SECTION 1: INTRODUCTION

The Malaysian Technical Standards Forum Bhd (MTSFB) invites all eligible organisations to submit project proposal(s)for the Industry Promotion and Development Grant (IPDG) programme.

Purpose:

The IPDG promotes technology innovation and the development of Technical Codes and Standards within the Malaysian communications and multimedia industry. By collaborating with industry partners, the IPDG aims to strengthen the capacity for effective and sustainable regulatory and policy in this rapidly evolving landscape.

Projects under this IPDG will generate greater impact and accelerate the development and adoption of technical codes.

The objectives of the IPDG are as indicated below:

a) To spur the development, standardisations and adoption of Information and Communication Technology (ICT) in communication networks, infrastructure, and applications.
b) To encourage members of MTSFB or industry to develop innovative projects that benefits the communication and multimedia industry.
c) To provide solution to common industry enhancing services for consumers.
d) To discover new strategic mechanisms that reduce costs, increase value, and contribute to a better, healthier, and conducive user experience.
e) To contribute to the development of new standards and best practices, positioning Malaysia as a leader in the regional and international arena.

Collaboration:

MTSFB encourages collaborative projects between organisations. Partnership that leverages diverse expertise and resources are highly valued.

We encourage your participation in this initiative to drive innovation and advancement in the Malaysian communications and multimedia industry.

SECTION 2: THE PROBLEM STATEMENT

2.1 The Problem Statement

In support of national agendas such as the National Energy Transition Roadmap (NETR), the Malaysian telecommunications industry faces the challenge of achieving its carbon reduction goals while maintaining reliable and accessible connectivity for all citizens. This is particularly evident in areas with limited grid access, such as rural communities, where reliance on diesel generators contributes significantly to greenhouse gas emissions. Furthermore, the increasing demand for advanced technologies like 5G and IoT add to the industry's environmental

impact.

Transitioning to cleaner energy sources is hindered by several challenges, including high costs, scalability limitations, and spatial constraints in certain locations. Additionally, ensuring equitable access to telecommunications services across Malaysia while adopting sustainable energy solutions requires careful consideration of the unique geographical and infrastructural challenges faced by the nation.

Therefore, there is an urgent need for innovative and sustainable energy solutions that are not only cost-effective and reliable but also meet the growing demands of a digitally connected nation. These solutions must consider the unique geographical and infrastructural challenges of Malaysia while ensuring equitable access to connectivity for all.

This problem statement highlights the critical need for sustainable energy solutions in the Malaysian telecommunications sector, emphasizing the environmental, economic, and social implications of the current situation.

Theme: Sustainable Energy Solutions for a Greener Telecommunications Infrastructure

2.2 Criticality of the Problem

(When would the project outcomes be required? Depending on the criticality and number of submissions the request may be deferred to the next second Call for Proposal scheduled for (date).)

The transition to sustainable energy sources for telecommunications infrastructure is critical due to a confluence of environmental, economic, and social factors.

Environmental impact: Continued reliance on conventional energy sources contributes to greenhouse gas emissions and environmental pollution, hindering Malaysia's Net Zero ambitions.

National imperatives: Aligning with national priorities like NETR and JENDELA requires the industry to adopt clean energy solutions. This is particularly crucial in rural areas with limited grid access, where sustainable energy sources can help achieve JENDELA's goals of providing universal connectivity.

Economic considerations: Fluctuating fuel prices, the high operational cost of diesel generators, and potential impacts from subsidy rationalization create financial uncertainties and hinder sustainable growth. This could significantly impact project costs for initiatives like JENDELA and potentially increase consumer costs for telecommunication services.

Service reliability: Power outages due to grid instability, fuel supply disruptions, and equipment malfunctions can disrupt network services, affecting both urban and rural users and undermining JENDELA's objective of reliable connectivity.

Technological constraints: Dependence on aging power infrastructure can impede the adoption of innovative and energy-efficient technologies, hindering progress towards a more sustainable and advanced telecommunications sector.

Addressing these challenges is crucial for the industry's long-term sustainability, Malaysia's environmental goals, and the nation's digital future.

This criticality statement underscores the urgency and multifaceted nature of the problem, highlighting the environmental, economic, and social consequences of not transitioning to sustainable energy solutions for telecommunications infrastructure in Malaysia.

