

Assignment Letter/Surat Tugas

No. AL/ARCS/368-1/XII/2021
 Date December 1, 2021
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 Type

Dena Hendriana, B.Sc., SM., Sc.D

Activity Assignment

Penugasan Kegiatan

Director of Academic Research and Community Services

Direktur Lembaga Penelitian Akademik dan Pengabdian kepada Masyarakat

In consideration of:

His appointment as Director of Academic Research and Community Services of Swiss German University under Decree nr. SK/020/HR/XI/19, dated November 18th, 2019

Mengingat:

Pengangkatannya sebagai Direktur Lembaga Penelitian Akademik dan Pengabdian kepada Masyarakat dengan SK pengangkatan no. SK/020/HR/XI/19, tertanggal 18 November 2019

Herewith gives the task to:

Name : Dena Hendriana, B.Sc., SM., Sc.D
 Position : Head of Master Mechanical Engineering Study Program

Dengan ini menugaskan kepada:

Nama : Dena Hendriana, B.Sc., SM., Sc.D
 Posisi : kepala Program Studi Magister Teknik Mesin

To become a speaker with the Community Service activity on the following below:

Untuk menjadi pembicara dengan kegiatan pengabdian kepada masyarakat berikut di bawah ini:

Nr.	Activity/ Kegiatan	Organizer/ Penyelenggara	Day & Date/ Hari & Tanggal	Venue/ Tempat
1.	Essential steps to implement techno-economic on wind and solar energy project	PT. United Tractors Tbk	Tuesday, 7 December 2021 13.00 – 15.30 WIB	Online Video Conference

The appointed shall accomplish the task in responsible ways in line with the related guidelines and other regulations given by SGU.


Pihak yang bersangkutan harus melaksanakan tugas dan tanggung jawab sebaik-baiknya, sesuai dengan petunjuk dan peraturan dari SGU.

Assignor/ Pemberi Tugas:

**Organizer's Chop&Signature/
Stempel & Tanda tangan Penyelenggara**



Kholis Abdurachim Audah, M.Sc, Ph.D
 Director of Academic Research and Community Services
Direktur Lembaga Penelitian dan Pengabdian Kepada Masyarakat

PT UNITED TRACTORS Tbk

 (.....Himawan Sutanta.....)

ESSENTIAL STEPS TO IMPLEMENT TECHNO-ECONOMIC ON WIND AND SOLAR ENERGY PROJECT

SESSION 2

SELASA

07

DESEMBER

2021

13:00-15:30 WIB



Opening Speech

ARI SUTRISNO
Director of PAMAPERSADA
NUSANTARA



Pemateri

Dr. Ir. GEMBONG BASKORO, M.Sc
Lecturer of Master
of Mechanical Engineering



Pemateri

DENA HENDRIANA, B.Sc., S.M., Sc.D.
Head of Master
of Mechanical Engineering



Pemateri

Dr. Ir. HENRY NASUTION, M.T., IPP
Deputy Head of Master
of Mechanical Engineering

Join Zoom
Meeting ID:
81655433271
Passcode:
AHEMCE



SCAN DISINI
UNTUK JOIN



Techno-Economic Assessment on Wind Energy

7 Desember 2021

Dena Hendriana B.Sc., S.M., Sc.D

Master of Mechanical Engineering (MME)

Swiss German University (SGU)





Biodata

Dena Hendriana, B.Sc., S.M., Sc.D.

Education

- Bachelor of Science, Northeastern University, Boston, USA, 1992
- Master of Science, Massachusetts Institute of Technology, Cambridge, USA, 1994
- Doctor of Science, Massachusetts Institute of Technology, Cambridge, USA, 1998



Working Experience

- Swiss German University, Tangerang, 2015 – now
- Surya University, Tangerang, 2013 – 2015
- Ford Motor Company, Michigan, USA, 2011 – 2013
- EXA Corporation, Michigan, USA, 2005 – 2011
- PT. JSU, Depok, 2003 – 2005
- Chrysler, Michigan, USA, 2000 – 2003
- General Motors, Michigan, USA, 1998 – 2000



Expertise

- Computational Fluid Dynamics
- Energy Conversion
- Mechatronics

Wind Electric Energy Project

1. Finding Site Location

- Methodology for assessing potential site

2. Defining Configuration of Wind Electric Energy System

- Based on energy availability, electricity demand, PLN availability
- Turbine selection
- Off-Grid / On-Grid
- Usage of Battery

3. Techno-Economic Analysis

4. Construction and Installation

- Environment considerations
- Challenges

5. Maintenance and Improvement

- Performance monitoring
- Continuous improvements

Finding Potential Site Location

- Using Wind Map
- By observation
 - Contour of land (mountain peak, hill)
 - Contour of building (top, corner, tunneling)

Methodology for assessing potential site

- Wind measurement for 1 week using weather station
 - Make a daily wind profile
 - Make a daily wind energy availability profile (considering cut-off speed)
- If the result is encouraging, continue measurement for 1 month
 - Make a weekly wind profile and energy availability profile
- For Season wind profile, measurement taken for 1 year or more