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of Towns and Municipalities**  
National association of local authorities in Serbia



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**The Working Group for PUC Transformation**

## **PUC Transformation in Serbia**

**- Towards more efficient operation and the development of communal infrastructure**

**November, 2007**

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## **1. Decision on Forming of the Working Group and Terms of Reference**

Based on the articles 8 and 37 of the Statute of the Standing Conference of Towns and Municipalities, and according to the Suggestions from the Round Table entitled "Reorganization of PUC's", held on December 5<sup>th</sup> 2006, the Presidency of the SCTM adopted the decision to form a Working Group for PUC Transformation at its 8<sup>th</sup> Session held on February 14<sup>th</sup> 2006 in Belgrade.

The stated Decision on Forming a Working Group resulted from the Suggestions agreed upon at the round table, with the objective of improving the level of utility services in Serbia through defining activities and expected results of the working group. Namely, on December 5<sup>th</sup> 2006, a round table entitled "Reorganization of PUC's" has been held in organization of SCTM and Municipal Infrastructure Agency Support Program (MIASP), with the support of EAR, at which more than 40 representatives of central authorities, local authorities, PUC's and international organizations were present. Among other things, the necessity of quick institutional strengthening of PUC's dealing with water supply, sewerage, solid waste management, and district heating was stressed out, in the aim of improving the quality of services for citizens, as well as to achieve environment protection standards.

Working Group is expected to:

- Create awareness on the problem of PUC transformation on the level of the National Government and local self-government units;
- Bring the problem of PUC transformation on the agenda of newly elected government;
- Direct media attention on the PUC transformation topic.

## **2. Concept of Work**

This paper has been designed as an attempt to outline major aspects of some communal activity issues, current condition in PUC's, dealing with those activities, but also to suggest milestones that could be examined by the actors in future process of defining the first steps towards PUC transformation, based on the current situation in Serbia and foreign experience, with the objective of:

- Improving the efficiency of PUC's and raising the quality of utilities;
- Reconstruction and development of local infrastructure;
- Achieving quality standards and implementation of EU regulations, primarily through efficient approach to non refundable - funds from EU and other sources of financing.

Conclusions and suggestions that follow, aim at the realization of the expected activities and represent the results of the work of consultants and the working group, with objective to contribute to the initiation of the PUC transformation process.

### **3. Conclusions**

1. According to lessons learned from collected case studies, the process of transformation and privatization, in some countries, new EU members (where it started more than 15 years ago, with inevitable mistakes made because of a rapid and wide spread privatization), are still in the process of searching for an optimal model and the solution to the problem how to preserve the public interest and at the same time function efficiently. The search for an optimal model is also in progress in the more developed countries, but based on a market economy and competition, legal security, regulation and the protection of public interest, with the aim of a improving the quality of services..

Any further transformation strategy and models, in these countries as well in those starting the process, have to take into account the specific conditions where the positive and negative experiences of others appeared, eliminate the maximum of bad practices of its own communal sector, but with always present caution necessary for the protection of the future interests of the society.

2. Beside of having the prefix "public" and the fact that with Public Enterprises and PUC's "public property" is at stake, between these two significant differences exist in the type of activity, size and number, potential interest of foreign partners, profits etc.

In the process of public sector transformation it is necessary for the PUC's to be considered as a separate issue, and in that sense, because of the complexity in satisfying public needs it is necessary to define different models for every sector (water and wastewater, communal waste and heating) especially in the phase of considering possible public-private partnerships, as it will probably be the case with Public enterprises (oil industry, air transport etc.).

3. In the preparatory process for PUC transformation, the competent government institutions should define a strategy concerning the vital communal infrastructure, by sector, in regard to the issues weather the ownership of such (regardless of the title) can at all be subject to any kind of privatization, or does it remain in public ownership, preserving the public interest. In cases, where a long term defined public sector exists, it is possible to, under certain conditions, count on donations as a source of funds for investments for modernization and achieving EU regulatory standards.

The competent government institutions should also define a strategy concerning weather to, when, to what extent and in which communal sector will it allow entrance to private capital or domestic or foreign partners, accompanied by simultaneous institutional regulation. Practice in other countries shows that the private sector has proven efficient in reducing costs, but also that private capital is not oriented toward significant investments, and that it is oriented toward profits through price increase and monopolistic behavior accompanied by employment reductions and benefiting from lack of regulation.

4. Every transformation proposition, that includes changes in ownership, must take into account that before status changes LSG/PUC property must be properly inventoried, cadastral registered, the value of assets must be objectively evaluated, as it can be an obstacle for creditors or abused in the case of private sector involvement.



5. The main problem issues in the functioning of PUC's, as a consequence of inherited and circumstances in the last 15 or so years are :
  - Inadequate ownership and usage rights solution of the previously government now public property issue and based on that the administrative and political influence on the PUC operations.
  - Fragmentation of functions and accumulation of resulting unresolved issues
  - Increasing expenses and inadequate tariffs for complete expense coverage
  - Low level of payment collection, large debt write-off, low liquidity and outstanding obligations.
  - Inefficient operations, lower quantity and quality of services, indifference towards and impossibility to satisfy consumer needs
  - Worn-out and obsolete equipment and infrastructure
  - A chronic lack of funds for reconstruction and capacity enlargement
  - Non compliance with environmental standards
  - Lack of regulated performance indicators
  
6. When considering the main problem issues in PUC functioning, the most current one that burdens PUC operations is the issue of tariff levels and the procedure of approved limited price increases (annually, from previous year's statistic data) that is not based on realistic cost coverage parameters, but rather on administrative influence on PUC economics. The communal sector has for some time now indicated the need for defining a methodology system of tariff setting based primarily on realistic cost coverage and investment needs. When the issue of tariff setting is raised on the central and institutional level, a parallel process should include performance indicators, quality and responsibility, but also the protection of the public interest from sudden price increases and monopolistic behavior.

Based on the present level of living standards or consumer purchasing power, with a more or less acceptable increase in tariffs as a short term measure, it is probably possible to raise a part of funds necessary for covering all expenses, but not for the necessary level of needed investments. Long term measures such as: price policy definition, payment collection increase, reduction of losses in the network, could to some extent soften the long term price increase blow, but the problem of providing funds for infrastructure reconstruction and adaptation to standards will remain open.
  
7. As an example of forecasts for necessary funds, such as data from some studies from 2005<sup>1</sup>, the forecasted capital expenditures for Serbia and Montenegro in 2006 – 2015 are 200 million Euros for water supply and 300 million Euros for wastewater, with an average annual operating expenditure of 51 million Euros. According to the Water Master Plan for Serbia 2002–2012, the needed funds for investments in the water sector for 2002–2007 were forecasted at 940 million Euros, with a 30% government participation, and 484 million Euros for wastewater treatment for the same period. In the district heating sector, according to the Serbian Energy sector development strategy until 2015 the necessary funds for rehabilitation are 180 million Euros with an additional 230 million Euros for energy efficiency and environment protection.

According to some rough estimates necessary investments in communal infrastructure are about 4 billion Euros, ( about 1 billion for water supply, 2.1 for waste water and communal solid waste and 0.7 for district heating), which amount is multiple to the total amount of all municipal incomes, and would be a considerable burden on the state budget.
  
8. In order to get a more precise understanding of a long term view of the needs and sources, when the amount of funds necessary for undisturbed PUC functioning in the present conditions and the necessary funds for infrastructure expansion and compliance with EU standards, are verified and viewed in relation to disposable PUC/LSG/government funds, a better understanding of self financing capabilities would be possible as well as the needs for non refundable sources and financing needs from international institutions.

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<sup>1</sup> Water Markets Europe, Opportunities in EU accession, 2005



9. The main obstacle for long term satisfaction of public needs for quality communal services is the now for some time chronic lack of funds for modernization and communal infrastructure expansion. As a commonly known fact, the financial position of PUC's/LSG does not make it very probable that some can self finance even 25% of necessary larger investments, so they will most probably need to rely on donations and loans.
  
10. As a source of relatively easily obtained investment funds, loans demand a higher level of efficiency than in case of donations, as the borrower has to operate with such profit rates that will enable him to service loan payments. In order to ensure the necessary cash flow for loan repayments the creditor may insist on price increase and improved collection of bills.  
From the creditors point of view, when some legal issues are resolved, these kind of loans are a safe investment with almost ensured regular payments because LSG/PUC are a secure client backed with firm government guaranties.  
Experience from other countries shows that caution is needed in taking loan obligations and with them connected privatization and contractual arrangements. In a situation when infrastructure modernization is financed mainly by borrowing the burden of long term debt servicing is reflected on significant price increases and burdens the debtor LSG/PUC, and the government as a guarantor. Simultaneously the need and grounds for donations ceases to exist, as they can only be used for communal infrastructure reconstruction and standard compliance, but not for debt payments.
  
11. If we consider lessons learned from other countries, if we want to modernize our communal infrastructure network without significant debt and increased pressure for private capital involvement, it is necessary parallel with the process of pre accession and accession, to steer toward and intensify activities on adopting and application of EU regulations and standards.  
Donations as a source of free and non retrievable investment funds are mostly directed towards problem solving and do not have an impact on economic efficiency, but are linked to regulation compliance and donors standards. The positive effects of donations with proof of standard compliance, combined with increased efficiency and project economics, can be a development driver when in a favorable proportion (for example 75% donations / 25% loans) and so combined can have a positive effect on infrastructure development and the commercialization and efficiency of PUC operations. In such a manner the donor ensures compatibility with EU standards, and the PUC/LSG get access to non retrievable funds and depending on it's economic strength becomes a co-investor or co-owner with own, donated or borrowed funds.
  
12. EU funds for communal infrastructure development, non refundable funds in the form of donations, that are planned and set aside, are in some countries, now members of the EU, insufficiently used because of the lack of adequate number of individual quality projects, slack and insufficient knowledge of the necessary approach methodology.

The current infrastructure condition and needed funds for reconstruction and development of PUC's in Serbia as well as the level of project preparation on the local level do not allow such a slow pace of development and demand an efficient approach to available donations.

An efficient approach to donations available to potential candidate countries implies that in accordance to the formulated national strategy of development and EU standards, simultaneous preparation must take place for the implementation of procedures on state and local level for a faster and comprehensive absorption of available EU funds, with self participation.

#### **4. Proposed recommendations**

1. In the process of defining the strategy of transformation the relevant government authorities should separately deal with PUC and separately with Public Enterprises.
2. Within the strategy for PUC transformation, it is necessary to observe each sector separately (water, district heating, communal waste) according to their specifics and public needs.
3. The formulation of the strategy process and models of transformations should be accompanied by an attitude in principle by the government bodies on:
  - a. vital communal infrastructure by sector, e.g. the definition of infrastructure that will remain in permanent public property;
  - b. which sectors can or can not be the subject of ownership transformation (total or partial), dynamically planned and phased;
  - c. in cases of PPP or privatization the first step should be the strategy and policy, followed by preliminary activities and defining preconditions, such as: obligatory clauses and transparency of procedures and criteria, legal security and public control of contracts and the regulation of market conditions and responsibilities etc.
- *Potential positive effect of recommendation 1, 2 and 3:* mistakes of others and the “traps” of a quick and wide privatization are avoided, at the same time protecting the public interest, bargaining power and vital infrastructure.
4. It is necessary to perform an inventory and property registry (utility and land cadastre) and realistic evaluations of property to which PUC have usage rights.
  - *Potential positive effect of recommendation 4:* a reliable property registry is established and a “fair” value of property is determined as a sound basis for determination of property shares.
5. The first steps toward PUC reorganization and transformation could be the development of proceedings and measures aimed at more effective operations of PUC’s:
  - a. To the most possible extent relieve the PUC of political influences on management issues, organization and income capabilities, but with necessary government control for the responsibility in performing basic functions and standards application.
  - b. Formulate obligatory government principles for the methodology of price policies and parameters that will enable rational covering of all expenses with minimal administrative and political influence. In the first phase, of application it is necessary to formulate measures protect the public interest from sudden price increases and monopolistic behavior. At the same time the PUC need to intensify activities on revenue generation by increasing receivables and eliminating network losses.
  - c. Examine the options for formulating strategic priorities for inter municipal communal systems, regional PUC’s, on a functional principle. The regionalization strategy should be primarily focused on local problem issues, as a measure to improve operations and economic position, and access to external sources of financing. .

- d. Define the basis for the establishment and application of a system of efficiency indicators (benchmarking) by communal sectors for the purpose of establishing realistic and comparable parameters for current situation evaluation and for future needs for indicators in the functioning and transformation of PUC's.
- *Potential positive effect of suggestion 5:*
- Decreasing the influence of current politics on efficiency
  - Increasing role of regulatory institutions in standard application control and quality improvements
  - Regulation of tariff policies without administrative influence on operations.
  - Based on regional projects, easier access to sources of financing, especially in small and less developed regions.
  - Establishing realistic and comparable parameters for current situation evaluation and for future needs for indicators in the functioning and transformation of PUC's.
6. The state of the communal infrastructure and the weak economic position of PUC determines the need for an accelerated, planned and organized approach (by the government bodies, and local self government) to defining the needed funds for reconstruction with respect to EU standard requirements, as well as to the application for external funds, primarily donations available to potential candidates for EU membership. The realization of this task demands that the necessary criteria is met in a timely manner, or the EU funds or other donor contributions intended for donations will remain unused..

For that reason it is very important to:

- a. Evaluate the current infrastructure situation, identify priorities, verify own and necessary fund for investments in communal infrastructure by sectors, regions and individual PUC's.
  - b. Intensify activities on capacity building of potential recipients (central government, LSG/PUC) through training, education on project preparation and knowledge of the methodology of accessing EU funds or other donor contributions.
  - c. Accelerate project preparation and applications for EU funds or other donor contributions.
- *Potential positive effect of suggestion 6:* Overcoming the chronic lack of funds for reconstruction and development of communal infrastructure and fast and efficient access to EU donations and external sources of financing.

## **5. The Activity and Conditional Classification of PUCs**

The Law on communal activities defines them as “activities of production and delivery of communal products and services which are irreplaceable condition of life and work of the citizens and other subjects on a certain territory”. They are:

1. filtering and distribution of water;
2. filtering and drainage of atmospheric water and sewerage;
3. production and supply of steam and heated water;
4. maintaining cleanness in cities and municipalities;
5. maintaining landfills;
6. management of parks, green and recreational areas;
7. maintenance of roads, streets and other public areas in cities and other settlements, public lightening;
8. organization and maintenance of graveyards and burial services;
9. public transportation.

*\*Note: Subject of this material are PUC's from 1 to 5.*

According to the data from Business Association KOMDEL, there are 483 PUC's registered in Serbia, 357 of which are performing communal, and 126 are performing housing and living space activities. The total number of employees in PUC's is around 30 000 or app. 3,7% of total amount of employees in the country.

One of the criteria used by KOMDEL for classification of PUC's into related groups (primarily for the purpose of observation of the transformation process), although they differ very much by capacities and activities, is the number of inhabitants/users who live on the territory where one PUC functions, or characteristics of its activity. By this criteria, there are small, medium, and large PUC's, whereby:

- Small PUC's are those that operate in areas where their services are used by up to 20 000 inhabitants, i.e. whose main characteristic is that in most cases, there is only one PUC dealing with all utilities (communal activities);
- Medium PUC's are those that operate in areas where their services are used by approximately 20 000 – 120 000 inhabitants, and they are mostly characterized by separate water supply, district heating, solid waste management, park maintenance and graveyards;
- Large PUC's are formed separately for each communal activity in areas where their services is used by more than 120 000 inhabitants.

According to the same source, based on representative sample consisting of 90 PUC's, their percentage is as follows:

- 60-65% small PUCs,
- 30-35% medium sized PUCs,
- 3-4% large PUCs.

According to the Statistical Office of Serbia for 2006, the total number of inhabitants in rural areas was 3,2 million, while the total number of inhabitants in urban areas was 4,3 million (without Kosovo data), out of which:

- in 61 municipalities with less than 20 000 inhabitants, resides approximately 11% of the total population
- in 78 municipalities with between 20 000 and 120 000 inhabitants, resides approximately 44% of the total population
- In 11 cities which have more than 120 000 inhabitants resides approximately 25%, and when the city of Belgrade is included with its 20% of total population, that amounts to approximately 45% of the total population.

PUC classification	% of total No of PUC	Number of inhabitants on PUC territory	Number of LSG	% population on LSG territory
Small	60-65 %	< 20.000	61	11%
Medium sized	30-35 %	> 20.000 < 120.000	78	44%
Large	3-4 %	> 120.000	11 populated areas + Belgrade	(25%+20%) 45%

When these two sources are put in ratio, a clearer picture is formed of the PUC business complexity from the aspect of various possibilities to satisfy public needs, but also from the aspect of alternatives that need to be included in their transformation, having in mind all activities conducted by PUC's.

However, it must be taken into account that possible projected courses of change, besides general principles, must also take into consideration specific solutions for 65% of PUC's (small PUC's of general character, economically weakest, that satisfy only about 11% of the population), which will be different from the scenarios projected for 3-4% of large, specialized PUC's which satisfy around 45% of the total population. So called large PUC's, due to their location, infrastructure, market size, and function, take high priority on the list of public interests, but are also very interesting for potential donors and/or investors and creditors.

Besides the difference in size, i.e. economic strength and potential, the specifics of every communal activity must also be taken into account, because of their different importance for the public interest. Because of that, it might be the most appropriate solution to focus PUC transformation strategy on the projections prepared by communal activities.

## **6. The Value of the Communal Assets/Infrastructure**

In order to create an overall picture on the value of communal infrastructure, it should be noted that it can be observed from more than one aspect.

The key aspect for the determination of the exact value of communal infrastructure is a correct and regular physical inventory of the property and its register in the appropriate property registers, which is not the case in many PUC's/local self-governments. It is known that the process of updating and registering real estate in Serbia is an ongoing process, so it can be expected that the exact data about the physical count and owners will be available in reasonable time.

The accounting value of the property, according to data stated in the books of PUC's and local self-governments is official from the accounting point of view. In annual reports, fixed assets are stated as one sum, especially in smaller PUC's that deal with more than one activity, which creates difficulties with demarcation of infrastructure by kind. Another existing problem for determination of value is the synchronization of the domestic and international accounting standards.

From the policy making and strategic decisions aspect, the value of the infrastructure is formed based on the official data, but when considering future courses of action is also evaluated from the public importance, user value, and public interest protection aspect.

Market value, if viewed upon from the aspect of the profit that it can bring, in the changed business environment, is different both from the accounting and social value.

From the point of view of the private capital involvement in market value or newly created value, the key question to be raised is what is the base for the calculation of stake of each possible partner in the total value of the property that is being privatized or contracted.

As the illustration of the amounts, when it comes to the infrastructure issue in water supply and district heating, it is to be noted that there are 2,97 million registered households in Serbia, out of which 2.060.000 are connected to municipal water supply, and 450 000 are connected to district heating. If the calculation of the value of this infrastructure was made (by multiplication of the number of users by one of the parameters for the primary rough estimation, such as average value of the connection with depreciation), the calculated results and differences in their forming, point out the need for a systematic and realistic evaluation of the property used by PUC's.

These dimensions of the determination of value of communal assets/infrastructure, must be taken into account when the strategy of transformation or restructuring models are to be determined. Objectively evaluated value of the communal infrastructure will be necessary and will have tremendous influence on the transparency in cases where the ownership structure is to be changed.

## **7. Retrospective on the Current Position of PUC's, Key Problems in Their Activities, and Priorities for Transformation**

As a consequence of inheritance from previous socio-political circumstances and occurrences during 1990s, key problems that characterize and burthen the activity and the position of PUC's are:

1. PUC perform their activity under the constant influence of political factors which limit the autonomy of PUC's in making key business decisions;
2. PUC's do not have the autonomy in the disposal of the property they use;
3. Because of the administrative limiting of prices, subsidizing of the population, low bill collection, increase of costs, write off's of accounts payable, PUC's are financially weak and often illiquid;
4. Due to cumulated and inherited circumstances, administrative splitting is present together with over dimensioning and overburdening of some functions within PUC's, as well as irrational organization and lowered efficiency in providing services;
5. In most PUC's, an unstable economic position caused a constant increase in needs for current working capital, maintenance/reconstruction and funds for infrastructure development.
6. Inobservance of environment protection standards;
7. Objective identification of internal deficiencies is difficult because of the lack of parameters which would enable efficiency comparison within similar communal activities.

If the PUC issues could be defined by priorities which should be included in the transformation, then those would be:

- Systematic regulation of the appropriate tariff levels and operating conditions;
- Systematic setting up of inter-municipal regional systems;
- Systematic setting up of performance indicators ("benchmarking") ;
- Systematic elaboration of priority projects and necessary funds for infrastructure reconstruction and development.

## **8. Tariffs**

One of the important questions that always comes up first and burdens PUC activities to a great extent, is a question of systematic methodology of defining and approval of price levels, at least up to the level of complete cost coverage. Requests/suggestions for increasing prices of utilities are to be submitted to the LSG for approval, and are under the central authority supervision. This manner of price setting, besides setting prices that are insufficient to cover operational costs, brings some PUC's in an unfavorable position, because approval is always stated as a percentage of the current price, adjusted for the influence of inflation in the previous year. Those PUC's that, for whichever reason (but mostly because of the influence of local politicians), missed to submit a request for price increase are left behind in revenues, because all other PUC's (some of them even unjustifiable) have asked for a price increase. These occurrences show that the approval of price increase is not always based on real parameters of covering costs, but also on administrative intervening in PUC economics.

When prices of utility services are insufficient to cover real costs, or when the price level is under the influence of local political factors, PUC can use the option to indirectly increase its revenues, i.e. to lower the costs by lowering the amount, or more often, the quality of service. That, in turn, reflects on the amount and quality of services provided for final users.

