

The Energy Data Management Center: Overview

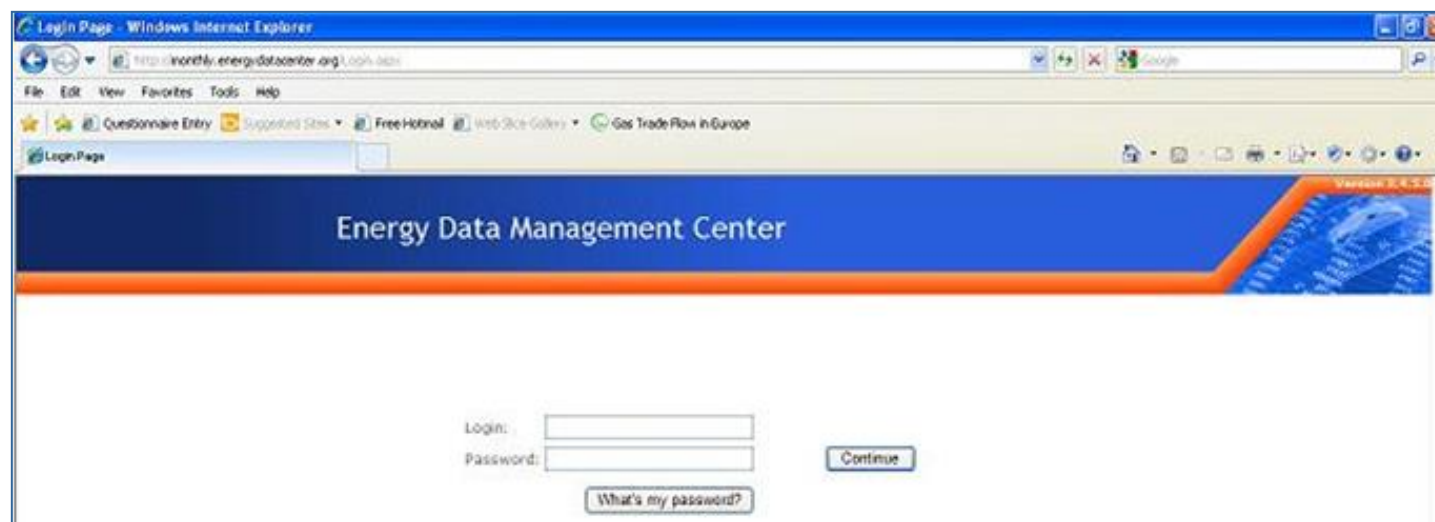
Oslo Group meeting
Abu Dhabi, May 2014

Roberta Quadrelli
Head, Energy balances, Prices, Emissions, Efficiency
IEA Energy Data Centre



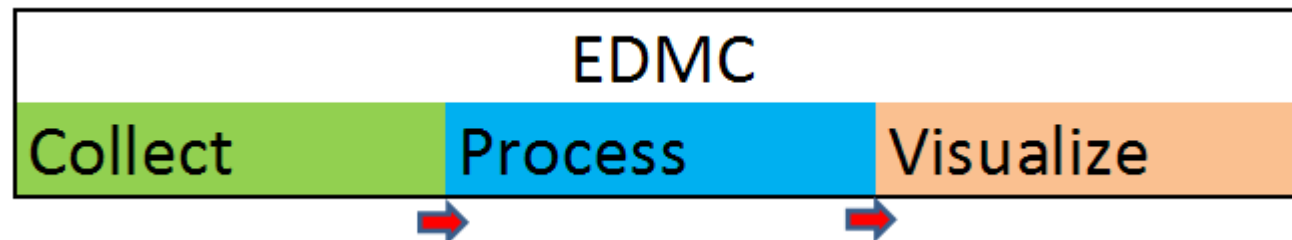
The Energy Data Management Centre (EDMC)

- **WHAT** is it?
- **WHY** is it Important?
- **HOW** to use it?



WHAT is EDMC?

- The EDMC is a complex database available on-line
- Created to facilitate data submission and data exchange
- Profile Based Client-Server application
- Allowing to collect, check and report energy data



WHAT is EDMC?

■ Data **Collection**

■ annual and monthly questionnaires by countries using any of the **11** available questionnaires

■ Collect data for **34** OECD Countries



WHAT is EDMC?

