

CROSS BOrder management of variable renewable energies and storage units enabling a transnational Wholesale market Coordinator: ETRA Investigación y Desarrollo S.A. SPAIN

**Participants:** 

Centrul Roman al Energiei – CRE. Compania Nationala de Transport al Energiei Electrice TRANSELECTRICA S.A. ROMANIA Institute Of Communications And Computer Systems. Independent Power Transmission Operator SA. Hellenic Electricity Distribution Network Operator SA. Public Power Corporation SA. GREECE COBRA Instalaciones Y Servicios S.A. SPAIN VARTA Storage Gmbh. GERMANY Elektroenergien systemen operator EAD BULGARIA J.P. Elektromreza Srbije Security Coordination Centre SCC ltd. Belgrade. SERBIA Nezavisni Operator sistema u BiH. **BOSNIA - HERZEGOVINA** University of Manchester UNITED KINGDOM HEP – Operator prijenosnog sustava d.o.o. KONCAR – inzenjering za energetikui transport dd. Sveuciliste u Zagrebu fakultet elektrotehnike i racunarstv. CROATIA Univerza v Ljubljani. ELPROS elektronski in programski sistemi doo. **SLOVENIA** Crnogorski Elektroprenosni Sistem. MONTENEGRO Operator na elektroprenosniot sistem na Makedonija. Ss Cyril and Methodius University, Faculty Of Electrical Engineering And Information Technologies. AD Elektrani na Makedonija Skopje – Direkcija. MACEDONIA CyberGrid Gmbh. AUSTRIA

This project has received funding from the european union's horizon 2020 research and innovation programme under grant agreement n° 773430



# ROMANIAN ENERGY CENTER - CRE



9 November 2017, Sofia

**MIHAI PAUN, VICE-PRESIDENT** 

## ROMANIAN ENERGY CENTER (Crossbow

The Romanian Energy Center is a non-governmental and non profit Association representing the interest of state-owned and private companies operating in the Romanian Energy Market, in relation with EU and National Institutions;

Active in all relevant areas including: electricity, oil and gas, coal, renewables, energy equipment and services plus R&D&I, and Legal assistance;

CRE contributes to the European and National decision-making process, promotes infrastructure investments and supports the transition to a decarbonized energy system.

## CRE MEMBERS



17 Members: Public and Private Sector

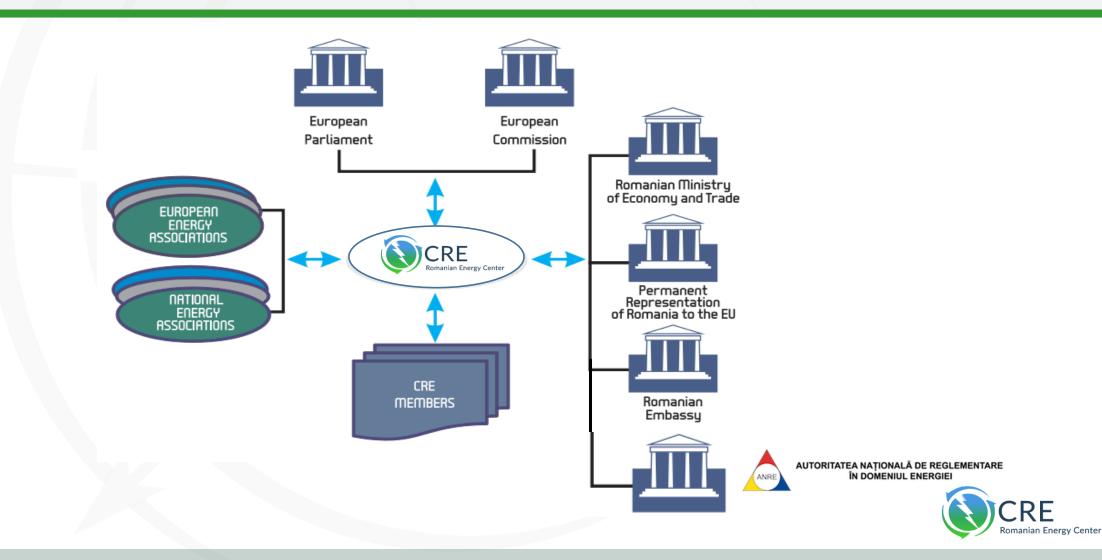
- ADREM INVEST
- BIOENERGY
- CEZ România
- Complexul Energetic Oltenia
- CONPET
- ELECTRICA
- ECRO
- E.ON România
- Electroalfa

- ENERGOBIT
- EXIMPROD
- INSTITUTUL DE STUDII SI PROIECTARI ENERGETICE
- ROMGAZ
- TRACTEBEL ENGENEERING GDF SUEZ
- TRANSELECTRICA
- TRANSGAZ
- **ŢUCA ZBARCEA & ASSOCIATES**