In those PUC's whose prices are below the level of covering costs despite the possible increases, activity will further on be burdened by the same problem, because it is not possible for them to generate sufficient revenues.

On the other hand, at some of those PUC's whose prices cover costs, there is no incentive of any kind for management to plan and organize the activities efficiently, because the management of PUC is directly influenced by political factors.

With the current level of living standard, i.e. purchasing power of the population, as an acceptable correction of prices as a short-term measure, it is probably possible to generate a part of the funds needed to cover costs, but it is not possible to generate the other part needed for investments. By long-term measures such as defining price policies, improving the bill collection rate and lowering network losses, it would be possible to ease a long-term price shock, but the problem of providing funds for renewal of capacities and achievement of standards is still left unsolved.

In the process of the future transformation of the utility sector, it is obviously necessary to define obligatory methodological principles of forming price policies which enable rational covering of all costs, but also to provide investment funds with minimum of administrative and political interventions. In the future phases of implementation of new pricing parameters, it is desirable that quality improvement are implemented before, and also, that measures and regulations are in place for the protection of the population from price shocks and monopolistic behavior.

In order to illustrate the model, some recommendations and steps towards the best practice in price definition, as well as experiences of the neighboring countries in forming water supply and sewerage prices are given in Annex No 3.

## **9. Financing the Communal Infrastructure Development**

### **9.1 Conditions for the Development of Communal Infrastructure and Sources of Financing in Serbia**

Due to lack of funds caused by insufficient level of prices, increase in costs, and low bill collection rate, PUC have found themselves in a position to have to lower the level of necessary investments in maintenance of the communal infrastructure. Chronic illiquidity (caused by previously stated economic conditions) and losses (again caused by technical aging and inadequate maintenance due to a lack of funds), made an impact on an overall squalor and bad condition of communal infrastructure, causing the need to find funds in order to improve its state and bring it to an acceptable level.

If one wanted to compare the condition of communal infrastructure in Serbia with the EU standards, excluding the overall obsolescence, it could be said that the biggest incompatibility and anachronism within the observed activities, is present in waste water treatment and industrial waste water treatment.

As an example of estimation of funds needed, a data from some studies conducted in 2005<sup>2</sup> can be used. Those studies quote the document called „Water Master Plan of the Republic of Serbia 2002 – 2012“, where it is stated that funds needed for investment in water supply companies during the 2002 – 2007 period are Euro 940 million (Republic of Serbia should cover 30% ), while for the investment in waste water treatment Euro 484 million is needed for the same period. According to some other estimations<sup>3</sup>, capital investments of Serbia and Montenegro during the 2006 – 2015 period will add up to Euro 200 million for water supply companies and Euro 300 million for waste water treatment, with the average annual need for investments of around 50 million Euro, and operational expenditures of around Euro 51 million. When it comes to district heating, according to the data stated in „Energy Sector Development Strategy of the Republic of Serbia Until 2015“, needed amount to rehabilitate the DH sector is Euro 180 million, with additional Euro 220 million for the purpose of energy efficiency and environment protection.

According to some rough estimates, the total need for investment in utilities and infrastructure are around Euro 4 billion, (Euro 1 billion for water supply, Euro 2.1 billion for sewerage and SWM, and around Euro 0.7 billion for district heating).

Every stated source of data assumes amounts which are much greater than annual sum of all municipal revenues in Serbia, which would mean substantial burden on the state budget.

In order to initiate the procedure for reconstruction and development of communal infrastructure, it is necessary to previously (short-term/long-term) systematically estimate the level of needed funds for current activities, as well as the level of funds for necessary investments in modernization and expansion of capacities. In line with that, it is necessary that relevant national authorities issue standards for services, which would have to be fulfilled, and that will ultimately also provide information about technical conditions and necessary investments. Besides that, the need for investments would, besides technical and public priorities, have to comply with the EU standards. When this dimension is systematically looked over, when priorities are defined and projects prepared, it is needed to intensively and swiftly initiate the search for sources of funding.

Sources of funding for revitalization of existing and construction of new infrastructure are limited to 25%-30% stake from own sources for priority projects (or more likely from development or commercial loans), due to the limited capacities of local self-governments/PUC's. The remaining 70%-75% could however, be obtained through donations.

When observing the possibility of obtaining a loan, existing credit potential should be taken into account. According to some data for 2007<sup>4</sup>, credit potential of local self-governments in Serbia has been 34% used

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<sup>2</sup> Water Markets Europe, Opportunities in EU accession, 2005

<sup>3</sup> Water Markets Europe, Opportunities in EU accession, 2005

<sup>4</sup> Study: Local credit markets for municipal infrastructure, MIASP/EAR, 2007

up, which means that 66% of the credit potential of towns and municipalities (on the state level) remains available for the purpose of financing.

A short overview of municipal credit potential:

	Credit potential 2007 (€ 000 000)	Existing loans (€ 000 000)	Remainder of the credit potential (€ 000 000)	Remainder of the credit potential (%)
167 municipalities	409	81	328	80%
<i>Of which 37 is underdeveloped</i>	43	5	38	88%
3 cities Kg (42%), Ni (49%), Ns (78%)	110	40	70	64%
Belgrade	301	210	91	30%
Vojvodina	141	0	141	100%
Total	961	331	630	66%

What can easily be spotted in the table, from the aspect of obtaining a loan with own stake in financing, is that average remainder of the credit potential of 80% exists in smaller municipalities, while situation in the cities differs. Cities with the biggest population and the most distributed infrastructure, such as Nis and Novi Sad, have already used up more than half of their credit potential, and when it comes to Belgrade, only 30% is left to be used. This can lead to a conclusion that smaller communities have a bigger potential for financing infrastructural needs, but they also have the need to cooperate in order to enlarge infrastructural projects with the aim of easier access to funding. On the other hand, large cities have always been prioritized because of their population and economic strength, had big infrastructural projects and investments, but will have to be careful in obtaining financing in the future, and must turn towards the utilizing the maximum possibilities for financing from donation funds. Knowing that this type of financing communal needs is relatively new in our environment, insufficient experience in these projects is a characteristic mostly distinctive in smaller municipalities. Therefore, it is necessary for the local self-governments and other institutions to be coached for an efficient and professional access to these funds.

When applying for loans, greater efficiency is required than when applying for donations. The applicant must secure revenue streams sufficient to cover costs, and pay off the installments regularly. In order to secure enough cash for servicing the loan, a party that supplies the loan can insist on increasing prices and improving the bill collection ratio. From this point of view, if some legal issues were solved in a proper way, these type of loans would be relatively safe, and would mean regular payments, as local self-governments are clients backed-up by national governments. Experience of other countries shows that debtors should be very careful when applying for loans, especially if privatization and contractual arrangements are tied to loans. In a situation when infrastructure modernization is financed mostly by loans, the burden of paying off the loan affects the increase in prices and burdens the debtor, as well as the government indirectly. At the same time, the need and the basis for the approach to donation funds is terminated, because donations are not to be used for easing off the (rash or conditioned) indebtedness, but only to revitalize infrastructure and achieving standards.

Donations as a source of free and non refundable funds for investments are mostly directed towards problem solving and they do not have significant influence on economic efficiency, but are rather tied to adapting to regulations and achieving standards of the donor. Positive effect of donations, together with proof of adapting to standards and regulations and proof of improving efficiency and economy, could be a development tool, when a good proportion is present (e.g. 75% donation, 25% loan). When combined in such way, donations can influence the reconstruction and development of infrastructure, as well as commercialization and efficiency of PUC activities. In this way, donor secures compatibility of the project with EU standards, and the LSG/PUC gets financing from non refundable sources. Depending on the economic strength, PUC becomes a co-investor in a project with own or borrowed money.

EU funds for communal infrastructure development (non refundable funds - donations), are in some countries, now EU members, not used enough due to a small number of quality individual plans, slowness or insufficient knowledge about the methodology of approach. The condition of infrastructure, the amount of funds needed for reconstruction and development, as well as the level of preparation of projects on the local level, do not allow us such a slow pace of reconstruction, but on the contrary, fast and more efficient application to the available funds is necessary. In order to make a donation application efficient and in accordance with the formulated strategy and EU standards, timely preparation for the application (with partial own funding) should be conducted on the national and local level.

## **9.2 EU Regulations and Effect on the Investment Needs of Some Communal Sectors/Infrastructure in Europe**

When observing the current state and development directions in EU countries, one can say that EU Directives are the main motivator of all necessary changes in communal infrastructure, in other words – EU standards are the main initiator for infrastructure investments.

Predictions say that majority of the needed investments in the „New Europe“ countries will be directed towards network building and raising the overall capacity of the infrastructure, while in the „Old Europe“ countries, funds will be directed towards cutting costs in the process of complying with standards that are becoming more and more demanding. Building new capacities in one group of countries and small qualitative improvements in another, require significant amounts of money. For example, according to some predictions, European sector of water supply and sewerage together with CIS will try to attract around Euro 355 billion during the 2006 – 2015 period (Euro 219 billion for sewerage and Euro 137 billion for water supply).<sup>5</sup> During the same period „New Europe“ countries will invest 10 times less in water supply and sewerage than developed countries, so for example, Sweden is expected to invest more in quality improvement than whole Russia. This can be explained by the degree of economic development, but also by the motives and obstacles towards foreign investments in vital infrastructure. Differences are also present, besides different purposes, in sources of financing, because new member states and those who are applying for membership will have easier access to donations, being underdeveloped. This fact will affect the reforms of the sector in some countries as well, by making them slow and by not removing barriers for local self-governments to indebt themselves. Since prices are expected to remain low in these cases, without coverage of operational costs, efficiency of these systems is questioned.

On the other hand, partial privatization has been done in some developed countries that could not rely on donations. The reason for this was the necessity of complying with the standards set, greatly influenced the authorities, who then, with nobody else to turn to, turned to the international financial institutions and private capital for missing funds. These conditions caused local self-governments to focus on the improvement of economic and efficiency indicators, besides focusing on the standard achievement. In some countries which have stable and a well-balanced financing system, the need for investments can be so great that loans will be necessary to satisfy quality standards (e.g. water supply). This will, of course, increase the pressure on the public sector to borrow, and cause necessary structural changes. That, in turn, could cause smaller PUC's to be under pressure to step into contractual arrangements with the private sector, or to unite with the bigger utility companies, while the destiny of big utility companies will depend on the condition of public finance.

Generally, when observed through changes created as a consequence of achieving standards, private sector involvement has mostly given positive results when it comes to cost cutting, but has also made a strong pressure on prices in order to achieve higher profit rate, without serious motives for investments. Big multinational companies are likely to try to eliminate the competition, and to create and maintain a monopoly, so this explains their efforts to put pressure on prices. Creditors usually demand for increase in prices to secure the pay-off stream, but can also affect a conditioned sector privatization, as well as commercialization of operational activities.

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<sup>5</sup> Water Markets Europe, Opportunities in EU accession, 2005

Having in mind the necessary funds for communal infrastructure development, which are usually in the hands of the state, and the possibilities provided by pre accession and other funds, it is clear that the optimal solution for every country is to approach donations first. The modernization of communal infrastructure, without larger indebtedness and the pressure for entrance of private capital in the vital communal activities, in the first phase of sector transformation means that activities concerning adoption of EU standards should be intensified, as well as fulfilling the conditions for EU integration and access to donation funds.

In the meantime, while these activities are in process, experience shows that one should be very careful in access to loans, contractual and privatization arrangements. Fast and overall privatization, followed by contractual arrangements, without proper mechanisms of market regulations, phased strategy and legal framework, has mostly resulted in mistakes that are still being corrected.

For those countries that have just entered or are about to enter EU, donations as the most appropriate source of financing require certain political processes, but also strict respect and know-how of the procedures of access to the funds. Actual steps in the process of transformation of utilities and infrastructure modernization will differ from country to country depending upon institutional framework, regulation regime, financial strength, availability of resources, environment protection, and overall chances for investment.

One of the successful examples in using non refundable funds from our very close neighborhood (95,5% of Euro 2 billion) is Romania<sup>6</sup>, which used heavily pre-accession funds (ISPA) during the 2000 – 2006 period. After it has been accepted into EU, Romania has become a user of cohesion funds from 2007, and by that has accessed 3-4 times greater amounts than those already used. In order to use such great sources, Romanian government has faced additional requests in the sense of capacity building in coordination and administration procedure for the acceptance of these funds (mostly for water supply and transport). According to the financial propositions, the minimum value of the project in order to apply is Euro 5 million, of which, 75% will be financed by non refundable funds (ISPA), and 25% has to be provided from own sources, loans, or other donations. More detailed overview of the ISPA projects approved in Romania is given in the Annex No 4.

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<sup>6</sup> [www.infocEuropa.ro/iweb/jsp/page.jsp?cid=192&lid=1&id=6918](http://www.infocEuropa.ro/iweb/jsp/page.jsp?cid=192&lid=1&id=6918)

## **10. Inter-municipal Cooperation and Benchmarking as Measures for Efficiency Improvement of the Utility Sector**

When PUC activities are observed, it is much needed to define indicators (benchmarks) for every activity which shall be used as basic parameters, on basis of which it will be possible to define a real standing point for measurement of efficiency (as a basic indicator for investment). In our environment, when only numerical data is available for comparison, it cannot be said that such information is useful, because it is conditioned by physical influence of the environment, technological factors, political factors, as well as internal efficiency factors and management.

The same factors that are important for performance indicators, are of crucial importance on the decision of enlargement of PUC on the functional basis, because inter-municipal cooperation is the way for small PUC's to obtain a better position and treatment when financing projects, due to their size and better quality of customer satisfaction.

### **10.1 Inter-municipal Cooperation – Some Experiences from Serbia and Other Countries**

Regionalization is, by definition, the tendency to form regions or the process of doing so.<sup>7</sup> Region can be defined as an administrative and functional region, whereby functional regions:

- May comprise parts of several administrative regions,
- May even comprise regions from more than one national state,
- Are rarely identical with the administrative regions.<sup>8</sup>

This definition implies that regionalization can show different sides depending of a subjects being "regionalized". In this sense, regionalization is more a political and administrative term than a business term, so when referring to utilities sector, the right term would be networking or inter municipal cooperation. Case study analysis show, as well as domestic practice, that networking in utilities is a natural tendency, resulting mostly from attempts to achieve efficient management and economies of scale. Networking is mostly present in Nordic countries within a transformation model called Public-public partnership, whereby few municipal utility companies (e.g. water suppliers) create one regional company with stakes proportional to the value of the property brought in the newly formed regional operator. There are also 250 joint authorities in Finland which are independent legal public entities governed by municipal legislation (regional councils, hospital districts, district for care of disabled and joint authorities to perform functions in public health and education. – all specific tasks on permanent basis).<sup>9</sup>

Advantages of regional utility companies are:

- Greater value of assets;
- Greater mortgage capacity;
- More efficient management;
- More stable long term development;
- Easier control by national legislative bodies;
- Economies of scale.

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<sup>7</sup> <http://en.wikipedia.org/wiki/Regionalisation>

<sup>8</sup> Walter Scherrer: Long Term Economic Development, Innovation, and Regional Economic Policy; Lecture for International Master CESPEM; University of Bologna, Sede di Forli; 2006

<sup>9</sup> Daniel Serban - Local Development Group: Inter-municipal Cooperation in Planning and Service Delivery: Analysis and Recommendations; Paper commissioned by UNDP

However, possible disadvantages could show up, especially during the initiation phase and those are:

- Discontent of municipalities for being forced to give away municipal PUC's in order to join regional PUC's;
- Discontent of PUC employees, because newly founded regional PUC would certainly be overstaffed;
- Discontent of political parties that would have to give up political influence in smaller areas (less high ranking municipal positions in PUC's for local officials).

A good attitude towards networking and regionalization of services can be found in some recent strategies adopted by the last government. Extracts from "The National Strategy Of Economic Development Of Serbia Action Plan 2006-2012" form a kind of general milestones for regionalization and state that following actions should be done in the close future as steps towards economic networking and regionalization, public sector liberalization, and end of privatization process:

- Demonopolize public utility companies at local level and fully implement anti-monopoly regulations on their operation.<sup>10</sup>
- Establish typology of regions according to the European classification of territorial units, according to the prevailing regulations; define the concept of region in order to enable access to EU structural funds and funds for cross-border cooperation.<sup>11</sup>
- Finalize the privatization process of companies with social capital by 2009. Put in place legislative and economic (market) conditions for privatization of enterprises with state capital (public companies) by 2008.<sup>12</sup>
- Remove administrative barriers, implement legislative reforms and harmonize regulations with those of the EU which, among other issues, require:
  - Transfer of property rights on real estate to local self-government
  - Establishing of a clear and simple fiscal system, with minimum different levies, plan relevant tax relief and incentives, introduce fiscal decentralization<sup>13</sup>

A good signal for support of these measures is assignation of funds from National Investment Plan for conducting the program for investing in underdeveloped areas in order to achieve equal regional development, (the program defines the conditions and methods for assignation of special funds to finance underdeveloped areas through construction of communal infrastructure, construction and enlargement of existing industrial capacities, etc.). Primary objective of this program is employment increase and to this purpose, 1 275 million RSD has been assigned.<sup>14</sup>

The Regional Development Strategy of Republic of Serbia states that regionalization is very much needed. This can be confirmed by pointing out an example that inadequate solid waste management and insufficient regional connection of municipalities is one of the key problems for transition.<sup>15</sup>

"Reform of the utilities sector requests completely new framework, control regime, and institutions that will conduct that regime. Rehabilitation and improvement of the public utilities requests the new management approach which has its base in preserving resources and integrating with the local self-government."<sup>16</sup> This quote could most probably be the best proof that there is a political will for transformation and inter-municipal cooperation.

However, inter-municipal is not a new concept even in Serbia. National Waste Management Strategy states that there is more than one step from turning a regular "junkyard" into a modern sanitary legal landfill. The first step, according to this document is creation of inter-municipal regions and construction of regional sanitary landfills, transfer stations, and recycling centers.

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<sup>10</sup> The National Strategy of Economic Development of Serbia Action Plan 2006-2012: Article 8.4. Principles Of Policy For A More Efficient Integration In The EU Market

<sup>11</sup> The National Strategy Of Economic Development Of Serbia Action Plan 2006-2012: Article 10.:Regional Development

<sup>12</sup> The National Strategy Of Economic Development Of Serbia Action Plan 2006-2012: Article 5.2.1.: Accelerate privatization and restructuring of existing enterprises

<sup>13</sup> The National Strategy of Economic Development of Serbia Action Plan 2006-2012: Article 5.2.2. Increase competitiveness of the corporate sector

<sup>14</sup> The Regional Development Strategy of Republic of Serbia, 2007--2012.; p.81

<sup>15</sup> The Regional Development Strategy of Republic of Serbia, 2007--2012 p. 134

<sup>16</sup> The Regional Development Strategy of Republic of Serbia, 2007--2012; p. 136

At this moment, there is only one new project of inter-municipal cooperation in Serbia, and that is a SWM project, for which the financing options are being chosen, and for which a study called "Feasibility Study for SWM Project Duboko" has been prepared. This feasibility study has been ordered by EAR and EBRD in July 2006, in order to be able to consider a financing option through donation and/or loan. Region which consists of 9 municipalities (Užice, Čajetina, Požega, Čačak, Kosjerić, Lučani, Arilje, Ivanjica i Bajina Bašta) is situated in the central-west Serbia, and it is one of the most heavily industrialized regions in the republic. A land for the landfill has been chosen to be near Užice (in Duboko), and it is decided that PUC Duboko should be in charge for construction and management of the regional system.

The goal of the project is improvement of service and operational efficiency. Process of solid waste management must comply with the legal framework, regulation standards, and environmental standards of Serbia and EU.

The feasibility study has supported project definition, operational and institutional agreements required to provide financing. Study has supported overall preparation of the project, up to the level where financing can be extended for the purpose of full project implementation.

This project has been done for solid household waste and does not assume specific types of waste such as slaughter waste, industrial waste, hazardous waste, medical waste, old vehicles, ash, tires, construction waste, massive waste, and car batteries.<sup>17</sup>

Having in mind that the project is new, section 5.4.3. (Regionalization Concept) of this study states the following: "Regionalization is a basic principle of the NWMS (e.g. regional landfills, transfer stations, recycling centre, etc) but seems an institutional void when analyzing the practicalities of setting up a legal institution to manage regional entities. We have highlighted the problem of effective control and decision making of the Utility. Duboko is only a pilot in this respect which could come up with workable solutions but it would be worthwhile to investigate a legally responsive structure which addresses issues as borrowing, ownership, and corporate decision-making.

Proposed solutions:

- Identify the most appropriate legal set-up of an regional PUC considering issues as borrowing, ownership, and corporate decision-making"<sup>18</sup>

The feasibility study can be downloaded at [www.miasp.com](http://www.miasp.com), and here is mentioned in a context of pointing out opened questions that will be raised in the process of PUC regionalization, in a sense of accessing funds, ownership, decision making, and will ask for a systematic approach.

The second example of regionalization in Serbia, somewhat older but specific because it has been entirely financed by own, state money, is Rzav. A company for regional water supply Rzav (<http://www.rzav.co.yu>) sells water to PUC's in surrounding municipalities Arilje, Požega, Lučani, Čačak, and Gornji Milanovac according to their actual use. It has been founded by these municipalities in 1990 as a separate PUC, with a sole purpose of water supply, and it functions from 1999 on. It is one of the few regional PUC's active in Serbia, and four of its founders will now take part in Duboko scheme.

Management structure is identical to the structure of Duboko PUC, with exception of Coordinating body:

1. Management Board: 11 members, 1 from each municipality, 5 from Čačak, 1 representative of Ministry of Agriculture, Forestry and Water.
2. Supervisory Board: 5 members, one from each municipality.
3. General Director: appointed by the decision of all 5 municipal assemblies.
4. Coordination Body: representatives of founders; formed to secure unity in further construction and use of the Rzav system.

