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# IPCC National GHGI Reporting and Guidelines for Energy, Waste Sectors – Reporting Guidance and Tables

Present By:

Eng. H. M. Buddika Hemashantha

International MRV Transparency

Advisor to CBIT-GSP

ipcc

INTERGOVERNMENTAL PANEL ON climate change





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Common reporting tables (CRTs) are a template for the electronic reporting of GHG data under the UNFCCC

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CRTs play a pivotal role in accurate and consistent reporting of GHG emissions to the UNFCCC

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CRTs serve as a standardized framework that enables countries to report their emissions data in clear, transparent and comparable manner

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CRTs are organized into a series of tables and sub tables

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Each table/ sub-table is designed to capture specific aspect of GHG emissions and removals

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CRTs provide detailed information about emission sources, methodologies and data quality



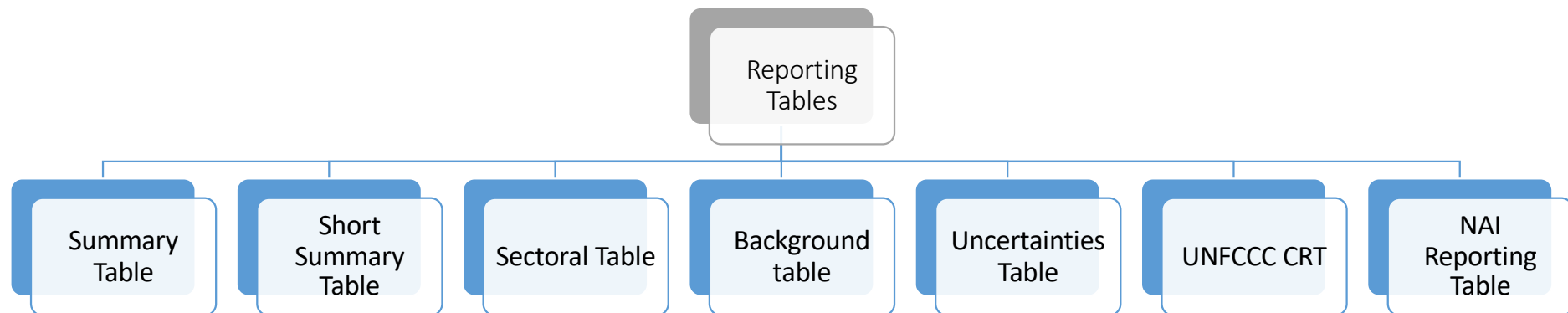
**TABLE 8.1**  
**NOTATION KEYS**

<b>Notation Key</b>	<b>Definition</b>	<b>Explanation</b>
NE	Not estimated	Emissions and/or removals occur but have not been estimated or reported.
IE	Included elsewhere	Emissions and/or removals for this activity or category are estimated and included in the inventory but not presented separately for this category. The category where these emissions and removals are included should be indicated (for example in the documentation box in the correspondent table).
C	Confidential information	Emissions and/or removals are aggregated and included elsewhere in the inventory because reporting at a disaggregated level could lead to the disclosure of confidential information.
NA	Not applicable	The activity or category exists but relevant emissions and removals are considered never to occur. Such cells are normally shaded in the reporting tables.
NO	Not occurring	An activity or process does not exist within a country.

# Reporting table overview



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# Result - Energy sectoral table



Table 1 displays emissions categorized by gas type

Memo and information items displays emissions of international bunkers other special information.

