CGE Greenhouse Gas Inventory Hands-on Training

Exercises

Energy Sector

For this exercise, you will also need the Excel file "Hands-on-Exercises-Energy.xls"

1. Use the energy data in the Excel worksheet "Energy balance" and the data in the worksheet "Non-energy use" together with appropriate parameters, such as net calorific values, carbon content etc., to estimate CO_2 emissions from the energy sector using the reference approach.
2. Using the activity data in the Excel worksheet "Energy data for transport", perform the following tasks:
    a. Derive values for all fuels under all categories for the years 2000 and 2005;
    b. Estimate CO_2, CH_4 and N_2O emissions for the years 2000 and 2005 for all categories listed in the Excel worksheet.
3. Using the activity data in the Excel worksheet "Oil and NG", estimate, when applicable, the CO_2, CH_4 and N_2O emissions from all categories listed in the worksheet.

Excel file "Hands-on-Exercises-Energy.xls"

Data for oil and natural gas

	ACTIVITY DATA		
	Description	**Unit**	**Value**
1. B. 2. a. Oil			
I. Exploration	*oil extracted*	Gt	0.11
ii. Production	*oil produced*	Mt	76.48
iii. Transport	*oil transported by rail/sea*	kt	15,100.00
iv. Refining / Storage	*oil refined*	t	11,698,200.00
v. Distribution of Oil Products	*(specify)*		
vi. Other	*(specify)*		
1. B. 2. b. Natural Gas			
i. Exploration	*(specify)*		
ii. Production / Processing	*gas produced*	10^6 lt	35,941.80
iii. Transmission	*gas transported, including transit*	10^6 m^3	91,088.00
iv. Distribution	*gas consumed*	10^6 m^3	7,914.00
v. Other Leakage	*(specify)*		645.37
in residential and commercial sectors	*liquified gas consumed*	kt	645.37
1. B. 2. c. Venting			
i. Oil	*(specify)*		
ii. Gas	*(specify)*		
iii. Combined	*(specify)*		
Flaring			
i. Oil	*(specify)*		
ii. Gas	*(specify)*		
iii. Combined	*gas flared*	10^6 m^3	1,727.00