DETAILS OF AWARDED PROJECTS UNDER THE
NATIONAL CYBERSECURITY R&D GRANT CALL

Project Title	Shadow-based Patch Management System for Supervisory Control and Data Acquisition Energy Management System/Demand Management System
Principal Investigator	Yu Ming, Power Automation
Partner Organisations	Singapore University of Technology and Design (SUTD)
Description	To develop a novel method to objectively evaluate the acceptability of an applied patch. This will minimise loss of redundancy, and also allow earlier switchover of patches to the production system.

Project Title	Anomaly detection in Power System Control Centres and State Estimation
Principal Investigator	Vishram Mishra
Partner Organisations	Illinois at Singapore Pte Ltd, SUTD
Description	To develop a modular anomaly detection software that uses deep learning to detect cyber-attacks on Power System Control Centres (PSCCs) with speed, high precision, and low false positives. The modularity of the solution will also allow it to adapt to different PSCC systems.

Project Title	Machine learning enabled Physical Layer Cyber-Protection for improving the cyber security of battery systems
Principal Investigator	William Wong, Panasonic R&D Center Singapore
Partner Organisations	Singapore University of Technology and Design (SUTD)
Description	To develop a process-based anomaly detection and mitigation framework for stationary battery systems (SBS) that can enhance the security of SBS, without relying on network data or expensive hardware.