

APPROVED  
by Order of the State Committee for Construction, Architecture, and Housing Policy of Ukraine  
# 138 dated June 27, 2001

Registered with the Ministry of Justice of Ukraine,  
# 748/5939, August 23, 2001

## **PROCEDURE FOR PRICING CENTRALIZED WATER AND WASTEWATER SERVICES**

### **1. GENERAL PROVISIONS**

1.1. This procedure defines a mechanism for calculating tariffs for water and wastewater services and providing resource conservation incentives. It shall apply to enterprises of all ownership forms that render the aforementioned services.

1.2. Terms used in this Procedure shall have the following meaning:

**Base tariff for water and waste services** - an amount of payment that ensures reimbursement of operating, financial, capital investment costs (or their fraction), income tax costs per unit of service; it shall be determined by an enterprise on the basis of production program indicators for a base year agreed upon by the Authorized Agency regulating price and tariff setting within the scope of its competence;

**Operating costs** – costs that are set in accordance with Items 17 and 20 of Regulation (Standard) # 16 “Costs” approved by Finance Ministry of Ukraine Order # 18, dated 12/31/99, and registered with the Ministry of Justice of Ukraine, # 27/4248, dated 01/19/00, with changes introduced in accordance with Finance Ministry Orders # 131, dated 06/14/00, and # 304, dated 11/30/00 (hereinafter referred to as Regulation (Standard # 16);

**Financial costs** – costs that are set in accordance with Provision (standard) # 16.

**Capital investment costs** – costs associated with funding capital investments, particularly, acquisitions, construction, reconstruction, upgrading and other improvements of fixed assets, as well as costs related to acquisition of intangible assets subject to depreciation under the Law of Ukraine on “Enterprise Income Tax.”

1.3. This Procedure is being introduced for the purpose of:

Implementation of a mechanism for providing economic incentives to reduce the share of material and energy resources of water and wastewater enterprises in transition to break-even functioning.

1.4. For the purpose of resource economies and ensuring effective operation of the water and wastewater sector, two-rate tariffs may be applied that include the annual cost of service of a unit of additional water and wastewater capacity and the cost of a unit of water and waste service consumed.

## 2. FORMING BASE TARIFFS

2.1. Water and wastewater enterprises shall form base tariffs on the grounds of a production program for the planned year, planned costs determined on the basis of industry standards, state statistical reporting and calculations of water and wastewater enterprises, and the amount of the income tax.

One cubic meter of drinking water and one cubic meter of wastewater shall serve as calculation units for water and wastewater enterprises.

2.2. Enterprise's production program for the planned year shall be developed with a consideration for:

- Measures aimed at improvement of technologies for purification of drinking water and sewage, replacement of amortized networks and equipment, reduction of water consumption and losses in the process of its production and transportation;
- Implementation of a system for metering water resource use, production and distribution of drinking water, wastewater treatment, ensuring proper functioning and inspection of metering devices;
- Analysis of actual and projected consumption.

2.3. Cost planning shall be done by types of costs: operating costs, financial costs, and income tax costs.

**Operating costs** include:

- **Production costs of services**, undistributed fixed general production costs (at their initiation);
- **Administration costs**;
- **Distribution costs**;
- **Other operating costs**.

Composition of planned cost items shall be determined by enterprises individually depending on the type of service (water supply or wastewater service) and peculiarities of its production process and distribution. Capital investment costs shall be included in planned costs upon a decision of the Authorized agency.

## 3. PRODUCTION COST

**Service production costs** shall include costs mentioned in paragraphs 3-6 of Item 11, Regulation (Standard) # 16.

3.1. **Direct material** costs shall be determined in accordance with Items 12 and 22 of Regulation (Standard) # 16 and include costs of:

- Raw materials that form the basis of the produced service determined on the grounds of the planned water delivery volume, throughput of wastewater, reagent doses and their contractual prices, including transportation and procurement costs (the need in reagents (chlorine, coagulant, etc.) for disinfecting drinking water and sewage shall be set based on requirements of BNiP 2.04.02-84 "Water Supply. External Networks and Installations", BNiP 2.04.03-85 "Sewerage System. External Networks and Installations" with consideration for quality of output water, accepted processing schemes for water purification and processing regulations;
- Fuel and electricity for production process needs determined on the basis of cost standards, as well as volumes of water delivery, sewage throughput, their purification, and current fuel and electricity tariffs. In calculating electricity costs, a reactive load surcharge should be included;
- Purchased parts, half-finished products, production-related works and services provided by external enterprises and organizations assumed on the level of actual costs for previous years with consideration for changes expected in the planned period in accordance with contracts concluded;

- Material resources that are used to ensure production processes and can be directly allocated to a specific cost center.

