

STATE COMMITTEE OF WATER SYSTEM UNDER THE MINISTRY OF  
TERRITORIAL ADMINISTRATION OF THE REPUBLIC OF ARMENIA

# *Public Private Partnership*

## *Case of Water Infrastructure of the Republic of Armenia*

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# *Background and Rationale for PPP in Armenia*

- The water and water resources sector of Armenia faced serious problems following the collapse of the Formal Soviet Union
- Insufficient funding, poor management led to the deterioration of network and increased losses
- Water supply duration was insufficient, with poor pressure and intermittent service
  - The customers received average 4-6-hour water supply per day, and in some areas even this quantity wasn't provided.*
- The financial situation of the water utilities was precarious
  - The collection rate for water and wastewater services was at low level and covered only 15% which could be hardly enough for covering the costs of energy power.*

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# *Main Advantages of Public Private Partnership*

- Management culture involvement
- Concentrating on service and commercial performance
- Easy access to new financing and investments
- Insuring policy clarity and sustainability

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# *Priorities Established by the Government Concerning Private Sector Participation*

- ensuring proper financial flows in the water segment, defining the appropriate level of tariffs and payment discipline
- ensuring stability and application of laws and contracts, creation of clear and applicable legal framework
- responsiveness to the investors' needs, increase of administrative efficiency
- abatement of the Government's interference as much as possible; allowing the investors to manage their income on their own
- ensuring efficient supervision of the investments by the investors

# *Water Supply Companies of Armenia*

- Yerevan Djur CJSC – Private Company
- Armenian Water and Sewerage CJSC – 100% State Shareholding
- Shirak Water Sewerage CJSC – 51% State Shareholding and 49% Municipal Shareholding
- Lori Water Sewerage CJSC – 51% State Shareholding and 49% Municipal Shareholding
- Nor Akunq CJSC – 51% State Shareholding and 49% Municipal Shareholding

# *Main Indicators of the Water Utilities*

<i>Water Utility</i>	<i>Tariff USD</i>	<i>Collection Ratio</i>	<i>Subsidy providing</i>
Yerevan Djur	0.57	90.02%	
Armenian Water and Sewerage	0.59	78.2%	2009-2010
Shirak Water Sewerage	0.4	66.3%	
Lori Water Sewerage	0.4	79.2%	
Nor Akunq	0.5	93.8%	2009-2010

# *Yerevan Djur CJSC*

- *The form of management:*     *Lease contract*
- *Operator:*                     *General des Eaux, Véolia Water, France*
- *The term of leasing:*             *2006-2016*
- *Service area:*                     *Yerevan city and nearby 32 rural settlements*
- *Number of population under the service area:*     *1030 thousand people*
- *Investment projects:*
  - *World Bank loan first project*     *1998 - 2005*
  - *World Bank loan second project*   *2006 - 2011*
  - *France Government loan project*   *2008 – 2013*

# *Main Peculiarities concerning the Lease Contract*

- the operator (lessee) creates a separate private company /lease company/;
  - the lease company have a full right of economical operation of the leased property and is responsible for management, operation and maintenance of the whole system;
  - the lessee takes the implementation responsibility of the investment financing provided by different donor organizations;
  - the tariff is full cost recovering on operational costs level and does not include the capital costs including depreciation; the tariff adjustment should be possible in case the following changes:
    - inflation
    - exchange rate
    - energy cost
    - water consumption level
  - the lease company should be obliged to pay a fee, the sum of which should be equal to the service amount of the credit debts
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# *Lease Contract Main Performance Standards*

- improvement of water supply duration
- water quality and its monitoring
- responsiveness to consumers complaints

# *Véolia Water Company's Proposals*

<i>Standards</i>	<i>Performance year</i>									
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
Base tariff without VAT	144	144	144	129	129	99	99	89	89	75
Intake from sources	347 mln m <sub>3</sub>									150 mln m <sub>3</sub>
Water losses	81.3%									44.7%
Water consumption	63 mln m <sub>3</sub>									81 mln m <sub>3</sub>
Energy consumption	125 mln kb/h									25 mln kb/h
Fees collection	79%									92%

# *Comparative Data of Yerevan Water Utility*

<i>Standards</i>	<i>Before Private Sector Involvement</i>	<i>At the End of the Management Contract with A-Utility</i>	<i>After 2.5 Years of Lease Contract with Véolia Water</i>
Improvement of water supply average duration	4-6 hours	18.4 hours	20.35 hours
Reduction of energy consumption	240.3 mln kb/h	124.2 mln kb/h	115.3 mln kb/h
Installed water meters	3 856	379 580	401 100
Water consumption per capita l/day	By norm 250 Actual 797	110	87.3
Improvement of fee collection	20.9%	79%	90%
Quantity of pressure measuring loggers		33	76

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# *Challenges during the Contract Implementation*



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# *Challenges during the Contract Implementation*

- Lack of a clear definition of the base year data for performance indicators;
- Difficulties with tariff revision related with the water consumption decrease risk;
- Ensuring the corresponding qualification level of the contract management and monitoring country's representatives

