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INOGATE Tariff Review Study in Partner Countries

Inogate Partner Countries



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Tariff Review



- A survey of Electricity and Gas tariffs in the Partner Countries
 - Overview of the tariff methodologies in place
 - Intended as a guide to future technical assistances
 - Not a detailed analysis
- Methodology
 - Questionnaires to regulatory authorities/ministries
 - Supplemented by internal and publicly available sources
 - Reinforced by feedback on the drafts from partner countries

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Tariff Review



- Market make-up and structure
- Regulatory environment
- Costs of electricity and gas (market and regulated tariffs)
- Transmission and distribution tariffs
- End User tariffs
 - Level of cost recovery
 - Allocation of costs
 - Subsidies

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The main principle of the price regulation



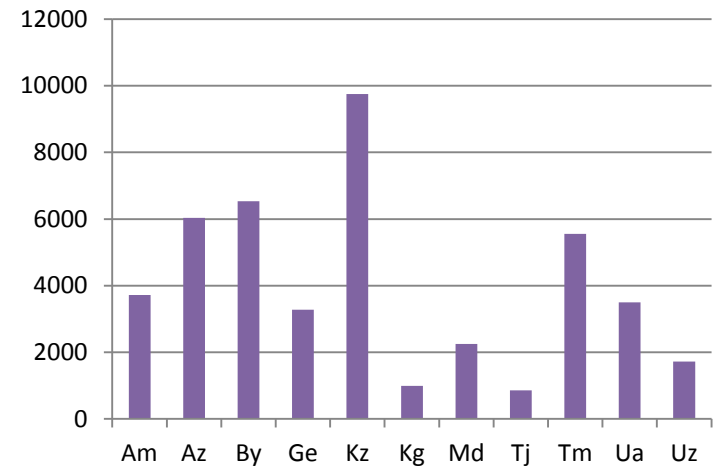
End-user price **regulation** should be abolished as it distorts the functioning of the market

The regulator should set *regulated tariffs* for the regulated companies so that the regulated tariffs allow the companies to earn a revenue that covers the “*justified costs*” of their operation, that is the costs that are **necessary** and **unavoidable** to provide the regulated service at a **predefined level of quality**

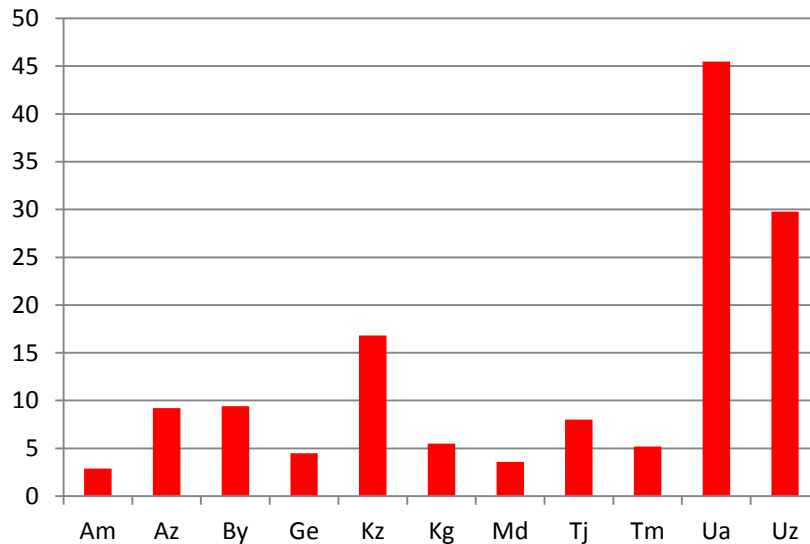
Characteristics of Partner Countries 2013



