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INOGATE Tariff Review Study in Partner Countries

Background to the Review



- The Inception Missions undertaken by Inogate in Q4 2012 identified a high level of interest in tariffs and tariff methods in the Partner Countries
- Key subject areas were:
 - The methods of establishing costs in the sub sectors of the industries
 - Mechanisms to encourage efficiency
 - Methods of recovering costs in a fair manner from consumers in the context of the local environment
- Interest in the strategies deployed in the EU were of interest, particularly in the experiences of recently joined states

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Timeline for the Review



- Compressed timeline:
 - ToR approved end May 2013
 - Questionnaires drafted and circulated end June
 - Responses received through July and August, some in September
 - Draft internally circulated end September
- Final draft will be compiled and circulated following inputs at this seminar
- Should be considered ‘fact finding’ intended to identify areas of further support

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Major Topics



- Market make-up and structure
- Regulatory environment
- Wholesale tariff methods for electricity and gas
- Transmission and distribution tariffs
- End User tariffs
 - Level of cost recovery
 - Allocation of costs
 - Cross subsidies
- Comparisons with the EU

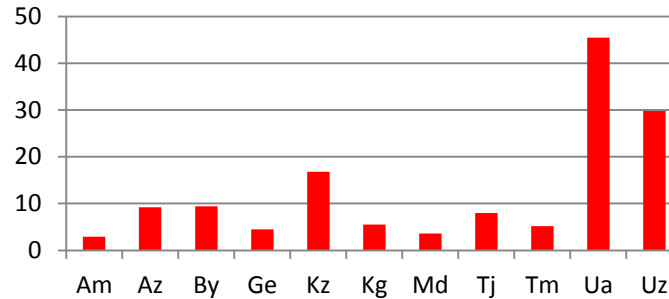
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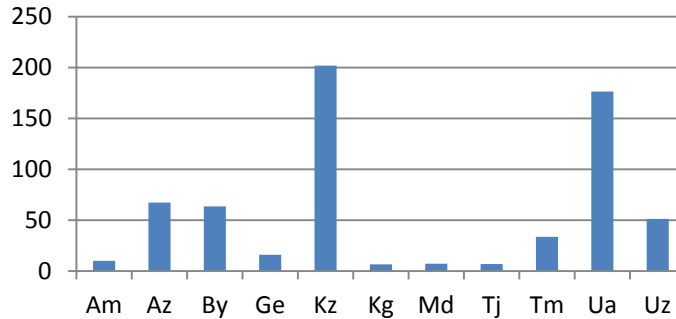
Characteristics of Partner Countries



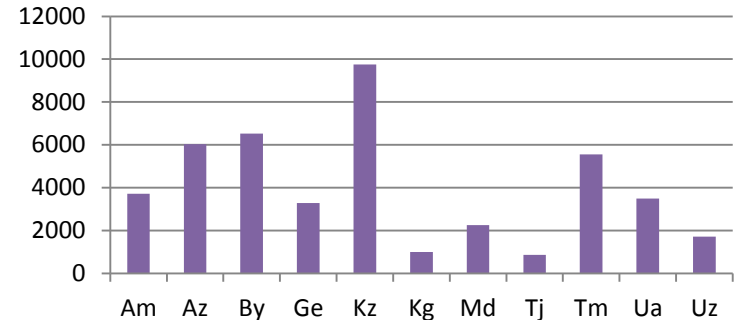
Population



GDP



Average Income \$





Electricity

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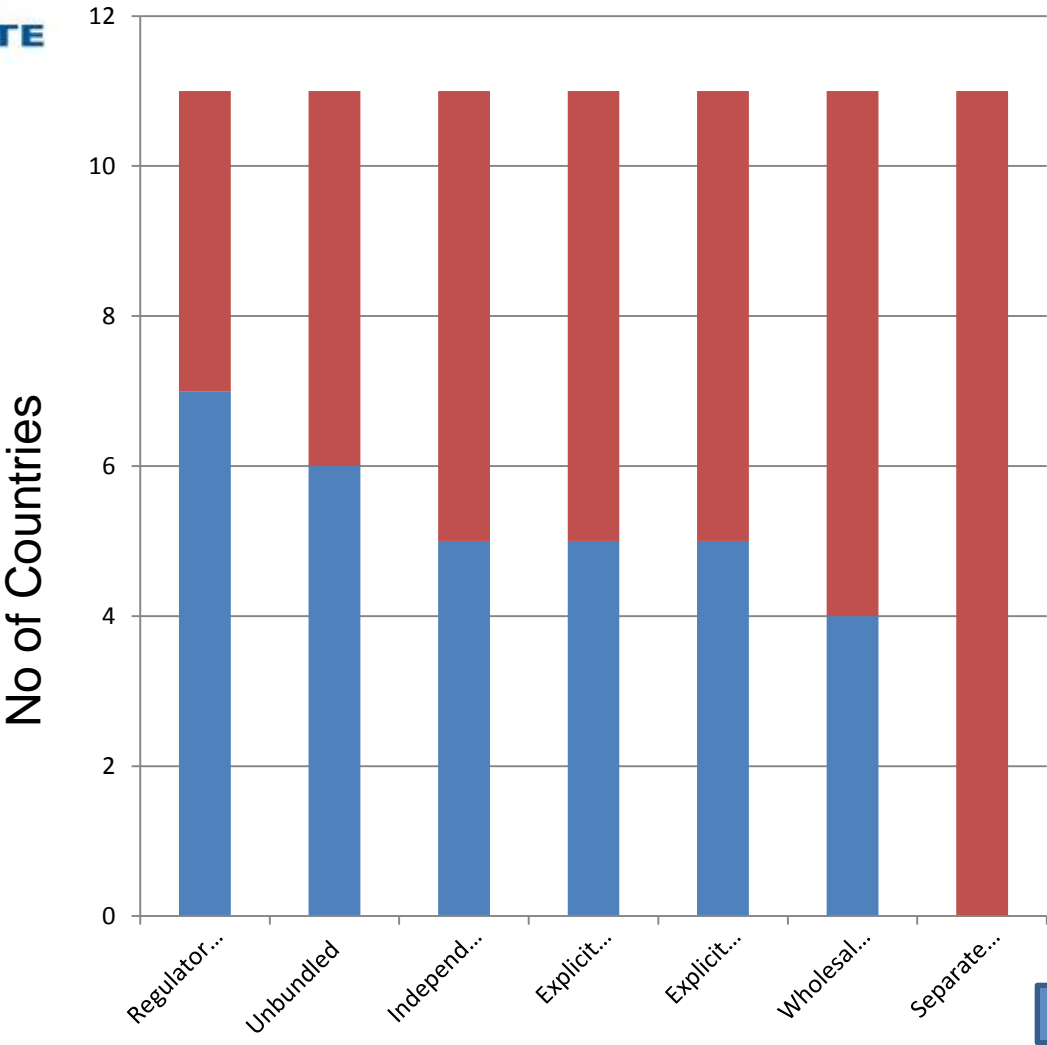
Market Structure