Table 1 Energy Sectoral Table							
Categories	Emissions (Gg)						
	CO2	CH4	N2O	NOx	CO	NMVOcs	SO2
<b>1 - Energy</b>	47827.422	80.755	2.279				
<b>1.A - Fuel Combustion Activities</b>	45838.453	79.100	2.279				
<b>1.A.1 - Energy Industries</b>	8317.918	0.159	0.110				
1.A.1.a - Main Activity Electricity and Heat Production	8317.918	0.159	0.110				
1.A.1.a.i - Electricity Generation	8317.918	0.159	0.110				
1.A.1.a.ii - Combined Heat and Power Generation (CHP)							
1.A.1.a.iii - Heat Plants							
1.A.1.b - Petroleum Refining							
1.A.1.c - Manufacture of Solid Fuels and Other Energy Industries	0.000	0.000					
1.A.1.c.i - Manufacture of Solid Fuels	0.000	0.000					
1.A.1.c.ii - Other Energy Industries							
<b>1.A.2 - Manufacturing Industries and Construction</b>	9506.429	0.554	0.096				
1.A.2.a - Iron and Steel	820.211	0.034	0.007				
1.A.2.b - Non-Ferrous Metals							
1.A.2.c - Chemicals	786.016	0.032	0.006				
1.A.2.d - Pulp, Paper and Print	632.746	0.025	0.005				
1.A.2.e - Food Processing, Beverages and Tobacco	1690.608	0.065	0.013				
1.A.2.f - Non-Metallic Minerals	3699.110	0.323	0.050				
1.A.2.g - Transport Equipment							
1.A.2.h - Machinery	15.766	0.001	0.000				
1.A.2.i - Mining (excluding fuels) and Quarrying	249.028	0.010	0.002				
1.A.2.j - Wood and wood products	495.919	0.020	0.004				
1.A.2.k - Construction	495.976	0.020	0.004				
1.A.2.l - Textile and Leather	526.008	0.020	0.004				
1.A.2.m - Non-specified Industry	95.040	0.004	0.001				
<b>1.A.3 - Transport</b>	21673.883	4.473	1.065				
1.A.3.a - Civil Aviation	1021.206	0.007	0.029				
1.A.3.a.i - International Aviation (International Bunkers) (1)							
1.A.3.a.ii - Domestic Aviation	1021.206	0.007	0.029				
1.A.3.b - Road Transportation	20648.706	4.466	1.035				
1.A.3.b.i - Cars	20648.706	4.466	1.035				
1.A.3.b.i.1 - Passenger cars with 3-way catalysts	20648.706	4.466	1.035				
1.A.3.b.i.2 - Passenger cars without 3-way catalysts							
1.A.3.b.ii - Light-duty trucks							
1.A.3.b.ii.1 - Light-duty trucks with 3-way catalysts							

Table 1 Energy Sectoral Table							
Categories	Emissions (Gg)						
	CO2	CH4	N2O	NOx	CO	NMVOcs	SO2
<b>Memo Items (3)</b>							
International Bunkers	5918.214	0.415	0.158				
1.A.3.a.i - International Aviation (International Bunkers) (1)	1532.537	0.011	0.043				
1.A.3.d.i - International water-borne navigation (International bunkers) (1)	4385.677	0.404	0.115				
1.A.5.c - Multilateral Operations (1)(2)							
<b>Information Items</b>							
CO2 from Biomass Combustion	27528.864						
CO2 from Biomass Combustion Captured	0.000						
Biogenic CO2	0.000						





# Result - Uncertainties Reporting Table 7a



IPCC Inventory Software - PHL\_EnergySector - [Reporting Table 7a - Uncertainties]

Application Database Inventory Year Worksheets Tools Export/Import Reports Window Help

Reporting Table 7a - Uncertainties

Base year for assessment of uncertainty in trend 2000 Year T 2000 Refresh Data

2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 equivalent)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T
<b>1 - Energy</b>						
1.A.1 - Energy Industries - Liquid Fuels	CO2	2548.436	5.000	6.136	7.915	0.126
	CH4	0.099	5.000	228.788	228.843	0.000
	N2O	0.020	5.000	228.788	228.843	0.000
1.A.1 - Energy Industries - Solid Fuels	CO2	5766.053	5.000	12.460	13.426	1.856
	CH4	0.060	5.000	200.000	200.062	0.000
	N2O	0.090	5.000	222.222	222.278	0.000
1.A.1 - Energy Industries - Gaseous Fuels	CO2	3.429	5.000	3.922	6.354	0.000
	CH4	0.000	5.000	200.000	200.062	0.000
	N2O	0.000	5.000	200.000	200.062	0.000
1.A.1 - Energy Industries	CO2	0.000	5.000	5.000	7.071	0.000
	CH4	0.000	5.000	5.000	7.071	0.000
	N2O	0.000	5.000	5.000	7.071	0.000
1.A.2 - Manufacturing Industries and Construction - Liquid Fuels	CO2	6687.058	16.583	20.351	26.252	0.120
	CH4	0.260	16.583	758.804	758.985	0.000
	N2O	0.052	16.583	758.804	758.985	0.000
1.A.2 - Manufacturing Industries and Construction - Solid Fuels	CO2	2819.371	8.660	21.581	23.254	0.425
	CH4	0.293	8.660	346.410	346.518	0.000
	N2O	0.044	8.660	384.900	384.998	0.000
1.A.3.a - Civil Aviation - Liquid Fuels	CO2	2553.743	7.071	5.953	9.243	0.045
	CH4	0.018	7.071	141.421	141.598	0.000
	N2O	0.071	7.071	212.132	212.250	0.000
1.A.3.b - Road Transportation - Liquid Fuels	CO2	20648.706	5.000	3.068	5.866	4.545
	CH4	4.466	5.000	244.693	244.744	0.000
	N2O	1.035	5.000	209.938	209.997	0.000
1.A.3.b - Road Transportation	CO2	0.000	0.000	0.000	0.000	0.000
1.A.3.c - Railways - Liquid Fuels	CO2	3.971	5.000	2.024	5.394	0.000
	CH4	0.000	5.000	150.602	150.685	0.000
	N2O	0.002	5.000	200.000	200.062	0.000
1.A.3.d - Water-borne Navigation - Liquid Fuels	CO2	4385.677	5.000	4.301	6.596	0.259
	CH4	0.404	5.000	50.000	50.249	0.000
	N2O	0.115	5.000	140.000	140.089	0.000
1.A.4 - Other Sectors - Liquid Fuels	CO2	6340.223	10.000	10.432	14.451	0.364
	CH4	0.657	10.000	324.138	324.293	0.000
	N2O	0.067	10.000	409.648	409.770	0.000

