Advance Artificial Intelligence (AIS)

Dr. Drs. Taswanda Taryo, M.Eng.Sc.

Program Magister Teknik Informatika

Universitas Pamulang

Feb.-March 2023

My Short CV

- Born, March 28, 1956
- •1. Education: Physics, ITB, 1976-1981,
- •2. Univ. New Brunswick, Canada, M.Sc. in Chem. Eng.,
 - 1989-1991,
 - •3. Doctor in Computation, UGM, 1998-2003,
 - Cum Laude.
 - Joined BATAN November 1981;
 - A. Div. Manager of Reactor Technology, 1992
 - •B. Director of Safeguards Tech. Center, 2005
 - C. Director of Nuclear Safety and Rect. Techn.
 Center, 2006
 - D. Director of Dissemination Center, 2006-2008

My Short CV

- 011
- •E. Deputy Chairman for Dissemination of NST, 2008-201
 - •F. Secretary General, 2011-2014
 - •G. Deputy Chairman of NET, 2014-March 2016
 - •H. Member of National Energy Council (DEN),
 - •Jan.-Dec., 2014
 - •I. President Commissioner of PT INUKI,
 - August 2011-March 2016.
 - •J. Part -Timer Lecturer for S-2, Saturday/Sunday Since 2003-Now.
- •K. CEO of Project Management Office for Indonesia Exp. Power Reactor, April 2016-Dec. 2017.
 - •L. Sen. Researcher at BATAN, Jan 2018-April 2021.
 - M. Full Unpam Lecturer Since April 2021.
 - •At least 82 Papers for National and International Seminars, Conferences and Journals.

<u>GRADING</u>



Minimum Kehadiran 75%

1. KEHADIRAN 10%, 2. TUGAS/PRESENTASI: 20%

2. UTS: 30%

3. UAS: 40%

<u>GRADING</u>



1. KEHADIRAN 10% (100 bila 14x Hadir)

2. TUGAS 20%

(60% Nilai Tugas Mingguan 14X + 40% Nilai Presentasi)

3. UTS: 30%

4. UAS: 40%

JADWAL KULIAH

KULIAH•PRE-UTS:



22/02; 01/03; 08/03

15/03; 22/03; 29/03; 03/05

ME/UTS: 10 May 2023

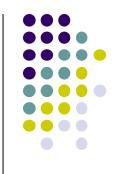
KULIAH PRE-UAS:

17/05; 24/05; 31/05

07/06; 14/06; 21/06; 28/06

FINAL EXAM: 05 July 2023

PRESENTATION



- 1. Duration 15 minutes,
- 2. The topics must relate to MIS,
 - 3. Grading: Content, Time and Presentation's Style,
- 4. Presentation can be in Bahasa or in English,5. If in English, "BONUS 5" will be rewarded for Final Exam

4 Steps to Be A Good Life

- 1. To Have A Vision,
- 2. To Be Focused and Sustain,
- 3. Be Honest and Always
- To Be A Giver and
- 4. Be Prayed to Allah and Ask Pray from Your Parents.