6 items in questionnaire

- Are you UNBUNDLED
- Is there a REGULATORY FUNCTION
- Is there an INDEPENDENT REGULATOR
- Are there EXPLICIT TARIFFS for Generation and Transmission
- Is there a WHOLESale MARKET for electricity
- Is DISTRIBUTION and SUPPLY separated

Structure

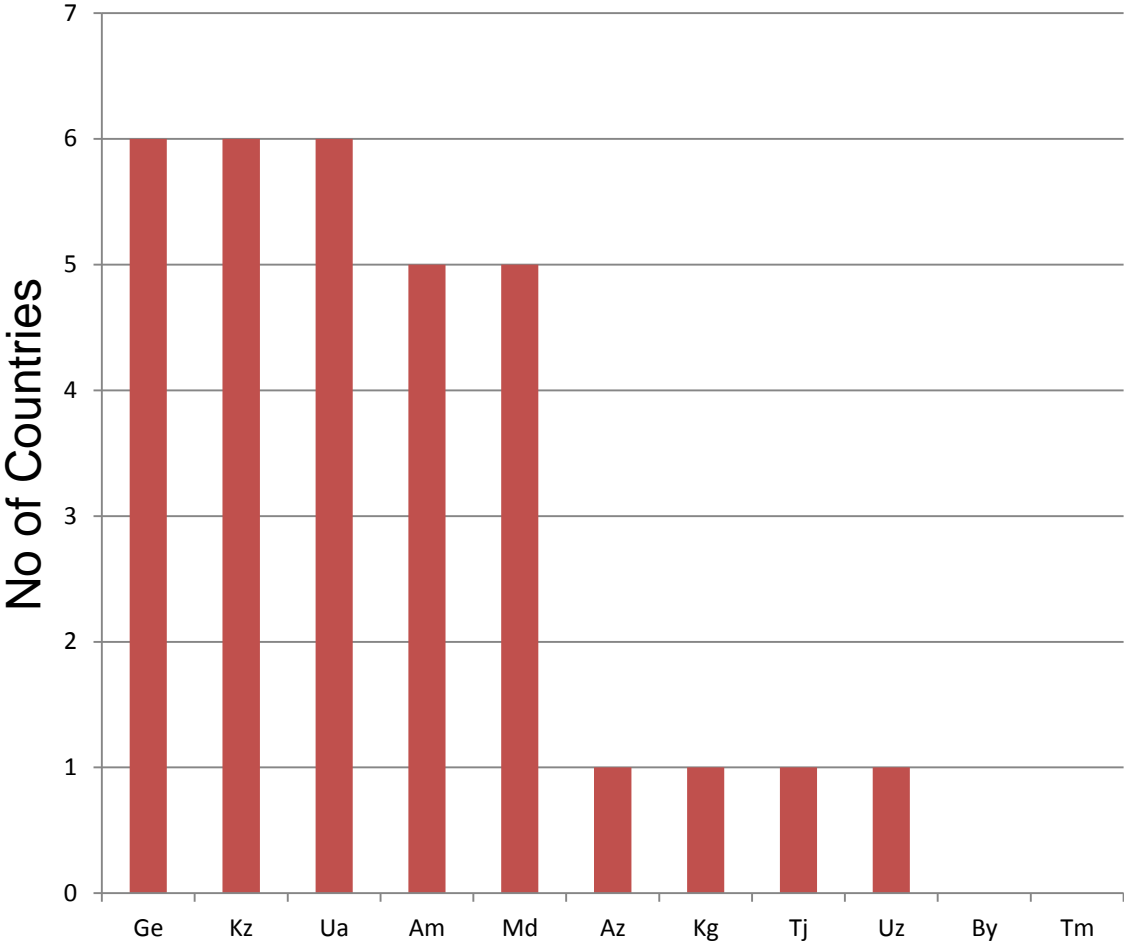


Progress of Reform

Current status of the 11 Partner Countries

No Countries with feature

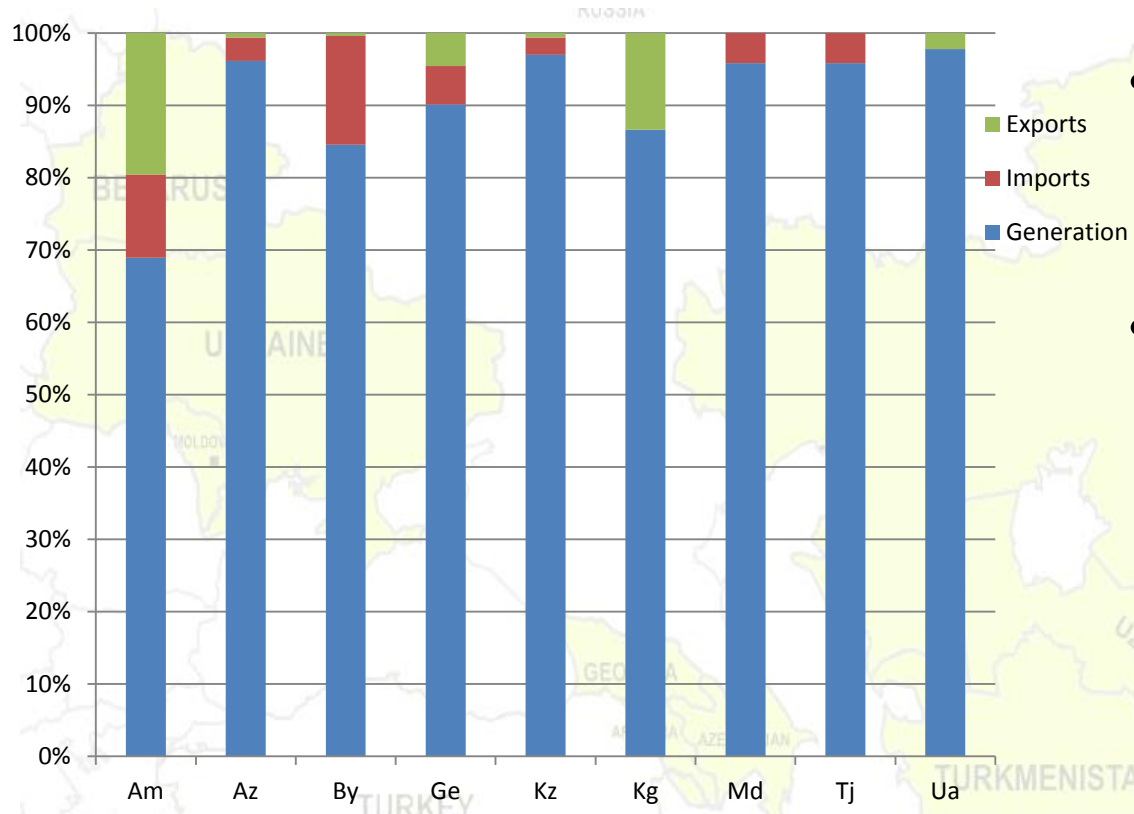
Structure



Progress of Reform

Number of steps taken by each PC

International Electricity Trade



- Trade is undeveloped in the region
- Missed opportunities for improving security of supply and reducing costs



