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REPUBLIC OF MOLDOVA

TARIFF METHODOLOGY

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Prepared by

Hagler Bailly
1530 Wilson Boulevard
Suite 400
Arlington, VA 22209-2406
(703) 351-0300

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CONTENTS

I Executive Summary

II Tariff Methodology

III ANNEXES

A Calculation of Retail Tariffs

B Cost Data and Analysis

C An Evaluation of ANRE Cost and Tariff Analysis for 1998 (electric)

D ANRE Methodology and Notes with Tariff Schedules

TARIFF METHODOLOGY

I EXECUTIVE SUMMARY

During the period since ANRE (National Energy Regulatory Agency) was established by Government Resolution 767 dated August 17, 1998 until September 1998 ANRE has undertaken to adopt a tariff methodology and resulting prices in accordance with its pricing responsibilities Its first efforts in this regard have reflected the historic Soviet-period approach to commodity pricing which is at some distinct variance from the traditional cost-based methodologies usually employed by Western regulatory economists or public utility commissions

The fundamental differences in methodologies reflect

1 Soviet cash accounting which does not recognize accruals to match revenue and expense timing differences, and

2 The pervasive use of "normatives" to establish the appropriate cost components of the utility's cost of service

The principals who are associated in any way with the energy sector (including the Ministries of Economy and Finance, Department of Energy, etc) as well as the companies themselves and ANRE have no exposure or grounding in the most fundamental principles of normal Western accounting standards (often referred to as "IAS" or International Accounting Standards) A basic understanding of IAS is fundamental to determining the revenue requirements of any business, including regulated utilities

Moldova adopted as of January 1, 1998, National Accounting Standards which are compliant with IAS and also provide the basic opportunity for ANRE to introduce additional Regulatory Accounting Standards as required to supplement the more general national standards This is important progress, but training has just begun and the conversion process will take some time to produce reliable results As part of our work we have actively facilitated the training in Moldova of energy sector accountants

In the interim, Hagler Bailly has analyzed ANRE's computations, provided feedback to the Commissioners on our specific observations and analyzed separately the cost, production and sales data which underlies tariff formation This analysis compares historic data for 1996 and 1997 with the estimates used by ANRE in its tariff calculations This format facilitates the identification of "proforma" adjustments made to recorded data, either explicitly or implicitly, for the purpose of moving ANRE to adopt the usual standard of reasonableness applied in U S jurisdictions This U S approach calls for relying on actual accounts, but adjusting these amounts in anticipation of "known or measurable changes" which will better align future revenues under approved tariffs with the costs to be incurred by the utility

In addition there are several important issues which need to be addressed to align ANRE s current methodology with the market/license framework being implemented including

- Each type of licensee should be treated separately consistent with license conditions and the overall reformed industry framework,

- Licenses for the monopoly services require ANRE to adopt specific prices to be set forth in a license Annex for a fixed period of time ANRE's current approach to initiating the computation of these prices should be seen as a needed interim action during the transition period but should be replaced in the longer term by ANRE's review, adjustment (as decided after public hearings) and approval of tariff proposals submitted by the utilities themselves,

- Each licensee should be afforded its right to the recovery of its unique (and limited to reasonable) costs, which means that prices charged will be different for each separate electric distribution company (Disco),

- Generator prices should be a matter of bi-lateral contracts between each combined heat and power plant (CHP) and a Disco (Moldtranselectro for the interim period), again we may need ANRE to calculate these prices in current circumstances, but their longer term role is limited to the approval of prices negotiated and agreed by the parties directly involved,

- The retail tariff formula embedded in the regulated tariff supply (RTS) license needs to be acknowledged by ANRE (they have agreed to it) and implemented This means that costs of power supply (PP, or purchased power, in the formula) are dynamic and are passed through (with reconciliation "R") over time ANRE seems most comfortable with quarterly, rather than more frequent changes in tariffs (annual tariffs are not acceptable, due to the significance of seasonal cost variations),

- The LVN and RTS provisions for recognition of differential pricing by service voltage levels and customer classes needs to be reflected in retail tariffs

Hagler Bailly's strategy to deal with the complex issues of moving from the traditional methods of determining prices to a process clearly routed in a transparent assessment of actual costs was to produce calculations for each utility based on booked costs plus appropriate adjustments (ultimately to be determined by ANRE in transparent fashion) These computations would then be reviewed with ANRE to obtain their acceptance, "buy-in" to the process and, ultimately the adoption of a revised "Methodology" consistent with the new approach

4

In addition we produced the attached paper on appropriate tariff methodologies which reflects the scope of the fundamental concepts which we have discussed with the Commissioners and staff during the course of this task

This work serves two important purposes

(1) It provides comfort to potential private investors and

(2) It provides a rational basis for pricing generally, which should be strengthened by and be consistent with, the adoption of new national accounting standards in Moldova

It is important that the tariff methodology adopted by ANRE be restricted to setting forth principles of general applicability (among entities and over time) rather than a rote formula which requires no thinking (aka "normatives") However there also needs to be as much general descriptive and procedural detail as we can reasonably include for each element in the cost of service

At the conclusion of this task, ANRE was presented with the attached example of how to calculate tariffs in accordance with the methodology inherent in the system of licenses adopted by the Commission This model has been difficult to create because of the extremely arduous task of obtaining the industry data required for this purpose Now however, this model demonstrates to ANRE, using the data with which it is most familiar the process of translating accounting and operating data into specific prices for each licensee An extremely important element of this process is the quarterly adjustment of tariffs for actual costs of energy production, including any accrued reconciliation between actual revenues received and related expenses