- Data **Checking**

- Check data according to a predefined set of **rules**

Emergency Data Questionnaire | Energy Data Management Center | Version 3.4.11.0

Home | Questionnaires | Checks | Data transfers | Reports | Downloads | Parameters

Ending: February | Year: 2014 | Submission: M-1 | Country: | In yellow, modifications since: 12-03-2014 (DD-MM-YYYY) | by: <All> | Save

Product: Crude Oil | Modification on behalf of the country | Period: ERE 7 - 2014

QUE - STOCKS | Right click in a cell to add a comment

This time series is read-only | Unit: Thousand Metric Tons

Stocks	FEB 2013	MAR 2013	APR 2013	MAY 2013	JUN 2013	JUL 2013	AUG 2013	SEP 2013	OCT 2013	NOV 2013	DEC 2013	JAN 2014	FEB 2014
Closing stocks on National Territory													21,738
JODI M:1	21,582	21,393	21,885	21,921	22,223	22,185	21,695	21,610	21,904	21,629	21,594	21,669	
MOS	21,324	21,553	21,981	22,169	21,685	21,687	21,691	21,608	21,979	21,573	21,546		
Industry													2,216
JODI M:1													
MOS	1,880	2,052	2,556	2,695	2,191	2,477	2,288	2,234	2,415	2,012	1,962	0	0
Agency													15,385
JODI M:1													
MOS	15,399	15,458	15,325	15,374	15,394	15,325	15,318	15,408	15,374	15,371	15,356		
Government													
JODI M:1													
MOS													
Of Which: Closing stocks on National Territory with foreign claim													4,137
JODI M:1													
MOS	4,045	4,045	4,100	4,100	4,100	4,085	4,085	4,186	4,190	4,190	4,228	0	0

WHAT is EDMC?

Data Visualization

Tables

Joint Questionnaires Energy Data Management Center

Home Questionnaires Checks Data transfers Status report Downloads Parameters

Cycle: 2012/2013 Country: Australia Year: 2011

OIL - SUPPLY OF CRUDE OIL, NGL, REFINERY FEEDSTOCKS, ADDITIVES AND OTHER HYDROCARBONS

SUPPLY OF CRUDE OIL, NGL, REFINERY FEEDSTOCKS, ADDITIVES AND OTHER HYDROCARBONS

Unit: Tkt

		Crude Oil	Natural Gas Liquids	Refinery Feedstocks	Additives / Oxygenates	Of which Biofuels	Other Hydrocarbons
		A	B	C	D	E	F
Indigenous Production	(+) 1	19,775	2,136				
From Other Sources	(+) 2				491	491	
Backflows to Refineries	(+) 3						
Products Transferred	(+) 4			2,253			
Total Imports (Balance)	(+) 5	25,045		425			
Total Exports (Balance)	(-) 6	14,826		864			
Direct Use	(-) 7	68	2,125		491	491	
Stock Changes (National Territory)	(+) 8	325	3	229			557
Refinery Intake (Calculated)	(=) 9	30,251	14	2,043	0	0	32,308
Statistical Differences	(-) 10	589	14	-883	0	0	-280
Refinery Intake (Observed)	(=) 11	29,662		2,926			32,588
MEMO ITEMS:							
Refinery Losses	12	1,039					1,039
STOCK LEVELS:							
Opening Stock Level (National Territory)	13	2,205	195	603			3,003
Closing Stock Level (National Territory)	14	1,880	192	374			2,446
AVERAGE NET CALORIFIC VALUES:							
Net Calorific Value of Production	15	43,985	45,410				