Methodologies

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Every partner country that has a tariff methodology uses cost-based methods:



Country	Cost evaluation	Regulatory asset base			Rate of return
		Asset value	Investments and work in progress	Depreciation	
Armenia	Prior year Fixed & Variable Costs	Historical Cost for State companies, Valuation at divestiture	New investments	Straight Line	(WACC) based on average cost of debt and equity
Azerbaijan	Prior year F & V Costs	Historical Cost	Not included	Straight line	
Georgia	Prior year F & V Costs	Replacement cost formula in 1999	Not included	Straight line,	WACC
Kazakhstan	Based on reports and normative documents	Valued at divestiture by replacement		Straight line	"Reasonable return"
Kyrgyzstan	Prior year F & V Costs	Historical Cost		Straight line	
Moldova	Prior year F & V Costs	Valued by replacement cost method	Working capital is included,	Straight line	RoA is based on interest at rates earned by government bonds
Tajikistan	No published methodology				
Ukraine					

Wholesale Electricity Tariffs



- Not all countries reported generation tariffs:
 - some vertically integrated,
 - some tariffs are confidential
- Not reflective of a 'market' price
 - Tariffs are capped or fixed
 - Distorted by long term agreements

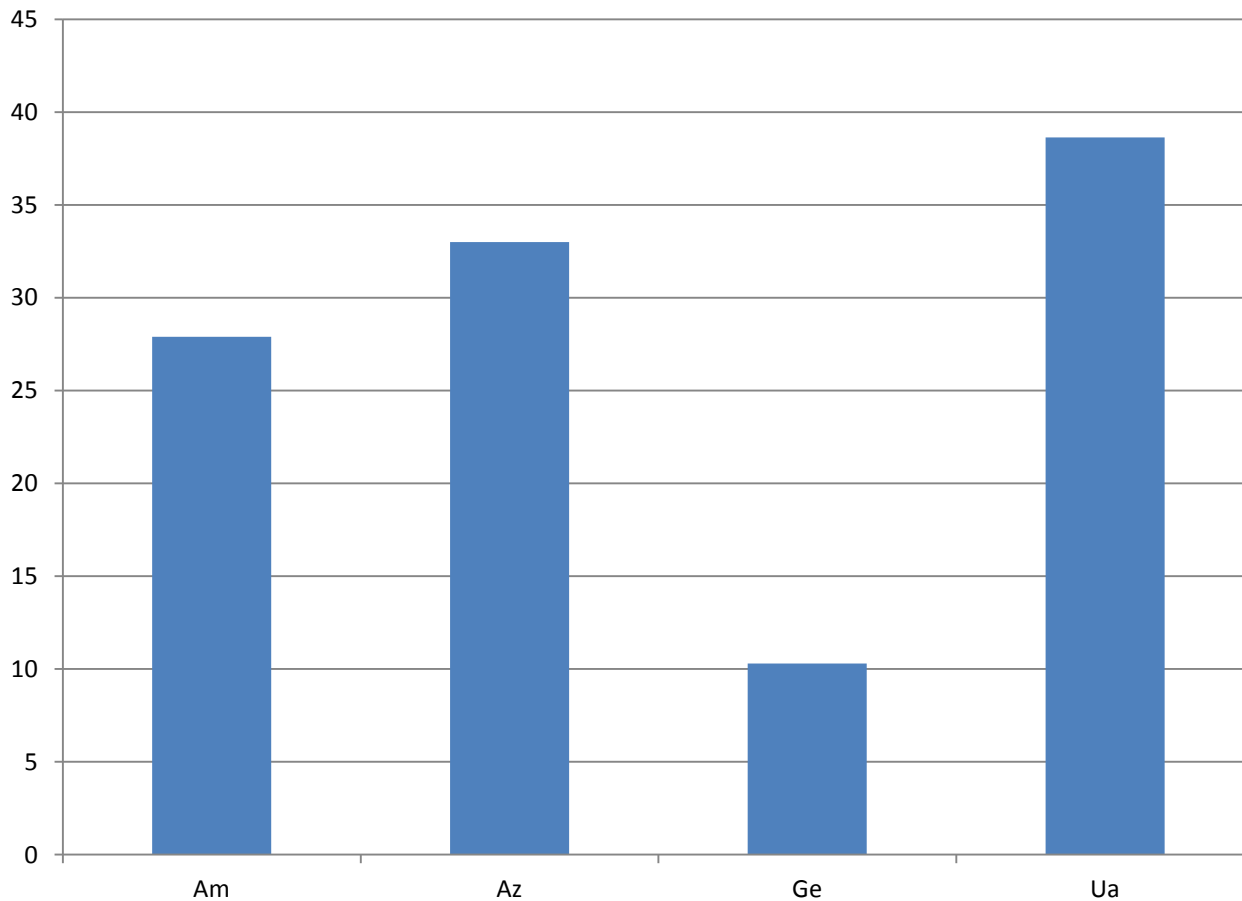
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Wholesale Electricity Tariffs