ANRE has a basic understanding, and acceptance, of the principles which underlie a correct calculation of energy prices based on a determination of the utility's revenue requirements, including a reasonable return on its capital committed to utility service What it requires now is an opportunity to explore these concepts in concrete, applied fashion and develop an understanding in depth of the essential variables and key decisions required to implement these principles for the benefit of Moldova

TARIFF METHODOLOGY

CONTENTS

1 General Principles *5*

2 Major Components of Cost of Service *5*

3 Functional Components Of The Electric Service *6*

4 Cost Of Service Principles *7*

5 Rate Base (Assets Devoted To The Business) Determination *8*

5 1 Plant In Service **8**

5 2 Plant Additions **9**

5 3 Construction Work In Progress And Plant Held For Future Use **9**

5 4 Working Capital Allowance **9**

6 Rate of Return Calculations *9*

6 1 Basic principles of a fair rate of return **9**

6 2 Components of Capital **10**

6 3 Example of overall cost of capital computation **12**

6 4 Estimation of Equity Return **13**

6 4 1 Comparable earnings method 13

6 4 2 Price-Earnings (P/E) Ratio method 14

6 4 3 Discounted Cash-flow model (DCF) 14

6 4 4 Capital Asset Pricing Model (CAPM) 14

6 5 Applicability to Moldova **16**

7 Taxes (VAT, income, others) *16*

7 1 Valued-added tax **16**

7 2 Income taxes **17**

8 Depreciation *17*

9 Operating and Maintenance Expenses *18*

10 Tariff Design *20*

10 1 Production **20**

10 2 Transmission And Dispatch **23**

10 3 Distribution And Supply (Customer Service) **24**

11 Class Cost Of Service Study And Allocation Methods *25*

12 Summary *26*

1 General Principles

- ANRE must consider the financial integrity of the utility and the customer right to a reliable service at reasonable rates as the primary goals of regulation Its actions must balance these two goals

- Utility incurs costs in providing customer service and is entitled to the opportunity to recover these costs

- The burden to prove that costs are reasonably and prudently incurred lies with the utility The ANRE has a right to challenge these costs and disallow imprudent investments and costs

- The ratemaking process should produce rates such that when applied to billing kwh sales will result in revenues that are sufficient to cover costs including a reasonable return (profit) on the invested funds by the enterprise This is the fundamental traditional ratemaking approach and rate structures and procedures should be consistent with this principle

- Practical considerations such as ease of billing, customer understanding, available technologies etc may impact full application of the above principles

- Legal considerations eg statutory authority, enabling legislation and laws of the RoM will affect the ratemaking procedures For example, the statute may permit only used and useful investment (rate base), original cost vs fair value etc

2 Major Components of Cost of Service

- Operations and maintenance expenses including fuel and purchased power,
- Depreciation and amortization,
- Taxes other than income taxes,
- Income taxes,
- Return on investment (profit) requirement,

The sum of these components produces total cost of service, which is then compared to the annual revenues produced from billing kWh/kWh sales Rates are then adjusted to equalize revenues to the total costs for the annual period called the Test Year

3 Functional Components Of The Electric Service

Basic functions in providing electric service are

a generation or purchased power,

b transmission and dispatch which includes installation and operation of high-voltage lines,

c distribution and delivery of service, and

d customer-related functions including meter installation maintenance and meter reading, billing, collections, customer services etc

Under an unbundled electric service structure as contemplated in Moldova separate entities may provide each of the service component Further, each component may be owned by private investors whether publicly owned eg stockholders or by a privately owned companies The ownership structure should be immaterial to the cost of service and tariff application

Presently it is proposed that the transmission and dispatch functions shall be owned by the government entity, Moldtranselectro (MTE) for the foreseeable future

Until recently (November 1997) the single government-owned enterprise Moldenergo operated the entire electric system under what is known as vertically integrated system Since November, the Moldenergo has been broken up into five regional distribution systems, Moldtranselectro, and several generation companies under a joint-stock company structure In June 1998 licenses were issued to the distribution companies and to the CHPs and in August license was issued to MTE In addition licenses have been issued to several independent suppliers and wholesalers to provide unregulated power into the Moldova system

It is GoM goal to sell all systems except the MTE to private investors Since the entities may be owned by separate investors or combine ownership of one or more entities, the cost of service and tariff structure must be developed for each separate entity As the services shall be offered under a monopoly structure, National Energy Regulatory Agency (ANRE) has been established to regulate tariffs and terms of service offered by the licensees Eventually it is expected that the generation function shall be opened up to full competition and only monopoly services shall be regulated This is similar structure as is currently being contemplated in the U S All entities and functions except the Transm & Dispatch shall be privatized although there is no reason why this function could not as well be performed by a private entity, in the future

4 Cost Of Service Principles

As in any business enterprise, pricing a product or service must take into consideration all relevant costs of doing business including recovery of the investments in the enterprise and a reasonable return on those investments For the electric systems characterized by high level of plant and equipment there are two major types of cost components a) Fixed costs and b) Variable costs

