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**TRADE AND INVESTMENT REFORM
SUPPORT PROGRAM IN AZERBAIJAN**

Utility Sector Goals and Strategy for Azerbaijan

NARUC/ERRA Tariff and Regulatory Workshop

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Utility Sector Goals and Strategy for Azerbaijan

- Azerbaijan continues to experience economic resurgence primarily from its rich energy resource development and export
- Economic growth and maturity is fast approaching that of developed economies and new EU-member countries
- Rapid economic growth has created opportunities to raise living standards of all citizens
- GOAZ is also rightly placing strategic emphasis on non-energy sector growth, diversification and move towards market economy

Utility Sector Goals and Strategy

- Infrastructure and utility sector development an essential element of this strategy
- Utility sector needs rapid modernization and expansion, attracting private investments, state- of- the- art technology application, know how and management skills
- In recent years, GOAZ has invested substantial sums into energy utility and water sectors to improve reliability and quality of services.
- It is already showing good results: expanded new connections, reduced outage rates, more metering, and enhanced collections and financial performance
- Gas and Electric distribution systems in urban areas, specially in Baku show rapid modernization, such as AMR, electronic billing and CIS

Utility Sector Goals and Strategy

- A sound institutional and regulatory framework is an essential component of sustainable infrastructure development and modern utility services
- Despite recent improvements, institutional and regulatory framework has not kept pace with infrastructure growth, needs further strengthening and sound footing
- The USAID funded TIRSP project has recommended an strategy for gradual institutional reforms to:

Create best practices regulatory framework, efficient tariff regime, private sector participation and sustainable, modern utility organizational structure

Goals and Objectives

- Regulatory Reform: a sustainable and competent utility regulator
- Tariff Reform: economic- based tariffs, rational efficient tariff structure
- Customer Care: Consumer Protection, Service quality standards
- Restructuring: Un bundle, privatize or Concession-out selected assets in gas and electric sectors; stimulate competition in enabling segments
- Promote market liberalization: open market access, transparent non-discriminatory market rules, feasible retail access
- Regional Integration: a) promote cross-border trade and transit, b) regional dispatch and control, optimized economy transactions

Goals.....contd.

- Enhance Energy Security: reduce risk of system failure, emergency management
- Encourage active regional and international association participation: NARUC, ERRA, Energy Community
- Staff development and training, sustainable professional organization, capacity building
- Make utility institutional reform a key element to promote WTO accession
- Overall goal to bring Azerbaijan in convergence with EU and regional practices, institutional arrangements

Previous Efforts

- Letter of Intent of GoAZ to establish regulatory framework, signed by the PM (April 2003)
- LOI cogently outlined objectives, principles, and roadmap to institutional reforms, fully-powered, independent regulatory agency
- WB developed recommendations and draft legislation (2004-2005)
- Reform draft legislation sent to COM- 2005
- Creation of Tariff Council (2003)
- Tariff Council role strengthened in 2005 as separate entity, technically apart from any ministry, separate appropriation
- However de facto control by Min. of Economic Development as Chairman of TC; TC members are representatives from various ministries

Current Tariff Council Role

- TC established by Presidential Decree
- Resolution 247 elaborates tariff principles, operation rules

Observations:

- Generally rules give TC adequate authority to develop and adopt cost-based, rational tariffs
- TC sets prices for 39 sectors, including electric, gas and water utilities
- Secretariat w/ staff of 25 processes all- sectors rate requests
- Thus diffused analytical focus on energy tariffs
- Organizational short-coming when compared to 'good', far less best, practices
- Insufficient professional resources: Need stronger skills, analytical capacity
- More in depth cost analysis needed to calculate tariffs, set rational prices
- Politics a strong component in tariff decisions
- Consumer protection, service quality regulation outside TC jurisdiction and not adequately addressed elsewhere
- No effective monitoring of utilities
- Funding from state budget vulnerable to political pulls