Wholesale Electricity Tariff €/MWh

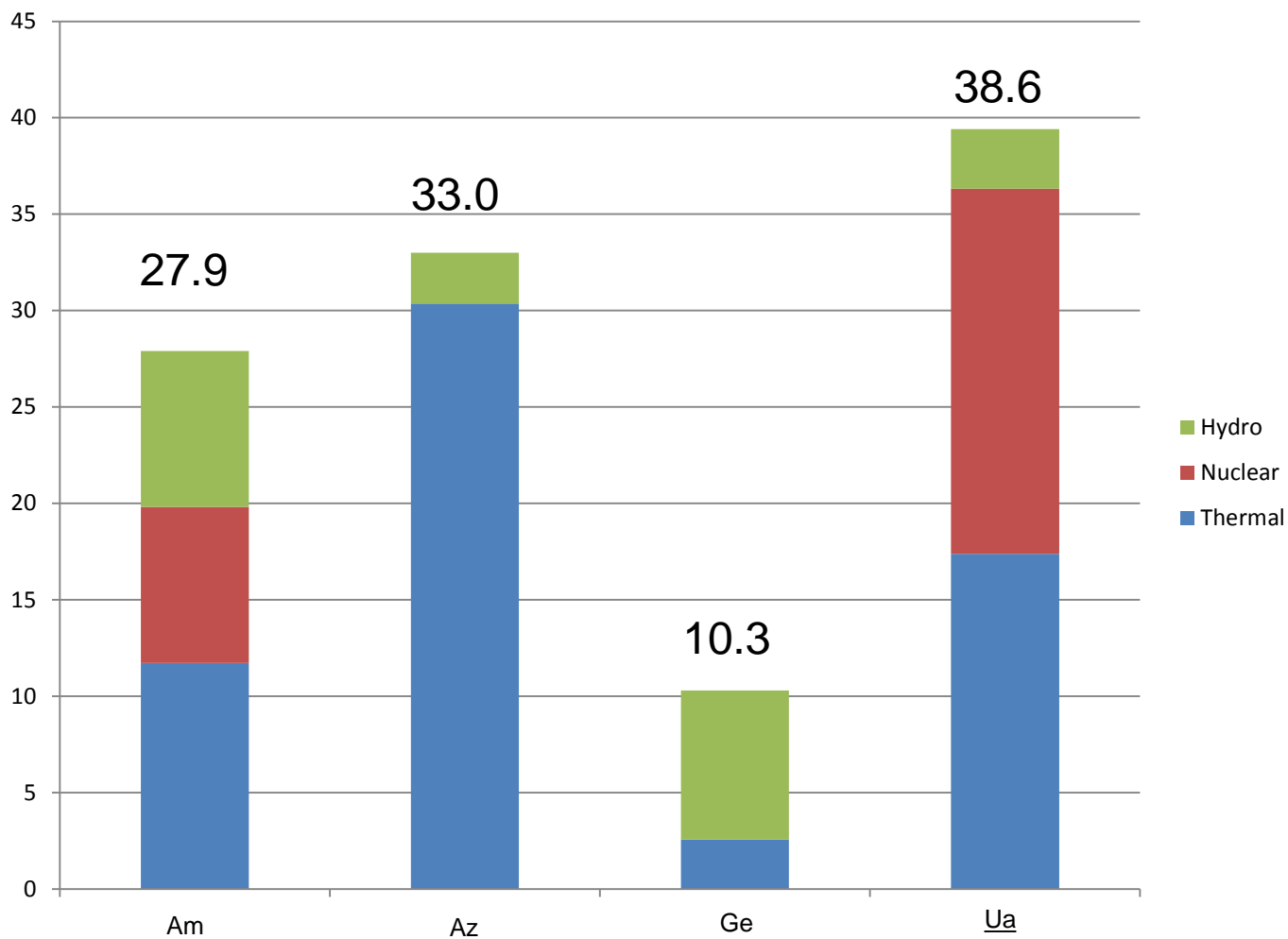


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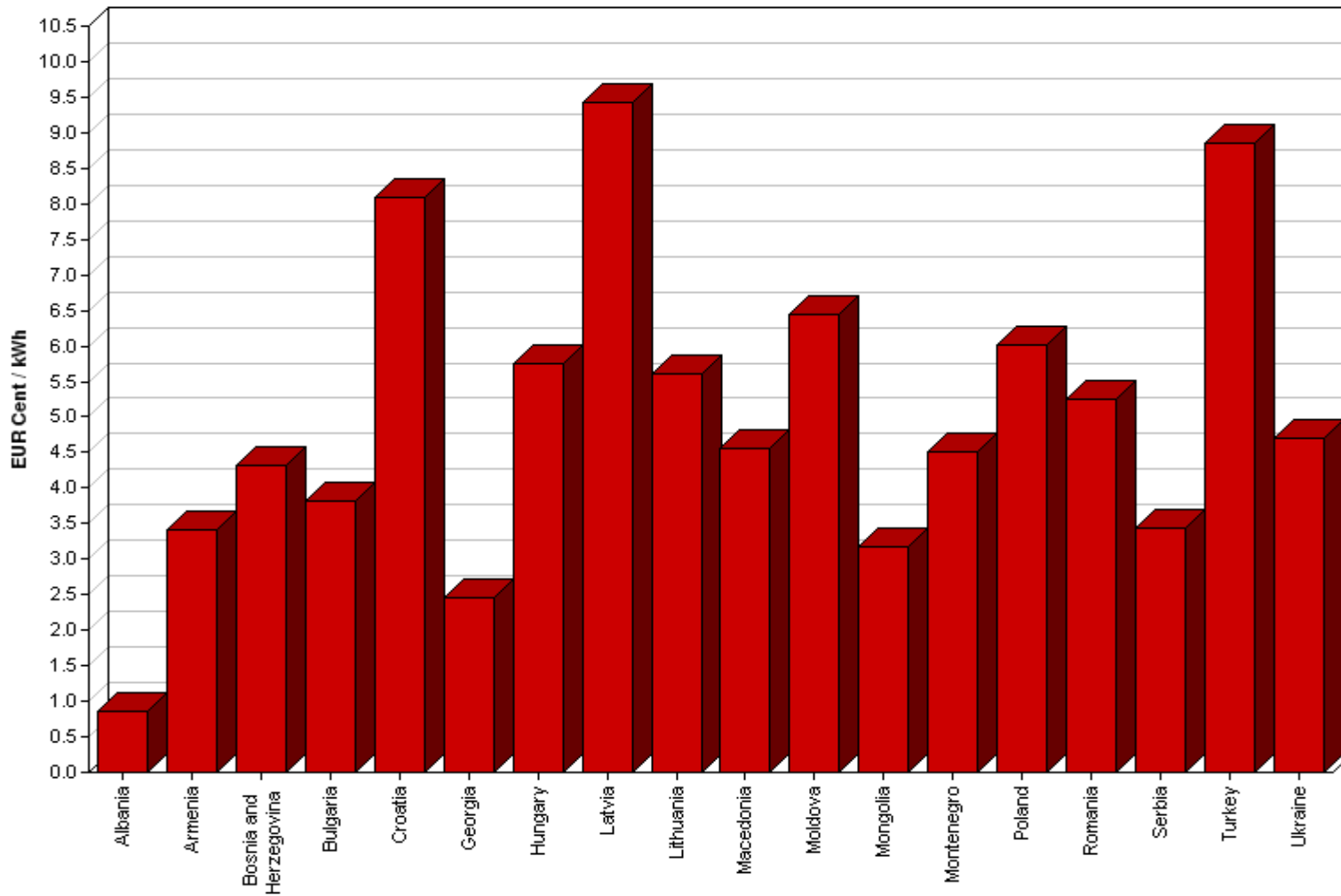
Wholesale Electricity Tariffs

