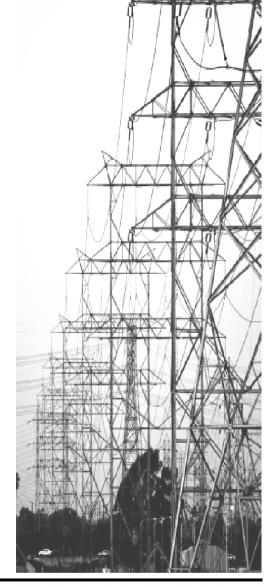




IENE – 6th South East Europe Energy Dialogue Redefining South East Europe's Energy Map

Thessaloniki, 30 - 31 May 2012

Towards a Regional Electricity Market



Simon Uzunov Energy Community Secretariat www.energy-community.org



ENERGY 2020

EU STRATEGY FOR COMPETITIVE, SUSTAINABLE AND SECURE ENERGY

ENTSO-E TYNDP

CLUSTERS OF NEW INVESTMENT IN CSE REGION

ENERGY COMMUNITY

A SINGLE REGULATORY SPACE FOR TRADE IN NETWORK ENERGY

TOWARDS A REGIONAL MARKET

REGIONAL POLICIES AND PROJECTS



EU Energy Policy

2007 – Lisbon Treaty laid down the central goals for the EU energy policy:

- SECURITY OF SUPPLY
- COMPETITIVENESS
- SUSTAINABILITY



- around the common objective of ensuring the uninterrupted physical availability of energy products and services on the market, at a price which is affordable for all consumers (private and industrial) while contributing to the EU wider social and climate goals

2007 – **EU Council** adopted energy and climate change objectives for 2020:

- REDUCE GREENHOUSE GAS EMISSIONS BY 20%
- INCREASE THE SHARE OF RENEWABLE ENERGY **TO 20%**
- IMPROVE ENERGY EFFICIENCY BY 20%
- supported by the EU parliament and embedded in the Europe 2020 Strategy for smart, sustainable and inclusive growth (2010)



2010 – Inquiries¹ indicate partial progress:

INTERNAL ENERGY MARKET IS STILL FRAGMENTED

- Transparency, accessibility and diversification has not reached expectations, there are **barriers to open competition**
- Development of companies and investments beyond national borders is still hampered by diverse national rules and practices
- Implementation of internal market legislation is incomplete, with over 40 infringement procedures
- Energy efficiency measures are insufficient leaving vast potentials untapped
- The move towards renewable energy and greater efficiency in transport is developing too slowly

SECURITY OF SUPPLY IS FRAGILE

- Part of the foreseen investments is either postponed or late
- Significant parts of the existing production capacities shall be **shut down by 2020** out of obsolescence which means need for **replacement and expansion of capacity**, finding secure non-fossil fuel alternatives and adaptation of networks to renewable sources
- There is no common approach with respect to the countries **suppliers of gas and transit countries**, as well as with respect of **exploitation of domestic potentials** of fossils fuels



¹ EC Communication COM (2010) 639 Final - 10 November 2010



2011 – Energy Strategy 2020¹

- BASIC ATRIBUTES OF THE ENERGY STRATEGY
- Measures focusing on energy consumption decoupling economic growth from growth of energy consumption, pursue an active energy-savings policy (especially in transport and construction), as well as energy storage and electro-mobility



- On the supply side priorities are twofold streamlined on development of competitive and secure sources of energy renewable sources must be not only sufficiently applied to meet the targets but also to ensure that the renewable energy is economically competitive by 2020
- Natural gas and oil rising demand and import requirements call for diversified and safe supply routes
 - FIVE PRIORITIES OF THE ENERGY STRATEGY
- Achieving an energy-efficient Europe
- Building a truly pan-European integrated energy market
- Empowering consumers and achieving the highest level of safety and security
- Extending Europe's leadership in energy technology and innovation
- Strengthen the external dimension of the EU energy market

¹ EC Communication COM (2010) 639 Final - 10 November 2010



2011 – Energy Strategy 2020¹

FREE MOVEMENT OF ENERGY

- Market liberalization can not fulfil its targets competitive prices as well as sustainable energy, unless robust efforts are made to create a more integrated, interconnected and competitive market
- Eliminate all remaining obstacles to competition from the market (fragmentation, national treatment, concentration, monopoly position, overuse of regulated prices, subsidies) and enforce competition on national level
- develop a renewable energy market ensure that the legislation is fully implemented, and apply adequate support schemes (sustainable, predictable, balanced, cost-effective, consistent with technology development, not hindering competition, and with required degree of convergence and harmonization between jurisdictions)
- The electricity (and gas) market can function properly only if energy can freely flow wherever it is needed development of needed infrastructure remains one of the key challenges, in particular in the cases where:
 - a) It enables to utilize renewable energy in the same manner and in combination with "classic" energy,
 - b) In the regions where it is technically and technologically underdeveloped or in bad condition
 - c) It provides interconnection of the EU market with the neighbouring countries

TRIACE

COLUMN STREET

¹ EC Communication COM (2010) 639 Final - 10 November 2010



2011 - Energy Strategy 2020¹

- FREE MOVEMENT OF ENERGY (2)
- Market development gains momentum through implementation of the "Third Energy Package" - among else through the establishment of ACER and the Networks of the Transmission System Operators (ENTSO-e, ENTSO-g) and Regional initiatives (Energy Community, Baltic Market, Mediterranean Ring, Eastern Partnership, etc.)