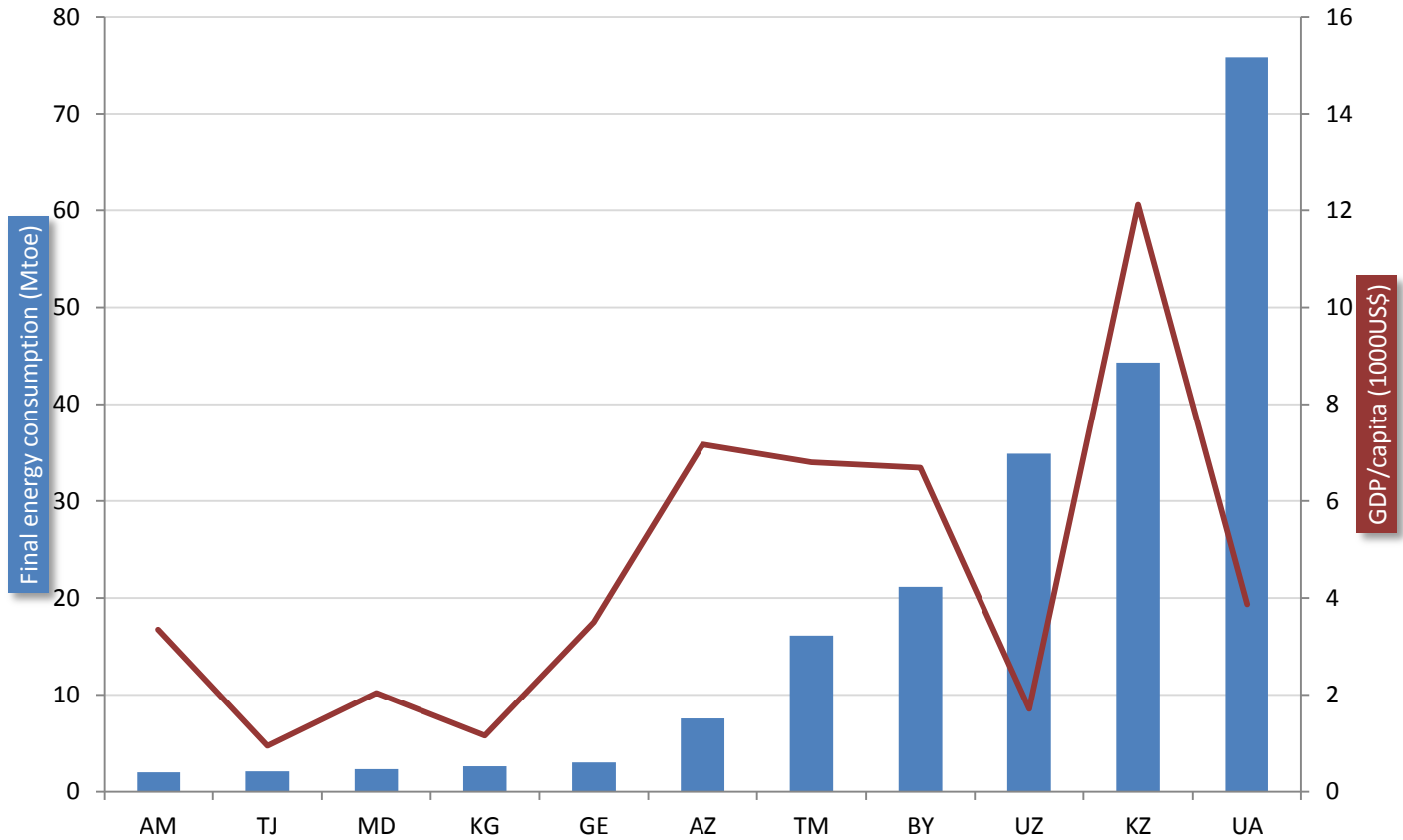
Average Income \$



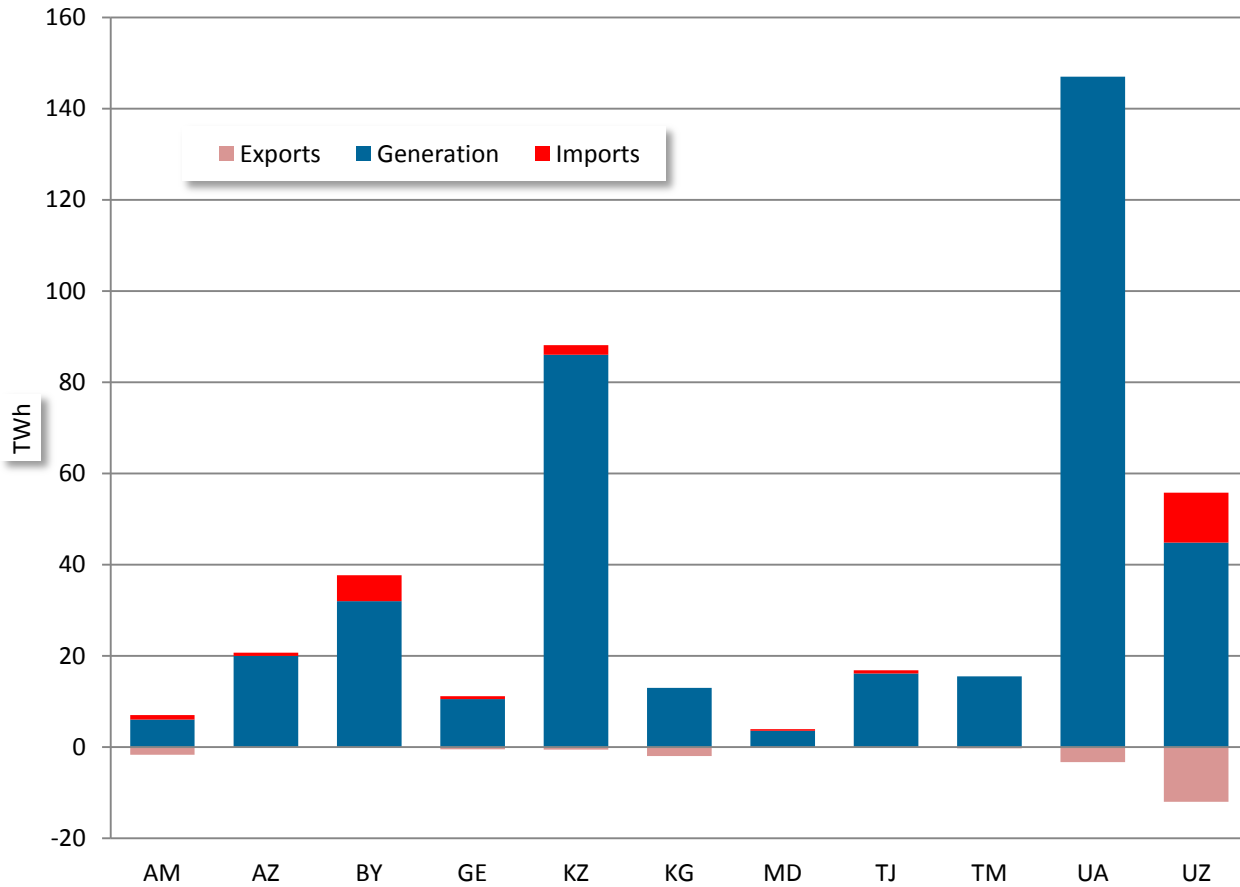
Population



Characteristics of Partner Countries 2013



Characteristics of Partner Countries 2013



Market Structure



Country	Independent Regulator	Unbundled		Wholesale Market	
		Elec	Gas	Elec	Gas
Armenia	Yes	Yes	No	No	No
Azerbaijan	No	No	No	No	No
Belarus	No	No	No	No	No
Georgia	Yes	Yes	Yes	Yes	No
Moldova	Yes	Yes	Yes	No	No
Ukraine	Yes	Yes	Yes	Yes	No
Kyrgyzstan	Yes	Yes	No	No	No
Kazakhstan	No	Yes	Yes	No	No
Tajikistan	No	No	Yes	No	No
Uzbekistan	No	No	No	No	No



Methodologies

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Costs & Allocation



Revenue Requirement:

$\text{RoA} + \text{Opex} + \text{Depreciation} + \text{Taxes}$

Tariff Design:

- Single, two or three part tariffs
- Time of Use
- Volume or block tariffs

Methodologies for RR



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Country	Opex 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 Electricity	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



Electricity

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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