The fixed costs are the costs of purchasing, building and installing equipment such as power generation facilities and associated plant, transmission and distribution lines meters and controls, office buildings and similar facilities necessary in conduct of the business Typically equipment and plant are assets with long lives and provide service over a number of years The fixed costs are therefore annualized expenses such that over the useful lives of the assets the expenses will fully recover the total investments This is accomplished through an annual depreciation and amortization mechanism In addition there is associated a return on the balance of the investment funds used in acquisition of the assets This is analogous to lending money to a borrower The funds are loaned to an investor or a financial institution for a fixed period of maturity The lender would then demand that his/her funds be returned to him over the period of maturity along with the interest on the outstanding balances However funds may be of two kinds from equity investors and lenders These will be discussed later The fixed costs have two components, return of assets (depreciation and amortization) and return on assets (i e interest or profit margin on the investment) These costs are called fixed because they are primarily incurred in acquisition of fixed assets (plant, equipment) and do not generally vary with the level of output from the plants in any given period For example the annual depreciation expense must be recovered regardless of whether or how much power a plant produces in a given year This method for recovery of fixed costs is defined as Rate Base/ Rate of Return method For the purpose of rate making the return or profit is treated as a cost of service

Variable costs are the annualized expenses incurred by the enterprise in providing operation and maintenance of the plant and equipment, purchase of fuel, material and supplies, wages and salaries of employees including benefits, payments for contractual services, licensing fees and certain taxes Generally these expenses vary with the level of output (kWh) in a given period

The combined fixed costs and variable costs are summed up into a Revenue Requirements formula,

$$Rev\ Req = [Oper\ \&\ maint\ exp + Depreciation + other\ taxes] + [Rate\ Base \times Rate\ of\ return/(1 - Tax\ rate)]$$

The RR formula can be computed for each entity in the chain of electric supply The final customer tariff will be the sum of all the individual RR for each service supplied to the customers The revenue requirements are compared with the proforma revenue expected

from existing tariffs to determine the revenue deficiency or surplus The tariffs are then adjusted to match the revenue requirements with the proforma revenues More detailed calculation of each cost component is explained and illustrated in this report

5 Rate Base (Assets Devoted To The Business) Determination

Rate base represents the investor supplied plant and equipment required in providing service to the customers The rate of return calculated from the cost of capital formula is applied to this rate base to determine the return component in the RR calculation Rate base is typically the booked original cost of acquiring the facilities less depreciation taken In some cases fair market method may be employed This may include replacement cost method marginal or incremental costs (LRIC) etc

The regulator s statutory authority may dictate what method can be employed in determining the rate base Other criteria for including items in the rate base are the 'used and useful" "prudent investment", "stranded investments" etc Other items that may be considered in the rate base are Construction Work In Progress (CWIP) plant Held for future use, cancelled projects, abandoned assets due to obsolescence etc Typically the CWIP and plant held for future use is not included in the current rate base calculation but is rather capitalized through AFDC (Allowance for Funds During Construction) with interest (return) component for future inclusion when the construction is complete and the plant becomes 'used and useful' Exclusion of CWIP from the current rate base can seriously affect the cash-flow for operations and increase the borrowing costs The ANRE may elaborate a policy on this and consider a partial CWIP in the current rate base calculations Plant held for future use may be included in the rate base if the company can demonstrate that its use in near future is imminent This may include for example acquisition of land for facility expansion

Generally commissions have considerable latitude in adopting these concepts for rate base treatment, subject to the statutory framework It is important that ANRE adopt consistent and uniform approach and establish policy on these issues Typical items included in the rate base are

5 1 Plant In Service

This is the net book value of the plant and equipment using original costs less accumulated depreciation reserves In the case of acquisition by a new owner, the rate base shall be determined by the acquisition price or the fair market value (FMV) The difference between acquisition costs and FMV, if necessary and reasonable may be allowed as amortization expense over a period deemed reasonable by the regulator In the event Moldovan electric system is privatized, the rate base treatment of acquisition adjustment could be a seriously debated issue The potential investor shall demand up front guarantees that the entire purchase price of assets will receive a full rate base treatment In case of facilities serving joint functions e g CHP's serving heating and electric customers, an acceptable allocation method will have to be designed to minimize cross subsidies between consumer types The accounting system should prescribe how

the various plant accounts are booked and maintained so as to ease their verification for ratemaking, taxes and reporting purposes

5 2 Plant Additions

From time to time utility shall add equipment and plant to its rate base which must be recognized This could include either additions of capacity or improvements to the facility environmental and safety-related items, large maintenance items etc

5 3 Construction Work In Progress And Plant Held For Future Use

As discussed above these items may be included in the rate base depending on the circumstances, recognizing the cash flows, reasonable and imminent use of the proposed equipment etc Guidelines on these should be elaborated by ANRE

5 4 Working Capital Allowance

This allowance represents the day to day cash needs of the company to maintain fuel inventories material and supplies, prepayments and advances of insurance taxes time lags between services rendered and payments received etc It is a necessary part of doing business and must be recognized for ratemaking purposes Theoretically it represents the difference between current assets and current liabilities Measurements of working capital allowances can be quite controversial and debatable issue For example how much fuel inventories should a power plant carry in order to conduct its operations in a reasonable and non-disruptive manner In Moldova there have been established normatives that have been historically followed ANRE seems to continue this practice It is recommended that ANRE consider actual utility operations, customer bill paying habits, and cash needs of the licensee and adopt a practical approach There are number of methodologies that can be utilized to estimate working capital and cash allowances These include balance sheet method, lead-lag studies, 45- day standard formula etc Further elaboration of these methods can be provided to ANRE However the immediate need is to at least conceptually recognize this expense item