- Provided the supply remains stable the natural gas will continue to play the key role in the EU energy mix
 in the coming years and even gain importance as a back-up fuel for volatile electricity generation which further underlines the importance to diversify gas imports, both pipelines and LNG terminals
- Administrative procedures shall be simplified and shortened for the "Projects of European Interest" aimed to serve:
 - a) Security of supply
 - b) Solidarity, or
 - c) Integration of renewable energy



¹ EC Communication COM (2010) 639 Final - 10 November 2010



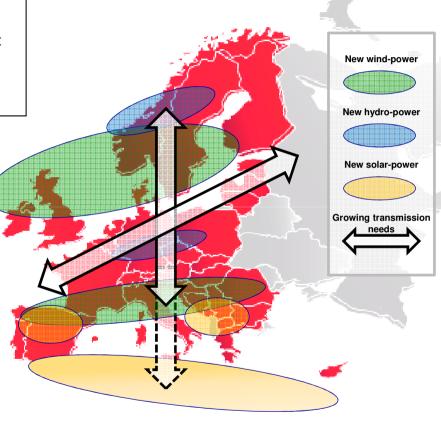
TYNDP 2010

FIRST REPORT for TYNDP

- serves as basis for seeking consistency between national and regional plans
- allows ENTSO-E to identify main improvement areas and best means for planning
- the main concern is lack of social acceptance that severely delays or jeopardises the realisation of transmission projects



- □ (**SoS**) Security of Supply
- (RES) tackling climate change and integration of Renewable Energy Sources
- (IEM) economic efficiency and realization of the Internal Energy Market

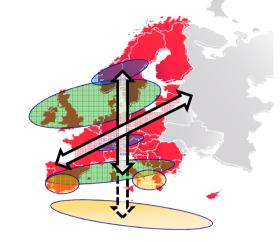




TYNDP 2010

FIRST REPORT for the TYNDP

EU policy priorities are important but not sole drivers for grid investment "of pan-European significance" – ENTSO-E identified SEVEN main investment clusters



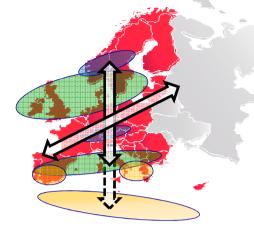
ENTSO-E main investment clusters

- Massive RES integration in the North part of Europe the connection of RES, mainly wind located in remote areas with low load requirements, investments are required in
 - Connection to the network,
 - Increased onshore transmission capacity
 - Efficient balancing of the system utilizing available and future hydroelectric facilities
- Massive RES integration in the South part of Europe the connection and transmission of RES, mainly wind, hydro and solar mainly in the Iberian Peninsula (SWE and CSE), requires
 - Internal reinforcement
 - increased interconnection capacity with the rest of Europe (France)



TYNDP 2010

FIRST REPORT for the TYNDP

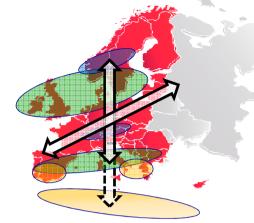


- ENTSO-E main investment clusters (2)
 - Massive N-S and E-W flows in the South-East and Central South regions (SEE and CSE)
 dictated by the power balances and market prices of the countries including GR, FYROM, AL and IT as dominant importers of electricity. Includes
 - Strengthening of the regional network (assist market integration),
 - New generation (BG, HU, HR) for the N-S direction
 - Interconnection of new systems (TY, MD, UA) for the E-W direction
 - New pump-storage capacities (AT, CH)
 - Strong correlation with wind-power generation (DE, in the future FR, IT)
 - □ **Integration** of the **Baltic States** According to the EC Energy Market Interconnection Plan (2008), aiming at full integration into the EU energy market of the three Baltic States (LT, LV, EE)
 - Strengthening of (new) interconnections with the neighbouring EU Countries (FI, SE, PL)



TYNDP 2010

FIRST REPORT for the TYNDP

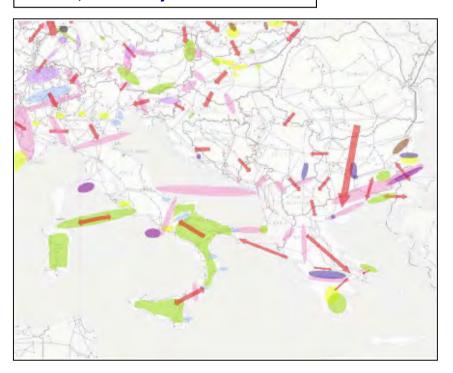


- ENTSO-E main investment clusters (3)
 - New Conventional Power Plants connection, complementary to RES, all over Europe (totalling estimated 100 GW in the next decade) aiming
 - To replace old decommissioned plants, or
 - To cope with load growth and system balancing
 - □ Power supply to some EU cities and regions requiring reinforcement (in ES, FR, HU, SK, PL, CZ, etc) as this could
 - Interact with other investment needs in the area, or
 - Limit the available cross-border capacity
 - Market integration with new clustering of generation units, variation of sources and generated power and new centres of consumption all over Europe to ensure that wherever power is available it can be efficiently brought to consumption, requires
 - Development and adaptation of grid access rules
 - Propose most appropriate market framework



