

SECI Regional Electricity Projects

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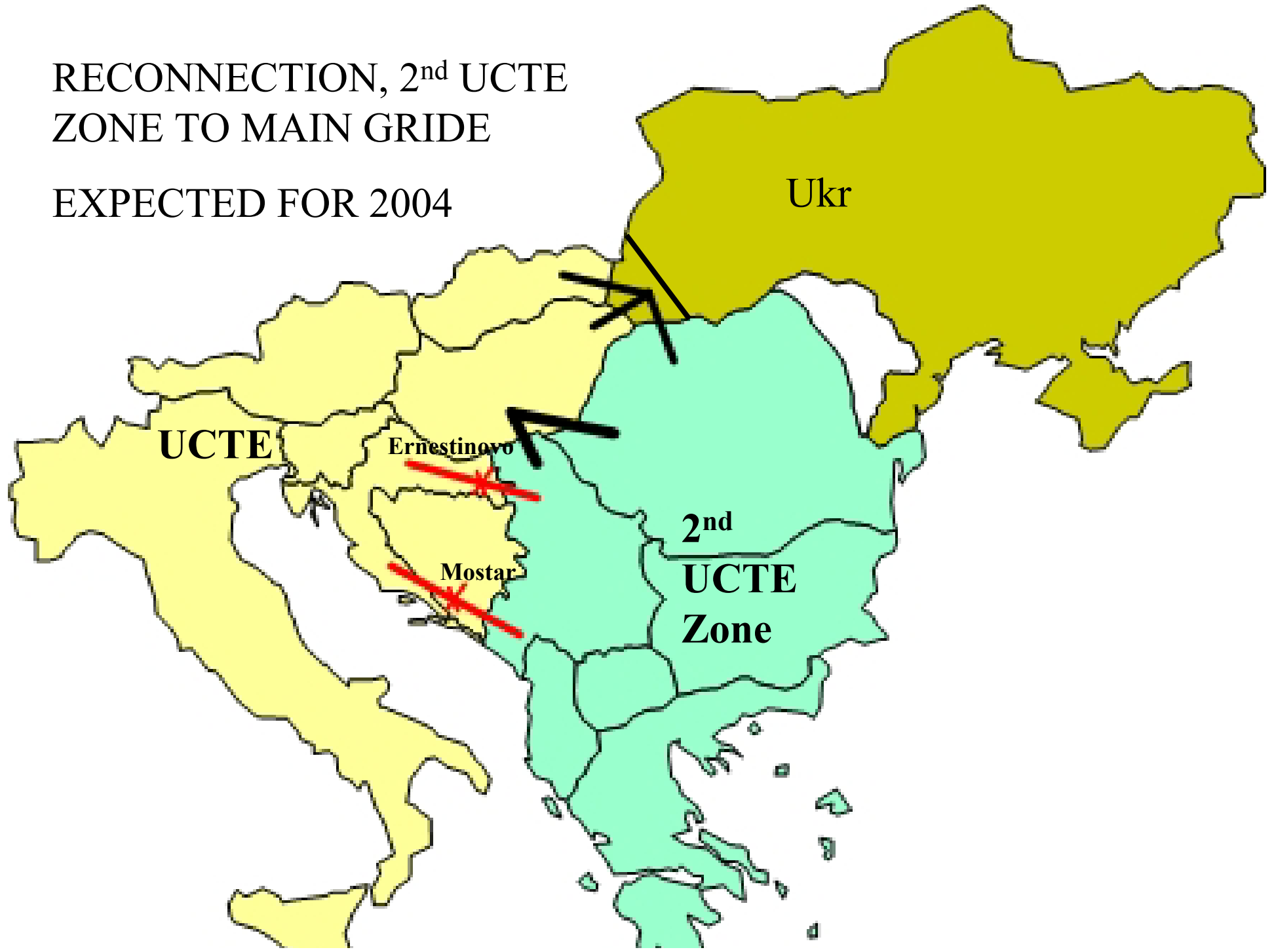
Contents:

- Introduction and SEE Region Definition
- SEE Power Systems status and Reconnection to UCTE
- SECI Electricity Project Group
- Regional Power Sector Investment aspects

Participating Countries/Companies

- Albania, KESH
- B&H (3+1)
- Bulgaria, NEK
- Croatia, HEP +EIHP
- Greece, HTSO
- Hungary, MVM
- Macedonia, ESM
- Romania, Transelectrica
- Slovenia, ELES
- Turkey, TEIAS
- YUG, Montenegro, EPCG
- YUG, Serbia, EPS+EKC
- Kosovo, UNMIK+KEK

RECONNECTION, 2nd UCTE
ZONE TO MAIN GRIDE
EXPECTED FOR 2004



SECI Electricity Project Group

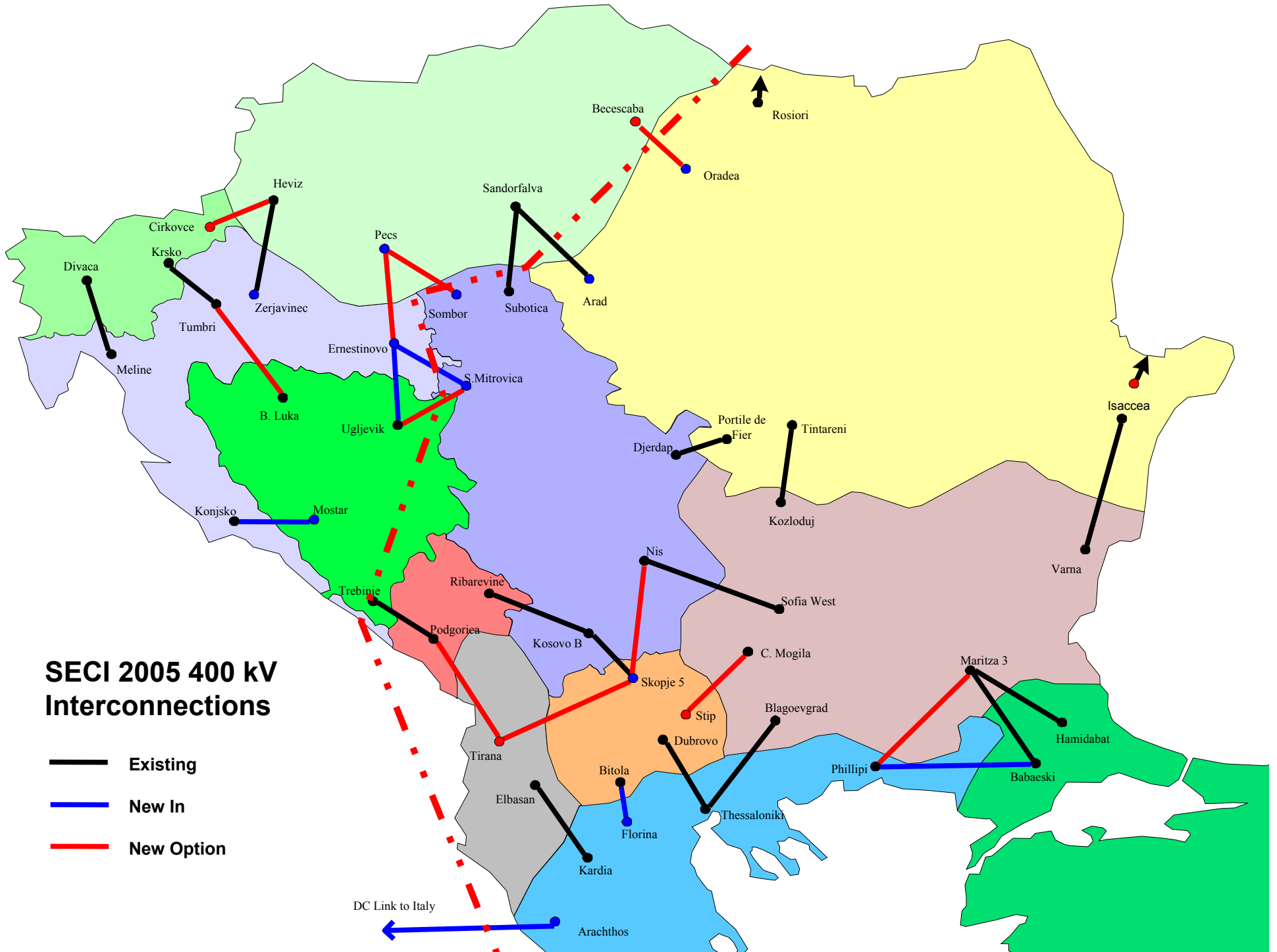
- SECI (South East European Cooperative Initiative) Electricity Project Group was established in 1998
- Governmental initiative, Macedonia hosted the project Group & ESM organizational & experts coordination
- SECI Project Group, in the initial phase, prepared the TORs for 5 Projects of common interest
- Few practical projects are performing, mainly supported by USAID and participating companies