Management Board makes decision by 51% majority, whereby representative of employees also votes. All decisions must be ratified by each municipality (Council). Statutes stress out that decisions must be made during a 3 months period. It seems that this system functions well in case of these 5 municipalities.

Short overview of the activities shows that PUC functions on the break-even point, and because of that it cannot create reserves for replacement. This makes sense because of low bill collection discipline –

<sup>17</sup> Feasibility Study Duboko Solid Waste Mmanagement Project, 2007, p..7

<sup>18</sup> Feasibility Study Duboko Solid Waste Mmanagement Project, 2007.p.126

percentage of paid bills varies from 50% up to 91%. Solving this unfavorable situation has been a condition for submission of blank bill as a warranty for regular payments. Rzav has also exercised a decrease in supply towards one of the PUC's until a blank promissory note/bill has been submitted.

It can be concluded that system functions well because it covers O & M costs, but it lacks the possibility for further expansion or replacement investments.<sup>19</sup>

As it can be seen, inter-municipal cooperation between PUC's dealing with water, sewerage and heating mostly depends upon real needs for solving current problems with the satisfaction of customer needs for utility services, technical and natural conditions (dispersion, population, resources, etc). If these preconditions exist, political will should also exist because advantages are obvious. Of course, feasibility studies would be required for every project if inter-municipal cooperation is adopted as a national strategy.

If foreign experiences are taken into account once again, some researches (Switzerland) show that inter-municipal cooperation is usually a direction of poorer, less developed municipalities. Knowing that Serbia does not lack municipalities with those characteristics (only with much smaller capacities), inter-municipal cooperation could be a positive move towards more efficient external financing for development of those municipalities, because it is most probably the most efficient way to supplement the lack of own financial resources.

## 10.2 Benchmarking as a Technique for Measuring the Efficiency of Business Activities

Benchmarking is a process of finding the best existing product, production process, or service, and its implementation as standards for improvement of company's own products, processes, and services.<sup>20</sup> Some reports that were submitted before this one have drawn the following conclusions on the benchmarking issue:

- Benchmarking could play a major role in the set up and monitoring of improvement projects;
- Per sector the elaboration of methods and systems may be quite different and must be further developed;
- Support is needed from sector organizations and consultants that can be involved in the development of benchmarking strategies and in the design, development and implementation of related benchmarking systems and databases.<sup>21</sup>

The main technique of benchmarking, when referring to the upper definition, is measurement. In order to perform measurement, one must have indicators which are of a same kind as indicators that are to be improved.

The following groups of indicators are mostly used:

- performance indicators
- process indicators
- product characteristics indicators.

In case of public utilities presented in the relevant material, benchmarking indicators could be:

- For water supply and sewage
  - *Performance indicators:* operations profit/loss statement, number of connections, billed/paid ratio, customer satisfaction, length of water and sewage network, No of employees/connection, etc.
  - *Process indicators:* water losses, water supply duration per annum, system break-down procedures, regular annual maintenance process, speed of network expansion, IT processes implemented, etc.
  - *Product indicators:* availability of water, water pureness, price of water.
- For solid waste management
  - *Performance indicators:* operations profit/loss statement, households served, area covered, amount of waste collected, number of households/employee, etc.
  - *Process indicators:* kilometers of streets covered in a shift, automatization in collecting waste, etc.

<sup>19</sup> Feasibility Study Duboko Solid Waste Mmanagement Project, 2007.122

<sup>20</sup> Stoner J., Freeman E., Gilbert D.: "Management", Prentice Hall International Editions, 6<sup>th</sup> edition, 1995, p. 224

<sup>21</sup> Hans Kok: Transformation of Public Utility Companies in the Republic of Serbia; 2007; pg 10



- *Production indicators:* accuracy of time table, amount of leftovers at the household waste site, etc.
- For district heating
  - *Performance indicators:* operations profit/loss statement, number of connections, billed/paid ratio, customer satisfaction, network length developed over time, No of employees/connection, etc.
  - *Process indicators:* heat losses, system break-down procedures, regular annual maintenance costs, speed of network expansions, etc.
  - *Production indicators:* availability of hot water during the year, hot water pureness, ability to regulate temperature inside the heated spaces, etc.

When implementing benchmarking as a technique, the most complicated task is to gather information on relevant indicators. If such an activity would be initiated, a body for monitoring that activity would have to be formed. Basically, utilities are hard to benchmark, and reasons for this are specific characteristics of the utilities market such as availability of water resources, size of the population, solid waste structure, etc.

Even if it is not meant to be a perfect tool for measurement, benchmarking is necessary whenever there are no indicators to be compared. After its use has begun, actors in the research process will at least have some indicators (sector specific), and by having them, they will be able to perform some action that will lead their companies to achieve a sector average in performance. If it is proven that natural or demographic factors are limiting the efficiency, indicators will at least be proof that some PUC's cannot perform efficiently and have to be subsidized or financed entirely from donations. On the other hand, when conditions are artificially created (such as administratively controlled prices or overstaffed PUC), benchmarking can surely point out consequences of the scenario whose cause has already been determined, and there comes the possibility for a corrective measure.

## **11. Legal Framework**

There is a deep, significant and no sever connection between two entities: Municipality and Public Utility Company. Municipalities are establishers of public utility companies. Both are Constitutional categories. Both entities have got prefix «public», so both, municipal administration and PUC serve to citizens. Having in mind these relations this section «4. Legal Framework» is divided into two sub-sections: «4.1 Present legal situation» describing current status and legal conditions for work of Municipalities and Public Utility Companies and «4.2 Recommendations for improvement of the legal status of Public Utility Companies» describing first of all current possible legal instruments for development and improvement of the PUC-s status and their work and proposing basic directions in creation of new system based law and regulations. (Reference: Contribution on legal framework<sup>22</sup>)

### **1. Present legal situation**

#### **1.1 Introduction**

There were big expectations in the public on preparation and adoption of new Constitution of Republic of Serbia, especially for new, different and better determination of municipalities as autonomous and decentralized units and their rights in the field of movable and immovable property. Instead of concrete provisions on the municipality's property so-called public property is just mentioned in the Constitution, but fortunately such property and accordingly rights at this property is going to be defined in details within separate pieces of law, because Constitution's provisions and principles gave legal base for such determinations. It gives a new expectation, new hope, that overall process of decentralization is going to be continued, not only in sense of political decentralization but in something which is more important, what is core, essential effort and this is financial decentralization. There is no financial decentralization without clear municipalities` rights at land, public buildings and other public immovable things.

From the organizational point of view, authorities, responsibilities and scope of work which is in line with PUC business, article 190 of the new Constitution is most important. Pursuant to this article, but also to the provisions of the Article 18 of the Law on Local Self-Government municipality regulates and provides performance of all Communal Activities (water supply; wastewater; solid waste; district heating; local roads and streets; public lightening; public transportation; public parking lots; marketplaces; public bathhouses; and other activities that municipality regulates within its local regulations as communal activities); defines Water conditions; issues water Approvals and Licenses for facilities of local importance; uses assets which are property of the State; establishes organizations, bodies and services to meet Municipality's Needs. These services, so-called public services mean «public institutions» and «public companies». Having in mind that the municipality is responsible for performing of communal activities public companies are only and always «public utility companies».

The Law on Public Companies and Performance of Activities of General Interest defines communal activities as activities of general interests. It follows that the activities of general interest are determined by the National Parliament, and embodied by the highest act passed under its competence - the law. And this aspect – performing activities which are of the general interest is one of the main bases in creation of the attitude which is going to become brunt of this document on PUC-s transformation. The concept of the communal activities is not stipulated by this law. This was done by the Law on Local Self-Government, and above all, by the Law on Communal Activities.

#### **1.2 Entities performing communal activities**

Communal activities are performed by public utility companies. This principle is based on the provisions of Article 3 of the Law on Public Utility Companies and Performance of Activities of General Interest, according to which the activities of general interest are performed by public utility companies. However, the activities of general interest, even the communal activities, can also be performed by other organizational shapes -

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<sup>22</sup> Contribution «Legal framework»: by B. Pejić, senior legal advisor - MIA

other ("non-public") company; part of a company or entrepreneur, whereas in the performance of this activity, this shape has got the same position as the public utility company. The Law on Public Utility Activities, however, stipulates in Article 8, Para 2 that the activities in the field of water supply, wastewater, district heating and transportation of passengers in municipal transportation (tram, trolley and rail transportation of passengers) can be performed only by public utility companies! And, if the founding of a PUC would not be cost-effective in view of the scope of work and number of users, the municipality, in accordance with the same article, can entrust performance of these communal activities to another company or entrepreneur, under the contract. But the question here is does it only relate to the moment of the founding of PUC or to any later aspect of its performance? In other words is it possible to do it when that existing company is obviously can not perform well or this possibility exists only in period of the founding of a new public utility company?

### **1.3 Two fundamental elements of the basis of which one company is determined as public**

A public utility company is a company performing the activity of general interest, which founder is the state and units of territorial autonomy and local self-government. When the public utility company is founded by the municipality or the city, the founding deed is the decision, passed by the municipal assembly or the city hall. In the decision of the assembly whereby the public utility company is founded are contained data on the founding capital, rights, liabilities and responsibilities of the company and municipality in performing the public utility activity of general interest, property that cannot be disposed of, namely property the acquisition and disposal of which requires the approval of the municipality as the founder, as well as other issues stipulated by the Law on Commercial Companies as issues that each must contain (business name and seat of the company, predominant activity, amount of the main capital, manner and time of introduction of share).

These two elements are closely intertwined in all relations of the municipality and the public utility company. There is a special subtitle - section in the Law on Public Utility Companies and performance of activity of general interest which emphasizes the realization, namely protection of general interest "Securing the protection of general interest". This protection is secured actually by the municipality as the founder. The municipality, namely, approves: the statute, issuance of guarantees and other forms of securities and collaterals for deals which are not within the framework of activities of general interest, tariff (decision on prices, tariff system and other issues related to tariffs), disposal of company property of higher value, the deed on general terms for supply of products and services; investment of capital; status changes; deed on assessment of value of state capital and decision on privatization; the other decision of the bodies of the public utility company.

### **1.4 Proprietary right and other authorities resulting from the proprietary right**

The assets acquired, namely acquired by public utility companies, are assets owned by the Republic. The state is the owner, and the public utility companies are users of these assets. Accordingly, there are respective powers, namely limitations in enjoyment of proprietary right, namely powers resulting from this right and forming this right (the proprietary right as is responded). The Law on Assets owned by the Republic of Serbia stipulates that the acquisition and disposal of real estate used by the public utility company is decided on by the Government. The granting the use, namely lease, as well as mortgage on the real estate used by the public utility company, is decided by the authority defined by the municipality statute (assembly, namely council of municipality president) with the approval of the Republic Directorate for Assets of the Republic of Serbia.

Public (state) capital in a public utility company is divided into shares or stakes of a respective nominal value. This capital is assets invested by the state and the right to use of these assets, things and rights, owned by the state. The value of state capital is entered in the register.

The law on public utility companies and performance of activities of general interest stipulates that the property of a public utility company consists of the right to use the assets owned by the state, namely estate of general interest, pecuniary assets, securities, as well as proprietary right over movable assets and real estate.

### **1.5 Entrusting tasks from the sphere of activities of a public utility company**

The activity of general interest, even the communal activity can be performed, except by the public utility company, also by other forms of organization: another company or its part, as well as by an entrepreneur. The right to perform a public utility activity is acquired by the commercial companies and entrepreneurs by a contract with the municipality/city. Such contracts define particularly: the work and operation, rights and obligations with respect to the use of state owned assets; liabilities of the commercial company and entrepreneur; rights and liabilities in case of disturbance of operation, other issues.

Beside the municipality/city, only a public utility company can entrust certain individual parts of the work from the sphere of its activities to another company or entrepreneur. The entrusting in this case is made in a manner and according to the procedure set by the regulations of the municipal bodies (municipal assembly).

Entrusting of performance of public utility activities or individual jobs is made for a period of five years. If the commercial company (entrepreneur) also takes the obligation to invest assets in the respective activity, the period for which it is entrusted may last as long as the period of return of such assets, but not longer than 25 years.

### **1.6 Financing the activity of a public utility company**

The work of the public utility companies is financed from the price of communal products and services. Beside the revenue from the sold product and public services, the assets for performance and development of communal activities is provided from the part of the charge for development of building land and charge for the use of the building land, voluntary local tax, as well from other sources, in accordance with the law (grants, subsidies from the budget). The other sources are, among others, also the Republic assets, which according to Article 22, paragraph 2 of the Law on Communal Activities participate in financing the project of construction of public utility facilities of interest for several municipalities, in accordance with the development plans.

With respect to financing public utility activities, it follows that the market aspects of operation and position of public utility companies, are fully emphasized in this segment. However, the setting of tariffs, manner and procedure and the entire system related to it, lead to a completely different conclusion: that the public utility companies do not operate with market orientation. The respective control, whether administrative, or from corporate angle (majority share of the public - state owned or in the future - municipal capital) must exist.

### **1.7 Price of public utility services**

In setting the price of public utility services certain elements are assumed for forming the price of communal services, if assumed that the forming of the price of utility services set by the Law on Public Utility Activities, Art. 24. The elements forming the price of utility services are: type, scope and quality of public utility services; value of assets engaged in rendering services; scope and quality of invested work in performing the utility services; material costs in performing the public utility services, other elements depending on the market condition and specific features of individual utility services.

### **1.8 Public utility company bodies**

The tasks of the bodies are set by the law regulating the position of the companies (commercial companies) and the articles of association. In short, the tasks of the board of directors are tasks that correspond to the management body and the assembly, the tasks of the director corresponds to the executive body, and the tasks of supervision to the supervising body. The municipality/city, as the founder of a public utility company, appoints and relieves the management (director and president and members of the board of director) and the president and members of the supervisory body. The founding decision of the municipal assembly determines the office of the director, namely the number of members of the board of directors and the supervisory board and their office.

## **2. Recommendations for improvement of the legal status of public utility companies**

### **2.1 Current possible legal instruments for development and improvement of the PUC status (including corporate/structural directions for transformation of PUC's)**

There are several regulations in the legal system of the Republic of Serbia which regulate the respective relations, conditions and rights and obligations, tied directly to improving the position and work of public utility companies. Strictly speaking, these directions may be observed through four groups of aspects and relations. The first pertains to entrusting tasks, as a category stipulated not just in this analysis by the mentioned systemic and other laws, but in the Constitution itself. The other direction is privatization, as a general path in transformation, but without any detailed determinants, with respect to public utility activities. Namely, for quite some time the idea is present to define a comprehensive strategy which, after having been accepted in the professional public, and the competent state authorities, would become the basis for legal regulation of the status, right and obligations, and finally, the very transformation of public utility companies (which the public activities in general can be the object of privatization, which part and in what percentage of capital of public utility company remains a public-legal, and which private, the organization and manner of decision making and the position of the public utility company towards the public bodies in the process of making strategic decisions etc.). The third direction is a system of concessions, which remind in many ways of entrusting the task (above all, because the entrusting of tasks and concessions is made for a specific period of time, whereas the public utility activity or task in the sphere of such activity may be entrusted for a period of up to 25 years under certain conditions, and the concession up to 30 years). On the other hand, the concession resembles a short-term joint venture arrangement. The reason for this is the fixed term (in other words, there is the participation of private domestic or foreign capital, private domestic or foreign organizational form and finally, procedure in decision making, in accordance with the domestic regulations, realized by the domestic or foreign legal or natural person). According to the Law on Concessions the development, maintenance and operation of public utility facilities for the purpose of performance of public utility activity, among other things, is the object of concession (taking into consideration such defined concessions in case of performance of public utility activities, concessions in public utility activities are always performed on the basis of B.O.T. system - build, operate and logically, transfer to the owner - Republic of Serbia). The concessionary pays the concession charge. The fourth, presently legally possible direction is a joint venture arrangement, as a type of PPP (public private partnership) relation. Such option, except being recognized in general by the regulations on privatization, foresees the regulations regulating the position of the company, as well as foreign investment (the Law on commercial companies and Law on foreign investments). So, there are four main instruments existing in this moment in domestic legislation. While first and third are examples of temporary improvement just of work of PUC's, second (privatization) and fourth (joint-venture arrangements that could be seen as joint-stock or limited liability companies) are examples of permanently improved both of work and status of PUC's within appropriate corporate/structural changes.

### **2.2 Implementation of new regulations transforming the commercial companies into PUCs**

The concept of public company and bodies of such company had been determined in the previously effective Company Law. These provisions used to "cover" also the public utility companies, although the Law on public companies and performance of activities of public interest, are actually repeated, but also elaborated. In this Law again the public company is defined as a company performing the activity of general interest, founded by the state, namely local government. The company bodies are also indicated, as follows, management board, supervisory board and director, and the possibility is left to form the executive board of directors by the articles of association (which is the case with the Law on public companies and performance of activities of general interest). The founding rights of the municipality are determined; identical to the last mentioned law, as the founding of a public utility company. The Company Law also has a foreseen option of private companies or companies with majority share of state capital and other organizational form, including the entrepreneur, to perform the activity of general interest.

### **2.3 Recommendations for improvement of the status of the municipality and PUC**

If the recommendations pertain to a reform of the local government and reform of the local government and change of the position of the municipality with a desire to reinforce it, then it could be reduced in short to the municipality having to be a territorial, administrative and regional unit where, pursuant to the law, are realized municipal affairs and administrative affairs; that the municipality owns land within legally determined borders which it develops, secures and dispose with, in accordance with the law, as well as public facilities important to the municipality and the work of the municipality bodies (the municipality has other real estate and movable assets on that territory, which it acquires and disposes with, in accordance with the law); that the tasks are realized within the municipality in the areas in which it performs its affairs and administrative affairs in the areas in which the performance of these tasks is entrusted to the municipality; finally, that the municipality as a form of state and provincial decentralization should be defined as a regional unit, with a coat of arms and a flag.

As for the harmonization of the recommendations and initiatives that could be proposed in this document with the standards existing in EU, and which pertain to public utility companies, it is certain that a comprehensive national strategy defining the elements stated in subsection 4.2.1 of this paper (Joint-Venture and other PPP shapes as Joint-Stock or Limited Liability Companies as well as privatized PUC's in accordance with this document's proposals) represents a path for transforming the public utility company into companies existing in the countries of the European Union - market oriented, competitive, sound and efficient companies where the concept "enterprise" comes to its full expression and the prefix "public" (even where the respective activity is performed by a single company) loses its importance. Such a strategy that would be materialized by concrete legal regulations, would be a bridge that domestic legislature connects with the Acquis Communautaire.

## **12. Overview of the PUC Sector Transformation (Privatization) Process in the New EU Member Countries**

A common characteristic for these countries is that, almost immediately after political changes, they initiated the process of the rapid destruction of all institutions for centralized planning, but without proper institutional replacement. By doing so, these countries had reached the position in which their governments had to reorganize PUC's completely, and place them on some kind of a market basis. Without a studious phased strategy and fast changes in ex-nationalized ownership structure, mistakes were inevitable.

PUC transformation models vary from country to country, primarily due to motives of institutions in charge to formulate change policies. The primary cause for transformation was a wish to improve efficiency and raise the quality of services. At the beginning of the process, it was strongly believed that market orientation of PUC's is much better than the old system of service distribution, which was afterwards combined with the wish to ease budget expenditures and to make PUC's commercial organizations that can support themselves. In these circumstances, the main condition for changes were funds for investments, which could have been provided only from external sources. One of the possibilities to raise funds was privatization. In some countries, transparent market conditions were lacking, and so was appropriate regulation of tender conditions and procedures. In order to reach their goals as soon as possible, many mistakes were made, primarily because of the inappropriate legal framework, conditions for investments that were not precise enough, and free interpretation of rules by interested parties. Once these interpretations were cleared, mistakes have already been made, so it was quite hard to correct them. In many cases, fast and unmindful privatization led to the erosion of the property of the local authorities and to the increase in unemployment rate. Consequences of these actions can still be felt in those regions.

In each of these countries, specificities and differences exist in the public treatment of the public utilities, which means that in most ex-socialist countries and now EU members, questions about formulation of the policies and options are still unsolved and unclear.

Generally, PUC sector transformation has passed through four phases:

1. Giving property back to the local authorities,
2. Corporatization, PPP's, commercialization and outsourcing,
3. Privatization – attraction of capital mostly through operational functions, with exceptions in infrastructure privatization,
4. Regulation.

### **12.1. Mistakes in the Transformation-Privatization Process**

In the initial phase, right after social changes, the first step in the privatization process was the sale of state property, which has been done without proper tender and other regulatory procedures. That phase was the so called „spontaneous“ privatization, i.e. search for new owners. In that environment, very unfavorable contractual arrangements for customers have been made, and those, on the contrary, very favorable for private capital. In default of regulation, market conditions, and development of institutions, these occurrences have been considered as natural consequence of privatization.

Most common negative characteristics of the transformation-privatization were:

1. Transformation of natural monopolies into private ones;
  - Lack of adequate preparation, defined authorities and regulatory bodies
  - Large international investors have obtained a good starting position and market dominance before regulatory mechanisms have been set up, so they opposed market liberalization and competition in order to protect themselves.
2. Corruption

- Lack of transparency in public decision making;
  - Inadequate planning of the transformation process;
  - Economic and political influence of private sector on public sector.
3. Conflict of interests and unconcern for future changes
- Local politicians were not interested in accepting regulations which prescribe business standards and subtend their influence on process transparency.
4. Social aspect disregarded
- Substantial and fast increase in prices, not as a consequence of improving amount and quality of services
  - Heavily increased amount of utility service costs in the average family income.
  - Unemployment rate increase as a result of overall privatization and economic activities slow down.