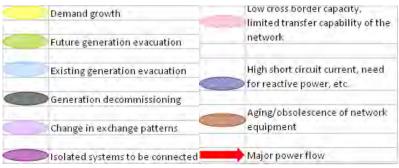
TYNDP 2010

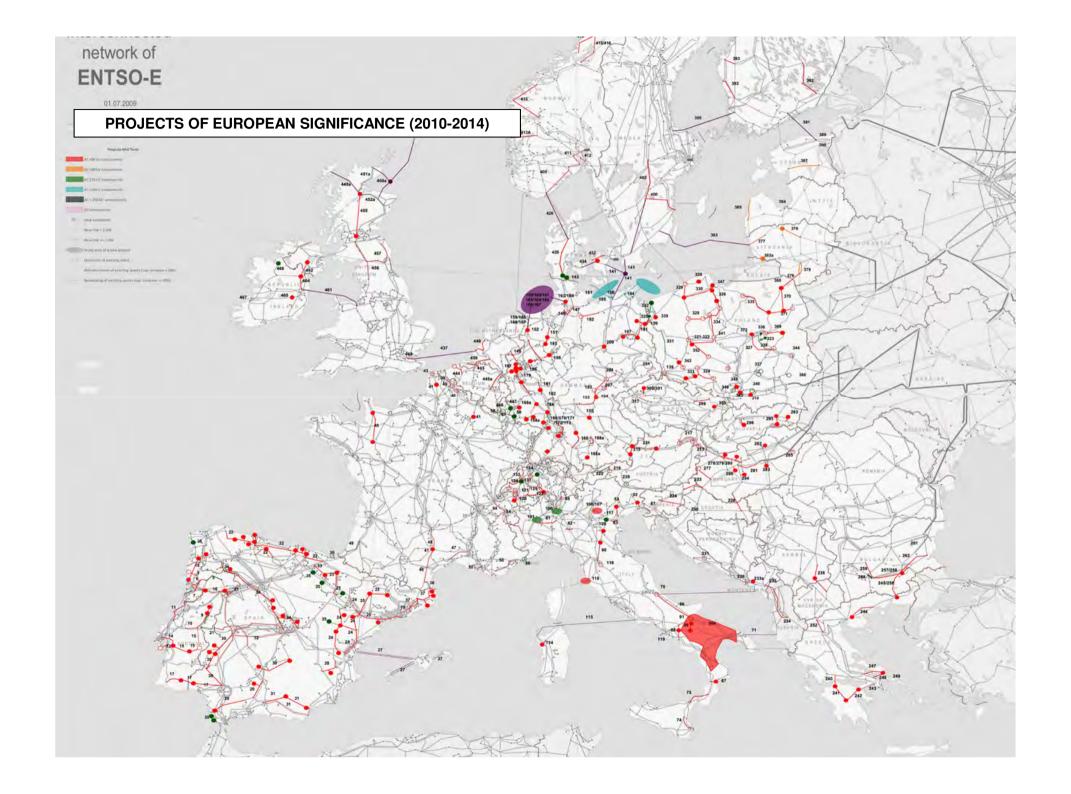
Grid investment needs up to 2015 Greece, South Italy

