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Transmission Tariff Benchmarking

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Transmission Tariff Benchmarking

- Formulated questionnaire in July 2005
- Most responses completed by October 2005
- Revised responses received in April 2006
- Final Report now in circulation
- Findings:
 - Wide variations in status of transmission tariffs, less in type of tariff
 - Differential effects on efficiency
 - Most do not yet cover costs (but should within 3-4 years)
 - Most SEE electricity markets too small to take full advantage of optimal transmission tariffs



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EU Transmission Pricing Guidelines

- Harmonize network access charges for generators (the “G” component)
- Provide locational price signals for generation and transmission
- Eliminate distance-based transmission tariffs and charge for entry and exit



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Brief Summary of the Findings

1. Transmission prices for ECSEE members ranges from 1.37-5.7 €/MWh. This compares with a range for EU members of 3-14 €/MWh
2. Trade and investment:
 - a. Optimal transmission tariffs, while desirable, are not necessary to stimulate trade and investment
 - b. A “good enough” tariff that covers costs and sends the right signals on congestion and location is an excellent starting point



Brief Summary of the Findings *(cont.)*

3. Cost coverage in full is a feature of all of the respondents that have successfully restructured
4. Many countries, including some EU members, use some sort of cross-subsidy to protect certain classes of electricity users
5. Where cross-subsidies are significant relative to the overall tariff revenue, potentially beneficial effects of separate tariffication of transmission are lost in the noise of the transfer payments



Brief Summary of the Findings *(cont.)*

6. Many respondents have started to feature more incentive clauses for promoting improved efficiency
7. Most countries have either locational or temporal price differentials and four of the seven ECSEE members have some element of ancillary services tariffs
8. Successful tariffication of transmission and distribution can be accomplished using the current capabilities of regulators
9. The respondents show significant differences in their progress toward tariffs that meet the EU guidelines discussed above