Most common mistake in these countries was copying western models without exception. Western economy model in its recent past have not had such rapid and massive change of ownership, and is based on pluralism of services, together with the application of market model that functioned for quite a long time. Impulsive and complete turnover in a sense of copying the model without base for its functioning, had to lead to smaller or bigger mistakes in application.

Practice in these countries has shown that transformation towards privatization can be done quite rapidly, but in the same time many problems can come up if regulative framework and following mechanisms do not exist, and that is an area where state bodies have usually been inactive or very slow, in defining as well as in application.

Common experience in all the countries that have passed through the transformation of utility sector shows that fast privatization and loss of control over property does not create positive results. On the other hand, gradual involvement of private sector in utilities could bring quality and efficiency in terms of costs, but does not necessarily lead to quality improvement. Practice has also shown that overall privatization does not have to be the only solution, but in fact, one of the alternatives is partial privatization combined with the introduction of competition, and that can cause decrease in prices and increase in quality of services.

When experiences from ex-socialist countries are compared to the EU countries, the following must be taken into account:

- Difference in GDP,
- Available quality of services,
- Facility equipment levels, level of modernization, and condition of infrastructure,
- Some of the ex-socialist Eastern Europe countries have achieved pre-transitional level of income, but are still substantially below average of others in EU and/or still have not overcome transitional shock.

Ex-socialist countries of "New Europe" had the political need and wish to transform and modernize utilities, but it has not been necessary to completely copy western model of utilities because social and economic circumstances differed substantially. Wish to achieve the development level present in western countries is by all means positive, but the process itself is too complicated and requires thorough preparation and time for thoughtful transition and planned gradual implementation.

### **13. Overview of the PU Sector Transformation-Privatization in Developed European Countries**

Highly developed countries are characterized by the safe property status, developed and institutionally protected market, as well as companies focused on utility services which are able to satisfy customers and their needs.

Models are different, but their mutual orientation is characterized by:

- Lowering budget deficit,
- Adaptation to standards,
- Efficiency improvement,
- Competition stimulus,
- Deregulation of state influence.

Basic models are mostly set in a way that local governments are engaged in communal activities in a sense that they organize local public companies owned by state or public, and they mostly decide to found a limited companies with city as owner or joint stock companies with mixed ownership of the city (mostly majority) and private capital.

These organizational forms have proven to be good in satisfying needs of citizens and keeping the price level under control, even as a social category (as in Sweden). On the other hand, such utility services can place a burden on municipal budget, and can be less flexible and inefficient in its activities.

In some cases, local authorities can decide to consign some utility services to private sector partner, under the following conditions:

- Conducting services is usually tied to managing or not of the infrastructure and fixed assets;
- Contractual arrangements or franchise;
- Limited or unlimited competition.

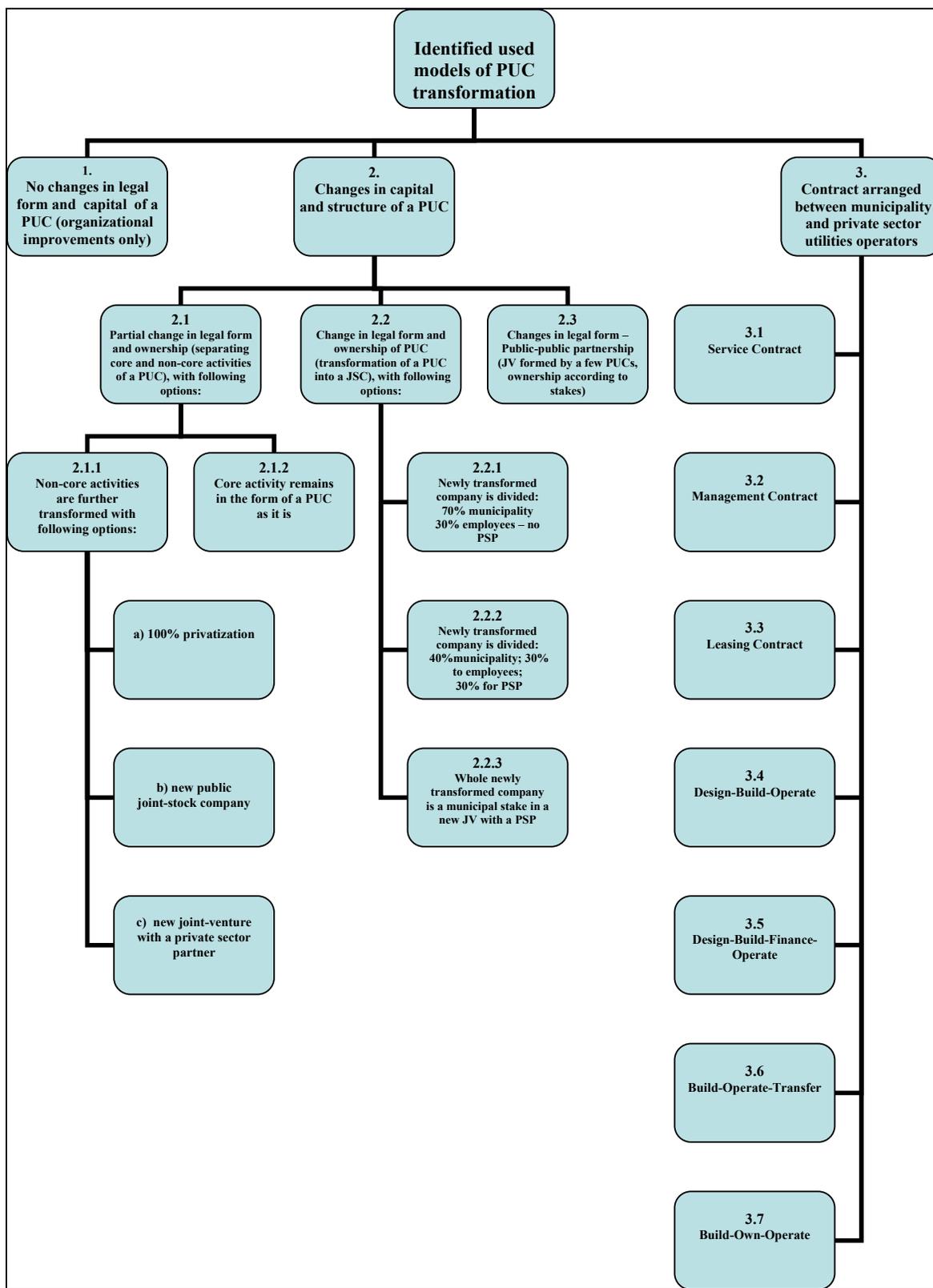
These models or their combination in most cases can secure better efficiency in satisfying communal needs and can provide greater flexibility of offer, but depending upon the specificity of implemented model; they can significantly reduce negotiating strength and control possibility from the side of municipal authorities.

In some countries, such as Sweden, most common attitude is that only 100% public ownership is the best solution for providing necessary public needs, while in the same time, non core activities can be separated and privatized.

A combination of mentioned models is very often present in practice, depending upon the following factors:

- Political will of the local authorities to keep vital infrastructure , or to sell, rent or consign assets and infrastructure to private sector partner;
- Possibility of keeping or losing control over strategic decisions in the public sector;
- Possibilities of keeping dominant negotiation position, weakening it or losing it;
- Available alternative for providing reliability and security in utilities;
- Market conditions, interest of private sector for profit and protection of public interest.

### 14. Identified And Implemented Models Of PUC Transformation (Graphic Overview)



\* The models presented here do not represent a recommendation or suggestion for a specific model of transformation of PUC's – they have only been identified as used models in other countries.

Models presented in the graph are identified and grouped according to the examples found in the case studies and other literature. Each of these models has its own definition and has been implemented at some point in time in the past, so this graph is the grouping of all models found. Although crucially different in organizational and legal nature, these models are usually combined and implemented together or they follow one another through the transformation period. However, the current state of the country which is conducting the PUC transformation has the biggest impact on determining which model should be used and when.

#### **14.1 Model No 1: No changes in the legal form and capital of the PUC** (organizational improvements with existing staff and assets in order to improve efficiency)

This model does not assume any interference of any factors other than internal organizational factors. Basically, every PUC could be held responsible for its own performance, at least up to a point of being limited by prices set by government or number of employees which is not to be decreased, which is again a political decision. This model supposes pure organizational improvements with existing staff and assets in order to achieve efficiency.

Possible techniques to be used are benchmarking and different tariff setting, followed by a regulatory body definition. Increase in efficiency of collecting bills and cutting costs usually come along. A technique very similar to benchmarking could also be used when applying this model, and that is twining. Twining assumes that a public sector water authority or company in one country helps a public sector water authority in another country. A more developed and more efficient company could provide technical assistance to its foreign partners or a number of advisors whose role is to achieve an overall transfer of know-how.

This model, besides organizational changes limits change in the ownership structure, but does not limit change in the total value of the property i.e. increase in assets. In the environments where communal infrastructure is inadequate, it allows and assumes access to funds for investment in existing and/or new objects, infrastructure and equipment.

#### **14.2 Model No 2: Changes in capital and structure of a PUC**

This group of models consists of three sub-models, described under the following three subtitles.

##### **Model 2.1: Partial change in legal form and ownership**

This sub-model occurs as a result of separating core and non-core activities of the PUC. It assumes that after separation of the activities, bigger part of the PUC will keep the legal form and the structure of capital as it had before, and will continue to perform its core activity. This type of PUC could after transformation be a subject for further improvements of performance, increase of efficiency, and investments.

Smaller (non-core) activities would after separation be subject to the change of the legal form in one of the following ways:

- a) Privatization up to 100% ownership stake
- b) Forming a new company with public capital in the form of a joint-stock company, capable for market competition, and at the same time performing contracted tasks for the existing PUC.

- c) Forming a joint venture between the separated part of the PUC and a private partner with a majority of public or private capital.

A chosen scenario for a non-core part (or parts) of a PUC depends on the various technical, operational, and market conditions, but generally, one of the three options is always applicable.

### **Model 2.2: Change in legal form and ownership structure of PUC**

This sub-model occurs as a result of transformation of a PUC into a joint-stock company. It assumes that an existing PUC would, further on, be subject to the transformation according to the following scenarios:

- 2.2.1 Transformation of PUC into a joint-stock company without selling shares, but rather distributing them to the local self-government (70%) and employed staff (30%). This model may or may not prohibit further selling of shares without the permission of the relevant national bodies.
- 2.2.2 Transformation of PUC into a joint-stock company by selling 30% of shares to a strategic private sector partner, preserving 40% of shares (related to the vital activities of PUC) in the municipal ownership, and distributing 30% of shares to the employed staff and public. This model may prohibit the sale of more than 49% of shares to the private partner without the permission of the relevant national bodies.
- 2.2.3 After transformation of PUC into a JSC, newly founded JSC would start negotiations with the strategic partner from the private sector, and that arrangement would involve the foundation of a new joint-venture company with the 51:49 or 49:51 ownership stake (depending upon the approval of the state). Property of the new JV company would consist of the assets of the old PUC plus property brought in by PSP.

This model does not involve the sale of capital, and is by some authors considered as capitalization and by some as a contractual form of privatization. It was widely used in the former CEE countries and experienced problems in practice because of difficulties in the appropriate estimation of partner contributions.

### **Model 2.3: Changes in legal form of PUC**

This sub-model is usually result of the regional networking whereby a few PUC's of a same kind would form a joint-venture company (mostly JSC). It does not require change in ownership other than transfer of property from national to municipal level, which is an activity pre-dating the transformation. Management rights in the new company are to be defined according to the value brought in by each PUC into the new joint-venture. Networking of a PUC's in order to form a regional PUC is often referred to as a "public-public partnership", and it is mostly used in Nordic countries, and has proven decent results. However, implementation of this model requires thorough preparation because its feasibility very much depends on technical, natural, human, and political factors.

This sub-model, which by its nature represents functional regionalization, combined with benchmarking, tariff model reforms, improvement of bill collection, and cost cutting, has always produced good results. As a result of regionalization and enlargement, this way of transformation which does not affect ownership structure (public ownership over vital infrastructure) but does influence the economy via volume of activities, has proven to be more suitable when it comes to access to foreign financing for modernization and development.

### 14.3 Model No 3: Contractual arrangements

Models of Contractual Arrangements	
Service contracts (SC)	Design - Build – Operate (DBO)
Management contracts (MC)	Design–Build–Finance–Operate (DBFO)
Leasing Contract (L)	Build – Operate - Transfer (BOT)
	Build – Own – Operate (BOO)

This model assumes partnership with private sector partners. Models of these contractual arrangements which are considered the best are those for which the national government has, in advance, laid down rules, obligations and standard contractual clauses which are obligatory.

Arrangements in the left column are easily applicable even now, but could be risky because of their nature. Arrangements from the right column are especially suitable in a situation when investments in assets other than vital assets are needed (such as wastewater treatment plant, heating plant, landfill, etc. – not pipelines). In order to be implemented successfully, this model assumes that strategy has been developed in advance on the national level, as well as adequate instruments of public interest protection. Possible sub-models are:

**3.1: Service Contract (SC)**-Service Contracts or Service-Level-Agreements (SLA's) are contracts between service providers and customers that define the services provided, the metrics associated with these services, acceptable and unacceptable service levels, liabilities on the part of the service provider and the customer, and actions to be taken in specific circumstances.<sup>23</sup>

**3.2: Management Contract (MC)**-Management Contract or Management Agreement is a contract between the owner of income property and a management firm or individual property manager that outlines the scope of the manager's authority.<sup>24</sup> It is an agreement by which a company will provide it's organizational and management expertise in the form of services.<sup>25</sup>

**3.3: Leasing Contract (L)** - Leasing Contract is a contract granting use or occupation of property during a specified period in exchange for a specified rent.<sup>26</sup>

**3.4: Design - Build – Operate (DBO)** - A DBO contract is a contract whereby a private company designs, builds, and operates a utility facility. The government entity (town, city, county, water commission, etc.) finances the construction and continues to own all assets, set rates and exercise control of water resources. The partner company functions as the technical operator and/or customer service provider.<sup>27</sup>

<sup>23</sup> [http://www.iec.org/online/tutorials/service\\_level/](http://www.iec.org/online/tutorials/service_level/)

<sup>24</sup> [http://www.4554.com/Glossary/MANAGEMENT\\_AGREEMENT.html](http://www.4554.com/Glossary/MANAGEMENT_AGREEMENT.html)

<sup>25</sup> <http://financial-dictionary.thefreedictionary.com/Management+contract>

<sup>26</sup> <http://www.answers.com/topic/lease>

<sup>27</sup> [www.waterpartnership.org/press/articles/WhyPartner.pdf](http://www.waterpartnership.org/press/articles/WhyPartner.pdf)

**3.5:** *Design–Build–Finance–Operate (DBFO)* - A DBFO contract is the contract whereby the private sector designs, finances and constructs a new facility, and then operates the facility during the agreed period of time. During the whole agreement period, public entity is the owner of the facility.

**3.6:** *Build – Operate - Transfer (BOT )*- A type of arrangement in which the private sector builds an infrastructure project, operates it, and eventually transfers ownership of the project to the government. In many instances, the government becomes the firm's only customer and promises to purchase at least a predetermined amount of the project's output. This ensures that the firm recoups its initial investment in a reasonable time span.<sup>28</sup>

**3.7:** *Build – Own – Operate (BOO)* - The private sector finances, builds, owns and operates a facility or service in perpetuity. The public constraints are stated in the original agreement and through on-going regulatory authority.<sup>29</sup>

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<sup>28</sup> <http://www.investopedia.com/terms/b/botcontract.asp>

<sup>29</sup> [http://www.pppcouncil.ca/aboutPPP\\_definition.asp](http://www.pppcouncil.ca/aboutPPP_definition.asp)

## **ANNEXES:**

## **Annex No 1: Analytical Framework And Methodology Of Case Studies**

### **Analytical Framework And Methodology Of Case Studies**

The Analytical Framework must define:

1. the research questions – what the partners wish to learn in the course of the study;
2. the unit of analysis of the case studies;
3. the logic linking the data to the propositions.

In this sense, the analytical framework for the project of Transformation of PUC's in Serbia has the following characteristics:

1. Research questions
  - Identify steps which forerun PUC transformation and transformation models, in accordance with identified and observed experiences from other countries;
2. the unit of analysis of the case studies
  - examples of up scaling and regionalization of transformed PUC's
  - examples of tariff settings after the transformation of PUC's
3. the logic linking the data to the propositions

The project is based on the exploration of 51 case studies presented in the tabular overviews (23 WW, 13 SW, and 15 DH). These case studies are expected to provide information on the interaction between a range of factors, at various levels, on the parties and processes involved in decision-making, including the constraints on decisions and objectives of decision-makers, so that models of these interactions can be developed to guide future decision-makers.

The selection of the case studies was made not by sampling on the basis of indicators at a given point in time, but rather on the basis of known examples of decision-making processes where a variety of factors, constraints and objectives could be observed.

Most of the case studies describe cities where the steady state has been affected by some initiative or contingency – e.g. a proposal for new sewage treatment plants, or for a form of private sector operation. Either situation requires decision-making processes which involve a range of actors and factors interconnected by processes.

The complexity of public utility companies requires dealing with a very wide set of dimensions in order to make each case study comparable and suitable for analysis. The analysis of decision-making process in this field can best be seen through the following key dimensions:

1. Actors
2. Factors

## **Actors**

Actors are discrete individual, corporate, or collective social units. However, actors in a PUC transformation and their actions are viewed as interdependent rather than independent, autonomous units. Some examples of actors are people in a group, departments within a corporation, public service agencies in a city, or nation-states in the world system.<sup>30</sup> The decision making process on PUC issues involve a wide and diverse set of actors covering the various utility uses, government levels, and different agents. In particular case of Serbia, the most important actors is (in order of strength when it comes to decision making):

1. National Government (including relevant ministries);
2. Current management of the PUC's (including the public companies that manage the PUC's as well as the PUC's that provide the services themselves);
3. Local authorities;
4. Unions of workers;
5. Users;
6. NG sector.

The order in which actors have been stated is certainly not the natural order of importance concerning actors in a PUC transformation decision-making process. It is also important to notice that information present in public (in traces of course, because PUC's are not the first priority of any political party) lead to conclusion that the possible ways of transformation of public utilities extremely vary from not doing anything, to selling the PUC's through privatization process, just like it has been done with other state-owned enterprises.

## **Factors**

Factors are found together with every agent at every level included in decision making process. Decision-making is thus the result of interaction among different elements from different levels of power (European Union, national, regional and local level).

The PESTE framework provides five major categories of external factors – political, economical, social, technical, and environmental factors. These factors vary over time and throughout the selected cases. However, some general issues to be covered have been identified to recognize a set of issues that arise in the case studies as well as in everyday life in Serbia if observed through the user view.

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<sup>30</sup> Wasserman, Stanley, and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. Cambridge University Press, Cambridge

<b>Factors</b>	<b>Sets of issues</b>
<b>Political and institutional</b>	<ol style="list-style-type: none"> <li>1. Political will for PUC transformation</li> <li>2. Underdeveloped legal framework</li> <li>3. No clear strategy on PUC transformation, only general directions have been outlined, but without any support in facts and figures</li> <li>4. Sustainability of current political system</li> </ol>
<b>Economic</b>	<ol style="list-style-type: none"> <li>1. Economic sustainability</li> <li>2. Efficiency</li> <li>3. Regulation</li> <li>4. Strategy</li> </ol>
<b>Social</b>	<ol style="list-style-type: none"> <li>1. Equality of access to service</li> <li>2. Social sustainability (acceptable price levels)</li> <li>3. Inclusiveness in the process (stakeholders taking part in reform)</li> <li>4. Redistributive effect (a model easily applicable in other utilities)</li> <li>5. Public opinion on the future course of activities in utilities sector</li> </ol>
<b>Technical</b>	<ol style="list-style-type: none"> <li>1. Service quality and performance</li> <li>2. Constraints to adoption of technology</li> <li>3. Implications of technology adopted</li> </ol>
<b>Environmental</b>	<ol style="list-style-type: none"> <li>1. Environmental sustainability</li> <li>2. Operational strategy and the environment</li> <li>3. Environmental impact of operations (preventing pollution or recycling strategies)</li> </ol>

The most effective way in which this analysis can be used is asking the following questions about the information provided:

1. Which of these influencing factors are the most important at the present time in each case study?
2. Which are likely to be the most important in the future?
3. What are the key drivers of change in the selected cases?

The study objective is to identify forms of organization and the reforms made in the recent period to infer a model of PUC transformation that could help decision makers and stakeholders:

1. To enhance the capability of municipal and PUC staff in the preparation and financing of municipal infrastructure projects;
2. To ensure the proper implementation and the sustainable operation of project investments.

However, since case studies come from various national, political, natural, and traditional backgrounds, some basic preconditions for PUC transformation shall be presented before the analysis of gathered case studies.

Presenting the case studies and analysis shall be conducted separately, according to the basic activity – water and wastewater treatment companies, solid waste management companies, and district heating companies. Case studies shall be presented in a tabular overview outlining the issues stated in Terms of Reference and those are:

1. Information on the process of successful **up-scaling and regionalization** of water and district heating utilities in other countries;
2. Information and examples of **legal instruments** for regionalization and up-scaling such as Concession Contracts, Service Level Agreements and Association Agreements for municipal collaboration;
3. Conceptual models for the **calculation of tariffs** for municipal services delivery.

In this way, relevant information from case studies shall be presented in a way that is more suitable for further analysis that will follow. The case studies table will have the following columns, as pointed out in TOR:

<b>Company/ Country/</b>	<b>Up scaling and regionalization (positive and negative examples shown)</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons learned</b>
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It is important to point out that not every case study has every issue needed for the analysis, but this is due to different methodologies of different sources of case studies. However, the gathered information, together with some articles and analysis presented from various sources that are not in a form of case studies are sufficient to develop the common sense best practice conceptual model.