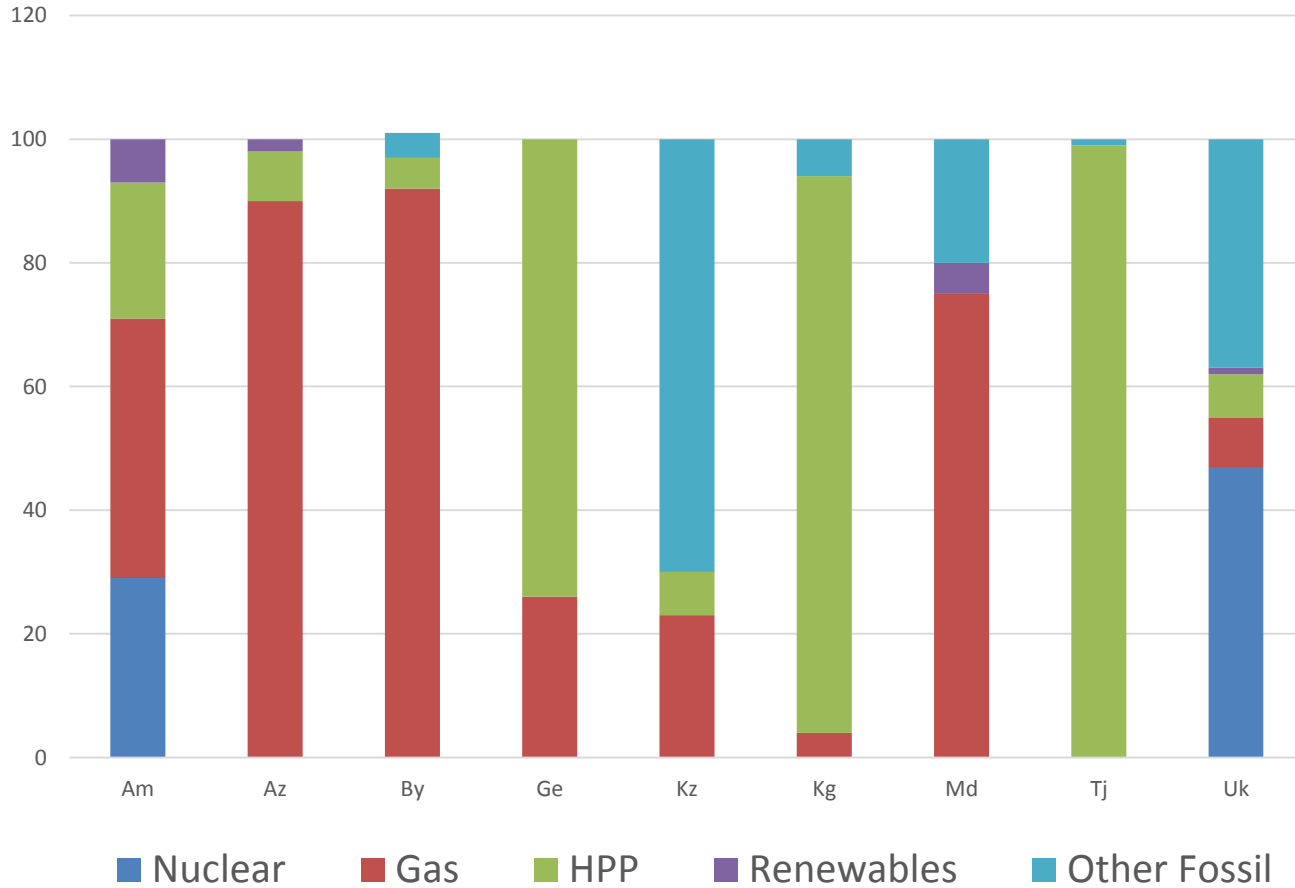
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Electricity Production



