI).

The electroindustry is rapidly evolving. Electrification, digitalized connectivity and changing business conditions and technologies present opportunities and challenges for electrical manufacturers. AI is one of those technologies. Over the past two years NEMA has been working to advance the awareness, understanding, and adoption of AI among Member companies. NEMA developed a white paper that provided a comprehensive overview of AI technology in the manufacturing community. It presented market drivers, use cases, and strategies for deploying AI and provided examples of manufacturers that have successfully completed proof-of-concept (POC) demonstrations or commercial deployments. Potential challenges to AI deployments, including technology hurdles, operational issues, human capital concerns, and regulatory impacts were also discussed, along with specific recommendations for deploying AI within a manufacturing environment. An abridged ebook version of the white paper is available at AI Whitepaper, abridged ebook.

With respect to specific comments on the AI Risk Management Framework, NEMA provides the following:

1. The use of AI within the manufacturing sector is being driven by specific enabling market factors that include the digitalization of data, the development of Internet of Things (IoT) networks, and the steady improvements in Machine Learning (ML) and Deep Learning (DL) algorithms. AI technology introduces scale and efficiency and is best applied to two types of problems: data analysis and subsequent predictive recommendations and actions; and routine redundant tasks. The framework should consider these problems as part of its overall guidance and how AI can solve them as risk methodology is developed.

2. NEMA Member companies produce devices and systems that generate huge amounts of machine data. AI algorithms can be used to derive understanding from concept machine data in aspects

such as complexity, quality, and labeling. These algorithms can then be used to subsequently improve the process whereby these devices and systems are produced. This is different from personal data which includes private or confidential information and is subject to regulations like the California Consumer Protection Act (CCPA) or, in the case of medical devices, the Health Insurance Portability and Accountability Act (HIPAA). The framework needs to clearly make the distinction between machine data and personal data in its risk methodology and set an appropriate balance between a person's right to privacy against the need to continuously feed AI algorithms into a production improvement process.

3. A concern about the use of AI algorithms to enhance the performance efficiency of a system is determining liability if something goes wrong. If someone is injured (including in a non-physical way) by a system that used AI, there likely would be liability assigned to the company that deployed the algorithm. However, in a legal scenario, it is likely that additional liability may be sought; the vendor that supplied the software, platform, or algorithm may also share some liability. Misallocated liability can hamper innovation in AI, so liability reforms will be needed as AI becomes more mainstream.

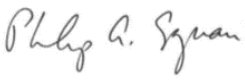
4. Perhaps the most visible area where regulations will affect AI are within the transportation and health care segments. Whereas in healthcare, risk-based oversight is embraced by regulators and industry alike; the integration of increasingly autonomous fee-for-service and private vehicles will require a significant amount of technology-informed regulation. It also will require regulation of access to services and passenger rights. For instance, transparency of how the automated transportation services algorithms are used while yet respecting the proprietary nature of product development, may be warranted.

5. Several published Standards exist within the International Organizations for Standardization's (ISOs) ISO/IEC JTC 1/SC42 on Artificial Intelligence which need to be considered when developing a framework. One such example is ISO/IEC 23894.2 Information Technology-Artificial Intelligence-Risk Management

NEMA supports an open and inclusive process as the framework is developed, in the same way NIST developed the *Framework for Improving Critical Infrastructure Cybersecurity (CSF)*. The framework should be flexible and provide a baseline while allowing AI developers to innovate and the market to continue maturing.

NEMA looks forward to remaining an active participant in this process. If you have any questions on these comments, please contact me, or have your staff contact Steve Griffith, Industry Director, at 703-841-3297 or Steve.Griffith@Nema.org.

Sincerely,



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