6 Rate of Return Calculations

An important component of ratemaking formula is the estimation of the return that an investor should receive for investment and risk that he incurs in providing utility service A fair and reasonable return will enable the licensee to attract investors and lenders to provide funds for conduct of the business Considerable judgement must be used in estimating the equity component of the return as will be explained here

6 1 Basic principles of a fair rate of return

Generally the rate of return estimation should take into consideration the particular circumstances of the licensee, market conditions, regulatory and legal authority etc

Some of the relevant criteria include

a **Maintain financial soundness of the business** For example if the return offered is inadequate, the utility may be unable to issue new securities or may be forced to issue new securities at below book value thereby diluting the value of its present investors This is considered negative for the financial integrity of the on-going business This will increase cost of capital, which will eventually result in higher tariffs or poor service On the other hand the licensee has the obligation for efficient management of his capital Inefficient use of capital resources may be punished by lowering the authorized return

b **Ability to attract new capital** Since the licensee must continually raise new capital the return it can offer must be sufficient and reasonable to attract new investors and lenders who have other opportunities to invest their funds

c **Comparable earnings criteria** Returns earned by other business in the same general environment with similar risks is an important factor in determining the licensees authorized return Credit maintenance and comparable earnings are two basic principles of return estimation Recognition of risks is a fundamental consideration in evaluation of returns and typically the return estimation is reduced to an exercise in the evaluation of the risks of the enterprise Several sophisticated models and theories are employed to evaluate risks as will be discussed later

6 2 Components of Capital

All enterprises employ different forms of capital in proportions depending on the nature of the business, leverage objectives and cost effectiveness

Typically the capital consists of the following components

a) **Long-term debt** These are the funds borrowed by the enterprise (secured and unsecured) for the long term investment in equipment A secured debt such as mortgage bond pledges the assets of the enterprise while unsecured does not The cost of the latter may be slightly higher or not at all Under debt capital the enterprise would guarantee a fixed or variable interest rate and a principal payments under a pre-agreed schedule This is called the 'debt service' The interest rate is determined by the prevailing market conditions and the credit ratings of the enterprise Independent agencies such as Moodys, S&P, Fitch provide credit ratings for a given debt security Typically the interest rates are pegged to an index such as Prime or Libor plus a certain premium basis points determined by the creditworthiness of the borrower For ratemaking purpose, the interest costs are treated as straight pass through in cost of capital computations Maturity of long-term debt may be 10 to 30 years Non-payment of interest or principal according to schedule can result in default and bankruptcy proceedings of the enterprise Typically interest expenses are deductible for income tax purposes This effectively reduces the cost of borrowing and thus lower tariffs

Besides the long-term debt the enterprise may also issue short-term (1 to 2 year) debt and bank loans to finance its working capital and seasonal cash management

b) **Preferred and preference stock** This security has characteristics of debt and equity Usually the dividend rate is fixed at the time of issuance and there are often redemption or call features similar to debt Also holders of the preferred stock have certain rights similar to debt holders in the event of default For balance sheet evaluation and tax purposes the preferred stock is treated as equity The preferred security is junior to the debt and consequently demands higher return than debt but is superior to common equity Often preferred stock is convertible to common equity under the issuing terms Utilities are most frequent issuers of the preferred stock as it offers lower cost capital opportunities Further since it is treated as equity for financial and credit reporting purposes, it shows the utility in a better light from the leverage point of view However, non-deductiblity of interest costs makes it less desirable form of capital

c) **Common Equity** This form of capital is the risk capital of the owners of the enterprise Under its terms no dividend payments are guaranteed and in the event of default or bankruptcy the investors in common equity have last call on the company assets The components of the common equity capital include 1) original capital or new shares issued, called paid-in capital and 2) the retained earnings which represents the earnings of the enterprise retained (plowed back) in the business, after payment of dividends, for expansion and growth of the business The dividend rate is at the discretion of the management and can be increased or decreased at the will of the management Common equity represents the net worth of the enterprise The return to the investors comes in the form of dividends and the future growth in the value of the business There is no upward ceiling on how much return the investor may earn just as there is no downward floor Due to higher risks the overall return on common equity expected is higher than on debt or the preferred stock

Capital Structure is the combined capital of different types employed to finance the assets of the enterprise The percentages of debt and equity in the total capital determine leverage of the enterprise Generally higher leverage i e debt/total capital is associated with higher perceived financial risk Various other indicators of risk are also employed such as coverage ratios When a firm employs higher debt capital its coverage drops creating higher financial risk Usually the lenders would demand certain minimum standards of leverage and coverage ratios to loan new money to the enterprise
In general the rate base and total capitalization are not equal This is because the utility may have unregulated assets, regulatory disallowances, deferred taxes etc For ratemaking purposes the overall cost of capital is calculated from the capital structure formula and then this overall cost is applied to the allowable rate base

6 3 Example of overall cost of capital computation

Type of capital	proportion	rate	component of return
Long-term debt	60%	08	4 8
Preferred stock	5	10	0 5
Common equity	35	12	4 2
Overall Return			9 5 %

The overall cost of capital is then applied to the rate base calculations as shown in the above RR formula