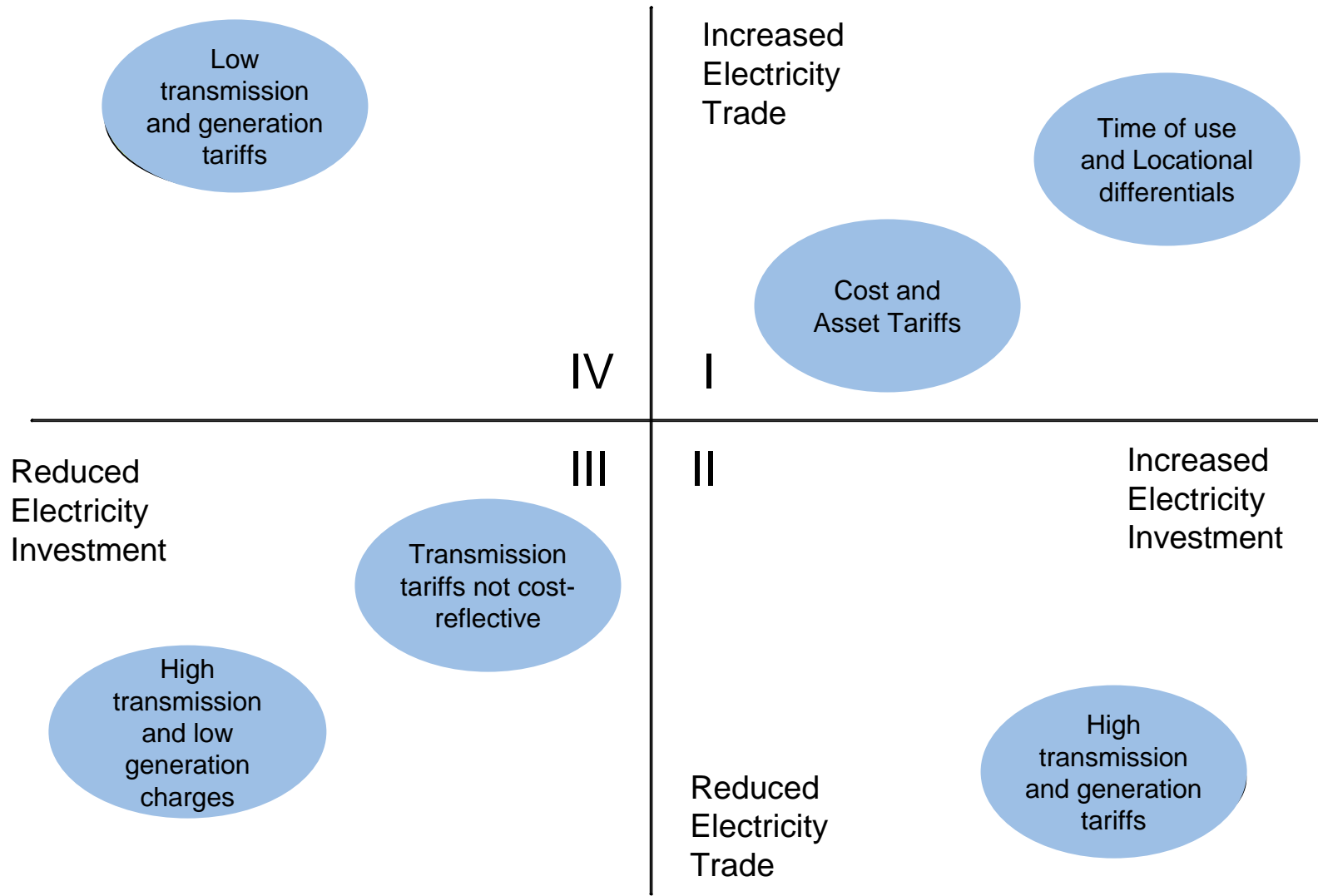


Selected Results

Selected Results of Transmission Pricing Survey: Prices and Incentives						
Country	Share of Network Costs (%)		Price Signals (x =>xxx)		Average Value (€ per MWh) <i>without</i> system services	Does Transmission invoice Include System Services?
	Generator	Load	Time of Day/Seasonal	Locational		
Albania			x	x	N/A	Y
Bosnia-Herzegovina	0	100	xx	x	N/A	Y
Bulgaria	0	100	xxx	x	4.76	N
UNMIK			N/A	N/A	N/A	Y
FYROM			x	x	N/A	N
Romania	50.3	49.7	xx	xxx	5.7	Y
Turkey	50	50	x	xxx	3.63	N
Other Respondents						
Austria			x	xx	N/A	N
Greece	27.4	77.6	x	xx	4.4	Y
Hungary	0	100	x	x	9.0	Y
Italy	35	65	xx	x	~12	N
Slovenia	0	100	xx	x	4.1	Y
<p>Notes: System services generally include both losses and reactive power, as well as system operation charges. Other A/S are not included. Some countries have not yet completed their transmission tariffs or have not yet fully differentiated certain cost elements. Italy charges a fixed fee in addition to the G and L charges. Most of the missing results for the SEE countries will be furnished early in 2006 as UNMIK, Albania, Bosnia-Herzegovina and FYROM implement newly-designed transmission tariff systems. Where A/S are included in the transmission tariff, they are sometimes denoted separately on the invoice, as in Romania.</p>						



Impacts of Pricing Policies on Trade and Investment





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Impacts of Pricing Policies on Trade and Investment

- Prices only have to be “good-enough” to stimulate some trade and investment - especially if significant transmission investment is needed.
 - A “good-enough” tariff will
 1. Cover all costs of transmission, including new capacity
 2. Provide “reasonable” signals regarding congestion and location of new generation
 3. Reflect energy policy priorities - renewables, cogeneration, etc.

A few years of “good-enough” can provide enough financial strength to implement a more sophisticated tariff



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Impacts of Pricing Policies on Trade and Investment

- Subsidizing your customers, especially if they are foreigners, will not stimulate investment
- Transmission and generation prices have asymmetric impact:
 - Effective pricing system is necessary but not sufficient for good outcomes,
 - Inefficient pricing system is sufficient in itself to assure bad outcomes



Selected Results of Transmission Pricing Survey: Methodology			
Country	Transmission Tariff	Distribution Tariff	Other Fees, Subsidies
Albania	Combination of price and revenue cap	N/A	Losses, capacity reservation
Bosnia-Herzegovina	Cost + rate of return	N/A	Losses
Bulgaria	Cost + rate of return	Cost + rate of return with revenue cap	Losses
UNMIK	N/A	N/A	Subsidies to public broadcasting
FYROM	Revenue cap structure With performance incentives	Price cap structure with performance incentives	Subsidies to some industries
Romania	Revenue cap structure	Price cap structure	Losses, ancillary services, limited subsidies to those using less than 1000 kWh/yr.
Turkey	Revenue cap structure 47.8% Opex 3.5% Capex 42.5% Stranded Cost 6.1% ROI	Revenue cap structure	Losses, ancillary services, "energy fund"
Other Respondents			
Austria	Cost + rate of return	Cost + rate of return	
Greece	Cost + rate of return	Cost + rate of return -Only for "eligible customers" at MV	Charge in lieu of ancillary services,
Hungary	Cost + rate of return with 4th year review	Cost + rate of return with fixed charge + energy charge	Losses, system (ancillary) services, stranded costs, renewable energy & cogeneration support
Italy	Cost + rate of return	Revenue cap and price cap	Separate ancillary services market, losses are paid by generators
Slovenia	Price cap with capital expenditure adjustments	Price cap with capital expenditure adjustments	Losses