Costs of transportation and distribution of purchased water to consumers shall be allocated to respective cost items.

3.2. **Direct labor costs** are defined in Item 13 of Regulation (Standard) # 16.

Labor costs of paying wages of production workers shall be determined on the basis of the number and rate-qualifications make-up of production workers directly involved into production processes, as well as fixed hourly rates and wages.

Costs of additional wages for production workers shall be determined by amounts of current additional wages, allowances, guarantee and entitlement payments, bonuses related to performance of work tasks and functions, vacation pays.

Other incentive and entitlement payments shall be determined by amounts of current bonuses, remuneration, incentives, entitlement payments and other cash and material payments under a collective agreement.

3.3. **Other direct costs** are defined in Item 14 of Regulation (Standard) # 16.

Other direct costs shall include all other production-related costs that can be directly allocated to a specific cost center and shall include:

- Contributions to social arrangements for production workers;
- Depreciation of fixed assets and other non-current tangible and intangible production-related assets in accordance with requirements of Regulation (Standard) # 7 “Fixed Assets”, approved by Finance Ministry Order # 92, dated 04/27/00, registered with the Justice Ministry, # 288/4509 dated 05/18/00, with changes introduced in accordance with Finance Ministry Order # 304, dated 11/30/00 and the Law of Ukraine “On Enterprise Income Tax” (the enterprise shall have the right to choose and approve by a respective order the procedure and methods for depreciation of fixed production assets taking into consideration their make-up and operational life; intangible assets depreciation amounts shall be accepted in accordance with their actual level for previous years and changes anticipated for the planned period);
- Rent (if applicable).

3.4. **General production costs** shall be determined in accordance with Item 15 of Regulation (Standard) # 16 and shall be divided in fixed and variable costs, including:

- Production management costs for department and site management specialists and staff that are determined on the basis of the staff-list number of employees, accepted rates and wages taking into account additional payments and bonuses (remuneration of specialists, department managers, social deductions, expenses for business trips, guarantee and entitlement payments stipulated by effective legislation, other cash and material pursuant to a collective agreement);
- Depreciation of fixed assets and other non-current tangible assets intended for general production (department, site, processing line);
- Costs of maintenance, operation, repairs, insurance, operating rent of fixed assets and other non-current general production assets (if available), costs associated with improvements of fixed assets, costs of fire prevention and guard service of production facilities and maintenance of sanitation areas, costs of outsourcing related to delivery of centralized water and wastewater services determined under respective contracts;
- Costs of technology improvement and production organization that are determined on the basis of costs of service quality improvement, implementation of resource-saving activities, enhancement of water and wastewater facility and network reliability;
- Costs of heating, lighting, and disinfecting production premises, pest control, garbage collection and other utility costs that are calculated on the basis of electricity and heat consumption

necessary for lighting and heating production premises, the amount of solid wastes, and current electricity and utility service tariffs;

- Costs of servicing the production process (repair department services and other additional production-related services, wear-and-tear item deterioration, labor protection and safety, mandatory car insurance for drivers, outsourcing, communication services: phone, telegraph, fax, the post-office, business trips);
- Environmental protection costs;
- Taxes and duties (environment pollution duty, duty for special use of fresh water resources, tax on land occupied by production facilities and additional departments, communal tax calculated on the basis of the number of production workers, other local taxes and duties stipulated by effective legislation).

3.4.1. According to Item 16 of Regulation (Standard #16), the costs of services rendered (if they are incurred) may include unallocated fixed general production costs. The total amount of allocated and unallocated costs may not exceed their actual value.