Other forms of financing called 'off-balance sheet financing' including lease financing sale of receivables, are also employed to raise capital But these are not explicitly used in the return calculations above They are amortized and passed through as expenses

As mentioned above the debt component of return is relatively easy to compute since the actual interest costs incurred are includible in rates In some instances the regulator mav challenge the prudency and reasonableness of the debt costs Typically state and federal energy regulators have security issuance authority and therefore must pre-approve each security, its terms etc Thus in ratemaking proceeding, the debt cost is not a surprise Some states require that the utility engage in tender bids for all debt issuances to ensure that it is an open process and debt is issued at least cost Debt may be issued to public or by private placement based on cost effectiveness Basically the total annual interest costs from each debt issue is summed up and divided by the total outstanding debt at the time Adjustments are made for any redemptions or principal payments during the test year The average interest rate is the ratio of these two numbers Similar calculation is done for the preferred stock costs

Even though the utility knows the exact book value of its equity, the real judgement is applied in estimating the cost of equity as it is a function of risks, market conditions, equity ratio in the capital, growth prospects of the business and the analysts' perception and biases This is one of the most controversial issues in utility ratemaking Typically utilities hire outside experts to testify on the rate of return issues in order to convey the impression of an unbiased third party opinion

Another aspect of return calculation involves the capital structure assumptions As the above calculation shows the overall rate of return is affected by the ratios of different capital components in the total mix Higher equity ratio will result in higher overall cost and vice-versa The regulator would like to see lower equity ratio i e higher leverage On the other hand the utility wants to claim higher equity ratio to maximize its overall return Its argument being that lower equity results in higher interest costs and detrimental to the

14

customer Ultimately the regulator must determine the proper balance between equity and debt ratio In most cases the actual capital structure is accepted In some cases a theoretical or target capital structure is used based on comparable companies in similar business Capital structure issue becomes more complicated when the utility is a subsidiary of a parent and employs double leverage to maximize its return

6 4 Estimation of Equity Return

Analysts employ a number of theories and methods to estimate the equity returns They all require a number of assumptions and projection about the economic and market conditions, future growth, and investor perception of the utility industry in general and the enterprise in particular

A basic assumption in cost of equity estimation is that it is forward looking approach In other words we should look at the current cost of capital rather than historic The reason being that it is necessary to attract new capital Also since there are no guaranteed dividends the investors expect to receive returns on the basis of prevailing market conditions It should also be emphasized that the regulatory approach in the US only guarantees an opportunity to earn the authorised return It does not however guarantee that the authorized return must be earned by the utility The basic premesis of estimating common equity return are

- should be forward looking
- represents the opportunity cost (capital attraction)
- recognises the investment risk and
- prevailing market conditions

6 4 1 Comparable earnings method

This has been the traditional method until recently, when more quantitative and analytical methods were developed in 1960s Under this method, the earnings of several utilities with similar operational and risk characteristics, size etc are compared for the recent periods Average actual earned or authorized returns was then considered as reasonable benchmark for the utility under consideration

Although this method worked for a number of years there were several problems with it First there was always controversy as to group of utilities deemed to be comparable Each analyst could reflect its bias in picking the utilities in the group Second there was the circulatory argument because only the utilities were being compared to each other Thus higher return of a utility in the group would affect the group as a whole which would in turn see further upward adjustment in its return and so on Sometimes this was resolved by considering comparable non-utility groups Also the comparable earnings method only looked at historic results and did not recognize future circumstances Currently this method is only used to supplement or as a reasonableness test while other models are considered as primary

6 4 2 Price-Earnings (P/E) Ratio method

This method is based on market behavior and the assumptions that the market price adjusts itself in relation to its earnings in order to maintain a constant price-earnings ratio and the market price would eventually converge to its book value The P/E ratios are calculated for comparable utilities for a number of recent periods The ratios are then applied to the market price to estimate the return The value is adjusted for floatation and issuance costs The method had great appeal when the P/E ratios were low and resulted in higher expected returns (a P/E of 7 suggests 15 5% return) Also this method was more applicable when the P/E ratios were stable With recent trends in utility owning non-utility assets, the P/E ratios do not reflect pure utility characteristics There is also controversy as to which periods to choose as stock prices react to different events It is also observed that the market prices react more to the future expected earnings and the investor perceptions than to the actual historic earnings Thus, this method has lost its popularity

6 4 3 Discounted Cash-flow model (DCF)

This method is forward looking and explicitly recognizes that the future expected stream of earnings is a primary determinant of the market price of a utility stock The basic financial theory behind this method is that the current market price is the present value of the future expected stream of cash-flows of the enterprise The discount rate used in deriving the present value represents the opportunity or expected return It is assumed that the market price will adjusts itself to book value in line with the authorized return This is represented by the formula,

$k = D/P + g$, where

k = current cost of common equity (return)
D= dividend rate per share
P = current market price
g = assumed growth rate of the dividend

As the current market price of the stock and the current dividend rate is known, the estimate of cost of capital then reduces to estimating the expected dividend growth rate of the company There are various variations of this model eg constant growth rate vs variable growth etc This method became highly popular in 70s and still one of the principal theoretical models It is generally used in combination with other methods

6 4 4 Capital Asset Pricing Model (CAPM)

The CAPM model compares the market returns of the given security with the returns from other investments when adjusted for relative risk Emphasis is that the investor will adjust his return requirement to compensate for the risk in the particular security in comparison to the market risks

