

Energy Regulatory Office

The New Lignite Mine & New Generation Project in Kosovo



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Chairman of ERO

11ο Εθνικό Συνέδριο για την Ενέργεια

15-11-2006



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www.ero-ks.org

Project Components

- In compliance with the:
 - Kosovo Energy Strategy
 - carried out studies and regional electricity market opportunities

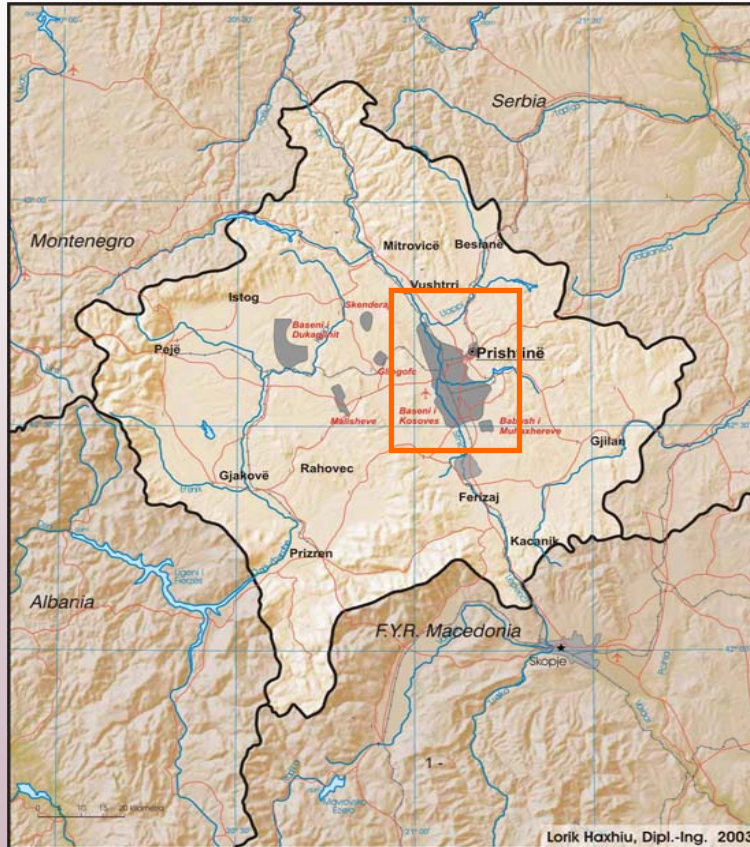
Kosovo is soliciting 15/8/2006 expressions of interest from qualified private investors in an energy development projects that encompasses the following components:

The development of a new coal mine for existing generation units (Sibovc SW) and/or the development of a new mine (the Sibovc mine) for coal supply to the new power plant

Construction of a new power plant 'Kosovo C' with an estimated installed Capacity of up to 2100 MW and associated transmission capacity

Rehabilitation of certain units (3 x 200 MW) of the existing power plant 'Kosovo A'

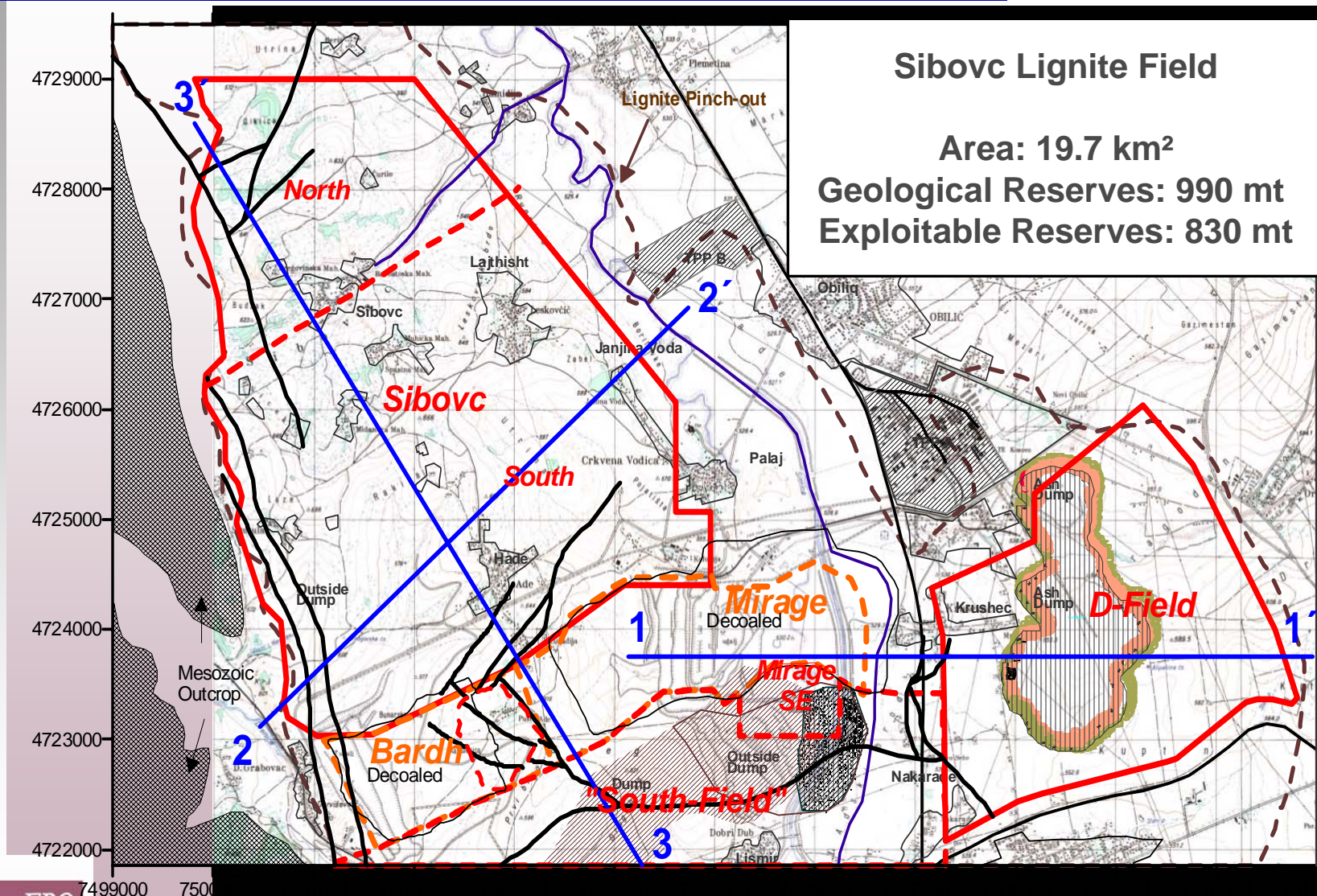
Kosova's Lignite Basins



Lignite Basin	Area [km ²]	Reserves [Million Tonnes]			
		Geological		Exploitable	
		<i>t</i>	<i>t_{ce}</i>	<i>t</i>	<i>t_{ce}</i>
Kosova	264	11500	2957	9804	2521
Dukagjini	95	2737	782	1625	464
Other		87	22	74	19
Total		14324	3761	11503	3004