Three SECI Project's activities

- Teleinformation System Among National Dispatch Centers/TSOs of SECI Countries
(1st phase 2000/01, 2nd phase 02/04)
- Regional Transmission System Planning
(1st phase 2001/02, 2nd phase 2003/04)
- Regional Role of Hydro Generation in the light of REM (performed 2002/03)

Regional Interconnection Aspects

**Based on SECI Transmission
Planning Project**



New Transmission Interconnection Investments

Project	Countries involved	Current status	Length [km]	Financing
Ernestinovo – Pecs	CRO, HUN	Pre-FS	90	Open
Sombor – Pecs	YUG, HUN	Prep or FS	80	Open
Nis – Skopje 5	YUG, MKD	FS	195	GRE
S. Mitrovica – Ugljevik	YUG, B&H	Prep. Construction!	75	Open, Int.!
B. Luka – Tumbri	B&H, CRO	Idea	230	Open
Bekescaba – Oradea	HUN, ROM	FS	92	EBRD
Elbasan – Tirana	ALB	FS		GRE
Tirana – Podgorica	ALB, SCG	FS	203	KFW!?
Tirana – Kosovo B	ALB, SCG	FS	~ 200	KfW! WB?
Tirana – Skopje	ALB, MKD	Prelim. Analyses	~ 200	Open
Maritza 3 – Filippi	BUL, GRE	Decision for constr.	257	
Filippi - Babaeski	GRE, TUR	Prep. Construction		
Bitola – Florina	MKD, GRE	Prep. Construction	40	MKD, GRE
Stip – C. Mogila	MKD, BUL	Prep. Construction	150	EBRD