Unit: kJ/kg

Joint Questionnaires Energy Data Management Center

Home Questionnaires Checks Data transfers Status report Downloads Parameters

Cycle: 2012/2013 Country: Australia Ending: 2011

ELECTRICITY AND HEAT - GROSS ELECTRICITY PRODUCTION

Gross Electricity Production (GWh) - Table 1

	2006	2007	2008	2009	2010	2011
Main Activity Producer Electricity Plants						
Total	212,118	219,095	220,610	228,435	231,150	230,232
Nuclear						
Hydro	16,029	14,517	12,057	11,869	13,549	16,807
of which Pumped Storage	103	178	148	67	48	51
Geothermal					1	1
Solar	1	4	4	4	4	4
Tide, Wave, Ocean						
Wind	1,713	2,611	3,093	3,824	5,052	5,807
Combustible Fuels	194,375	201,963	205,456	212,738	212,544	207,613
Heat from Chemical Processes						
Other Sources						
Main Activity Producer CHP Plants						
Total	8,247	8,723	8,234	4,245	4,717	4,998
Nuclear						
Hydro						
of which Pumped Storage						
Geothermal						
Solar						
Tide, Wave, Ocean						
Wind						
Combustible Fuels	8,247	8,723	8,234	4,245	4,717	4,998
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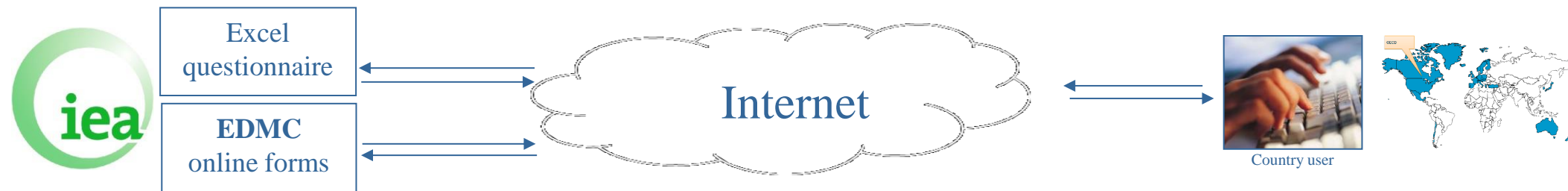
Time series

WHY is EDMC Important?

- Data submissions are more **secure and transparent**
- More **efficient** co-operation with partners (countries, EuroStat, ...)
- The country users can **automate** the data submission
- Cross-questionnaire **checking**
- A **faster** data quality process

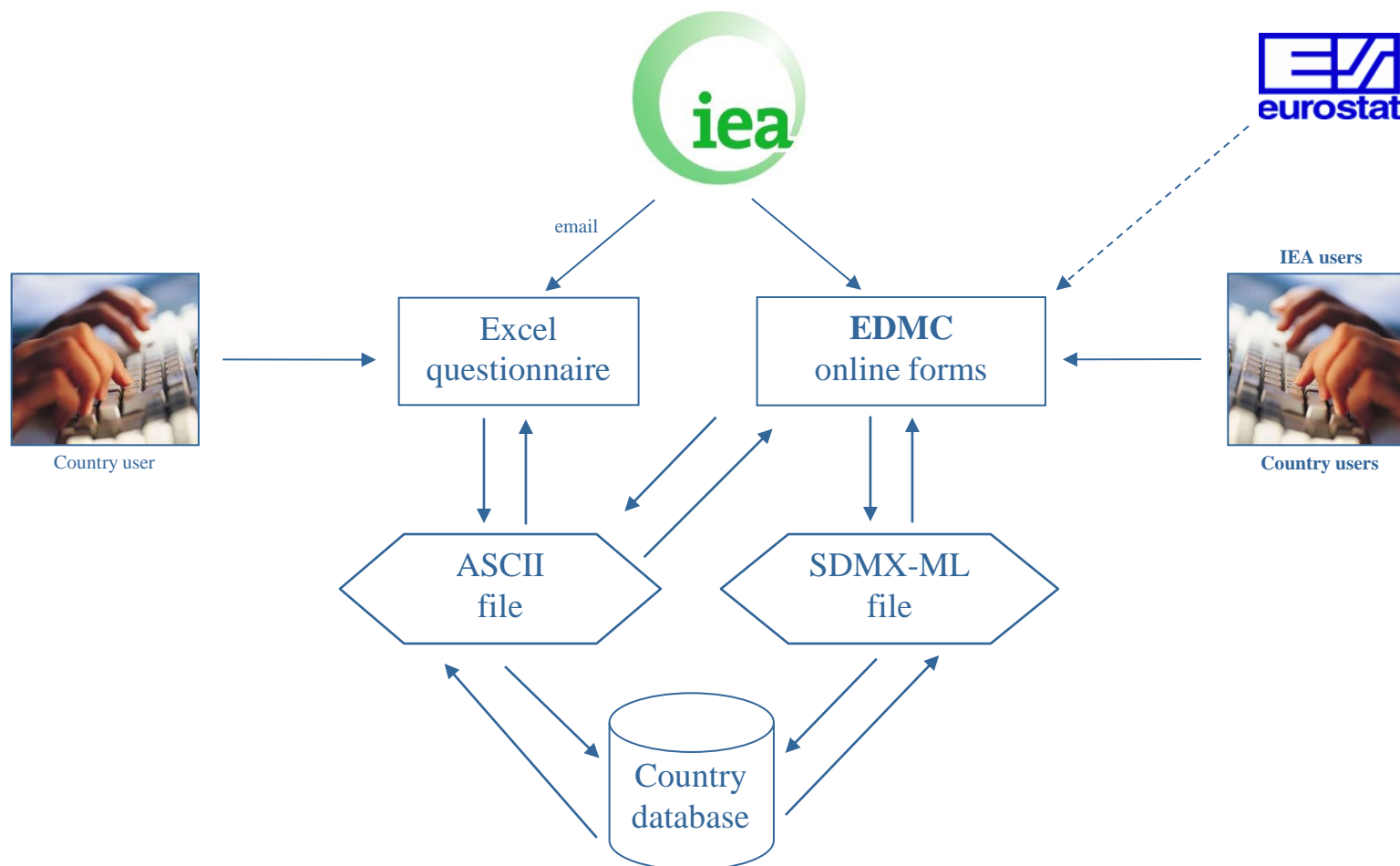
WHY is EDMC Important?