SECTION 3: PROJECT REQUIREMENT

3.1 Objective

The objectives are:

1. **Reduce carbon footprint:**
Minimise greenhouse gas emissions from telecommunications infrastructure, particularly by reducing reliance on diesel generators and fossil fuel-based grid power. Achieve carbon neutrality or net-zero emissions targets in line with national agendas like NETR.

2. **Promote renewable energy adoption:**
Increase the use of renewable energy sources like solar, wind, and hydro for powering telecommunications infrastructure. Explore and implement innovative energy storage solutions to address intermittency issues associated with renewable energy sources.

3. **Improve energy efficiency:**
Optimise energy consumption in telecommunications equipment and infrastructure. Implement energy-saving technologies and practices to reduce operational energy demands.

4. **Ensure reliable and cost-effective solutions:**
Develop sustainable energy solutions that are reliable, resilient, and cost-effective to ensure uninterrupted telecommunications services. Consider the economic feasibility and long-term sustainability of energy solutions.

5. **Address geographic and infrastructural challenges:**
Develop and implement solutions suitable for various geographic locations, including remote and rural areas with limited grid access. Address infrastructure constraints and challenges in deploying and maintaining sustainable energy solutions.

6. **Foster innovation and research:**
Encourage research and development of new and innovative technologies for sustainable energy solutions in the telecommunications sector. Collaborate with industry, academia, and research institutions to drive innovation.

7. **Ensure equitable access:**
Ensure that sustainable energy solutions do not compromise the accessibility and affordability of telecommunications services for all Malaysians. Address potential digital divide issues arising from the transition to cleaner energy sources.

8. Align with national initiatives:

Support national initiatives like JENDELA and the National Digital Network (Jalinan Digital Nasional) by ensuring that sustainable energy solutions contribute to achieving connectivity goals.

By focusing on these objectives, Malaysia can pave the way for a greener and more sustainable telecommunications infrastructure while ensuring continued progress towards a digitally connected nation.

3.2 Scope

The project shall develop an innovative energy efficient solution with PoC that meet the above objective in any of the following areas tailored to the specific need of the telecommunications and digital sectors:

a) renewal energy sources.
b) innovative energy storage.
c) green data centre.
d) greener telecommunications infrastructure.

3.3 Deliverables

The project shall prepare and submit the followings.

a) solution development plan and implementation.
b) project development report (deliverable and site visit report).
c) final report.
d) technical report.

3.4 Project Timeline

The project timeline **shall not exceed 12 months**.

3.5 Quantum of Funding

The quantum of funding **shall not exceed RM200,000**.

3.6 Expected Benefit and Outcomes

a) Promote renewable energy adoption.
b) Improve energy efficiency.
c) Development of new and innovative technologies for sustainable energy solutions in the telecommunications sector.
d) Reliable and cost-effective solutions, which can withstand problems, and don't cost too much and these solutions are affordable and can work well in the long run.
e) Equitable access to make sure everyone in Malaysia can still use telecommunications services at an affordable price, even when we switch to cleaner energy sources. We need to address any issues that might prevent some Malaysians from accessing these services due to this change.

SECTION 4: PROPOSAL SUBMISSION

4.1 This proposal is open to all members, and we encourage collaborating with industry partners.

4.2 Proposal Submission Period

The Call for Proposals (CFP) will be open for a period of one (1) month:

- Open: **7 February 2025**; and
- Close: **6 March 2025**

4.3 CFP Documents

Applicants are strongly encouraged to refer to the Grant Application Guideline before submitting the application. The Grant Application Guideline and Grant Application Form may be downloaded on the website: https://mtsfb.org.my/grant/.

4.4 Proposal Submission Documentation

The proposal submission must include the below documentations.

a) Cover letter;
b) Grant Application Form;
c) Proposal; and
d) All relevant supporting documentation

The submission documentations are to be submitted via email **ipdg@mtsfb.org.my** and marked "**IPDG SUBMISSION 2024 Cycle 2**".

4.5 Enquiries

For any queries, kindly e-mail to **ipdg@mtsfb.org.my** and mark **"IPDG QUERY 2024 Cycle 2"** as the email subject line.

SECTION 5: TERMS AND CONDITIONS

All applicants seeking consideration must fulfil the following criteria:

a) Membership in MTSFB as a registered organisation.
b) Proven engagement and contribution to MTSFB standardisation activities.
c) To actively contribute and participate in MTSFB standardisation activities for a minimum of three (3) years from the year Grant is awarded.
d) To undertake the draft lead role for at least one (1) Technical Code (TC) within 3 years.