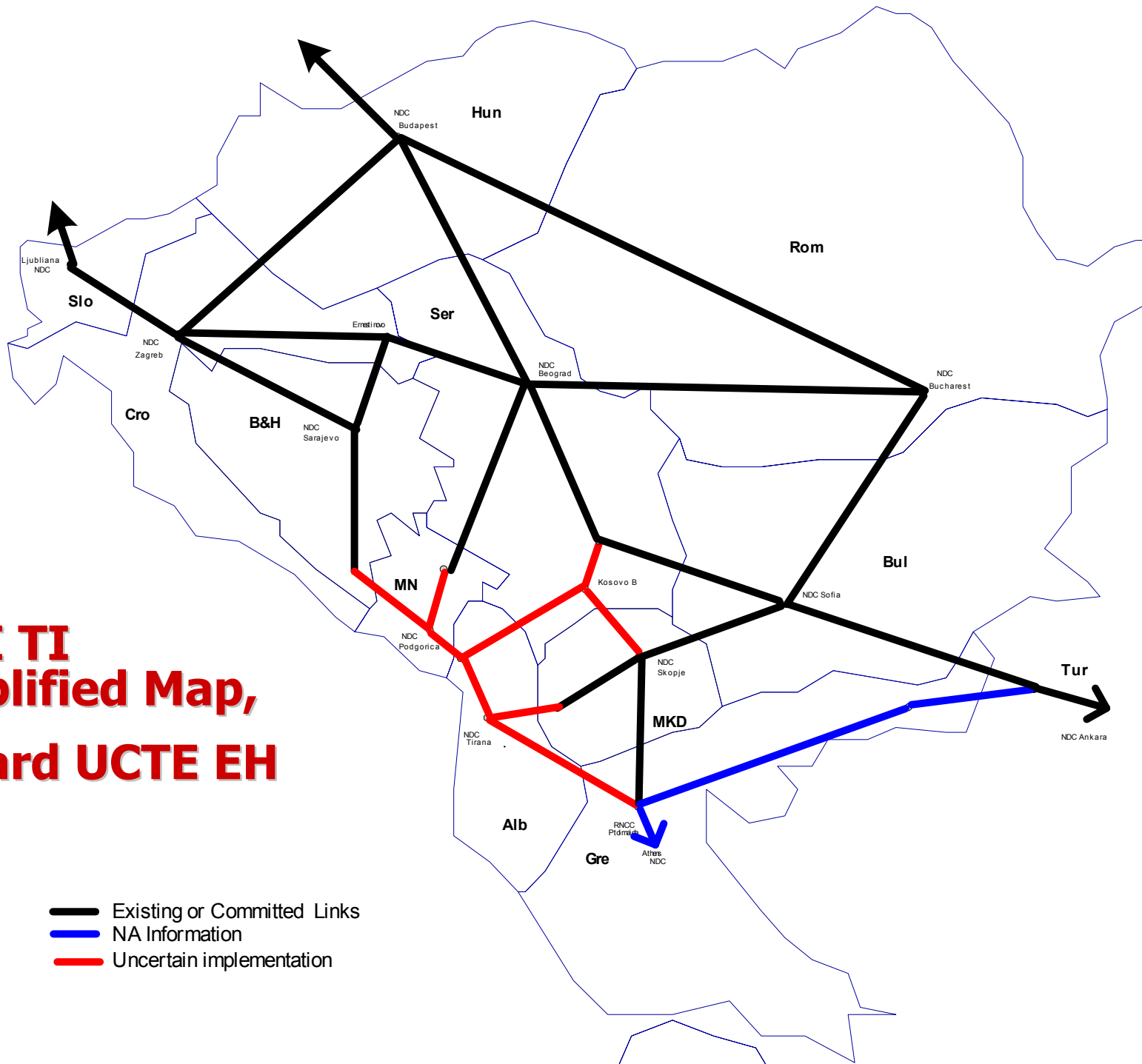
 In operation in 2005

 option

Regional Teleinformation Aspects

**Based on SECI Teleinformation
Project**

SECI TI Simplified Map, toward UCTE EH



Follow on Activities on TSP Project 2003/04 (1/3)

1. Updating and improving existing Regional Model
 - Model should be refreshed and updated
 - Try to avoid as much as possible internal equivalent elements in the model
 - Try to improve equivalent of the UCTE system
2. Identification of bottlenecks and future evaluation
3. Updating the Study Approach
 - Considerations of new project options
 - Combinations of the optional lines
 - Expand planning criteria, particularly for interconnection lines

Follow on Activities on TSP Project 2003/04 (2/3)