# Result - Uncertainties Reporting Table 7a



IPCC Inventory Software - PHL\_EnergySector - [Reporting Table 7a - Uncertainties]

Application Database Inventory Year Worksheets Tools Export/Import Reports Window Help

Reporting Table 7a - Uncertainties

Base year for assessment of uncertainty in trend: 2000 Year T: 2000 Refresh Data

2006 IPCC Categories	Gas	Base Year emissions or removals (Gg CO2 equivalent)	Activity Data Uncertainty (%)	Emission Factor Uncertainty (%)	Combined Uncertainty (%)	Contribution to Variance by Category in Year T
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	CH4	0.000	5.000	200.000	200.062	0.000
	N2O	0.000	5.000	200.000	200.062	0.000
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	N2O	0.000	5.000	5.000	7.071	0.000
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	CH4	0.018	7.071	141.421	141.598	0.000
	N2O	0.071	7.071	212.132	212.250	0.000
1.A.3.b - Road Transportation - Liquid Fuels	CO2	20648.706	5.000	3.068	5.866	4.545
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	CH4	0.000	5.000	150.602	150.685	0.000
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1.A.4 - Other Sectors - Liquid Fuels	CO2	6340.223	10.000	10.432	14.451	0.364
	CH4	0.657	10.000	324.138	324.293	0.000
	N2O	0.067	10.000	409.648	409.770	0.000

## Result - CRT Table



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CRT section includes 12 tables as bellow;

1. Table 1 : Sectoral Report for Energy
2. Table 1 A(a)s1 Sectoral Background data for Energy, Fuel combustion activities- sectoral approach sheet -1
3. Table 1 A(a)s2 Sectoral Background data for Energy, Fuel combustion activities- sectoral approach sheet -2
4. Table 1 A(a)s3 Sectoral Background data for Energy, Fuel combustion activities- sectoral approach sheet -3
5. Table 1 A(a)s4 Sectoral Background data for Energy, Fuel combustion activities- sectoral approach sheet -4
6. Table 1 A(b) Sectoral Background data for Energy, Fuel combustion activities- reference approach
7. Table 1 A(c) Compression of CO2 emission from fuel combustion
8. Table 1 A(d) Sectoral Background data for Energy, Feedstocks, reductant and other non energy use of fuels
9. Table 1 B 1 Sectoral Background data for Energy- solid fuels
10. Table 1 B 2 Sectoral Background data for Energy- Oil, natural gas and other emission from energy production.
11. Table 1 C Sectoral Background data for Energy- CO2 Transport and storage
12. Table 1 D Sectoral Background data for Energy- International aviation and international navigation )  
international bunkers) and multilateral operations

# Result - CRT Table



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Application Database Inventory Year Worksheets Tools Export/Import Reports Window Help

Sector: Energy Year: 2000 Refresh values

Table1 | Table1.A(a)s1 | Table1.A(a)s2 | Table1.A(a)s3 | Table1.A(a)s4 | Table1.A(b) | Table1.A(c) | Table1.A(d) | Table1.B.1 | Table1.B.2 | Table1.C | Table1.D