# *Armenian Water and Sewerage CJSC*

- *The form of management:*    ***Management contract***
- *Operator:*                      ***Saur, France***
- *The term of leasing:*            ***2005-2008, extended till 2010***
- *Service area:*                    ***37 urban and 280 rural settlements***
- *Number of population under the service area:*    ***619 thousand people***
- *Investment projects:*
  - ***World Bank loan project***                      ***2005 - 2008***
  - ***EBRD loan and grant project***                      ***2008 - 2010***
  - ***ADB loan and grant project***                      ***2008 - 2012***
  - ***USAID grant project***                                ***2007 – 2009***

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# *The Main Responsibilities of the Management Contractor*

- Improving the standard and efficiency of the water and wastewater services;
- Increasing the consumer willingness to pay for water and wastewater services;
- Improving the financial performance of the company and achieving a more financially sustainable operation;
- Training and developing the company's staff;
- Preparing and maintaining investment projects for the disbursement of available capital funds during the term of the contract and assessing the longer term investment needs.

## *Data on Basic Indicators of Management Contract*

<i>N<sup>o</sup></i>	<i>Indicators</i>	<i>Unit</i>	<i>Base Year</i>	<i>Average 2005</i>	<i>Average 2006</i>	<i>Average 2007</i>	<i>Average 2008</i>
1	Weighted average number of drinking water service	hours/day	6.04	7.39	9.62	10.98	12.10
2	Collection ratio (excluding budget organizations)	%	47.9	36.2	62.6	72.3	75.9
3	Total staff per 1000 individual subscribers	u	9.45	8.34	7.15	6.87	6.85
4	Electricity consumption	Kwh/m <sup>3</sup>	0.43	0.38	0.31	0.30	0.29
5	% of individual subscriber billed on the bases of metered consumption	%	40.2	53.6	57.3	62.5	64.6
6	Weighted average water bacteriological safety compliance	%	93.8	93.8	93.9	96.2	96.6
7	Ratio of water volume billed on basis of metering to total metered and normative billed volume	%	25.0	26.0	47.3	56.2	59.1

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# *Challenges during the Contract Implementation*



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## *Challenges during the Contract Implementation*

- Unreliability of baseline data which should be used for the operator's performance assess and accordingly its bonus identification;
- Performance of the contract monitoring function by a qualified Project Implementation Unit;
- Different approaches to the some contract requirements between the management contractor and the independent auditor.

# *Shirak, Lory and Nor Akunq Water Sewerage Companies*

- *The form of management:*    *Closed stock company with participation of communities with State share of 51% and municipal share of 49%*
- *Service area:*                    *5 urban and 61 rural settlements*
- *Number of population under the service area:*    *375 thousand people*
- *Investment projects:*
  - *KfW loan and grant project - 2000-2010*
  - *KfW loan project with 2 additional phases for next 6 years, the preparation will be after the project in use*

# Performance Indicators Foreseen Change

<i>Indicator</i>	<i>Progress</i>		
	<i>Shirak</i>	<i>Lori</i>	<i>Nor Akunq</i>
<i>Water supply average duration</i>	Reconstructed areas - 24h; other areas - extension for at least 1h, 2h, 3h daily per corresponding year of the project compared to base year.		Project area - 24h;
<i>Compliance of water quality with WHO standards</i>	Maximum 6 tests p.a. do not comply with standards in 2 <sup>nd</sup> and 3 <sup>rd</sup> years		Maximum 6 tests p.a. do not comply with standards
<i>Water losses</i>	1 <sup>st</sup> year - max. 80% 2 <sup>nd</sup> year - new network: <35%; old network: max.75% 3 <sup>rd</sup> year - new network: <35%; old network: max.70%	1 <sup>st</sup> year - max. 70% 2 <sup>nd</sup> year - new network: <35%; old network: max.65% 3 <sup>rd</sup> year - new network: <35%; old network: max.60%	1 <sup>st</sup> year - max. 66% 2 <sup>nd</sup> year - max.60% 3 <sup>rd</sup> year - max.55%
<i>Collection ratio</i>	1 <sup>st</sup> year $\geq$ 70% 2 <sup>nd</sup> year $\geq$ 80% 3 <sup>rd</sup> year $\geq$ 90%	1 <sup>st</sup> year $\geq$ 80% 2 <sup>nd</sup> year $\geq$ 85% 3 <sup>rd</sup> year $\geq$ 90%	1 <sup>st</sup> year $\geq$ 85% 2 <sup>nd</sup> year $\geq$ 90% 3 <sup>rd</sup> year $\geq$ 93%

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# *Lessons Learned*

- PPPs can act as agents of change by bringing in new skills and competencies in managing water utilities;
- PPPs should be part of a broader sector reform process, rather than an isolated undertaking;
- flexibility and commitment by both parties to restructure the contract are critical to success;
- reform advisers should not raise expectation about how fast PPPs can improve performance as it is a long process;
- sustained political support and commitment helps build trust and relationships.



***THANK YOU***