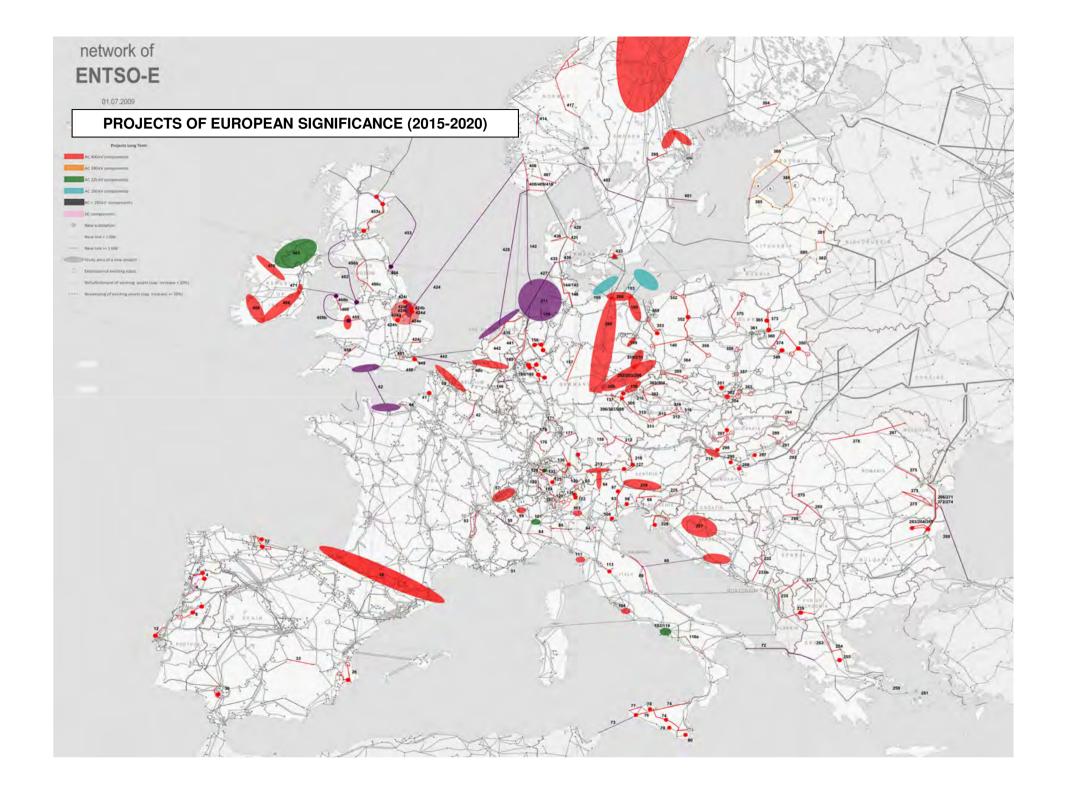


Grid investment needs after 2015 other Balkan countries, Bulgaria, Romania











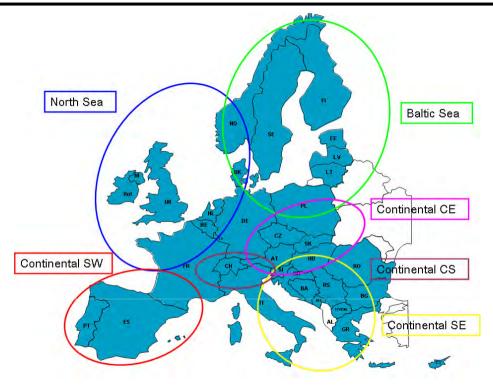
TYNDP 2012

REGIONAL GROUPS for TYNDP

- * ENTSO-E is divided in 6 Regional Groups for grid planning and system development (NS. BS. CSW. CCE. CCS. CSE)
- * The Continental SE group consists of 11 TSOs (GR, IT, BG, FYROM, ME, BA, HR, RS, RO, SI, HU), one corresponding member (CY), and one member in data provision and modelling (AL)

TYNDP package

- (TYNDP) the Ten Year Network Development Plan is focused on projects of pan-European significance detailed in each RIP
- (RIP) the Regional Investment Plans document the overlap between National Development Plans (TSO) and the TYNDP – focused on project planning at a regional level.
- (SO&AF) Scenario Outlook and Adequacy Forecast analyses future system adequacy at mid- and longterm

