

# **Smart grid and Power Electronics Consortium Singapore (SPECS)**

## \* Background

- The Smart Grid and Power Electronics Consortium Singapore (SPECS) was announced at SIEW 2018 and was officially launched at the Energy Grid 2.0 Forum on 9<sup>th</sup> April 2019;
- SPECS is set up to provide a platform for companies to access the latest technologies developed by IHL/RI, and to translate them into commercially-viable products and services;
- It is a 3 years programme (1<sup>st</sup> Dec 2018 – 30<sup>th</sup> Nov 2021) supported by NRF, EDB and EMA, and hosted at ERI@N for its operation;
- A Management Board and Technical Committee are set up to provide strategic and technical guidance needed for the SPECS programme;
- Membership includes representatives from the IHLs, RIs and industry from the Smart grid and Power Electronics eco-system;
- A fixed sum of budget from Energy Grid 2.0 programme has been set aside for pre-competitive or “seed projects” identified and supported by SPECS.

NATIONAL  
RESEARCH  
FOUNDATION

EDB  
singapore

ENERGY  
MARKET  
AUTHORITY

SPECS  
Smart Grids + Power Electronics  
Consortium Singapore

## \* Value Proposition for MNC/LLE/SME

### SPECS Core Competency

#### End Users



#### Industry Alignment Fund

Pre-Positioning Programme  
(IAF- PP)

Industry Collaboration  
Projects  
(IAF- ICP)

#### Internationalization



## \* Value Proposition for SME/Start-up

### Value-added by Partners

#### Institute of Higher Learning



#### Centres of Innovation

Energy



Electronics & IoT



Marine & Offshore



Materials



#### IP Commercialisation



# \* SPECS Governance

Energy Grid 2.0  
Steering Committee




Management Board

	Name	Title
Co-Chair	Dr. Alvin Yeo	Director, EMA
Co-Chair	Prof. Subodh Mhaisalkar	ED, ERI@N
Members	Dr. Yeoh Lean Weng	Director, USS, NRF
	Dr. Henry Wong	Director, IPO, NRF
	Prof. Philip Liu	VP (R&D), NUS
	Mr. Damian Chan	ED, EDB
	Mr. Geoffrey Yeo	Director, US, ESG



Technical Committee

Chair	Dr. Nouredine Hadjsaid	Grenoble Institute of Technology
Members	Prof. Sanjib Panda	NUS
	Prof. Lock Kai Sang	SIT
	Dr. Koh Leong Hai	NTU
	Prof. Aditya Mathur	SUTD
	Dr. Kazunori Yamamoto	A*STAR



Programme Office

## \* An Example of Ongoing Project

**Project Title:** Internet of Energy with Advanced Analytics, Modelling, Optimization and Digitization for ESS and Renewable Energy Sources

**Industrial Collaborator:** Sembcorp Industries

**Government Agency:** Housing & Development Board (HDB)

PI: Dr. Koh Liang Mong, ERI@N

Co-PI: Dr. Li Ang, Sembcorp

Grant: SEETP, 2 years project duration



# \* Industry Members

MNC: 5



LLE: 3



SME: 7



Start-up: 8



Total: 23

## \* SPECS Technology Primer Exercise

This primer is developed via a consultative process that involves academics, industry members and policy makers. These experts are engaged via interviews, focus group discussions and workshops conducted between March to October 2019.

The objectives of this primer:

- Identify priorities, gaps, and development timelines of smart grid and power electronics technologies;
- Identify and prioritise industry challenges and opportunities to accelerate development and deployment of available technologies;
- Provide a clear pathway for R&D investments.



# \* SPECS Events Calendar 2019

	2019												2020
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>Workshop</b>	★ 25 Jan							★ 23 Aug					
<b>Networking</b>				★ 9 Apr							★ 25-28 Nov		
<b>SIEW Conference</b>										★ 31 Oct			
<b>Management Board</b>					★ 29 May							★ 5 Dec	
<b>Technical Committee</b>		★ 22 Feb					★ 12 Jul			★ 1 Nov			★ 9 Jan

## \* **SPECS Contact**

Dr Koh Leong Hai  
SPECS Programme Director  
Email: [lohwk@ntu.edu.sg](mailto:lohwk@ntu.edu.sg)

SPECS  
Smart Grids + Power Electronics  

---

Consortium Singapore