€/MWh



ELECTRICITY Producer Prices in EURO cents/kWh for Q4 of 2012

Electricity Producer Prices (Total price) - 2012/4



Transmission Tariffs



- Not all Transmission tariffs available

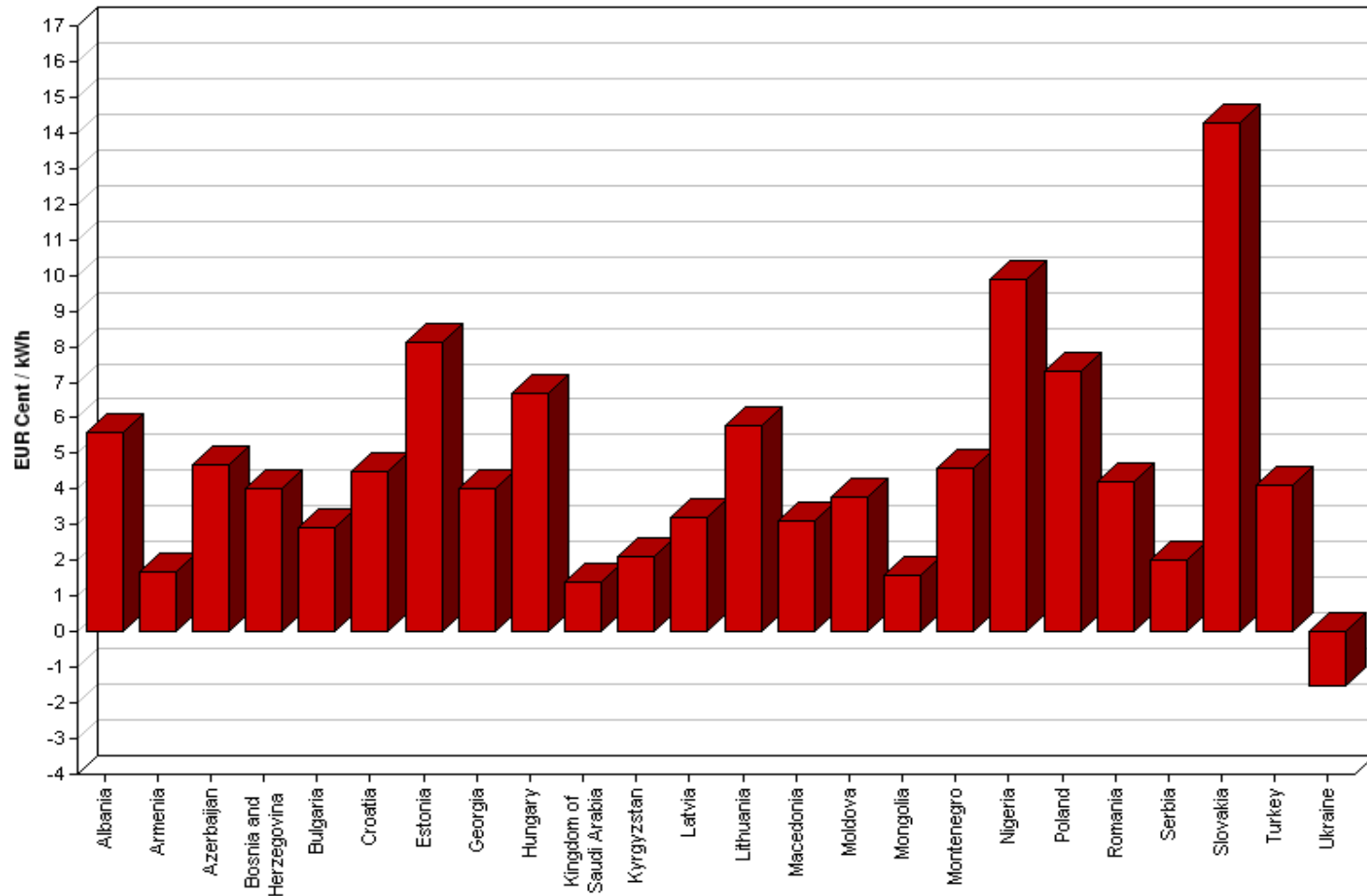
Country	€ /MWh
Georgia	2.8
Kazakhstan	2
Armenia	2.04
Moldova*	4.97

*includes technical losses

ELECTRICITY (Network prices + Retail Margin) in Average Residential Price in EURO cents/kWh in the period of Q4 of 2012



Retail Margin in Average Electricity Price for Residential Customers (2012/Q4)



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End User Tariffs



A wide range of methods of differentiation and cost allocation are in use:

- Voltage
- capacity (kW)
- customer type;
- Time of Day
- 'Block' tariffs
- Distribution Company

End User Tariffs



Country	Differentiated	Block Tariff	Time of Day	Household > Industrial	Subsidies
Am	Voltage	No	Yes	Yes	Some customers
Az	High intensity consumers	No	No	No	No
By	Customer type & capacity	No	Yes	No	
Ge	By Distribution Company	Yes	No	No	No
Kz	Split by Distribution Company	Yes, optional	Yes	No	No
Kg	Customer type	No	No	No	No
Md	Voltage and Distribution Company	No	Yes	Yes	No
Tj	Customer type	No	No	No	No
Tm	No charge				
Ua	By Customer category and capacity	Yes	No	No	No
Uz	By Customer Type				

Household Tariffs



- Several countries use 'block' tariffs
- Some have time of day tariffs
- The chart shows average tariffs for comparison

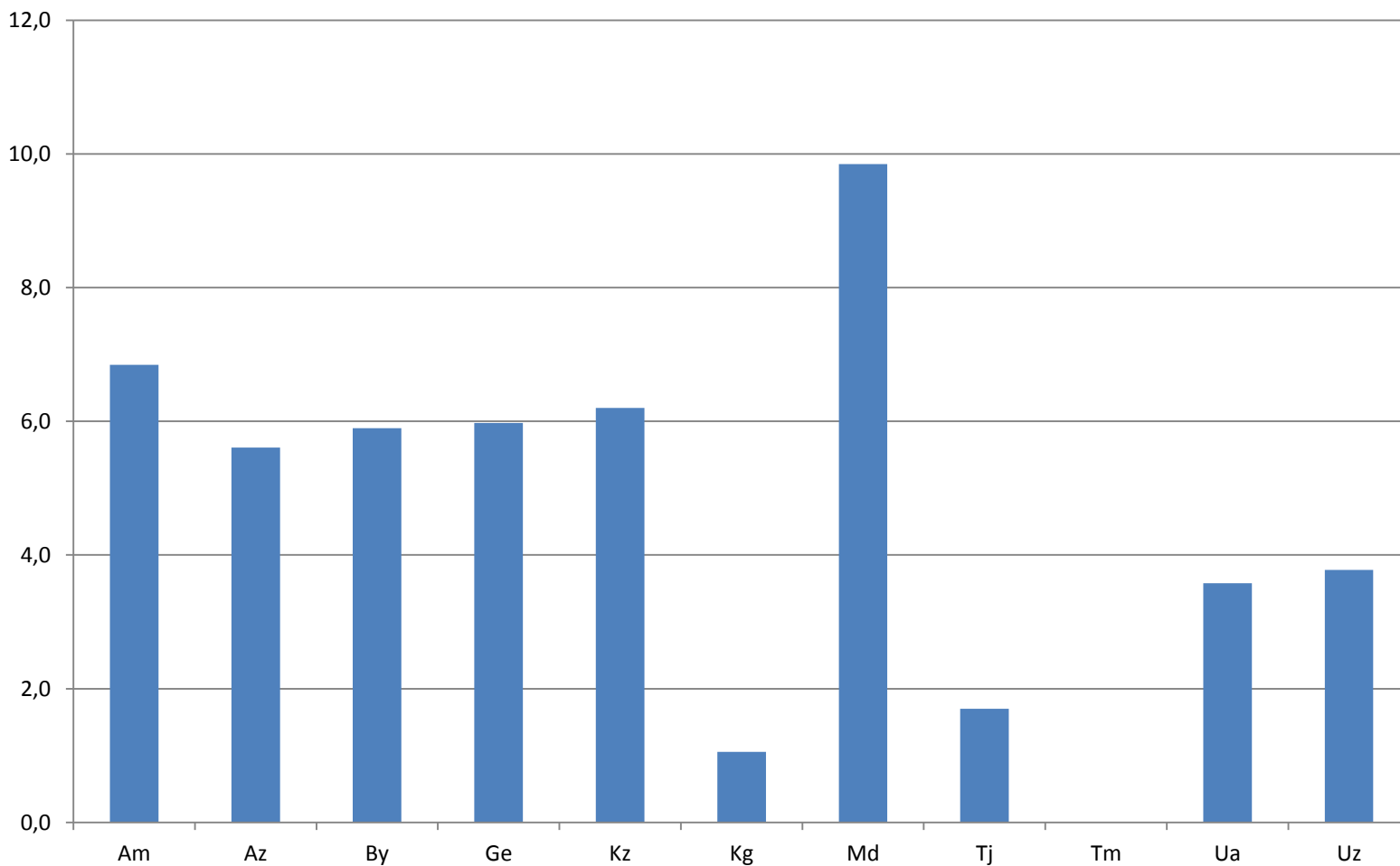
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Household Tariffs