#### **4. ADMINISTRATION COSTS**

According to Item 18 of Regulation (Standard) # 16 **administration costs** include expenses associated with servicing and administering an enterprise, namely:

- Expenses for supporting managerial and other general staff (except for sales staff) based on personnel arrangements (pay, bonuses and other compensatory payments under the effective legislation, payroll tax);
- Business trip expenses;
- Organizational, representation and other expenses;
- Costs of maintenance, operation and repairs of fixed assets, other general non-current tangible assets (operating rent, repairs, materials for premise maintenance, heating, lighting, garbage collection, disinfecting, guard);
- Bonuses for professional services (such as legal services under absence of the legal department at an enterprise, audit and property appraisal) to be specified by relevant contracts;
- Communication costs (the post-office, telegraph, telephone, telex, fax, etc.);
- Depreciation of fixed assets, non-current tangible assets, intangible general assets;
- Taxes, duties and other legislatively-stipulated mandatory payments, excluding those that are part of production costs (payment for the land occupied by administrative and management premises; communal tax calculated on the basis of the number of the administrative staff; vehicle owner tax for cars used by management personnel of an enterprise; other mandatory duties and payments stipulated by effective legislation);
- Settlement and cash servicing expenses;
- Other overheads (staff trading and retraining; computer equipment leasing; occupational periodicals subscription, etc.)

#### **5. DISTRIBUTION COSTS**

**Distribution costs** are operating costs which are defined by Item 19 of Regulation (Standard) # 16 and directly related to distribution of works and services. Distribution costs include:

- Cost of labor involved into distribution of services (works, goods, and products);
- Advertising and informational services;
- Costs of producing settlement books;
- Depreciation and repairs of fixed assets, non-current tangible assets;
- Fees to housing and utility organizations for collecting consumer payments and fees for using data on available housing;

- Cost of maintaining and inspecting metering devices.

Distribution costs shall be determined based on actual costs for previous years and changes projected for the planning period.

## 6. OTHER OPERATING COSTS

Other operating costs are defined by Item 20 of Regulation (Standard) # 16 and include costs of operating activities which are not included in “Material costs”, “Labor costs”, “Social Contributions” (Payroll Tax), and “Depreciation”.

## 7. FINANCIAL COSTS

7.1 According to Item 27 of Regulation (Standard) # 16 financial costs include interest expenses (on loans received, bonds issued, financial lease, etc.), as well as expenses related to raising debt capital.

7.2. Financing costs shall be determined in accordance to loan contracts concluded and effective legislation.

## 8. EXPENSES FROM ORDINARY ACT INCOME TAX

8.1. The amount of the current income tax shall be recognized as expenses for a period according to Regulation (Standard) # 17 “Income Tax” approved by Order of the Ministry of Finance of Ukraine # 353 dated December 28, 2000 and registered with the Ministry of Justice on January 20, 2001, # 47/5238.

8.2. Calculation of planned expenses from income tax on ordinary activity shall be performed taking into consideration temporary differences between asset (or liability) valuation as it appears in financial reporting and the tax base of this asset (or liability).

## 9. BASE TARIFF CALCULATION

9.1. Calculation of a base tariff shall includes enterprise’s planned costs per unit of service.

9.2. An individual cost component in money terms (the cost of an individual resource) shall be determined by formula:

$$C_j = N_j \times P_j ,$$

where:

$C_j$  amount of an individual cost component in money terms, UAH;

$N_j$  need in  $j^{\text{th}}$  resource in real terms;

$P_j$  price of a unit of respective resource at the time of the tariff-setting, UAH.

9.3. Individual cost components calculated by the above formula will be then grouped into individual cost items:

$$C_{ibase} = \sum_{j=1}^m C_j$$

where:

$C_{ibase}$  amount of an individual cost item in money terms, UAH.

$m$  number of individual cost components.

9.4. The next step is to determine the amount of an individual cost item in money terms per unit of service:

$$A_{ibase} = \frac{C_{ibase}}{V_{planned}}$$

where:

$A_{ibase}$  amount of an individual cost item per unit of service, UAH/m<sup>3</sup>;  
 $V_{planned}$  planned distribution volume of service, m<sup>3</sup>,

9.5. The next step is to combine individual costs into group costs. The amount of costs by individual group per unit of service is determined by formula:

$$GC_{kbase} = \sum_{i=1}^n A_{ibase}$$

where:

$GC_{kbase}$  amount of group costs per unit of service, UAH/m<sup>3</sup>;  
 $n$  number of cost items in each of the cost groups;

9.6. Base planned costs per unit of service are the total of group costs and income tax expenses per unit of service:

$$PC_{base} = \sum_{k=1}^l GC_{kbase} + PT,$$

where:

$PC_{base}$  base planned costs, UAH/m<sup>3</sup>;  
 $\sum_{k=1}^l GC_{kbase}$  amount of costs by all group costs, UAH/m<sup>3</sup>;  
 $PT$  income tax expenses, UAH/m<sup>3</sup>;  
 $l$  number of cost groups.