Recommended Regulatory Framework Elements

- . Clear legislative mandate, well defined powers and limits on authority**
 - All functions under one agency. Transparent deliberative process**
 - Funding source other than state budget: utility assessments**
 - Fixed term of office for commissioners, dismissal only for cause**
 - Non interference from executive branch or vested interests**
 - Power to issue licenses, enforce performance**
 - Power to establish tariff levels and tariff structures**
 - Power to establish service quality standards, Consumer protection measures, billing, service and new connection policy and rules**
 - Power to establish uniform accounting system for regulated entities**
 - Review investments, capacity expansion plans (not necessarily pre-approve)**
 - Power to resolve disputes among market participants**
 - Appellate rights of participants**
 - Code of ethics for regulators**

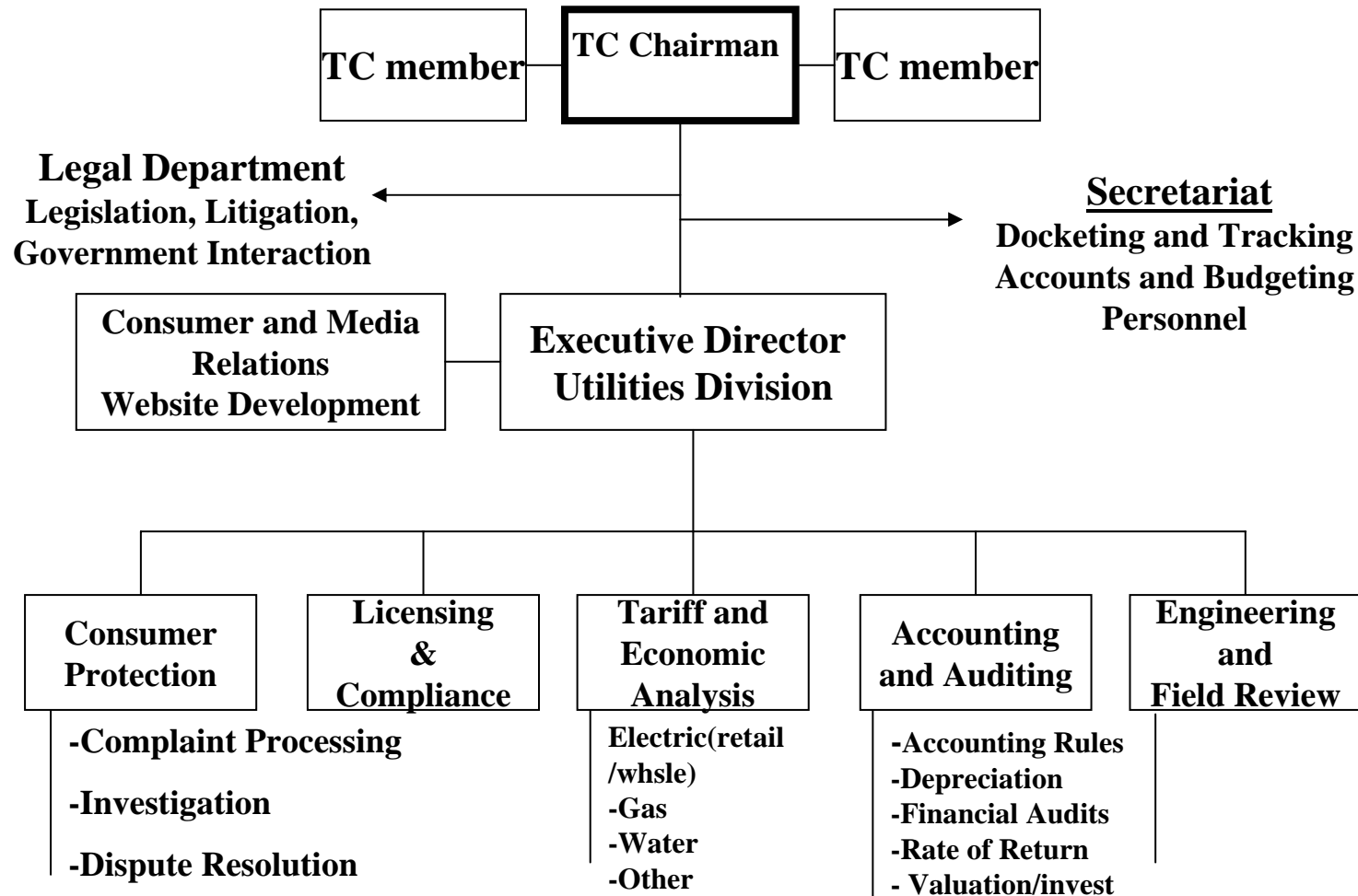
Regulatory Framework: What we need to do?