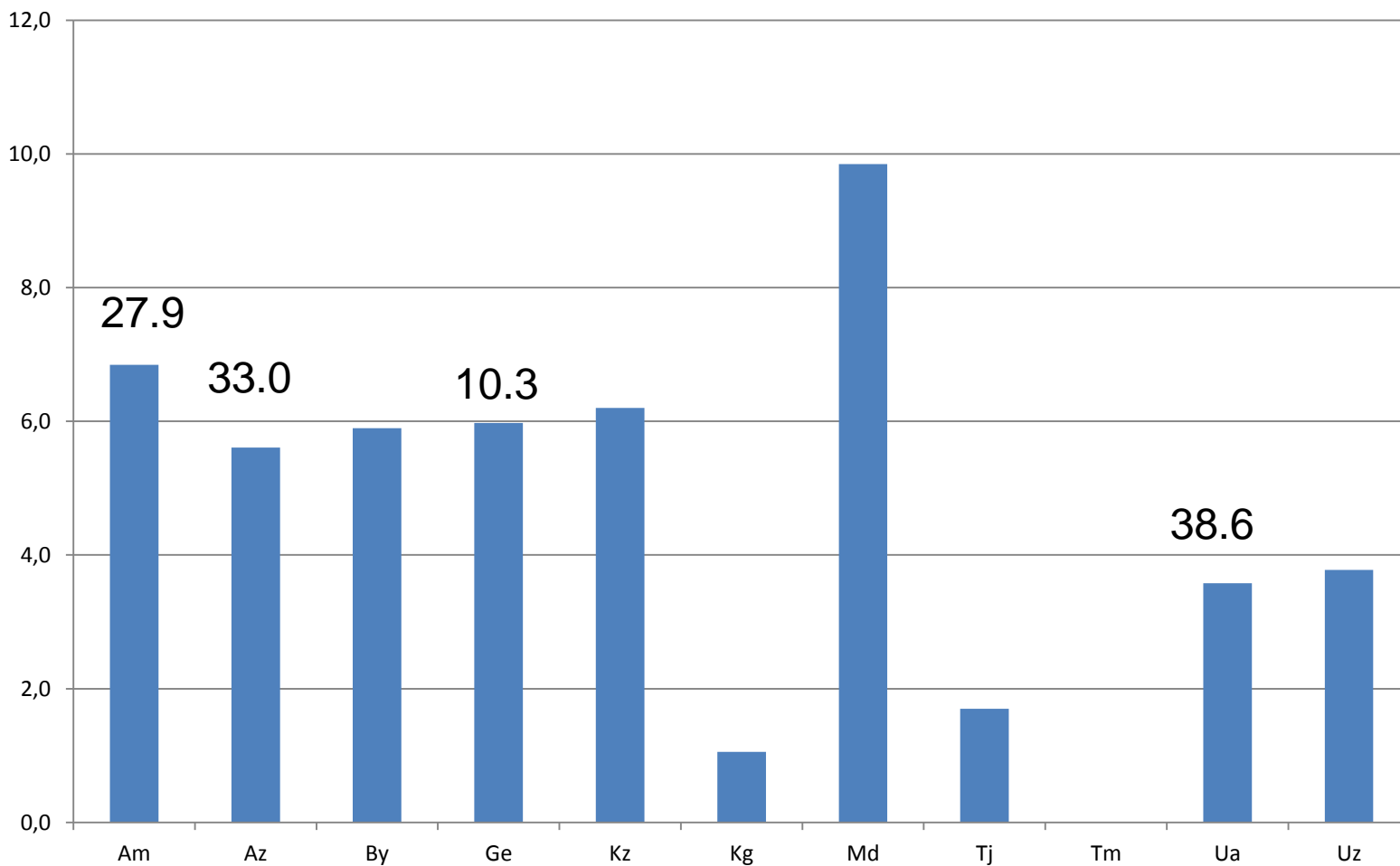
Average End User cent/kWh



Household Tariffs

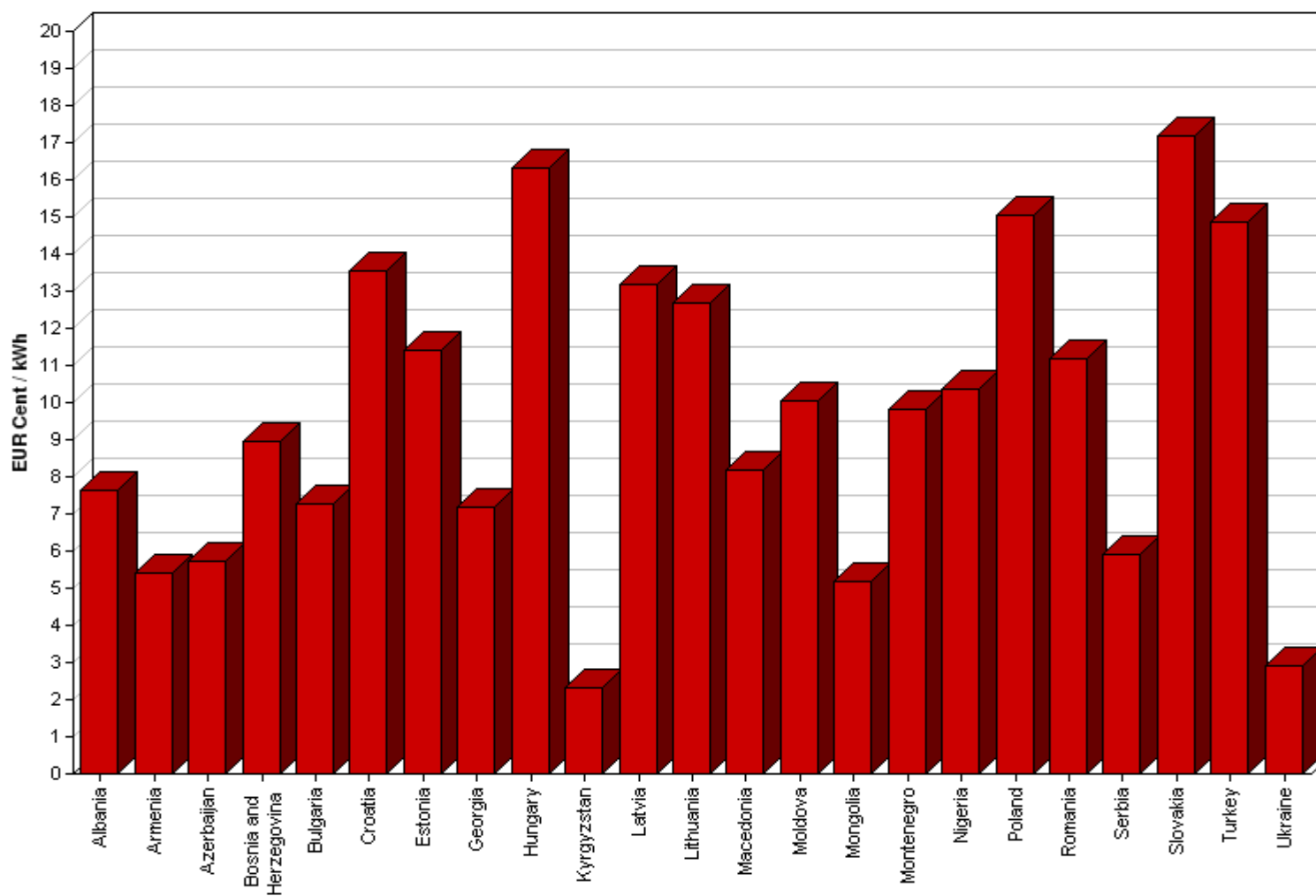


Average End User cent/kWh



ELECTRICITY Residential Prices with Taxes in EURO cents/kWh for Q4 of 2012

Electricity Residential Prices (Total price) - 2012/4



Subsidies

Typical subsidies:

- Customer Cross subsidies
- 'Soft' Loans
- Preferential tax treatments
- Fuel prices at less than market
- Trade embargoes/Market access restrictions
- Guaranteed sales and tariffs



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Subsidies



Subsidies are not uncommon:

- They should be targeted
- The costs should be explicitly recognised
- The most undisciplined subsidies are cross-customer
- Most of the Partner Countries admitted only to cross subsidies

Recommendations



- For those that are not unbundled, consider unbundling (even at accounting level)
 - Supports accurate costing
 - Allows specific targeting of strategic subsidies
- For those that have cost based tariffs:
 - Review the inventory
 - Consider a revaluation of key assets
 - Consider a review of acceptable returns
