UPI CLIMATE ACTION COMMITMENT TOWARD CARBON NEUTRALITY

Institutional Supporting Document – SDG 13 Climate Action

Reporting Year 2025

1. Institutional Policy Statement

   Universitas Pendidikan Indonesia (UPI) affirms its institutional commitment to progressively reduce greenhouse gas emissions from campus operations through renewable energy expansion, energy efficiency improvements, sustainable mobility initiatives, and strengthened environmental governance. This commitment reflects the university's responsibility as a higher education institution to actively contribute to climate action and environmental sustainability in accordance with global sustainable development priorities.

   As part of its Smart and Green Campus vision, UPI continuously integrates sustainability principles into infrastructure development, operational management, and campus services. These efforts aim not only to reduce environmental impacts but also to promote environmental awareness among students, academic staff, administrative personnel, and external stakeholders. Through this integrated approach, sustainability becomes an essential component of institutional transformation and long-term environmental responsibility.

   UPI recognizes that higher education institutions play an important role in supporting climate mitigation efforts through research, education, and operational practices. Therefore, the university continues to strengthen its sustainability programs through measurable emission reduction initiatives, responsible energy management, and environmentally responsible campus development practices. This institutional direction reflects UPI's commitment to contributing to long-term carbon neutrality efforts through practical and measurable actions.

2. Emission Boundary Description

   UPI's emission reduction commitment focuses on operational emission sources including direct emissions from campus transportation activities and indirect emissions from purchased electricity used in academic, research, and administrative operations. Sustainability programs addressing these emission sources include renewable energy deployment, energy-efficient appliances, smart infrastructure implementation, and low-emission transportation initiatives.

   These initiatives are designed to gradually reduce the university's carbon footprint by targeting the most significant emission contributors within campus operations. Renewable energy programs help reduce reliance on fossil-fuel based electricity sources, while energy efficiency programs aim to lower overall electricity demand through improved technologies and better operational practices. Transportation initiatives also support the gradual transition toward low-carbon mobility within campus operations.

   These initiatives primarily address Scope 1 and Scope 2 emission sources based on recognized greenhouse gas accounting approaches and reflect the university's practical approach to managing emissions within its operational control boundary. This approach allows UPI to establish a realistic and measurable pathway toward emission reduction while strengthening sustainability governance and institutional accountability in environmental management.

3. Climate Governance

   Implementation of climate-related programs at UPI is coordinated through institutional units responsible for facilities management, infrastructure planning, and environmental sustainability programs. These units play an important role in ensuring that sustainability initiatives are properly planned, implemented, monitored, and continuously improved through structured institutional coordination.

   The Directorate responsible for facilities and infrastructure management plays a central role in implementing energy efficiency programs, renewable energy development, and building management improvements. These efforts are supported by operational teams responsible for monitoring electricity usage, maintaining energy-efficient systems, and supporting infrastructure improvements aligned with sustainability goals.

   In addition, sustainability initiatives are supported through cross-unit collaboration involving academic departments, administrative units, and operational teams. This collaborative approach ensures that sustainability is not treated as a standalone initiative

but as an integrated component of campus governance. Through this governance structure, UPI continues strengthening institutional capacity in managing climate-related initiatives and improving environmental performance.

4. Implementation Commitment

   UPI continues strengthening sustainability governance by improving environmental monitoring practices, expanding renewable energy utilization, promoting energy conservation behavior, and enhancing sustainable infrastructure development as part of its institutional climate action pathway. These efforts demonstrate the university's long-term commitment to improving environmental performance through continuous improvement practices.

   The university adopts a gradual implementation approach that prioritizes practical improvements such as equipment replacement, infrastructure upgrades, and operational efficiency improvements. This approach allows UPI to implement sustainability initiatives in a realistic and financially responsible manner while ensuring long-term sustainability impact.

   UPI also promotes environmental awareness through campus campaigns and operational guidelines encouraging responsible energy use and environmentally responsible behavior. These efforts support institutional climate action by combining infrastructure improvements with behavioral transformation within the campus community.

Climate Action and Carbon Neutral Commitment Framework

1. Executive Summary

   UPI demonstrates its commitment toward carbon neutrality through the implementation of renewable energy programs, energy efficiency initiatives, greenhouse gas emission monitoring, and sustainable mobility programs. These initiatives establish a structured institutional pathway toward reducing operational emissions and strengthening climate responsibility.

   The university recognizes that achieving carbon neutrality requires long-term commitment and continuous improvement. Therefore, UPI focuses on developing sustainability programs that can gradually reduce emissions while strengthening institutional capacity for environmental management. These programs reflect the university's transition toward more sustainable campus operations.

   Through these efforts, UPI demonstrates institutional readiness to contribute to climate action by strengthening sustainability governance, improving operational efficiency, and supporting environmentally responsible infrastructure development.

2. Key Sustainability Data

   UPI monitors key sustainability indicators to support climate action planning and environmental performance evaluation. Total energy consumption recorded was 21,373 GJ (equivalent to 5,936,953 kWh), while renewable energy production reached 729 GJ (equivalent to 202,356 kWh), resulting in a renewable energy ratio of 3.41%. These figures demonstrate the university's ongoing transition toward cleaner energy utilization.

   In addition, the adoption of energy-efficient appliances has reached approximately 48.65% of major electrical equipment across campus facilities. This reflects the university's gradual replacement strategy of conventional equipment with energy-efficient alternatives such as LED lighting systems, inverter air conditioning units, and smart monitoring devices.

