Welcome back

29 March 2021

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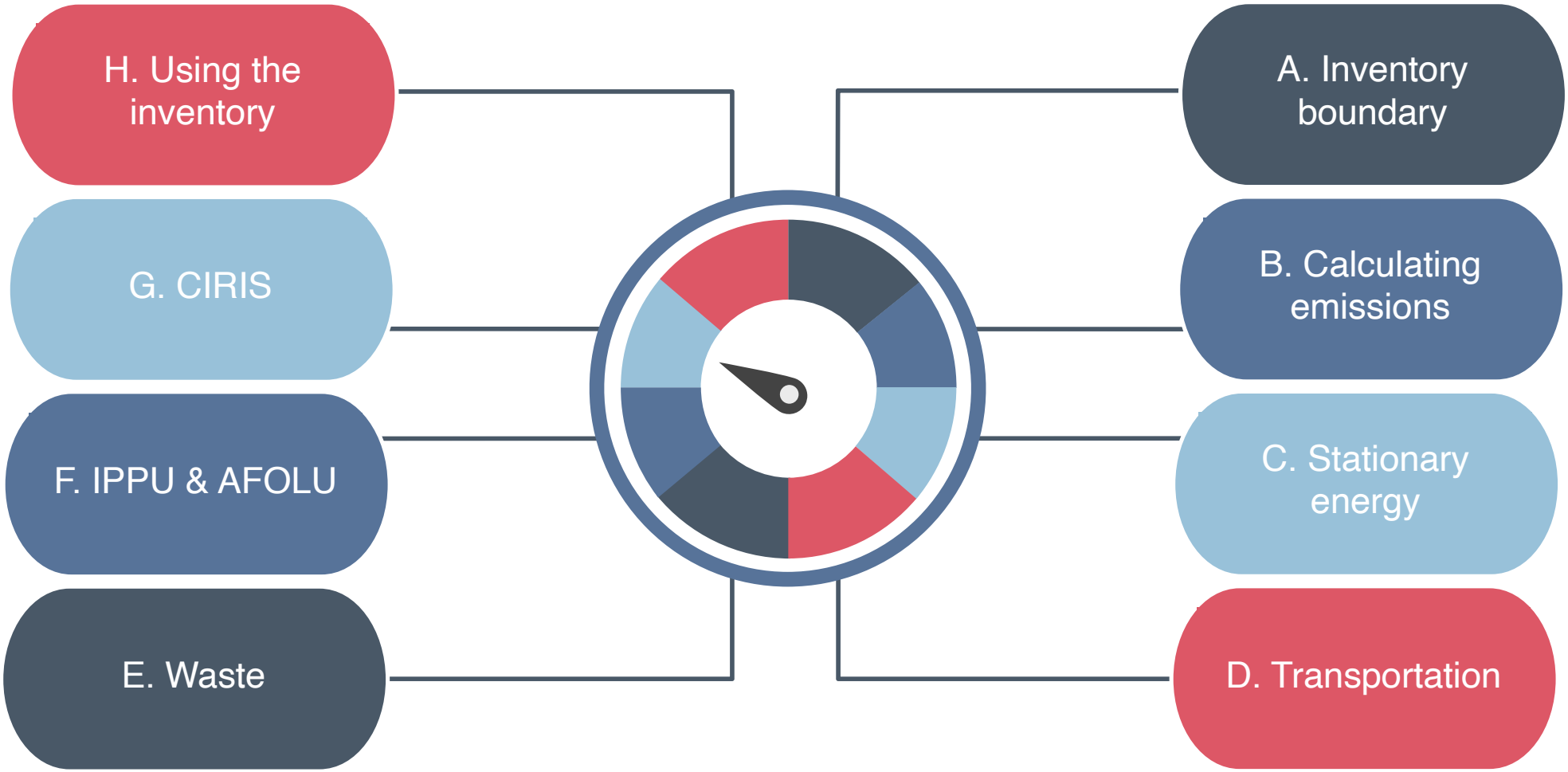
RE-CAP

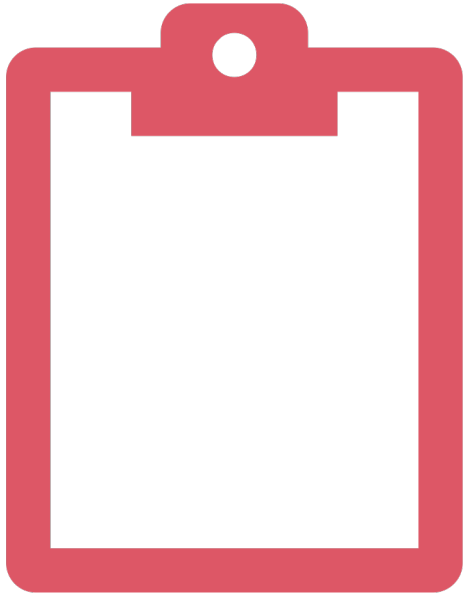
Module F: IPPU and AFOLU

Module E: IPPU and AFOLU


H. Using the inventory
G. CIRIS
F. IPPU & AFOLU
E. Waste
A. Inventory boundary
B. Calculating emissions
C. Stationary energy
D. Transportation

02
Workbook

Practical



Workbook: Task #4

GTALCC GHG Accounting - Participant handbook

Exercises	
Module B	Calculating GHG emissions
	Reviewing an inventory
Module C	Stationary energy
Module D	Transportation
Module E	Waste
Module F	IPPU and AFOLU

Tables	
Table 1	GHG emission sources
Table 2	Fuel types
Table 3	GPC
Table 4	Action plan

Reference
GPC
GWP
Notation keys
Checklist

GPC minimum requirements

Figure 2 Sources and scopes covered by the GPC

Sectors and sub-sectors	Scope 1	Scope 2	Scope 3
STATIONARY ENERGY			
Residential buildings	✓	✓	✓
Commercial and institutional buildings and facilities	✓	✓	✓
Manufacturing industries and construction	✓	✓	✓
Energy industries	✓	✓	✓
Energy generation supplied to the grid	✓		
Agriculture, forestry, and fishing activities	✓	✓	✓
Non-specified sources	✓	✓	✓
Fugitive emissions from mining, processing, storage, and transportation of coal	✓		
Fugitive emissions from oil and natural gas systems	✓		
TRANSPORTATION			
On-road	✓	✓	✓
Railways	✓	✓	✓
Waterborne navigation	✓	✓	✓
Aviation	✓	✓	✓
Off-road	✓	✓	
WASTE			
Disposal of solid waste generated in the city	✓		✓
Disposal of solid waste generated outside the city	✓		
Biological treatment of waste generated in the city	✓		✓
Biological treatment of waste generated outside the city	✓		
Incineration and open burning of waste generated in the city	✓		✓
Incineration and open burning of waste generated outside the city	✓		
Wastewater generated in the city	✓		✓
Wastewater generated outside the city	✓		
INDUSTRIAL PROCESSES AND PRODUCT USE (IPPU)			
Industrial processes	✓		
Product use	✓		
AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU)			
Livestock	✓		
Land	✓		
Aggregate sources and non-CO_2 emission sources on land	✓		
OTHER SCOPE 3			
Other Scope 3			

✓ Sources covered by the GPC

+ Sources required for BASIC+ reporting

Sources included in Other Scope 3

Sources required for BASIC reporting

Sources required for territorial total but not for BASIC/BASIC+ reporting (*italics*)

Non-applicable emissions

Congratulations

03
Module G

CIRIS

Module G: CIRIS

Overview	Using CIRIS	Practical Part A	Practical Part B
01	02	03	04

Module G

CIRIS

01

Overview

Overview

Excel-based reporting template and calculators

Captures all required data for a GPC and CRF compliant inventory

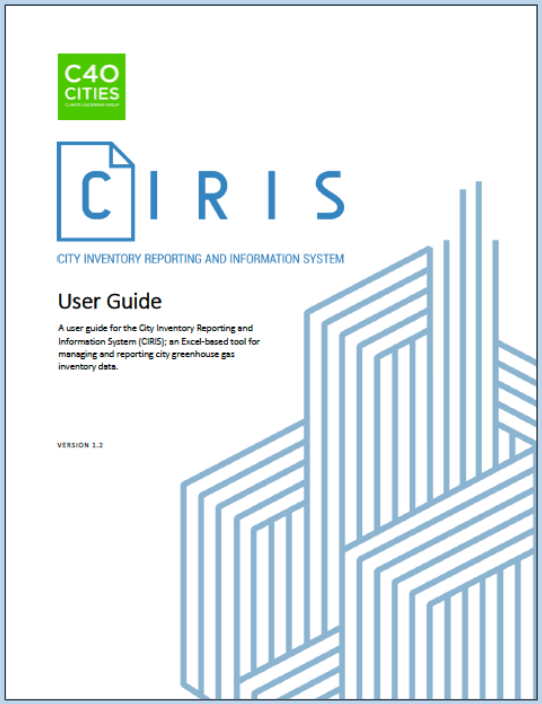
Available via CDP and on https://resourcecentre.c40.org

CIRIS is:

- Accessible
- Easy to use
- Flexible
- Transparent
- Able to combine reporting and analytics

Overview

User guide



Video tutorials

https://resourcecentre.c40.org/resources/reporting-ghg-emissions-inventories

Introduction

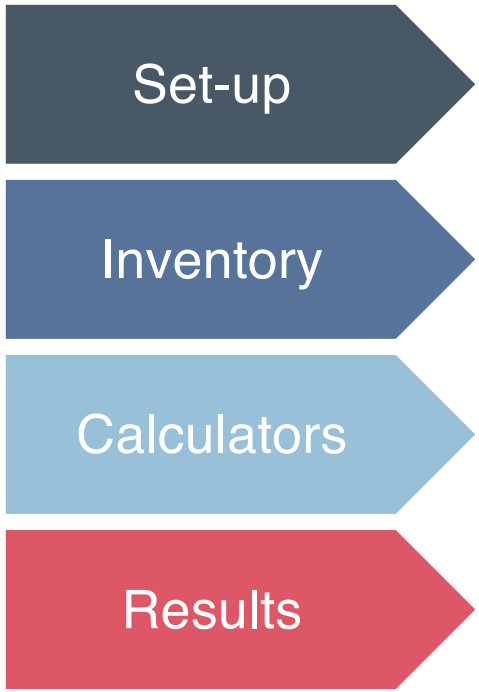
01 Introducing the City Inventory Reporting and Information System (CIRIS)

02 City Inventory Reporting and Information System (CIRIS): User Guide

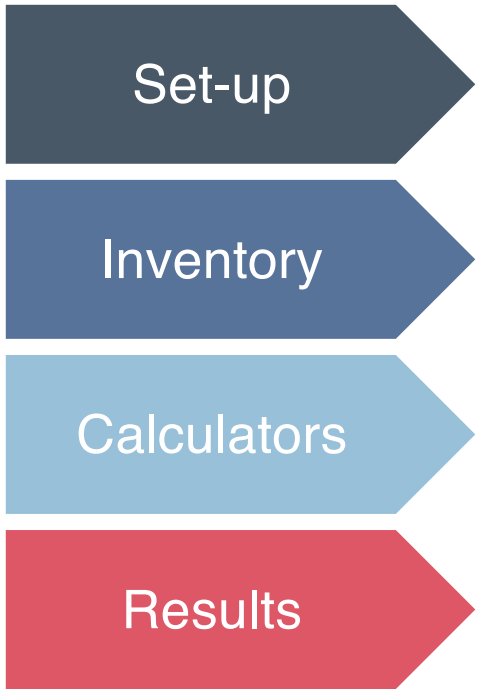
Introducing the City Inventory Reporting and Information System (CIRIS)

Source: https://www.youtube.com/watch?v=HMmAesyjtRM&feature=emb_logo

Features

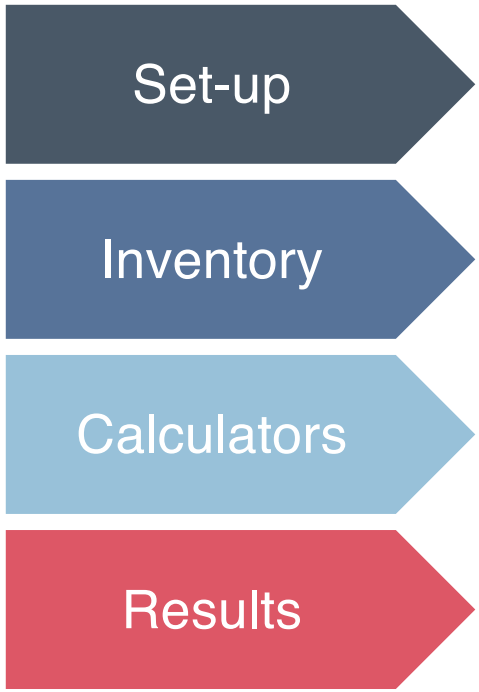


Features



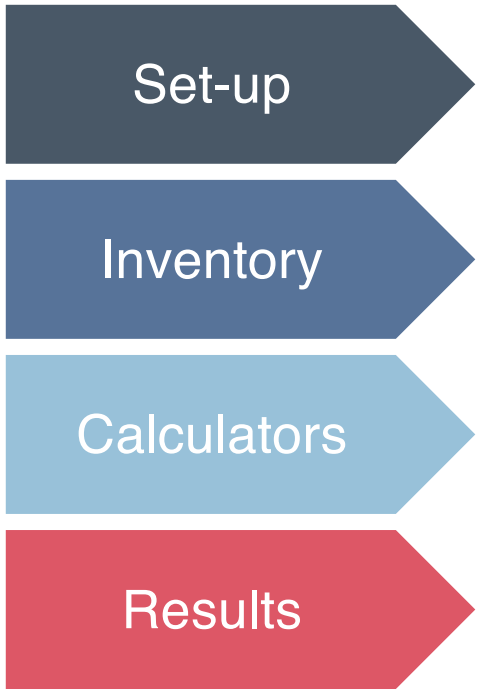
- Define the inventory boundary
- Provide supporting background information, such as population and land area
- Record all data sources and emission factors to be used in the inventory

Features



- Record activity data.
- Using the emission factors defined in the Set-up, emissions are calculated according to the GPC reporting framework.
- Stationary energy, Transportation and Waste must be completed for a BASIC inventory. IPPU and AFOLU are additional required for a BASIC+ inventory.

Features



- Five calculators are included:
  - Fugitive losses from gas distribution
  - Solid waste landfill
  - Biological treatment of waste
  - Waste incineration
  - Wastewater
- Calculations are based on IPPC Guidance and use default factors.
- Should only be used if no other data is available.

Features

Set-up

Inventory

Calculators

Results

- This section shows the inventory results and presents total emissions in various ways
- Historical emissions data for benchmarking
- Option to record emission credits to estimate a city's net emissions
- Includes results presented in GPC and CRF summary tables

Module G

CIRIS

03

Using CIRIS

Using CIRIS


CIRIS
Introduction
Set-up
Inventory
Calculators
Results
Notes
User guide
GPC
Notation keys
GWP
Conversion factors
CIRIS
CITY INVENTORY REPORTING AND INFORMATION SYSTEM
Click here to begin

Using CIRIS

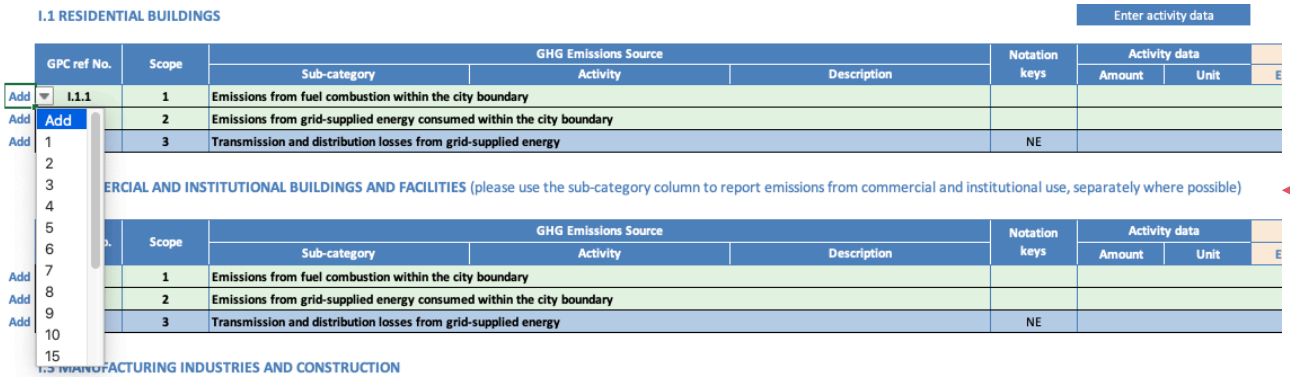
CIRIS

Introduction	Set-up	Inventory	Calculators	Results	Notes
City information	Data sources	Emission factors	IPPU Emission factors		