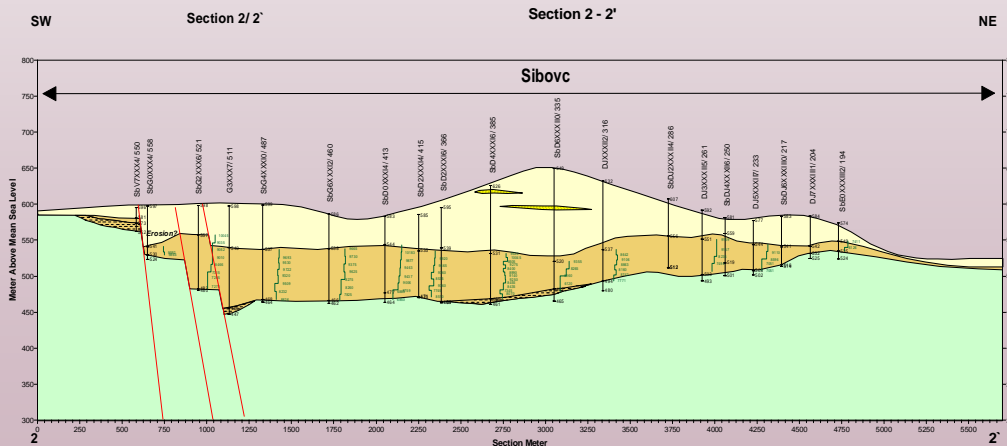
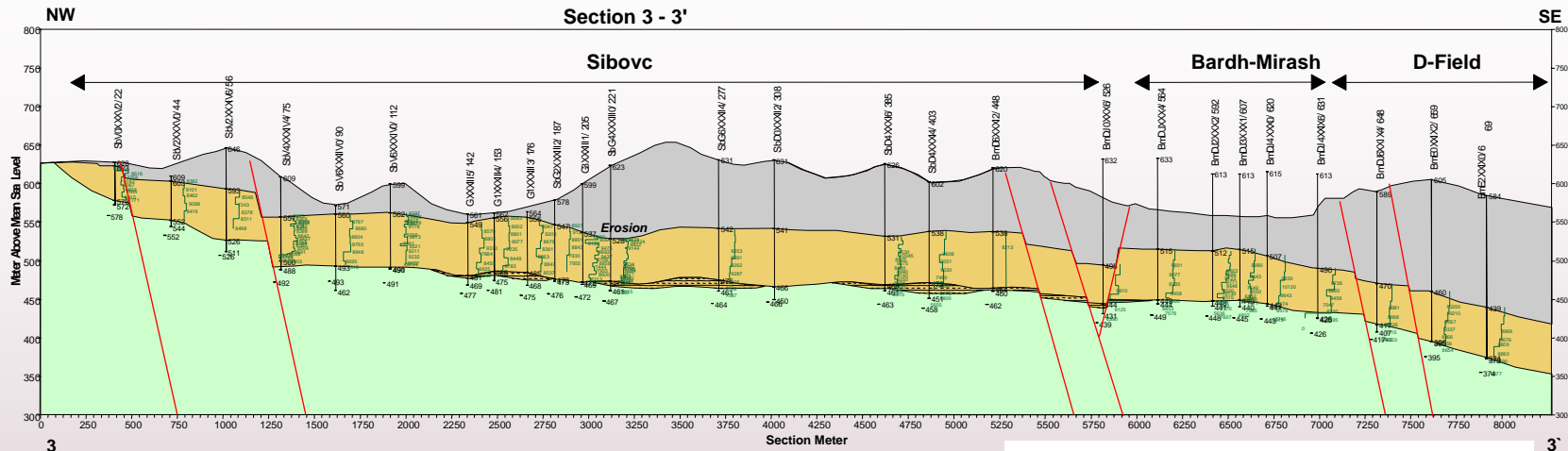
Area	Ash	Lower heating value	Moisture	Sulphur	
				% <i>total</i>	% <i>comb</i>
	%	<i>kJ/kg</i>	%		
Bardh	14.1	7860	47.7	0.98	0.34
Mirash West	14.4	7750	47.5	1.01	0.35
Sibovc	13.85	8149	47.8	0.91	0.32

Northern part of “Kosova” lignite basin “Sibovc”



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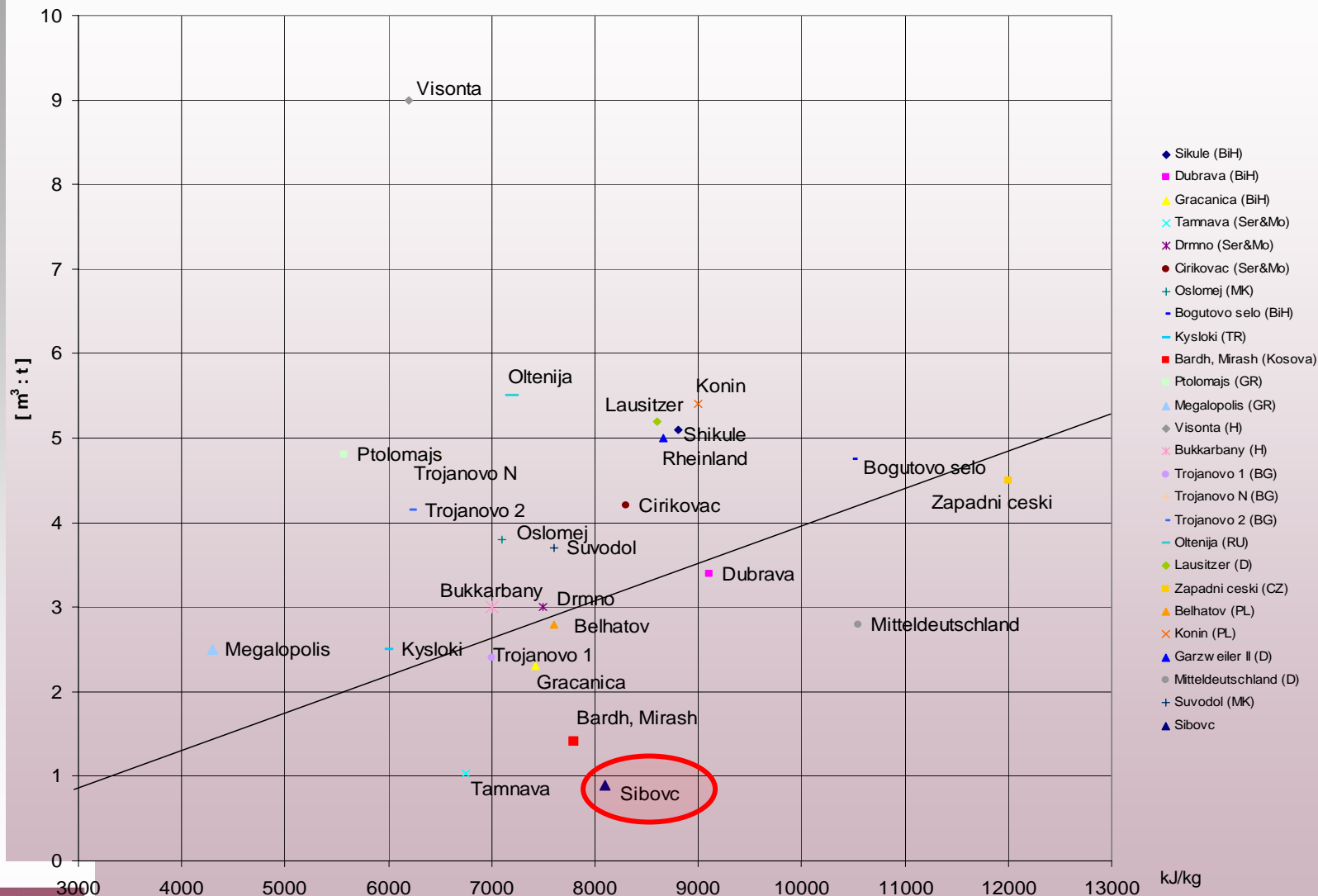
Sibovc Lignite Mining Area – Cross Section