## Annex No 2: Tabular Overview Of The Case Studies (sorted by activities)

### 2.1 Water Supply And Waste Water Sector (*italic-positive example, underlined-negative*)

	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Wittenbach SWITZERLAND <sup>31</sup>	<i>Corporations or municipalities, as water suppliers, are responsible for operation and maintenance of their part of the network.</i>	Formally the municipality is responsible for the water supply of the village, but this task is completely delegated to the corporation. The <u>Group Water Supply owns all infrastructures from springs to meters.</u>	<i>The fee consists of a fixed charge and a volumetric charge.</i> The fees are set by the executive board of the corporation and supervised by the canton.	<i>Water supply has been user driven for more than century. <u>Legal protection of private ownership has been a driving force for the spread of networks.</u></i>
Cartagena COLOMBIA <sup>32</sup>	<i>In a part of the city that was placed by urban planning outside of municipal area, AGUACAR implements collective payment system in order to stop the habit of illegal connecting and not paying for the water.</i>	AGUACAR – JV: 50% municipality of Cartagena, 45.91% AGBAR - private water supplier from Barcelona, 4.09% by company employees. 1. AGBAR – JV management contract 2. AGUACAR – MUNICIPALITY - "affermage" contract	<i>Tariff levels must generate the income sufficient to cover both operating and investment costs of water utilities. The tariff structure must incorporate a pro-poor element by making provision for cross-subsidies - a "solidarity fund".</i>	<i>The JV arrangement <u>confuses the role of the public sector.</u> A public-private partnership can exist in the absence of municipal capacity. Co-ordination of activities by external regulatory bodies is necessary for municipal capacity building.</i>
Haapavesi FINLAND <sup>33</sup> ( <u>Southwest WWP in St Petersburg</u> )	<i>The city is not the only client of the newly founded JV company, but the company Valio uses its services as well.</i>	JV company was formed by Kemwater Services and YIT Environment. Kemwater Services is responsible for operation and maintenance, YIT Environment for renovation works.	Clients pay monthly for service. Monthly Fee will be adjusted once a year according to changes of general price level. <i>Monthly fee is based on the influent load.</i>	<i>Activities of private partners entering the PPPs should be complementar.</i>
Hämeenlinna	<i>A supramunicipal JSC owned</i>	The company is fully owned by 6	Equal tariffs to whole area not	JSC owned by the

<sup>31</sup> Matthias Saladin: Wittenbach, a corporation running the business – Switzerland; SKAT Switzerland

<sup>32</sup> Andrew Nickson: Water and Sanitation Services in Cartagena, Colombia, 2001

<sup>33</sup> Vesa Ranta-Pere: Outsourcing of Haapavesi Waste Water Treatment Plant, 2004



FINLAND <sup>34</sup>	<i>by Hämeenlinna Town and five neighbouring municipalities. Hämeenlinna Region Water Ltd., was established in 2001. Outsourced: store, accounting, payroll calculation, design, construction, electricity and automation maintenance...</i>	municipalities The company owns the water supply assets The assets of each municipality formed the basis for ownership in the company Water supply related rights and responsibilities were transferred to the company from the municipalities	earlier than after one year of action <i>All costs should be covered by tariffs, profit not accepted.</i>	municipalities is a common alternative in the regional cooperation. It can be stated that it fulfils the present and future requirements of sustainability very well.
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Stockholm, SWEDEN <sup>35</sup>	<i>Public sector water authority or company in one country helps a public sector water authority in another country. Stockholm Vatten provided technical assistance to the local partners by providing a limited number of resident advisers, who were responsible for know-how transfer in a number of technical and operational areas and for providing support to the in-house restructuring of the two undertakings.</i>	The United Nations Secretary General Advisory Board on water (UNSGAB) is launching a scheme for the promotion of this kind of cooperation in water supply and sanitation.	Tariff increases were predicted and new tariff structure implemented during the project.	<i>This cooperation relies on a more gradual and collaborative approach to change than PPPs. Potential of it depends on the establishment of clear objectives for the partnership, in light of a political mandate from the respective governments. Donors and IFIs should consider supporting these arrangements because they promote context relevant "good governance" principles rather than changes in the ownership.</i>
Apa Nova, ROMANIA <sup>36</sup>	n/a	Vivendi and the municipality of Bucharest formed a new JV company which became	The evolution of the tariffs is under the responsibility of	Bucharest is receiving reliable financing, and it

<sup>34</sup> Dr Jarmo J. Hukka, Dr Osmo T. Seppälä: WaterTime case study - Hämeenlinna, Finland, 2005

<sup>35</sup> Tapio S. Katko, Marko Stenroos: WaterTime case study - Stockholm, Sweden 2005

<sup>36</sup> Resource Book on PPP Case Studies: Case 1 Apa Nova in Romania, 2004

		<p>the water operator. The municipality remains the owner of the public goods. New JV received goods administration right and exploitation right.</p> <p><i>The contract is a "results contract". JV is responsible to ensure the necessary investments. The control of the Services Levels is ensured by The Regulatory Agency for the Water and Sewerage Services in Bucharest.</i></p>	<p>different factors from national and local level but are under an Int. Experts Commission. New JV is paid under a price cap mechanism. <i>The water tariff was fixed at the moment of contract signature, with the agreement that it would be regularly adjusted. The decision to change the tariff will be made by the City Council on the basis of an application presented by the private operator.</i></p>	<p>is able to access the required expertise, and looks forward to dividend. The private operator expects profit, which they try to obtain by improving operational efficiency and by ensuring that revenues from the water tariff are effectively collected.</p>
Scottish Water Solutions, UK <sup>37</sup>	New expertise was brought in to join experienced industry personnel in leading the reform of the water industry in Scotland.	SWS was formed by SWA and two consortia in one of the largest partnering agreements of its kind. SWA owns 51% of SWS with the rest split equally between the two consortia: Stirling Water and UUGM.	n/a	<i>Separate intrnl. specialist service providers can be brought together to deliver added value. Robust sector regulation aids contractual negotiation and application.</i>
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
BerlinWasser, GERMANY <sup>38</sup> <u>The model proven by experience in other sectors, in transition economies.</u>	The company is serving over three million water and wastewater customers in Berlin and its surrounding areas.	<p>The contract consisted of two parts: a JV agreement between an international consortium and the public body as far as the asset ownership is concerned; and a concession agreement to operate the WS, under a €68 million fee. The latter was:</p> <ul style="list-style-type: none"> <li>- A E 250 million investment, until 2009</li> <li>- Improvement of the economic, environmental and technical standards of the system.</li> </ul>	<i>A fixed tariff up to the end of 2003, tending to its reduction in the long term.</i>	JVs facilitate the transformation of state owned companies as both parties have a direct interest to succeed. <i>Mutual understanding in running a business is of a crucial importance for a JV success.</i>

<sup>37</sup> Resource Book on PPP Case Studies: Case 2. Scottish Water Solutions, UK, 2004

		- No staff redundancies until 2014.		
Dublin Region Waste Water Scheme, IRELAND <sup>39</sup>	The treatment plant is responsible for treating wastewater arising from consumers, both domestic and commercial, in the Greater Dublin Area.	DBO contract has been awarded for 20 years operation. It requires the operators to manage the performance of the treatment works. <i>The contractor is paid for the operation of the plant. The Municipality sets the tariffs and collects the revenues.</i> The assets remain publicly owned. The private operators have legal obligation to maintain the plant and to cover operating costs.	<i>The tariff is set at a level sufficient to cover both capital and operating costs. No profit sharing is envisaged.</i>	<i>The consortium holding the DBO agreement receives a rent to cover maintenance and operating costs. The operator has a direct incentive to maintain the assets and enhance operational efficiency.</i>
Karvina Sewerage, CZECH REPUBLIC <sup>40</sup>	Unclear contract – unfavorable position for the municipality.	Shares were distributed free of charge among the municipalities of the region acc. to number of inhabitants. In 1999 shares were sold to private investors through SE. New owners signed a PPP leasing contract with the municipality.	Increases in charges are discussed and mutually agreed after the Municipality propose calculations. A forum was established to discuss investments and prices.	As many details as possible should be arranged by contracts. Transfer of ownership after divestiture should be controlled.
Trencin Water System, SLOVAK REPUBLIC <sup>41</sup>	Contract was very unfavorable for the municipal side – it was changed and renewed later in order to receive ISPA grant.	Operating assets were sold in 1998 to TVS, a private company. Infrastructural assets were still owned by the municipal company TVK. TVK and TVS signed a 20 year PPP contract whereby TVK leased the infrastructural assets to TVS to operate them. The contract also fixed a profit margin of 15% based on operational costs for TVS; that the rent and the operational costs are to be covered by the tariff; TVS	The rent and tariffs are decided by TVK after consultation with TVS.	Risk sharing must be well balanced between two sides. If not done properly, contracts can be re-negotiated willingly or by instruction from a source of funding such as EU institutions.

<sup>38</sup> Resource Book on PPP Case Studies: Case 4. BerlinWasser, Germany, 2004

<sup>39</sup> Resource Book on PPP Case Studies: Case 6. Dublin Region Waste Water Scheme, Ireland, 2004

<sup>40</sup> Resource Book on PPP Case Studies: Case 7. Karvina Sewerage, Czech Republic, 2004

<sup>41</sup> Resource Book on PPP Case Studies: Case 8. Trencin Water System, Slovak Republic, 2004

		<p>bills and collects the revenues; and TVS is responsible for routine maintenance.</p>		
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Budapest, HUNGARY <sup>42</sup>	Concerning Water service company five surrounding municipalities obtained a limited amount (2% all together) of the shares.	In 1992/1993 the state ownership of the W & S network was transferred to the municipality. Two JSCs were formed and given the ownership of the network of water and sewage separately. In 1997 the bid by Lyonnaise des Eaux and RWE for 25% of Budapest Water Works was successful. <u>Prices proposed were higher than rival bids but Lyonnaise offered to pay an extra Forint 3 billion to the city council.</u> <sup>43</sup> PPP contract states that PSP is responsible for the operations, and it has a permanent majority - 4 out of 7 seats - on the board of management. In July 1999, Budapest Municipal Council rejected a business plan which projected HUF 2.7bn in net losses, a 5% decrease in sales income for 1999, but premiums paid to the managers of almost HUF 250m. <sup>44</sup>	Water prices in Budapest in 1998 were 175% above the level of 1994. A Fund was established for those households who could not pay for the increased price of the public utility services. The prices started to reflect real operational costs and also development costs.	An example of W & S activities separation. <u>Crises can be caused if water demand decreases</u> (for whichever reason) because operation costs will rise. Costs will also rise if WW treatment plants are built. Price formula must be precisely agreed and sustainable because water is a human right. <u>Mistakes have been made in filling the treasury from accepting higher water prices, fixing a large sum as a fixed water fee, and fixing premiums regardless of the result.</u>
Dwr Cymru, UK <sup>45</sup>	<i>Members of DCWW are to be recruited in Wales on the strength of their knowledge and expertise, not as</i>	Glas Cymru is a Company Limited by Guarantee without share capital. It purchased a water operator Welsh Water and its assets in 2001.	Ofwat set price limits for DCWW such that bills can rise in real terms by on average <u>1% only in each of the next</u>	High level expertise can be obtained even with a short-term contract. Contract incentives are

<sup>42</sup> Judit Péter: WaterTime case study - Budapest, Hungary, 2004

<sup>43</sup> World Water Forum: Financing water – distortions and prejudice; March 2000

<sup>44</sup> <http://www.france.attaq.org/spip.php?article2952>

<sup>45</sup> Resource Book on PPP Case Studies: Case 9. Dwr Cymru, Welsh Water Not for Profit Model, UK, 2004

	<p><i>representatives of any particular stakeholder group.</i> They are to elect a Board that consists of highly qualified and credit worthy individuals. Glas, via DCWW, has outsourced all operating and customer contact responsibilities to United Utilities and Thames Water respectively.</p>	<p>Glas Cymru agreed to limit itself to:</p> <ul style="list-style-type: none"> <li>• <i>Quantifying potential rebates to customers and setting a time-scale for their payment;</i></li> <li>• <i>Publishing the remuneration scheme for directors, focused on performance;</i></li> <li>• <i>Limiting Glas Cymru to the single purpose of providing water and sewerage services;</i></li> <li>• <i>Publishing and using best practice criteria for the appointment of members of Glas Cymru;</i></li> <li>• <i>Ensuring that the rights proposed for bondholders do not impede the Director's duties under the Water Industry Act 1991;</i></li> <li>• <i>Consent to Ofwat's licence modifications.</i></li> </ul>	<p><u>four years.</u></p>	<p>effective if there is real potential for the contractor to achieve key performance indicators and remain incentivised.</p>
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Stadtentwässerung Schwerte GmbH, GERMANY <sup>46</sup>	n/a	3 private companies signed a "memorandum of understanding" with the municipal WW managers and the city treasury. 52% of the shares of the new JV belongs to the city. A LC between the company and the City and a framework contract with a detailed task specification to transfer all municipal waste water duties to SEG exists. All infrastructure remained in municipal ownership as special budget item. The company is responsible for economic and environmental risks. SLAs or duties of investment were not signed.	Tariffs should not rise more than on an average of NRW cities.	Existing structures can be used to integrate public and private parties if there is enough flexibility to allow each to operate effectively. Future intentions of the parties should be clearly elaborated in order to avoid misunderstandings. Political statements are not enough to provide sufficient confidence.
Gdansk, POLAND <sup>47</sup>	The SNG concession also	A JV company (51% SAUR, 49% City),	<i>The city sets prices annually,</i>	Good example of

<sup>46</sup> Resource Book on PPP Case Studies: Case 10. Stadtentwässerung Schwerte GmbH, Germany, 2004

<sup>47</sup> Robin de la Motte: WaterTime case study - Gdańsk, Poland, 2005



	covers Sopot (for both water and sewerage)	called Saur Neptun Gdańsk (SNG) was set up in 1992. <i>Infrastructure was owned directly by the City and leased to SNG. From 2005, the infrastructure will be owned by the city via an Asset Holding Company, which will lease the it to SNG.</i>	<i>on the advice of SNG.</i> From 1992 to 2003 the average monthly bill decreased 3% in real terms, whilst water consumption fell on average of 52%.	cooperation and openness to public, but not enough political will to be implemented in more cities.
Lodz, POLAND <sup>48</sup>	Current situation came as a result of unsuccessful PPP with French private contractors which occurred during the 1990s.	As of 2004, the operator of the water and sewerage system in Łódź is Zakład Wodociągów i Kanalizacji Sp zoo (ZWIK). The operator of the WWTP is a separate company, Grupowej Oczyszczalni Ścieków Łódź Sp zoo (GOŚ). Both are JSCs, and their shares are respectively 100% and 99.99% owned by the city. W & S infrastructure and WWTP are owned by the city, and leased to the respective operators.	<i>There are different rates and prices for different group of water recipients. Generally the price is made up of:</i> <ul style="list-style-type: none"> <li><i>price per m<sup>3</sup> of water, based on indications of water meter or lump sum of average usage</i></li> <li><i>subscription price + VAT</i></li> </ul>	Political will not to give water operations to private companies resulted in this <i>model of public JSCs that work under commercial law.</i>
Milan, ITALY <sup>49</sup>	n/a	Since June 2003, water supply and sewerage in the municipality of Milan is provided by the wholly municipally-owned PLC Metropolitana Milanese (MM) under a two to five year concession. As of February 2005, wastewater treatment services were being provided by two private consortia that had built two major treatment plants, respectively operating under a 12 and half years contracts.	n/a	Transparency is of particular concern when BOT contract represent an opportunity for rent-seeking actor. Fiscal considerations are persistent factor in decision making. <u>Generally, too many issues depend on politics.</u>
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Stockholm, SWEDEN <sup>50</sup>	Drinking water is supplied also to nine other neighboring local authority areas, and wastewater	SWC operates under the parent company, Stockholms Stadhus AB. <i>Since 1991, almost all the City's fully-owned incorporated companies have been merged with the</i>	<i>The SWC has three different categories of connection and consumption fees for consumers:</i>	The main reason for establishing the SWC was to avoid a conflict between consumers and

<sup>48</sup> Robin de la Motte: WaterTime case study - Łódź, Poland, 2005

<sup>49</sup> Emanuele Lobina: WaterTime case study - Milan, Italy, 2005

<sup>50</sup> Tapio S. Katko, Marko Stenroos: WaterTime case study - Stockholm, Sweden, 2005

	received for treatment from six local authority areas.	<i>parent company, Stockholms Stadshus AB. Stockholm Vatten AB is owned directly by the City of Stockholm 7%, through Stockholm's Stadshus AB 91%, and by the municipality of Huddinge 2%. The city council sets requirements WW services. SWC owns and maintains the WW pipeline systems in Stockholm and Huddinge.</i>	<ul style="list-style-type: none"> <li>• <i>single-family houses,</i></li> <li>• <i>multi-dwelling buildings and office buildings,</i></li> <li>• <i>industries and others.</i></li> </ul> <p><i>There are fixed fees related to the property and variable fees related to water consumption and wastewater treatment.</i></p>	the utility. The company form gave increased autonomy to the management and made it possible to react quickly to external changes.
Szeged, HUNGARY <sup>51</sup>	<u>The case study is not a good example of upscaling because PPP model changed its shape and content a few times but some issues still remain unsolved. This reorganization process was subject to court case due to not conducting the evaluation of assets from the former municipal company.</u>	Three main functions of a municipal water operator - operation, investment, and maintenance/reconstruction/construction - were separated and three new companies were founded. Générale des Eaux CGE/Vivendi/Veolia then formed a local company Servitec Ltd in order to have a local co-founder of those three new companies. Operating company and investment company had the ownership structure with the municipal majority, whilst maintenance and reconstruction company had majority of private ownership.	Since 1993 municipality is the price regulator. Each year it reviews the price, although there is no concrete legislation on how municipalities should calculate the prices. In the agreement, the formula to set the price was clearly stated and detailed with its two main parts: <ul style="list-style-type: none"> <li>• operational costs</li> <li>• development costs.</li> </ul>	The price increase can be the result of several factors some of which had nothing to do with PPP. The final transformation solution seems sustainable.
Tallinn, ESTONIA <sup>52</sup>	Tallinna Vesi also has a services contract with Viimsi District.	The City of Tallinn incorporated its water and sewerage undertaking "Tallinn Waterworks and Sewerage Municipal Enterprise" in May 1997. <u>The majority (50.4 %) of the shares of AS Tallinna Vesi were acquired by International Water UU in 2001. IWUU's offer consisted of:</u> - an increase of the share capital and	n/a	<u>The case study does not show a good example of upscaling because the manouevres of the shareholders caused a decrease in share capital.</u>

<sup>51</sup> Judit Péter: WaterTime case study - Szeged, Hungary, 2005

<sup>52</sup> Dr Jarmo J. Hukka, Dr Osmo T. Seppälä and Mr Risto Teinonen: WaterTime case study - Tallinn, Estonia, 2005

		- a payment to the City for 50.4 % of the capital. The City and the company signed the SLA, Shareholder's Agreement and Business Plan.		
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Tampere, FINLAND <sup>53</sup>	The supramunicipal cooperation has been developed since 1970s. Water is sold and wastewater treated based on contracts between Tampere and Pirkkala, Nokia, Lempäälä, Kangasala, Ylöjärvi and Valkeakoski.	<i>A JSC, Tavase Oy, was established by 9 municipalities as a non-profit company. In accordance with the Water Services Act, every municipality has to make the development plans in cooperation with the water and sewerage undertakings within its territory, and with the neighbouring municipalities. The municipality also has to participate in regional water services planning.</i>	The water tariff was 0.78 EUR/m <sup>3</sup> incl. VAT until 30 June 2002, and thereafter 0.83 EUR/m <sup>3</sup> incl. VAT. The tariff also included the basic charge and the meter rent. The wastewater tariff was 1.19 EUR/m <sup>3</sup> incl. VAT until 30 June, and thereafter 1.24 EUR/m <sup>3</sup> incl. VAT.	A JSC for artificial recharge of groundwater, acquisition and bulk supply is the most common option in the regional cooperation. Based on experiences elsewhere, it can be stated that it will fulfil the present and future requirements.
Timisoara, ROMANIA <sup>54</sup>	Starting with this point, several projects with international finance were initiated. The most important financial institution is the EU (ISPA) with the purpose to rehabilitate and to upgrade the local WWTP and sewage network and, from the other hand, to ensure the technical assistance.	The water management in Timisoara is provided by the public Autonomous Water and Sewerage Company "Aquatim", the administrator of an important segment of the public infrastructure. Aquatim is subordinated to the Local Council of the city of Timisoara which is a representative Council resulted from the local election of the people.	n/a	<i>It is possible to obtain funding from EU sources without involvement of private sector.</i>
Vilnius, LITHUANIA <sup>55</sup>	<i>Vilnius Water Company takes care of water and</i>	Vilnius state water company was transformed into a municipal special purpose	The residential water tariff has been 4.12 LTL/m <sup>3</sup> since 2001,	<i>The decision to keep Water Company under</i>

<sup>53</sup> Dr Jarmo J. Hukka, Dr Osmo T. Seppälä: WaterTime case study - Tampere, Finland, 2005

<sup>54</sup> Observatorio de los Servicios Públicos ERL-Universidad Complutense de Madrid: Timisoara, 2005

