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Universitas Tarumanagara

## **SKRIPSI**

**Judul:**

DAMPAK LINGKUNGAN DARI PEMANFAATAN  
PEMBANGKIT LISTRIK  
TENAGA NUKLIR DI INDONESIA

**Disusun oleh:**

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PROGRAM STUDI HUKUM  
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2025

**THE ENVIRONMENTAL IMPACT ON THE UTILIZATION  
OF NUCLEAR POWER PLANTS IN INDONESIA**

**UNDERGRADUATE THESIS**

Submitted to Fulfill One of the Requirements to Obtain a Bachelor of Laws  
Degree at the Faculty of Law in Tarumanagara University

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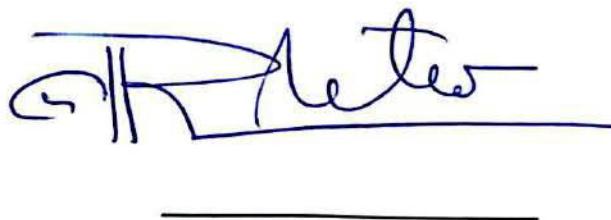
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## ABSTRACT

**(A) Name** : Tiffany Noel Dumais (205200013)

**(B) Title** : The Environmental Impact on the Utilization of Nuclear Power Plants in Indonesia

**(C) Pages** : XVII+76+2025

**(D) Keywords** : Nuclear Power Plant, Nuclear Energy, Environment Sustainability

**(E) Abstract** : This research aims to analyze the potential of the utilization of Nuclear Power Plants (PLTN) in Indonesia as the alternatives solution to meet the increasing energy needs and reduce dependence on fossil fuels. PLTN offer high efficiency, large capacity, and low carbon emissions, in line with efforts to achieve sustainable development goals (SDGs 7 and 13). However, the development of nuclear power plants faces significant challenges, including radioactive waste management, operational safety, community resistance, and a regulatory framework that needs to be strengthened. This research uses a normative method with a statutory and comparative approach, as well as legal document analysis to evaluate the issues. The results show that the development of nuclear power plants in Indonesia requires comprehensive long-term planning, strengthening the legal framework, transparency, and public involvement. With a responsive legal approach, nuclear power plants can be integrated into a sustainable energy transition strategy to support energy security and environmental preservation.

**(F) References** : 55 (1995-2024)

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**(H) Writer** : Tiffany Noel Dumais

## **FOREWORD**

Praise and gratitude to God Almighty, for his blessings and grace the author can finish this final project in the form of an undergraduate thesis with the title “The Environmental Impact on The Utilization of Nuclear Power Plants in Indonesia.” This undergraduate thesis is prepared as a requirement to complete studies at the Faculty of Law, Tarumanagara University in order to obtain a Bachelor of Law degree. First of all, allow the author to express my deepest gratitude to all who have been faithfully standing by the author's side to support and help the writer through his difficult times, and comfort the author until this thesis is completed. This gratitude is specifically addressed to:

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The writer hopes that this thesis can be useful and helpful to add insight related to Legal Knowledge, especially regarding The Environmental Impact on the Utilization of Nuclear Power Plants in Indonesia.

Jakarta, 6 Januari 2024

Writer

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Dengan ini menyatakan bahwa skripsi ini merupakan hasil kerja saya sendiri di bawah bimbingan Tim Pembimbing dan bukan hasil plagiasi dan/atau kegiatan curang lainnya.

Jika saya melanggar pernyataan ini, maka saya bersedia dikenakan sanksi sesuai aturan yang berlaku di Universitas Tarumanagara.

Demikian pernyataan ini saya buat dengan sebenarnya, untuk dipergunakan sebagaimana mestinya.

Jakarta, 02-Januari-2025  
Yang menyatakan



TIFFANY NOEL DUMAIS  
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## **LIST OF ABBREVIATIONS**

PLTN	: Pembangkit Listrik Tenaga Nuklir (Nuclear Power Plants)
SDGs	: Sustainable Development Goals
IAEA	: International Atomic Energy Agency
RUEN	: Rencana Umum Energi Nasional (National General Energy Plan)
RPJMN	: Rencana Pembangunan Jangka Menengah Nasional (National Medium Term Development Plan)
FABA	: Fly Ash and Bottom Ash
MODI	: Minerba One Data Indonesia
BAPETEN	: Badan Pengawas Tenaga Nuklir (Nuclear Power Supervisory Agency)
BATAN	: Badan Tenaga Nuklir Nasional (National Nuclear Power Agency)
EBT	: Energi Baru dan Terbarukan (New and Renewable Energy)
AMDAL	: Analisis Mengenai Dampak Lingkungan (Environmental Impact Analysis)
BRIN	: Badan Riset dan Inovasi Nasional (National Research and Innovation Agency)
NRE	: New Renewable Energy
MSR	: Molten Salt Reactor
ESDM	: Energi dan Sumber Daya Mineral
GSR	: General Safety Requirements
NEPIO	: Nuclear Energy Program Implementation Organization

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