Key parameters

Area:	19.7 km ²
Geological reserves:	990 m t
Exploitable reserves:	830 m t
Overburden to Coal Ratio:	0.9 m ³ : 1 t
Average Coal Seam Thickness:	75 m

Comparison of Sibovc with European Coal Mines



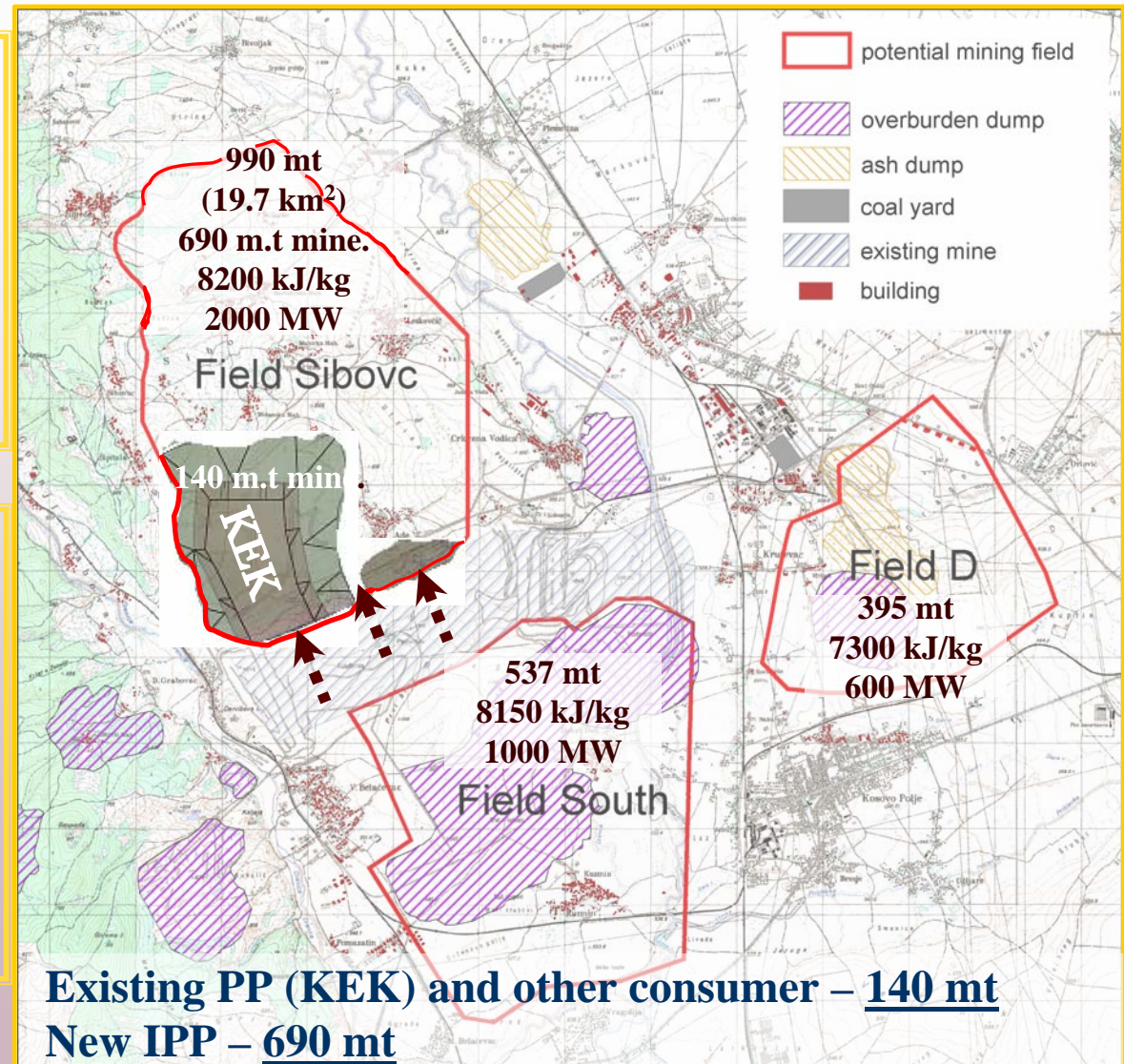
Potential Mines

new mine - which start from the existing mines Mirash/Bardh and advances in Northern direction of the Sibovc field

For illustration:

2000 MW

- 7500 h/a
= 15 TWh
- 1.1 t/MWh
= 16.5 mt/a
- 690 mt
>> 41.8 years



Main Mining Plan - Sibovc

Capital Expenditures - Sibovc

- Approx. 370 m€- equipment
- 60 m€- resettlement

Coal Production

- 16 mt/year
- from 2019 - 22 mt/year

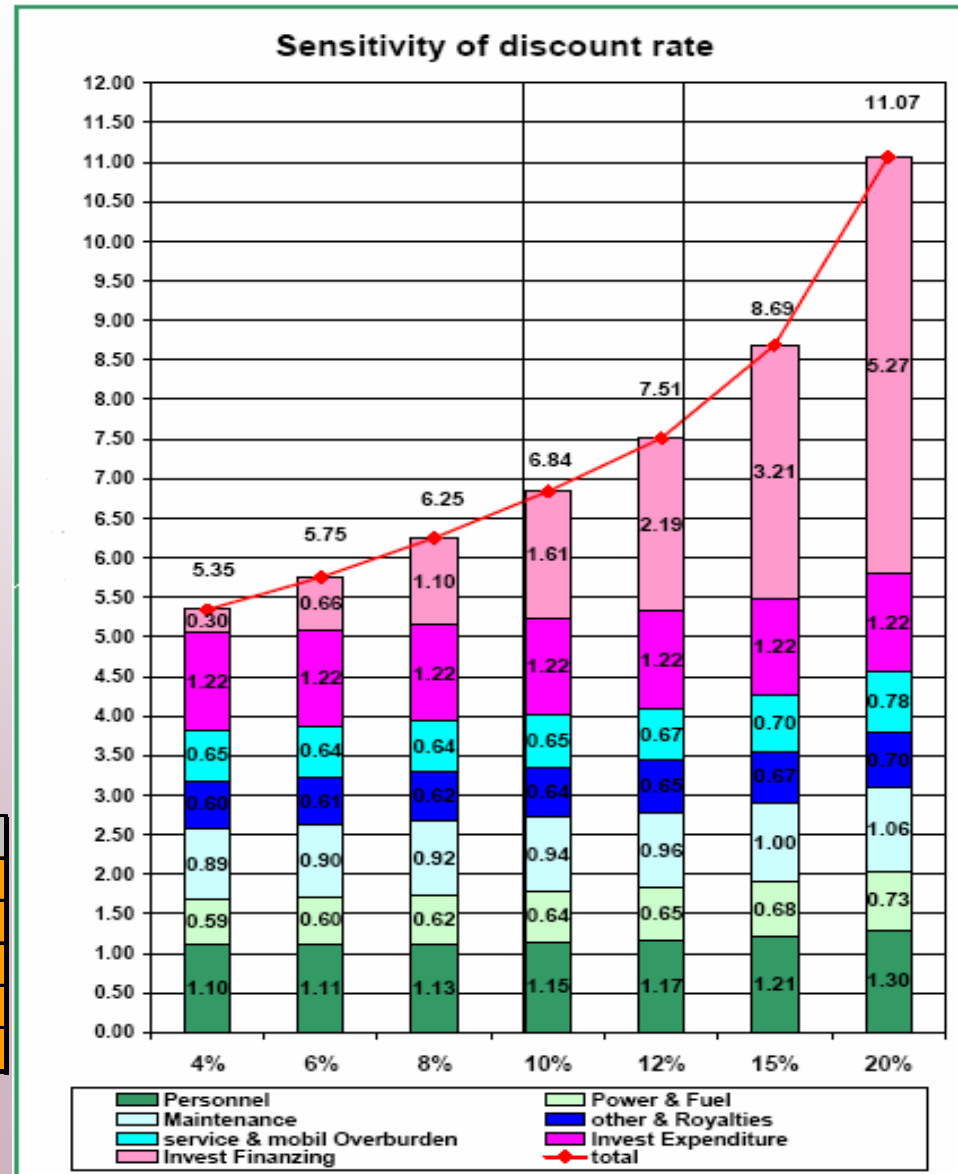
Cost of Coal

- €7.51/ton at 12% IRR
- €8.69/ton at 15% IRR

Assumed cost of equity 20 %

Assumed WACC 15 %

Country - IRR Comparisons	IRR (nominal)
Egypt	15% 18%
Kenya	15%
Malaysia (1st wave IPPs)	18% 25%
Malaysia (2nd wave IPPs)	12%(target)
Philippines	17,50%



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New Power Plant Site – Comparative Advantage



- Close vicinity to the new lignite mine – Sibovc
- Interconnection / 400 kV Switch Yard

- Water Supply / Iber Lepenci Irrigation System
- Road and Rail infrastructure



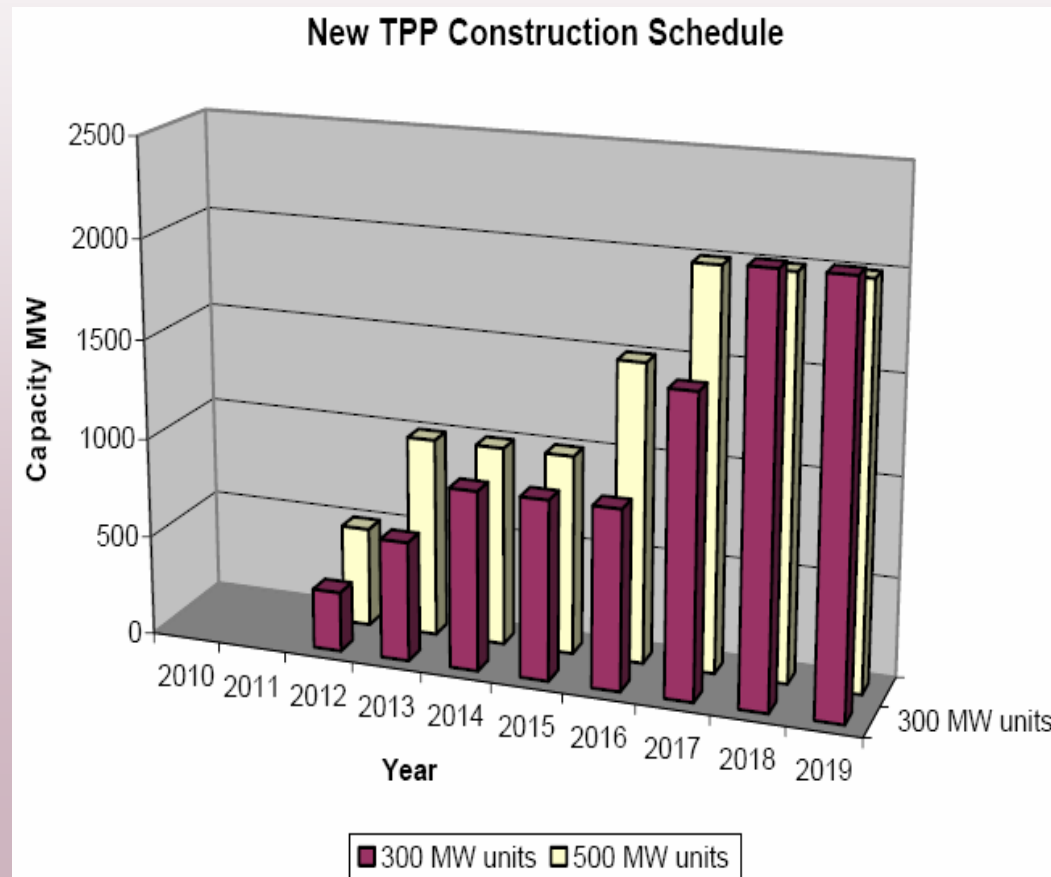
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New IPP – Construction Phases

Commissioning of the new TPP (first unit 300 MW or 500 MW) in two phases:

- 1st phase, € billion 1.1 – 1.3 + development cost of mine € million 300
- 2nd phase (10% less expensive), if two 300 MW units in one 600 MW – saves additional 15 %.



