(Amend) TERMS OF REFERENCE

POSITION TITLE:	**National GHG Mitigation and Inventory Expert (Energy Sector)**
AGENCY/PROJECT NAME:	UNDP CO/NC4-BUR3 Project
DURATION OF CONTRACT:	**1 June 2021– 28 February 2022**

1) GENERAL BACKGROUND

Thailand ratified the United Nations Framework Convention for Climate Change (UNFCCC) in 1994 and Kyoto Protocol (KP) in 2002. It later established the National Committee on Climate Change Policy (NCCC), chaired by the Prime Minister, as the highest policy body on climate change of Thailand for international negotiations and policy planning. The Office of Natural Resource and Environmental Policy and Planning (ONEP) through the Climate Change Management and Coordination Division is the National Focal Point (NFP) for the UNFCCC and KP at national and international levels. In fulfilling its reporting requirements, the country submitted its Initial National Communication, Second National Communication, and Third National Communication in November 2000, March 2011, and August 2018, respectively. The First Biennial Update Report and the Second Biennial Update Report were submitted to the UNFCCC in December 2015 and December 2017, respectively.

The National Communication is a vital medium for the exchange of information on Parties' responses to climate change and UNFCCC process. Thailand has opportunity to highlight its issues, problems, gaps and constraints faced as well as technical and financial supports needed. The National Communication can form a two-way communication with the Convention in addressing climate change. In addition, the information from the National Communications has commonly been used in national sustainable development policy and planning such as National Adaptation Plan, Thailand Nationally Determined Contribution and its roadmap and action plan. More specifically, the Project Steering Committee (PSC) members, representatives of relevant agencies, and other stakeholders participated in the Third National Communication (NC3) process has replicated their knowledge and experiences learned into their relevant policy and planning practices as seen in current socio-economic policy and planning process. The implementation will take place at national, sub-national and local levels.

Facing major global and internal changes including global warming, severe national disasters, vulnerable ecosystems, coastal erosion, and sea level rise, Thailand decided to highlight for the first time the importance of developing low-carbon-society that is resilient to climate change in its Eleventh Plan - The National Economic and Social Development Plan (NESDP) (2012-2016) issued in October 2011 under one of the sixth focal areas "Strategy for Managing Natural Resources and Environmental toward Sustainable Development". Thailand's Twelfth NESDP (2017-2021), issued in October 2016, continued this strategy by highlighting the following priorities area in promoting green and inclusive growth:

Conserve natural resources and find a balance between conservation and utilization; Move Thailand forward via green socio-economic development;
Increase capacity building to improve responds to natural disasters and climate change; Increase efficiency and improve governance of natural resources and environmental management; and
Manage balance of water demand and supply

Following the National Strategy, the Government formalized Thailand Climate Change Master Plan (2012-2050) on 14 July 2016, which foresees the achievement of long-term goals in a phased approach. Through this national master plan as well as other policy document, the Government intends to establish framework and approaches to adapt to climate change and enhance climate resilience, to apply appropriate and efficient technologies to sustain national competitiveness and development toward sustainable low-carbon and sufficiency economy through strengthening three key pillars i.e., adaptation, mitigation, and capacity building.

Having a strong commitment, Thailand has pledged through its Nationally Determined Contributions (NDCs) to UNFCCC its greenhouse gas emission reduction by 20 percent from the projected business-as-usual (BAU) level by 2030 and signed the Paris Agreement on 22 April 2016 to push forward the first climate change action plan into a legally obligated commitment. The level of its contribution could increase up to 25 percent, subject to adequate and enhanced access to technology development and transfer, financial resources and capacity building support through a balanced and ambitious global agreement under the United Nations Framework Convention on Climate Change (UNFCCC).

Thailand has implemented NAMAs since 2015 on a voluntary basis. Priority sectors are energy and transport. Various measures had been implemented and reported in Thailand's Second Biennial Update Report (BUR2) involving power generation from renewable energy, heat generation from renewable energy, biofuel consumption in transport sector, energy efficiency improvement by thermal power plant, energy efficiency improvement by clean technology power plan, and energy efficiency standard and labelling electric equipment. These measures include the establishment of domestic MRV process, institutional agreement for further implementation and continuation to NDC.

For adaptation measures, National Adaptation Plan (NAP) has been approved by the National Committee on Climate Change Policy. Other adaptation issues have also been recognized and tackled in parallel through Thai government's initiatives such as pilot of NAP implementation in selected areas, selected sectoral Vulnerability and Adaptation database, integration of NAP into local climate change action plan as well as an establishment of linkages among these elements to ensure a comprehensive and effective application, and will develop M&E system for NAP in early 2021.