% Electricity Production by Source

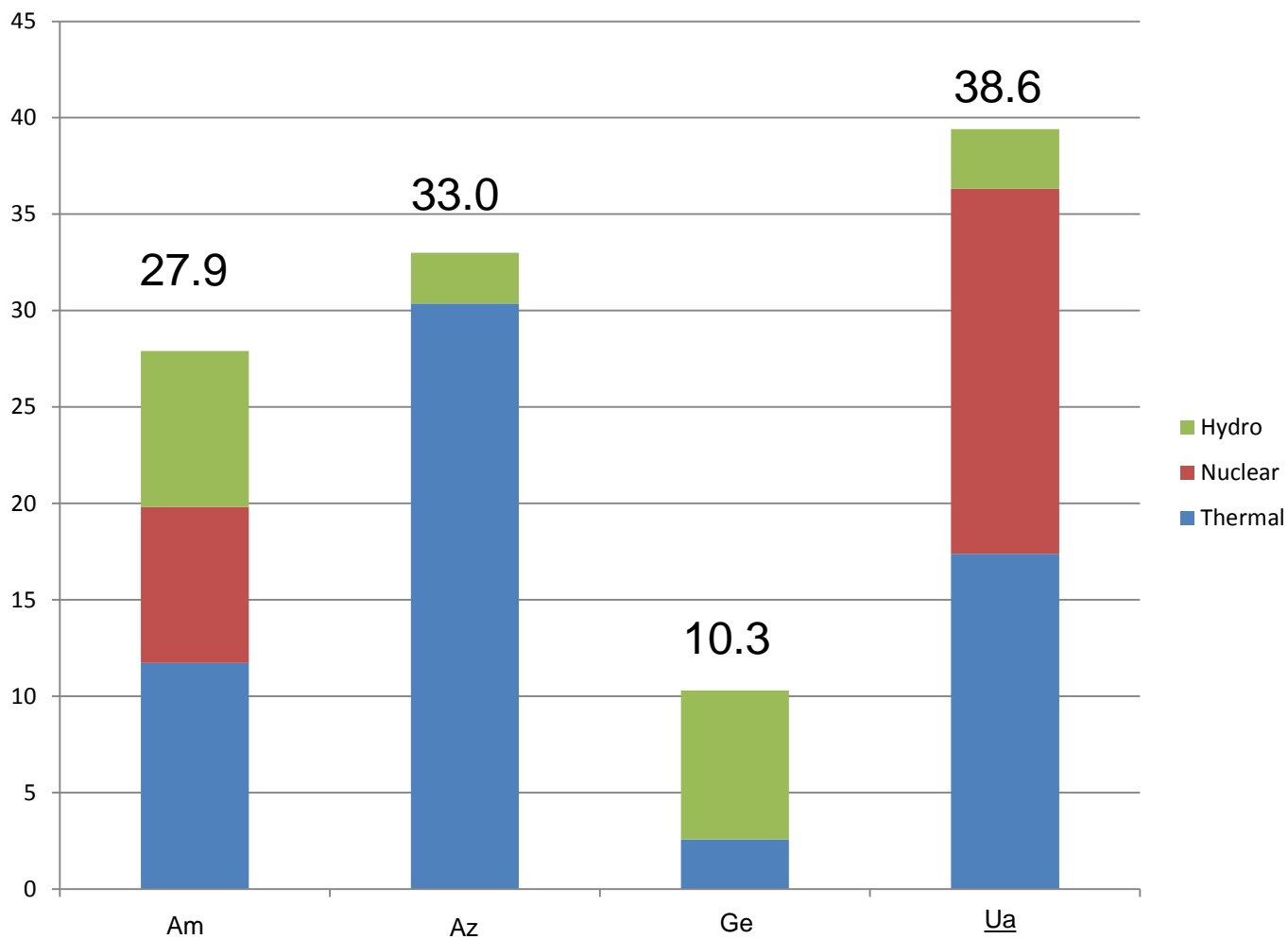


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Wholesale Electricity Tariffs