LPTAP – Project Management

Chair: **Minister of Energy and Mining**

Project
Steering
Committee

- SRSG's office
- Head of UNMIK Pillar IV (EU Pillar)
- **Minister of Environment and Spatial Planning**
- **Chair, Energy Regulatory Office**
- Prime Minister's Office
- Minister of Economy and Finance
- Minister of Labor and Social Welfare
- **Chair, Ind. Commission for Mines**

Project Manager

Project
Office

Mines
Task Manager and assistant

Environmental and Social
Task Manager and assistant

Power
Task Manager and assistant

Administration and Accounting
Task Manager and assistant



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LPTAP - Procedures and Timing



2006

EOI

Call for EOI has been published on

August 15, 2006

Deadline for submission of EOI is

November 30, 2006

Procurement of:

1. Transaction Advisory Services
2. Legal Advisory Services
3. Social and Environmental Safeguards Advisory services is ongoing

2007



RFP

- Short listed Companies / Consortia will receive Request for Proposal during Q2 of 2007
- Evaluation of Proposals and selection of successful bidder shall be concluded by Q4 of 2007

2008



Contract Negotiation and Closing

Negotiations with a successful bidder on mutually-acceptable, appropriate terms and conditions that will assure the successful development of the Transaction



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Criteria for expression of interest

A Prospective Bidder must meet the following minimum criteria:

1. Has developed green field, coal or lignite fired electric generation projects, which are now either in construction or operation, totaling more than 2,500 MW
2. Has raised more than €2 billion of limited recourse project debt or through long term corporate financing as of November 30, 2006 in the energy and/or mining sector; or has a minimum of €2 billion in free cash reserves, as stated in the year-end 2005 audited financial statements
3. Has developed and is operating, as of November 30, 2006, mines producing more that 20 million tons per year of coal or lignite
4. Has control of or operates one or more generation companies and/or concessions with an aggregate capacity of at least 10,000MW as of November 30, 2006



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Asset Packages

- Asset Packages Lignite
 - **Sibovc SW Lignite Field**
 - **Whole Sibovc Field**

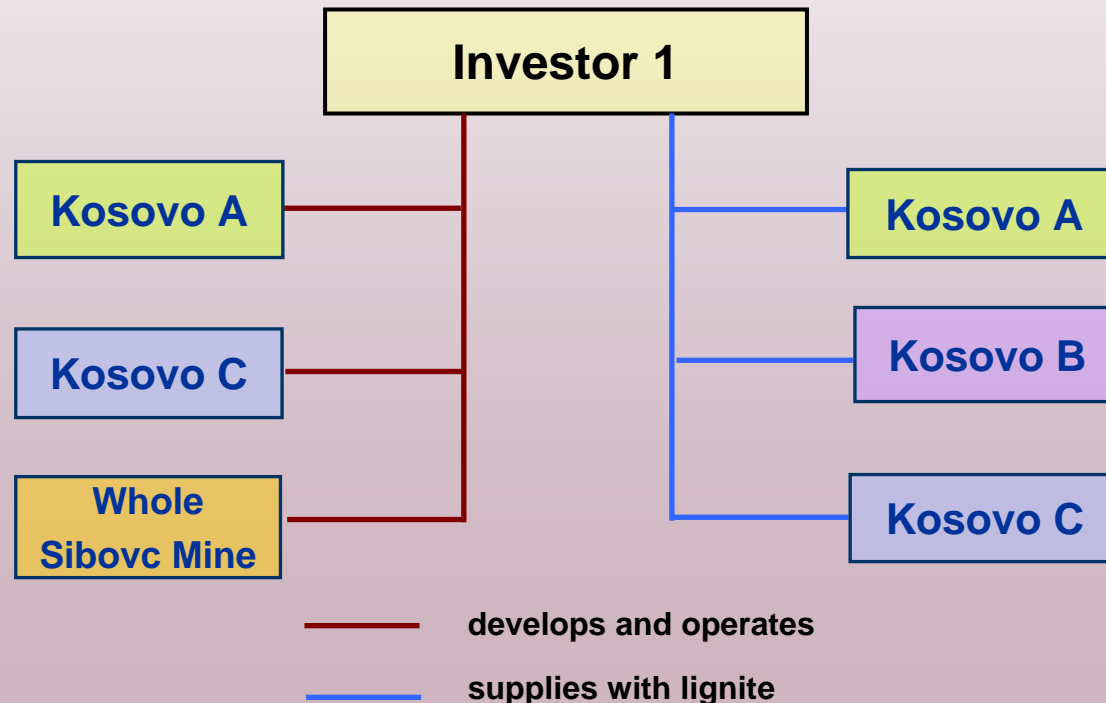
- Asset Packages Power Generation
 - **TPP Kosovo A**
 - Over haul
(life extension until 2010/14, approx. EUR 50 mln)
 - Capital rehabilitation
(life extension until 2020, approx. EUR 145 mln)
 - **TPP Kosovo C**
 - 1.000 MW
 - 2.000 MW

One Vertically Integrated Mining-Power Project

- One Investor -

In this case we have one single investor and operator who:

- *develops and operates whole Sibovc Field*
- *invests in and operates Kosovo A (two asset options, overhaul and rehabilitation)*
- *invests and operates Kosovo C (two asset options, 1.000 MW and 2.000 MW)*
- *supplies lignite to Kosovo A, B and C*