9.7. The base tariff which is grounded from economic perspective ( $T_{base}$ ) shall equal the total of planned base costs and capital investments expenses (base profit forming of which is described in Section 10) per unit of service:

$$T_{base} = PC_{base} + E_{ci}$$

where:

$PC_{base}$  planned base costs, UAH/m<sup>3</sup>;  
 $E_{ci}$  capital investment expenses (base profit), UAH/m<sup>3</sup>.

Attachment 1 includes an example of calculating the base tariff.

## 10. CAPITAL INVESTMENT EXPENSES

10.1. Expenses for capital investments shall be made out of profit and shall be designated for acquisition, construction, reconstruction, upgrading and other improvements of fixed assets of water and wastewater enterprises, as well acquisition of intangible assets under effective legislation.

10.2. Capital investment expense shall be planned based on enterprise's capital investment program and a financial plan. The capital investment program stipulates identification of investment projects, terms of their implementation and volumes of their funding. Enterprise's financial performance and cash flow projections are a major component of its financial plan. Cash flow projections include cash flow from operating, financing and investment activities to assess possibilities to ensure funding of capital investments and cash needs. The volume of capital investment spending shall

determined on the basis of the aforementioned documents and is subject to approval by the Authorized agency taking into consideration a consumer opinion.

10.3. An enterprise shall determine the specific share of an individual category of customers ( $k_i$ ) in forming expenses for capital investments and agree on it with the Authorized Agency.  $k_i$  may vary from 0.0 to 1.0; in so doing, the total  $k_i$  cannot exceed 1.0.

10.4. In planning capital investment expenses, tariff setting for each consumer group shall be done as follows:

$$T = PC_{base} + k_i \frac{E_{ci}}{\epsilon_i}$$

where:

$T$  tariff for an individual consumer group;

$E_{ci}$  capital investment expenses per one cubic meter;

$\epsilon_i$  specific share of an individual consumer group in the planned service distribution volume;

$k_i$  specific share of an individual consumer group in forming expenses for capital investments;

## 11. BASE TARIFF APPROVAL PROCEDURE

11.1. Tariffs calculated under this Procedure will be set and regulated by agencies authorized to do so within their competence and according to the procedure established by the Laws of Ukraine «On Local Governments in Ukraine», «On Local State Administrations», «On Natural Monopolies» and Cabinet of Ministers Decree # 1548 dated December 25, 1996 «On Establishing Prices/Tariffs Regulation Authorities of Executive Power Bodies and Executive Bodies of City Radas».

11.2. For an Authorized agency to make a decision on tariff changes, enterprises shall file data on distribution volumes, consumption rates, water losses and consumption, prices for raw materials, services, energy fuels etc. in absolute and relative (percentage) terms.

11.3. The agency that is authorized to set (regulate) tariffs for water and wastewater services shall be obligated to do so within 20 calendar days of the date of filing all necessary materials by the enterprise or mail a valid rejection in writing to the enterprise and make its decision public.

## 12. BASE TARIFF ADJUSTMENT MECHANISM

12.1. In case of changes in rates of payments, taxes, minimum wages, rent, other mandatory payments and duties, prices for fuel and energy resources (electricity, gas, petrol, diesel fuel, coal, fuel oil), reagents, other resources enterprises will adjust base tariffs in order to fully recover operating activity costs.

12.2. Adjusted tariffs will be approved according to the procedure specified for approval of the base tariff by authorized bodies within their competence determined by the Laws of Ukraine «On Local Governments in Ukraine», «On Local State Administrations», «On Natural Monopolies» and Cabinet of Ministers Decree # 1548 dated December 25, 1996 «On Establishing Prices/Tariffs Regulation Authorities of Executive Power Bodies and Executive Bodies of City Radas».

12.3. Adjustment of base tariff cost items shall be done by formula:

$$PC_{index} = \sum_{I=1}^f A_{f base} + \sum_{I=1}^{n-f} A_{(n-f) base} * I_{ik}$$

where:

$PC_{index}$  index-linked planned costs;

$A_{f base}$  base tariff cost costs not subject to index-linking;

$A_{(n-f) \text{ base}}$  base tariff cost costs subject to index-linking,  
 $n$  number of base tariff cost items;  
 $f$  number of base tariff cost items which are not subject to index-linking;  
 $I_{ik}$  projected producer price indices regarding  $i^{\text{th}}$  cost item.

An example of calculating adjusted base tariffs is provided in Attachment 2.