<sup>55</sup> Pekka Pietilä: WaterTime case study - Vilnius, Lithuania, 2005

	<p><i>wastewater services not only in the City of Vilnius but also in three neighbouring municipalities, namely Vilnius District, Svencionys and Salcininkai. These three municipalities are also shareholders of Vilnius Water Company.</i></p>	<p>joint-stock company in 1991. In 2003 Vilnius Water Company was transformed from a special joint-stock company to a joint-stock company. This change in organisational form was based on a legislative change which abolished special joint-stock companies. Vilnius Water Company is 100% owned by the four municipalities as follows: Vilnius City 94.02%, Vilnius District 1.33%, Svencionys 2.58%, and Salcininkai 2.07%. <i>According to Lithuanian law, water resources have to remain in public ownership.</i></p>	<p>and remained the same until the end of 2004. This tariff includes both potable water and wastewater services. The industrial tariff is 4.07 LTL/m<sup>3</sup>, and for other consumers (schools, hospitals, etc.) 4.01 LTL/m<sup>3</sup>. These charges include VAT of 18%. The water tariffs set by the company have to be approved by the municipal council.</p>	<p><i>municipal ownership is certainly in line with the EU's subsidiarity principle: decision making at the lowest appropriate level.</i></p>
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## 2.2 Municipal Solid Waste Management Sector (*italic-positive example, underlined-negative*)

	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
<p>ASA, Debrecen, HUNGARY<sup>56</sup></p>	<p>n/a</p>	<p>In 1991, ASA and the city of Debrecen formed a joint venture (AKSD) for waste management through direct negotiation. ASA had 51% controlling share, and the Municipality held a 49% share. <i>The foreign partner committed itself to the replacement of the vehicle fleet and to the construction of a landfill compliant to E.U. standards.</i> The municipality contributed facilities in kind. The contract was based on the principle of guaranteeing that yearly annual revenues, fixed in advance, would cover investment and a return on capital over the five-year period (1991-1996). The parties agreed to adjust the lump-sum fee annually, for inflation and other factors, according</p>	<p>Municipality pays to the company a lump sum based on predetermined formula. Tariff is being set by the Municipality, independently of the JV. <u>According to the agreed formula, the lump-sum fee in the last year was to be five-fold the fee in the first year.</u></p>	<p>Joint venture deals in MSWM can be financially viable and sustainable, without central government support, and can effectively contribute in MSWM regionalization.</p>

<sup>56</sup> Resource Book on PPP Case Studies: Case 11. ASA and Rethmann, Hungary, 2004



		to a complex formula. <i>Finance Director of the company, according to the original contract, was a nominee of the Municipality.</i>		
Rethmann, Szolnok, HUNGARY <sup>57</sup>	Rethman's case demonstrates that it is possible to operate MSWM in a financially viable and self-financing manner based on direct client relationship with the customers.	The Municipal Council reached the decision to establish a separate municipal corporation for MSWM, and to subsequently offer shares in the corporation to an investor who would undertake the required investments. The Council had the exclusive right for the final decision on the tenders, including the right to reject all the tenders. The tender was awarded to Rethmann. The joint venture contract explicitly mandated the company to collect the fees from households. Among other contractual obligations, Rethmann committed itself to the replacement of the vehicle fleet and containers, and to the construction of the landfill.	<i>Tariff is being set jointly by the Municipality and the JV company.</i> The company earns its entire revenues from tariffs and fees, which are directly collected.	<i>Professionally conducted competitive tendering process has major advantages, including possible long term cost savings.</i>
Vienna, AUSTRIA <sup>58</sup>	SWM focuses on the best eco-standards. Rapid progress has been made with organic waste and waste-to-energy systems.	In 1995 the City launched the Viennese Climate Protection Program (KLIP) to develop guidelines for a climate protection action plan.	n/a	<i>Special attention is given to the limitation of waste. Three plants in Austria licensed to burn household wastes produce 21.9% of Vienna's district heating</i>
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Nessebar "Golden Bug" Landfill, BULGARIA <sup>59</sup>	n/a	Municipal company operates the transport and collection service, Nessebar's landfill is operated through a concession. In the beginning Golden Bug operated under a service contract, which was later converted into a 15-year concession from	<i>Company makes profits from sale of recycled materials, mainly PET bottles, other plastic material, metal cans and paper, whereas glass is at present not</i>	<i>Selective treatment of waste materials on landfills can be commercially viable with low tech methods.</i>

<sup>57</sup> Resource Book on PPP Case Studies: Case 11. ASA and Rethmann, Hungary, 2004

<sup>58</sup> <http://www.eaue.de/winuwd/47.htm>

<sup>59</sup> Resource Book on PPP Case Studies: Case 13. Nessebar "Golden Bug" Landfill, Bulgaria, 2004



		the Municipality. The contract is vague in its provisions and enforceability on either side. <u>Golden Bug appears to share all of the risks of the operation, without any counterpart assurances or support arrangements from the Municipality.</u>	<i>saleable</i> . Golden Bug invoices the Municipality for land filling based on its actual costs, supported by its own documentation of bills.	Poor legal environment is a constraint to market entry.
Kirklees Metropolitan Solid Waste Project, UK <sup>60</sup>	n/a	A special purpose vehicle called Kirklees Waste Service Ltd was created. Kirklees transferred assets into the company in return for voting rights and equity shares which were in turn transferred to the service provider in return for reduced gate fees. The JV provides Kirklees with a 19% voting only shareholding and a representation on the board. From 2002 there is a guaranteed minimum tonnage, a fixed gate fee per ton, a guaranteed diversion (60%) and a deduction in fees based on the percent of recycling not met.	A unitary fee is charged over the contract life which is adjusted based on volumes received and achievement of landfill diversion targets. The payment mechanism has been designed to provide incentives for increased waste diversion.	<i>Public party benefits from having a small and consistent team with the necessary skills, budget and ability to take decisions.</i> Given the complicated nature of PPPs, they should be implemented on a stand alone basis in a determined supporting framework.
Mülheimer Entsorgungsgesellschaft mbH, GERMANY <sup>61</sup>	MEG was to concentrate on hazardous waste incineration and develop this business as a regional service for the Ruhr area as a whole.	City of Mülheim in 1994 invited two private partners to found the public-private MSWM enterprise "Mülheimer Entsorgungsgesellschaft mbH" (MEG limited). 25.1% of the shares belonged to the city. The 74.9% of private shares were divided equally between one international (Trienekens AG) and one domestic waste enterprise. In 1998 the city council asked the city management, the management of MEG and Trienekens AG to develop a PPP concept for all municipal solid waste services. <i>The majority of the shares – 51% – of the new PPP should be held by the city to keep political control in a sector</i>	The tariff level for the period 2000/2005 and certain annual contract payments for the Trienekens AG (sales taxes included) were arranged by one of those 8 contracts.	Restricted competition and concentration on one private party in the development phase implies risks in effectively addressing the set of economical, technical, quality and environmental objectives.

<sup>60</sup> Resource Book on PPP Case Studies: Case 14. Kirklees Metropolitan Solid Waste Project, UK, 2004

<sup>61</sup> Resource Book on PPP Case Studies: Case 17. Mülheimer Entsorgungsgesellschaft mbH, Germany, 2004

		<i>with controversial public discussions. Trienekens AG accepted this proposal so 8 contracts were signed.</i>		
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Lansing, MI, USA <sup>62</sup>	City unit for waste collection serves app. 19 000 households. Other households are served by private operators.	<i>From 1975, a household could subscribe to the city's unit pricing program, or subscribe to private service. The city continued this program virtually unchanged until 1991, when it increased the fee-per-bag from \$1 to \$1.50 and implemented city-wide curbside recycling and yard waste collection. Two landfills are engaged in the process, both privately owned.</i>	Households that subscribe to the city service must purchase 30-gallon refuse bags. The bags cost \$7.50 for a package of five, and are available at several supermarket chains, Quality Dairy stores and local convenience stores. For furniture and white goods, the city sells \$20 bulk collection stickers.	<i>Unit pricing program has been implemented for more than 30 years without major changes. This shows that properly designed systems can last for very long time.</i>
Prescom in Targoviste, ROMANIA <sup>63</sup>	Prescom serves about 80% of Targoviste's population and five nearby communes.	Under Romanian Law, Municipalities may directly engage in carrying out waste management services, so there are currently two service providers in Targoviste: a private company "Prescom" and a municipal department "Salubrita". Collections are entirely in the hands of Prescom, without any intervention or support from the Municipality. <u>Prescom neither has a license to operate, nor has there been a tender for service provision.</u> Thus Prescom operates informally, without legal sanction and authority, though it does have some formal contracts with communes it serves outside Targoviste	In Targoviste they charge households on the basis of 14,000 lei (0.45 Euro) per month per person. In the communes the charge is less than 25,000 lei per household. The gross profit margin is about 20%.	Prescom is profitable with an annual revenue of app. 650,000 Euro. However, the need for a coherent legal environment is clear and essential to support the development of effective PPPs. This should also be coordinated with a strategic approach to PPP development and overall financing of infrastructure and service provision.

<sup>62</sup> Marie Lynn Miranda, Joseph E. Aldy : Unit Pricing of Residential Municipal Solid Waste; Duke University, 1996; Appendix 2



Jegunovce Concession, MACED. <sup>64</sup>	n/a	The contract gives to private operator exclusive right to collect household waste in the town and allows it to make contracts with industries and institutions. In return, Delva pays a fee of 8% of its revenues. Delva contracts directly the industries and households. <u>However the service is not compulsory on the population, and the municipality has no support arrangements for Delva in fee collection. Thus Delva operates entirely at its own risk.</u> So far the relations between the Municipality and the Company are cordial and the privatization of the service promises to be a success that could serve as a model to other municipalities.	n/a	<i>It is possible even in an unfavorable legal environment for PPPs, to create and encourage PPP development. A backward-looking legal environment is difficult to change even with the E.U. assistance.</i>
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Downers Grove, IL. USA <sup>65</sup>	The private company serves only the suburb of Downers Grove. Population of the market is around 50 000 inhabitants.	The municipality awards hauler contracts through a bidding process. Downers Grove presently contracts with Browning-Ferris Industries (BFI). BFI collects waste once a week and dumps it into a district owned landfill and pays a fee per ton. Collected waste consists of three types of waste: hh waste, recyclable waste, and yard waste. All three kinds are being treated at the different location in different factory.	The municipality requires HHs to place refuse stickers on bags left out for collection. Stickers cost \$1.50. HHs must attach sticker to each standard, 30-gallon waste bag set out for collection. Only single family dwellings participate in the program. The city formulates prices.	<i>Easy and efficient model of collecting tariffs.</i>
Glendale, CA, USA <sup>66</sup>	The number of inhabitants served by this utility is around 180 000 without going to the neighbouring cities.	The city collects refuse from all single family residences. The activity is conducted by public hauler two times per week and taken to a public recycling facility. The city contracts service for multi-family residential, commercial and industrial	Single family residences may subscribe to either one 65-gallon cart or one 100-gallon cart. Households may request additional carts, but must pay a	<i>Outsourcing is possible according to the criteria of who produces waste also. In this sense, hh are socially more</i>

<sup>63</sup> Resource Book on PPP Case Studies: Case 15. Prescom in Targoviste, Romania, 2004

<sup>64</sup> Resource Book on PPP Case Studies: Case 16. The Jegunovce Concession, Macedonia, 2004

<sup>65</sup> Marie Lynn Miranda, Joseph E. Aldy : Unit Pricing of Residential Municipal Solid Waste; Duke University, 1996; Appendix 2

<sup>66</sup> Marie Lynn Miranda, Joseph E. Aldy : Unit Pricing of Residential Municipal Solid Waste; Duke University, 1996; Appendix 2

		customers to licensed private haulers.	one-time, non-refundable fee of \$66 and applicable monthly collection fees.	<i>protected than businesses that are served by private operators.</i>
Grand Rapids, MI, USA <sup>67</sup>	The number of inhabitants served by this utility is around 180 000 without going to the neighbouring cities.	The Grand Rapids City Manager, who reports to the Mayor and the City Commission, oversees Public Works office. Public Works contains six departments and maintains responsibility for snow removal, city water, street maintenance, sanitation, traffic safety, the city motor pool and refuse collection. <i>Residents may select their collection service from among the city government and 23 licensed private hauling firms.</i> The dumping spots are private processing facilities both for hh waste and for yard waste.	The city offers three options to its residential waste customers: - 30-gallon city bags (10 bags-\$8.5) - \$0.85 city refuse tags to attach these tags to regular 30-gallon garbage bags, a 30-gallon cardboard box or bundled waste not exceeding 30 pounds - 30-gallon refuse containers from the city for \$10 and \$44.20 annual refuse license sticker for it.	<i>More than one way to bill the service can be considered as user friendly strategy. Competition seems to result in a sustainable SWM system.</i>
Hoffman Estates, IL, USA <sup>68</sup>	The number of inhabitants served by this utility is around 47 000 without going to the neighbouring cities.	The municipal government contracts with a hauler through a bidding process. The municipality is serviced by Laidlaw Waste Systems. The hauler accounts for fluctuations in sticker sales when formulating its unit price. Hoffman Estates residents receive curbside recycling free of charge. The private hauler collects recyclables once a week on the same day as refuse collection. The city requests residents place clean and dry recyclables in a city-provided recycling bin.	Residents pay only for the amount of waste they set out: there is no fixed fee. Only single-family dwellings participate in the program. White goods may be collected and disposed for a charge of \$25/item.	<i>Example shows that it is possible to operate a waste collection service without a fixed charged – only volumetric is being paid.</i>

<sup>67</sup> Marie Lynn Miranda, Joseph E. Aldy : Unit Pricing of Residential Municipal Solid Waste; Duke University, 1996; Appendix 2

<sup>68</sup> Marie Lynn Miranda, Joseph E. Aldy : Unit Pricing of Residential Municipal Solid Waste; Duke University, 1996; Appendix 2

### 2.3 District Heating Sector (*italic-positive example, underlined-negative*)

	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
CTR, DENMARK <sup>69</sup>	CTR, the Metropolitan Copenhagen Heating Transmission Company – is a partnership of the municipalities of Frederiksberg, Gentofte, Gladsaxe, Copenhagen and Taarnby. The network is considered as communal district heating network since five municipalities have planned it and financed it.	<i>CTR's board of directors represents the five municipalities involved in the partnership. The Municipality of Copenhagen appoints four of the eight members of the board and the other municipalities each appoints one member. Two advisory committees are attached to the board to deal with all economic and technical matters arising during the running of the project. These committees are called the Contact Committee and the Technical Committee, respectively, and are made up of leading local government officials from the municipalities involved in the partnership.</i>	CTR's pool price comprises a fixed effect charge and a variable energy charge. The effect charge covers fixed costs such as the producers' fixed charges, wages, administration costs and loan repayments. The energy charge covers the actual cost of fuel, the cost of running pumps and other variable operational costs. The size of the fixed charge has been set in advance – based on the estimated heat demand in the individual municipalities on completion of the system. It is paid regardless of the actual level of heat consumption.	A solution found in water supply case studies is presented in DH case studies as well. Good example of regionalization.
POLAND <sup>70</sup>	n/a	<i>DH sector differs much:</i> 1. <i>communal budgetary unit and enterprises not transformed into a Commercial Code company,</i> 2. <i>LLC owned by municipality, jointly with private entity,</i> 3. <i>JSC owned by municipalities, together with</i>	<u>Based on Polish experience, it can be stated, that the problem of energy pricing, especially in the DH sector, is probably the most sensitive element in the process of transition. According to the last amendments of the Energy</u>	Sector is quite liberalized concerning organizational issues, but prices are still under control of the law.

<sup>69</sup> [http://www.ctr.dk/ctr/e\\_ctr\\_inshort.htm](http://www.ctr.dk/ctr/e_ctr_inshort.htm)

<sup>70</sup> Witold Cherubin: Present Situation And Current Trends In Restructuring The District Heating Sector In Poland And Other CEE Countries; World Energy Council; 2003

		<p><i>private entities (some of them privatized by the issuing of bonds or sale of shares on the SE),</i></p> <p>4. <i>private company (some lease DH plants and networks, but few private firms own DH assets)</i></p>	<p><u>Law, fixed charges for heat and transmission services may constitute only 30% of total services charges.</u></p>	
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
MACEDONIA <sup>71</sup>	The share-holding company will now be able to carry out the development and expansion of its system with a part of the realized profit.	<p>Toplifikacija AD is the largest heat producer in the country. It was transformed into a mixed ownership company. The subject of privatization was the heat sources (heat plants). The distribution network remained state-owned. Toplifikacija AD leases the distribution network according to an agreement. <i>According to this agreement, Toplifikacija AD is to secure the maintenance of the distribution network and to expand it each year at an expense equal to the yearly depreciation of the distribution network. In addition, Toplifikacija pays rent to the State per year.</i></p>	<p><i>The consumers of heat from the district heating system pay up to two times less for their heating than the consumers with any other heating systems. Now, the price takes into account a planned profit of up to 8% of the value of the fixed assets and the working capital invested in the energy enterprise. With pricing of heat in accordance with the Meth. of Prices, there is no more a necessity for a connection charge.</i></p>	<p>Good example of re-arranging the DH public company which already exists into a commercial company without introducing private sector partner other than its own workers.</p>
LATVIA <sup>72</sup>	n/a	<p>There are many heat suppliers in Latvia, mostly municipal with few exceptions. DH assets are owned by communes and sometimes private investors. Energy Regulation Board – set up to perform among others the following main functions:</p> <p>1. Regulating: energy; telecomm., post;</p>	<p><u>District heating tariffs vary widely – from 18 ECU/MWh at the low end to 47 ECU/MWh at the high end.</u> At present, energy prices in most cases correspond to the actual costs of energy.</p>	<p><u>One body administers very different sectors. Efficiency of the body is disputable.</u></p>

<sup>71</sup> Dimitar Hadži-Mišev: Privatization Of District Heating In Macedonia: Process And Experience; World Energy Council; 2003

<sup>72</sup> A. Akermanis, U. Sarma, E. Zeberga, N. Zeltins: Present Situation And Trends In Restructuring The Heat Supply Systems In Latvia; World Energy Council; 2003

		<p>railway tariffs;</p> <ol style="list-style-type: none"> <li>2. Licensing of energy supply enterprises;</li> <li>3. Approving tariffs calculated by energy supply enterprises;</li> <li>4. Developing a methodology for tariff calculation;</li> <li>5. Defining the procedure for approval of tariffs;</li> <li>6. Protecting energy consumers,</li> <li>7. Reviewing disputes between energy consumers and suppliers and taking decisions that are binding for both parties and that can be appealed against before the Court;</li> <li>8. Developing regulations on energy production and supply;</li> <li>9. Promoting competition in energy supply.</li> </ol>		
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Kaunas Energy, LITHUANIA <sup>73</sup>	n/a	<p>DH sector is decentralized. There are six regional and 13 municipal DHC. Kaunas Energy was established comprising the former branches of JSC Lithuania Energy, i. e. Kaunas Power Plant and Kaunas District Heating Network. A shareholders meeting, a supervisory board, a management board and the management direct the company. The Municipality is the main shareholder (85,21% shares). Attempt to attract private investors to take part in the company under a leasing contract failed in two instances, and because of that, "Kaunas Energy" adopted a new management structure and developed a new strategy after which a tender will be repeated.</p>	n/a	<p><u>The reason for pulling in a private sector partner through tender is not clear, especially after decent transformation that was done by the company itself.</u></p>

<sup>73</sup> Rimantas Bakas: Lithuania: Reorganization Of "Kaunas Energy" And Preparation Of The Privatization Of Kaunas CHP; World Energy Council; 2003



BULGARIA <sup>74</sup>	n/a	<p>DH sector is centralized and there are two large heat suppliers: Sofia Municipality and the State Agency for Energy and Energy Resources.</p> <p>The Strategy and the Action Plan are prepared on the basis of three main issues:</p> <ul style="list-style-type: none"> <li>• Investigation of the potential viability of the commercial companies on the basis of reported and forecasted technical-economical data</li> <li>• Development possibilities for district heating on the basis of restrictive and positive approach</li> <li>• Key elements of the restructuring, being: <ul style="list-style-type: none"> <li>- a problem of disconnection rate,</li> <li>- dual tariff introduction,</li> <li>- and transfer of financial burden to municipalities</li> </ul> </li> </ul>	<p><u>The DH/CHPs are selling heat to the population at prices below cost, fixed by the government uniformly for the country as a whole. All other economic entities pay marginal prices formed on the basis of full operating cost and some profit margin.</u> The difference between the production cost and the fixed prices to the population is covered by a central subsidy. The dual tariff with capacity and energy charge will apply for all consumers and will cover the costs from the heat source to the substations (including the cost of the substation). The tariff components should reflect the actual allocation of costs between the variable and fixed costs. The price has to rise according to the income.</p>	n/a
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
BELARUS*	n/a	<p>DH sector is centralized and there are two large heat suppliers: Concern "BELENERGO" and the Ministry of Housing and Communal Services. These two are also the owners of DH infrastructural assets.</p>	<p>Heat tariff for residents, fuel and energy prices are regulated by the Government, companies calculate heat prices for industry. Subsidies exist in housing sector - heat tariff for residents covers 10 % of production costs, heat prices for industry are cost-</p>	<p><u>If full cost accounting is implemented only in industry sector, while households are subsidized, it can cause high disconnection rate.</u></p>

<sup>74</sup> Lubka Georgieva: Strategy For The Development Of District Heating In Bulgaria For 2000-2005; World Energy Council; 2003

			reflective (include some profit).	
ESTONIA*	n/a	DH sector is decentralized. There are many heat suppliers, both municipal and industrial companies. <i>However, DH assets are owned by communes</i> while heat sources are owned by industrial companies. Ownership over the assets is differentiated – Eesti Energia owns 3 biggest heat sources, owners of other DH assets are communal and industrial companies	Heat tariffs are fixed by municipalities, while jurisdiction of Energy Market Inspectorate includes tariffs evaluation. No subsidies for DH sector, fast elimination of cross-subsidies between consumer groups, but support for poor families exist.	n/a
HUNGARY*	n/a	DH sector is decentralized. Heat suppliers are municipal, industrial and private companies. Assets are owned by communes or industrial companies.	State supports gas sector and different heat prices for households and industry. The exact formula s not available.	n/a
SLOVAKIA* <sup>75</sup>	n/a	DH sector is decentralized. There are about 1200 heat suppliers. They are municipal, industrial and private companies. DH assets are owned by municipalities, Ltd. and joint stock companies, private firms, industrial companies.	Maximum heat price limit fixed for households by the Ministry of Finance and cost-reflective heat prices for other consumers. There are subsidies for final consumers.	n/a
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Cuellar (Segovia),	This project	<i>Cuellar Town Council is in charge of the</i>	n/a	<i>A project as innovative as</i>