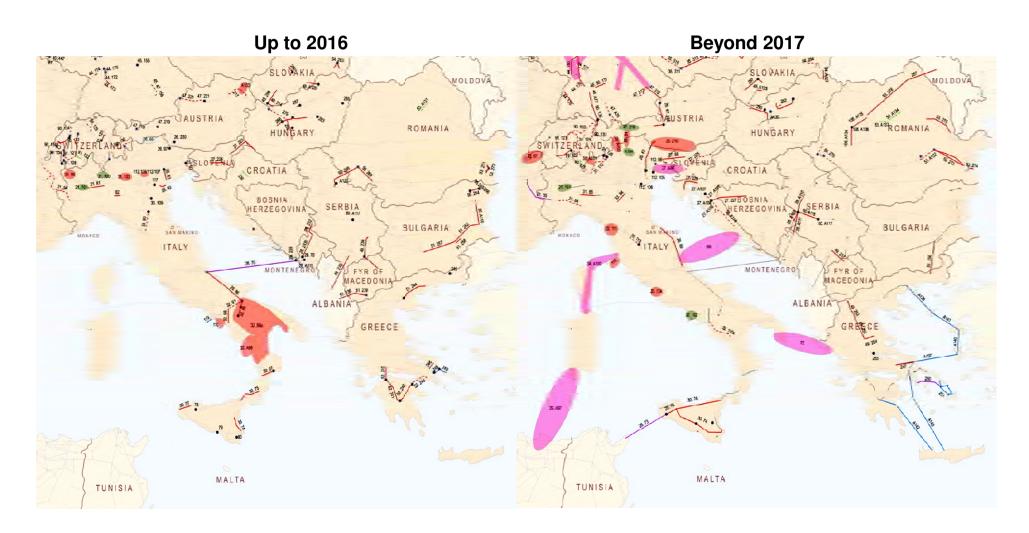






TYNDP 2012

MID-TERM AND LONG-TERM INVESTMENTS IN CSE

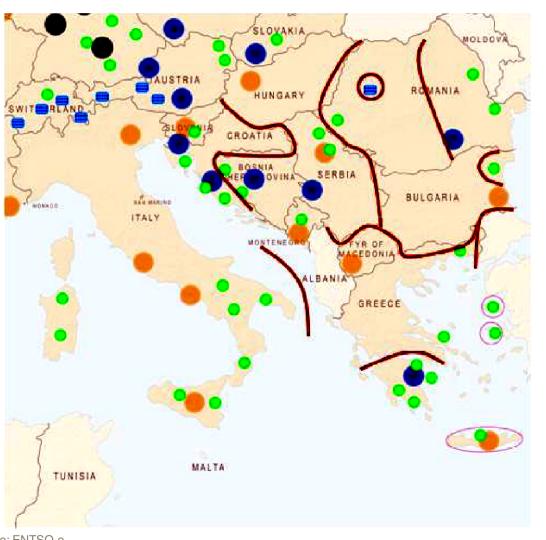


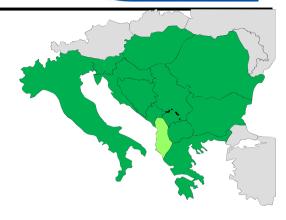
Source: ENTSO-e



TYNDP 2012

DRIVERS FOR SYSTEM EVOLUTION IN CSE

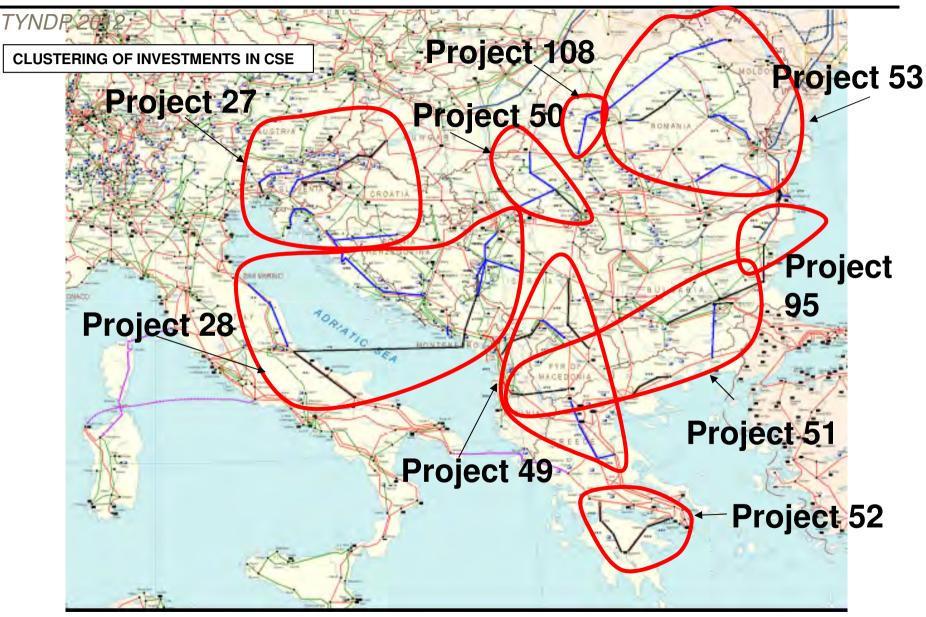




Legend

- **RES** generation
- Pumping
- Demand growth
- New conventional generation
- Generation decomissioning
- Isolated systems
- TYNDP 2012 boundaries



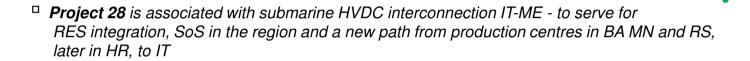




TYNDP 2012

CLUSTERING OF INVESTMENTS IN CSE

Main PROJECT CLUSTERS



- Project 51 is related to Corridor 8, connecting the BG coast on the Black Sea with the AL coast on the Ionian Sea increase of power transfer capacity between TY and BG, GR, MK, AL.
- Project 95 comprises construction of 2 x 400 kV SS and 3 lines in BG to accommodate RES penetration
- Project 52 comprises extension of 400 kV network in Peloponnese (GR) aimed to increase SoS and considerable amount of RES to be integrated
- □ **Project 27** is aimed to increase transfer capacity SI IT, SI HU, SI HR and HR BA, improving SoS and diversifying SoS increasing resilience and flexibility of the network.
- Project 49 is related to Corridor 10 and aims to increase transfer capacity and SoS in MK, AL and GR from the direction of RO, BG and RS

Source: ENTSO-e



TYNDP 2012

CLUSTERING OF INVESTMENTS IN CSE

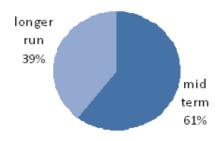
Main PROJECT CLUSTERS

- Project 50 aims to increase power transfer from RO and BG as main exporters in the area towards RS and HU, also enforcement for the N-S corridor from UA and RES integration in RS, RO
- Project 53 comprises investment in RO to accommodate integration of RES and conventional generation but also as transfer capacity from UA
- Project 108 is also purely RO cluster, to allow integration of new pump-storage HPP of 1000 MW aimed to assist the safe operation of RO system and integration of RES in the area

NEW INVESTMENT PROJECTS

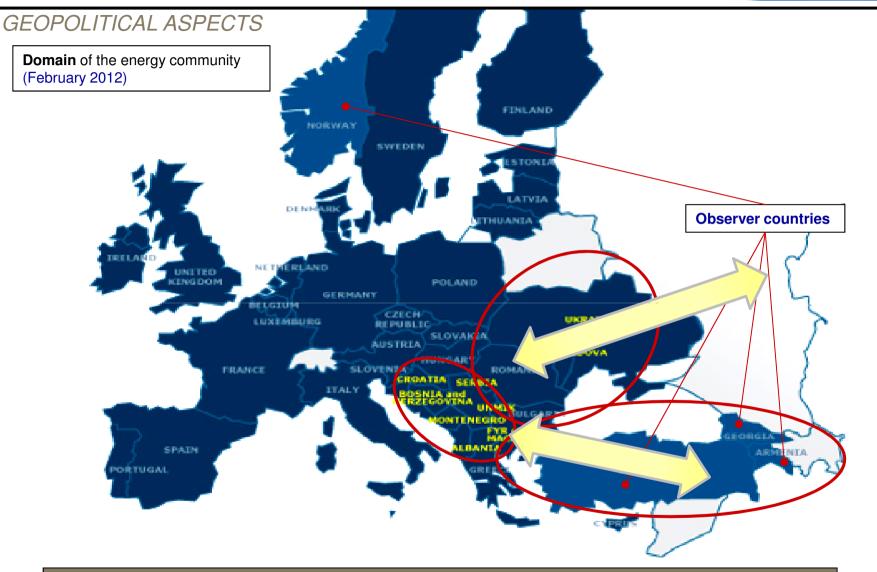
- □ 9 Project clusters are identified tin CSE
- □ 68 investments of pan-European significance are proposed
- □ 5700 km of new lines are foreseen
- □ Close to €10.8 billion of investments are required

