Global Warming Potential: GWP for Thailand Voluntary Emission Reduction Program (T-VER)

Announced on 27 October B.E. 2564 (2021)

By Carbon Credit Certification Office

Thailand Greenhouse Gas Management Organization (Public Organization)

Thailand Greenhouse Gas Management Organization (Public Organization) or TGO, as the main agency supporting the participation in greenhouse gas mitigation of all sectors in the country, has developed a mechanism to regulate project-level implementation of mitigation activities under the name "Thailand Voluntary Emission Reduction Program: T-VER".

TGO has developed T-VER program since 2014 and certifies emission reduction of 3 types of greenhouse gases namely carbon dioxide, methane and nitrous oxide. TGO has determined the 100-year Global Warming Potential (GWP) for the calculation the amounts of greenhouse gas emission reduction in T-VER Methodology and Tool based on the IPCC Fourth Assessment (AR4) 2007 as presented in Table 1.

Table 1 The 100-year Global Warming Potential (GWP) (IPCC Fourth Assessment (AR4) 2007)

Greenhouse gas	The 100-year GWP
Carbon dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous oxide (N_2O)	298

As Party to the United Nations Framework Convention on Climate Change or UNFCCC, Thailand is obligated to prepare a GHG inventory to be submitted to UNFCCC according to its capacity and readiness**.** To ensure efficiency in greenhouse gas mitigation of all Parties, UNFCCC under the Paris Agreement has established Transparency Framework to promote understanding, clarity and monitor progress, as well as support on the implementation of the Paris Agreement on climate change**.** Each Party is required to prepare a Biennial Transparency Report (BTR) and to submit the first report by 31 December 2024. It has

been determined that the 100-year GWP from the IPCC Fifth Assessment (AR5) 2014 shall be applied on GHG assessments in the BTR from 1 January 2021. Therefore, in order to ensure project-based GHG calculation from 1 January 2021 is consistent with the country's GHG inventory, it is appropriate to apply the 100-year GWP in the calculation of the amounts of greenhouse gases under T-VER program in accordance with IPCC Fifth Assessment (AR5) 2014 as shown in Table 2.

Table 2 The 100-year Global Warming Potential (GWP) (IPCC Fifth Assessment (AR5) 2014)

Greenhouse gas	The 100-year GWP
Carbon dioxide (CO_2)	1
Methane (CH_4)	28
Nitrous oxide (N_2O)	265

According to the resolution of meeting of the Subcommittee on Consideration of GHG Mitigation Projects and Activities No. 6/2021 on 5 October 2021, the Subcommittee approved the following:

1) To adjust the 100-year Global Warming Potential (GWP) for the calculation of the amounts of GHG reduction under T-VER projects with a crediting period from 1 January 2021 to comply the GWP in the IPCC Fifth Assessment (AR5) 2014 as shown in Table 2. The GWP shall be applied as a parameter to be monitored in T-VER Methodology and Tool.

2) Registered T-VER projects that have adopted T-VER Methodology where the GWP is set as a constant throughout the project's crediting period shall adjust the GWP according to AR5 for the calculation of GHG emission reduction for the credit period from 1 January 2021 onwards, by specifying the change in Section 1.2 of the Monitoring Report (MR). Such projects shall not be required to notify TGO or request for revalidation. The calculation of the amounts of GHG reduction for the crediting period before 1 January 2021 shall refer to the IPCC Fourth Assessment (AR4) 2007 in Table 1 as illustrated in Figure 1.

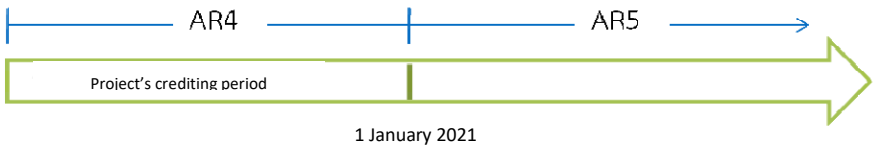

Figure 1 Application of GWP for registered projects

3) T-VER projects whose amounts of GHG reduction have been certified during the crediting period in 2021 shall calculate the amounts of GHG reduction by applying the GWP AR5 for the credit period following the one where the credits have been previously certified as illustrated in Figure 2.

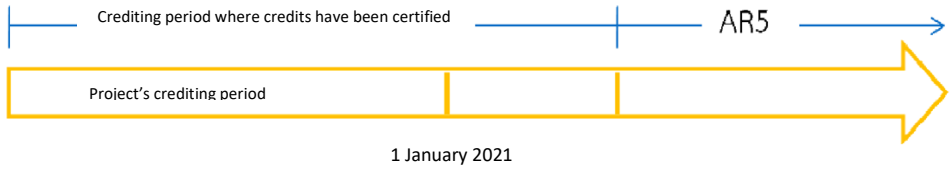

Figure 2 Application of GWP for projects whose amounts of GHG reduction have been certified during the crediting period in 2021