



# ENERGY SAVINGS VIA GUARANTEED ENERGY SAVINGS PERFORMANCE (GESP) CONTRACTING MODEL

As air-conditioning is the largest energy consumer, NEA has been working with public sector and building owners to adopt the Guaranteed Energy Savings Performance (GESP) Contracting Model to retrofit and improve the energy efficiency of chilled water plants.

This webinar will share how the GESP is used as a turn-key model to help building owners to right-size, optimise their chilled water systems and implement robust measurement and verification processes on tracking and maintaining the efficiency of the chilled water systems over the contracted period.

Speakers will share their experience in carrying out the GESP retrofitting projects in both public and private sector buildings.

Date: 25 Oct 2021, Monday

Time: 4pm to 6pm

CPD: 2 SCEMs – Approved and Confirmed /  
PDUs for PEs and CEngs (*To Be Confirmed*)

Fees: \$20 (IES Memers) / \$40 (Non Members)  
(*Fees exclude 7% GST*)



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SPEAKER	TOPIC
Mr Chiew Say Kiat NEA	Energy Savings Performance Contracting Model (GESP) to enhance energy efficiency in the Public Sector
Mr Goh See Wee Home Team Science & Technology Agency (HTX)	Energy Savings Performance (GESP) Projects
Mr Rafael Navar Johnson Controls	Energy Savings, The present and The Future

# ABOUT SYNOPSIS AND SPEAKERS

## ENERGY SAVINGS PERFORMANCE CONTRACTING MODEL (GESP) TO ENHANCE ENERGY EFFICIENCY IN THE PUBLIC SECTOR

The public sector strives to attain ambitious sustainability targets in carbon abatement and resource efficiency.

As part of an initiative to improve energy efficiency and meet Whole-of-Government (WOG) resource efficiency targets, NEA works with public sector building owners to adopt the Guaranteed Energy Savings Performance (GESP) contracting model for their chilled water plant retrofit projects.

This presentation will provide an overview of the GESP contracting model used in public and private sector and the benefits of adopting such model in improving energy efficiency for chiller systems.

Mr Chiew Say Kiat is Executive Engineer in Labelling and Standards Department (LSD) of Carbon Mitigation Division (CMD) in National Environment Agency (NEA), Singapore. CMD develops and administers regulations and requirements to mitigate GHG emissions for households sector, industry sector and HFCs.

LSD leads efforts to improve energy efficiency within households and public sector buildings through setting minimum energy efficiency standards for household appliances and chilled water systems for buildings.

## ENERGY SAVINGS PERFORMANCE (GESP) PROJECTS

The Home Team comprises of Ministry of Home Affairs, Home Team and Statutory Boards manage multiple facilities such as police stations, fire stations and checkpoints.

Centralised chilled water plants are being used in the large buildings and have been replaced under the Guaranteed Energy Savings Performance (GESP) contracting model. In this presentation, the speaker will provide an overview of the sustainable efforts by the Home Team as well as some insights and experience on a few GESP projects that has implemented.

Mr Goh See Wee is the Deputy Director (Infrastructure Management) in Building & Infrastructure (B&I) Sustainment Centre in the Home Team Science & Technology Agency (HTX). He has 18 years of experience in the area of infrastructure management and provides strategic direction to all properties under Ministry of Home Affairs (MHA)

B&I oversees all building and infrastructure matters for the Home Team Departments under the Ministry of Home Affairs (MHA). Within B&I, there are teams for facilities management, project development & management and contract management.

## ENERGY SAVINGS, THE PRESENT AND THE FUTURE

There is no doubt that Singapore is leading the way in many sectors and industries around the world for green building as a key element to sustainability model.

BCA launched the Super Low Energy (SLE) Programme in 2018 as part of the Singapore's green building movement with the aim of pushing boundaries for best-in-class energy performance building via cost-effective solutions. NEA announced in 2019 on the introduction of "Minimum Energy Efficiency Standards" (MEES) for Water cooled Chilled Water Systems in Industrial Facilities. These new targets (for commercial and industrial facilities) have led an increased interest of facility owners to develop energy-saving project under the GESP model.

This presentation will show an overview experience with case studies of GESP projects in Singapore and technologies used to achieve outstanding efficiencies in a sustainable way.

Rafael Navarro is an optimization and energy-efficiency expert with over 20 years of on-field experience and has achieved over 10 million kWh per year of energy savings through multiple types of bespoke optimization projects such as Conventional HAVC systems, Absorption-driven HVAC systems, Industrial Compressed Air units, steam generation, dryers, rotary kiln and electric furnaces, among other industrial and commercial machines and devices. Some of these projects have been internationally awarded due their contribution to sustainability.

Rafael's professional accomplishments range across various industries from Green Buildings, Steel production, Mining (minerals extraction and conversion), Oil and Gas, Manufacturing, Pharmaceuticals and IT. His trajectory has been enriched with multicultural experiences working for large multinational companies where he has identified, developed and deployed projects in different regions including APAC (Singapore, China, Macau, Malaysia), USA and South America.

Currently, Rafael is leading several projects to apply data analytics and artificial intelligent for fault detection and optimization in HVAC systems, especially chiller plants.