

Sector Proposal Templates (SPT)

Data issues and lessons learnt

Conference on Sectoral Approaches for International Climate Policy

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Session 2

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Overview

1. Background
2. Sector Proposal Templates (SPT)
3. Data issues and lessons learnt

Background: Development of sector crediting baselines (sector no-lose targets)

- Some developing countries voluntarily pledge sector crediting baselines
- Based on detailed, national, transparent analysis for each sector
- “No lose”: credits (to government) for reductions beyond baseline, no penalty if not achieved
- Governments have to pass on incentive to private entities

Why do we need sector proposal templates ?

Support developing countries in developing sector crediting baselines

- **Present:** *Capacity-building tool*

Exploring data issues, learn about institutional needs, testing feasibility of the approach

- **Future:** *Negotiation facilitation tool*

Delivering maximum transparency in setting of sector crediting baselines

Overview

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Project on Sector Proposal Templates

- Project partners:
 - GtripleC (Murray Ward)
 - Ecofys (Martina Jung, Niklas Höhne)
- Funding from:
 - World Bank
 - UK DEFRA
 - VROM Netherlands
 - GTZ (Germany)

Timeline

- Sector proposal templates developed:
 - Electricity production
 - Cement production
 - Transport
- Currently testing templates in Mexico
- Planned:
 - Further templates (e.g. iron and steel)
 - Further testing in other countries



Sectoral Proposal Templates

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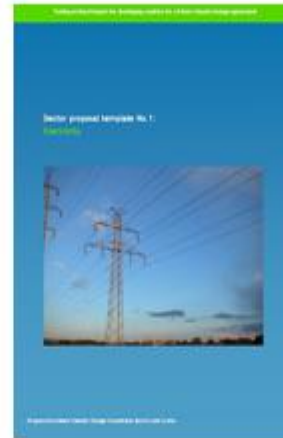
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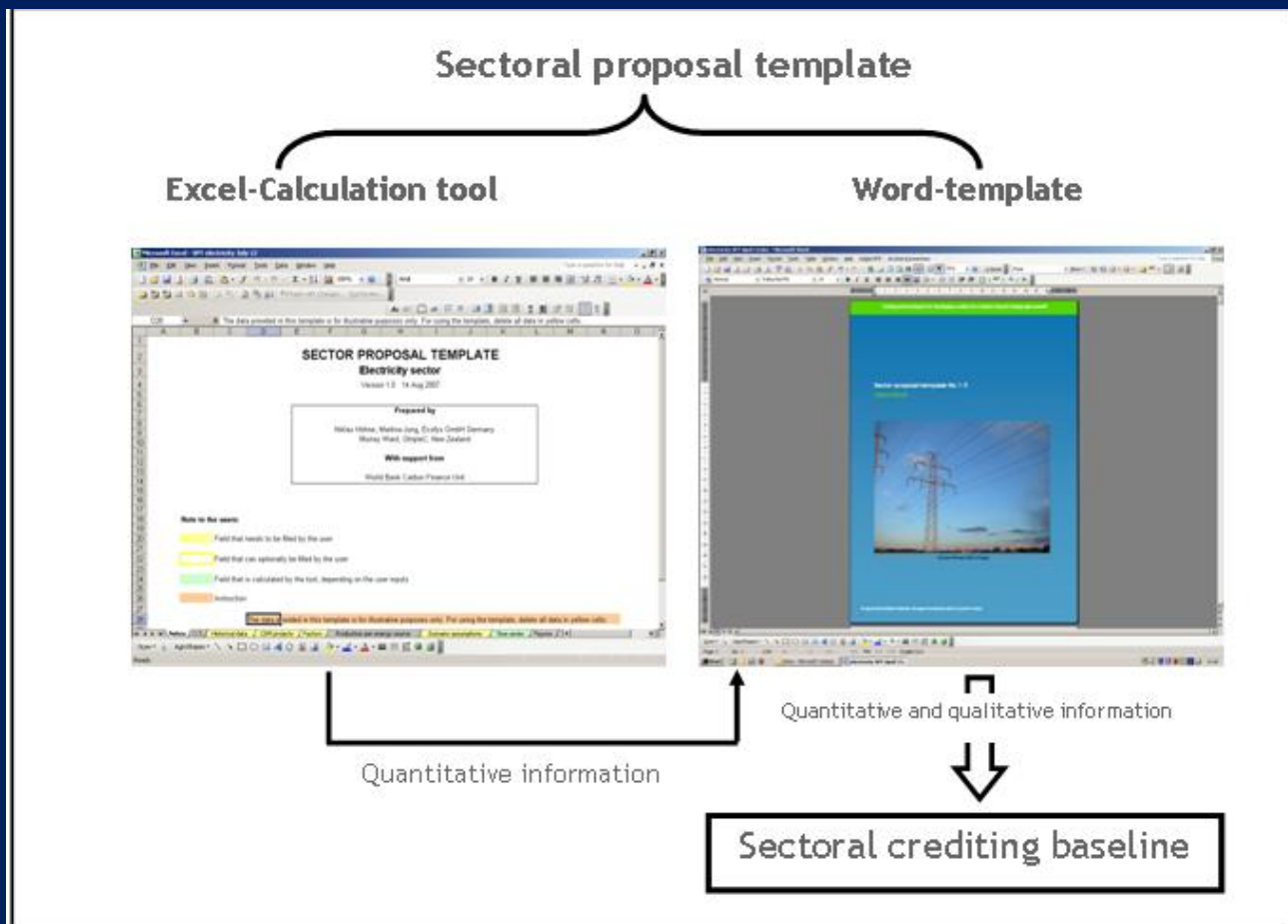
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Sectoral Proposal Templates