Nuclear for Country Prosperity

UNPAM Tangsel, February 2023









Status of NPPs in the Globe

449

Operation

398.887 MWe

On-power capacity

In-progress construction

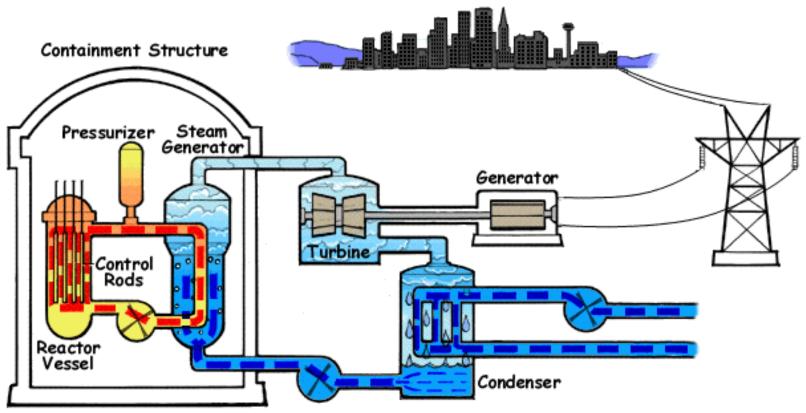
2 reactor

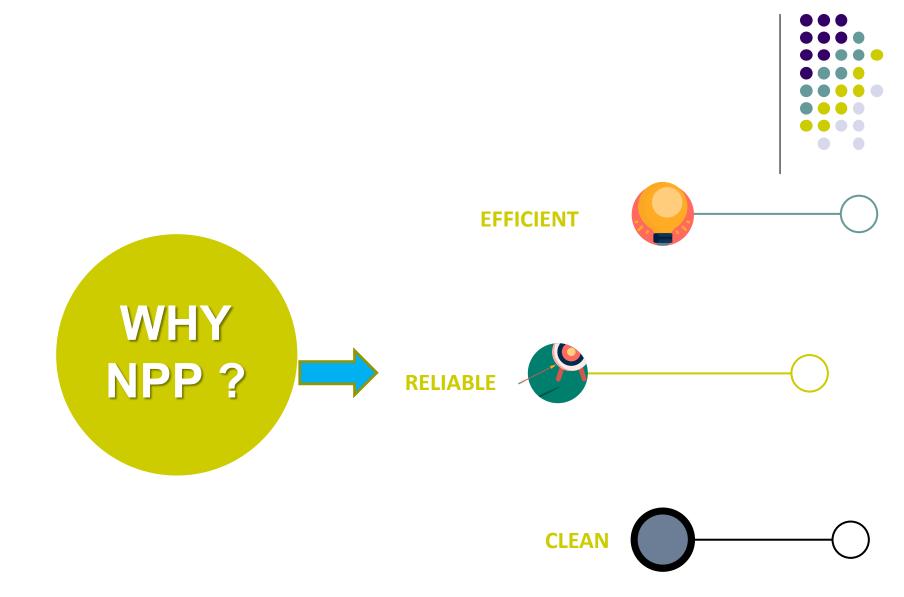
1 reactor

2 reactor

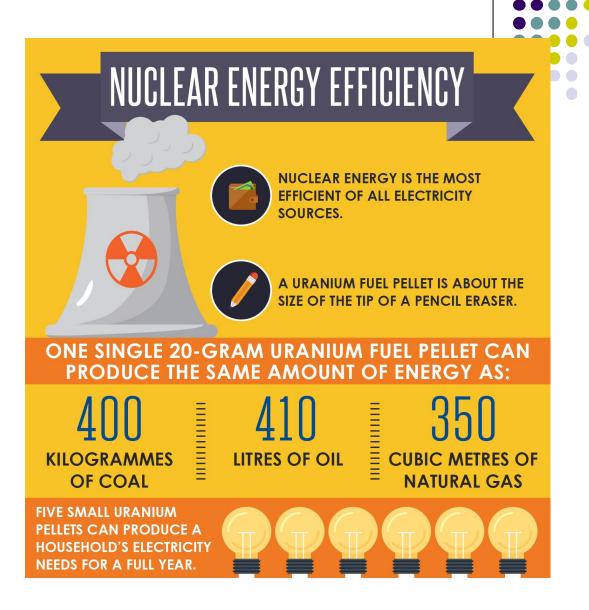
6 reactor





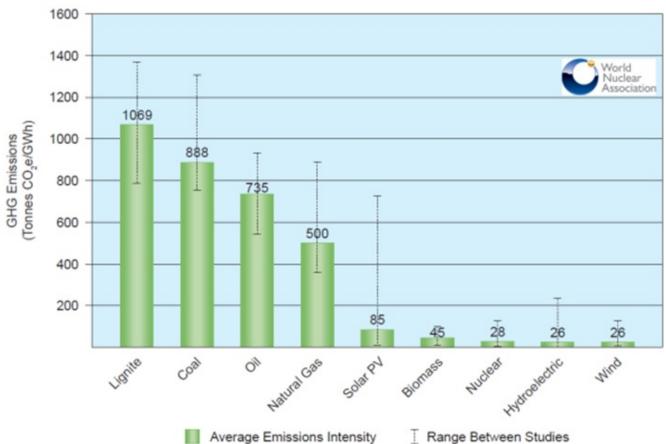


Fuel Comparative



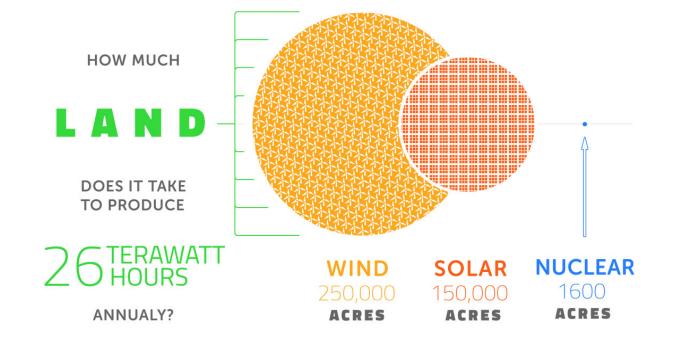


Carbon Emission Comparative





Land Need for Site



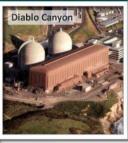
NPP Technology Development



Generation I



Generation II



Generation III / III +



Generation IV



1950

1960

1980

1990

2000

2010

2020

0

First prototypes

Calder Hall (GCR/MAGNOX)

Douglas Point (PHWR/CANDU)

Dresden-1 (BWR)

Fermi-1 (FBR/SFR)

Peach Bottom 1 (HTGR)

Shippingport (PWR)

Obninsk (LWGR)

Commercial production of electricity

Bruce (PHWR/CANDU)

Calvert Cliffs (PWR)

Flamanville 1-2 (PWR)

Grand Gulf (BWR)

Kalinin (PWR/VVER)