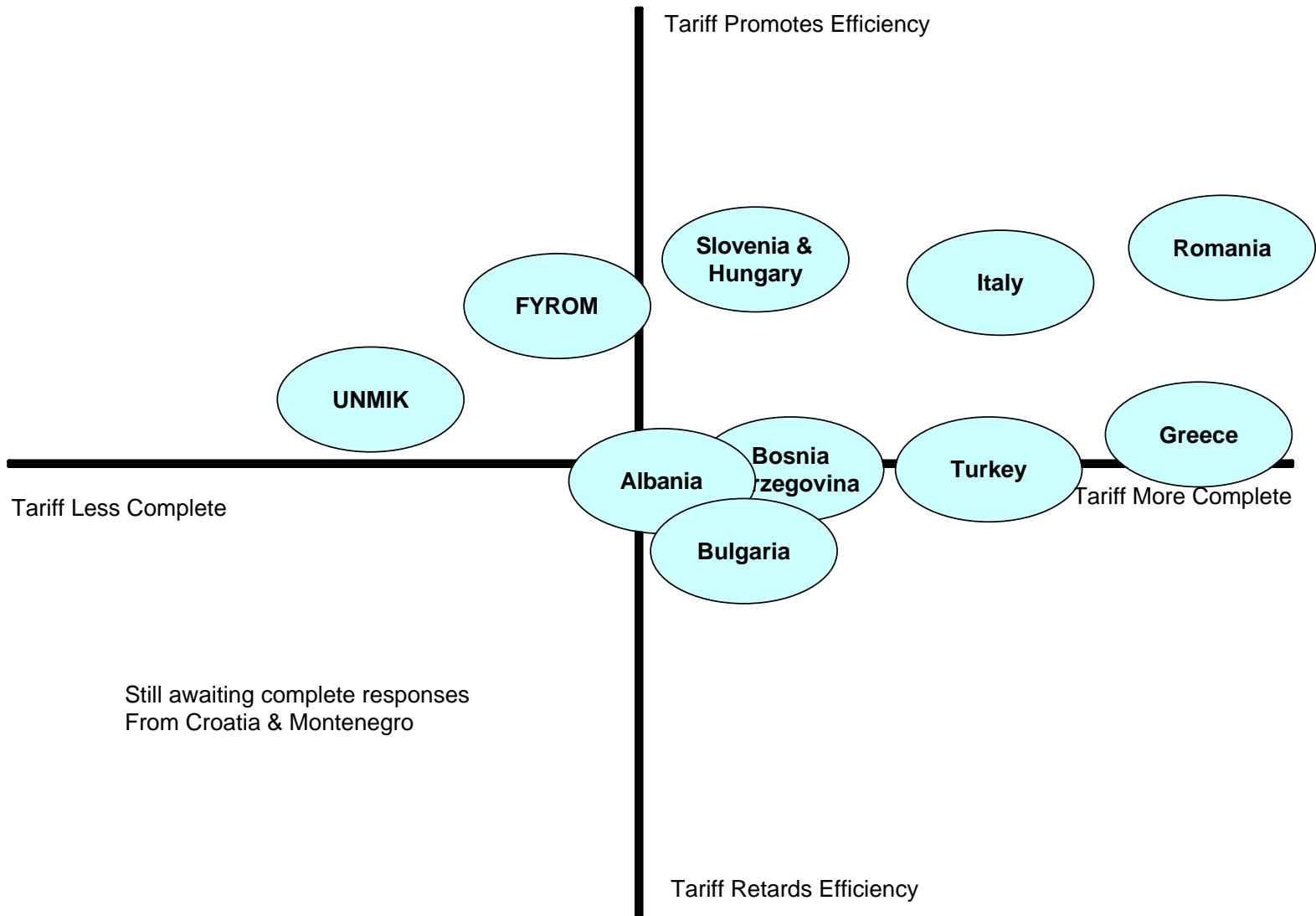
Incentive Structures

Transmission and Distribution Tariff Variations			
Country	Locational	Time of Use	Ancillary Services
Albania	No	Yes	Yes
Austria	Yes	No	No
Bosnia-Herzegovina	No	Yes	Yes
Bulgaria	No	No	No
FYROM	No	Yes	No
Greece	Yes	No	Yes
Hungary	No	No	Yes
Italy	No	Yes	Market
UNMIK	No	Yes	Yes
Romania	Yes	Yes	Yes
Slovenia	No	No	Yes
Turkey	Yes	No	No

Note: virtually all countries distinguish between day and night for industrial tariffs, and for certain commercial and even residential users. However, this table covers only time and locational differentials in the network tariff, not in the energy commodity charge.