 - Possibly consider an adjustment in the method to recover missing returns from under-valued assets
- For those that have well established costs
 - Consider the adoption of an incentive based methodology

Recommendations



Tariff Design

- Few Partner Countries set tariffs in line with incurred costs
 - Establish an accurate cost to serve model in the supplier organisations
 - Use to accurately calculate optimum tariff structure
- Even if implementation is politically unacceptable, the price of the policy should be known



Gas

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Gas industries in Partner Countries



Four groups:

1. Gas producers and exporters:
Turkmenistan, Uzbekistan, Kazakhstan,
Azerbaijan
2. Gas producers and importers: Ukraine
3. Significant gas consumers and importers:
Armenia, Belarus, Georgia, Moldova
4. Small gas consumers: Kyrgyzstan,
Tajikistan

Gas production and exports



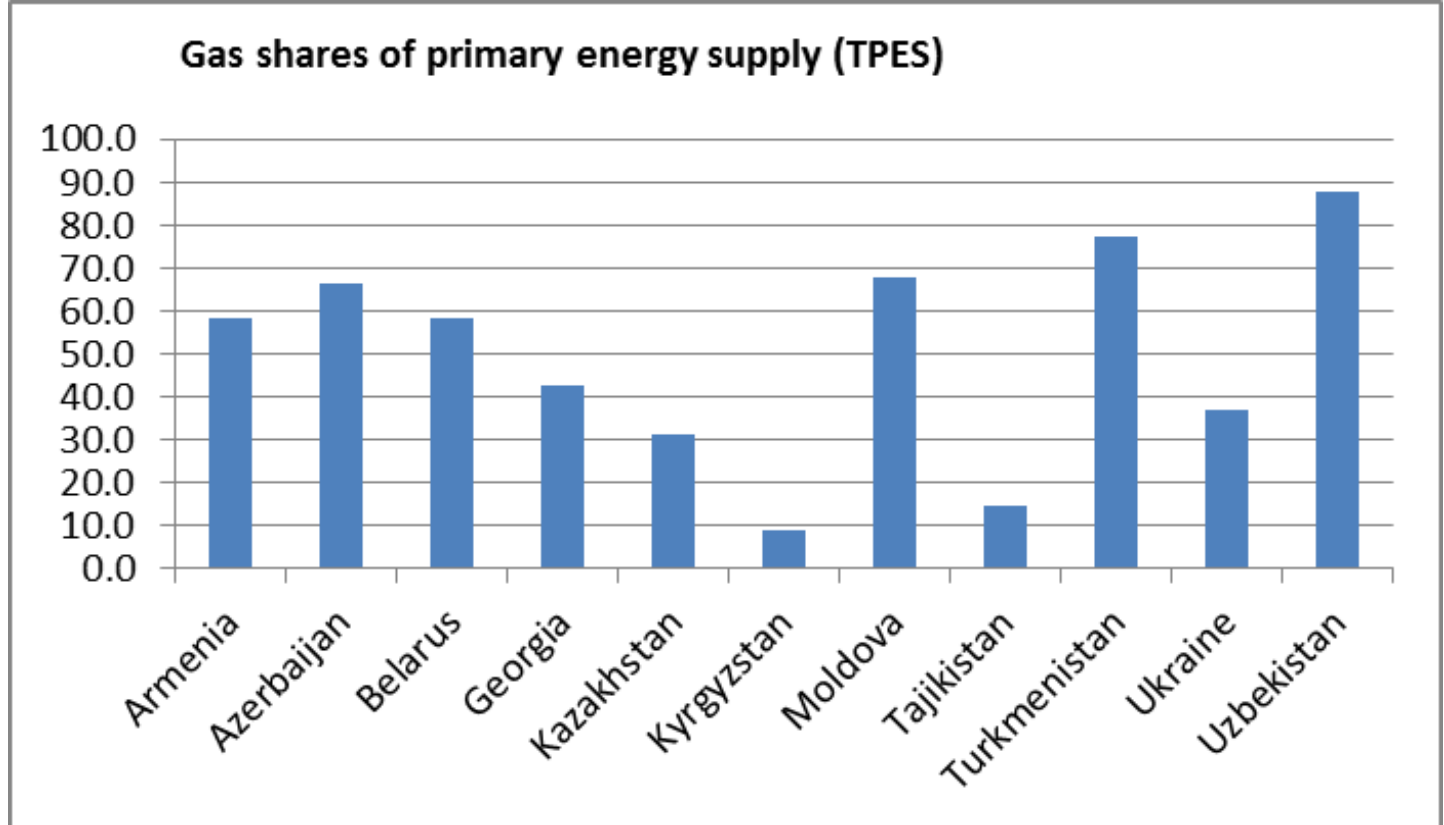
Million tonnes oil equivalent (MTOE)		
	Production	Export
Armenia	0	86
Azerbaijan	13,722	5,722
Belarus	184	0
Georgia	4	0
Kazakhstan	25,306	5,096
Kyrgyzstan	22	0
Moldova	0	0
Tajikistan	33	0
Turkmenistan	53,910	34,823
Ukraine	15,528	0
Uzbekistan	51,194	9,745