## RELATIONSHIPS





## MAIN ACTIVITIES







## CRE'S POSITION PAPERS



Φοροίζια Centrului Român al Energiei Privind STRATEGIA ENERGETICĂ ΝΑŢΙΟΝΑLĂ A ROMĂNIEI	Oppmenter    Proprioration      Approbarea Memorandumului de Intelegere intre Guvernul României și Guvernul Republicii Interconectării rețeledor de gaze naturale și energie interconectării rețeledur de Modava și România      Document de Poziție al asociației CENTRUL ROMÂNĂ AL ENERGIEI	Control Contro Control Control Control Control Control Control Control Control		Poziția Centrului Român al Energiei Privind PROGRAMUL DE REGLEMENTĂRI ALE ANRE 2018      Document de Poziție al asociației CENTRUL ROMÂN AL ENERGIEI      Ocument 2015	Poziția Centrului Român al Energiei Referitoare la Proiectul de Lege pentru aprobarea Oroporativia Intregrinderilor Publica nr. 109/2011      Doument de Poziția al asociației CENTRUL ROMÂN AL ENERGIEI
And the second s	MOU Between Romania's Guvernment and Republic of Moldova	Risk Preparedness in the Area of SOS	New Energy Market Design	Regulation Programe of ANRE 2016	Corporate Guvernance – Law 109/2011

- Position Paper of CRE on the Preparation of the New EC Directive on Renewables after 2020 (Link)

- Position Paper of CRE on the Modification of Energy Efficiency Law (Link)



### CRE EVENTS ROMANIA ENERGY DAY 2017



"Regional cooperation, a key driver for the Energy Union: Mechanisms and initiatives for the energy industry and policy makers" 6<sup>th</sup> Romanian ENERGY DAY, Bruxelles, 30-31 May 2017

- OBJECTIVE To Inform the representatives of EU institutions in Bruxelles and to contribute to EU decision making process on energy priorities, projects & programs in Central and South-East Europe & in Romania;
- To Facilitate investments in energy infrastructure, to support Energy Market Integration and to increase energy security in the Region;
- To proactively contribute to the development of HV electricity, oil and gas corridors and to increase interconnection capacity in the Region;
- Extended specialised media coverage → e.g. EURACTIV, Calea Europeana, Energynomics.ro, Brussels–Expert.eu





### CENTER FOR DIALOGUE AND COOPERATION IN ENERGY (CDCEP) – 16+1 (crossbow



Cooperation between China and Central and Eastern European Countries 中国—中东欧国家合作

#### 16+1 represents the economic cooperation enhancement format between China and Central and Eastern European Countries

Priority Domains/ Committees	Renewable Energy Sources	Smart Grids	Energy Efficiency	Coal	Nuclear Energy	
Investments and Finance	WG	WG	WG	WG	WG	
Commercial Cooperation	WG	WG	WG	WG	WG	
Research and Development	WG	WG	WG	WG	WG	
Legislation and Regulation	WG	WG	WG	WG	WG	

16+1 Energy Conference and Fair 8-10 November Bucharest



### EUROPEAN PROJECTS - IMPLEMENTATION crossbow

# RESERVE

**Renewables in a Stable Electric Grid** 



NRG\*L

**Enabling Smart Energy** as a Service via 5G Mobile Network advances





**SUCCESS - Securing Critical Energy** Infrastructures



electric

sursa ta de energie

**CROSS BOrder management of variable** renewable energies and storage units enabling a transnational Wholesale market



Wide scale demonstration of Integrated Solutions and business models for European smart **GRID** 



**SOGNO - Service Oriented Grid for the Network Of the Future** EXPERIENTE ÎMPREUNĂ

**CEZ ROMANIA** 

## CRE ROLE IN CROSSBOW



WP	CRE	Total WP	WP	CRE	Total WP
	[pm]	[pm]	$\overline{\mathbf{A}}$	[pm]	[pm]
1	4	131	2	4	179
3	6	93	4	4	191
5	6	129	6	0	156
7	0	125	8	12	182
9	6	128	10	0	158
11	6	185	12	6	359
13	10	369	14	14	90
15	10	129	16	14	148
17	1	84	18	8	199
19	14	162	20	-	-



## CRE – MAJOR ROLE



• WP 14 – Technical evaluation and socio-economic impact assessment [Months: 33-48]

→ Deliverable D14.2: Socio-economic and technical Impact assessment of CROSSBOW integrated solution.

- WP 15 Business models and overcoming local barriers
  → Deliverable D15.3: Identification and recommendation for local non-technical barriers
- WP 16 Scaling-up and replication: Overcoming regional and global barriers

→ Deliverable D16.2: Identification and recommendation for European technical and interoperability barriers;

→ Deliverable D16.3: Identification and recommendation for European non-technical barriers;

• WP 19 – Exploitation, business innovation strategy and contribution to standards

→ Deliverable D19.3: CROSSBOW Contribution to standardization

## CRE – MAJOR MILESTONES



MS	Title	Month	Content
MS 13	Intermediate Evaluation	42	At the end of the preliminary deployment a first evaluation will be performed.
MS 15	Final Evaluation Report, Replication Roadmap and Recommendations to standards	48	At the end of the project, the CROSSBOW complete evaluation of the impact will be publicly available, and recommendations for the replication and scaling-up of the project solutions will be delivered.



CROSS BOrder management of variable renewable energies and storage units enabling a transnational Wholesale market Dr. Mihai PAUN

Vice-President

Mihai.Paun@crenerg.org



For more information visit: crossbowproject.eu