<sup>75</sup> \* All cases on this page are made from existing comparative study by Witold Cherubin entitled Present Situation And Current Trends In Restructuring The District Heating Sector In Poland And Other CEE Countries; World Energy Council; 2003

SPAIN <sup>76</sup>	consisted in the installation of a biomass central heating plant with capacity to supply heat and domestic hot water (DHW) to a neighbourhood composed by app. 1,000 inhabitants including a school, a cultural centre and a municipal sports centre.	<i>management and maintenance of the biomass central heating plant and will be the owner of the installation for twenty years. IDAE (National energy agency) and EREN (Energy Regional Entity of Castilla y Leon) have financed the project through a third party financing mechanism. The University of Valladolid has also provided technical support and it was in charge of the start-up phase and optimisation of the plant performance.</i>		<i>this one would hardly be able to implement without introducing PPP model (at least for financing) because it is hard to attract private capital without warranties from authorities. This is because completely new technology is not interesting so much at the first sight in a sector where many solutions are present (like DH sector).</i>
Molins de Rei, Catalonia, SPAIN <sup>77</sup>	Heat produced from biomass is distributed via hot water to a residential complex called "La Granja" located in Molins de Rei (Catalonia).	This Plan was conceived and driven in 1997 by the Town Council of Molins de Rei, the EMSHTR (Hydraulic Services and Waste Treatment Municipal Entity), ICAEN (Catalonian Energy Institute) and Efiensa Company. This group set up the specific Company Molins Energia S.L. created to build and maintain heat generation from biomass system, and to distribute hot water to 695 new houses included in a residential complex through a district heating network. In 1999, the three public organisms of the group launched a Call for Tenders to select a private enterprise to be included in Molins Energia S.L. Company and assume the construction and the	n/a	<i>Collective installation with individualised services is the key element for success. The collaboration and commitment of public institution and private initiatives are key factors for the success of a similar initiative.</i>

<sup>76</sup> Penelope Project Good Practice Database: Biomass central heating in Cuéllar (Segovia); Energie-Cités 2001 - 2002

<sup>77</sup> Penelope Project Good Practice Database: A biomass district heating in Molins de Rei; Energie-Cités 2001 - 2002

		management of the power plant. The contract was awarded to a joint venture called "Biomassa Aprofitament Energètic, S.L." and formed by Hidrowatt S.A. and d'Algües Sabadell S.A. Molins Energia S.L. is the owner of the power plant, and therefore it is in charge of its management.		
	<b>Up scaling and IMC</b>	<b>Legal acts and forms of organization</b>	<b>Tariff calculation model</b>	<b>Lessons Learned</b>
Southampton, UK <sup>78</sup>	At the time of initial investment the company had only one customer, the City Council, with whom they had signed a contract. The list of city customers is now extensive and varied, includes four hotels, whereby one of them, De Vere Grand Harbour Hotel, takes also chilled water for air conditioning. The BBC's regional radio and TV studios, a food superstore, a large college campus, and office complexes are also on the list.	<i>The Council made available very valuable city centre land for the well, wellhead equipment and sizeable heat station building. It granted licences and wayleaves for laying distribution mains, and assisted with the planning processes.</i> It established a multi-disciplinary project team, with representatives from engineering, planning, legal & finance officers to assist in development, and made bids to the European Union for financial support in developing the scheme. <i>Utilicom's</i> obligation was to finance, construct and operate the scheme's initial development, and it had a reciprocal obligation to co-operate with the Council in later, wider development.	n/a	<i>After ten years of operation the district heating and cooling scheme in Southampton has proved its reliability and economical viability. It is now clearly apparent that co-operation was a main factor which contributed to the success of the Southampton scheme.</i>
Tasca, ROMANIA <sup>79</sup>	App. 50% of the	In 1998 an agreement was signed between	During the heating season	<i>Although not completely</i>

<sup>78</sup> Energie Cities, City of Southampton: Geothermie District Heating Scheme – Southampton, UK

<sup>79</sup> Energie Cities, Grue & Hornstrop Consulting: Biomass Demonstration Project – Tasca, Romania



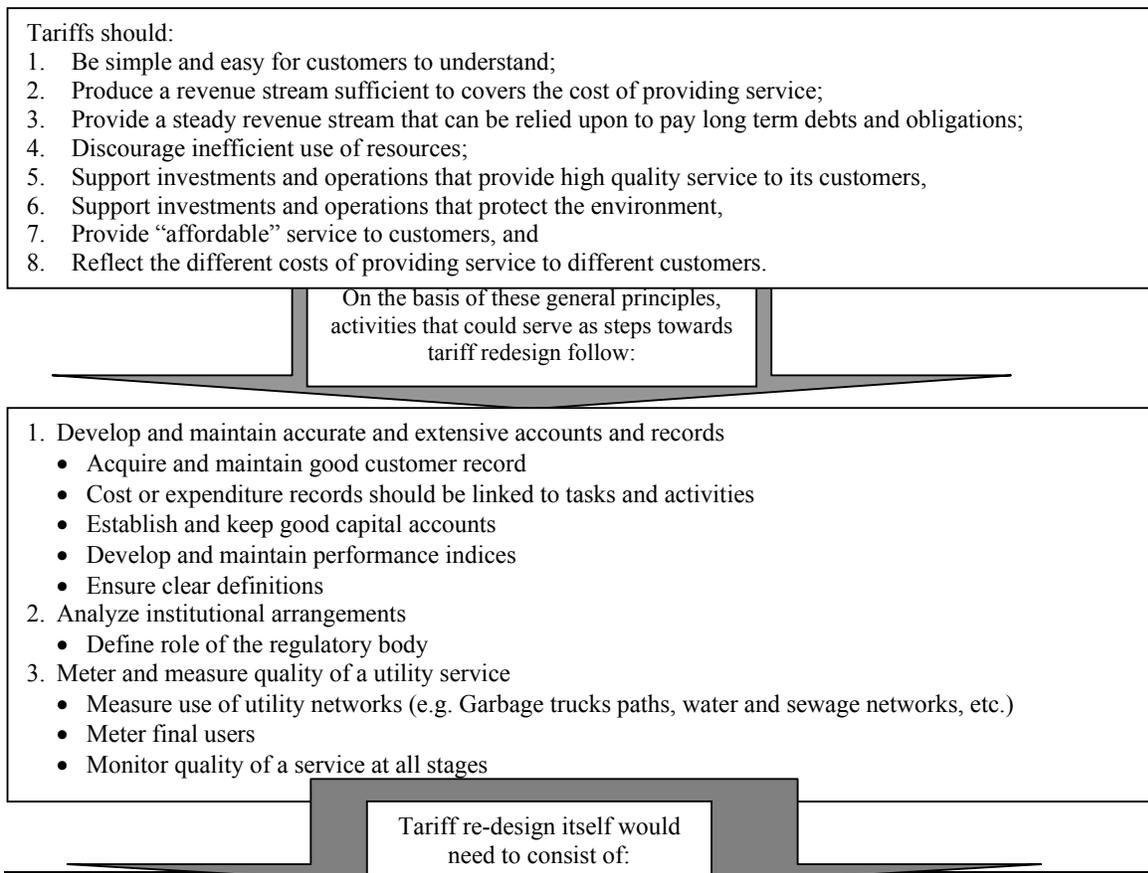
	<p>village uses the heat from this plant (app. 2000 inhabitants).</p>	<p>the municipality of Tasca and the Danish Environmental Protection Agency implementing a demonstration project in the village of Tasca. Project partners were municipality, DEPA, Local Environment Protection Agency, Edil Project Consulting, and Grue &amp; Hornstrup Consulting. The project was 90% financed by DEPA and 10% by the municipality.</p>	<p>2001/02 heat production price reached the level of heat consumer price, so the plant operated without profit. Heat consumer price consists of operation and maintenance costs while depreciation is not included.</p>	<p><i>economically viable, price of this heat is still smaller than from regular DH power plants. Using local feedstock for power plants creates new jobs. Great environmental benefits were identified after implementation.</i></p>
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### Annex No 3: Prices Of Utility Services

#### **Recommendations and Steps in Defining Tariff Setting: Overview of the Experiences of Neighbouring Countries in Setting WW Tariffs**

The graphic shown on the next page is a result of observation and adaptation of guidelines suggested in "Best Practice in Water and Wastewater Tariff Setting - Lessons for Water Systems in Transition Economies, Final Draft; June 2006". This paper provides a summary of tariff practices, and tariff-related policies generally, that appear to strengthen the efficiency, finances, and service levels of municipal water systems. It was prepared for the DABLAS Task Force by contributors to the DABLAS Implementation Working Group. Some attitudes are identical for all utilities, and so the graph is applicable to the process of price formation in all observed utilities, i.e. water supply and sewerage, solid waste management, and district heating.

When a new tariff system starts to be implemented, it will take some time and effort to explain to the general population that changes are necessary, and to the political decision makers that communal services can not be treated as a social category. This might be the most sensitive issue for the public opinion, so it is recommendable for the first step to work on gradual increasing of tariffs, preceded or parallel with the increase of quality of services. Tariffs need to cover all costs (of effective operations) including investments, but also to provide an acceptable profit if national strategy allows profit in utilities. In order to achieve this, government needs to liberalize prices to a certain extent, but also keep firm control through regulatory measures that the situation does not get out of control and backfire on the transformation process.



1. Establishing cost-based tariffs
  - Establish full cost tariffs including proper account of depreciation
2. Setting tariffs with variable and fixed parts (in order to provide the smallest predictable level of revenues)
3. Being aware of, and limiting, tariff burden on customers (in order to gain public acceptance of transformation, and indirectly acceptance by utility companies)
  - There is no “best practice” formula to calculate affordable tariff
  - Develop long term service agreements with key customers
4. Providing incentives for good management
  - Award contracts for system management on a competitive basis
  - Develop performance-based contracts that allow utility operators and staff to benefit financially from cost-savings
  - Encourage system planning and budgeting processes that carefully evaluate the costs and consequences of all alternatives

Also...

... after the process of tariff re-design has been finished, the following should be done:

1. Conduct public information programs
  - Publish and regularly remind customers of the tariff schedule and pricelist
  - Describe to customers policies for calculation of tariffs and role of different costs in calculation
  - Commission an external performance audit
  - Explaining cost recovery
2. Bundle best practices

### **Water and Wastewater Tariffs in the Neighboring Countries**

Presented below are extracts from the project entitled “Assessment and Development of Municipal Water and Wastewater Tariffs and Effluent Charges in the Danube River Basin”. This project has been used together with all other project documents (for specific countries respectively) in order to develop a tariff suggestion. None of the examples shown here can be used as a best practice, but to some extent they all make contribution for development of a rational and feasible best practice. Full sources of information containing these extracts, as well as the case studies, national profiles, and summaries can be found at [www.undp-drp.org](http://www.undp-drp.org).

#### **Hungary**

The function defined as of the MUs are allocated among several actors. There are two MU's that have the responsibility on operation issues. The owners of the infrastructure have municipal unit licenses on tariff issues. In three territorial units the Ministry of EWM has these licenses, while in other areas the municipalities have this right each by each. The municipalities' have concession contracts with the service providers that define the algorithm of price modification. The municipalities and the Ministry of Environment and Water Management have regulation unit licenses over the sewerage networks they own. The identification of cost elements is a technical problem, meanwhile introducing new cost-sharing rules is a political one. The result of stricter allocation of costs borne by consumer groups reflects in tariff differences.

## **Romania**

Prices for raw water are the same throughout Romania but differ in accordance with the source of water (e.g., inner rivers, the Danube, or groundwater) and the category of users (industries, households, power plants, farms, fisheries, etc.).

- Tariffs - are levied on water pollution to reduce suspended and oxygen-depleting substances in river flows using limits set by the law. If the limits are exceeded, fines or penalties are levied;
- Fines are levied for violation of the laws, standards, regulations;
- Penalties are levied for discharging larger amounts of pollutants or abstracting higher amount of water than the quantities established by WMau.
- Bonuses are granted by National Authority Romanian Waters to water users that take measures to protect waters and discharge less pollutants than the level granted by WAau; the bonus could be up to 10% of the raw water bill in one year.

For W&WW services there is neither grant nor subsidy available from central government to cover current costs (the same situation is for waste management). MUs should cover their expenditures only from tariffs and charges. According to the law, tariffs should also provide a share for a development fund and a small benefit for MU. Owing to the fact that in most of cases Local Councils want to keep tariffs down, many MU are in red, registering losses. When the situation is aggravated by inflation or increase of the price for other utilities and the power utilities threaten to switch off the power, Local Councils agree for an increase of the tariffs and charges. In cases when a formula was agreed, then the increase of the tariffs is made automatic. W&WW operators receive and have received grants only from EU through ISPA instrument. ISPA is addressing issues in the field of transport and environment (water and waste management). Up to present, 33 ISPA Financing Memorandums have been signed by Romanian authorities, with a total amount of 1,6 billion euro, representing 70% of the EU contribution for the period 2000-2006. There are more than 20 W&WW projects financed under ISPA. The amount of the W&WW projects financed by ISPA is more than 680 million €. The strategy for ISPA was to begin with larger cities with a population bigger than 250000 inhabitants and later on to continue with small cities. As the ISPA financing covers only 75% of the investment and 25% have to be local contribution, all municipalities have to find ways to cover their share. For this loans from EBRD and EIB have been used in many cases.

## **Slovakia**

From 2003, the prices for households are regulated based upon the justified economic costs of service provisions. The National Office for Regulation of Network Services has the decision making power to decide on the maximum allowable price both for households and other clients. The National Office annually issues decisions about the maximum prices and tariffs to each individual supplier of W&WW services. 2003 is crucial in the evolution of the Slovak water supply and wastewater sector due to the following factors:

- New water-related legislation was passed (Water Act, Act on Water Supply and Sewerage Utilities, Regulation on Permissible Level of Pollution);
- Municipal water companies are being established taking the responsibility of the infrastructure development, cost, and revenues, and these municipal water companies are allowed to establish public-private partnerships;
- Regulation of water tariffs from national level was cancelled and replaced by the regulation of the National Office for Regulation of Network Sectors; and
- State budget contributions to cover the production costs of water and wastewater (W&WW) service operators practically stopped.

The current basic rule of the tariff structure is that the tariffs are designed to cover the operating costs and investment costs (through a depreciation allowance) of the W&WW operator but work needs to be done to assure that these costs are entered properly and apply continuously. Currently, there are lower tariffs for

households` clients and higher tariffs for industrial clients. The operator does not have substantial incentive to reduce internal operation costs due to several reasons:

- Households tariffs are indexed and calculated based upon the previous year basis regardless of production costs (the rest of production costs must be recovered from others),
- Tariffs (both for drinking water and sewage water) are calculated in a way that a final tariff includes 10 – 15% net revenue for the water company.

### **Czech Republic**

Currently, tariffs are under the financial regulation controlled by the Ministry of Finance and its regional Financial Offices. This regulation includes a strict rule for tariff construction and regular reporting on tariffs to customers and government administration. The problem is that Financial Offices do not have water-management experts, so it is very difficult for them to identify any failure (e.g. inappropriate pricing) or to accurately estimate the "real" financial need for running the system sustainable. Thanks to the different types of MUs in which municipalities as owners and businesses as service providers have different agendas – almost each MUs is an "original"- the tariff level can be both:

- Lower than optimal, which means that sufficient resources are not saved for future investments and repairs of the infrastructure (especially when Mayors are pushing not to increase prices of water),
- Higher than optimal in some items (e.g. management wages, administration overheads... etc.). To find what is "optimal" from outside is very difficult, especially for the Financial Offices. Due to this limitation on financial control, there is a danger of unsustainable running of MUs that can cause the severe deterioration of the infrastructure in the next 10 – 15 years.

That is why in the near future the Ministry of Agriculture, as the responsible body for the development of public water supply and sewerages, is going to propose a significant change in the price regulation control: They ask the responsibility to be shifted from Ministry of Finance to Ministry of Agriculture, where the special department should be established as a controlling body. This change would need to be initiated by the amendment of related laws.

In the Czech Republic, effluent charges for wastewater discharge are derived from both, the total quantity discharged and the level of pollution in discharged water (there is a list of pollutants for which different payment are settled in absolute numbers – e.g. 16 CZK/kg of phosphorus).

When considering a construction of a new WWTP main factors and critical points of doing such investments are:

- The un-subsidized costs may sometimes be distributed only to the particular customers connected to the new plant or distributed to all customers of a particular MU. Even the latter, to realize such an investment in small towns (up to 2000 PE) may be an enormous financial burden to carry into the future.
- Although the construction of WWTP is subsidized, the minimal participation of municipal resources (at least 20% of the investment) is required and, as illustrated in the case study, these costs may increase current sewage charges significantly.
- The operational cost of running the new infrastructure or WWTP are not subsidized. These costs are the key to necessitating increases in the sewage tariff.

### **Bosnia and Herzegovina**

According to the Federal Law on Municipal activities (Official Gazette of Socialist Republic of B&H No. 20, July 26, 1990) and Law on Municipal activities of RS (Official Gazette of RS, No. 11/95), the Municipal Assembly defines the method of service pricing, but the service provider defines the price of the service. Water and wastewater tariffs are proposed by the MWWU on the base of calculation of financial department in the MWWU. Recommended water and wastewater tariffs would be ratified by the Executive Council of Municipality. About 80% of users are households. Delivery of bills and water meter reading is quarterly. Payment of bills is, however, monthly. The reason for this frequency is on the one hand the hope for

improved payment, on the other, liquidity problems of the MWWU. Water meters of industry and institutions are both read and billed monthly.

### **Croatia**

While there are water companies with negative current financial accounts, most Croatian WUs have zero or slightly positive balance. Although the current account balance is a key indicator of MWWU performance, this figure alone does not tell the whole story. There are companies with zero balance which, by properly and regularly maintaining the infrastructure, are on a sustainable path of operation. Some other companies also break even financially, while they cannot maintain their infrastructure and therefore constantly experience a deterioration of system conditions and quality of service. Many MWWUs in Croatia belong to the latter category. Present tariffs at these utilities will not ensure safe long term operation, and the MWWUs need to increase revenues (often together with a decrease of costs). Higher revenues will be especially important when pieces of the existing infrastructure are worn out and need replacement, or the service is upgraded, for instance by building a wastewater treatment plant.

Even though collection of bills is not a problem for many MWWUs, some utilities are not able to collect a portion of their bills (up to 20%) or receive payments only with a delay. For these MWWUs setting proper tariffs must go together with efforts or strategies at improved and timelier collection. On top of the problems with current and future financial balance, tariff designs are often distorted and household users are cross-subsidized by industrial and other users. Cross-subsidies not only result in a loss of economic efficiency, but they also pose a risk of disconnection on the part of industrial clients of the MWWUs, losing a major source of revenue. Since fixed costs make up the majority of all costs for most MWWUs, stable revenues are high priority, and the self-supply of industrial consumers is a threat to the stability of revenues. Another threat to the revenue stream is that present tariff designs include only a variable component, and not a fixed one. As tariffs increase, demand for the services will go down, and this will have an impact on total revenues. Lastly, a large portion of the collected revenues is paid as a tax or charge to the government, reducing the possibility of building up reserves locally for future investments. In this context, our reform proposals are listed below.

- In the short run most municipal water and wastewater companies are in a financially stable situation. The infrastructure, however, is being depreciated not only in terms of accounting, but also physically, and major investments will be needed to maintain and/or replace assets. Tariffs will need to be increased in order to generate appropriate revenues for this purpose.
- At present household consumers are cross-financed by industrial consumers. Tariff increase, therefore, should primarily take place at households.
- In MWWUs with problems with non-payment, strategies to improve collection and timely payment of bills need to be implemented.
- Economic efficiency can also be improved through the introduction of fixed tariffs. Fixed tariffs generate revenues regardless of actual consumption, therefore they make the revenue stream more dependable, and they are also more equitable, as all consumers will have to contribute towards the fixed costs of the company, which need to be covered even if consumption is very low for certain users.
- There are, however, some vulnerable consumer groups, especially low income households, where a dramatic increase in tariffs, especially fixed tariffs, can create problems. Fixed tariffs, should therefore, be introduced slowly and cautiously, or special arrangements need to be made for low income households.
- Some of the large investments, especially into sewage collection and wastewater treatment, will dramatically increase costs, and subsequently, tariffs. If outside help, such as grants or preferential loans from the European Union is not available, then these investments need to be delayed until the economic status of consumers considerably improves.

