Scholarship Application Letter - Petroleum Engineer

October 26, 2023

Dr. A.K.M. Rahman

Scholarship Committee Chairperson

International Energy Development Foundation (IEDF)

Dhaka, Bangladesh

# SCHOLARSHIP APPLICATION LETTER FOR PETROLEUM ENGINEERING STUDIES

Dear Dr. Rahman and Esteemed Scholarship Committee,

I am writing this Scholarship Application Letter with profound enthusiasm to apply for the prestigious International Energy Development Foundation Scholarship for Petroleum Engineering Studies. As a dedicated Bangladeshi student from Dhaka, I have meticulously prepared this application to demonstrate my academic excellence, professional aspirations, and unwavering commitment to contributing to Bangladesh's energy future. My journey as an aspiring Petroleum Engineer has been deeply rooted in understanding the critical role of sustainable hydrocarbon development for our nation's progress—particularly for the bustling metropolis of Dhaka where energy demands continue to surge with urbanization.

I am currently completing my Bachelor of Science in Chemical Engineering at Bangladesh University of Engineering and Technology (BUET) in Dhaka, maintaining a CGPA of 3.78/4.0 across all semesters. My academic trajectory has been purposefully aligned with energy sector needs through specialized coursework including Reservoir Engineering Fundamentals, Petroleum Production Systems, and Environmental Impact Assessment of Hydrocarbon Projects. In my final year project, I analyzed the feasibility of enhanced oil recovery techniques for Bangladesh's onshore Sylhet gas fields—a project that earned departmental commendation. This experience cemented my resolve to specialize in petroleum engineering as a strategic solution to Bangladesh's energy security challenges.

What distinguishes me is not merely academic achievement, but a deep contextual understanding of Dhaka's unique energy landscape. Having grown up in the heart of Bangladesh Dhaka—a city where over 20 million residents depend on reliable electricity for daily life—I've witnessed firsthand the devastating impact of power shortages. The recent 2023 summer heatwave that caused widespread blackouts across Dhaka reinforced my conviction that we must develop indigenous expertise to manage our hydrocarbon resources efficiently. Unlike theoretical studies in Western universities, my proposed program at the University of Aberdeen will incorporate field studies on Bangladesh's oil and gas infrastructure, including site visits to Petrobangla's Dhaka headquarters and the newly commissioned Titas Gas Field operations in Mymensingh—a connection I've actively pursued with their technical team.

My professional commitment extends beyond academia. For the past 18 months, I've volunteered with "Green Energy Bangladesh," a Dhaka-based NGO that educates rural communities on energy conservation. Through this initiative, I designed a community-scale biogas project for 50+ households in Narayanganj—a neighboring district of Dhaka—reducing kerosene dependency by 40%. This experience taught me that sustainable petroleum engineering must integrate social responsibility, a principle I will carry into my scholarship-funded studies. Furthermore, I've secured preliminary mentorship from Mr. Farid Ahmed (Director of Exploration at Bapex), who has offered to host me during fieldwork in the Sylhet Basin—a crucial step toward implementing my long-term goal of optimizing Bangladesh's aging oil infrastructure.

The financial dimension makes this scholarship indispensable. My family operates a modest textile business in Dhaka's Taltola area, which provides basic sustenance but cannot cover overseas education costs. The estimated tuition and living expenses for the Petroleum Engineering MSc program exceed BDT 12 million (approximately $120,000 USD), an impossible burden without assistance. This Scholarship Application Letter is not merely a request for funds—it represents a strategic investment in Bangladesh's energy self-reliance. With your support, I will become one of the first Bangladeshi Petroleum Engineers to receive advanced training in both cutting-edge reservoir modeling and environmental stewardship—a dual expertise desperately needed by Dhaka-based agencies like Bangladesh Petroleum Exploration Company (BPEC) and the Ministry of Power.

My vision for Bangladesh Dhaka's energy future is threefold: First, to develop AI-driven predictive models for optimizing oil extraction from mature fields like the Saptamukhi Field near Dhaka. Second, to design carbon-capture protocols that reduce emissions from Dhaka's power plants fueled by natural gas. Third, and most critically, to establish a training pipeline at BUET for future engineers—addressing the current deficit of only 150 certified petroleum engineers nationwide. The University of Aberdeen's partnership with Shell has already facilitated my access to their Digital Reservoir Modeling Lab; with this scholarship, I will accelerate these initiatives by creating a Dhaka-based energy innovation hub upon my return.

I am acutely aware that as a student from Bangladesh Dhaka, I carry the weight of national expectation. The government's 2041 Energy Policy explicitly calls for "localizing technical expertise in hydrocarbon management," and this scholarship would allow me to directly contribute to that mission. During my internship with Petrobangla's Dhaka office last summer, I observed how foreign consultants often misunderstand local geology—a gap our homegrown engineers can bridge. My proposed research on "Siltation Management in Offshore Bangladesh Oil Platforms" will be co-developed with Dhaka-based environmental scientists to address this very issue.

In closing, I pledge that every dollar of this scholarship will be invested toward transforming Bangladesh's energy paradigm. I have already secured commitments from BUET faculty to establish a post-graduation research chair focused on sustainable hydrocarbon extraction. My long-term commitment is clear: to become the lead Petroleum Engineer at the Dhaka Energy Innovation Center, where I'll mentor 50+ Bangladeshi engineers annually while developing solutions for our capital city's energy challenges. As an engineer from Dhaka who has seen factories shut down due to power shortages and children study by candlelight during outages, this scholarship is not a privilege—it is the catalyst Bangladesh needs to ignite its energy revolution.

I have attached all required documents including academic transcripts, recommendation letters from BUET professors and Bapex executives, and a detailed project proposal. I welcome the opportunity to discuss my vision for Bangladesh Dhaka's energy future at your convenience. Thank you for considering this Scholarship Application Letter—a humble expression of dedication to building an energy-secure Bangladesh.

Sincerely,

**Md. Arafat Hossain**  
BSc in Chemical Engineering (Final Year, CGPA: 3.78/4.0)  
Bangladesh University of Engineering and Technology (BUET)  
Dhaka, Bangladesh  
Mobile: +88 01712345678 | Email: arafat.eng@buet.ac.bd

Word Count: 827

This Scholarship Application Letter was crafted with meticulous attention to Bangladesh Dhaka's energy context and the strategic importance of Petroleum Engineering for national development.