

SWISS GERMAN UNIVERSIT

Assignment Letter/Surat Tugas

AL/ARCS/368-1/XII/2021 No.

Date December 1, 2021

Services

Page 1 of 1

Doc.

Type

Main Document/ Dokumen Utama

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

Activity Assignment

Director of Academic Research and Community

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

Herewith gives the task to:

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

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

Penugasan Kegiatan

Direktur Lembaga Penelitian Akademik dan Pengabdian kepada Masyarakat

Mengingat:

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

Dengan ini menugaskan kepada:

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

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

Nr.	Activity/ Kegiatan	Organizer/ <i>Penyelenggara</i>	Day & Date/ <i>Hari & Tanggal</i>	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.

Assignor/ Pemberi Tugas:

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

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 UNITED 3 **ORS Tbk**

Himawan









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

SESSION 2

SELASA

DESEMBER

2021

13:00-15:30 WIB







ARI SUTRISNO
Director of PAMAPERSADA
NUSANTARA



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



DENA HENDRIANA, B.Sc., S.M., Sc.D.

Head of Master of Mechanical Engineering

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Dr. Ir. HENRY NASUTION, M.T., IPP

Deputy Head of Master of Mechanical Engineering

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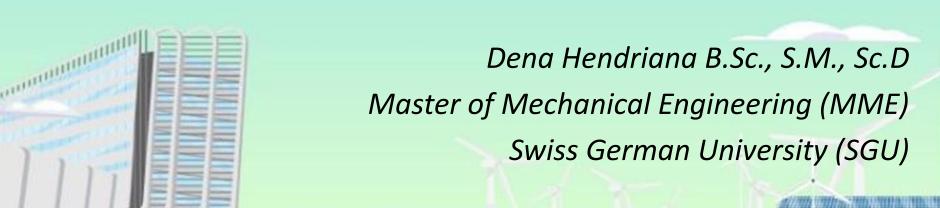






Techno-Economic Assessment on Wind Energy

7 Desember 2021





Biodata

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

Education

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