

ENERGY AND WATER SERVICES REGULATORY COMMISSION  
OF THE REPUBLIC OF NORTH MACEDONIA

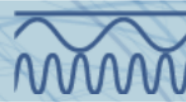
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## ERC Market Monitoring Software Key Features

Martin Martinoski, MBA

2<sup>nd</sup> Trilateral CEER-ECRB-MEDREG Workshop

25 June 2019, Brussels



# Software Toolbox

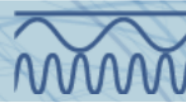
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## 1. MM-Central – Application for administering data collection system

- Administering various user's data (company details, license details, power plants details, etc.)
- Generating unique data templates
- Managing received datafiles and creating database
- Activity logs

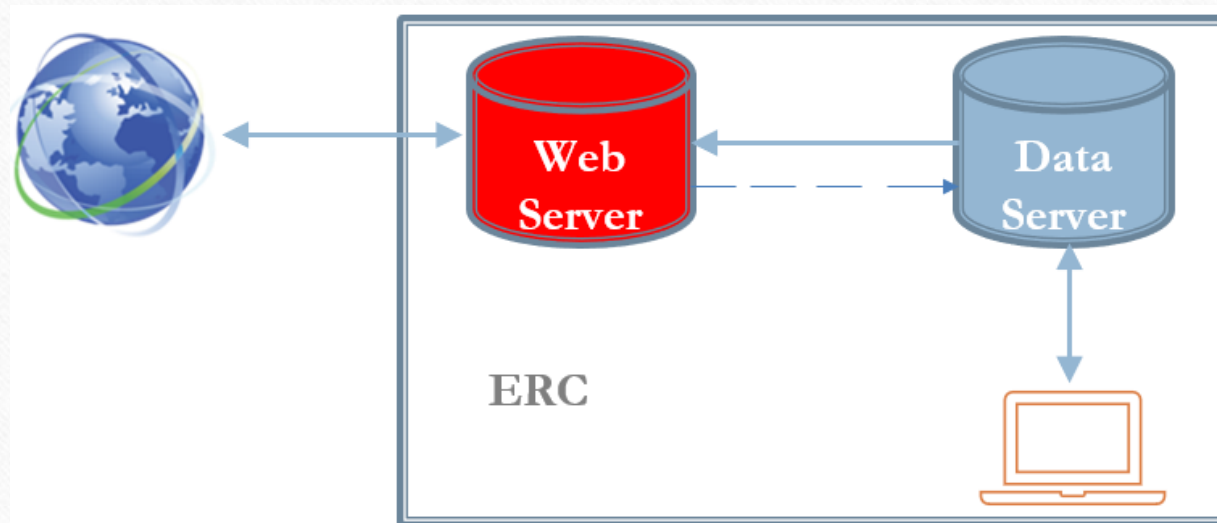
## 2. Web platform <https://monitoring.erc.org.mk/> - for data submitting

## 3. Excel VBA programs for generating analyzed data reports

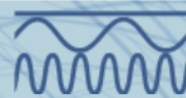


# Data Security Architecture

Maximum data protection is enabled. Data access is allowed only through the PC's within ERC MM Department. There is only one SQL port open through which uploaded data reports on the web server are automatically withdrawn and stored in the data server and by so data access is not allowed from the web server.







# Data Collection

- Generating templates (mm-central) - unique for each user/license/reporting period;
- Communication with the users is through web portal [monitoring.erc.org.mk](http://monitoring.erc.org.mk);
- Generated templates appear on users' profiles, where they download templates, fill in data and upload them back.

Генерирање на обрасци

Обрасци Извештаи База на податоци

Година 2018 Месец 03 Период \* Фирма Сектор \* Лиценца \*

Обрасци Сите Вер. 3.0 Нов месец Темп. 21 Files: 2/179 Креирај Вчитај верзии

P...	Template	Верзија	Креиран	РБ	Образец	Верзија	Креиран	Големина (kB)
1	ee-ods_01	3.0	2018-03-03 16:23:52	1	elem-ee-ods_01_2018-03	3.0	2018-04-02 12:00:31	80
				2	evndist-ee-ods_01_2018-03	3.0	2018-04-02 12:00:35	80
2	ee-ods_03	3.0	2018-02-16 17:39:48	3	elem-ee-ods_03_2018-03	3.0	2018-04-02 12:00:41	44
				4	evndist-ee-ods_03_2018-03	3.0	2018-04-02 12:00:43	44
3	ee-opee_01	3.0	2018-03-04 17:11:31	5	mepso-ee-opee_01_2018-03	3.0	2018-04-02 12:01:27	158
4	ee-ops_01	3.0	2018-02-16 17:58:15	6	mepso-ee-ops_01_2018-03		2018-04-02 12:01:27	
5	ee-proiz_01	3.0	2018-03-10 19:56:51	7	agrogama-ee-proiz_01_2018-03	3.0	2018-04-02 12:02:09	86
				8	elem-ee-proiz_01_2018-03	3.0	2018-04-02 12:02:13	87
				9	evnelektrani-ee-proiz_01_2018-03	3.0	2018-04-02 12:02:18	87
				10	germa-ee-proiz_01_2018-03	3.0	2018-04-02 12:02:23	86
				11	jpstrezevo-ee-proiz_01_2018-03	3.0	2018-04-02 12:02:27	86