Kursk-1 (LWGR/RBMK)

Palo Verde (PWR)

Advanced and evolutive reactors

ABWR (GE-Hitachi; Toshiba BWR)

ACR 1000 (AECL CANDU PHWR)

AP1000 (Westinghouse-Toshiba PWR)

APR-1400 (KHNP PWR)

APWR (Mitsubishi PWR)

Atmea-1 (Areva NP-Mitsubishi PWR)

CANDU 6 (AECL PHWR)

EPR (AREVA NP PWR)
ESBWR (GE/Hitachi BWR)

Pequeños reactores modulares

- B&W mPower PWR
- CNEA CAREM PWR
- India DAE AHWR
 KAERI SMART PWR
- NuScale PWR
- OKBM KLT-405 PWR

VVER-1200 (Gidopress PWR)

Innovative designs

GFR Gas-cooled fast reactor

LFR Lead-cooled fast reactor

MSR Molten salt reactor

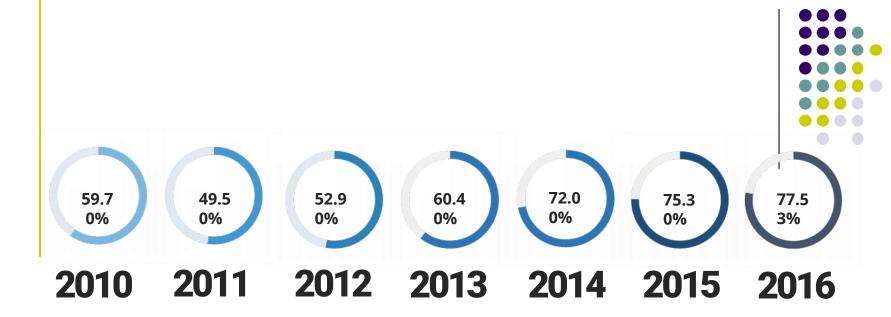
SFR Sodium-cooled fast reactor

SCWR Supercritical water-cooled

VHTR Very high-temperature reactor

Source: Gen IV International Forum and Foro Nuclear





Public Acceptance in Indonesia



Sustainable Energy Renewable Energy Friendly Environment Technology Guarantee Risk and Safety
High Cost Investment
Geopolitics Resistance
Public Acceptance



THANK YOU ANY QUESTION?