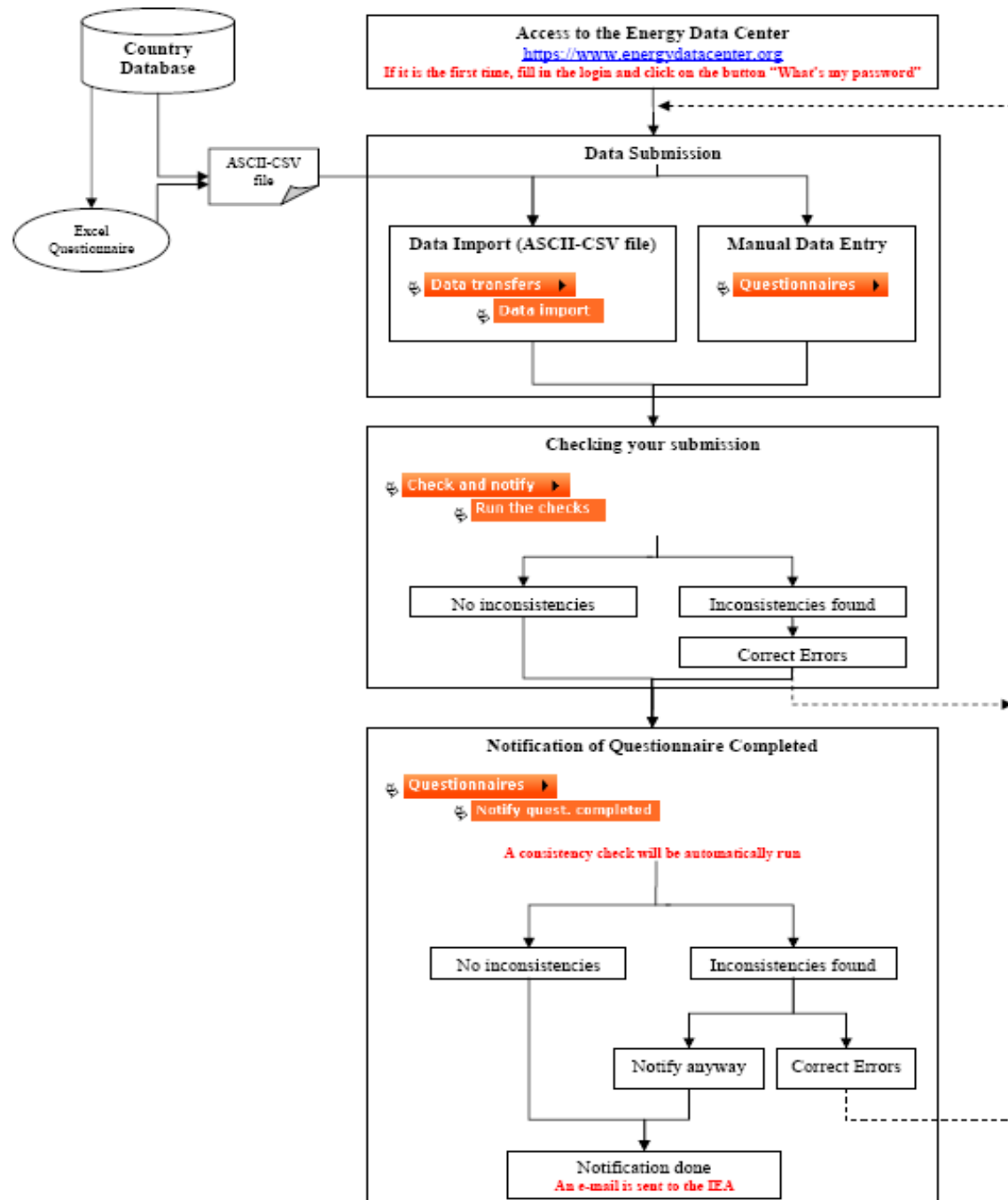
- Guarantees the **consistency** of the forms being used
- A client-server solution for a better **dissemination** of new questionnaires



HOW to use EDMC?