Thailand's Fourth National Communication (NC4) becomes a formal process and channel for all responsible sectoral stakeholders to build upon such efforts to collaborate, take stock and integrate all data available for the improvement of adaptation work in Thailand and setting a clear national direction.

To compliment these efforts and the achievement of the country's Sustainable Development Goals on climate change and Thailand 4.0 national development policy, Thailand also initiated the "Thailand Greenhouse Gas Emission Inventory System (TGEIS)" project. Institutional arrangement is a critical part of the national GHG inventory system. TGEIS provides structure, assists in institutionalizing inventory process, and improves national capacity to generate national GHG inventory in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventory. In addition, Thailand will be able to better manage GHG emission estimation and its approval process. Systematic estimation will also yield tremendous benefits for Thailand in achieving accurate calculation outcome and supporting policy makers to formulate national climate change policy as well as measures in comprehensive manner.

Between 2015 and 2016, Thailand began drafting a National Adaptation Plan (NAP) - a mean of identifying medium and long-term adaptation needs, developing and implementing strategies and programmes to address those needs – by performing a vulnerability assessment report. This process follows a country-driven, gender sensitive, participatory and fully transparent approach. During 2013-2018, UNDP through Strengthening Thailand' Capacity to Link Climate Policy and Public Finance Project develops Climate Change Benefit Analysis (CCBA) guidelines to serve as a tool for government agencies to integrate climate change dimension into their policy planning and budgeting process, and to assess the economic valuation of the proposed projects including co-benefits. CCBA guidelines also provide suggestions on institutional arrangement for budget allocation.

Collectively, Thailand has been continuously enhancing its national capacities on development of GHG inventory, mitigation options, vulnerability assessment, and adaptation options. However, the accumulated capacities are hardly keeping pace with increasing threats, and needs to tackle the growing issues/problems. It is important for Thailand to advance further its national capacities to cope with the existing and emerging issues, achieve our commitment under Paris Agreement, and to communicate with UNFCCC parties in addressing climate change. NC4 and BUR3 to the UNFCCC will enable Thailand to continue fulfilling all commitments. The facilitative sharing of views (FSV) under the International Consultation and Analysis (ICA) process for Parties not included in Annex I to the Convention shall provide Thailand good opportunities in illustrating its national circumstances and hearing recommendations from international experts for further capacities improvement in developing Biennial Update Reports and other related national reports.

Article 13 under the Paris Agreement stated that each Party shall regularly provide national inventory report, information on progress implementation and achievement towards its INDCs, climate change impact and adaptation, relevant information on capacity building and support needed. Therefore, the National Communications and the Biennial Update Reports are considered important tools for Thailand to meet this commitment and elevate its national agenda on climate change.

The Fourth NC and Third BUR project will build on findings and recommendations from previous NC and BUR work, as well as recommendations from the ICA process for BURs. With limited resources and technical capacity, Thailand has prioritized implementing the following recommendations in NC4-BUR3 to promote effectiveness and accelerate country readiness to meet international commitments.
The recommendations are categorized as follows:

(a) **Needs with regard to the GHG inventory**: (i) Training technical staff and national experts to use the 2006 IPCC Guidelines, particularly for undertaking data collection and data processing for the agriculture, forestry and other land use sector and Energy sector; (ii) Further enhancing the methods of collecting disaggregated data from sectoral subcategories, particularly for new industries in the Energy sector, for use with the 2006 IPCC Guidelines; (iii) Strengthening existing institutional arrangement to improve data collection of national statistics from relevant agencies and the private sector; (iv) Enhancing processes for data collection, emission calculations and reporting on emissions of HFCs, PFCs and SF6;

(b) **Needs with regard to mitigation**: (i) Further enhancing the capacity to report information on the status of actions and funding for measures to better understand the progress of implementation; (ii) Further enhancing the capacity to report on the progress and underlying steps taken or envisaged; (iii) Further enhancing the capacity to improve transparency by providing additional information on outcomes, such as sustainable development effects, economic and social consequences of the implementation of response measures and interaction of policies and actions;

(c) **Needs related to reporting cross-cutting issues:** Strengthening institutional and personnel capacities to fulfil reporting obligations on a continuous basis.