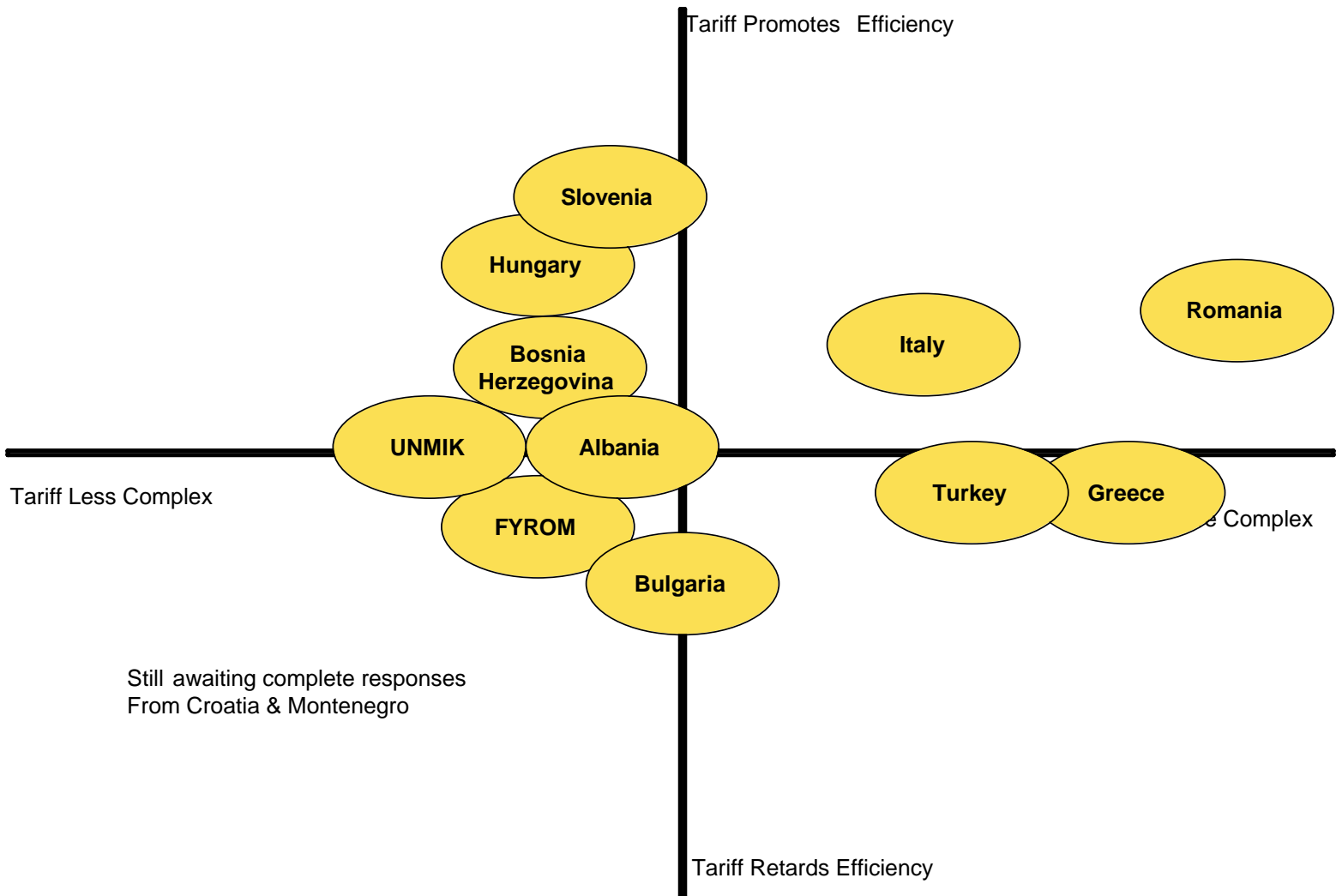


Status of Tariff Working Group Members





Regulatory Tradeoffs: Complexity v. Ease of Regulation





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Next Steps

- Circulate final transmission tariff report
- Analyze updated retail tariff information
- Report on retail tariffs in June at Athens Forum
- Institutionalize benchmarking data collection and reporting
- Improve use of pricing information in system planning