■ The EDMC: Excel Templates and Forms





How can countries use EDMC?

HOW to use EDMC?

■ EDMC Questionnaires

- **5** independent Annual Questionnaires (Electricity, Coal, Gas, Oil, Renewables). Questionnaires sent with prefilled time series.
- **5** Monthly Questionnaires (MOS Oil, MOS Gas, Maxi JODI, JODI Gas, JODI). Empty templates.
- **1** flexible Emergency Reporting Questionnaire (QuE).

HOW to use EDMC?

- Data transfers from **CSV** (comma separated value)
- From a CSV file created from the annual/monthly IEA excel questionnaire.
 - Use the “Export” button on the menu page in excel questionnaire.
- Directly from your own database:
 - via a CSV file

HOW to use EDMC?

EDMC Online Forms

Joint Questionnaires
Energy Data Management Center

Home Questionnaires Checks Data transfers Status report Downloads Parameters

Cycle: 2011/2012 Country: Germany Year: 2010 In yellow, modifications since: 30-11-2011 (DD-MM-YYYY) Save

Modification on behalf of the country

ELECTRICITY AND HEAT - GROSS PRODUCTION

This questionnaire is read-only.

TABLE 1. GROSS ELECTRICITY AND HEAT PRODUCTION

		MAIN ACTIVITY PRODUCER PLANTS			AUTOPRODUCER PLANTS			MAIN ACTIVITY PRODUCER G=(A+B+C)
		ELECTRICITY (ONLY)	CHP	HEAT (ONLY)	ELECTRICITY (ONLY)	CHP	HEAT (ONLY)	
ELECTRICITY UNIT: GWh (10 ⁶ kWh)		A	B	C	D	E	F	
Electricity	1	521,540	54,471		23,178	29,795		576,011
Nuclear	2	140,556						140,556
Hydro	3	26,978			378			26,978
Pumped Hydro	4	6,929						6,929
Geothermal	5	28						28
Solar	6	11,675			7			11,675
Tide, Wave and Ocean	7							0
Wind	8	37,707			86			37,707
Combustible Fuels	9	304,112	54,239		21,452	28,806		358,251
Heat from Chemical Sources	10							0
Other Sources	11	484	232		1,255	989		716

HEAT Unit: TJ

Information on this value - Windows Internet Explorer

Value modifications

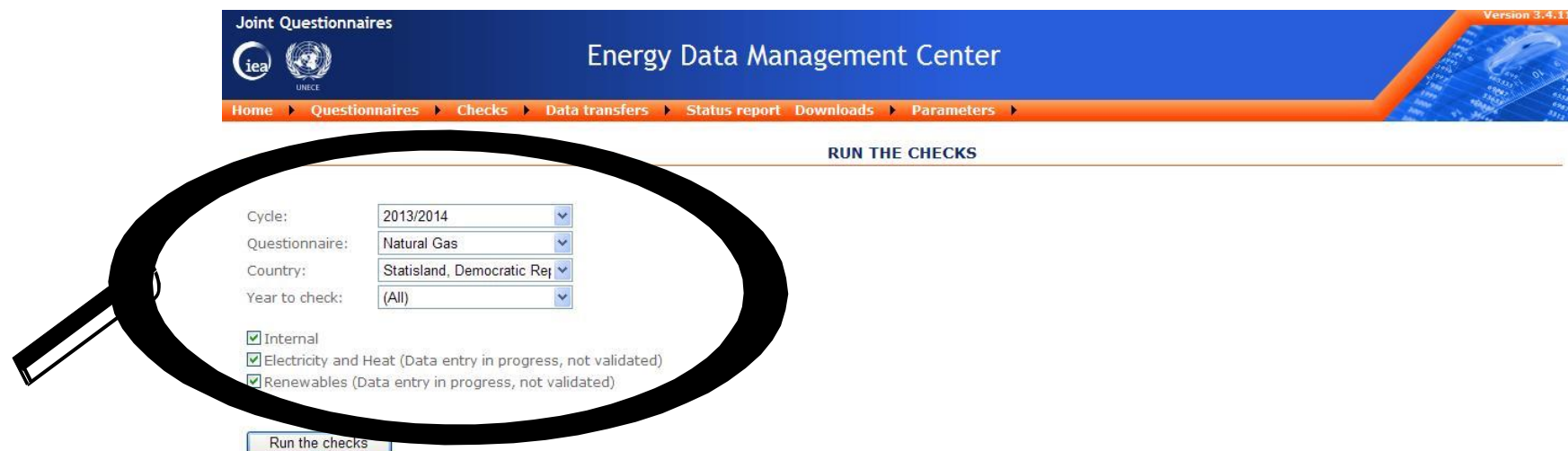
Date	Value	Status	Source	User	Modif mode
26-Jul-2011	2136		Country	R. Pospiech	Import
27-Jul-2011	650794		Country	T. XU	Import
04-Nov-2011	666		IEA	R. Pospiech	Questionnaire data entry