Investment costs



ENERGY COMMUNITY



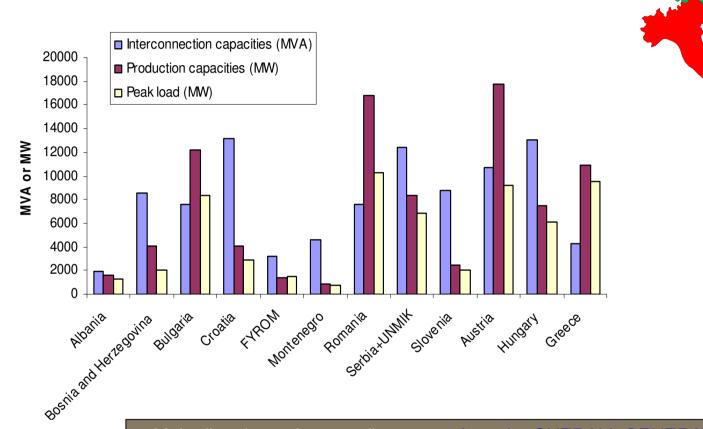


- ➤ The interest in the Energy Community is shifting to the EAST (following the EU Eastern Partnership initiative)
- > The Contracting Parties are located on some of the main energy corridors between EU and Asia

ENERGY COMMUNITY



GENERATION ADEQUACY (2010)



Main directions of energy flows stem from the OVERALL GENERATION ADEQUACY - export role of Bulgaria, Romania, Austria, Bosnia and Herzegovina and Ukraine, while importers are Greece, Albania, Montenegro, Former Yugoslav Republic of Macedonia, Kosovo* and Italy

Source: SECI TSP Project



STRUCTURE

Participation in the energy community (February 2012)

9 Contracting Parties

- Albania
- Bosnia and Herzegovina
- Croatia
- FYR of Macedonia
- Moldova
- Montenegro
- Serbia
- Ukraine
- Kosovo *

4 Observers

- Armenia
- Georgia
- Norway
- Turkey

15 Participants

- Austria
- Bulgaria
- Cyprus
- Czech Republic
- France
- Germany
- Helenic Republic
- Hungary
- Italy
- The Netherlands
- Poland
- Romania
- Slovakia
- Slovenia
- United Kingdom
- The European Union
- ➤ Moldova (2010) and Ukraine (2011) acceded to the Treaty which tripled the energy market (from 26 to 73 million inhabitants)
- ► In October 2011 Armenia acquired the status of observer and Poland became a participant



ENERGY POLICY

Energy Policy in the EU

Three main OBJECTIVES

- sustainability
- security of supply
- competitiveness
- ➤ Establishment of EU Internal Energy Market

Energy Policy of the SEE countries

The same objectives in a more DEMANDING ENVIRONMENT

- no common legal platform
- no regional legal enforcement
- deteriorated energy infrastructure
- limited own investment potentials
- fragmented political environment
- economic and social disadvantages
- perception of political instability

A common ADVANTAGE:

policy for accession to the EU

> Establishment of a functional REGIONAL Energy Market

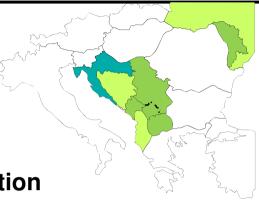


Status of implementation (February 2012)

- **Advanced level** of overall implementation:
 - Croatia



- The Former Yugoslav Republic of Macedonia
- Montenegro
- Moldova
- Serbia
- Kosovo*
- Intensive ongoing activities on the primary legislation
 - Albania
 - Bosnia and Herzegovina
 - Ukraine
- ➤ <u>A significant gap exists</u> between TRANSPOSITION (formal adoption) of the provisions from the relevant Acquis and its practical IMPLEMENTATION (enforcement through corresponding Rules and Instruments)
- > <u>All Contracting Parties</u> have established Regulatory Authorities and developed comprehensive regulatory frameworks however still missing substantial elements for effective liberalization of the market and support for investments in new energy infrastructure (power generation)



ENERGY COMMUNITY



IMPLEMENTATION OF THE TREATY

Status of **local market** development

ALBANIA

- A single, dominant state-owned power generation, single buyer model
- The single distribution company has been privatized, operates on low liquidity
- The system operator OST operates independently
- Competitive retail market does not exist
- Retail prices on low level, very low collection rate and high level of losses
- Power exchange does not exist
- Balancing market does not exist
- Regulated prices available for large industry customers

> <u>Albania</u> has privatized its distribution network and supply activities (CEZ from the Czech Republic) but almost half of the revenue is not collected, facing problems with bad debts. Albania. Is critically insufficient in generation adequacy operating more than 95% hydro generation.