Thailand can achieve the above prioritized tasks through ONEP's full implementation of the TGEIS system as a tool to store emission data and estimation, based on the 2006 IPCC Guidelines for the National Greenhouse Gas Inventory. This initiative is a crucial step in Thailand's transitioning from a Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventory to 2006 IPCC Guidelines for the National Greenhouse Gas Inventory. Through NC4-BUR3 project, Thailand will be establishing a system and mechanism for Energy sector, to enable HFCs, PFCs and SF6 emission estimation. In additional, the Thai government has initiated "data gap analysis" project with the objective in strengthening the national capacity in data collection activities. The key concerns in applying TGEIS for BUR3 and NC4 are on how to acquire, to produce good data, and to acquire resources necessary to build capacity and support data collection methods in each sector in compliance to the 2006 IPCC Guidelines especially in greenhouse gas emission sectors. Note that these sectors have never been reported. Therefore, it is encouraged by recent COP decisions to report the use of synthetic gases.

In preparing the NC4 and BUR3, a series of workshops will be needed to demonstrate data entry into the Data Entry Template and emission estimation on TGEIS for Inventory Working Group members in details. These operations could create a complete understanding among members on how TGEIS assists in generating NC and BUR reports. Moreover, it could conduct data gap analysis as well as solution identification.

The third BUR was submitted to the UNFCCC in December 2020. The fourth NC and the fourth BUR are expected to be finalized and submitted to the UNFCCC in December 2022.

The project has been developed in consultation with the Office of Natural Resources and Environmental Policy and Planning (ONEP) under the Ministry of Natural Resources and Environment. ONEP and UNDP Thailand have signed a Project Document and a Letter of Agreement (LoA) on February 18th, 2020 as an agreement to become a sole Implementing Partner and a Support Services Provider respectively for the project. This assignment is essential to the delivery of the National communication and Biennial Update Report mandated by the COP Decisions and Guidelines.

2) OBJECTIVES OF THE ASSIGNMENT

The objective of the assignment is, for the GHG Mitigation and Inventory Expert (Energy Sector), to provide technical guidance to enhance processes for Thailand in data collection, emission calculations , reporting on emissions of the energy sector, and report of the GHG reduction outcome from NAMA and to ensure the delivery of GHG Inventory and Mitigation Chapter as a component in submission of Thailand's Fourth National Communication and Forth Biennial Update Report to the UNFCCC by December 2022.

The GHG Mitigation and Inventory Expert (Energy Sector) will provide these services for the NC4-BUR3 project under IGSD Unit of UNDP Thailand and in close coordination with the Office of Natural Resources and Environmental Policy and Planning (ONEP) under the Ministry of Natural Resources and Environment.

3) SCOPE OF WORK

Under the overall supervision from the Project Manager, IGSD Unit, UNDP Thailand, the Contractor will perform the following tasks:

- Review existing issues in reporting on Thailand national GHG emission of the energy sector;
- Review data collection, activity data, emission factors, emission calculations, and reporting on emissions of energy sector year 2017-2018 and its re-calculation by TGEIS in accordance with 2006 IPCC Guidelines for National Greenhouse Gas Inventories and others COP decision guidance;
- Take a role as the Lead Inventory Expert among other GHG inventory experts to ensure that the same technical approaches are applied;
- Compile the emission calculations results from energy, waste, agriculture, and LULUCF sector and conduct the overall key categories analysis, emission trend, QA and QC, uncertainty for Thailand national GHG for NC4 and BUR4, compare with the calculation results from TGEIS;
- Prepare the recommendation on the further improvement processes for Thailand in data collection, emission calculations, and reporting on emissions of the energy sector;
- Support ONEP in organizing consultation workshop among key stakeholders and/or working groups;
- Support ONEP in participating in the International Consultation and Analysis (ICA) process under the UNFCCC, as requested;

4) DURATION OF ASSIGNMENT, DUTY STATION AND EXPECTED PLACES OF TRAVEL

Duration: **1 June 2021– 28 February 2022 (Up to 40 Days)**
Duty Station: **Homebased (no travel)**

5) FINAL PRODUCTS

All the outputs/deliverables as stipulated below needs to be reviewed and certified by ONEP/the Project Manager at UNDP prior the payment is released.

- Ensuring capacities and approaches in GHG inventory reporting are strengthened and improved;
- Ensuring the NC4 and BUR4 are prepared according to the guidelines provided by UNFCCC;
- Ensuring the implemented GHG reduction measures and its outcome have been reported strengthened and improved for further implementations;
- Ensuring the NC4 and BUR4 are submitted to the UNFCCC in a timely manner.

