

# Introduction to Microgrid Systems

Course Code: NGD03

SFC-Eligible | Course Reference Number: TGS-2022013403

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## COURSE OBJECTIVES

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Upon completion of this course, participants will be able to:

- Know what a microgrid is and its difference from utility grid
- Understand how microgrids work with real-life examples
- Learn the typical distributed energy resources (DERs) in microgrids and how energy balance is calculated
- Understand how the DERs are sized at a microgrid's conceptual design stage
- Learn the setup and operation of a microgrid at SP Group's Concept Lab

## MAIN CONTENTS

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- Overview of Microgrid Systems – its functions, features and use cases
- Components of Microgrids and Energy Calculation
- Component Sizing and Dispatch
  - Consideration factors for microgrid design
  - Parameters for DERs sizing and dispatch
  - Walk-through of DER-CAM tool for microgrid conceptual design
- SP Group Concept Lab Microgrid
  - Setup
  - Microgrid islanding
  - Zero emission operation
  - Virtual tour

## METHODOLOGY

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Lecture

## TARGET AUDIENCE

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Technical and non-technical staff who wish to have a basic understanding of the objectives, functions, designs and operations of microgrid systems and DERs used in microgrids

## COURSE DETAILS

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Duration	:	7 hours
Instructional Method	:	Face-to-face or Synchronous E-learning
Certification	:	SIPG Certificate of Completion
PDU by PE Board	:	4
Additional Requirement/s	:	NIL

## COURSE FEES

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Full Course Fee	:	S\$700 (before GST)
For Singapore Citizens/PR/LTVP+*	:	S\$210 (before GST)
For Singapore Citizens (40 years old and above)	:	S\$70 (before GST)

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## ADDITIONAL REMARKS

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- Trainee must attain at least 75% attendance rate and pass the assessment to receive Certificate of Completion and funding grant (if applicable).
- Subsidy of up to 70% is applicable for Singapore Citizens, Permanent Residents or Long-Term Visitor Pass Plus (LTVP+) Holders, subject to funding agency's approval.
- Enhanced subsidy of up to 90% is applicable for Singapore Citizens aged 40 years and above, subject to funding agency's approval. Note that GST payable will be computed from fee after 70% funding.
- Professional Development Unit (PDU) is applicable for Professional Engineers registered under the Professional Engineers (PE) Board only.
- All published fees are subject to prevailing GST.

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## CONTACT US

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For more information, please contact SIPG at +65 6916 7930 or email [training-institute@spgroup.com.sg](mailto:training-institute@spgroup.com.sg).

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