Status of **local market** development



BOSNIA AND HERZEGOVINA

- Three state-owned power utilities
- The system operator NOS BiH operates independently. The transmission company (Elektroprenos) suffers from chronic mismanagement.
- Competitive retail market does not exist (one active eligible customer)
- Retail prices on moderate level
- Power exchange does not exist
- Balancing market does not exist
- Regulated prices available for large industry customers
- Low overall market liquidity

> <u>Bosnia and Herzegovina</u> is net exporter of electricity. The political environment is relatively complex which makes the reform process significantly lengthy and cumbersome.



Status of **local market** development



CROATIA

- The system operator HEP OPS operates within HEP Holding
- Competitive retail market does not exist (MOST consumers supplied by HEP)
- Retail prices on moderate level
- Power exchange does not exist
- Balancing market does not exist
- Regulated prices available for large industry customers
- Low overall market liquidity
- Switching rules developed and applied
- Eligibility criteria enforced for all customers

> <u>Croatia</u> started its process of wholesale market opening and made first steps toward market coupling in the border with Hungary



Status of **local market** development



- A dominant state-owned power generation company
- The single distribution company has been privatized
- The system operator MEPSO operates independently
- Retail market is open for major industry customers
- Retail prices on low level
- Power exchange does not exist
- Balancing market does not exist
- Low overall market liquidity
- Cross-border capacity allocation "pay-as-bid"

> The Former Yugoslav Republic of Macedonia is a net importer for 30% of its consumption. Distribution is privatized (EVN fro Austria).





Status of **local market** development

MONTENEGRO

- A single, dominant state-owned power utility
- The system operator Elektroprenos operates independently
- Competitive retail market does not exist. One customer switches the supplier
- Retail prices on moderate level
- Power exchange does not exist
- Balancing market does not exist
- Regulated prices available for large industry customers
- Low overall market liquidity
- Cross-border capacity allocation "pay-as-bid"

> Montenegro is net importer of electricity, inherently dependent on the system of Serbia for its security of supply.

Large part of the generation company has been privatized.

ENERGY COMMUNITY



IMPLEMENTATION OF THE TREATY

Status of **local market** development

SERBIA

- A single, integrated state-owned power utility
- The system operator EMS operates independently
- Competitive retail market does not exist
- Retail prices on low level
- Power exchange does not exist
- Balancing market does not exist
- Regulated prices available for large industry customers
- Significant and improving overall market liquidity
- Cross-border capacity allocation "pay-as-bid"

> <u>Serbia</u> does not participate in the regional capacity allocation project (CAO) but has taken steps towards market coupling with Hungary (and potentially Romania and Bulgaria)

ENERGY COMMUNITY



IMPLEMENTATION OF THE TREATY

Status of **local market** development

KOSOVO*

- A single, dominant and integrated state-owned power utility, single buyer model
- The system operator KOSTT operates independently
- Competitive retail market does not exist
- Retail prices on low level, very low collection rate and high level of losses
- Power exchange does not exist
- Balancing market does not exist, balancing assisted by Serbian utility EPS
- Regulated prices available for large industry customers
- Capacity allocation performed by the Serbian operator EMS

><u>KOSOVO</u>*_Is inherently suffering from drastic insufficiency of own generation capacity and low adequacy (almost all thermo generation), endangered security of supply (regular load shedding) and deteriorated distribution network including low payment **dis**cipline. Privatization of the distribution and retail supply is in preparation.



ENERGY COMMUNITY FRAMEWORK

Main policy drivers remain the same

Small and fragmented markets
 (multiple borders, multiple rules, fragmented demand)



- Concentrated and bundled generation (lack of transparency and cost-reflectivity)
- Exclusive approach to energy supply (exclusive rights or priorities of access, reserved capacities)
- Fragmented legislation (adverse and incompatible for market integration)
- Need for Diversification of trading platforms
 (OTC, spot market, real-time, balancing, capacity trading)
- Compatible regulation (dispute settlement, reciprocity, mutual recognition of rules)
- Safety and mutual assistance (in case of disruptuion and sudden crisis)
- Large infrastructure investment (electricity transportation, power generation, RES)



REGIONAL COOPOERATION

SEE REGIONAL COOPERATION Initiatives

Regional recognition of licences (trading, generation, supply)

RECIPROCITY (no preferences, free establishment) in the national legislation INTEGRATION (ECRB project for common rules for licencing – EU compatibility) DISPUTE SETTLEMENT on regional level

Regional market Monitoring - project

SCOPE OF DATA relevant for market monitoring (agreement with operators)
MONITORING PLATFORM under development (ENTSO-e compatibility)

Regional Balancing market - project

IMBALANCE SETTLEMENT procedures on local level CROSS-BORDER BALANCING under development (ENTSO-e compatibility)

Compatible Market Rules – project (ENTSO-e)

ENTSO-e GRID CODES under development (ENTSO-e project)
COMPATIBLE MARKET RULES (Energy Community project)
REMIT - REgional Market Integrity and Transparency (ENTSO-e project)