No	Deliverables/ Outputs	Estimated Duration to Complete	Review and Approvals Required
1	Assignment workplan	15 days after contract signing	ONEP/UNDP
2	a. Results of the Review data collection, activity data, emission factors, emission calculations, and reporting on emissions of energy year 2017-2018 and its re-calculation by TGEIS	31 July 2021	ONEP/UNDP

	b. Consultation meeting or workshop with ONEP and key agencies on the issues (a)		
4	a. Results in conducting the key categories analysis, emission trend, uncertainty for NC4 and BUR4 b. Report on the recommendation of further processes improvement for Thailand in data collection, emission calculations, and reporting on emissions of energy sector	31 January 2022	ONEP/UNDP

6) PROVISION OF MONITORING AND PROGRESS CONTROLS

The service provider will be supervised by UNDP Project Manager - IGSD unit, throughout the consultancy. He/she will work closely with the Communications consultants, and Technical Advisors and other staff involved in the NC4-BUR3 Project as appropriate.

7) DEGREE OF EXPERTISE AND QUALIFICATIONS

Applications are solicited from highly experienced specific expertise in the below fields.

Required qualifications:

Education:

- University Degree in engineer, environment, sciences, and/ or other related fields is required.

Working Experience:

- At least 5-year experience in climate change mitigation and GHG inventory development;
- At least 2-year experience using IPCC guidelines for national GHG inventories;
- At least 2-year experience with Thailand Greenhouse Gas Emissions Inventory System (TGEIS);

Desired qualifications:

- Experience with Policy Maker in create policy related on climate change issues;
- Familiarity with the ICA and FSV process under the UNFCCC is an asset; and
- Ability to work as a part of ONEP Inventory team, sharing knowledge and experiences with in the team.

Functional competencies:

- Strong analytical, reporting and writing abilities;
- Excellent speaking and presentation skills;
- Ability to interact with government officials is an asset;

Language requirements:

- Strong spoken and written English language skills required; and
- Knowledge of language (Thai) of the project is required.

8) PAYMENT TERMS

The method of payment is output-based and as per below deliverable. The payments shall be released upon UNDP's satisfaction of the service providers submission of each deliverable by or before the due dates as agreed with the UNDP Thailand team.

No	Deliverables/ Outputs	Estimated Duration to Complete	Review and Approvals Required	Payment
1	Assignment workplan	15 days after contract signing	ONEP/UNDP	30%
2	c. Results of the Review data collection, activity data, emission factors, emission calculations, and reporting on emissions of energy year 2017-2018 and its re-calculation by TGEIS a. Consultation meeting or workshop with ONEP and key agencies on the issues (a)	31 July 2021	ONEP/UNDP	30%
4	c. Results in conducting the key categories analysis, emission trend, uncertainty for NC4 and BUR4 a. Report on the recommendation of further processes improvement for Thailand in data collection, emission calculations, and reporting on emissions of energy sector	31 January 2022	ONEP/UNDP	40%

9) RECOMMENDED PRESENTATION OF OFFER

Interested candidates must submit the following documents/information to demonstrate their qualifications. Please group them into one (1) single PDF document:

a) **Personal CV,** indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references;
b) **Letter of Confirmation of Interest and Availability and Financial Proposal** that indicates the daily rate/fee of the candidate, in Thai Baht.

Incomplete proposals may not be considered. The shortlisted candidates may be contacted, and the successful candidate will be notified

10) CRITERIA FOR SELECTION OF THE BEST OFFER

The criteria which shall serve as the basis for evaluating offers is as follows:
Combined Scoring method – where the qualifications and methodology will be weighted 70% and combined with the price offer which will be weighted 30%.

Technical criteria for evaluation (Maximum 100%)

- Criteria 1: University degree in engineer, environment, sciences, and/ or other related fields Max 10%
- Criteria 2: Experience in GHG inventory development in Energy sector Max 30%
- Criteria 3: Experience using IPCC guidelines for national GHG inventories Max 20%
- Criteria 4: Familiarity with Thailand Greenhouse Gas Emissions Inventory System (TGEIS) Max 30%
- Criteria 5: Strong analytical, reporting and writing abilities Max 10%

Only candidates obtaining a minimum of 70% of the total technical points would be considered for the Financial Evaluation.

11) APPROVAL OF THE TERMS OF REFERENCE

The Terms of Reference is approved by:

_____
Lovita Ramguttee
Deputy Resident Representative
UNDP Thailand

Date of Signing: _____