



crossbow

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 – inženjering 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





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

ROMANIAN ENERGY CENTER - CRE



9 November 2017, Sofia

MIHAI PAUN, VICE-PRESIDENT

ROMANIAN ENERGY CENTER



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

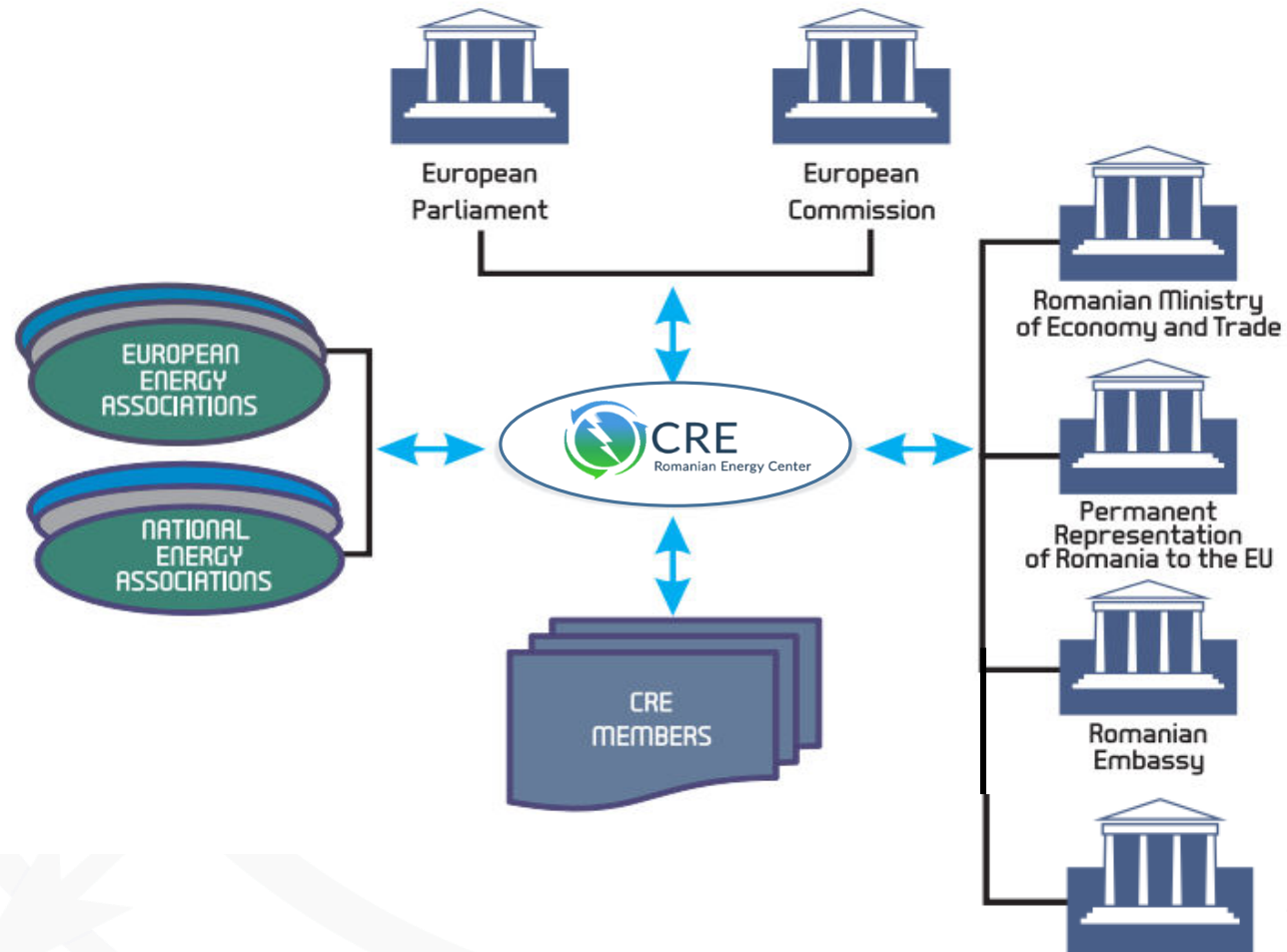


17 Members: **Public** and Private Sector

- 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 ENGINEERING – GDF SUEZ
- TRANSELECTRICA
- TRANSGAZ
- ȚUCA ZBARCEA & ASSOCIATES



RELATIONSHIPS



AUTORITATEA NAȚIONALĂ DE REGLEMENTARE
ÎN DOMENIUL ENERGIEI



MAIN ACTIVITIES



Position papers to Romanian and European Energy Policy consultations



EU Projects



Events in Romania and Brussels



Coordinator of the Center for Dialogue and Cooperation 16+1 – China CEEC

CRE'S POSITION PAPERS



Romania's
National
Energy
Strategy

MOU Between
Romania's
Government
and Republic of
Moldova

Risk
Preparedness in
the Area of SOS

New Energy
Market Design

Regulation
Programme of
ANRE 2016

Corporate
Governance –
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”

6th 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



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



Renewables in a Stable
Electric Grid



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



SUCCESS - Securing
Critical Energy
Infrastructures



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



EXPERIENȚE ÎMPREUNĂ.

CRE ROLE IN CROSSBOW



WP	CRE	Total WP		WP	CRE	Total WP
	[pm]	[pm]			[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