### 13. APPLICATION OF MARGINAL PRICES AS A METHOD FOR TARIFF REGULATION

13.1. The Authorized Agency in the sphere of regulating (establishing) prices (tariffs) may, according to the Law of Ukraine «On Prices and Pricing», decide on applying the tariff regulation method by establishing a marginal price (within the base tariff with due regard to provisions specified in Section 12) so that an enterprise take resource conservation measures.

13.2. Establishment of a marginal price is a method of regulation by setting a limit (cap) price of service for a fixed period. Over this period, the enterprise may receive additional income through reduction of costs to the level below the planned one resultant from conservation of resources.

13.3. Following are prerequisites for using this method:

- Availability of a report on performance of the functional and cost analysis (FCA);
- Availability of a resource saving program agreed upon by all interested parties.

13.4. The functional and cost analysis (FCA) is an economic assessment of actual costs of performing existing production and other functions by the enterprise. FCA envisages the inspection and analysis of actual costs, identification of unproductive costs by all existing functions, including by non-operating activity, identification of possibilities for cost adjustment in order to reduce costs, or ceases funding unprofitable non-operating activities.

13.5. A resource conservation program shall envisage taking measures aimed at saving resources through realization of investment projects, technology improvements, capacity development, facility reconstruction, automation and dispatching, enhancement of ecological safety and reliability etc.

The program shall provide calculations of anticipated economies from implementation of the aforementioned measures. The program shall be accompanied by an action plan.

The resource economies schedule can be a part of an asset restoration program since introduction of new technologies and equipment results, in most cases, in economies of labor, materials and other resources.

### 14. ENCOURAGING CONSERVATION OF RESOURCES AT WATER AND WASTEWATER ENTERPRISES

14.1. For the purpose of providing incentives for reduction of per unit consumption of material, energy, and labor resources, enterprises shall be given the right in regulating tariffs via marginal prices to use funds received from implementation of the resource economies program for restoration of assets and provision of material incentives to workers.

14.2. The extent of economies in real terms by each resource type ( $\Delta R_j$ ) shall be determined by comparing a calculated need in this resource ( $R_j$ ) to the actually consumed amount of this resource ( $R_{jactual}$ ):

$$\Delta R_j = R_j - R_{jactual}$$

14.3. The next step is to determine the extent of economies of a  $j$  resource type in *real terms* ( $\Delta R'_j$ ) per unit of volume of services rendered ( $V_{real}$ ):

$$\Delta R'_j = \frac{\Delta R_j}{V_{real}}$$



14.4. The extent of economies of a  $j$  resource type in  $y$  money terms per unit of services rendered ( $E_j$ ) is determined by formula:

$$E_j = P_j \cdot \Delta R_j',$$

where,  $P_j$  – price of a unit of a  $j$  resource.

14.5. The actually received economies of a  $j$  resource type in money terms ( $E_{jactual}$ ) is calculated as a product of the extent of economies of a  $j$  resource type in money terms per unit of service rendered ( $E_j$ ) and the actual volume of services paid for by consumers ( $V_{paid}$ ):

$$E_{jactual} = E_j \cdot V_{paid},$$

where the actual volume of service paid for by consumers ( $V_{paid}$ ) is determined by a ratio of enterprise's actual income by bills settled ( $I_{actual}$ ) for a certain period and the base tariff ( $T_{base}$ ):

$$V_{paid} = \frac{I_{actual}}{T_{base}}$$

14.6. Total actual economies by *all* types of resources in money terms will amount to:

$$E_{jactual}^{total} = \sum_{j=1}^m E_{jactual}.$$

14.7. The enterprise shall have the right to use funds received through resource economies for the following purposes:

- Funding research and design developments in the area of resource economies;
- Implementing technologies aimed at resource economies;
- Purchasing resource-efficient equipment, patents, and know-how;
- Paying bonuses to workers who achieved significant personal indicators with regard to implementation of resource-efficient technologies.

14.8. Workers will be awarded bonuses for economies of fuel and energy resources in accordance with the procedure stipulated by the “Provisions on material incentives to staff and individual employees of enterprises, organizations and institutions for economies of fuel and energy resources”, approved by the State Energy Efficiency Committee and the Economy Ministry of Ukraine, dated 06/21/00 # 47/127, and registered with the Justice Ministry of Ukraine on 07/10/00, registration # 405/4626.

O.O. Milner,

Head of Department for Reforming and Developing the Water and Wastewater Sector