

Energy Cyber EC- 04

Summary for the U.S.-Israel Energy Center Website – Energy Cyber

Program Title: Comprehensive Cybersecurity Technology for Critical Power Infrastructure AI-Based Centralized Defense and Edge Resilience

	U.S. Entities	Israeli Entities
Leaders	Arizona State University	Ben-Gurion University of the Negev
Consortium Members	Georgia Institute of Technology	OTORIO
	Nexant	RAD
	DelekUS	SIGA OT Solutions
	Duquesne Light Company	Arava Power
	Schweitzer Engineering Laboratories	
	MITRE Corporation	
	Arizona Public Service	

*Two additional Israeli entities are about to join the consortium.

The Israel-U.S. Initiative on Cybersecurity Research and Development for Energy (ICRDE) will research, develop, evaluate and demonstrate new technologies to solve critical challenges pertaining to cybersecurity of energy facilities, taking into consideration all phases of energy production and transmission. This is because energy and cybersecurity are intrinsically linked, whereby cybersecurity serves as an enabler technology for uninterrupted and continuous energy production and supply. Both Israel and the U.S. face increasing cyberattacks that can lead to a loss of billions of dollars and infrastructure damages that need time to recover. We formulate five projects across three main themes in our proposal: Theme 1 models the Cyber-physical system (CPS) of energy systems and establishes the knowledge database of cyberattacks. Theme 2 develops advanced tools and technology for the Information Technology/Operational Technology (IT/OT) monitoring. Theme 3 designs control tools to achieve resilience and robustness in futureproof architecture.

Israel-US ICRDE is a consortium of leading research institutions, power utilities, and private companies. The US team is led by Arizona State University and includes Georgia Institute of Technology, Nexant, DelekUS, DLC, SEL, MITRE, and APS. The Israeli team is led by Ben-Gurion University and includes RAD, OTORIO, SIGA, Arava Power, with two additional member that are about to join. Binational teams will develop, integrate, and test technologies originating from ICRDE members. The Center will leverage core competencies of each partner to demonstrate high-value cyberattack mitigation technologies in both countries. Successful technology demonstrations, supported by techno-economic assessment and systems analysis, will deliver transformative cybersecurity solutions for Israel and the US, opening global markets for ICRDE technologies.

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