The risk is measured by the relative volatility of the security stock in the market in relation to the market as a whole This index of volatility is called the beta' Thus analysis under the CAPM model is reduced to determining the beta factor In order to analyze beta the risk factors can be broken down in three components a) pure rent/ return, b) inflation component and c) risk adjustment factor Typically the first two components can be determined in the US by looking at the returns available for the US-issued government securities They are considered risk free investments as the full faith and credit of the US government guarantees the return of principal and the interest In the case of other sovereign countries an evaluation will have to be made as to the riskiness of their securities A sovereign risk component will have to be evaluated

The risk component of return in turn is further divided into two sub-components a) systemic risk, which represents risk or volatility of the market as a whole This recognizes that all securities in the market face certain volatility and price fluctuations The average variability in the market as a whole is considered a systematic risk The relative risk of the given security or the industry it represents is called 'unsystematic risk' Usually the investor will develop a diversified portfolio of investments such that the individual risks in stocks (up and down) will cancel each other out What then remains is the systematic risk of the portfolio in relation to the market as a whole The 'beta factor' for the portfolio is then estimated which determines the relative variability of the portfolio It is expressed as an index between –1 to +1 The market as a whole has a beta of 1 The model is expressed as

$Rp = Rf + b (Rm - Rf)$ where,

Rp = expected return of the security or the portfolio

Rf = risk-free return
Rm = market rate of return
b = beta factor for the specific portfolio or the security

Example

Assume average market return is 12% , risk-free return is 7% and the portfolio beta is 0 8, then the expected return is $Rp = 7 + 0\ 8 (12 - 5) = 7 + 5\ 6 = 12\ 6\ \%$

There are a host of other analytical techniques for estimating cost of common equity Generally the commissions would adopt one primary model and then use combination of other models to test for reasonableness Some jurisdictions including Federal Energy Regulatory Commission (FERC) in the past have adopted benchmark rate of return approach This was to be the guideline and standard applicable to all utilities unless the utility can prove that the benchmark would not be applicable in its situation Typically the benchmark returns are not workable as each utility believes that it is unique and proposes its own methodology and analysis

The regulators also have the authority to tie the return component to the management performance Frequently the regulators will adjust the rate of return to the quality of service, generation unit availability, plant performance etc Typically during the rate case the commission would establish standards against which the actual performance is measured on say annual basis The rate of return and revenue requirements are then adjusted accordingly

6 5 Applicability to Moldova

Although the models described above are widely applied in the US they will have only limited applicability in ratemaking process in country like Moldova for a number of reasons First there is no historic experience and data as the state-owned energy industry had totally internal accounting and financial structure Second the analytical models rely on efficient securities markets, both for equity and debt etc This is totally lacking in Moldova For example there is no measure of riskless return here as there is no tradition of corporate or Govt - issued securities to the general public or an established market If the Moldova s energy systems are privatized the investors will develop their own estimates based on experience in similar projects in developing countries and estimates of sovereign risks for specific projects Initially it seems reasonable to expect that the authorized rates of return will be established on a negotiated basis with appropriate guarantees However it is important that ANRE and the staff should be familiar and knowledgeable about different analytical techniques so as to facilitate discussions and negotiations with enterprises and potential investors

7 Taxes (VAT, income, others)

The revenue requirement component must include all taxes that are mandated and necessary for conduct of the business Licensee may be responsible for federal VAT taxes, local property and other taxes and finally income taxes on earned return or profits The regulator must recognize and allow, lei for lei, all taxes as recoverable expenses It is the obligation of the enterprise however to organize and conduct its business in a manner so as to minimize its tax liability Some of the methods to accomplish this include effective use of tax laws, deferring tax payments, recognizing and accruing obligations as permitted by financial and accounting standards etc

7 1 Valued-added tax

It is our understanding that the current VAT laws exempt the residential users from VAT This would generate substantial VAT credits for the distribution companies since they pay the VAT at the point of power purchase on the full amount, part of which is later sold to the residential users Credits generated by this cannot be offset against income taxes or other obligations to the government but can only be offset against future VAT liability How to receive this refund from the government is an issue, which has been raised by several Discos in Moldova Although it is a matter not directly within the jurisdiction of the ANRE, it must assist the utilities in supporting their case before the government

7 2 Income taxes

Calculation of income tax allowance is performed by first calculating the net income (profit) that is deemed reasonable for the utility This is done as explained above by applying the income tax factor to the net overall rate of return This gross overall return is then multiplied by the plant rate base By including this gross amount in the tariffs the utility is compensated for its income tax obligations Typically the utility will prepare this calculation and the regulatory expert staff would verify the books and the calculations Generally the utility may maintain different books for tax purpose than for regulatory purpose For example for tax purpose the law may allow an accelerated depreciation either by assuming shorter life or front-loaded, e g declining balance This will generate larger depreciation expense and thus tax savings for the enterprise in the earlier years of the asset life On the other hand for regulatory purpose the asset may be depreciated slowly (longer life) or on straight line basis Under regulatory scheme the tax savings generated are typically passed onto the customers in the form of a zero cost capital in computing the overall rate of return