A. INVENTORY BOUNDARY (GPC CHAPTER 4.4, TABLE 4.1, PAGE 40)

Boundary	Information	Reference(s)
Name of city	Autonomous City of Buenos Aires	
Country	Argentina	
Region	Latin America	
Inventory year (select from list)	2013	*Calendar year: 1st of January 2013 to 31st of December 2013.*
Geographic boundary (select from list)	Administrative boundary of a local government	*http://www.buenosaires.gob.ar/agenciaambiental/cambioclimatico/english-information-available-here/ghgs-emission-report*
Heating degree days (HDD, °C)*		
Cooling degree days (CDD, °C)*		
Land area (km2) within city boundary	202.04	Source: General direction of legislative documentation (CEDOM) http://www.cedom.gov.ar/es/ciudad/barrios/ciudad/ciudad.html
Resident population within city boundary*	3079071	Year 2013 projection by the Treasury Secretariat of Buenos Aires City Governement. www.buenosaires.gob.ar/areas/hacienda/sis_estadistico/ir_2013_580.pdf
GDP (US$) of economic activity within city boundary*	79384000000	Source: Treasury Secretariat converted to US Dollar based on exchange currency price in january 2014 = $6,52 (National Bank).
Type of economy (select from list)	Services	Source: Treasury Secretariat - Statistics and Census General Direction (Anual report 2013)
Climate (select from list)	Temperate, hot summer	http://people.eng.unimelb.edu.au/mpeel/koppen.html
Other information	3,389,350 commuters	The City doubles its population daily because of the more than 3 million people that enter the City for work, study and administrative process. Source: Estudio de Cohesión Social en la Región

Standard vs. Light



I.1 RESIDENTIAL BUILDINGS

Enter activity data

	GPC ref No.	Scope	GHG Emissions Source			Notation keys	Activity data	
			Sub-category	Activity	Description		Amount	Unit
Add	I.1.1	1	Emissions from fuel combustion within the city boundary					
Add		2	Emissions from grid-supplied energy consumed within the city boundary					
Add		3	Transmission and distribution losses from grid-supplied energy			NE		

Add
1
2
3
4
5
6
7
8
9
10
15

ERCIAL AND INSTITUTIONAL BUILDINGS AND FACILITIES (please use the sub-category column to report emissions from commercial and institutional use, separately where possible)

		Scope	GHG Emissions Source			Notation keys	Activity data	
			Sub-category	Activity	Description		Amount	Unit
Add		1	Emissions from fuel combustion within the city boundary					
Add		2	Emissions from grid-supplied energy consumed within the city boundary					
Add		3	Transmission and distribution losses from grid-supplied energy			NE		

I.3 MANUFACTURING INDUSTRIES AND CONSTRUCTION

Standard – select only the number of rows you need per sub-category. Uses macros

Light – 20 rows provided for each sub-category

I.2 COMMERCIAL AND INSTITUTIONAL BUILDINGS AND FACILITIES (please use the sub-category column to report emissions from commercial and institutional use, separately where possible)

GPC ref No.	Scope	GHG Emissions Source			Notation keys	Activity data		Acti
		Sub-category	Activity	Description		Amount	Unit	EF unit
I.2.1	1	Emissions from fuel combustion within the city boundary						
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.1	1	Please select	Please select				Please select	
I.2.2	2	Emissions from grid-supplied energy consumed within the city boundary						

Using CIRIS

DATA SOURCES (GPC CHAPTER 5.4, PAGE 48)

	Data	Name of source	Provider	Latest year	Period	Frequency	Scale
25	*EXAMPLE: Emission factors*	*National emissions factor database*	*Ministry of the Environment*	*2014*	*Calendar year*	*Annual*	*National*
	Natural gas stationary consumption	Natural gas operational data - Distribution; ENARGAS	ENARGAS	2015	Calendar year	Other (monthly)	Local
	Grid-supplied electricity stationary and transport consumption of the City	Commercialization Division (Edenor S.A) and Environment Division (Edesur S.A)	Edenor S.A. and Edesur S.A.	2015	Calendar year	As required	Local
	Fuel consumptions transport and manufacturing industries	Transport fuels sales; Secretariat of Energy	Secretariat of Energy	2015	Calendar year	Other (monthly)	Local
	Fuels consumption power plants	Monthly report - MEM - Detailed report; CAMMESA	CAMMESA	2015	Calendar year	Other (monthly)	Other (by energy plant)
	Fuel consumptions municipal fleet	General Director of DGMFMH	DGMFMH	2014	Calendar year	As required	Local
	Fuel consumption of railways	Statistics area, National Comission of Transport Regulation (CNRT)	CNRT	2015	Calendar year	As required	Regional
	Solid waste landfilled, and gases recovered for energy or flared	Statistics area, CEAMSE	CEAMSE	2015	Calendar year	Other (semestral)	Local
	Wastewater treated	AYSA	Statistics area	2013	Calendar year	Annual	Regional
	Transmission and distribution losses	Edenor S.A, Edesur S.A & CAMMESA Annual reports	Edenor S.A, Edesur S.A & CAMMESA	2014	Calendar year	Annual	National
	CNG sold for transportation in the City	Anual statistic report; Treasury Secretariat - GCBA	Treasury Secretariat - GCBA	2014	Calendar year	Annual	Local
	Fuels emission factors	2006 IPCC Guidelines for National Greenhouse Gas Inventories	IPCC	2015	Calendar year	Valid since 2006	International
	Grid emission factor	CAMMESA Annual Report, SE grid EF calculator, APrA own calculations	CAMMESA, Secretaría de Energía, APrA	2013	Calendar year	Annual	National

Using CIRIS

DATA SOURCES (GPC CHAPTER 5.4, PAGE 48)

	Data	Name of source	Provider	Latest year	Period	Frequency	Scale
25	*EXAMPLE: Emission factors*	*National emissions factor database*	*Ministry of the Environment*	*2014*	*Calendar year*	*Annual*	*National*
	Natural gas stationary consumption	Natural gas operational data - Distribution; ENARGAS	ENARGAS	2015	Calendar year	Other (monthly)	Local
	Grid-supplied electricity stationary and transport consumption of the City	Commercial and Industrial Division (Edesur S.A)	Edenor S.A. and Edesur S.A.	2015	Calendar year	As required	Local
	Fuel consumptions transport and manufacturing industries	Transport fuels sales; Secretariat of Energy	Secretariat of Energy	2015	Calendar year	Other (monthly)	Local
	Fuels consumption power plants	Monthly report - MEM - Detailed report; CAMMESA	CAMMESA	2015	Calendar year	Other (monthly)	Other (by energy plant)
	Fuel consumptions municipal fleet	General Director of DGMFMH	DGMFMH	2014	Calendar year	As required	Local
	Fuel consumption of railways	Statistics area, National Comission of Transport Regulation (CNRT)	CNRT	2015	Calendar year	As required	Regional
	Solid waste landfilled, and gases recovered for energy or flared	Statistics area, CEAMSE	CEAMSE	2015	Calendar year	Other (semestral)	Local
	Wastewater treated	AYSA	Statistics area	2013	Calendar year	Annual	Regional
	Transmission and distribution losses	Edenor S.A, Edesur S.A & CAMMESA Annual reports	Edenor S.A, Edesur S.A & CAMMESA	2014	Calendar year	Annual	National
	CNG sold for transportation in the City	Anual statistic report; Treasury Secretariat - GCBA	Treasury Secretariat - GCBA	2014	Calendar year	Annual	Local
	Fuels emission factors	2006 IPCC Guidelines for National Greenhouse Gas Inventories	IPCC	2015	Calendar year	Valid since 2006	International
	Grid emission factor	CAMMESA Annual Report, SE grid EF calculator, APrA own calculations	CAMMESA, Secretaría de Energía, APrA	2013	Calendar year	Annual	National

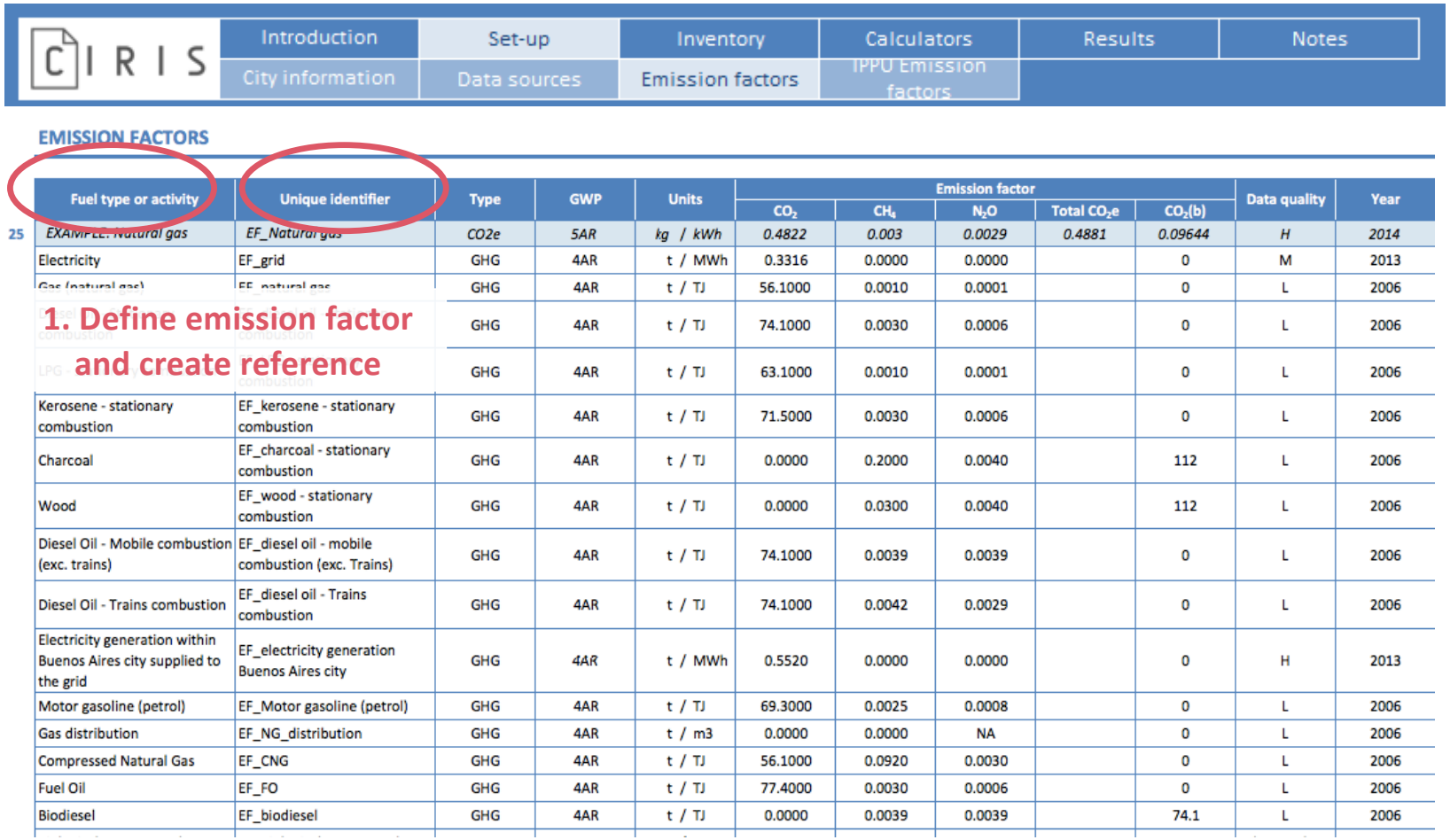
Name of source used for drop-down list

Using CIRIS

EMISSION FACTORS

	Fuel type or activity	Unique identifier	Type	GWP	Units	Emission factor					Data quality	Year
						CO_2	CH_4	N_2O	Total CO_2e	$CO_2(b)$		
25	*EXAMPLE: Natural gas*	*EF_Natural gas*	*CO2e*	*5AR*	*kg / kWh*	*0.4822*	*0.003*	*0.0029*	*0.4881*	*0.09644*	*H*	*2014*
	Electricity	EF_grid	GHG	4AR	t / MWh	0.3316	0.0000	0.0000		0	M	2013
	Gas (natural gas)	EF_natural gas	GHG	4AR	t / TJ	56.1000	0.0010	0.0001		0	L	2006
	Diesel Oil - Stationary combustion	EF_diesel oil - stationary combustion	GHG	4AR	t / TJ	74.1000	0.0030	0.0006		0	L	2006
	LPG - stationary combustion	EF_LPG - stationary combustion	GHG	4AR	t / TJ	63.1000	0.0010	0.0001		0	L	2006
	Kerosene - stationary combustion	EF_kerosene - stationary combustion	GHG	4AR	t / TJ	71.5000	0.0030	0.0006		0	L	2006
	Charcoal	EF_charcoal - stationary combustion	GHG	4AR	t / TJ	0.0000	0.2000	0.0040		112	L	2006
	Wood	EF_wood - stationary combustion	GHG	4AR	t / TJ	0.0000	0.0300	0.0040		112	L	2006
	Diesel Oil - Mobile combustion (exc. trains)	EF_diesel oil - mobile combustion (exc. Trains)	GHG	4AR	t / TJ	74.1000	0.0039	0.0039		0	L	2006
	Diesel Oil - Trains combustion	EF_diesel oil - Trains combustion	GHG	4AR	t / TJ	74.1000	0.0042	0.0029		0	L	2006
	Electricity generation within Buenos Aires city supplied to the grid	EF_electricity generation Buenos Aires city	GHG	4AR	t / MWh	0.5520	0.0000	0.0000		0	H	2013
	Motor gasoline (petrol)	EF_Motor gasoline (petrol)	GHG	4AR	t / TJ	69.3000	0.0025	0.0008		0	L	2006
	Gas distribution	EF_NG_distribution	GHG	4AR	t / m3	0.0000	0.0000	NA		0	L	2006
	Compressed Natural Gas	EF_CNG	GHG	4AR	t / TJ	56.1000	0.0920	0.0030		0	L	2006
	Fuel Oil	EF_FO	GHG	4AR	t / TJ	77.4000	0.0030	0.0006		0	L	2006
	Biodiesel	EF_biodiesel	GHG	4AR	t / TJ	0.0000	0.0039	0.0039		74.1	L	2006

Using CIRIS



CIRIS

Introduction | Set-up | Inventory | Calculators | Results | Notes

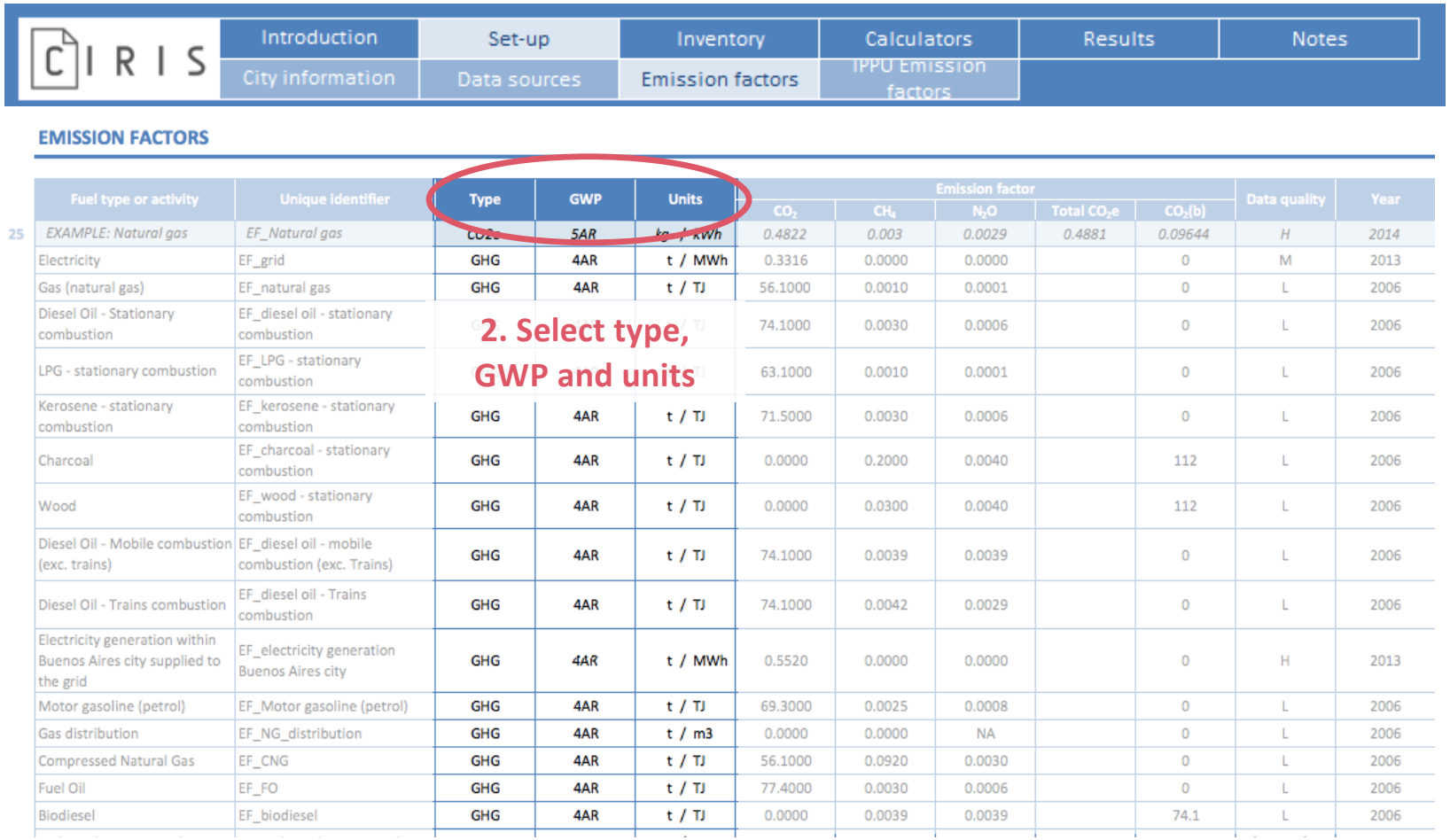
City information | Data sources | Emission factors | IPPU Emission factors