### **Annex No 4: Tabular Overview Of Approved ISPA Projects In Romania**

(presented by type and value)

Project Implementation							Annex I
ISPA Projects Approved by the Management Committee							
Measure Code:	Measure Name:	FM signature	Eligible Cost	ISPA Grant	%	RO Contribution	
Environment			€1,424,656,097.34	€1,032,858,076.00	72.5%	€391,798,021.34	
PE			€1,378,096,097.34	€1,002,055,576.00	72.7%	€376,040,521.34	
2000/RO/16/P/PE/001	Piatra Neamt Waste Management Programme in Romania	23-Oct-00	€17,309,705.34	€10,384,500.00	60.0%	€6,925,205.34	
2000/RO/16/P/PE/002	Craiova - Rehabilitation of Sewerage Network and Wastewater Treatment Facilities	22-Dec-00	€70,378,000.00	€52,783,500.00	75.0%	€17,594,500.00	
2000/RO/16/P/PE/003	Constanta Sewerage and Wastewater Treatment Rehabilitation	18-Nov-00	€86,877,177.00	€65,157,883.00	75.0%	€21,719,294.00	
2000/RO/16/P/PE/004	Rehabilitation of Wastewater Treatment Technology and Sewerage Improvements for the Population of Timișoara City	04-Dec-01	€45,363,012.00	€32,207,739.00	71.0%	€13,155,273.00	
2000/RO/16/P/PE/005	Upgrading the Water and Wastewater System in Pașcani, located in Iași County in Romania	18-Dec-01	€19,053,680.00	€14,290,260.00	75.0%	€4,763,420.00	
2000/RO/16/P/PE/006	Upgrading of drinking and wastewater systems in order to comply with European standards for water quality and environment protection in the city of Iași	22-Dec-00	€46,240,200.00	€34,680,150.00	75.0%	€11,560,050.00	
2000/RO/16/P/PE/007	Treatment of Drinking Water and Wastewater for Brașov City and neighbouring localities located in the County of Brașov	07-Jun-02	€52,837,762.00	€37,514,811.00	71.0%	€15,322,951.00	
2000/RO/16/P/PE/008	Rehabilitation and Modernisation of the Water Supply and Sewerage Systems for the area of Cluj	31-May-01	€46,755,800.00	€35,066,850.00	75.0%	€11,688,950.00	
2000/RO/16/P/PE/009	Valcea Jiului - Danubian Wastewater Treatment Plant Extension – Biological Stage located in Jiu Valley	22-Dec-00	€9,680,000.00	€7,260,000.00	75.0%	€2,420,000.00	
2000/RO/16/P/PE/010	Braila - Rehabilitation and extension of Sewerage Network and construction of a Wastewater Treatment Facilities.	15-Feb-01	€49,104,400.00	€36,828,300.00	75.0%	€12,276,100.00	
2000/RO/16/P/PE/011	Arad - Rehabilitation of Wastewater Treatment Facilities in order to protect the River Mures	15-Feb-01	€16,374,644.00	€12,280,983.00	75.0%	€4,093,661.00	
2000/RO/16/P/PE/012	Focsani - Rehabilitation of the sewerage network and wastewater treatment plant	20-Aug-01	€15,876,500.00	€11,748,610.00	74.0%	€4,127,890.00	
2001/RO/16/P/PE/013	Oradea - Rehabilitation of the Sewerage Network and Wastewater Treatment Plant	20-Aug-01	€22,084,622.00	€15,459,235.00	70.0%	€6,625,387.00	
2001/RO/16/P/PE/014	Râmnicu Valcea - Integrated Municipal Waste Management System	11-Apr-02	€14,673,100.00	€11,004,825.00	75.0%	€3,668,275.00	
2001/RO/16/P/PE/015	Targu Mures - Rehabilitation of Drinking Water Supply and Wastewater Collection and Treatment	20-Nov-01	€27,909,400.00	€20,932,050.00	75.0%	€6,977,350.00	
2002/RO/16/P/PE/017	Rehabilitation of Solid Waste Collection, Transportation, Treatment and Landfill in DAMBOVITA County	16-Dec-03	€25,894,000.00	€19,420,500.00	75.0%	€6,473,500.00	
2002/RO/16/P/PE/018	Bacau Drinking Water and Wastewater Collection and Treatment Improvements	25-Sep-03	€52,006,000.00	€39,004,500.00	75.0%	€13,001,500.00	
2002/RO/16/P/PE/019	Satu Mare Improvements to the Water Supply and Wastewater Collection and Treatment Systems	13-Dec-02	€37,355,000.00	€26,522,050.00	71.0%	€10,832,950.00	
2002/RO/16/P/PE/021	Buzau - Rehabilitation of the Wastewater Treatment Plant, Sewerage System and Distribution Network	13-Dec-02	€35,433,550.00	€26,220,827.00	74.0%	€9,212,723.00	
2002/RO/16/P/PE/022	SIBIU - Modernisation of the Water Supply and Sewerage Systems	18-Dec-02	€37,588,000.00	€25,559,840.00	68.0%	€12,028,160.00	
2002/RO/16/P/PE/023	Piatra Neamt: Improvement of Water Supply System, Sewerage and Wastewater Treatment	10-Dec-02	€28,594,545.00	€21,159,963.00	74.0%	€7,434,582.00	
2002/RO/16/P/PE/024	Integrated Waste Management System in Teleorman County	16-Dec-03	€21,406,000.00	€16,054,500.00	75.0%	€5,351,500.00	
2003/RO/16/P/PE/025	Bistrita Catchment Area: Rehabilitation and Extension of the Water Supply and Sewerage system located in Bistrita-Nasaud County	09-Nov-04	€22,500,000.00	€16,875,000.00	75.0%	€5,625,000.00	
2003/RO/16/P/PE/026	Pilesti: Rehabilitation of the wastewater treatment plant, sewerage network and water supply system	15-Dec-03	€41,750,000.00	€31,312,500.00	75.0%	€10,437,500.00	
2003/RO/16/P/PE/027	Integrated Solid Waste Management System in Galati and Surroundings	19-Oct-04	€23,000,000.00	€17,250,000.00	75.0%	€5,750,000.00	
2004/RO/16/P/PE/001	Botosani: Rehabilitation and Modernisation of the Water Supply, Sewerage Collection and Wastewater Treatment Systems	29-Nov-04	€42,500,000.00	€31,875,000.00	75.0%	€10,625,000.00	
2004/RO/16/P/PE/002	Râmnicu Vâlcea Rehabilitation of the Water Supply System, Sewerage System and Wastewater Treatment Plant located in Vâlcea County	06-Dec-04	€29,000,000.00	€21,750,000.00	75.0%	€7,250,000.00	
2004/RO/16/P/PE/003	Bucharest Wastewater Treatment Plant Rehabilitation: Stage I located in Ilfov County	13-Dec-04	€108,300,000.00	€70,395,000.00	65.0%	€37,905,000.00	
2004/RO/16/P/PE/004	Baia Mare Rehabilitation and Modernisation of Water and Sewerage Services located in the County of Maramures	08-Dec-04	€42,629,000.00	€29,840,300.00	70.0%	€12,788,700.00	
2004/RO/16/P/PE/005	Upgrading of water and sewerage networks and construction of a new wastewater treatment plant in GALATI	17-Oct-05	€60,000,000.00	€42,000,000.00	70.0%	€18,000,000.00	
2004/RO/16/P/PE/007	Zonal ecological landfill in Bacau	22-Nov-05	€20,500,000.00	€15,000,000.00	73.2%	€5,500,000.00	
2004/RO/16/P/PE/008	Rehabilitation and modernization of the water supply and sewerage systems in Drobeta Tr. Severin	06-Dec-04	€41,600,000.00	€31,200,000.00	75.0%	€10,400,000.00	
2005/RO/16/P/PE/001	Integrated management of solid waste and sludge from WWTP in Arges county.	29-Nov-05	€24,500,000.00	€18,375,000.00	75.0%	€6,125,000.00	
2005/RO/16/P/PE/002	Rehabilitation and modernization of water supply and wastewater systems in Deva and Hunedoara	29-Nov-05	€45,920,000.00	€34,440,000.00	75.0%	€11,480,000.00	
2005/RO/16/P/PE/003	Water distribution, sewerage and wastewater treatment in Caras-Severin County	06-Jun-06	€52,512,000.00	€36,758,400.00	70.0%	€15,753,600.00	

Measure Code:	Measure Name:	FM signature	Eligible Cost	ISPA Grant	%	RO Contribution
2005/RO/16/P/PA/004	Rehabilitation of the water supply system, extension of the sewerage system and modernization of the wastewater treatment plant in Suceava	29-Nov-05	€44,590,000.00	€33,442,500.00	75.0%	€11,147,500.00
<b>PA</b>			<b>€46,560,000.00</b>	<b>€30,802,500.00</b>	<b>66.2%</b>	<b>€15,757,500.00</b>
2000/RO/16/P/PA/001	TA for completion and upgrading of the Bucharest Glina WWTP	22-Feb-01	€1,810,000.00	€1,357,500.00	75.0%	€452,500.00
2003/RO/16/P/PA/012	Technical Assistance for Institutional Capacity Strengthening of ISPA Final Beneficiaries in the Water and Wastewater Sector.	15-Dec-03	€7,000,000.00	€7,000,000.00	100.0%	€0.00
2003/RO/16/P/PA/013	Technical Assistance for Project Preparation in the Environment Sector	15-Dec-03	€12,750,000.00	€9,945,000.00	78.0%	€2,805,000.00
2005/RO/16/P/PA/001	TA for Cohesion fund project preparation in the Environment Sector	29-Nov-05	€25,000,000.00	€12,500,000.00	50.0%	€12,500,000.00
<b>Institution Building</b>			<b>€589,753.00</b>	<b>€589,753.00</b>	<b>100.0%</b>	<b>€0.00</b>
<b>PA</b>			<b>€589,753.00</b>	<b>€589,753.00</b>	<b>100.0%</b>	<b>€0.00</b>
2001/RO/16/P/PA/009	Technical Assistance to strengthen the capacity of ISPA Implementing Agencies to Implement ISPA measures – Stage I of gap plugging in Romania	17-Jun-02	€589,753.00	€589,753.00	100.0%	€0.00
<b>Transport</b>			<b>€1,324,662,911.00</b>	<b>€989,274,309.00</b>	<b>75.4%</b>	<b>€325,388,602.00</b>
<b>PT</b>			<b>€1,257,101,351.00</b>	<b>€943,862,689.00</b>	<b>75.1%</b>	<b>€313,238,662.00</b>
2000/RO/16/P/PT/001	Rehabilitation of the Baneasa - Fetesti sections of the Bucharest - Constanta railway line in Romania	23-Oct-00	€308,972,588.00	€231,729,441.00	75.0%	€77,243,147.00
2000/RO/16/P/PT/002	Widening to four lanes of sections of national road No 5 from Bucharest to Giurgiu	23-Oct-00	€52,648,050.00	€34,747,713.00	66.0%	€17,900,337.00
2000/RO/16/P/PT/003	Construction and rehabilitation of sections 4 and 5 of the Bucharest – Cernavoda Motorway in Romania	23-Oct-00	€95,616,000.00	€71,712,000.00	75.0%	€23,904,000.00
2000/RO/16/P/PT/004	Rehabilitation of the section Craiova - Drobeta Turnu Severin on the national road no 6 (1st phase of Craiova - Lugoj)	22-Feb-01	€93,442,503.00	€70,081,877.00	75.0%	€23,360,626.00
2001/RO/16/P/PT/005	Construction of the Sibiu motorway bypass on Corridor IV in Romania	20-Aug-01	€70,261,600.00	€52,696,200.00	75.0%	€17,565,400.00
2001/RO/16/P/PT/006	Road Lugoj-Craiova b)Drobeta - Lugoj 143Km + By-passes	13-Dec-01	€155,578,840.00	€116,684,130.00	75.0%	€38,894,710.00
2003/RO/16/P/PT/007	Rehabilitation of the Railway Section Câmpina-Predeal on the Bucharest-Braşov Railway Line	19-Dec-03	€199,485,770.00	€149,614,328.00	75.0%	€49,871,442.00
2004/RO/16/P/PT/008	Construction of the Deva-Orastie Motorway Bypass located in Hunedoara County, Region West in Romania	13-Dec-04	€151,646,000.00	€113,734,500.00	75.0%	€37,911,500.00
2004/RO/16/P/PT/009	Construction of the road and rail adjoining infrastructure to the second bridge over the Danube at Calafat-Vidin on the Romanian side	25-Nov-05	€47,950,000.00	€35,962,500.00	75.0%	€11,987,500.00
2005/RO/16/P/PT/001	Construction of Lugoj by-pass located in Timis County in Romania	29-Nov-05	€23,750,000.00	€17,812,500.00	75.0%	€5,937,500.00
2005/RO/16/P/PT/002	Reconstruction of Rail and Road Infrastructure sections damaged by floods in July and August 2005 located in Giurgiu, Vrancea and Bacau in Romania	28-Oct-05	€57,750,000.00	€49,087,500.00	85.0%	€8,662,500.00
<b>PA</b>			<b>€67,561,560.00</b>	<b>€55,411,620.00</b>	<b>82.0%</b>	<b>€12,149,940.00</b>
2000/RO/16/P/PA/002	TA for detailed design and tender documentation of the section D.T. Severin – Lugoj on the National Road no 6 and accompanying studies (2nd phase of Craiova-Lugoj) located in Oltenia and Banat in Romania	07-Mar-01	€1,466,060.00	€1,099,545.00	75.0%	€366,515.00
2001/RO/16/P/PA/003	TA for the preparation of ISPA projects in the environment sector in Baia Mare, Botosani, Drobeta, Galati, Deva and Hunedoara	17-Sep-02	€3,500,000.00	€2,625,000.00	75.0%	€875,000.00
2001/RO/16/P/PA/008	TA for the rehabilitation of the railway line from the Hungarian border to Simeria located in Arad and Hunedoara counties in Romania and accompanying studies.	20-Dec-01	€800,000.00	€600,000.00	75.0%	€200,000.00
2002/RO/16/P/PA/011	TA for Improvement of the navigability on the Danube River	13-Dec-02	€1,640,000.00	€1,230,000.00	75.0%	€410,000.00
2004/RO/16/P/PA/001	Technical Assistance for the elaboration of general Transport Master Plan	25-Nov-05	€5,920,000.00	€5,032,000.00	85.0%	€888,000.00
2004/RO/16/P/PA/002	Technical Assistance for the Preparation of Road Projects for the Cohesion Fund in Romania	25-Nov-05	€15,834,500.00	€13,459,325.00	85.0%	€2,375,175.00
2004/RO/16/P/PA/003	Technical Assistance for the preparation of the RAIL projects for the Cohesion Fund	29-Nov-05	€22,900,000.00	€19,465,000.00	85.0%	€3,435,000.00
2005/RO/16/P/PA/002	TA Danube navigability pipeline for Cohesion Fund	29-Nov-05	€2,750,000.00	€2,337,500.00	85.0%	€412,500.00
2005/RO/16/P/PA/003	TA for preparation of Road projects for Structural Funds on TEN-T network located in NW, NE, E, SE, S and Central Part of Romania.	06-Dec-05	€12,751,000.00	€9,563,250.00	75.0%	€3,187,750.00
<b>Grand Total:</b>			<b>€2,749,908,761.34</b>	<b>€2,032,722,138.00</b>	<b>73.9%</b>	<b>€717,186,623.34</b>

## Annex 5

### Conclusions

#### **Round Table Meeting on Public Utility Companies Transformation Belgrade, November 13, 2007**

##### **1. Introduction**

An urgent need has been identified to strengthen the performance of public utility companies, allowing them to enhance the level and quality of municipal services for water supply, sewerage, district heating and solid waste management to customers. Municipal utility companies have a need to strengthen their ability to prepare and implement projects and to operate the facilities created and to strengthen their financial and technical performance.

For this purpose the Standing Conference of Towns and Municipalities (SCTM) on November 13, 2007 organized a Round Table Meeting on the Transformation of Public Utility Companies in Serbia. The Meeting was attended by more than 50 participants from various ministries, municipalities, Public Utility Companies (PUC's) International Institutions and guests from abroad. The Meeting took place in Belgrade in the framework of the Municipal Infrastructure Agency Support Program and was financially supported by the European Agency for Reconstruction (EAR) and GTZ Project "Modernization of Municipal Services".

##### **2. Proceedings**

Mr. Staničić, secretary general of the SCTM who chaired the Meeting welcomed the participants and stressed the importance of the subject of transformation of PUC's in order to improve the level of municipal services.

Mr. Luka Andrić, State Secretary for Privatization at the Ministry of Economy and Regional Development, announced that the Strategy for transformation of public utility companies will be finished by next September. This strategy is to include all activities of utility companies and to define the way in which the reorganization is to be carried out, since it is still unknown which types of privatization can be applied in public companies. As Mr. Andrić emphasized, in order to avoid the traps of the privatization, the working group is given a bit longer deadline for the preparation of the strategy. That is why, among other things, it is important to establish the price policy in public utility companies prior to the privatization itself, as well as to enable local self-government to use EU funds designated for Serbia. Cooperation with the SCTM in the further process was stressed out.

In his introductory remarks, Mr. Vassilis Petrides of the EAR emphasized the need to strengthen the position of Public Utilities in order to enhance their capacity to develop and initiate high quality proposals for projects and make use of the available funds from national and international sources. Mr. Vassilis Petrides, EAR Program Manager, also pointed out that the reorganization of public utility companies opens up new possibilities for the access to EU funds, and that it is important for Serbia to learn from experiences of neighboring countries so as not to repeat the same mistakes.

As guest speakers, Ms. Cerasella Lungu, of the Rumanian Ministry for environmental protection and sustainable development presented a case study on regionalization and Mr. Peter Vos from Royal Haskoning, Netherlands, also presented a case study on institutional development. A Serbian case study on regional waste treatment was presented by Mr. Vaso Sunjevaric, director of PUC Duboko.

Mr. Milisav Aleksic of the Municipal Infrastructure Program conducted a presentation of work of the Working Group for PUC Transformation, on the subject, in which he summarized the findings, conclusions and recommendations could be used to support future steps in the process of PUC transformation.

The participants of this meeting mentioned inefficient operation, outdated equipment and infrastructure, decrease in both scope and quality of services as the biggest weaknesses in the operation of local public utility companies, but also the impact of policy on management and organization, as well as incompliance of companies with the environmental standards, and the need to access funds for financing municipal infrastructure.

The findings and recommendations of the Working Group paper on "PUC Transformation in Serbia - Towards more efficient operation and the development of communal infrastructure", were discussed and the results of the discussion and suggestions made were included in the Round Table Conclusions.

### **3. Round Table Conclusions**

Identification of open questions for the further work on PUC transformation topic has been done, some general attitudes and suggestions that could be subject to observation in the future have been pointed out. Further work is to be done upon this complex and socially delicate issue. Municipal utility companies have a need to strengthen their ability to prepare and implement projects and to operate the facilities created and to strengthen their financial and technical performance. Regional links and organizing, up scaling, performance improvements and Corporatization are needed.

An attitude towards better understanding of problems and need for reform and transformation of public utility sector was stressed out on the round table, and that need has been identified on the central and local level.

Considering that the need has been recognized, initiation of activities on the central level follows, which results in realization of the Government's conclusion (forming the working group for preparation of the strategy for restructuring and privatization of local public companies), i.e. activities on defining and development of the strategy and further activities for systematic transformation of PUC's.

Besides issues of strategy and reforms, a topic that can be approached at the same time, on behalf of citizens and better services, are the necessary investments in communal infrastructure and inter-municipal cooperation, that is to say, access to funds and financing on that basis.

In order to have access necessary funds for investments, capacity building in identifying priorities, project preparation and implementation must be improved.

It is recommended that in the nearby future the government formulates a strategy for the transformation of PUC's in order to remedy the identified problems through cooperation with the Standing Conference of Towns and Municipalities and other relevant partners such as the Serbian Chamber of Commerce, professional associations etc.

### **4. Continued municipal infrastructure support – the necessary future activities and requirements for support to the SCTM in the further process of PUC Transformation**

It is noticed that with the WG report and WG presentation on the Round Table the initial phase of WG activities are finalized, while in the phase of preparation of new laws and programmes, the WG may be used to continue their efforts in PUC Transformation. Assessment of the current phase leads to some proposals for optional WG activities hereafter.

From the first phase of development of the project for PUC Transformation it has become clear that continued efforts will be needed.

One of the main issues is the continuation of the Policy Dialogue on PUC Transformation was to involve relevant ministries, agencies and stakeholder institutions in a coordinated effort of strengthening local self-government entities and PUC's.

From the Round Table conference in December 2006, the establishment of the WG on PUC Transformation in April 2007 and the Round Table conference in November 2007, after the presentation of the paper titled "PUC Transformation in Serbia - Towards more efficient operation and the development of communal infrastructure" it has become clear that awareness for the subject of PUC Transformation has been put on the central government political agenda for 2008.

PUC Transformation is not an exclusive subject for one ministry, as general and sectoral aspects have to address involving many ministries. Still coordination of restructuring is required and it seems that the new mandate of the Ministry of Economy and Regional Development includes a focus on PUC Transformation.

Projects in Serbia finding own solutions through inter-municipal cooperation, such as the Duboko project in Uzice also need to be assessed to draw conclusions on results and obstacles to be addressed for comparable projects in the near future. This requires more attention for all legal and institutional aspects of inter-municipal coordination.

Further work is needed on the following activities:

- Activities toward a better understanding amongst national and local government on the necessary legal, institutional, and fiscal reforms needed to promote decentralized municipal/PUC infrastructure services;
- Analyzing institutional reform requirements for different categories of PUC's in Serbia;
- Activities toward inter-municipal cooperation on provision of regional infrastructure services and the establishment of regional PUC's;
- Activities on supporting the formulation development of a National Strategy to transform the PUC's;
- Activities toward formulating and preparing an Action Plan for the transformation of PUC's in cooperation with the national stakeholders;
- Activities on supporting the preparation of central-level regulatory requirements for PUC's within relevant Ministries;
- Activities toward improving capacities and capabilities of municipal and PUC staff for preparing infrastructure projects.

In order to enable the above mentioned activities support is needed in the operationalization of further activities on PUC transformation. The Standing Conference of Towns and Municipalities is recognized as a key institution which should ensure that the standpoint of the local level is heard and noticed at the level of central government. Therefore, support from international and domestic experts is needed to: participate in the support for the formulation of a national strategy and action plan for PUC transformation, liaise with the national and local government institutions, PUC's and the Working Group, assist in establishing the Policy Dialogue, review policy issues and institutional reform requirements, organize policy seminars and round table sessions etc.