

SIEMENS' PERSPECTIVE ON THE CURRENT AND FUTURE IMPACT OF ARTIFICIAL INTELLIGENCE IN THE ENERGY ECOSYSTEM

Thiago Felipe Ribeiro¹, Henrique Inacio¹, Placido Junior¹, William Rocha¹

¹Siemens Digital Industries Software (thiago.ribeiro@siemens.com, henrique.inacio@siemens.com; placido.junior@siemens.com; william.rocha@siemens.com)

It is unprecedented in humankind history the significant and rapid changes in societal interaction with energy systems. The urgency of this transformation is driven by the need to mitigate global warming, as the energy sector is a major contributor to anthropogenic greenhouse gas (GHG) emissions. To meet international ambitious decarbonization goals, a profound digital transformation of the energy sector is essential. This transformation encompasses enhancing energy and resource efficiency, promoting electrification, integrating various sectors, and decentralizing the energy system. Such a comprehensive digital shift is underscored by global initiatives, such as the European Commission's 2022 policy on 'Digitalising the Energy System,' highlighting the critical role of digital technologies in this endeavor. Among these technologies, Artificial Intelligence (AI) has emerged as a key driver, especially with the recent advancements in generative AI. For many years, Siemens has been at the forefront of developing and promoting the Industrial Internet of Things (IIoT), Edge computing, and AI in business. In this presentation, we plan to share how AI is poised to revolutionize the energy ecosystem in the next decade, emphasizing its potential to catalyze a more sustainable, efficient, and interconnected energy future.

KEYWORDS: ARTIFICIAL INTELLIGENCE, DIGITAL TRANSFORMATION, ENERGY TRANSITION