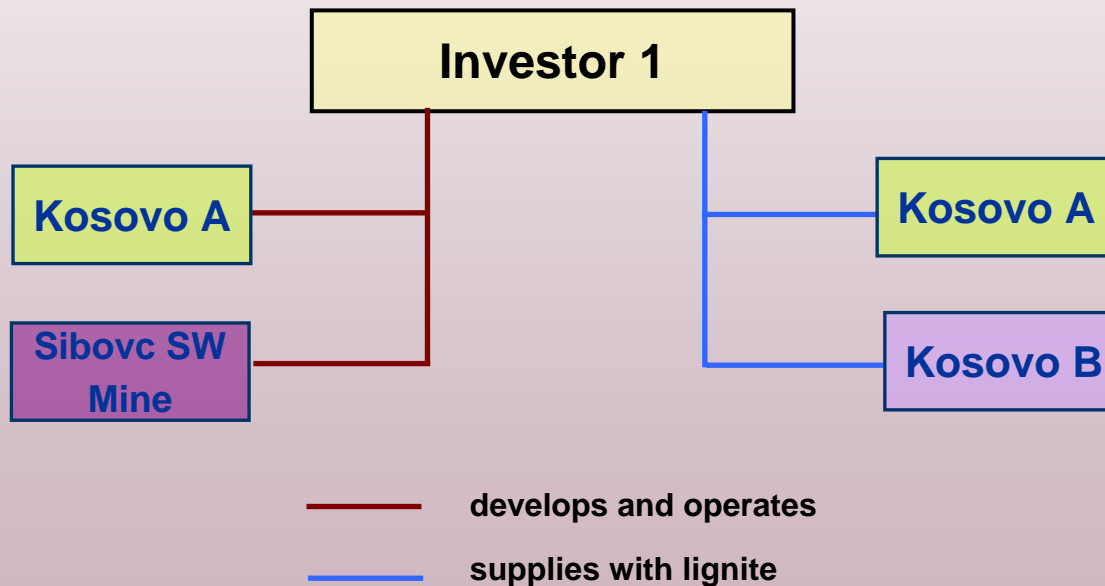


One Vertically Integrated Mining-Power Project

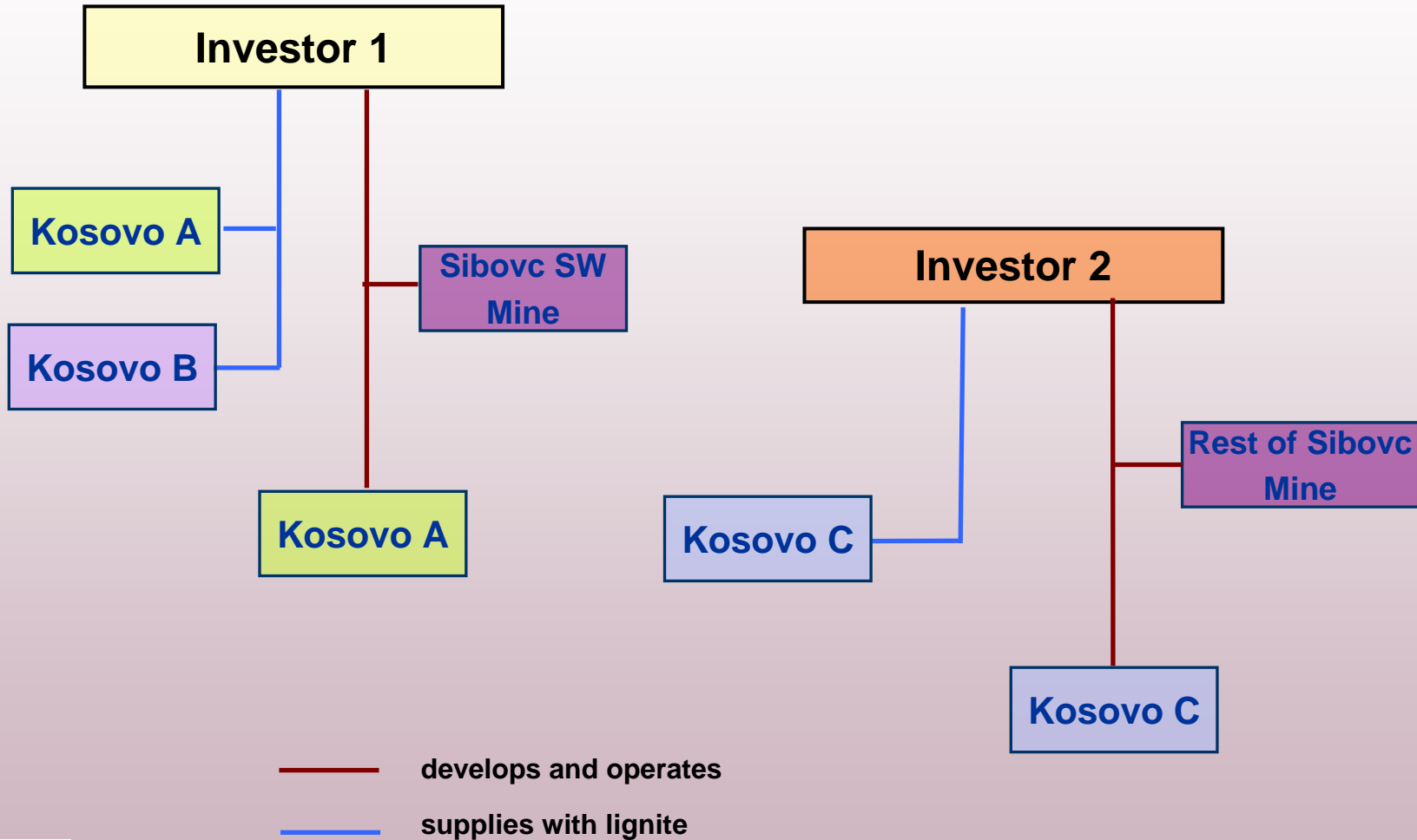
- One Investor, only Kosovo A -

In this case we have one single investor and operator who:

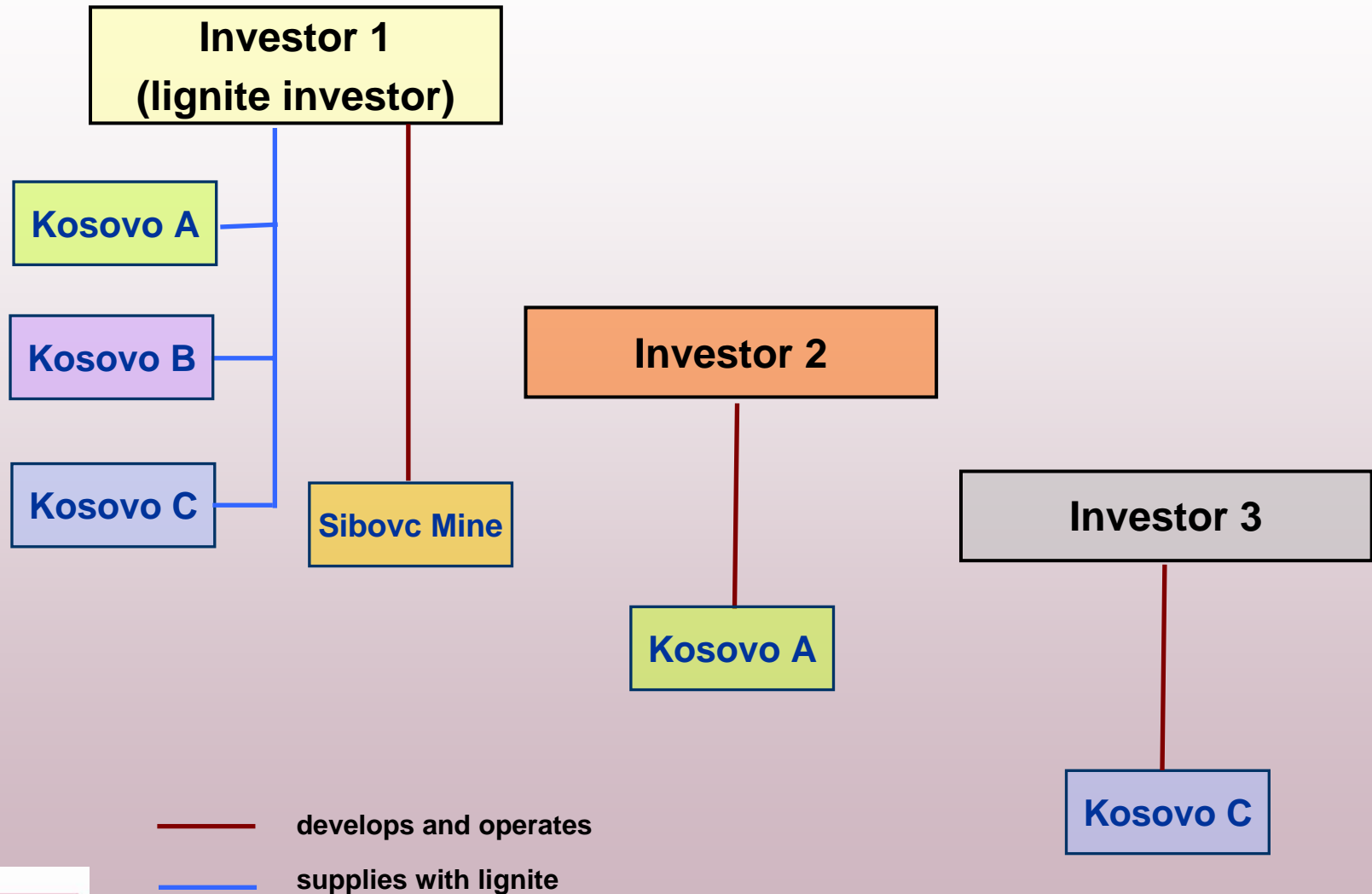
- *develops and operates Sibovc SW*
- *invests in and operates Kosovo A (full rehabilitation)*
- *supplies lignite to Kosovo A, B*



Two Vertically Integrated Mining-Power Projects - Two Investors -

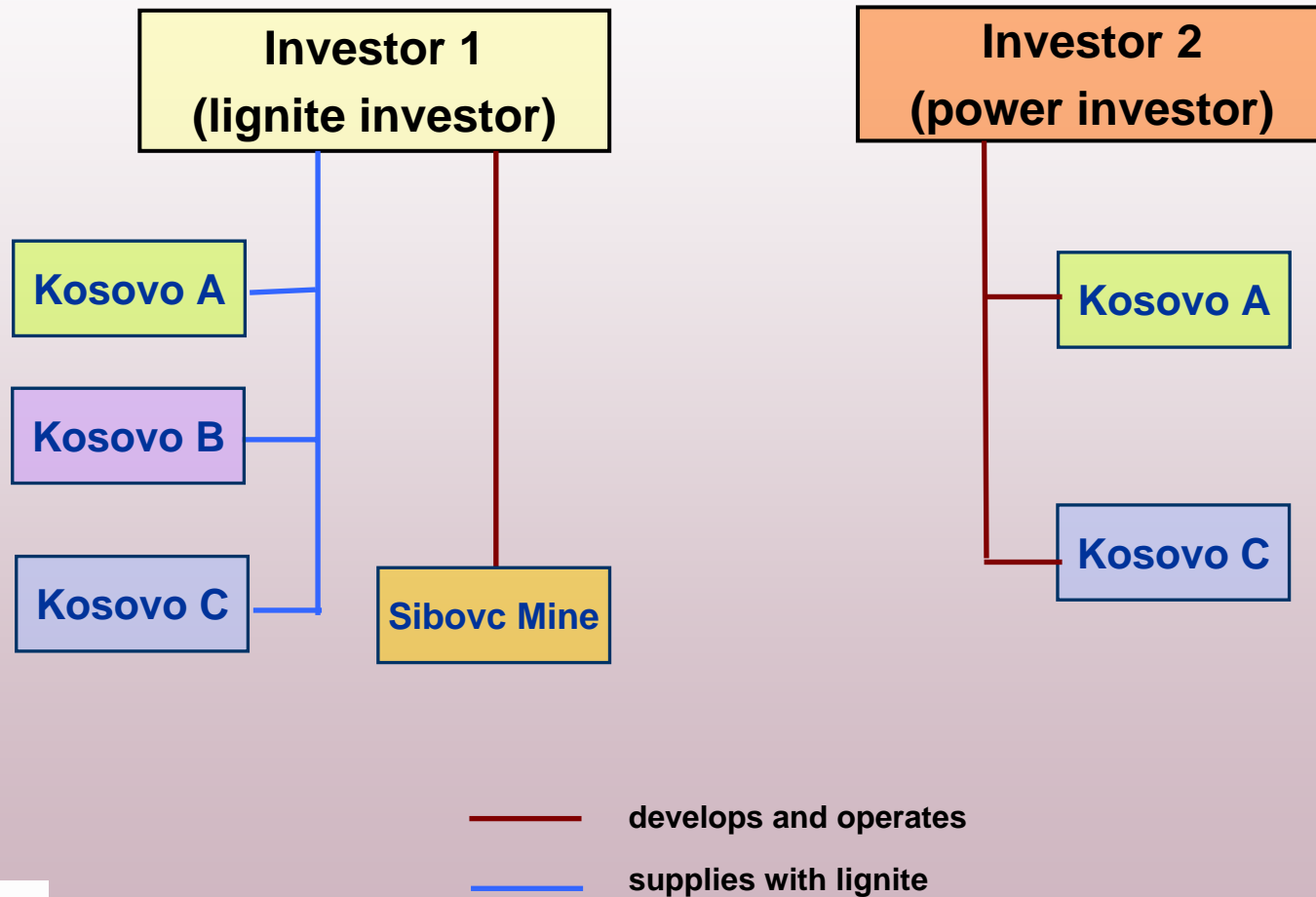


Arms Length Mining and Power Projects - One Mining Investor / Two Power Investors -



— develops and operates
— supplies with lignite

Arms Length Mining and Power Projects - One Investor in each -



Findings of Market Test – Ranking of Options (i)

Integrated vs. diversified options

- Almost all major companies showing their interest expressed a high preference to have a captive mine which is under their control.

Main reasons for this:

- **security of supply**
 - **operational synergies**
 - **technological synergies**
- The first argument is also very important for companies which would consider a diversified option. The mining operator in this case would have to demonstrate an adequate and very solid track record in lignite mining in order to keep the performance risk of the lignite supplier within acceptable levels.

