Appendix

Additional information to the Proposed Methodology
"Installation of wind power generation system"

This document provides additional information on how the reference CO_2 emission factors ($EF_{elec,RE}$) are established under the proposed methodology, taking into account Viet Nam's NDC and consistency with the approved JCM methodology VN_AM007.

1. Viet Nam's NDC reduction target

Under Viet Nam's updated 2022 NDC[1], GHG emissions in the energy sector are targeted to be reduced by 64.8 $MtCO_2$ under the unconditional contribution scenario from the 2030 BAU emissions of 678.4 $MtCO_2$, which were projected based on the 2014 GHG inventory. This corresponds to a 9.56% reduction.

2. Viet Nam's grid emission factor in 2014

According to "CO_2 emissions from fuel combustion 2017"[2], Viet Nam's grid emission factor in 2014 is 380 gCO_2/kWh, equivalent to 0.380 tCO_2/MWh.

3. Reference CO2 emission factor

The reference emission factor for displaced grid electricity has already been established in the approved JCM methodology VN_AM007 "Installation of Solar PV System (Ver. 01.0)"[3] as 0.333 tCO_2/MWh. Compared with the 2014 grid emission factor, the value is lower by 12.37%.

Since the reduction rate of 12.37% exceeds the GHG emissions reduction target for the energy sector (9.56%) under Viet Nam's NDC, the fixed value of 0.333 tCO_2/MWh is more conservative than a reference emission factor set taking into account the NDC reduction target based on the 2014 grid emission factor.

In order to ensure consistency and conservativeness, the fixed value of 0.333 tCO_2/MWh as defined in VN_AM007 Ver01.0 is applied as the reference CO_2 emission factor in this methodology.

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[1] Viet Nam, Nationally Determined Contribution (NDC), Updated in 2022, p. 10
https://unfccc.int/sites/default/files/NDC/2022-11/Viet%20Nam%20NDC%202022%20Update.pdf

[2] CO_2 Emissions from Fuel Combustion 2017, International Energy Agency (IEA), Section II.413, p. 470
https://www.oecd.org/content/dam/oecd/en/publications/reports/2017/10/co2-emissions-from-fuel-combustion-2017_g1g7ca18/co2_fuel-2017-en.pdf

[3] VN_AM007 "Installation of Solar PV System (Ver. 01.0)"
https://www.jcm.go.jp/jc/methodologies/vn-am007-ver1-0/