### TABLE 1 SECTORAL REPORT FOR ENERGY

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO2 (kt)	CH4 (kt)	N2O (kt)	NOx (kt)	CO (kt)	NMVOG (kt)	SOx (kt)	T	C
Total Energy									
1.A. Fuel combustion activities (sectoral approach)									
1.A.1. Energy industries									
1.A.1.a. Public electricity and heat production									
1.A.1.b. Petroleum refining									
1.A.1.c. Manufacture of solid fuels and other energy industries									
1.A.2. Manufacturing industries and construction									
1.A.2.a. Iron and steel									
1.A.2.b. Non-ferrous metals									
1.A.2.c. Chemicals									
1.A.2.d. Pulp, paper and print									

Legend

(1) "Total GHG emissions" does not include NOx, CO, NMVOG and SOx.  
 (2) As per decision 18/CMA.1, annex, para. 37, each Party shall use the 100-year time-horizon GWP values from the IPCC Fifth Assessment Report, or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO2 eq. Each Party may in addition also use other metrics (e.g. global temperature potential) to report supplemental information on aggregate emissions and removals of GHGs, expressed in CO2 eq. In such cases, the Party shall provide in the NID information on the values of the metrics used and the IPCC assessment report they were sourced from.  
 (3) Parties are asked to report emissions from international aviation and marine

Documentation box

Parties should provide further details to relevant references to relevant feedstocks and non-ferrous inventory, under the e...

Country/Territory: Philippines | Inventory Year: 2000 | Base year for assessment of uncertainty in trend: 1990 | CO2 Equivalents: AR5 GWPs (100 ye

Sector: Energy Year: 2000 Refresh values

Table1 | Table1.A(a)s1 | Table1.A(a)s2 | Table1.A(a)s3 | Table1.A(a)s4 | Table1.A(b) | Table1.A(c) | Table1.A(d) | Table1.B.1 | Table1.B.2 | Table1.C | Table1.D

### TABLE 1.A(a) SECTORAL BACKGROUND DATA FOR ENERGY

Fuel combustion activities - sectoral approach (Sheet 3 of 4)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	AGGREGATE ACTIVITY DATA		IMPLIED EMISSION FACTORS			EMISSIONS			CO2	
	Consumption (TJ)	NCV/GCV	CO2 (t/TJ)	CH4 (kg/TJ)	N2O (kg/TJ)	CO2 (kt)	CH4 (kt)	N2O (kt)	Method	EF
1.A.3 Transport	300456.6078					21673.88319773	4.47330928	1.06537461		
Liquid fuels	300456.6078					21673.88319773	4.47330928	1.06537461		
Solid fuels									NE, NO	
Gaseous fuels (6)									NE, NO	
Other fossil fuels (7)									NE, NO	
Biomass (3)										
1.A.3.a. Domestic aviation (12)										
Aviation gasoline										
Jet kerosene										
Biomass										

Sector: Energy Year: 2000 Refresh values

Table1 | Table1.A(a)s1 | Table1.A(a)s2 | Table1.A(a)s3 | Table1.A(a)s4 | Table1.A(b) | Table1.A(c) | Table1.A(d) | Table1.B.1 | Table1.B.2 | Table1.C | Table1.D

### TABLE 1.B.1 SECTORAL BACKGROUND DATA FOR ENERGY

Solid Fuels (Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS		EMISSIONS		RECOVERY/FLARING	
		CH4 (kg/t)	CO2 (kg/t)	CH4 (kt)	CO2 (kt)	CH4 (kt)	CO2 (kt)
1. B. 1. a. Coal mining and handling	Amount of fuel produced (Mt)						
	1.221			1.655235	NE, NO	NE, NO	
1.B.1.a.i. Underground mines (4)	0.046			0.63181	NE, NO	NE, NO	
1.B.1.a.i.1. Mining activities				0.55476	NE	NE	
1.B.1.a.i.2. Post-mining activities				0.07705	NE	NE	
1.B.1.a.i.3. Abandoned underground mines (number of mines)	NE			NE	NE	NE	
1.B.1.a.i.4. Flaring of drained methane or conversion of methane to CO2 (5)	NE			NE	NE	NE	
1.B.1.a.i.5. Other (please specify)				NO	NO	NO	
Other Underground Coal Mines [IPCC Software 1.B.3]	NO			NO	NO	NO	
1.B.1.a.ii. Surface mines (4)	1.175			1.023425	NE, NO	NE, NO	
1.B.1.a.ii.1. Mining activities				0.9447	NE	NE	





**Eng. H.M. Buddika Hemashantha**

International MRV Transparency Advisor to CBIT GSP

+44 7359 23 7074, +94 770 320 110

[buddika@climatesi.com](mailto:buddika@climatesi.com)