8 Depreciation

This is calculated by estimating the useful lives of different plant, equipment and capital items The plant is classified according to the accounting rules and the type of plant functional activity etc Typically the utility will maintain detailed property records for all capital expenditures for new plant and subsequent additions Each group of plant is analyzed for the service life, net salvage value, cost of removal etc to calculate the effective depreciation rate for that plant account Under the whole life method depreciation expense must cover invested capital, recognize credit for the salvage and recover cost of removal Under the remaining life method an additional adjustment is made for the difference between the theoretical reserves and the book reserves Most commissions use whole life method combined with straight-line method of recovery is used for tariff regulation The weighted average of all the depreciation rates by account is then approved by the regulator This composite depreciation rate (% of plant) is then applied to the actual rate base authorized to arrive at the total annual depreciation expenses Typically the depreciation studies are performed every three or four years to recognize any changes in parameters, plant additions etc A key step and a pre-requisite in this regard is the prescription by the regulator of appropriate plant accounting standard that is uniformly utilized by all licensees The actual annual depreciation expenses are accumulated in the depreciation reserve account and reconciled against the net plant balances The initial book values minus the accumulated reserves result in net book value and is rate base on which return is earned A separate record should be maintained for the intangible plant, franchise fees and amortization schedules

9 Operating and Maintenance Expenses

Applicable costs for O & M expenses shall depend on the type of operation e g generation, purchase power, transmission, distribution etc

Power plant or production operation such as CHP-2 may include the following expenses

A Operation
- supervision and engineering
- fuel
- supplies and expenses incl wages
- steam from other sources
- credits from sale of steam / heat
- electric plant operation incl Labor and wages
- rents
- misc steam power expenses, incl Water and water treatment

B Maintenance
- maintenance supervision and engineering
- maintenance of structures
- maintenance of boiler plant
- maintenance of electric plant
- maintenance of misc steam plant

For Hydraulic plants the additional O & M items shall include water for power rents, maintenance of dams reservoirs and waterways and other costs directly related to hydro operation

For transmission companies,

A Operation
- Operation supervision and engineering
- load dispatching
- station expenses
- overhead lines
- underground lines
- transmission of electricity by others
- misc transmission expenses
- rents
- etc

B Maintenance
- maintenance supervision and engineering
- maintenance of structures
- maintenance of station equipment
- maintenance of overhead lines

- maintenance of underground lines
- maintenance of misc trans plan

For distribution system the expense may be categorized as

- Operation supervision and engineering
- station expenses
- overhead and underground line expenses
- street lighting and signal expenses
- meter expenses
- customer installations
- misc expenses
- rents

In the maintenance similar expense categories may be used as operation

In addition there shall be customer account expenses including
- supervision
- meter reading
- customer records and collection expenses
- uncollectible accounts
- misc customer accounts expenses
- customer service and informational expenses (typically this is a separate category of expenses)

Other expenses common to all types of functions are

Sales expenses (Adver , Demonstr and Selling, Misc sales expenses)
Administrative and General which include A & G salaries, office supplies , outside services, property insurance, injuries and damages, employee benefits and pension, franchise , license
Fees and ANRE expenses, misc general, maintenance of general plant etc

Other adjustments to revenues and costs may be necessary, for example the non-utility revenues, expenses etc shall need to be properly accounted for

In addition, for the transmission company (MTE) and distribution Discos there will be the Purchased Power costs, other power supply costs and related expenses Each power cost, average tariff and quantity shall be identified by the source, by month etc

10 Tariff procedures applicable to Moldova

All regulated power supply is currently purchased and sold through the state-owned Moldtranselectro (MTE) In future this should change and each Disco or large users could purchase power from independent sources Under the current regime, the

generation companies CHPs and Hydro sell all their power to MTE pursuant to a bilateral annual contract The terms of the contract and tariffs are approved by the ANRE In reality the tariffs are initially calculated by ANRE which forms the basis for the bilateral contracts Therefore the production-facility licensees should provide complete and detailed production and cost data, including the actual historic data budget and plan data any extraordinary expenditures or abnormal events and provide all the supporting work papers Licensees should develop the cost and tariff calculations Complete and detailed information made timely available to ANRE and other interested parties is an essential element of regulation and its importance cannot be overemphasized

An important decision for CHPs is how to allocate the fuel and other operational costs between the electric and heating business Although there are several technical guidelines and allocation methods, as in any joint cost production there is considerable judgement and business considerations that come into play The primary criteria being that a) it recovers the total costs of the enterprise, b) preserves the market for all its products and services and c) does not cause undue hardship or customer dissatisfaction For the regulated service as here, the regulator s concurrence is an important factor and hurdle Although regulation is a formal legal procedure it is essentially a negotiating process and should be approached with flexibility and willingness to compromise The utility management should display innovation, aggressiveness, efficiency and ability to take risks, for the benefit of its customer and shareholder Further it should be recognized that the regulator's job is not free from political and social pressures