EMISSION FACTORS

	Fuel type or activity	Unique identifier	Type	GWP	Units	Emission factor					Data quality	Year
						CO_2	CH_4	N_2O	Total CO_2e	$CO_2(b)$		
25	*EXAMPLE: Natural gas*	*EF_Natural gas*	*CO2e*	*5AR*	*kg / kWh*	*0.4822*	*0.003*	*0.0029*	*0.4881*	*0.09644*	*H*	*2014*
	Electricity	EF_grid	GHG	4AR	t / MWh	0.3316	0.0000	0.0000		0	M	2013
	Gas (natural gas)	EF_natural gas	GHG	4AR	t / TJ	56.1000	0.0010	0.0001		0	L	2006
	[illegible] combustion	[illegible] combustion	GHG	4AR	t / TJ	74.1000	0.0030	0.0006		0	L	2006
	LPG	[illegible] combustion	GHG	4AR	t / TJ	63.1000	0.0010	0.0001		0	L	2006
	Kerosene - stationary combustion	EF_kerosene - stationary combustion	GHG	4AR	t / TJ	71.5000	0.0030	0.0006		0	L	2006
	Charcoal	EF_charcoal - stationary combustion	GHG	4AR	t / TJ	0.0000	0.2000	0.0040		112	L	2006
	Wood	EF_wood - stationary combustion	GHG	4AR	t / TJ	0.0000	0.0300	0.0040		112	L	2006
	Diesel Oil - Mobile combustion (exc. trains)	EF_diesel oil - mobile combustion (exc. Trains)	GHG	4AR	t / TJ	74.1000	0.0039	0.0039		0	L	2006
	Diesel Oil - Trains combustion	EF_diesel oil - Trains combustion	GHG	4AR	t / TJ	74.1000	0.0042	0.0029		0	L	2006
	Electricity generation within Buenos Aires city supplied to the grid	EF_electricity generation Buenos Aires city	GHG	4AR	t / MWh	0.5520	0.0000	0.0000		0	H	2013
	Motor gasoline (petrol)	EF_Motor gasoline (petrol)	GHG	4AR	t / TJ	69.3000	0.0025	0.0008		0	L	2006
	Gas distribution	EF_NG_distribution	GHG	4AR	t / m3	0.0000	0.0000	NA		0	L	2006
	Compressed Natural Gas	EF_CNG	GHG	4AR	t / TJ	56.1000	0.0920	0.0030		0	L	2006
	Fuel Oil	EF_FO	GHG	4AR	t / TJ	77.4000	0.0030	0.0006		0	L	2006
	Biodiesel	EF_biodiesel	GHG	4AR	t / TJ	0.0000	0.0039	0.0039		74.1	L	2006

1. Define emission factor and create reference

Using CIRIS



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	Compressed Natural Gas	EF_CNG	GHG	4AR	t / TJ	56.1000	0.0920	0.0030		0	L	2006
	Fuel Oil	EF_FO	GHG	4AR	t / TJ	77.4000	0.0030	0.0006		0	L	2006
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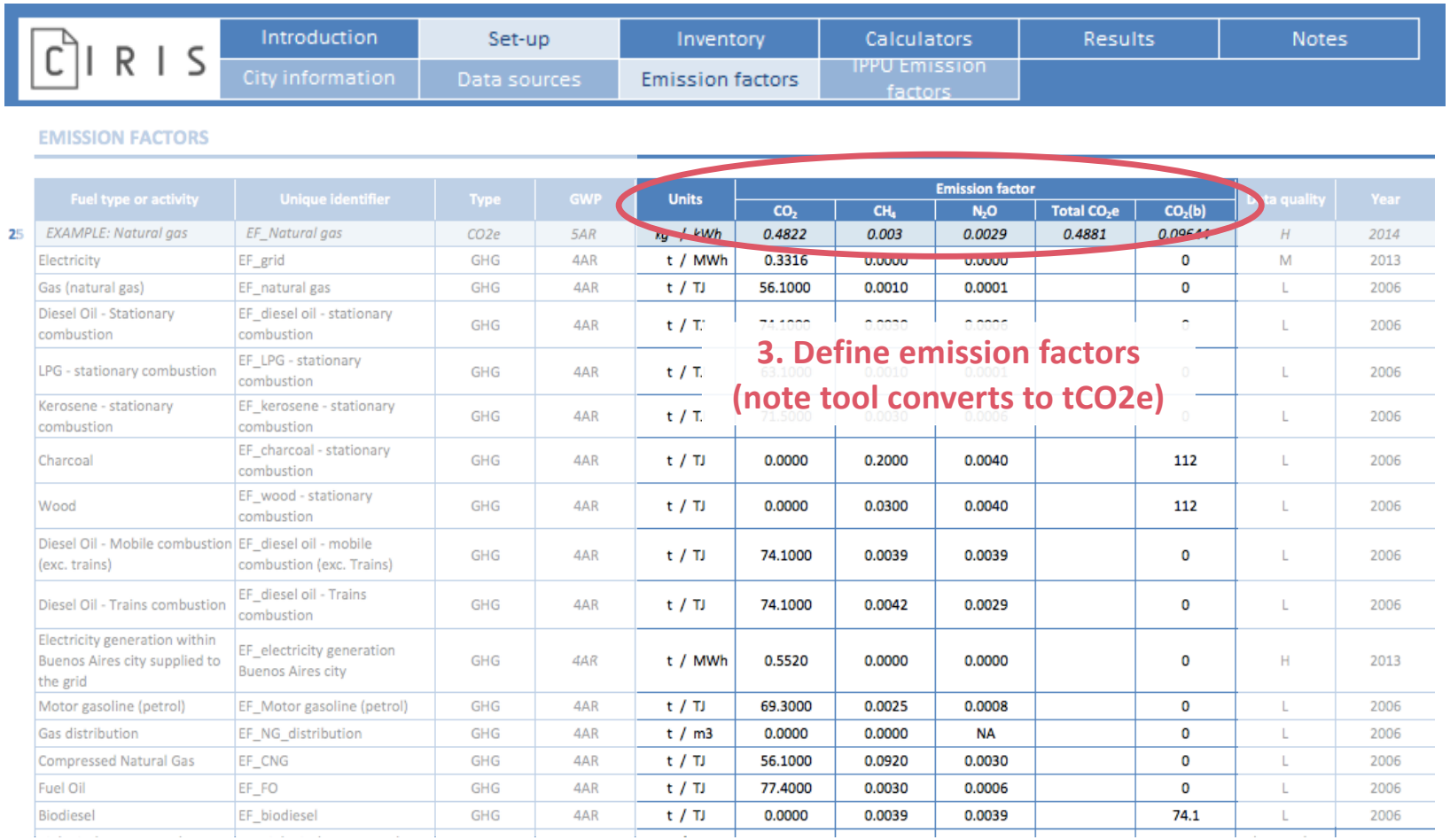
Using CIRIS



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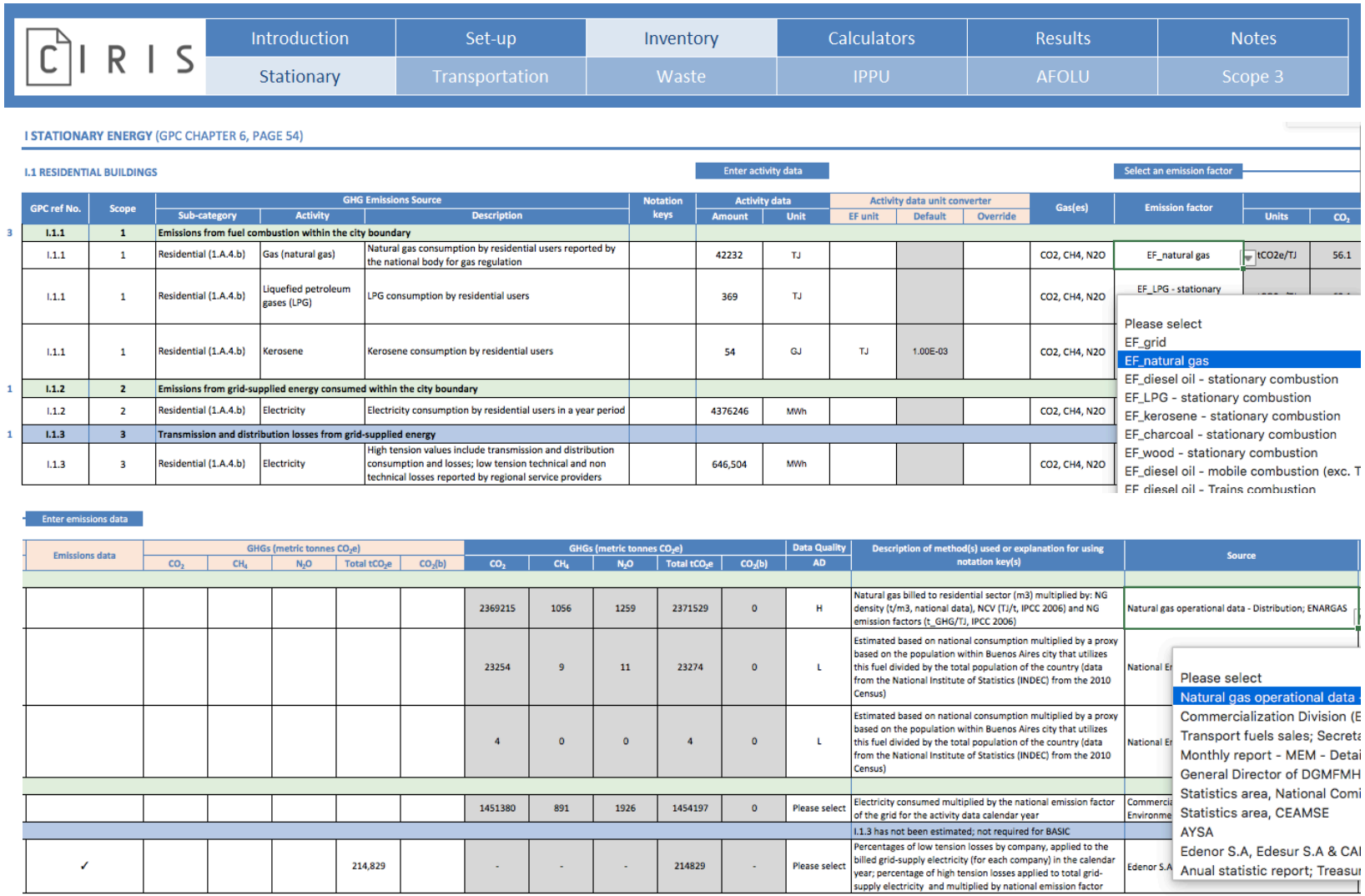
25	*EXAMPLE: Natural gas*	*EF_Natural gas*	*CO2e*	*5AR*	*kg / kWh*	*0.4822*	*0.003*	*0.0029*	*0.4881*	*0.09544*	*H*	*2014*
	Electricity	EF_grid	GHG	4AR	t / MWh	0.3316	0.0000	0.0000		0	M	2013
	Gas (natural gas)	EF_natural gas	GHG	4AR	t / TJ	56.1000	0.0010	0.0001		0	L	2006
	Diesel Oil - Stationary combustion	EF_diesel oil - stationary combustion	GHG	4AR	t / TJ	74.1000	0.0039	0.0039		0	L	2006
	LPG - stationary combustion	EF_LPG - stationary combustion	GHG	4AR	t / TJ	63.1000	0.0010	0.0001		0	L	2006
	Kerosene - stationary combustion	EF_kerosene - stationary combustion	GHG	4AR	t / TJ	71.9000	0.0030	0.0006		0	L	2006
	Charcoal	EF_charcoal - stationary combustion	GHG	4AR	t / TJ	0.0000	0.2000	0.0040		112	L	2006
	Wood	EF_wood - stationary combustion	GHG	4AR	t / TJ	0.0000	0.0300	0.0040		112	L	2006
	Diesel Oil - Mobile combustion (exc. trains)	EF_diesel oil - mobile combustion (exc. Trains)	GHG	4AR	t / TJ	74.1000	0.0039	0.0039		0	L	2006
	Diesel Oil - Trains combustion	EF_diesel oil - Trains combustion	GHG	4AR	t / TJ	74.1000	0.0042	0.0029		0	L	2006
	Electricity generation within Buenos Aires city supplied to the grid	EF_electricity generation Buenos Aires city	GHG	4AR	t / MWh	0.5520	0.0000	0.0000		0	H	2013
	Motor gasoline (petrol)	EF_Motor gasoline (petrol)	GHG	4AR	t / TJ	69.3000	0.0025	0.0008		0	L	2006
	Gas distribution	EF_NG_distribution	GHG	4AR	t / m3	0.0000	0.0000	NA		0	L	2006
	Compressed Natural Gas	EF_CNG	GHG	4AR	t / TJ	56.1000	0.0920	0.0030		0	L	2006
	Fuel Oil	EF_FO	GHG	4AR	t / TJ	77.4000	0.0030	0.0006		0	L	2006
	Biodiesel	EF_biodiesel	GHG	4AR	t / TJ	0.0000	0.0039	0.0039		74.1	L	2006

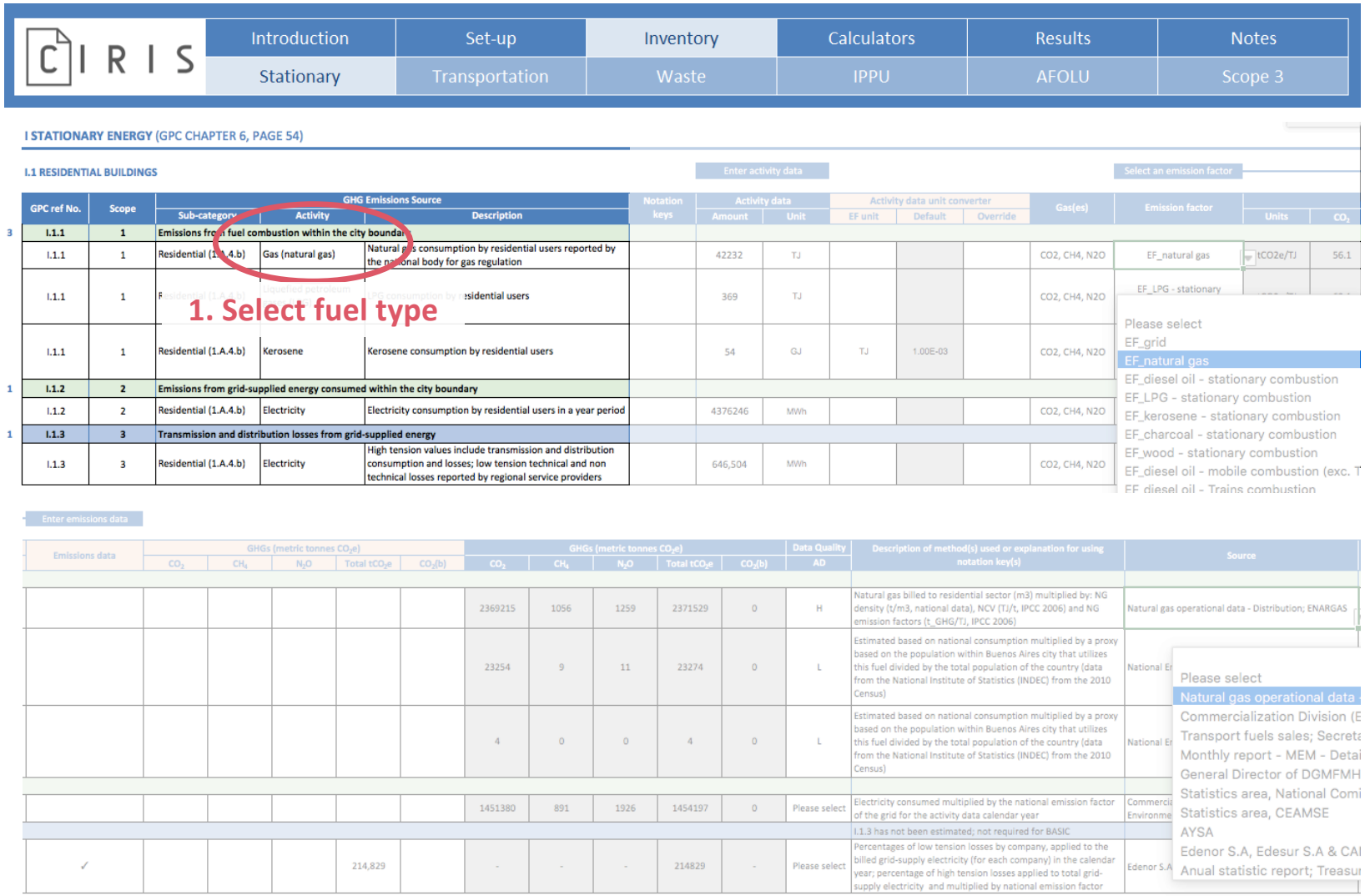
Using CIRIS



GPC ref No.	Scope	GHG Emissions Source: Sub-category	Activity	Description	Notation keys	Activity data: Amount	Unit	Activity data unit converter: EF unit	Default	Override	Gas(es)	Emission factor	Units	CO_2
I.1.1	1	Emissions from fuel combustion within the city boundary												
I.1.1	1	Residential (1.A.4.b)	Gas (natural gas)	Natural gas consumption by residential users reported by the national body for gas regulation		42232	TJ				CO2, CH4, N2O	EF_natural gas	tCO2e/TJ	56.1
I.1.1	1	Residential (1.A.4.b)	Liquefied petroleum gases (LPG)	LPG consumption by residential users		369	TJ				CO2, CH4, N2O	EF_LPG - stationary		
I.1.1	1	Residential (1.A.4.b)	Kerosene	Kerosene consumption by residential users		54	GJ	TJ	1.00E-03		CO2, CH4, N2O			
I.1.2	2	Emissions from grid-supplied energy consumed within the city boundary												
I.1.2	2	Residential (1.A.4.b)	Electricity	Electricity consumption by residential users in a year period		4376246	MWh				CO2, CH4, N2O			
I.1.3	3	Transmission and distribution losses from grid-supplied energy												
I.1.3	3	Residential (1.A.4.b)	Electricity	High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers		646,504	MWh				CO2, CH4, N2O			