- Outline role and functions of an efficient, independent utility regulatory agency
- Examine and recommend amends to current statutes and decrees to remove overlaps
- Prepare legal and regulatory framework overview
- Initiate presentations/discussions with appropriate officials, stakeholders to obtain consensus
- Develop legislative framework proposals
- Draft primary legislative documents creating an independent body
- Preferably a new Energy Law
- Promote adoption of legislation
- Assist GOAZ/TC in secondary legislation and agency rules ¹¹

TC strengthening: Near- term goal

- Build organization from within
- Establish a Utilities Division within the TC Secretariat
- Division (see Org chart) organization is professional, expertise-driven
- Build an ‘as if’ independent regulatory agency (staff) within TC
- Will push up decision- making
- Develop rules of practice and procedure
- Establish rate case review procedures, data filing requirements
- Public participation and hearing procedures
- Assume jurisdiction for consumer protection, service quality
- Many organizational changes can be initiated internally by TC
- Current funding from state but eventually from utility assessments (requires change in law)
- Demonstrate “ how a reg. body works”, work closely to assist to develop org. structure, staffing, training

TC Organization..recommended near-term



Electric System Profile

	Total installed Capacity(Mw)	Current Capacity (Mw)
Hydro	1024	3962
Fossil(NG, Mazut)	4600	636
Total Cap.	5624	4598
Annual Production (2006)	23,784 Gwh	
Net export	880 Gwh	
Transm. Losses	3.5%	
Dist. Losses	13-14%	
No. of Consumers	App. 2.04 million	
Annual consumption	19, 544 Gwh	
Population	64 %	
Business and services	2.5	
Industry	16	
Others (budget etc)	18	

Current Electric Tariffs

1. Wholesale

Azerenergy	4.1 qep/kwh (5.1 cent)
Small Private hydro gen.	2.5
Wind gen.	4.5

2. Retail

All consumers	6.0 qep/ kwh
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3. Transm. Tariffs

0.2

4. For large HTV(> 5 mill. Kwh/mo. supplied at 35-110 kv)

(chemical, steel foundry)