РКЕ РЕГУЛАТОРНА КОМИСИЈА ЗА ЕНЕРГЕТИКА НА РЕПУБЛИКА МАКЕДОНИЈА  
ПЛАТФОРМА ЗА ДОСТАВУВАЊЕ НА ПОДАТОЦИ ЗА ЕНЕРГЕТСКИТЕ ПАЗАРИ

Помош Управување со датотеки Прегледи на активности

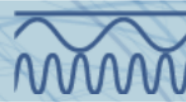
Преглед на образец датотеки

2018

Преглед на образец датотеки - [ 1 / 1 - 1 ]

Година	Месец	Име на датотека	Име на фајл	Период	Година	Месец	Недоставени извештаи
2018	03	feit-ee-trg_01_2018-03.xlsx	feit-ee-trg_01_2018-03.xlsx	01	2018	03	Choose File No file chosen

Симни Прикажи

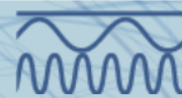


# Data Validation

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- 1<sup>st</sup> Step- Automatic check of received reports (Data server) – if there is an error (corelated cells not filled in with required data, o instead of 0, etc.), notification on the error report is automatically send back to the user via email, as well to ERC MM Department. If the report passes the first automatic check, email notification is sent to the user and MM Department.
- 2<sup>nd</sup> Step- Manual (logical) check of received reports - -if there is an error, the report is sent back to the user with explanation what to be corrected. If the report is ok, automatically goes to the Data Server.
- There is an option for additional manual check after initial approval of the report, if in later stage some issue is detected.





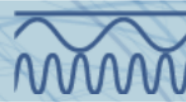
# Data Analysis

- Generating reports with analyzed data (Excel VBA Programs) e.g.

				<b>Reload data</b>		rb	dbTable	xlTable
				Вчитај податоци од база		1	ee_ods_01_Bilans	<a href="#">Bilans</a>
				Export all (.xlsx)		2	ee_ods_01_NabZag	<a href="#">NabZag</a>
Година	2018			Clear data		3	ee_ods_01_Prigovori	<a href="#">Prig</a>
Почетен месец	1	1	јануари			4	ee_ods_01_PromSnab	<a href="#">PromSnab</a>
Краен месец	3	3	март			5	ee_EIC	<a href="#">EIC</a>

Последна промена на	Оператори на дистрибутивен систем													
2018-04-19 15:38:48	Биланс на електрична енергија													
Енергија во	јануари-март 2018													
<b>kWh</b>														
Прв месец			Оператор	Влез во дистрибутивниот систем (kWh)				Излез од дистрибутивниот систем (kWh)						
1				Пренос	ЕЛЕМ	Останати	Вкупно	MV1	MV2	LV1.1	LV1.2	LV2	Кон пренос	
Последен месец	Месеци		ВКУПНО	1,765,773,049	22,247,976	135,537,645	1,923,558,670	80,051,402	208,710,461	28,152,806	107,365,703	1,196,887,429	11,544,119	
3	1	2	1	ЕЛЕМ Скопје	46,905,138	6,278,143	53,183,281	24,613,952	25,232,182	277,225		2,687,753		
	1	3	2	ЕВН Дистрибуција Скопје	1,718,867,911	15,969,833	135,537,645	1,870,375,389	55,437,450	183,478,279	27,875,581	107,365,703	1,194,199,676	11,544,119

- Excel VBA Programs provide over 160 excel sheets with analyzed data and indicators in electricity, natural gas, district heating and oil derivatives markets.

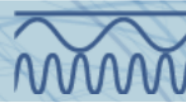


# Customers related data

(collected from Suppliers and DSOs)

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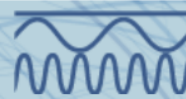
- Number of customers and/or metering points;
- Retail prices and tariffs;
- Number of new connections (requests, approved, realized, average duration);
- Number of disconnections due to unpaid bills or other reasons;
- Complaints (number of received, approved and rejected, as well time of response) on issues related with breach of contracts, connection/disconnection, metering, bills, price transparency, switching, continuity of supply, quality of supply, commercial quality, damage compensation;
- Number of received emails, phone calls, visits, written inquires;
- Number of switches and switching procedure duration;
- Planned and unplanned interruptions (number and duration), SAIDI, SAIFI.



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# Q & A





# Thank you!

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Energy and Water Services Regulatory Commission of the Republic of North Macedonia**

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