Status:
E - Estimated


Comments
Estimate based on historical data.

HOW to use EDMC?

- EDMC **Consistency checks**
- Internal consistency checks
- Cross-questionnaires consistency checks
- Running the checks online



Joint Questionnaires Version 3.4.11.0

  Energy Data Management Center

Home ▶ Questionnaires ▶ Checks ▶ Data transfers ▶ Status report ▶ Downloads ▶ Parameters ▶

RUN THE CHECKS

Cycle:

Questionnaire:

Country:

Year to check:

Internal

Electricity and Heat (Data entry in progress, not validated)

Renewables (Data entry in progress, not validated)



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Unit: Thousand Metric Tons

Historical data series

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Comparison :
QuE / MOS / JODI

- The EDC facilitates data entry (Excel or Manual)
- Consistency checks

HOW to use EDMC?

■ EDMC **Notify**

■ Once you complete a questionnaire **inform** us

■ A consistency **check** will be run automatically



HOW to use EDMC?

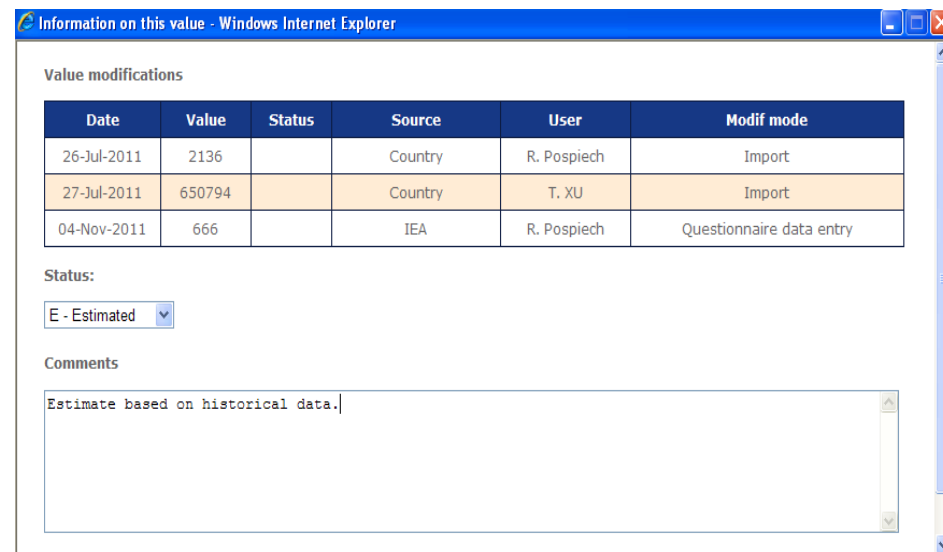
■ EDMC **Monitoring**

■ The EDMC consists of over 170 data sheets!

● And it keeps track on:

- ◆ New Submissions:
- ◆ Which data have been modified?
- ◆ By whom?
- ◆ What was the previous value?

- Data changes are **transparent**. User can follow data “history”



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Conclusion

● WHAT is EDMC?

- ◆ Online reporting tool to facilitate gains in timeliness, completeness and consistency of data submissions .
- ◆ Collects, Checks and Reports Energy Data from National Administration

● WHY is EDMC Important?

- ◆ Integrated tool for data quality (consistency checks, log historical changes)
- ◆ A faster and secure way for Data Submissions

● HOW to use EDMC?

- ◆ Use Online Forms or CSV files for Data Submissions
- ◆ Monitor and check submitted energy data. And assure its quality.

- **Now let's practice the interaction between the excel files and the energydatacenter website (test)**

<http://monthly.energydatacenter.org>