On-peak use	8 am- 10 pm	4.2 qep/kwh
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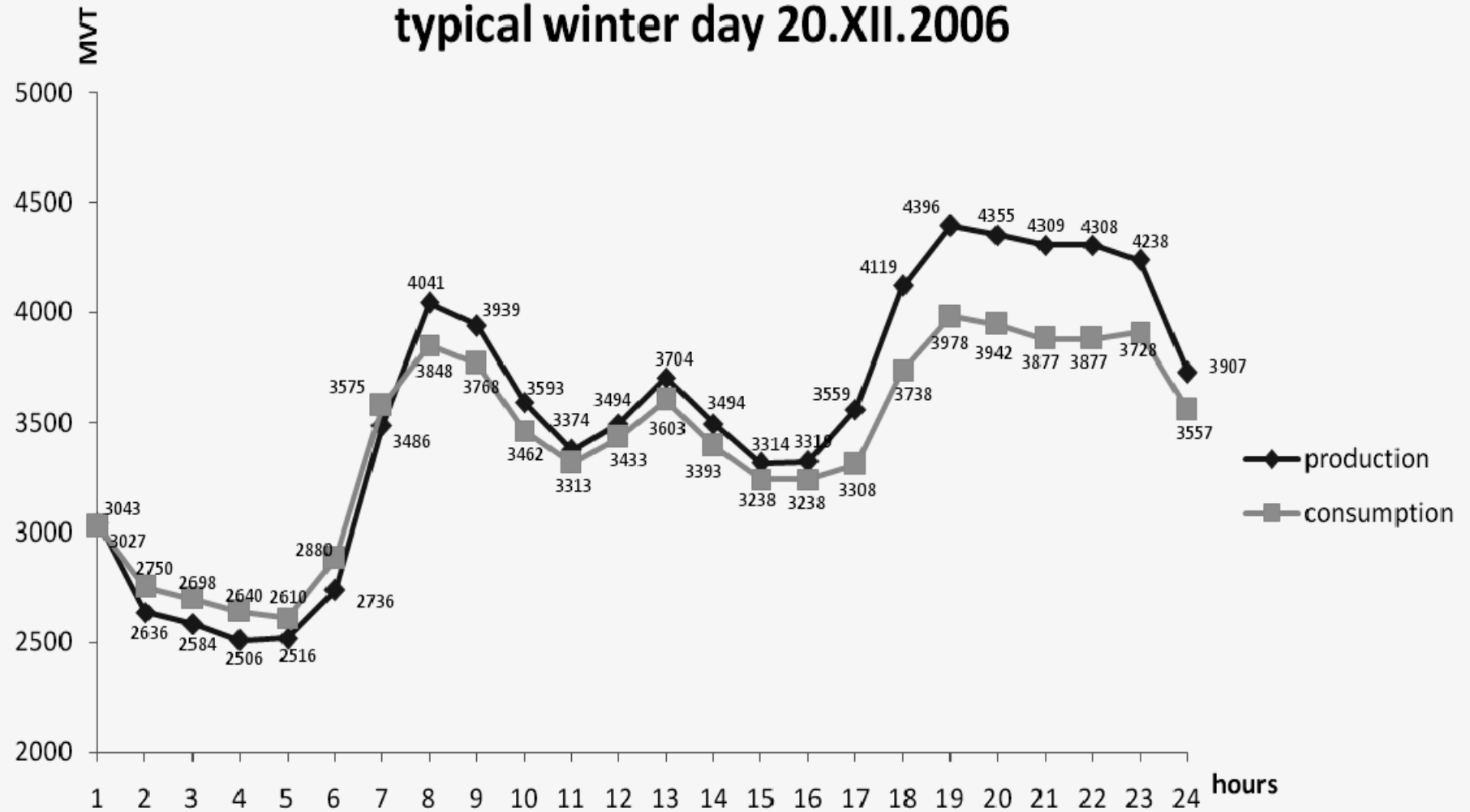
Off-peak use		2.0 qep
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Plus Trans. Tariff

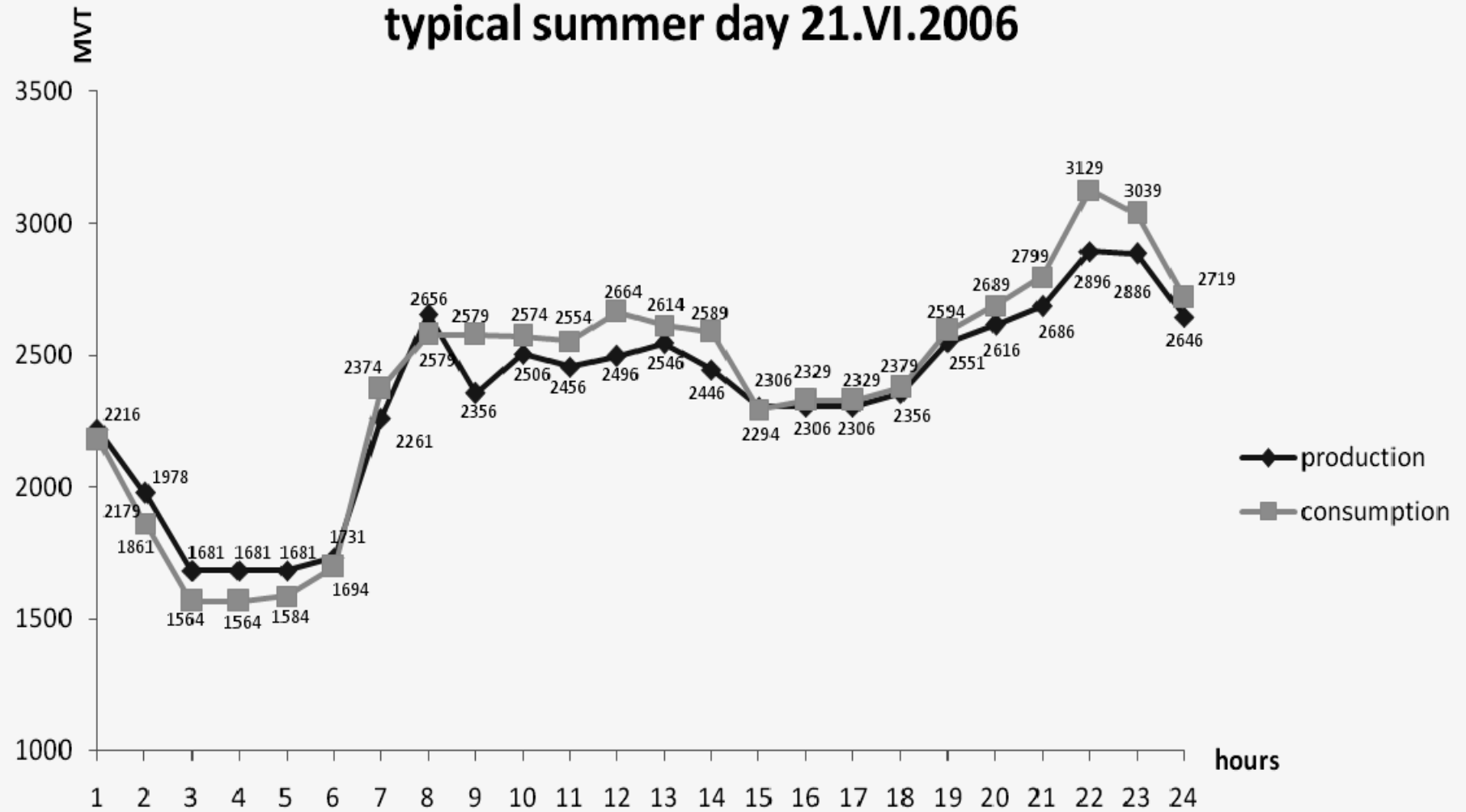
(Difference between wholesale tariff and off-peak tariffs to be covered by Azerenergy)