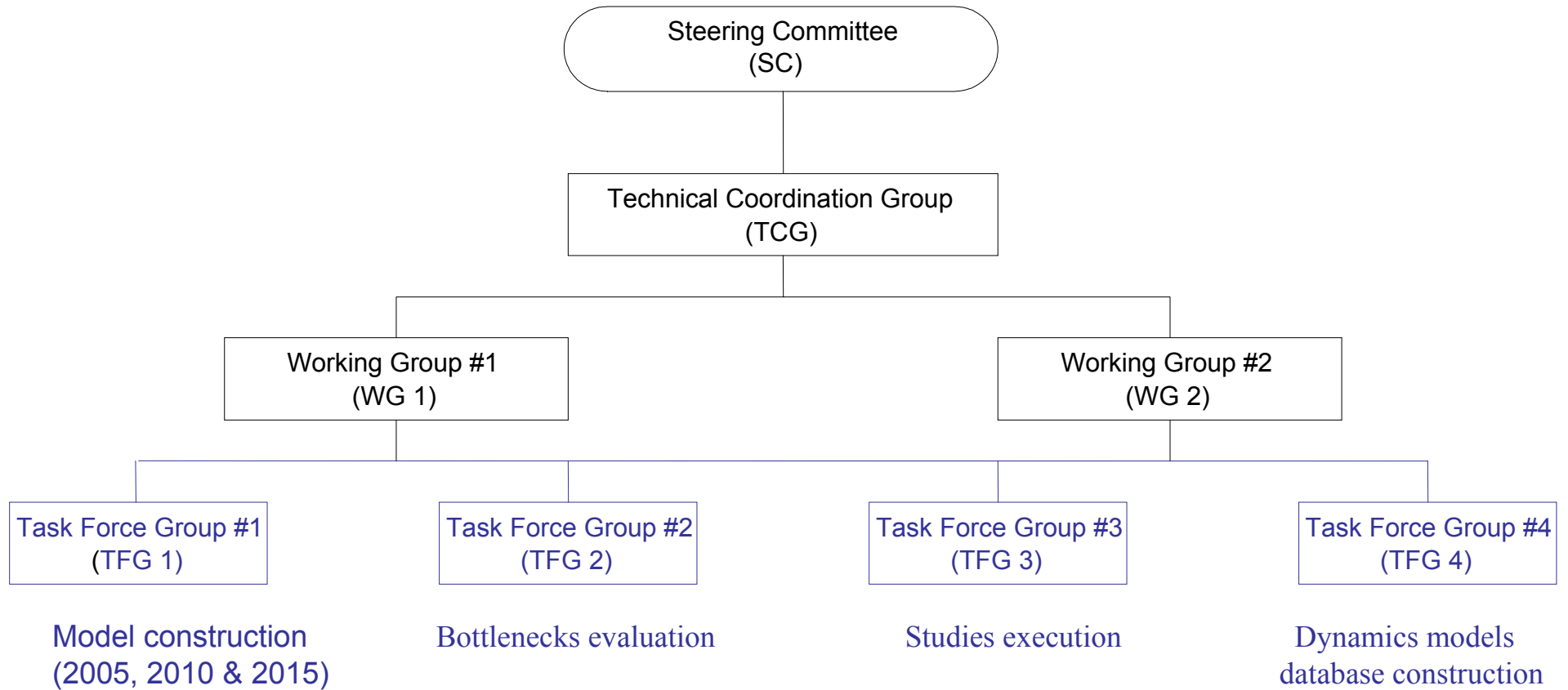
4. Expanding the existing Regional Model
 - Details for switching studies (short circuits)
 - Details for dynamics simulations
5. Expanding the Regional Model for future time horizon
 - Upgrading the model for year 2010
 - Option, update the model periodically
 - Definition of guidelines and recommendations for upgrading the model every year

Follow on Activities on TSP Project 2003/04 (3/3)

7. Study for light load (off peak) conditions and voltage problem consideration
8. Simulations of predicted realistic market based scenarios based on the GTMax and SDDP outputs
9. Training
 - For advanced PSS/E users
 - Internal PSS/E trainings for additional experts in region
 - Additional training for GTMax software