€/MWh



Electricity Transmission Tariffs



- Not all Transmission tariffs available

Country	€ /MWh
Georgia	2.2
Kazakhstan	2.0
Armenia	2.04
Moldova*	4.97

*includes technical losses

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

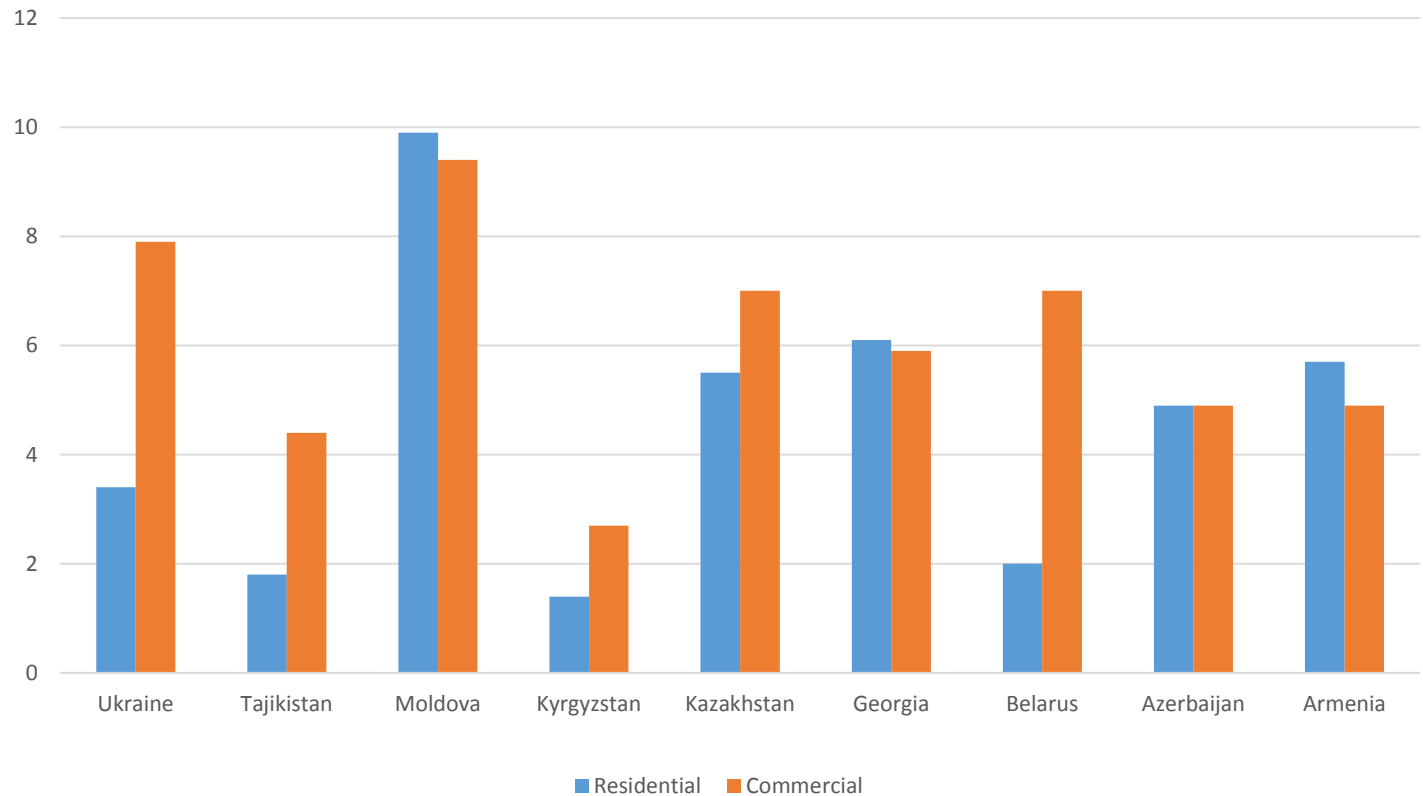


Country	Differentiated	Block Tariff	ToU	Household > Industrial	Subsidies
Am	Voltage	No	Yes	Yes	Some customers
Az	High intensity consumers	No	No	No	No
By	Customer type & capacity	No	Yes	No	
Ge	Voltage, Distribution Company	Yes	No	No	No
Kz	Distribution Company	Yes	Yes	No	No
Kg	Customer type	No	No	No	No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

End Consumer Tariffs



Average Tariffs, €/ct/kWh



Subsidies



Cross Subsidies:

- Georgia, Ukraine and Kazakhstan have 'block' tariffs
- All countries with the exception of Armenia and Moldova have higher commercial tariffs than household

Implicit Subsidies

- Fuel prices to TPPs lower than market (all except Armenia, Kyrgyzstan, Moldova)
- Little or no RoA on state owned assets

Explicit Subsidies

- Ukraine directly subsidises wholesale market because of failure to recover costs through tariffs



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



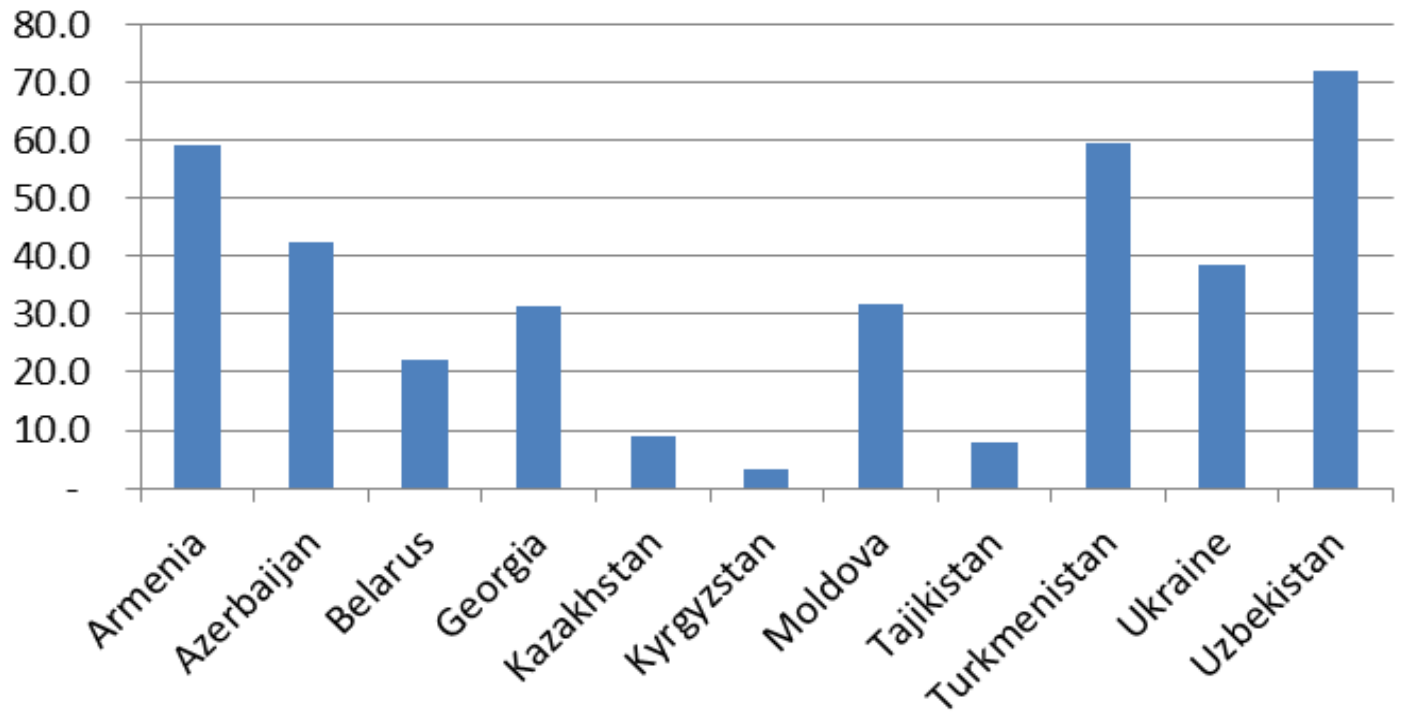
Million tonnes oil equivalent (MTOE)

	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

Shares of TFC



Gas shares of total final consumption (TFC)



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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

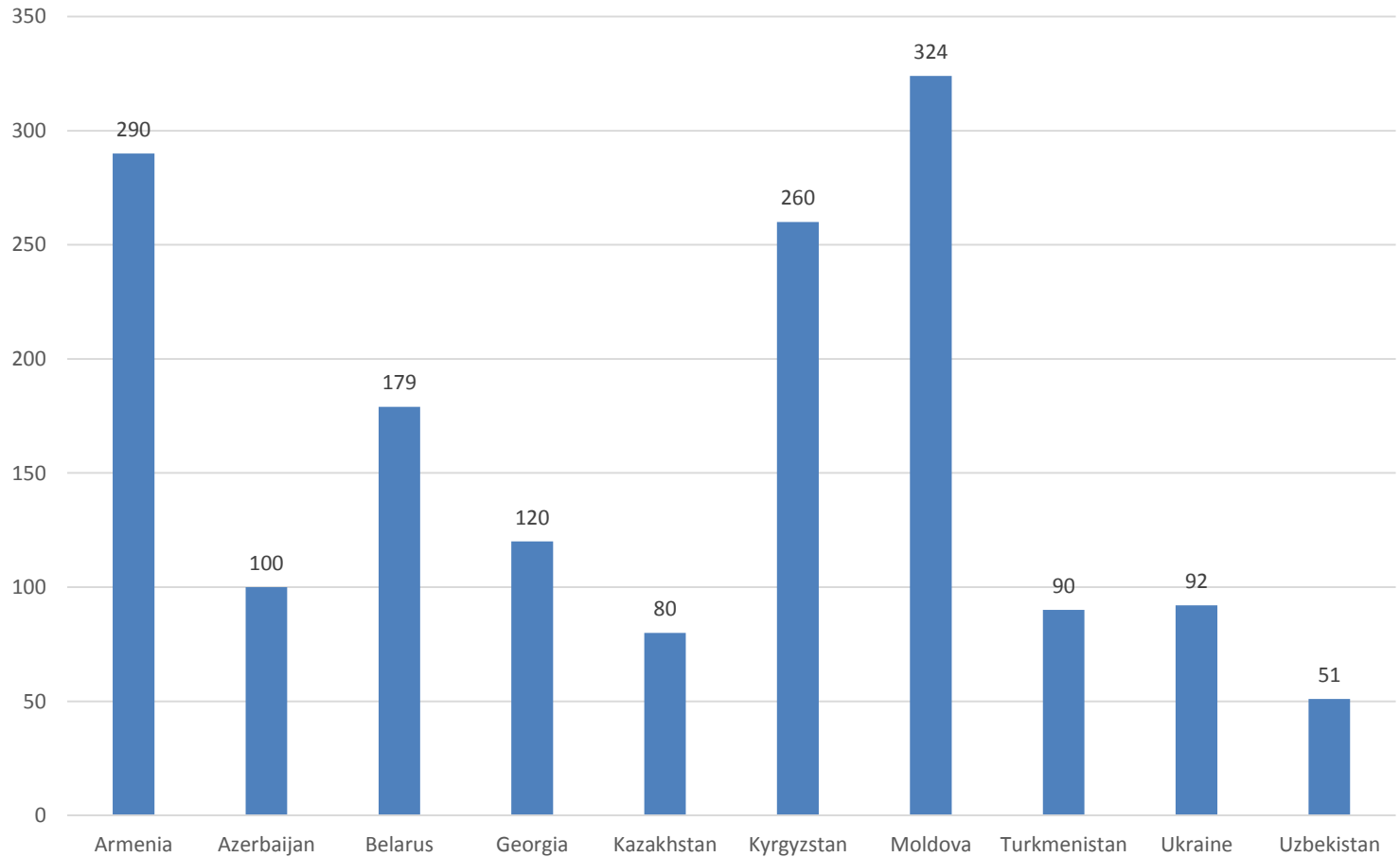
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End User Tariffs



Gas Tariffs, €/ct/1000M³



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

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Independent regulation



- Independent regulators in just 5 of the 11 countries
- Those without independent regulators are the “big four” gas producers plus Belarus and Kyrgyzstan
- Azerbaijan’s tariffs are set by the Tariff Council

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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

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



Thank you

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