   These indicators demonstrate measurable progress toward reducing indirect emissions and improving energy management practices. Continuous monitoring of these indicators enables the university to evaluate sustainability performance and identify opportunities for further emission reductions while maintaining operational efficiency.

3. Renewable Energy Programs

   UPI has installed solar panels and small wind turbines across several campus buildings to support clean energy transition and reduce dependence on conventional electricity sources. These renewable energy initiatives demonstrate the university's practical commitment to integrating clean energy solutions into campus operations.

   Renewable energy systems installed at selected campus facilities contribute to electricity supply for operational activities and support the university's efforts to reduce indirect emissions associated with purchased electricity. These installations also provide learning opportunities for students and researchers to engage with renewable energy technologies.

   UPI plans to continue expanding renewable energy installations as part of its long-term sustainability strategy. This gradual expansion approach reflects the university's commitment to improving renewable energy capacity while ensuring operational feasibility and infrastructure readiness.

4. Energy Efficiency Programs

   Energy efficiency programs at UPI focus on improving energy performance through the adoption of efficient technologies and better operational practices. These initiatives include the replacement of conventional lighting with LED systems, installation of inverter-type air conditioning units, and implementation of smart monitoring technologies.

   The university also applies energy management practices that encourage responsible electricity use and operational efficiency improvements. These efforts aim to minimize unnecessary energy consumption while maintaining the quality of academic and administrative services.

   Through continuous equipment upgrades and operational improvements, UPI demonstrates its commitment to reducing energy demand growth and improving environmental performance. These efficiency initiatives represent an important component of the university's carbon reduction pathway.

5. Emission Monitoring

   UPI conducts carbon footprint estimation based on energy consumption and campus transportation activities to establish baseline emission measurements. This monitoring

activity provides important information for understanding emission trends and identifying opportunities for emission reduction.

Energy monitoring systems also support data-driven decision making by providing information on electricity usage patterns and infrastructure performance. These monitoring practices strengthen institutional capacity to manage environmental performance through measurable indicators.

Through these monitoring efforts, UPI demonstrates institutional readiness to manage emissions systematically and support long-term carbon reduction strategies based on reliable operational data.

6. Smart Building Implementation

   Smart building implementation across campus facilities supports automation, lighting optimization, and energy monitoring systems that contribute to improved operational efficiency and reduced energy demand. These technologies help optimize energy usage and improve infrastructure performance.

   UPI continues integrating smart infrastructure features into campus development projects to support sustainable building management practices. These efforts demonstrate the university's commitment to improving environmental performance through infrastructure innovation.

   Smart building implementation also supports long-term sustainability by enabling better monitoring, improved operational efficiency, and enhanced building performance aligned with sustainability goals.

7. Sustainable Mobility

   UPI promotes sustainable mobility through the use of electric vehicles and campus bicycles to support the reduction of direct emissions from campus transportation activities. These initiatives aim to reduce reliance on fossil-fuel transportation while encouraging environmentally friendly mobility practices.

   The university also promotes mobility management practices such as improved parking management and support for non-motorized transportation. These efforts contribute to reducing emissions associated with campus transportation activities.

   Through these initiatives, UPI demonstrates practical steps toward reducing direct

emissions and supporting sustainable transportation practices within the campus environment.

8. GHG Alignment Statement

   UPI sustainability programs are aligned with greenhouse gas management principles consistent with the Greenhouse Gas Protocol approach, particularly focusing on identification of emission sources, emission reduction initiatives, and monitoring of Scope 1 (direct emissions) and Scope 2 (indirect electricity emissions).

   This alignment demonstrates the university's adoption of internationally recognized approaches to emission management and supports institutional credibility in sustainability reporting. Through this approach, UPI strengthens its commitment to managing emissions based on recognized environmental management practices.

9. Carbon Neutral Transition Pathway

   UPI establishes a long-term transition pathway toward carbon neutrality through the progressive reduction of Scope 1 and Scope 2 emissions supported by renewable energy expansion, energy efficiency programs, smart infrastructure implementation, and emission monitoring practices.

   This transition pathway reflects the university's long-term climate action direction and institutional readiness to contribute to global decarbonization efforts through practical sustainability initiatives. Rather than claiming immediate carbon neutrality, UPI focuses on building a realistic pathway supported by measurable programs and continuous improvement.

   Through this pathway, UPI demonstrates its commitment to strengthening sustainability governance and improving environmental performance while supporting long-term climate mitigation efforts.

10. Institutional Commitment Statement

    Based on the implementation of structured sustainability programs and measurable emission reduction initiatives, UPI commits to the progressive reduction of greenhouse gas emissions through operational sustainability practices and renewable energy transition as part of its pathway toward carbon neutrality.

    This commitment reflects the university's recognition of climate change as an important institutional responsibility and demonstrates its willingness to contribute to global

sustainability efforts through practical institutional actions.

11. Conclusion

    UPI demonstrates credible institutional readiness toward carbon neutral transition through sustainability governance, renewable energy development, efficiency programs, and emission monitoring practices. These initiatives collectively establish the university's commitment toward climate action and long-term carbon neutrality.

    Through continuous improvement and institutional collaboration, UPI continues strengthening its sustainability programs as part of its contribution to global climate action and responsible campus management.