Emissions data	GHGs (metric tonnes CO_2e): CO_2	CH_4	N_2O	Total tCO_2e	$CO_2(b)$	GHGs (metric tonnes CO_2e): CO_2	CH_4	N_2O	Total tCO_2e	$CO_2(b)$	Data Quality: AD	Description of method(s) used or explanation for using notation key(s)	Source
						2369215	1056	1259	2371529	0	H	Natural gas billed to residential sector (m3) multiplied by: NG density (t/m3, national data), NCV (TJ/t, IPCC 2006) and NG emission factors (t_GHG/TJ, IPCC 2006)	Natural gas operational data - Distribution; ENARGAS
						23254	9	11	23274	0	L	Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)	National Er
						4	0	0	4	0	L	Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)	National Er
						1451380	891	1926	1454197	0	Please select	Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year	Commercia Environme
												I.1.3 has not been estimated; not required for BASIC	
✓				214,829		-	-	-	214829	-	Please select	Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor	Edenor S.A

Using CIRIS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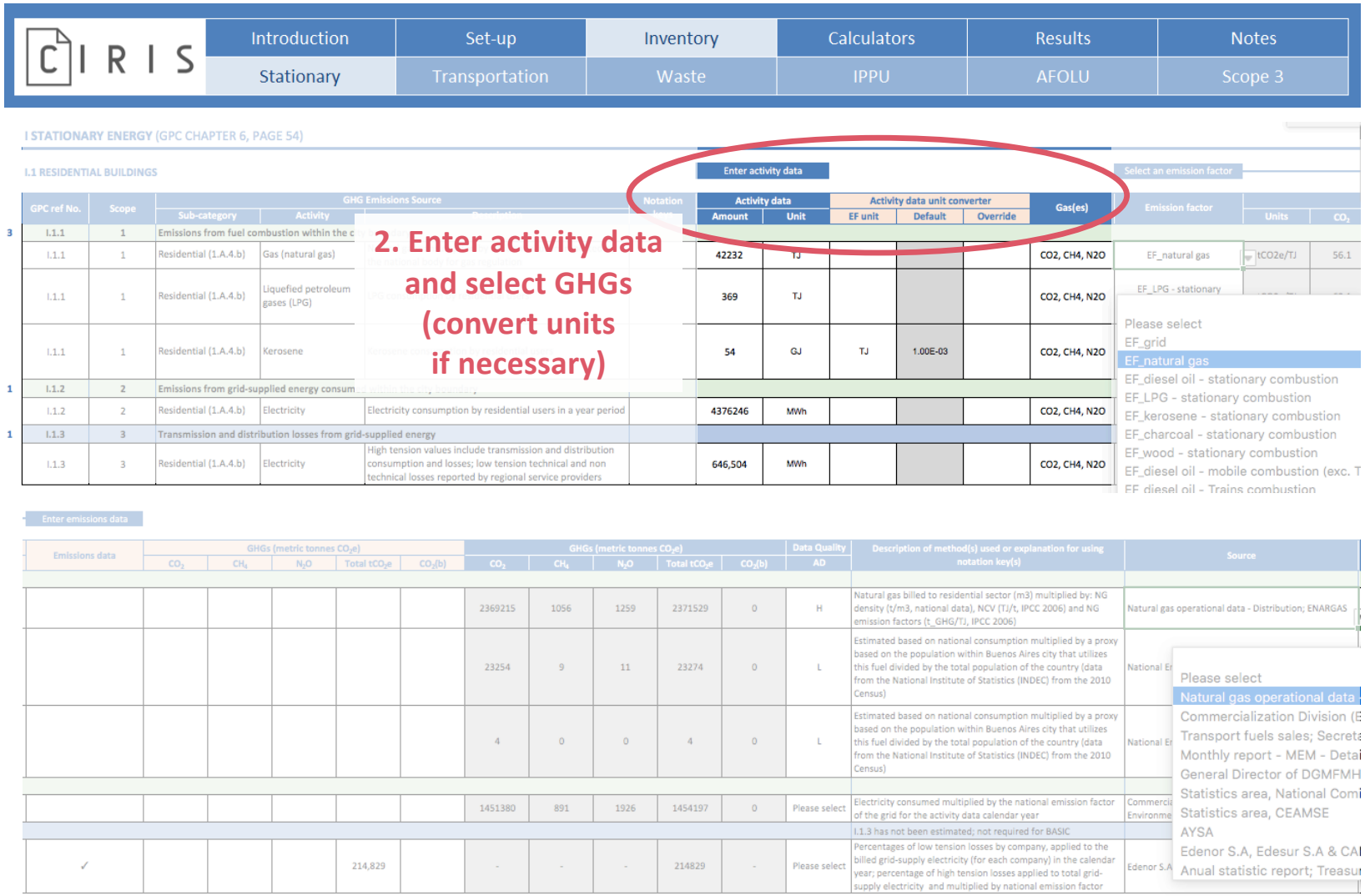
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
I.1.1 1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gas consumption by residential users 369 TJ CO2, CH4, N2O EF_LPG - stationary
1. Select fuel type
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ TJ 1.00E-03 CO2, CH4, N2O
I.1.2 2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
I.1.3 3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc.
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056 1259 2371529 0 H Natural gas billed to residential sector (m3) multiplied by: NG density (t/m3, national data), NCV (TJ/t, IPCC 2006) and NG emission factors (t_GHG/TJ, IPCC 2006) Natural gas operational data - Distribution; ENARGAS
23254 9 11 23274 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
4 0 0 4 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
1451380 891 1926 1454197 0 Please select Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
I.1.3 has not been estimated; not required for BASIC
✓ 214,829 - - - 214829 - Please select Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor Edenor S.A
Please select
Natural gas operational data
Commercialization Division (E
Transport fuels sales; Secreta
Monthly report - MEM - Detai
General Director of DGMFMH
Statistics area, National Comi
Statistics area, CEAMSE
AYSA
Edenor S.A, Edesur S.A & CAI
Anual statistic report; Treasu

Using CIRIS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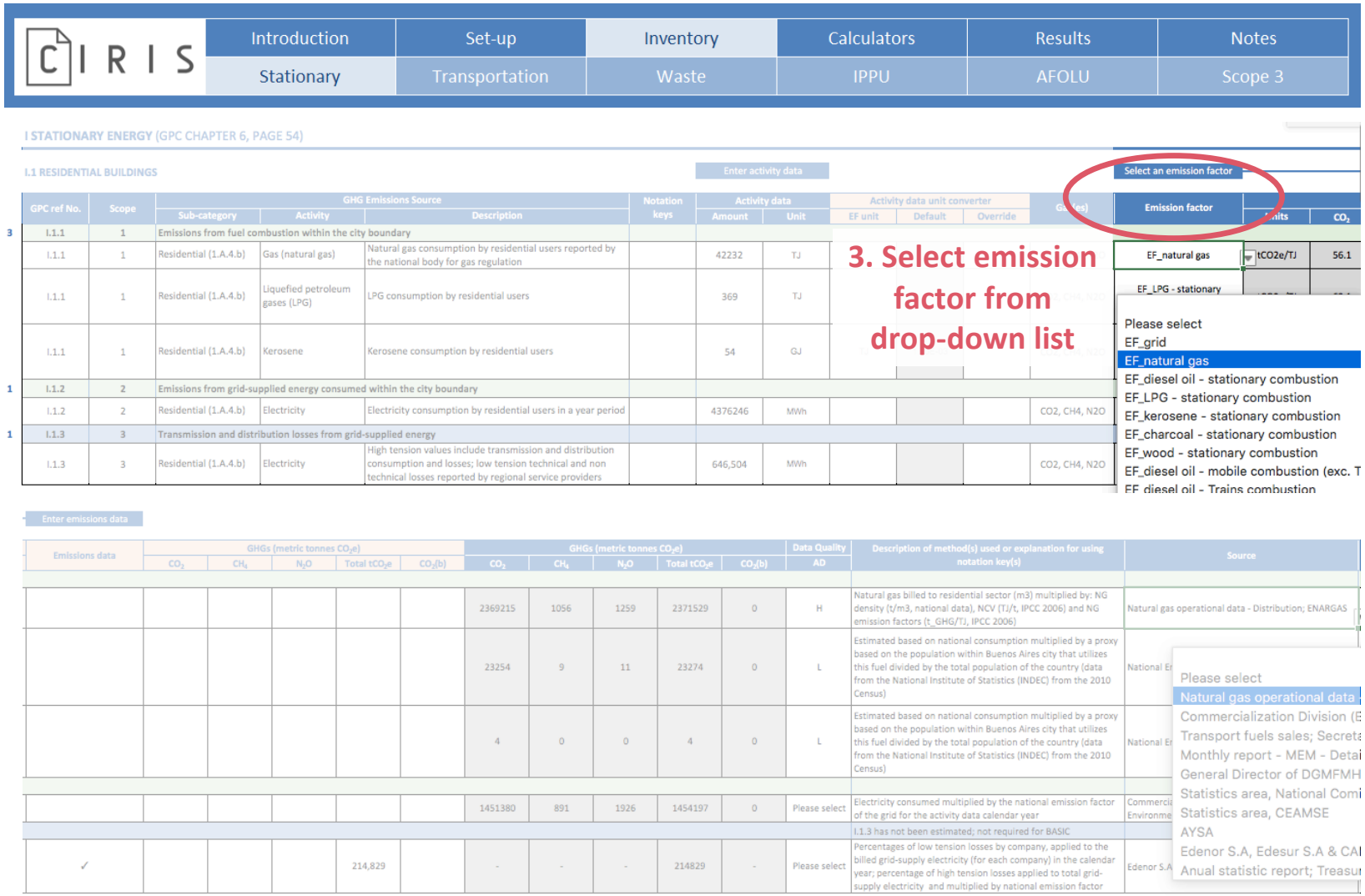
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
2. Enter activity data and select GHGs (convert units if necessary)
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Please select
Natural gas operational data
Commercialization Division (E
Transport fuels sales; Secreta
Monthly report - MEM - Detai
General Director of DGMFMH
Statistics area, National Comi
Statistics area, CEAMSE
AYSA
Edenor S.A, Edesur S.A & CAI
Anual statistic report; Treasu

Using CIRIS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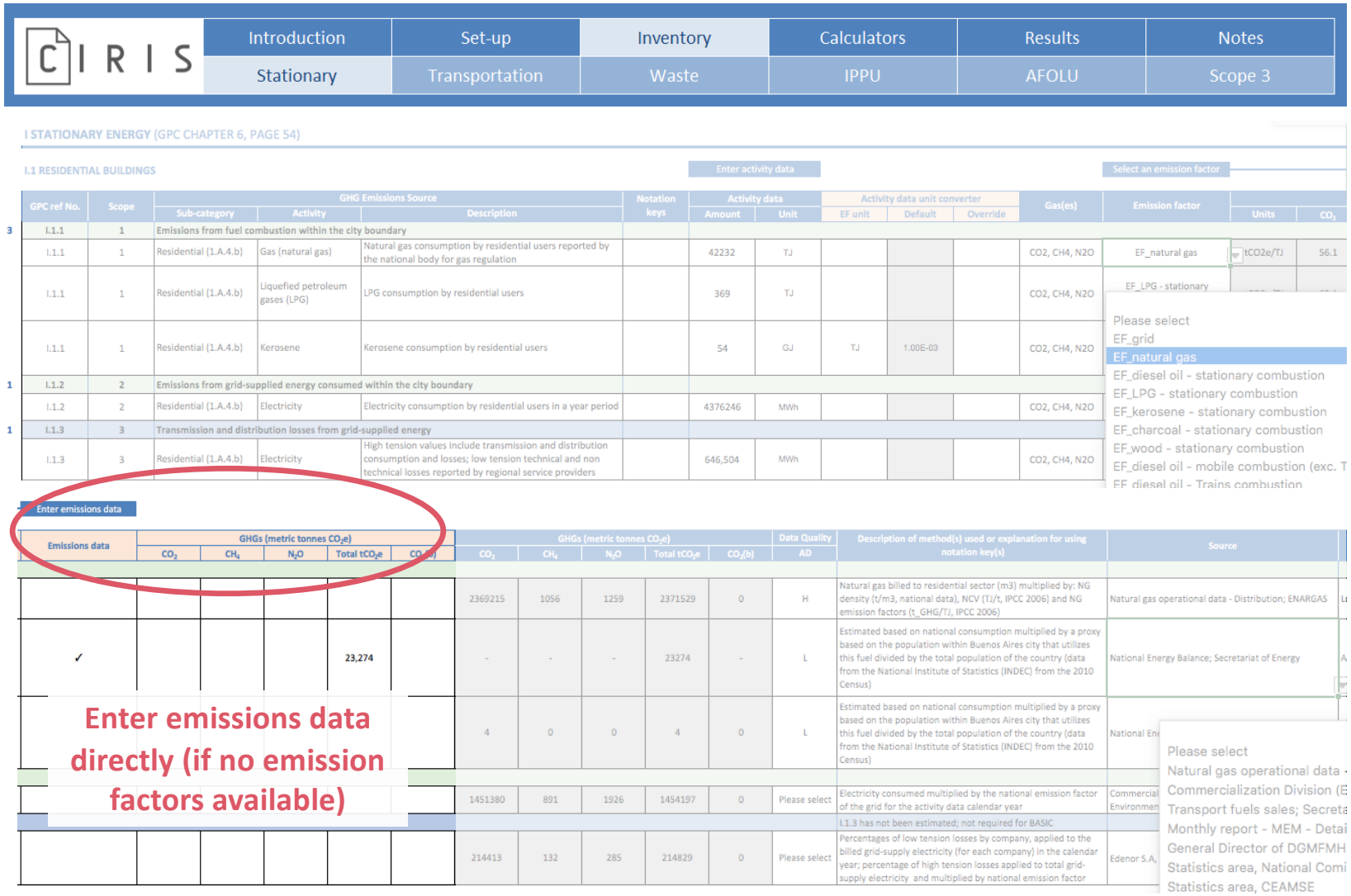
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
CO2
I.1.1 1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ
EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ
EF_LPG - stationary
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ
3. Select emission factor from drop-down list
I.1.2 2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
I.1.3 3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056 1259 2371529 0 H Natural gas billed to residential sector (m3) multiplied by: NG density (t/m3, national data), NCV (TJ/t, IPCC 2006) and NG emission factors (t_GHG/TJ, IPCC 2006) Natural gas operational data - Distribution; ENARGAS
23254 9 11 23274 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
4 0 0 4 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
1451380 891 1926 1454197 0 Please select Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
I.1.3 has not been estimated; not required for BASIC
✓ 214,829 - - - 214829 - Please select Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor
Please select
Natural gas operational data
Commercialization Division (E
Transport fuels sales; Secreta
Monthly report - MEM - Detai
General Director of DGMFMH
Statistics area, National Comi
Statistics area, CEAMSE
AYSA
Edenor S.A, Edesur S.A & CAI
Anual statistic report; Treasu

Using CIRIS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I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
I.1.1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ CO2, CH4, N2O EF_LPG - stationary
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ TJ 1.00E-03 CO2, CH4, N2O
I.1.2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
I.1.3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056 1259 2371529 0 H Natural gas billed to residential sector (m3) multiplied by: NG density (t/m3, national data), NCV (TJ/t, IPCC 2006) and NG emission factors (t_GHG/TJ, IPCC 2006) Natural gas operational data - Distribution; ENARGAS
✓ 23,274 - - - 23274 - L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census) National Energy Balance; Secretariat of Energy
4 0 0 4 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
Enter emissions data directly (if no emission factors available)
1451380 891 1926 1454197 0 Please select Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
I.1.3 has not been estimated; not required for BASIC
214413 132 285 214829 0 Please select Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor Edenor S.A,
Please select
Natural gas operational data -
Commercialization Division (E
Transport fuels sales; Secreta
Monthly report - MEM - Detai
General Director of DGMFMH
Statistics area, National Comi
Statistics area, CEAMSE

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I.1 RESIDENTIAL BUILDINGS

Enter activity data | Select an emission factor

	GPC ref No.	Scope	GHG Emissions Source: Sub-category	Activity	Description	Notation keys	Activity data: Amount	Unit	Activity data unit converter: EF unit	Default	Override	Gas(es)	Emission factor	Units	CO_2
3	I.1.1	1	Emissions from fuel combustion within the city boundary												
	I.1.1	1	Residential (1.A.4.b)	Gas (natural gas)	Natural gas consumption by residential users reported by the national body for gas regulation		42232	TJ				CO2, CH4, N2O	EF_natural gas	tCO2e/TJ	56.1
	I.1.1	1	Residential (1.A.4.b)	Liquefied petroleum gases (LPG)	LPG consumption by residential users		369	TJ				CO2, CH4, N2O	EF_LPG - stationary		
	I.1.1	1	Residential (1.A.4.b)	Kerosene	Kerosene consumption by residential users		54	GJ	TJ	1.00E-03		CO2, CH4, N2O			
1	I.1.2	2	Emissions from grid-supplied energy consumed within the city boundary												
	I.1.2	2	Residential (1.A.4.b)	Electricity	Electricity consumption by residential users in a year period		4376246	MWh				CO2, CH4, N2O			
1	I.1.3	3	Transmission and distribution losses from grid-supplied energy												
	I.1.3	3	Residential (1.A.4.b)	Electricity	High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers		646,504	MWh				CO2, CH4, N2O			

Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion

Enter emissions data

Emissions data	GHGs (metric tonnes CO_2e): CO_2	CH_4	N_2O	Total tCO_2e	$CO_2(b)$	GHGs (metric tonnes CO_2e): CO_2	CH_4	N_2O	Total tCO_2e	$CO_2(b)$	Data Quality AD	Description of method(s) used or explanation for using notation key(s)	Source
						2369215	1056	1259	2371529	0			ural gas operational data - Distribution; ENARGAS
✓				23,274		-	-	-	23274	-			onal Energy Balance; Secretariat of Energy
						4	0	0	4	0			onal Energy Balance; Secretariat of Energy
						1451380	891	1926	1454197	0	Please sele	ivity data calendar year	mercialization Division (Edenor S.A) and Environment Division (Edesur S.A)
												I.1.3 has not been estimated; not required for BASIC	
						214413	132	285	214829	0	Please select	Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor	Edenor S.A, Edesur S.A & CAMMESA Annual reports

Delete Cells

Emissions data automatically calculated if emission factor selected, or equal to manual entry

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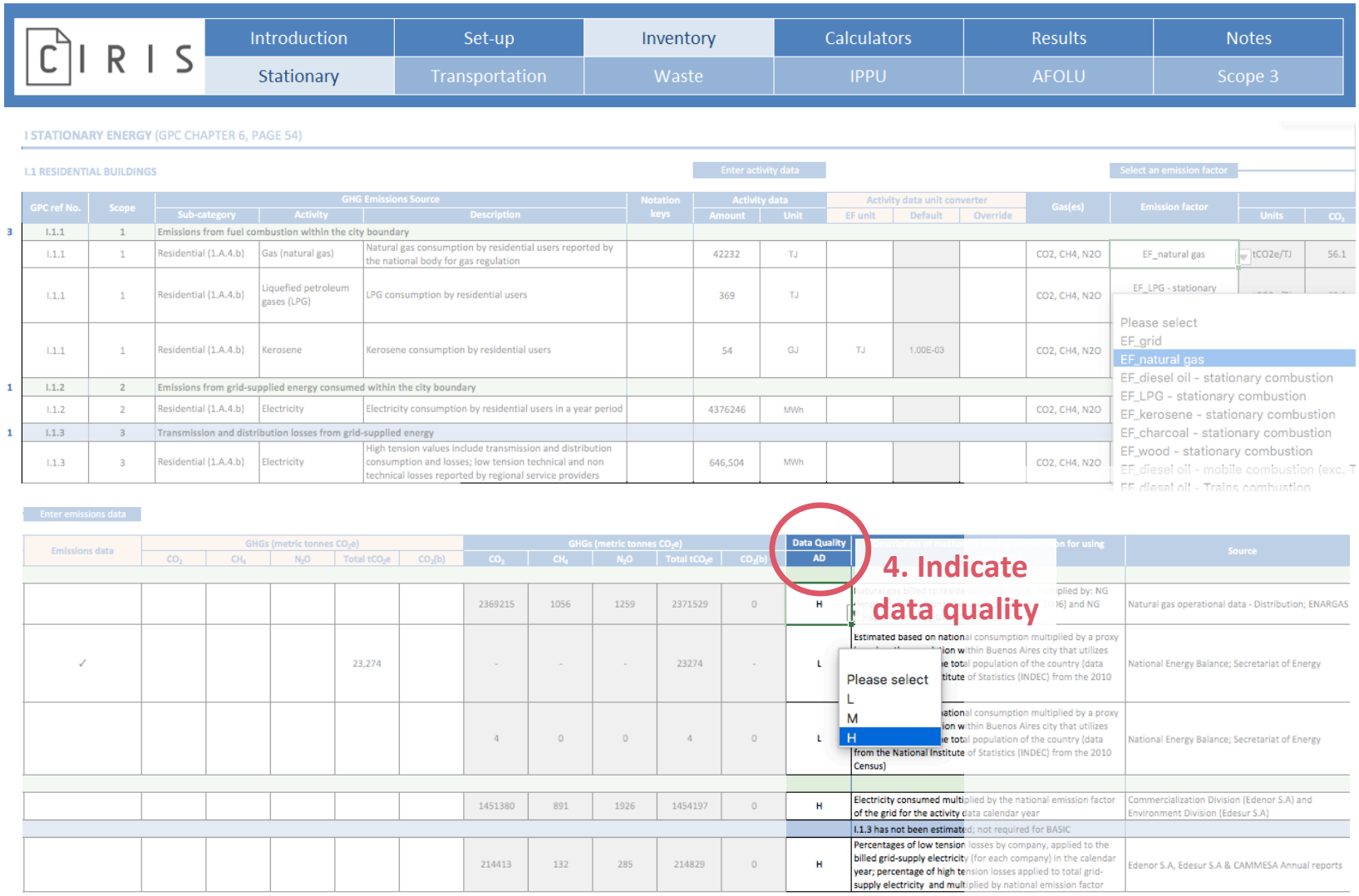
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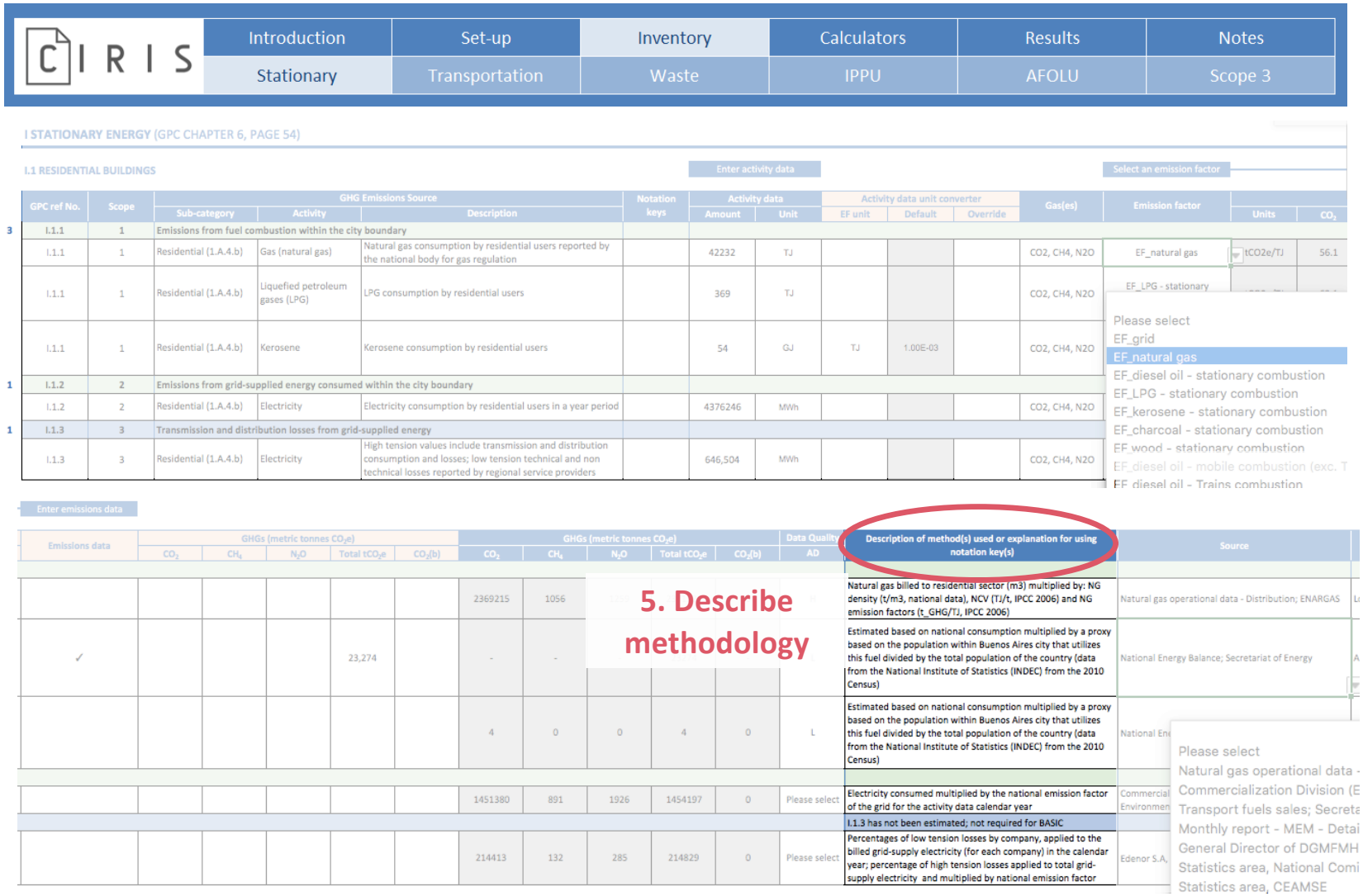
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
I.1.1 1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ CO2, CH4, N2O EF_LPG - stationary
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ TJ 1.00E-03 CO2, CH4, N2O
1 I.1.2 2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
1 I.1.3 3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Source
2369215 1056 1259 2371529 0 H
Natural gas operational data - Distribution; ENARGAS
✓ 23,274 - - - 23274 - L
Estimated based on national consumption multiplied by a proxy
Please select
L
M
H
National Energy Balance; Secretariat of Energy
4 0 0 4 0 L
National Energy Balance; Secretariat of Energy
1451380 891 1926 1454197 0 H
Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
Commercialization Division (Edenor S.A) and Environment Division (Edesur S.A)
I.1.3 has not been estimated; not required for BASIC
214413 132 285 214829 0 H
Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor
Edenor S.A, Edesur S.A & CAMMESA Annual reports
4. Indicate data quality

Using CIRIS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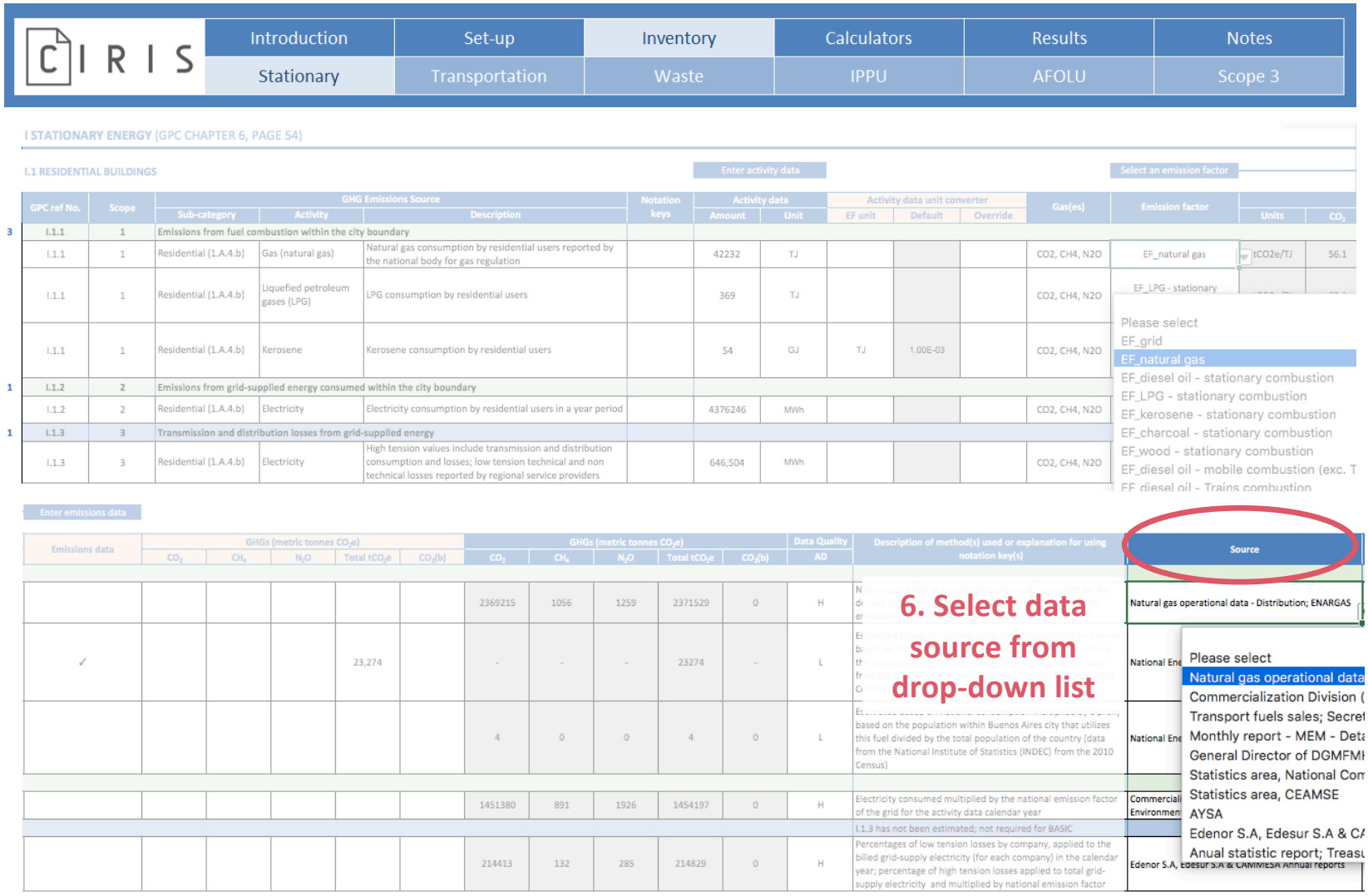
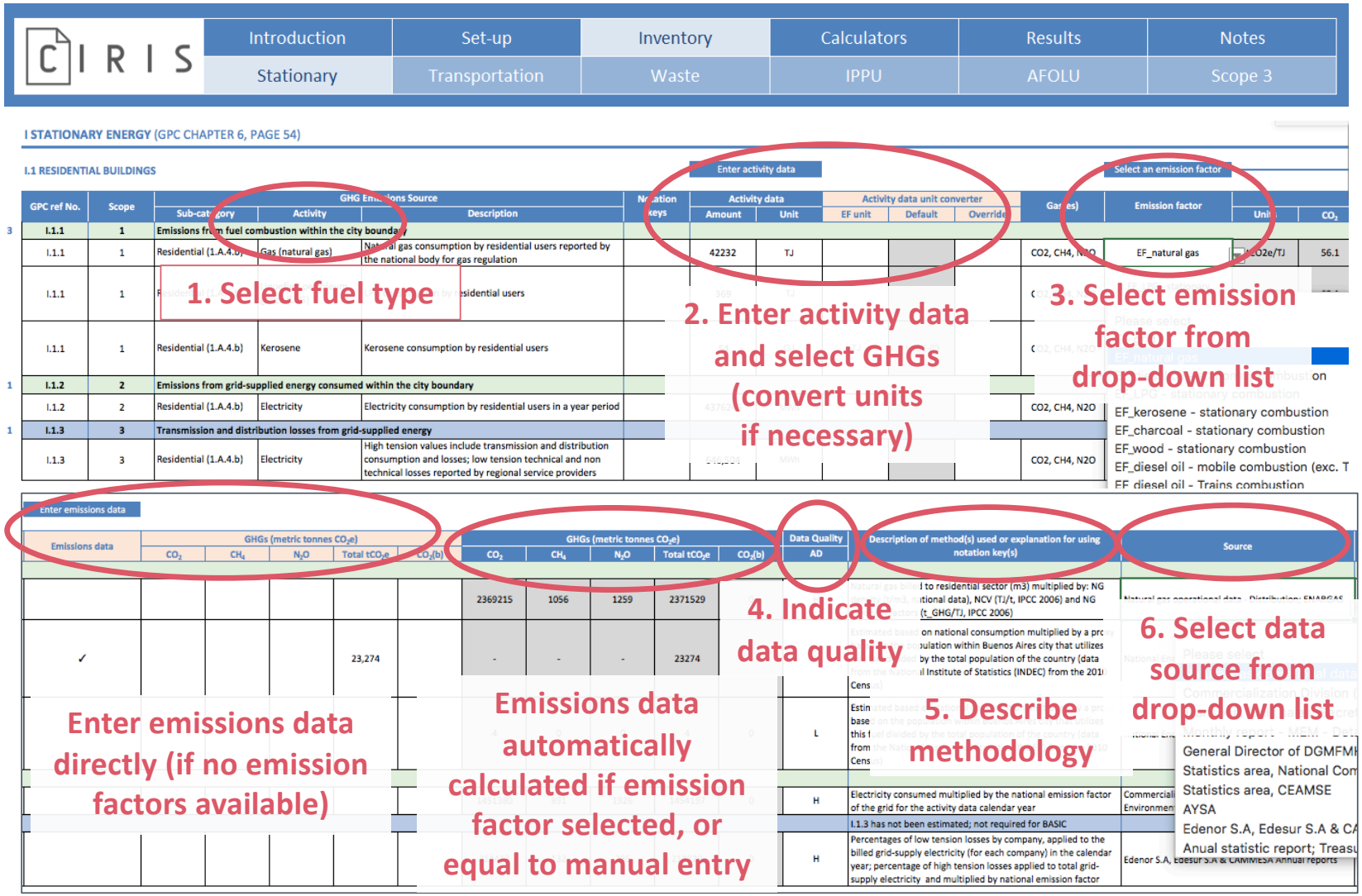
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
I.1.1 1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ CO2, CH4, N2O EF_LPG - stationary
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ TJ 1.00E-03 CO2, CH4, N2O
I.1.2 2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
I.1.3 3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056
Natural gas billed to residential sector (m3) multiplied by: NG density (t/m3, national data), NCV (TJ/t, IPCC 2006) and NG emission factors (t_GHG/TJ, IPCC 2006)
Natural gas operational data - Distribution; ENARGAS
5. Describe methodology
✓ 23,274 - -
Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
National Energy Balance; Secretariat of Energy
4 0 0 4 0 L
Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
1451380 891 1926 1454197 0 Please select
Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
Commercial Environmen
I.1.3 has not been estimated; not required for BASIC
214413 132 285 214829 0 Please select
Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor
Edenor S.A,
Please select
Natural gas operational data -
Commercialization Division (E
Transport fuels sales; Secreta
Monthly report - MEM - Detai
General Director of DGMFMH
Statistics area, National Comi
Statistics area, CEAMSE

Using CIRIS


CIRIS
Introduction
Set-up
Inventory
Calculators
Results
Notes
Stationary
Transportation
Waste
IPPU
AFOLU
Scope 3
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
CO2
I.1.1 1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ CO2, CH4, N2O EF_LPG - stationary
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users 54 GJ TJ 1.00E-03 CO2, CH4, N2O
I.1.2 2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period 4376246 MWh CO2, CH4, N2O
I.1.3 3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers 646,504 MWh CO2, CH4, N2O
Please select
EF_grid
EF_natural gas
EF_diesel oil - stationary combustion
EF_LPG - stationary combustion
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056 1259 2371529 0 H
Natural gas operational data - Distribution; ENARGAS
✓ 23,274 - - - 23274 - L
4 0 0 4 0 L
based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census)
1451380 891 1926 1454197 0 H
Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
I.1.3 has not been estimated; not required for BASIC
214413 132 285 214829 0 H
Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor
6. Select data source from drop-down list
Please select
Natural gas operational data
Commercialization Division (
Transport fuels sales; Secret
Monthly report - MEM - Deta
General Director of DGMFMI
Statistics area, National Com
Statistics area, CEAMSE
AYSA
Edenor S.A, Edesur S.A & CA
Anual statistic report; Treasu

Using CIRIS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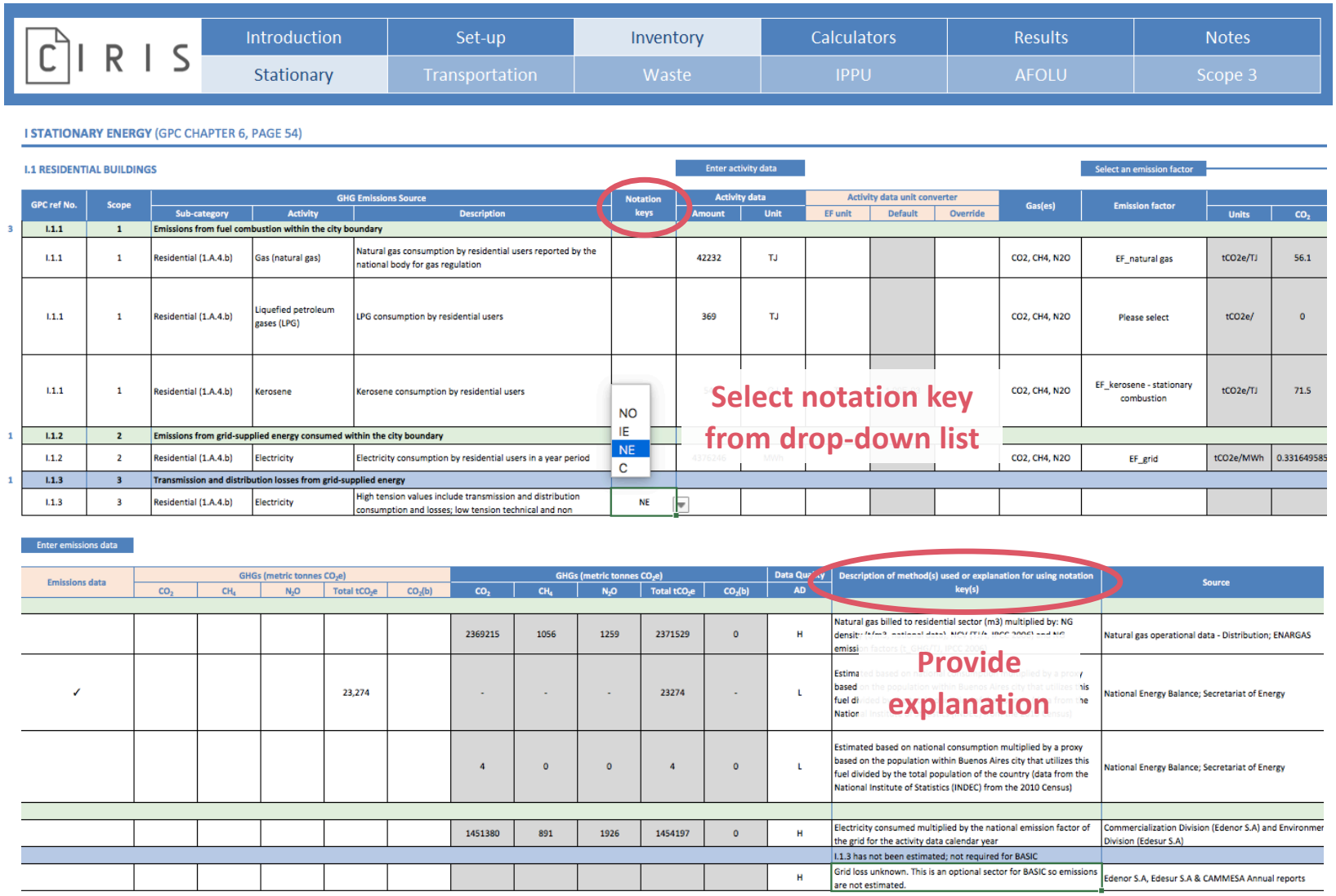
Scope 3
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gases)
Emission factor
Unit
CO2
I.1.1
1
Emissions from fuel combustion within the city boundary
Residential (1.A.4.b)
Gas (natural gas)
Natural gas consumption by residential users reported by the national body for gas regulation
42232
TJ
CO2, CH4, N2O
EF_natural gas
kgCO2e/TJ
56.1
Residential (1.A.4.b)
Kerosene
Kerosene consumption by residential users
I.1.2
2
Emissions from grid-supplied energy consumed within the city boundary
Residential (1.A.4.b)
Electricity
Electricity consumption by residential users in a year period
CO2, CH4, N2O
I.1.3
3
Transmission and distribution losses from grid-supplied energy
Residential (1.A.4.b)
Electricity
High tension values include transmission and distribution consumption and losses; low tension technical and non technical losses reported by regional service providers
CO2, CH4, N2O
1. Select fuel type
2. Enter activity data and select GHGs (convert units if necessary)
3. Select emission factor from drop-down list
EF_kerosene - stationary combustion
EF_charcoal - stationary combustion
EF_wood - stationary combustion
EF_diesel oil - mobile combustion (exc. T
EF_diesel oil - Trains combustion
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215
1056
1259
2371529
23,274
4. Indicate data quality
5. Describe methodology
6. Select data source from drop-down list
Enter emissions data directly (if no emission factors available)
Emissions data automatically calculated if emission factor selected, or equal to manual entry
Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year
I.1.3 has not been estimated; not required for BASIC
Percentages of low tension losses by company, applied to the billed grid-supply electricity (for each company) in the calendar year; percentage of high tension losses applied to total grid-supply electricity and multiplied by national emission factor
General Director of DGMFM
Statistics area, National Com
Statistics area, CEAMSE
AYSA
Edenor S.A, Edesur S.A & CA
Anual statistic report; Treasu

Using CIRIS


CIRIS
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Stationary
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Waste
IPPU
AFOLU
Scope 3
I STATIONARY ENERGY (GPC CHAPTER 6, PAGE 54)
I.1 RESIDENTIAL BUILDINGS
Enter activity data
Select an emission factor
GPC ref No.
Scope
GHG Emissions Source
Sub-category
Activity
Description
Notation keys
Activity data
Amount
Unit
Activity data unit converter
EF unit
Default
Override
Gas(es)
Emission factor
Units
CO2
I.1.1 Emissions from fuel combustion within the city boundary
I.1.1 1 Residential (1.A.4.b) Gas (natural gas) Natural gas consumption by residential users reported by the national body for gas regulation 42232 TJ CO2, CH4, N2O EF_natural gas tCO2e/TJ 56.1
I.1.1 1 Residential (1.A.4.b) Liquefied petroleum gases (LPG) LPG consumption by residential users 369 TJ CO2, CH4, N2O Please select tCO2e/ 0
I.1.1 1 Residential (1.A.4.b) Kerosene Kerosene consumption by residential users CO2, CH4, N2O EF_kerosene - stationary combustion tCO2e/TJ 71.5
I.1.2 Emissions from grid-supplied energy consumed within the city boundary
I.1.2 2 Residential (1.A.4.b) Electricity Electricity consumption by residential users in a year period CO2, CH4, N2O EF_grid tCO2e/MWh 0.331649585
I.1.3 Transmission and distribution losses from grid-supplied energy
I.1.3 3 Residential (1.A.4.b) Electricity High tension values include transmission and distribution consumption and losses; low tension technical and non NE
NO
IE
NE
C
Select notation key from drop-down list
Enter emissions data
Emissions data
GHGs (metric tonnes CO2e)
CO2
CH4
N2O
Total tCO2e
CO2(b)
Data Quality
AD
Description of method(s) used or explanation for using notation key(s)
Source
2369215 1056 1259 2371529 0 H Natural gas billed to residential sector (m3) multiplied by: NG Natural gas operational data - Distribution; ENARGAS
✓ 23,274 - - - 23274 - L National Energy Balance; Secretariat of Energy
Provide explanation
4 0 0 4 0 L Estimated based on national consumption multiplied by a proxy based on the population within Buenos Aires city that utilizes this fuel divided by the total population of the country (data from the National Institute of Statistics (INDEC) from the 2010 Census) National Energy Balance; Secretariat of Energy
1451380 891 1926 1454197 0 H Electricity consumed multiplied by the national emission factor of the grid for the activity data calendar year Commercialization Division (Edenor S.A) and Environmer Division (Edesur S.A)
I.1.3 has not been estimated; not required for BASIC
H Grid loss unknown. This is an optional sector for BASIC so emissions are not estimated. Edenor S.A, Edesur S.A & CAMMESA Annual reports

Using CIRIS

OVERVIEW (GPC CHAPTER 4.4, TABLE 4.2, PAGE 41)

NAME OF CITY: Rio de Janeiro, Brazil
LEVEL: BASIC+
INVENTORY YEAR: 2017

POPULATION: 6,520,266
LAND AREA (km2): 1,204
GDP (US$ million): 98,338

GHG Emissions Source (By Sector)		Total GHGs (metric tonnes CO2e)					
		Scope 1	Scope 2	Scope 3	BASIC	BASIC+	BASIC+ S3
STATIONARY ENERGY	Energy use (all emissions except I.4.4)	6,826,322	1,900,982	210,787	8,727,304	8,938,092	8,938,092
	Energy generation supplied to the grid (I.4.4)	4,159,685					
TRANSPORTATION	(all II emissions)	6,019,406	33,346	1,319,210	6,052,752	7,371,963	7,371,963
WASTE	Waste generated in the city (III.X.1 and III.X.2)	905,439		2,339,735	3,245,174	3,245,174	3,245,174
	Waste generated outside city (III.X.3)						
IPPU	(all IV emissions)	2,692,440				2,692,440	2,692,440
AFOLU	(all V emissions)	20,821				20,821	20,821
OTHER SCOPE 3	(all VI emissions)						
TOTAL		**20,624,114**	1,934,328	3,869,733	**18,025,230**	**22,268,490**	**22,268,490**

Territorial (scope 1) total

BASIC total

BASIC + total

Using CIRIS

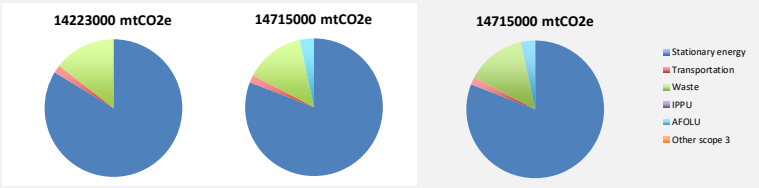
OVERVIEW (GPC CHAPTER 4.4, TABLE 4.2, PAGE 41)

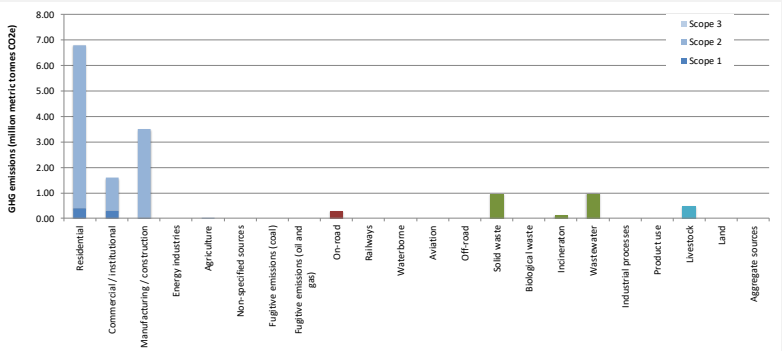
NAME OF CITY:	Hanoi, Viet Nam	**POPULATION:**	7,390,900
LEVEL:	BASIC	**LAND AREA (km2):**	3,329
INVENTORY YEAR:	2015	**GDP (US$ million):**	26,500

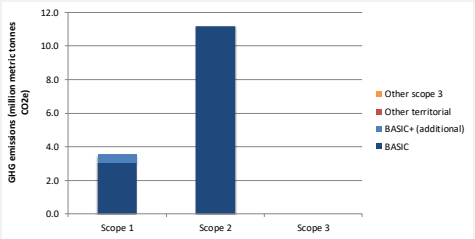
GHG Emissions Source (By Sector)		Total GHGs (metric tonnes CO2e)					
		Scope 1	Scope 2	Scope 3	BASIC	BASIC+	BASIC+ S3
STATIONARY ENERGY	Energy use (all emissions except I.4.4)	717,906	11,187,289		11,905,194	11,905,194	11,905,194
	Energy generation supplied to the grid (I.4.4)						
TRANSPORTATION	(all II emissions)	265,384			265,384	265,384	265,384
WASTE	Waste generated in the city (III.X.1 and III.X.2)	2,052,858			2,052,858	2,052,858	2,052,858
	Waste generated outside city (III.X.3)						
IPPU	(all IV emissions)						
AFOLU	(all V emissions)	492,042				492,042	492,042
OTHER SCOPE 3	(all VI emissions)						
TOTAL		3,528,190	11,187,289		14,223,437	14,715,479	14,715,479

GPC ref No.	GHG Emissions Source (By Sector and Sub-sector)	Total GHGs (metric tonnes CO_2e)			
		Scope 1	Scope 2	Scope 3	Total
I	STATIONARY ENERGY				
I.1	Residential buildings	407,780	6,387,844	NE	6,795,624
I.2	Commercial and institutional buildings and facilities	296,283	1,310,348	NE	1,606,631
I.3	Manufacturing industries and construction	11,053	3,489,097	NE	3,500,149
I.4.1/2/3	Energy industries			NE	
I.4.4	Energy generation supplied to the grid				
I.5	Agriculture, forestry and fishing activities	2,789	1	NE	2,790
I.6	Non-specified sources	NO	NO	NE	
I.7	Fugitive emissions from mining, processing, storage, and transportation of coal	NO			
I.8	Fugitive emissions from oil and natural gas systems	0			0
SUB-TOTAL	(city induced framework only)	**717,906**	**11,187,289**		**11,905,194**
II	TRANSPORTATION				
II.1	On-road transportation	265,384	IE	NE	265,384
II.2	Railways	IE	NO	NE	
II.3	Waterborne navigation	IE	NO	NE	
II.4	Aviation	IE	NO	NE	
II.5	Off-road transportation	IE	NO	NE	
SUB-TOTAL	(city induced framework only)	**265,384**			**265,384**
III	WASTE				
III.1.1/2	Solid waste generated in the city	953,736		IE	953,736
III.2.1/2	Biological waste generated in the city	NO		NO	
III.3.1/2	Incinerated and burned waste generated in the city	123,000		IE	123,000
III.4.1/2	Wastewater generated in the city	976,122		IE	976,122
III.1.3	Solid waste generated outside the city	NO			
III.2.3	Biological waste generated outside the city	NO			
III.3.3	Incinerated and burned waste generated outside city	NO			
III.4.3	Wastewater generated outside the city	NO			
SUB-TOTAL	(city induced framework only)	**2,052,858**			**2,052,858**
IV	INDUSTRIAL PROCESSES and PRODUCT USES				
IV.1	Emissions from industrial processes occurring in the city boundary	NE			
IV.2	Emissions from product use occurring within the city boundary	NE			
SUB-TOTAL	(city induced framework only)				
V	AGRICULTURE, FORESTRY and OTHER LAND USE				
V.1	Emissions from livestock	492,042			492,042
V.2	Emissions from land	NE			
V.3	Emissions from aggregate sources and non-CO2 emission sources on land	NE			
SUB-TOTAL	(city induced framework only)	**492,042**			**492,042**
VI	OTHER SCOPE 3				
VI.1	Other Scope 3			NE	
TOTAL	(city induced framework only)	**3,528,190**	**11,187,289**		**14,715,479**

GPC GHG Summary Graphs







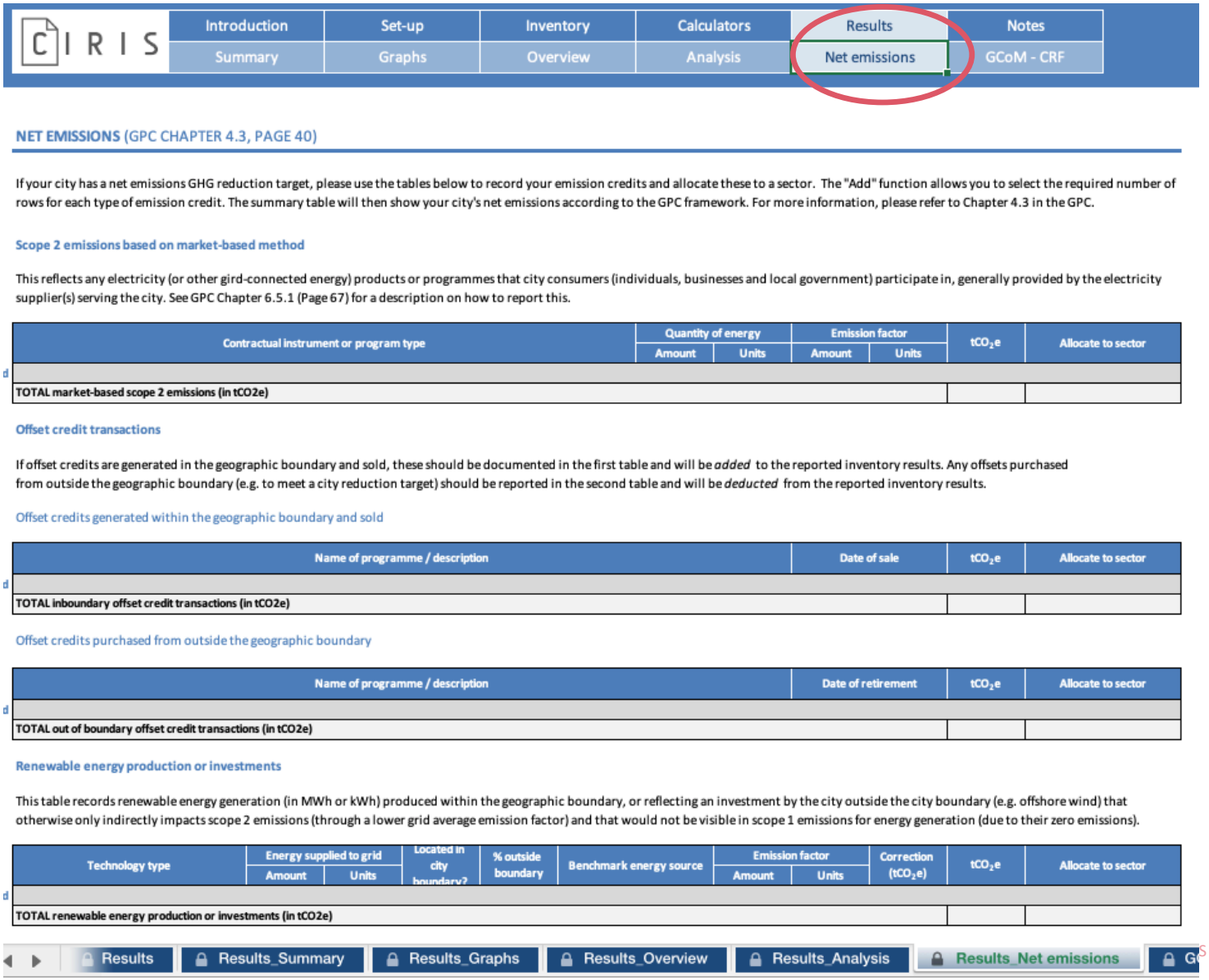
CRF

4.a. CRF Output Table

The Global Covenant of Mayors requires committed cities to report their inventories in the format of the new Common Reporting Framework (CRF).
Use the following table to report your emissions from CIRIS in the format of the CRF to the 'City-wide GHG Emissions' section of the CDP-ICLEI Unified Reporting System.

Sectors and Sub-Sectors	Direct Emissions (tCO2e)		Indirect emissions from the use of grid-supplied electricity, heat, steam and/or cooling		Emissions occurring outside the city boundary as a result of in-city activities		Please explain any excluded sources, identify any emissions covered under an ETS and provide any other comments
	Emissions in tCO2e	Notation key (if needed)	Emissions in tCO2e	Notation Key (if needed)	Emissions in tCO2e	Notation key (if needed)	
Stationary energy > Residential buildings	3,701,872		2,365,743		-	NE	
Stationary energy > Commercial buildings & facilities	-	NO	2,236,572		-	NE	
Stationary energy > Institutional buildings & facilities	-	NO	-	IE	-	NE	
Stationary energy > Industrial buildings & facilities	4,565,432		-	NO	-	NE	
Stationary energy > Agriculture	-	NO	-	NO	-	NE	
Stationary energy > Fugitive emissions	3,454					NE	
Total Stationary Energy	8,270,758		4,602,315		-	NE	
Transportation > On-road	-	NO	-	NO	-	NE	
Transportation > Rail	-	NO	-	NO	-	NE	
Transportation > Waterborne navigation	-	NO	-	NO	-	NE	
Transportation > Aviation	-	NO	-	NO	-	NE	
Transportation > Off-road	-	NO	-	NO	-	NE	
Total Transport	-	NO	-	NO	-	NE	
Waste > Solid waste disposal	-	NO			-	NO	
Waste > Biological treatment	-	NO			-	NO	
Waste > Incineration and open burning	-	NO			-	NO	
Waste > Wastewater	-	NO			-	NO	
Total Waste	-	NO			-	NO	
IPPU > Industrial process	-	NE				NE	
IPPU > Produce Use	-	NE				NE	
Total IPPU	-	NE			-	NE	
AFOLU > Livestock	-	NE				NE	
AFOLU > Land use	-	NE				NE	
AFOLU > Other AFOLU	-	NE				NE	
Total AFOLU	-	NE			-	NE	
Generation of grid-supplied energy > Electricity-only generation	904,546					NE	
Generation of grid-supplied energy > CHP generation	-	IE				NE	
Generation of grid-supplied energy > Heat/cold generation	-	NO				NE	
Generation of grid-supplied energy > Local renewable generation		NO				NE	
Total Generation of grid-supplied energy	904,546						
Total Emissions (excluding generation of grid-supplied energy)	8,270,758		4,602,315		-	NE	

Net emissions



CIRIS

Introduction | Set-up | Inventory | Calculators | Results | Notes

Summary | Graphs | Overview | Analysis | Net emissions | GCoM - CRF

NET EMISSIONS (GPC CHAPTER 4.3, PAGE 40)

If your city has a net emissions GHG reduction target, please use the tables below to record your emission credits and allocate these to a sector. The "Add" function allows you to select the required number of rows for each type of emission credit. The summary table will then show your city's net emissions according to the GPC framework. For more information, please refer to Chapter 4.3 in the GPC.

Scope 2 emissions based on market-based method

This reflects any electricity (or other gird-connected energy) products or programmes that city consumers (individuals, businesses and local government) participate in, generally provided by the electricity supplier(s) serving the city. See GPC Chapter 6.5.1 (Page 67) for a description on how to report this.

Contractual instrument or program type	Quantity of energy		Emission factor		tCO_2e	Allocate to sector
	Amount	Units	Amount	Units		
TOTAL market-based scope 2 emissions (in tCO2e)						

Offset credit transactions

If offset credits are generated in the geographic boundary and sold, these should be documented in the first table and will be *added* to the reported inventory results. Any offsets purchased from outside the geographic boundary (e.g. to meet a city reduction target) should be reported in the second table and will be *deducted* from the reported inventory results.

Offset credits generated within the geographic boundary and sold

Name of programme / description	Date of sale	tCO_2e	Allocate to sector
TOTAL inboundary offset credit transactions (in tCO2e)			

Offset credits purchased from outside the geographic boundary

Name of programme / description	Date of retirement	tCO_2e	Allocate to sector
TOTAL out of boundary offset credit transactions (in tCO2e)			

Renewable energy production or investments

This table records renewable energy generation (in MWh or kWh) produced within the geographic boundary, or reflecting an investment by the city outside the city boundary (e.g. offshore wind) that otherwise only indirectly impacts scope 2 emissions (through a lower grid average emission factor) and that would not be visible in scope 1 emissions for energy generation (due to their zero emissions).

Technology type	Energy supplied to grid		Located in city boundary?	% outside boundary	Benchmark energy source	Emission factor		Correction (tCO_2e)	tCO_2e	Allocate to sector
	Amount	Units				Amount	Units			
TOTAL renewable energy production or investments (in tCO2e)										

Results | Results_Summary | Results_Graphs | Results_Overview | Results_Analysis | Results_Net emissions | G

S CRF UPDATE

Using CIRIS

Demonstration

Module G

CIRIS

03

Practical Part A

Practical

Task: Create a draft GHG inventory in CIRIS for your city	
1	Define your **inventory boundary**
2	Define your **data sources** and **emission factors**
3	Update **Stationary energy** with data from Table A. Use notation keys for all other activities
4	Update **Transportation** with data from Table B. Use notation keys for all other activities
5	Update **Waste** with data from Table C. Use notation keys for all other activities
6	Complete **data quality assessment**
7	**Review** your results. Congratulations! You've completed a GPC inventory

Set-up: City information

Name of city / Country / Region

Inventory year

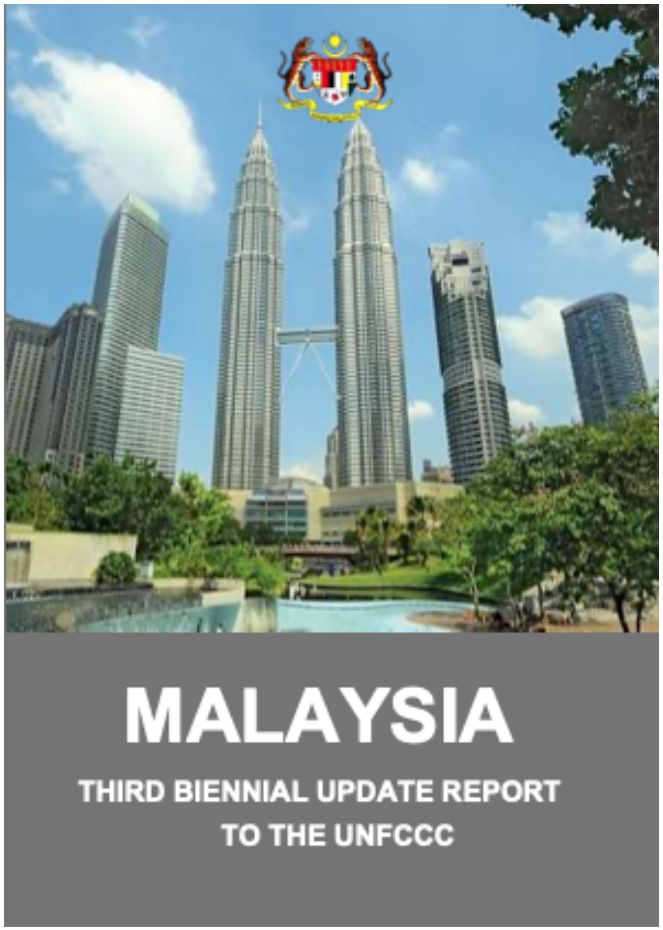
Geographic boundary

Land area (km^2) / Population / GDP (US$)

GPC reporting level

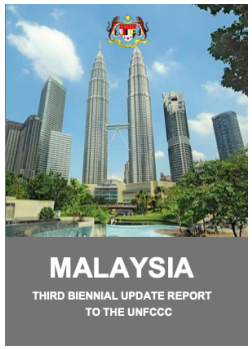
GHGs

GWP



Source: Malaysia Third Biennial Update Report to the UNFCCC

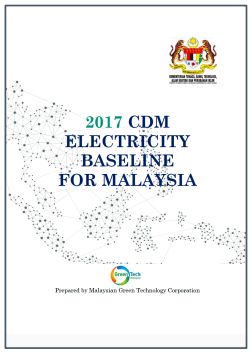
Set-up: Data sources



BUR3

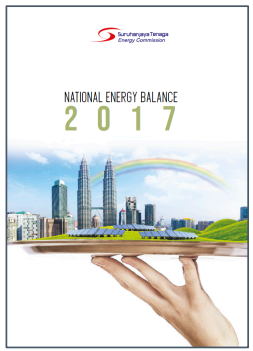
CIRIS calculators

CIRIS



CDM 2017

NEB 2017



Biennial Update Reports (BURs)

Data: BUR3

Name of source: Malaysia Third Biennial Update Report to the UNFCCC

Provider: Ministry of Environment and Water

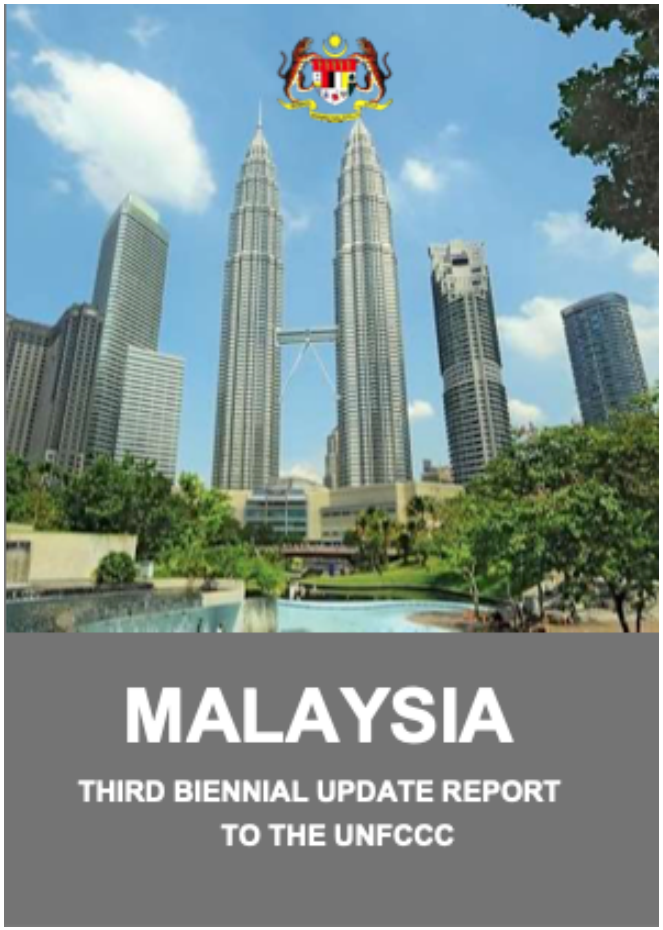
Latest year: 2016

Period: Calendar year

Frequency: Every two years

Scale: National

Link: https://unfccc.int/sites/default/files/resource/MALAYSIA_BUR3-UNFCCC_Submission.pdf



Source: Malaysia Third Biennial Update Report to the UNFCCC

National Energy Balance (NEB)

Data: NEB 2017

Name of source: National Energy Balance 2017

Provider: Malaysia Energy Information Hub (MEIH), Energy Commission (EC) of Malaysia

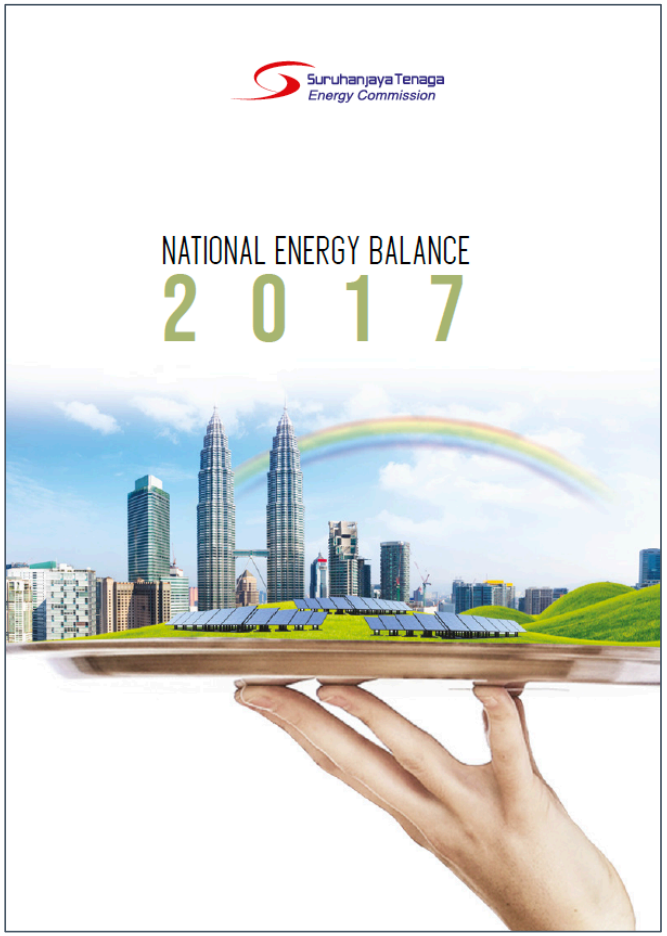
Latest year: 2017

Period: Calendar year

Frequency: Every year

Scale: National

Link: https://meih.st.gov.my/



Source: https://meih.st.gov.my/documents/10620/f2f4c39b-4748-4c5d-b90a-fc36ba880264

National Energy Balance (NEB)

Data: CDM 2017

Name of source: 2017 CDM Electricity Baseline for Malaysia

Provider: Malaysian Green Technology Corporation

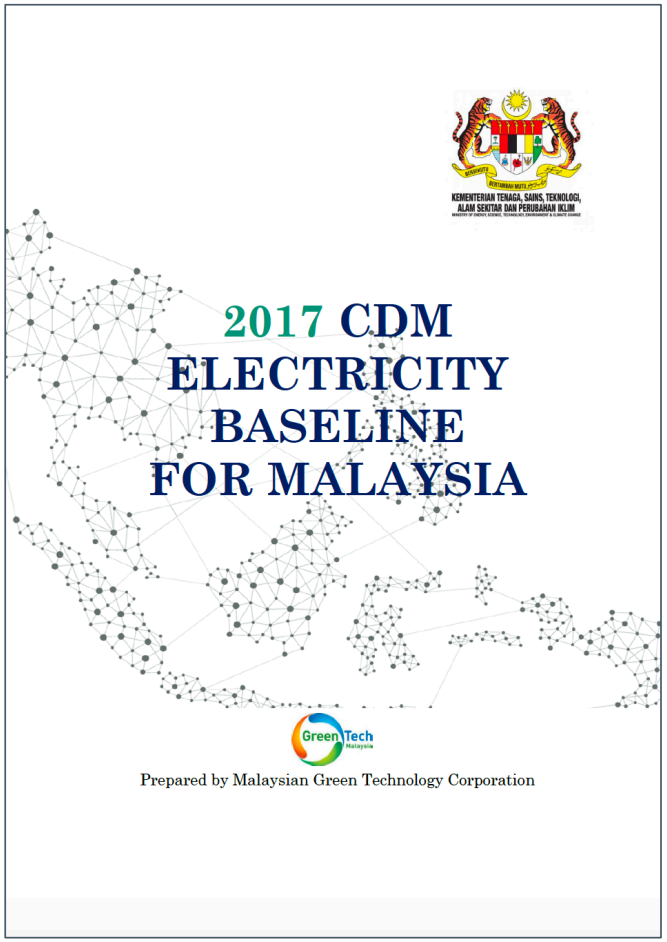
Latest year: 2017

Period: Calendar year

Frequency: Every year

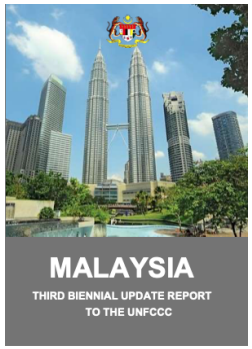
Scale: National

Link: https://www.mgtc.gov.my/wp-content/uploads/2019/12/2017-CDM-Electricity-Baseline-Final-Report-Publication-Version.pdf

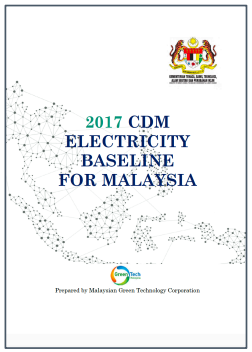


Source: Greentech 2017 CDM electricity baseline for Malaysia

Set-up: Emission factors



BUR3



CDM 2017

Fuel	CO2	CH4	N2O	Source
LPG	63.1 tCO2/TJ	0.001 tCH4/TJ	0.0001 tN2O/TJ	BUR3
Natural gas	56.1 tCO2/TJ	0.001 tCH4/TJ	0.0001 tN2O/TJ	BUR3
Diesel (stationary)	74.1 tCO2/TJ	0.003 tCH4/TJ	0.0006 tN2O/TJ	BUR3
Diesel (transportation)	74.1 tCO2/TJ	0.039 tCH4/TJ	0.0039 tN2O/TJ	BUR3
Petrol / Gasoline	69.3 tCO2/TJ	0.033 tCH4/TJ	0.0032 tN2O/TJ	BUR3
Electricity	0.585 tCO2/MWH			CDM 2017

Table A: Stationary energy

Sub-sector		Activity	AD	Source	EF	Source	GHG	Source
I.1	Residential buildings	LPG	3 000 TJ	NEB 2017	63.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Electricity	6 000 TJ	NEB 2017	0.585 tCO2/**MWh**	CDM 2017		
I.2	Commercial and institutional buildings and facilities	LPG	2 000 TJ	NEB 2017	63.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Electricity	15 000 TJ	NED 2017	0.585 tCO2/**MWh**	CDM 2017		
I.3	Manufacturing industries and construction	Natural gas	500 TJ	NEB 2017	56.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Diesel	500 TJ	NED 2017	74.1 tCO2/TJ 0.003 tCH4/TJ 0.0006 tN2O/TJ			
		Electricity	4 000 TJ	NED 2017	0.585 tCO2/**MWh**	CDM 2017		
I.8	Fugitive emissions from oil and gas systems	Natural gas	500 TJ	NEB 2017			671 tCO2e	CIRIS calculator

Table A: Stationary energy

Sub-sector		Activity	AD	Source	EF	Source	GHG	Source
I.1	Residential buildings	LPG	3 000 TJ	NEB 2017	63.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Electricity	6 000 TJ	NEB 2017	0.585 tCO2/**MWh**	CDM 2017		
I.2	Commercial and institutional buildings and facilities	LPG	2 000 TJ	NEB 2017	63.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Electricity	15 000 TJ	NED 2017	0.585 tCO2/**MWh**	CDM 2017		
I.3	Manufacturing industries and construction	Natural gas	500 TJ	NEB 2017	56.1 tCO2/TJ 0.001 tCH4/TJ 0.0001 tN2O/TJ	BUR3		
		Diesel	500 TJ	NED 2017	74.1 tCO2/TJ 0.003 tCH4/TJ 0.0006 tN2O/TJ			
		Electricity	4 000 TJ	NED 2017	0.585 tCO2/**MWh**	CDM 2017		
I.8	Fugitive emissions from oil and gas systems	Natural gas	500 TJ	NEB 2017			671 tCO2e	CIRIS calculator

If units AD ≠ units EF >>> use Activity data unit converter

Table B: Transportation

Sub-sector		Fleet	Method	Activity	AD	Source	EF	Source
II.1	On-road transportation	Multiple	Fuel sales approach	Diesel	15 000 TJ	NEB 2017	74.1 tCO2/TJ 0.039 tCH4/TJ 0.0039 tN2O/TJ	BUR3
		Multiple	Fuel sales approach	Petrol / Gasoline	25 000 TJ	NEB 2017	69.3 tCO2/TJ 0.033 tCH4/TJ 0.0032 tN2O/TJ	BUR3
II.2	Railways	Public	City-induced activity	Electricity	70 000 MWh	BUR3	0.585 tCO2/MWh	CDM 2017

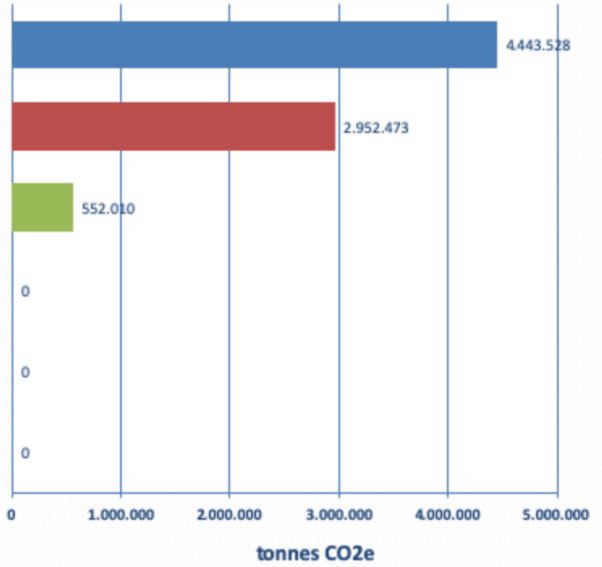
Table 3: Waste

Sub-sector		Treatment type	Type of waste	AD	Source	EF	Source	GHG	Source
III.1	Solid waste	Landfill - MC	All waste	60 000 tonnes				400 000 tCO2e	CIRIS
III.2	Biological treatment	All organic waste	All organic waste	140 tonnes				10 tCO2e	CIRIS
III.3	Incineration and open burning	Waste incineration	All waste	5000 tonnes				2 000 tCO2e	CIRIS
III.4	Wastewater	Domestic waste-water						150 000 tCO2e	CIRIS

Assume all waste is generated inboundary, but treated outside of the city boundary

Results: Summary

tCO2e	BASIC	Scope 1	Scope 2	Scope 3
	Stationary	381.028	4.062.500	
	Transportation	2.911.523	40.950	
	Waste			552.010
	IPPU			
	AFOLU			
	Other Scope 3			
	TOTAL	7.948.011		



Congratulations

Module G

CIRIS

04

Practical Part B

Practical

Task: Create a draft GHG inventory in CIRIS for your city using your workbook data	
1	Define your inventory boundary ✓
2	Define your data sources and emission factors ✓
3	Add **IPPU** and **AFOLU** with data from Module F. Use notation keys for all other activities
4	Update Stationary energy with data from Module C. Use notation keys for all other activities
5	Update Transportation with data from Module D. Use notation keys for all other activities
6	Update Waste with data from Module E, choosing your preferred methodology (CIRIS, scaled national data, proxy city). Use notation keys for all other activities
7	Complete data quality assessment
8	Review your results. Do the results make sense to you? Are they what you expected?

Table 4: IPPU and AFOLU

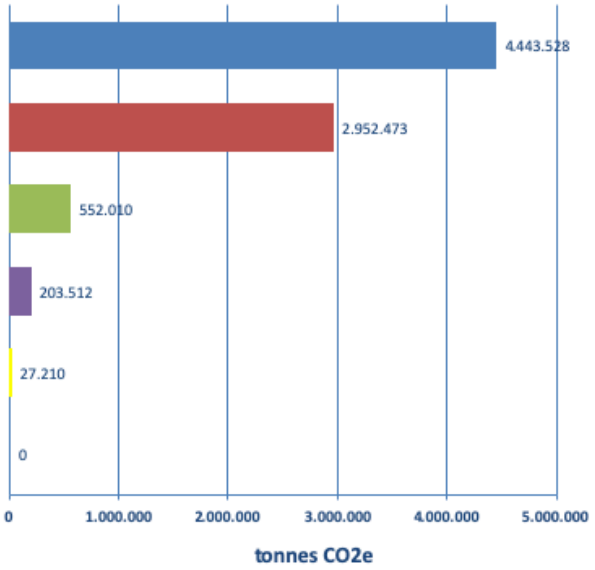
Sub-sector		Industry	Product use	AD	Source	EF	Source	GHG	Source
IV.2	Product use	Electronics industry	-					? tCO2e	BUR3
		Product uses as subtitutes for ODS	-					? tCO2e	BUR3
		Other product manufacture and use	-					? tCO2e	BUR3

Sub-sector		Activity	Description	AD	Source	EF	Source	GHG	Source
V.1	Livestock	All livestock	Enteric fermentation					? tCO2e	BUR3
		All livestock	Manure management					? tCO2e	BUR3

!!! Don’t forget to remove any default notation keys used

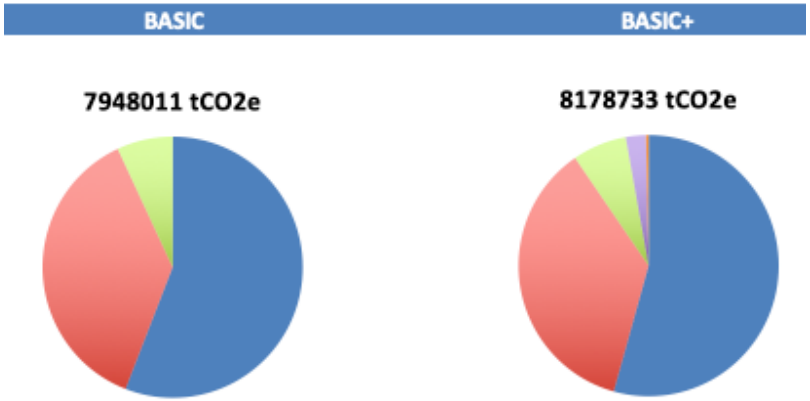
Results: Summary

tCO2e	BASIC+	Scope 1	Scope 2	Scope 3
	Stationary	381.028	4.062.500	
	Transportation	2.911.523	40.950	
	Waste			552.010
	IPPU	203.512		
	AFOLU	27.210		
	Other Scope 3			
	TOTAL	8.178.733		



Results: Summary

GHG Emissions Source (By Sector)		Total GHGs (metric tonnes CO2e)					
		Scope 1	Scope 2	Scope 3	BASIC	BASIC+	BASIC+ S3
STATIONARY ENERGY	Energy use (all emissions except I.4.4)	381.028	4.062.500		4.443.528	4.443.528	4.443.528
	Energy generation supplied to the grid (I.4.4)						
TRANSPORTATION	(all II emissions)	2.911.523	40.950		2.952.473	2.952.473	2.952.473
WASTE	Waste generated in the city (III.X.1 and III.X.2)			552.010	552.010	552.010	552.010
	Waste generated outside city (III.X.3)						
IPPU	(all IV emissions)	203.512				203.512	203.512
AFOLU	(all V emissions)	27.210				27.210	27.210
OTHER SCOPE 3	(all VI emissions)						
TOTAL		3.523.273	4.103.450	552.010	7.948.011	8.178.733	8.178.733



Practical

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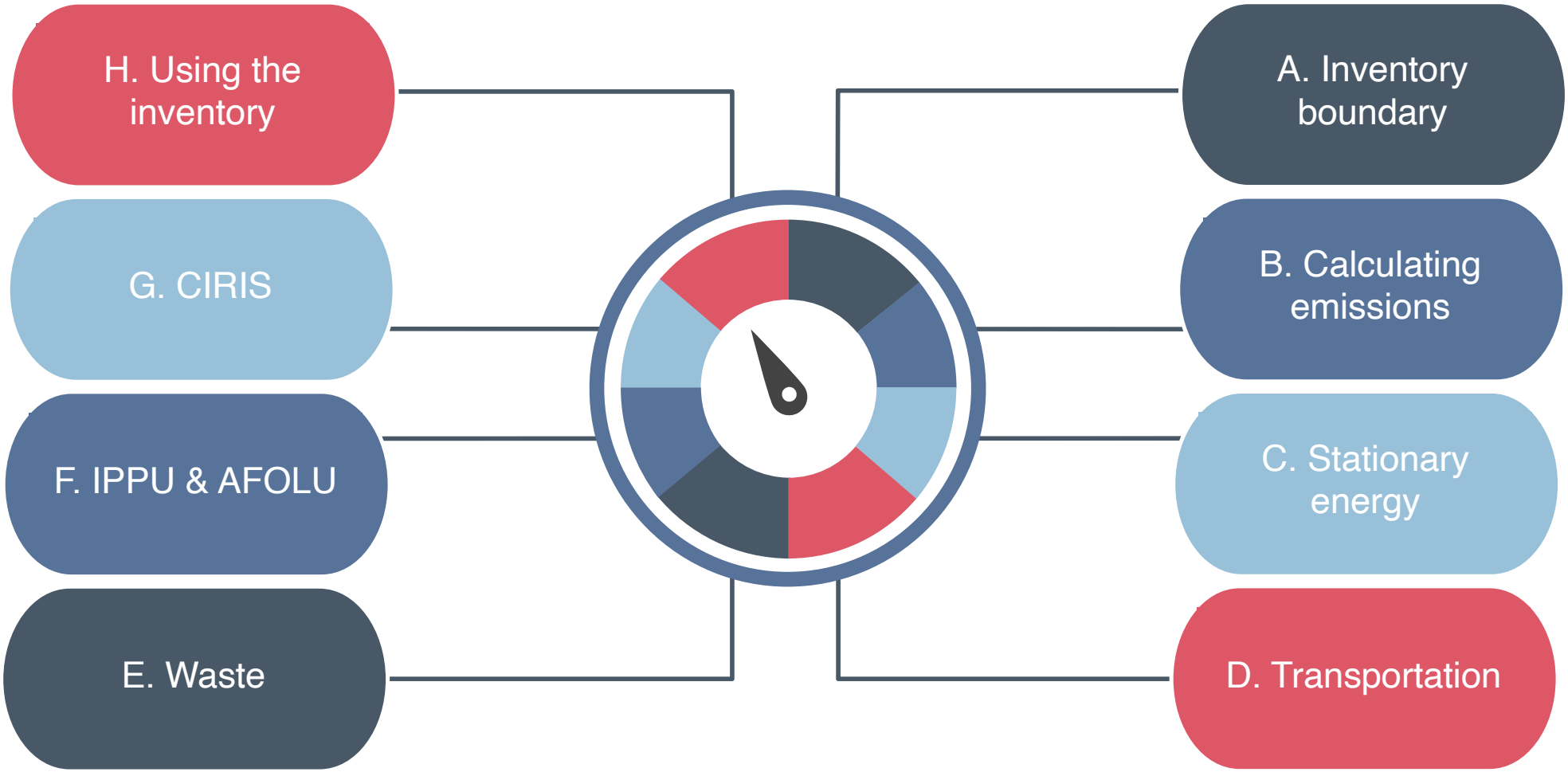
03
SUMMARY

Module G: CIRIS

Module G: CIRIS

Overview	Using CIRIS	Exercise	Practical
01	02	03	04


H. Using the inventory
G. CIRIS
F. IPPU & AFOLU
E. Waste
A. Inventory boundary
B. Calculating emissions
C. Stationary energy
D. Transportation

The end

Next time: Inventory management