Note: Unclear whether they are customers of Disco, if so what they pay

typical winter day 20.XII.2006



typical summer day 21.VI.2006



Generation

	Date putting into operation	The fuel type	Installed mw	Available mw	Production x 10 ⁶	Cost Cop/kwh	Fuel consumption
Azerbaijan TPS	1981-1990	Gas-mazut	2400	2100	11600,5	3,11	371,2
Ali-Bairamli TPS	1962-1668	Gas-mazut	1050	860	5672,5	3,61	446,4
Shimal (north) PS	2002	Gas	400	400	2670,6	2,13	239
Baki TPC	2000-2001	Gas	187	100	693,1	1,79	215,4
Baki TMPP	2007	Gas	104	104	476,3	N/A	N/A
Astara PP	2005	Gas	87	87	319,8	2,69	269,6
Sheki PP	2006	Gas	87	87	138	4,1	283
Khachmaz PP	2006	Gas	87	87	57,9		276
Nakhchivan PP	2006	Gas	87	87			
Nakhchian GTPS	2006	Gas	64	64	120	2,3	600
Mingechevir HPS	1953-2000	Water	418,1	340	1295,2	0,28	
Shemkir HPS	1983-2003	Water	530	270	1114,3	0,62	
Ter-Ter HPS (has been occupied by armenian armed forces)	1967	Water	50	0			
Aras HPS	1970-1971		22	22	110,9	0,22	
Vaykhir HPS	2006	Water	4,5	4	2,2		

Gas Usage

<u>Consumption(mill. cm.)</u>	<u>2006</u>	<u>2007</u>
Population	2791	2608
Industry	976	1273
Azerenergy	5148	4512
Municipal	322	332
Export	20	269
Losses(5%)	478	519
No. of Consumers	1.15 million	

Gas tariffs

- Wholesale (from SOCAR) to retailers 42 azn/tcm
- Transport Tariff 2.0 Azn per tcm / 100 km
- To Direct Access users 42.00 azn Plus 3.00 for transp.
(Azenergy, Alum., Steel; > 15 mi.. tcm)
- Storage fee: No separate tariff
- Retail:
 - Population 47.2 Azn / th.cm.
 - Others 100 azn/th. cm