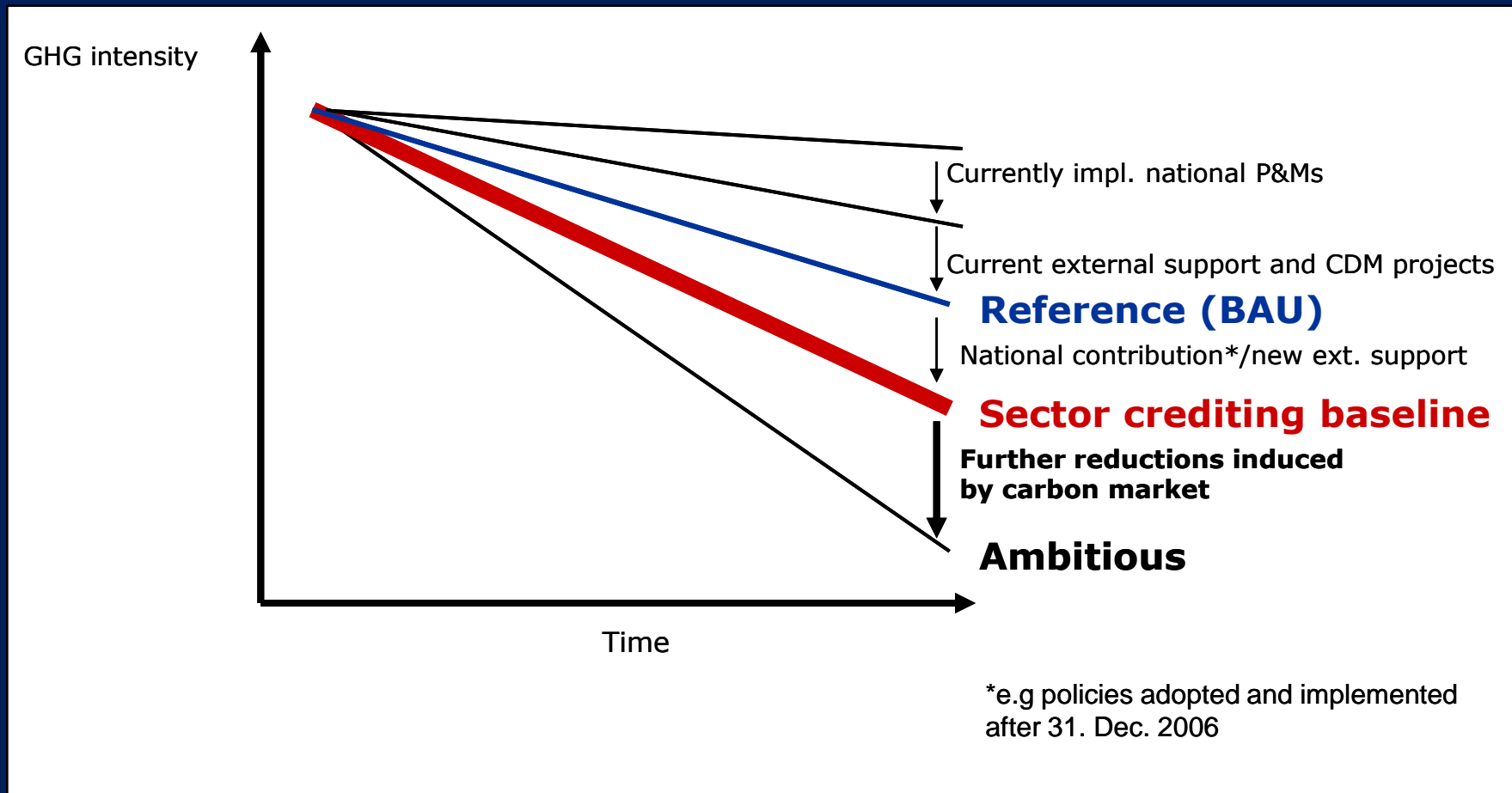
The 'Sectoral Proposal Templates' aim at supporting developing countries in proposing sectoral emission baselines under a post-Kyoto climate regime. The sectoral approach underlying this work is seen as a means to **scale-up investments** in clean technology and systems in developing countries. GtripleC and Ecofys are currently developing "Sectoral Proposal Templates" for selected sectors with the goal to perform a reality check by 'road testing' them in some developing countries.