Regional Energy Strategy - project

GENERATION ADEQUACY – demand forecast (SCENARIOS) NEW GENERATION CAPACITY investment projects CRITERIA for project assessment from a regional perspective

The two <u>most advanced</u> projects involving the ECRB are the WHOLESALE MARKET OPENING (WMO) project addressing the development of new trading platforms, and the COORDINATED AUCTION OFFICE (CAO) project for establishment of a regional capacity allocation mechanism in the South East Europe region



SEE REGIONAL WMO Project

REGIONAL ASPECTS of the Action Plan

ESTABLISHMENT OF A COMMON REGIONALLY COORDINATED
 CB CAPACITY ALLOCATION (CONGESTION MANAGEMENT) MECHSNISM

Based on the CAO Project and in coordination with corresponding initiatives

 AGREEMENT AND IMPLEMENTATION OF COMMON RULES FOR AUTHORIZATION OF TRADING ACTIVITIES (RECOGNITION OF LICENCES)

Based on the ongoing **ECRB** initiative and in compliance with corresponding EU practices

 ESTABLISHMENT OF COMMITMENT AND TIMELY IMPLEMENTATION OF THE THIRD ENERGY LEGISLATIVE PACKAGE BY ALL CONTRACTING PARTIES

Based on the provisions and timeframe of the established Implementation Project

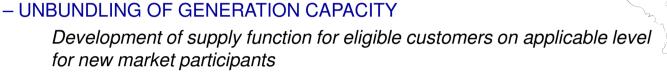
- ACTIVE ENGAGEMENT ON COMPLIANCE, COOPERATION AND ASSOCIATION WITH ENTSO-e AND ACER
- EFFECTIVE PLANNING AND IMPLEMENTATION OF INVESTMENT PRIORITIES FOR DEVELOPMENT OF THE TRANSMISSION AND GENERATION INFRASTRUCTURE



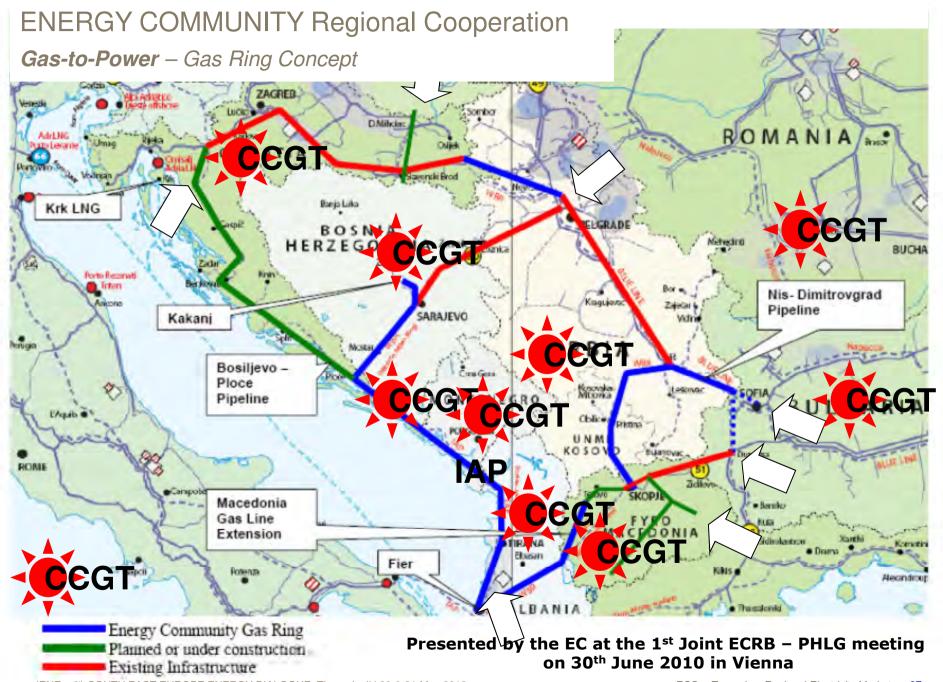
SEE REGIONAL WMO Project

LOCAL ASPECTS of the Action Plan

UNBUNDLING OF SUPPLY FROM INCUMBENT GENERATION



- ADEQUATE TREATMENT OF ELIGIBILITY
 - if necessary with transitional support from the state authorities in a transparent and non-tariff-based manner
- ADOPTION AND IMPLEMENTATION OF MARKET RULES WHICH ADEQUATELY ADDRESS BALANCE RESPONSIBILITY AND BALANCING MECHANISMS
 Based on commercial principles (market-based)
- ADJUSTMENT THE REGULATORY POWERS IN ORDER TO EFFECTIVELY COPE WITH MONITORING OF MARKET CONCENTRATION AND CB CAPACITY ALLOCATION
- INCREASE OF ALL ASPECTS OF TRANSPARENCY TO THE REQUIRED LEVEL
- PHASING OUT OF REGULATED SUPPLY PRICES FOR THE ELIGIBLE CUSTOMERS
- DEVELOPMENT AND IMPLEMENTATION OF SCHEMES AND RELIABLE MECHANISMS
 FOR PROTECTION OF SOCIALLY VULNERABLE CUSTOMERS (HOUSEHOLDS)





THANK YOU FOR YOUR ATTENTION

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence