

National Grid Emission Factor for 2019-2021

As per the DOE Department Order No. DO2011-08-0009, the National Grid Emission Factor (NGEF) serves as the reference for energy projects under the Clean Development Mechanism¹ (CDM) as the per-grid standard amount of greenhouse gas (GHG) emissions related to the activities performed on a particular grid. NGEF is computed for the major Philippine power grids — the Luzon-Visayas Grid and the Mindanao Grid.

The table below shows the computed 2019-2021 grid emission factors using DOE data².

Parameter	Luzon-Visayas Grid ^{d,e}	Mindanao Grid ^{d,e}
	<i>in t-CO₂/MWh</i>	<i>in t-CO₂/MWh</i>
Operating Margin Emission Factor^a (EF_{OM})		
EF _{OM}	0.6935	0.8522
Build Margin Emission Factor^b (EF_{BM})		
EF _{BM}	0.7426	0.7824
Combined Margin Emission Factor^c (EF_{CM} or NGEF)		
EF _{CM} (Wind and Solar Projects)	0.7058	0.8348
EF _{CM} (Other Projects)	0.7181	0.8173

^a Operating margin (OM) emission factor covers the group of existing power plants whose current electricity generation would be affected by the proposed CDM project activity.

^b Build margin (BM) emission factor covers the group of prospective power plants whose construction and future operation would be affected by the proposed CDM project activity.

^c Combined margin (CM) emission factor is the weighted average of the OM and BM emission factors.

^d Only power plants connected to the grid were included in the calculation for both Luzon-Visayas and Mindanao grids because the total capacity of off-grid power plants is less than 10% of the total capacity of grid power plants in the electricity system.

^e The low-cost/must-run resources constitute less than 50% of the total grid generation (excluding electricity generated by off-grid power plants) in average of the five most recent years; therefore, simple OM approach was used to calculate the OM emission factor.

¹ See Article 12 of the Kyoto Protocol

² DOE Power Statistics