Gas shares of primary energy supply (TPES)



	Mtoe	% of country total
Armenia	1,585.00	58.4
Azerbaijan	8,311.00	66.2
Belarus	17,180.00	58.2
Georgia	1,507.00	42.5
Kazakhstan	24,416.00	31.3
Kyrgyzstan	278	8.9
Moldova	2,255.00	67.7
Tajikistan	349	14.6
Turkmenistan	19,087.00	77.2
Ukraine	46,841.00	37
Uzbekistan	41,888.00	87.7

Shares of TPES



Gas shares of final energy consumption (TFC)

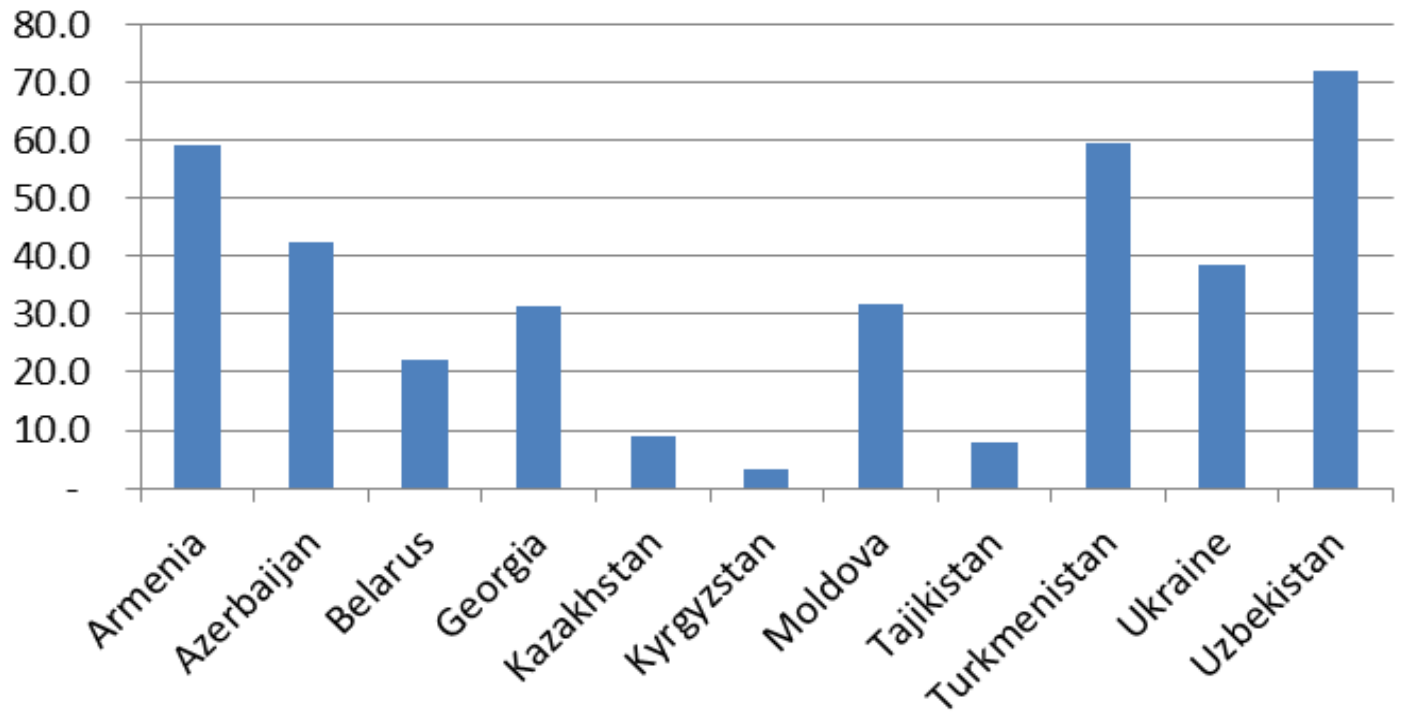


Gas shares of total final consumption (TFC)		
	mtoe	% of country total
Armenia	1,182	59.1
Azerbaijan	3,215	42.5
Belarus	4,638	22
Georgia	956	31.5
Kazakhstan	3,942	8.9
Kyrgyzstan	84	3.2
Moldova	739	31.7
Tajikistan	168	8
Turkmenistan	9,566	59.4
Ukraine	29,188	38.5
Uzbekistan	25,133	72

Shares of TFC



Gas shares of total final consumption (TFC)



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Key EU policy objectives



- Unbundling of gas transmission, distribution and supply
- Competition, particularly in supply
- Private sector involvement
- Independent regulation
- Incentive-based tariffs rather than cost-based
- Transparency over subsidies for particular consumer groups

Limited progress with unbundling



- Gas industry still dominated by vertically integrated state-owned enterprises
- Unbundling of accounts but often not on transparent basis
- Ukraine and Georgia best examples of progress

Wholesale gas costs



- Very low wholesale costs in the four main gas producing countries...Turkmenistan, Uzbekistan, Kazakhstan and Azerbaijan
- Lack of transparency with other gas import prices, notably those involving Gazprom
- Surprisingly large variations in import prices which are reflected in end user tariffs

End user tariffs



- Very low tariffs in four main gas producing countries
- Cost-based tariffs in other seven countries but with variable transparency
- Moldova and Georgia most transparent
- Considerable scope for improvements in tariff methodology
- Ukraine interested in switching to incentive-based tariffs

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Subsidies



- Very low end user tariffs in the “big four” gas producers
- Widespread cross-subsidisation among consumers in most of the other countries but with very little transparency
- Domestic consumers usually the most favoured
- Major gas consumer is the electricity industry so strong correlations between gas and electricity tariffs

Household Tariffs



	€/Gj	€/kWh	€/m ³
Armenia	5.2	0.02	0.20
Azerbaijan	2.9	0.01	0.11
Belarus	2.12	0.01	0.08
Georgia	6.36	0.02	0.24
Kazakhstan	1.29	0.00	0.05
Kyrgyzstan	8.1	0.03	0.31
Moldova	7.8	0.03	0.30
Tajikistan	4.39	0.02	0.17
Turkmenistan	1.05	0.00	0.04
Ukraine	2.1	0.01	0.08
Uzbekistan	2.25	0.01	0.09

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Thank you

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