REGIONAL TRANSMISSION SYSTEM PLANNING PROJECT

Project Management & Organization Scheme

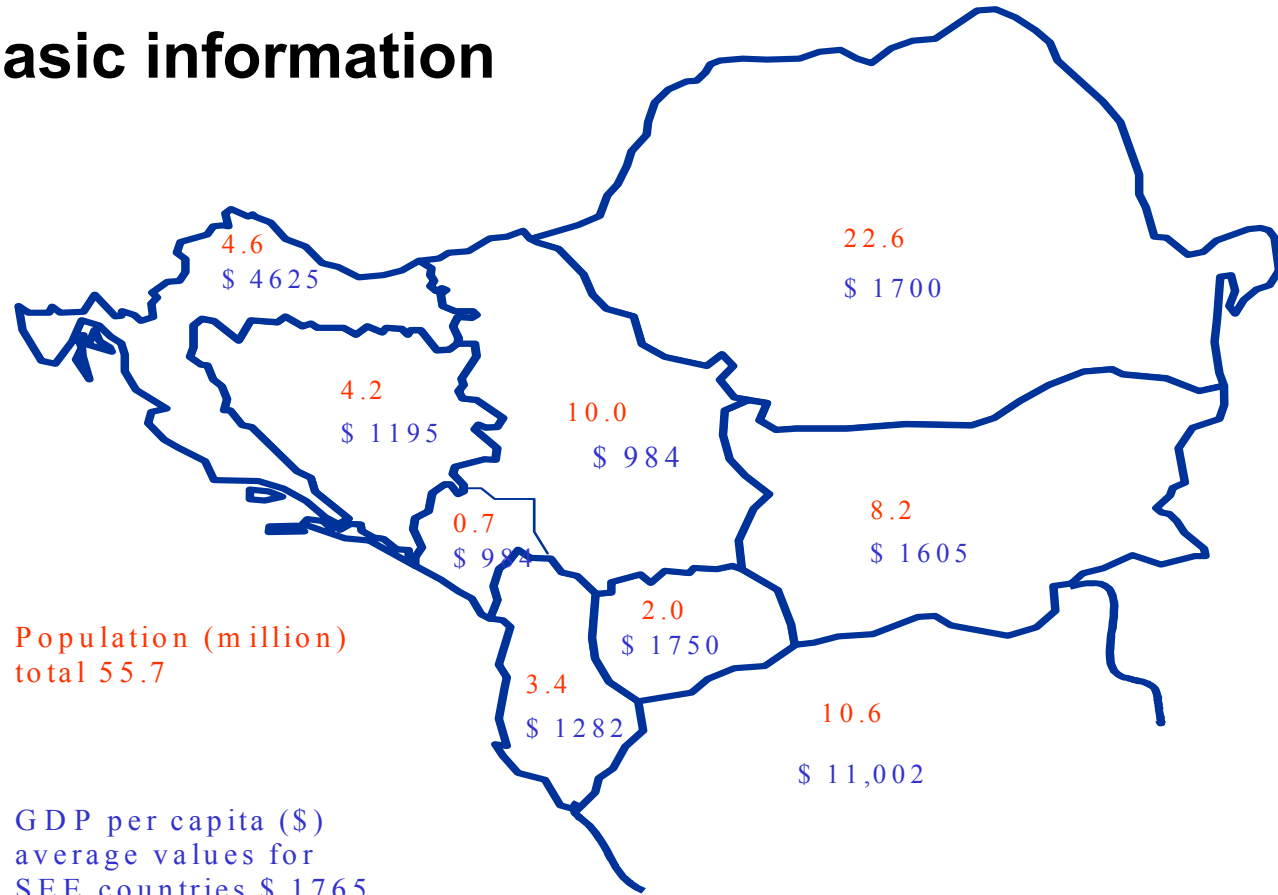


Regional investment approach

- SEE REM development as driving factor for regional investment approach and regional investment prioritizing
- Solutions to national energy issues based on isolated national markets are neither capable nor desirable as a means to satisfy regional supply and demand imbalances
- Balance between national & regional approach

Regional Demand and Supply

The basic information



Demand and supply outlook 2003-2012

- An average growth rate of about 2.3% is expected by regional utilities
- The region aims to add a net new capacity of about 4500 MW through 2012
- Rehabilitation of about 4000 MW of existing capacity would be required
- Without investments in generation the region may loose up to 6500 MW

Generation Investment Study

- EC & WB in the REM Framework
- Scope Demand & Supply outlook
- Time horizon 2015-20
- Regional Investment Prioritization
- SECI Project Group will cover
Transmission and Interconnection aspects