Structure of the templates



Concept: Sector crediting baseline



“Information-rich” templates

General background information in templates

- Description of the sector
- Examples of policies in other countries

To be provided by country

- Background information on the country
- Past and present situation of the sector
- Policies and Measures affecting the sector
- Scenario assumptions and results

Scenario assumptions and information on other countries

Scenario assumptions

Scenario name	Average 1990-2006	Scenario 1 BAU			Scenario 2 Sector crediting baseline			Scenario 3 Ambitious		
		2010	2015	2020	2010	2015	2020	2010	2015	2020
Future electricity production [growth per year]	3.7%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Future electricity demand [growth per year]										
Distribution losses (in % of electricity produced)										

Generation mix (% of TWh per source)	2006	2010	2015	2020	2010	2015	2020	2010	2015	2020	
	Coal without CCS	14.3	15.0	15.0	15.0	14.0	12.0	10.0	14.0	9.0	6.0
Petroleum without CCS	32.4	32.0	Example values for 2003								
Natural gas without CCS	35.4	35.0	Australia	Austria	Belgium	Brazil	Canada	China	Colombia	Denmark	Finland
Nuclear	4.8	5.0									
Hydro	9.1	10.0	3.0%	1.7%	1.3%	3.9%	1.5%	9.0%	2.1%	4.5%	3.4%
Geothermal	2.9	3.0	6.7%	4.8%	4.5%	0.6%	5.8%	6.8%	12.8%	4.7%	4.1%
Solar/wind/other	0.0	0.0									
Biomass waste	1.1	0.0									
Heat	0.0	0.0									
Total	100	100	77.2%	15.4%	13.9%	2.4%	19.6%	79.4%	35.7%	54.7%	31.8%

Electricity imports/exports (TWh)	Average 1990-2006	2010	2010	2015	2020	2010	2015	2020	2010	2015	2020
Electricity imports	0.08	0.1	1.0%	2.9%	1.2%	3.0%	3.0%	3.0%	3.3%	5.1%	1.1%
Electricity exports	0.10	0.0	13.8%	18.3%	25.9%	3.6%	5.9%	0.7%	9.1%	21.2%	16.6%
Net electricity imports	-0.02	0.1	0.0%	0.0%	56.7%	3.7%	13.0%	2.2%	0.0%	0.0%	27.0%
			7.0%	59.4%	0.3%	83.8%	58.4%	14.6%	51.1%	0.0%	11.4%
			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			0.3%	0.6%	0.1%	0.0%	0.2%	0.0%	0.0%	12.2%	0.1%
			0.6%	3.3%	1.9%	3.5%	0.0%	0.1%	0.8%	6.8%	12.1%
			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
			0.000	19.003	14.665	0.037	24.458	13.375	0.070	7.025	11.886
			0.000	13.386	31.157	0.012	26.307	13.351	1.186	15.573	7.036
			0.000	5.617	-16.491	0.026	-1.849	0.023	-1.116	-8.548	4.850



Overview

1. Background
2. Sector Proposal Templates (SPT)
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Sector crediting baselines = international benchmark?

- Sector crediting baseline is NOT a benchmark
- Data on emission intensity of the sector just one piece in the puzzle
- Different starting points and circumstances have to be taken into account (benchmarks do this only to a limited extent)
- More comprehensive picture (qualitative information on context of the sector in the country) will determine level of the baseline

Data issues

- Data availability
 - Data collection efforts prior filling templates are essential (e.g. by industry associations, WRI/WBCSD GHG Protocol)
 - Confidentiality of data can be a barrier in competitive sectors (less in others, e.g. electricity) – solution: aggregation?
 - Data availability a challenge in certain sectors (e.g. transport)
- Sector crediting baselines feasible in certain sectors (e.g. cement, electricity, iron and steel), while more difficult in others (e.g. transport)

Lessons learnt

- Early involvement of all relevant stakeholders necessary
 - Coherence in development of sector baseline and characteristics of collected data (system boundary, indicators, aggregation levels)
- Institutional issues (capacity-building in governments, focal point for communication with stakeholders and coordination of different data collection activities etc.)

Conclusions

- Sector proposal templates are ready to be used as capacity building and learning tool
- Sector crediting baselines can be developed
- Consideration of country specific circumstances is essential -> transparent reporting
- More work is necessary if sector crediting baselines are to be part of a post 2012 framework - time is short until the end of 2009

www.sectoral.org

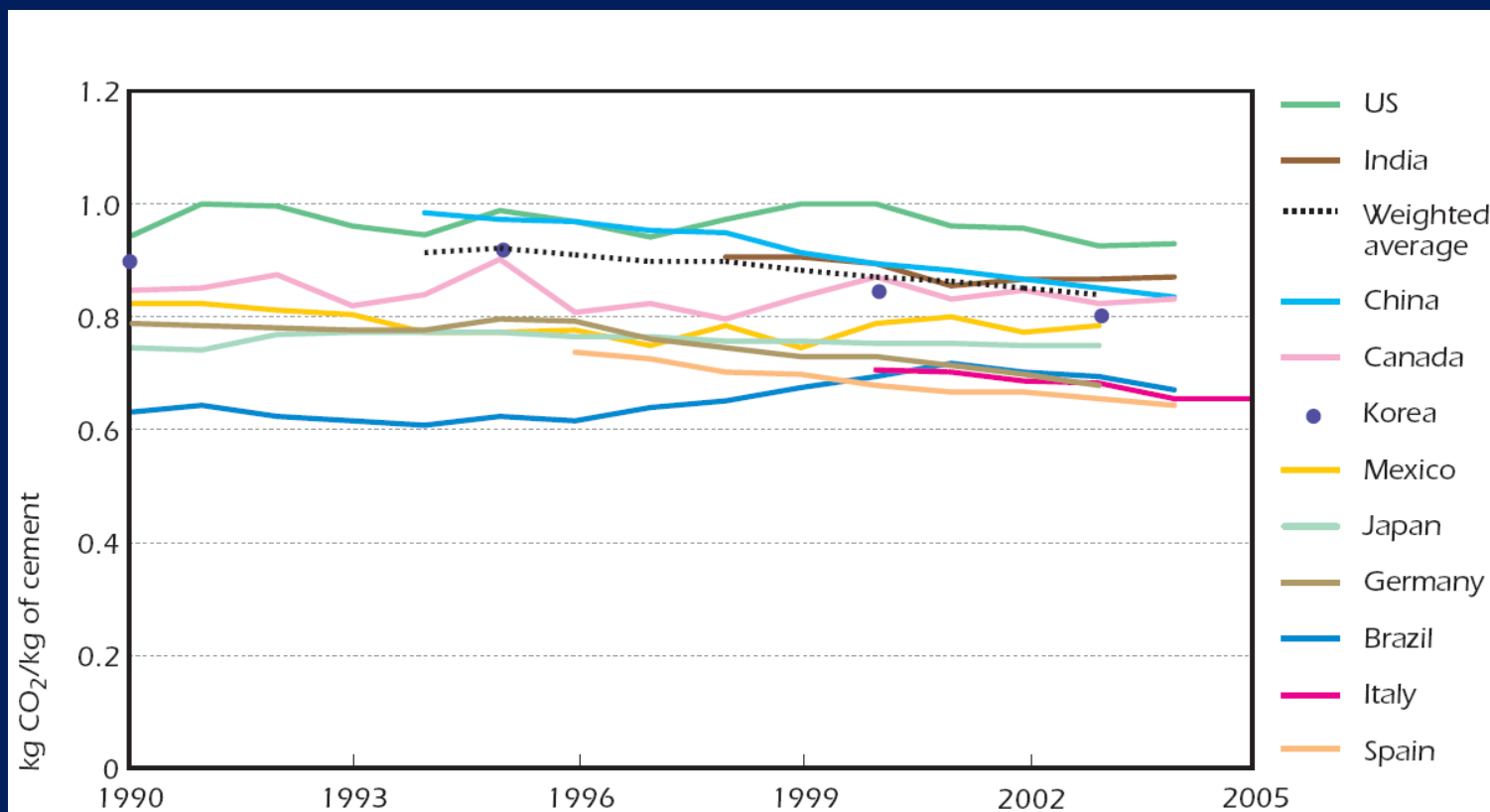
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Murray Ward, GtrippleC, murray.ward@paradise.net.nz

Back-up slides

Example: Different starting points



Note: Includes impact of electricity generation from waste heat in Japan. Boundary definitions may differ by country.

Sources: As for Figures 6.4, 6.5, 6.8 and 6.9; IEA statistics.

Source: IEA 2007, Tracking industrial energy efficiency and CO2 emissions


Content: Word template electricity

1. Background information on the country
2. Past and present situation of the sector
3. Policies and Measures affecting the sector
4. Scenario assumptions and results

Annex A: Introduction into the template

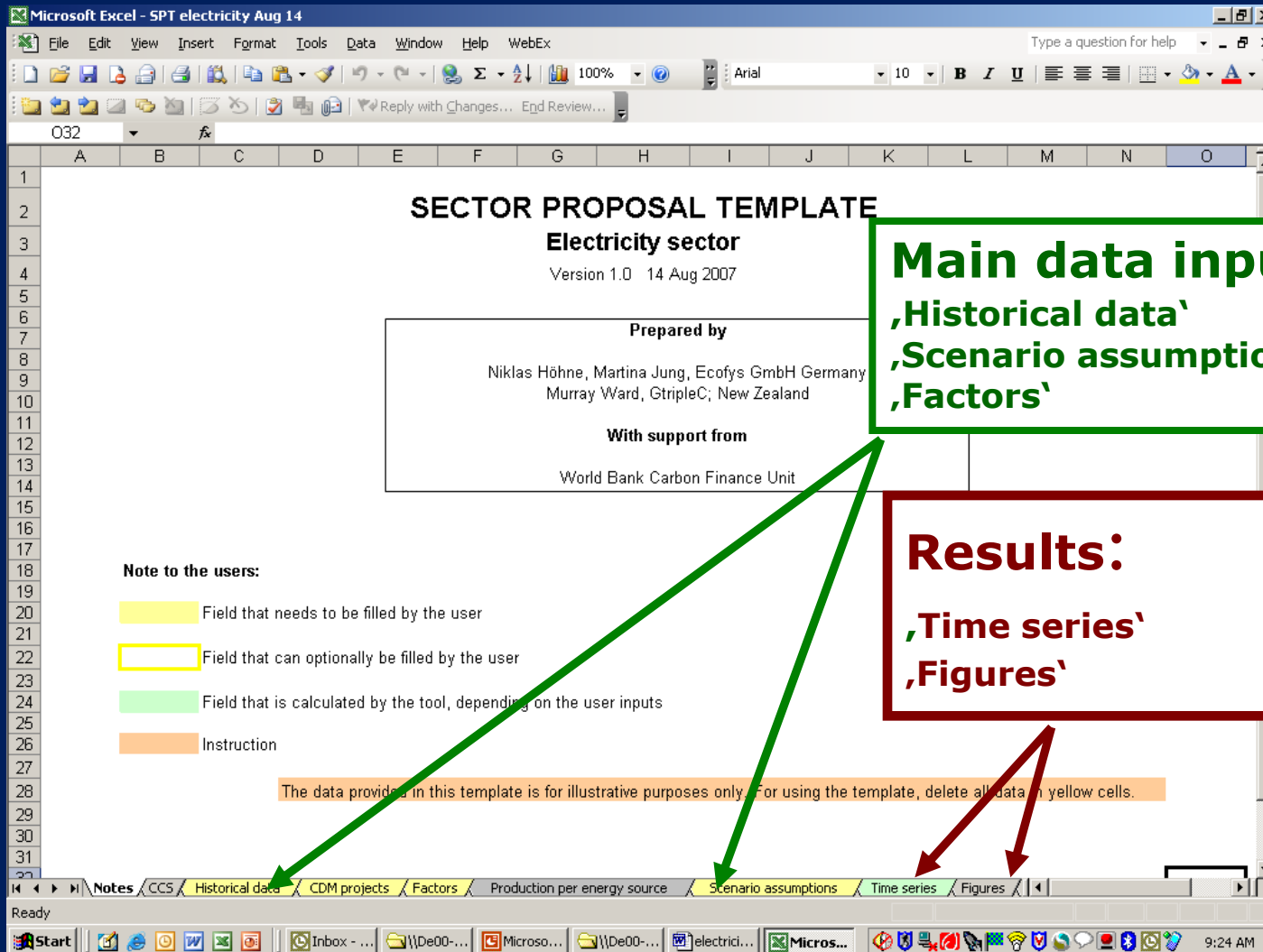
Annex B: General description of the sector

Annex C: Policy examples



General
information
for the user

Excel template electricity



Microsoft Excel - SPT electricity Aug 14

File Edit View Insert Format Tools Data Window Help WebEx

Type a question for help

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032

SECTOR PROPOSAL TEMPLATE
Electricity sector
 Version 1.0 14 Aug 2007

Prepared by
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 Murray Ward, GtripleC; New Zealand

With support from
 World Bank Carbon Finance Unit

Note to the users:

- Field that needs to be filled by the user
- Field that can optionally be filled by the user
- Field that is calculated by the tool, depending on the user inputs
- Instruction

The data provided in this template is for illustrative purposes only. For using the template, delete all data in yellow cells.

Notes | CCS | Historical data | CDM projects | Factors | Production per energy source | Scenario assumptions | Time series | Figures

Ready

9:24 AM

Main data input:
 ‚Historical data‘
 ‚Scenario assumptions‘
 ‚Factors‘

Results:
 ‚Time series‘
 ‚Figures‘

Results

		BAU			Sector crediting baseline			Ambitious		
		2010	2015	2020	2010	2015	2020	2010	2015	2020
Electricity production										
	Unit	2010	2015	2020	2010	2015	2020	2010	2015	2020
Electricity production Total	TWh	255.8	311.2	378.6	255.8	311.2	378.6	255.8	311.2	378.6
of which coal without CCS	TWh	38.4	46.7	56.8	35.8	37.3	37.9	35.8	28.0	22.7
of which oil without CCS	TWh	81.9	99.6	121.2	79.3	93.4	106.0	71.6	80.9	90.9
of which natural gas without CCS	TWh	89.5	108.9	132.5	76.7	80.9	87.1	74.2	74.7	75.7
of which nuclear	TWh	12.8	15.6	18.9	0.0	0.0	0.0	0.0	0.0	0.0
of which hydro	TWh	25.6	31.1	37.9	25.6	34.2	45.4	33.3	52.9	75.7
of which geothermal	TWh	7.7	9.3	11.4	12.8	15.6	18.9	12.8	15.6	22.7
of which solar/wind/other	TWh	0.0	0.0	0.0	25.6	40.5	68.2	25.6	49.8	68.2
of which biomass/waste	TWh	0.0	0.0	0.0	0.0	9.3	15.1	2.6	9.3	22.7
Electricity imports	TWh	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Electricity exports	TWh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net electricity imports	TWh	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CO2 emissions										
		2010	2015	2020	2010	2015	2020	2010	2015	2020
Total CO2	MtCO2	148.8	181.0	220.2	131.8	143.8	155.0	121.6	120.9	122.8
of which coal	MtCO2	32.7	39.7	48.4	30.3	30.8	30.9	29.2	22.6	18.1
of which oil	MtCO2	67.3	81.9	99.7	60.2	70.0	78.5	53.0	59.1	65.6
of which natural gas	MtCO2	48.8	59.3	72.2	41.3	42.9	45.6	39.4	39.1	39.1
CO2 from imported electricity	MtCO2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CO2 intensity										
		2010	2015	2020	2010	2015	2020	2010	2015	2020
CO2 intensity	tCO2/MWh	0.58	0.58	0.58	0.52	0.46	0.41	0.48	0.39	0.32
of which coal (without CCS)	tCO2/MWh	0.85	0.85	0.85	0.85	0.83	0.82	0.82	0.81	0.80
of which oil (without CCS)	tCO2/MWh	0.82	0.82	0.82	0.76	0.75	0.74	0.74	0.73	0.72
of which gas (without CCS)	tCO2/MWh	0.54	0.54	0.54	0.54	0.53	0.52	0.53	0.52	0.52