Note: a. Population consumer paying < wholesale cost

b. No dist cost recovery

Tariff goals

- Economic cost - based tariffs
- Revenue Requirements/RoR analysis as basis for tariff setting
- Attain full cost recovery in gradual steps
- Rational efficient tariff structure reflecting costs by customer classes
- Social protection for targeted groups
- Managing commercial and technical losses
- Tariff design: encourage conservation, DSM thru tariff design
- Advanced tariff design for large customers, expanded open access
- Promote metered service
- Enhance revenue collection

Tariff --- Recent developments

- Tariffs raised significantly in 2007 (1.6 to 0.06 AZN/kwh; 47/100 azn for gas)
- Tariff structure improvements: direct access to some large users allowed
- TOD tariffs available to large users, albeit deficient design
- Reportedly more meters installed (over 90% in gas, 80% for electric)
- Revenue recovery over 90% reported
- Service quality improvements, reduction in outages claimed
- Need further quality improvements in regions
- Some backtracking on tariff design: uniform electric tariff for all classes, previously had differentials among classes
- Gas tariff significantly below market price
- Domestic use heavily subsidized
- No specific tariff to address social protection: direct govt. subsidies do exist

Tariffs.....

Suggested Action Plan:

- Outline tariff principles and tariff methodology for gas and electric
- Revise filing requirements, access and review data year round , not just during rate cases
(we believe TC staff does not aggressively exercise its authority to pursue access to utility data)
- Demonstrate how to estimate revenue requirements, tariff calculations
- Outline advanced tariff structure for commercial and industrial classes: two part tariff; TOD tariff; interruptible,
- Outline options in residential tariff: lifeline, social tariff
- Incentive tariffs (e.g pegged to system reliability, service quality, cost performance)
- Unbundled tariffs, direct access, renewable energy off-take tariffs, transportation tariff , Allow gas storage leasing

Consumer Care and Service Quality

TC should assume role to implement Consumer Protection rules and service quality standards

- Assist in review of existing Grid code
- Propose updating or improving:
 - Quality of service technical standards (voltage fluctuation, frequency drops, harmonics, etc)
 - Service and billing rules (consumer bill of rights)
 - Service connection rules for new customers
 - Universal service provisions
 - Disconnect/reconnect policy
 - Consumer complaint and dispute resolution, enforcement

Regulatory regime sustainability

- Base decisions on sound technical analysis
- Explain and articulate decisions with legal and analytical support
- Be transparent: bring in public and interest groups in the deliberative process
- Develop sound regulatory tools: written procedures, strong professional organization
- Act with integrity, fairness and efficiency
- Give timely decisions

Restructuring....

- Privatization/MC of selected elec.and gas assets
- Promote PSP, IPPs, deregulate competitive services
- Decentralized water utilities: transfer control and regulation to local municipalities and townships
- Assist TC in developing water tariff methodology

Current Electric System

- SOE Azerenergy ‘nearly’ full service provider
- All generation under Azerenergy, Also TSO and transmission operator
- Distribution and Supply

Recent History:

2002- Concessions awarded for all distribution to private entities, Barmek and Bayeva

2006- Concessions cancelled

- Systems returned to state-management:
- Baku Distribution and Sumgait- managed by MED;
- Essentially functionally separate distribution and supply
- Recent move to re-offer to Concessions: Sheki and Sumgait

Restructuring Assistance

- Assessment of the current status of privatization
- Briefly analyze recent Concessions (Barmek/Bayva): what went wrong, lessons learned?
- Analyze legal, institutional and economic barriers to private participation, recommend mitigation measures
- Recommend streamlined, transparent tender process
- Discuss strategy and options with State Property Committee; Assist in tender docs, process

Barriers to investments

- Inadequate cash flows
- Instability in enforcement of laws and contracts
- Lacking regulatory independence
- Availability of credit enhancement and risk guarantee: sovereign guarantee etc.
- Process inconsistency
- Recent experiences (Barmek, Byava)

Enhancing Security of Supply

- Reduce risk of system failures by upgrading generation system, modernizing transmission system communications and control, (SCADA under construction)
- Develop export market and regional trade
- Enables lower reserve margin requirements
- Could use long term competitive import contracts to substitute own less efficient generation
- Develop and implement emergency management system
- Environmental benefits may earn carbon emissions credits
- In the gas sector, domestic gas production increases have already eliminated Russian purchases of 4 bcm enhancing energy security



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