Findings of Market Test – Ranking of Options (ii)

Non competitive vs. competitive options

- The companies accept competition although the opinion prevails that the local market is not ready for competition at the moment because of:
 - **low willingness to pay by the end customers**
 - **legal conditions are not given by now (all customers will be eligible only after 2013)**
 - **persisting monopoly in the distribution sector**
- Furthermore the functioning of the South Eastern European Energy Market has yet to be tested. They acknowledge that competition will happen anyhow in the export market.

Findings of Market Test – Ranking of Options (iii)

Overhaul vs. capital rehabilitation of Kosovo A

- Full rehabilitation of Kosovo A on a stand alone basis was not considered an attractive option to most of the companies
- A few medium sized companies would consider that option as possibility to achieve market entrance and presence in order to expand the operations at a later stage
- Clear preferences emerged towards the option to keep Kosovo A operative only until Kosovo C is commissioned.

It is argued that:

- **Real status & costs of capital rehabilitation of Kosovo A is not known** (*All companies will conduct their own technical and economic feasibility studies*)
- **Kosovo A is basically outdated technologically**
- **Carbon credits would only be available if efficiency gains would be achieved** (*It is assumed that with the investments proposed this would not be the case*)

Findings of Market Test – Ranking of Options (iv)

Small (1.000 MW) vs. Large (2.000 MW) configuration of Kosovo C

- Kosovo C – in first stage - smaller option (up to 1.000 MW)
- Second stage - to build another up to 1.000 MW capacity

This is recommended by the respective pre-feasibility study for Kosovo C for several reasons:

- **grid might not be in the condition to guarantee stability for 2.000 MW**
- **market risk and performance has to be assessed by a smaller configuration**
- **investment would be distributed over a longer period of time**

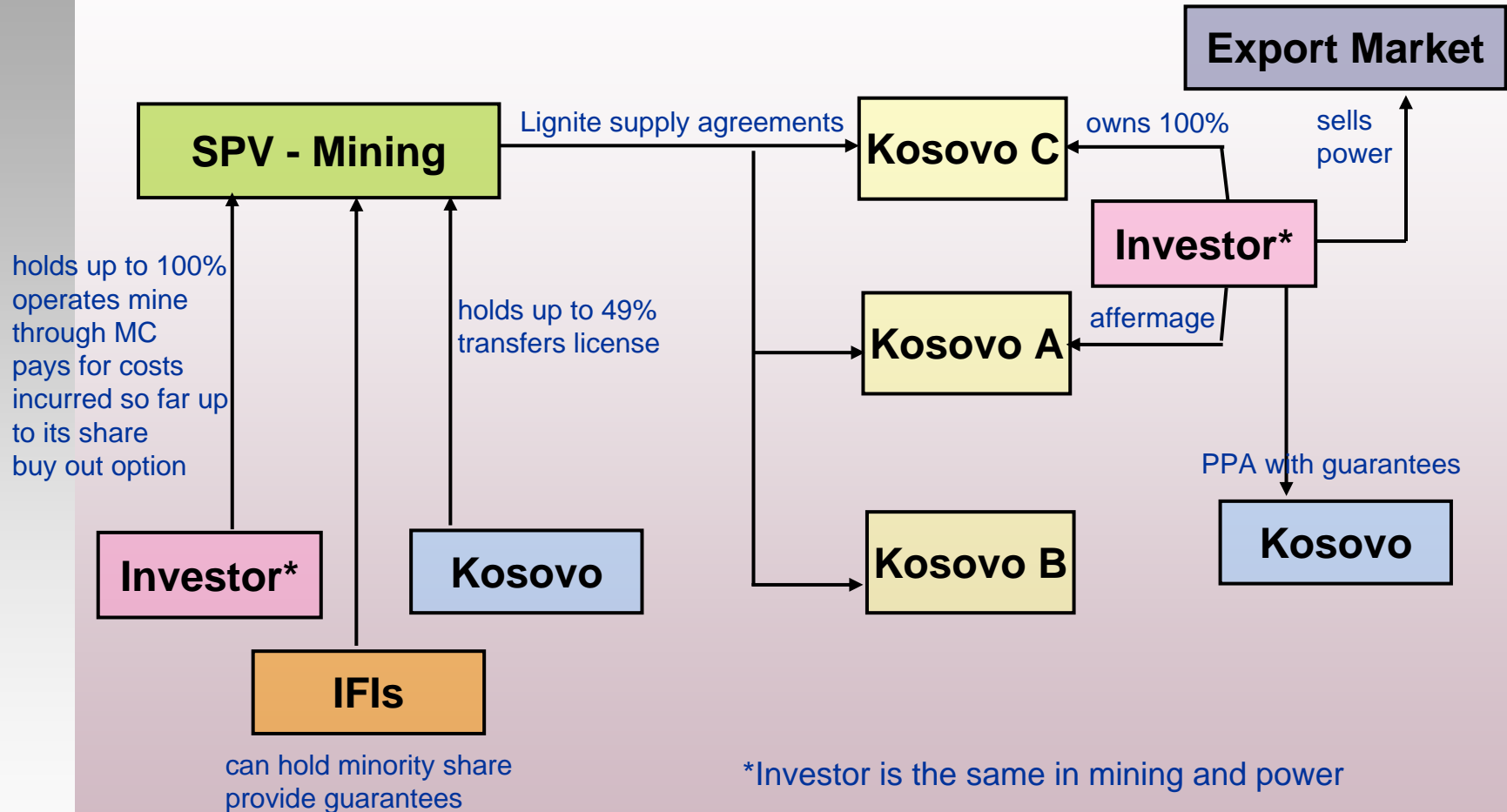
Findings of Market Test – Major Concerns

- Pre-qualification criteria
- Creditworthy off taker in the internal market
- Possibility of Public Service Obligation also for new generation capacities
- Status of related infrastructure
- Property of assets

Conclusions

- Sibovc SW on stand alone basis is not attractive to market players
- Market players interest in Sibovc SW is only in combination with Kosovo C (and whole Sibovc)
- Market players interest in Kosovo A is limited to short term until commissioning of Kosovo C

Illustrative example of participation and linkages



Energy Regulatory Office

**Thank
You**



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Transaction Adviser

Purpose

To provide transaction advisory services and assisting the PSC of LPTAP in attracting private sector participation

Scope of work (in three phases):

Phase 1: Preparatory work

- review the market structure & take measures (structural, legal environmental etc.) to facilitate the transaction
- prepare final investment package (based on Options Analysis) & recommend short list of qualified bidder

Phase 2: Prepare RFP and Bidding

- prepare necessary documents to undertake a competitive & transparent bidding process – issuance of a RFP to approved short list bidders

Phase 3: Negotiations and Closing

- Assistance in concluding negotiations with a successful bidder on mutually-acceptable, appropriate terms and conditions (in close cooperation with Legal Advisors)