10 Tariff Design

10 1 Production

In brief, the CHPs should take the following steps to develop costs and tariffs

a Develop detailed monthly budgets for the year for which the tariffs are to be designed, called the test year The starting point for the budget would be the forecast of the net energy and heat that CHP can deliver on an economic basis and for which there are willing buyers This is achieved through discussions with the current and potential buyers The gross output is then derived by including the station use The cost of this output is calculated for various components The itemized cost details shall include all fixed and variable expenses identified above It is assumed that the actual cost data for the previous years shall form the basis for developing the budget The presentation to ANRE should include side by side the actual data for the previous years and a detailed explanation of changes and their reasons, from the historic performance As a part of the submission, it should include work papers, computations and the annual reports on the operations (income statements, balance sheets, proforma revenues, fuel reports etc)

b Provide detailed cost analysis for allocation of heat and electric business with an explanation of the basis for the separation of costs between the two businesses If

required a further allocation of steam and hot water should be provided with an explanation for the separation Typically the demand forecast for the various outputs would be used to allocate the fuel The non-fuel expenses would be allocated on the basis of the fuel However the equipment or functions not required for that business would not be allocated For example the electric equipment switchyard transformers etc would only be directly assigned to the electric service The steam or hot water delivery system would be directly assigned to the heating system To the extent practicable the specific costs should be assigned consistent with the nature of the operation

c Provide copies of the proposed or completed contracts with the fuel suppliers and other vendors

d If CHP were a private entity the next step in the process would be to calculate the annual revenue requirements, which means all the operating costs and the fixed costs including the depreciation return and income taxes

e Calculate prices and tariffs for each service that would be necessary to recover the total cost of service and revenue requirements

Although the current CHP tariffs are a single uniform kWh charge, it is more efficient to apply a two part capacity and energy tariff The capacity tariff shall cover the fixed costs, which have to be recovered regardless of the output The energy charge will cover the variable expenses primarily fuel incurred in production of energy The advantage of the two-part tariff is that the utility can recover its fixed costs incurred in making the energy and capacity available to the customer The energy charges are collected only if the customer receives any kWh Such an arrangement is the most cost efficient approach For example in any give hour or period the customer may find an opportunity to purchase cheaper kWh from another source and avoid the CHP power From the CHP's point, it would be indifferent whether it actually delivers the kWh as long as the fixed charges are recovered Theoretically the savings in fuel and other variable O&M expenses shall exactly offset the loss of energy revenues From the national energy efficiency perspective this is most important as it prevents uneconomic use of the energy resources The capacity charges can be designed as per kWh or per kWh of the capacity made available to a customer The capacity charge per month can also be designed as fixed 12- monthly charges However when there are multiple customers taking power from the same facility, a per kWh charge is more appropriate It is determined by dividing the total monthly fixed expenses by the maximum Mw made available to the customers during a month In calculating the capacity charges an adjustment must be made for the periods when the unit is unavailable Often the seller may have obligation to provide replacement power if so specified in the terms of the contract A two-part tariff is quite typical of the power purchase contracts Further refinements to such tariffs are made by including seasonal or diurnal energy or capacity rates in order to reflect the actual cost structure of the power plant operation

An important and critical feature of the power purchase contract is the provision of a fuel adjustment clause Since fuel is the most significant component of the power generation and since the company has little control over the fuel prices the utility typically does not assume the risk of fuel price fluctuations Therefore any power purchase contracts must provide that the energy charges in the tariff shall be adjusted monthly or quarterly as the fuel input prices or the actual cost of production changes

There are a number of ways such a fuel cost recovery clause can be designed It should be recognized that a fuel clause protects both the company and the customer as the prices of fuel fluctuate in both directions Application of the adjustment clause may be worked out with the mutual convenience of the seller and the purchaser For most long-term take or pay contracts the fuel clauses are a common feature In some instances, for example when the power is supplied in a competitive spot market the fuel clauses are not necessary since the market prices are determined on a real time basis and there would be no room for fuel adjustment clauses The seller may also assume the fuel risk and forgo the fuel clause if it believes that it can absorb the risks and achieve benefits of the incentives

f Power purchase contracts with Discos Moldtranselectro, Thermocom RAPDET Direct access customers etc should be presented to the ANRE for their approval Generally ANRE would hold a public hearing on the application by CHPs The company should be prepared to defend its proposal by providing expert testimony or additional information as requested by ANRE Once approved the contract becomes effective The purchasers i e Discos MTE etc then is eligible to recover these power costs from its own customers Further under the fuel adjustment clause the charges for fuel price changes will be automatically reflected in the tariffs per the contract terms without any further approval from the ANRE

g In addition to the fuel adjustment clause, the power contract may also provide for the annual cost changes indexed to general price changes, inflation etc This may avoid frequent rate proceedings and provide a stable tariff environment

It should be recognized that even though the CHP tariffs are regulated by ANRE, primarily it is a bilateral contract directly negotiated by two independent, hopefully private, entities They possess sufficient skills and incentives to protect their respective interests The task of verification and audit of cost data should be left to the contracting parties In the long run, ANRE role should be minimal and approval process becomes routine and perfunctory

h Collections and receivables Generally the tariffs approved by ANRE are designed to provide an opportunity to recover the supplier costs It is not however the responsibility of the ANRE to ensure or guarantee that the seller indeed collects the revenues from the buyers It is essentially a private contract between two parties The contract terms should provide for the late payment fees, service termination for non-pay, legal recourse for collection, dispute resolution, barter payments etc In other

words it should be a businesslike arrangement and not rely on government or regulatory assistance or bailout

10 2 Transmission And Dispatch

The tariff development process for the transmission entity Moldtranselectro will be essentially similar As mentioned earlier, presently the MTE is responsible for all power purchase and delivery to the distribution companies, Discos It is the sole buyer of all the regulated power output from the domestic facilities and arranges for and enter into purchased power contracts with Ukraine Moldovagrass sugar factories etc in turn MTE has contracts with each disco for transmission and delivery of power into their systems MTE also performs system operation and dispatch functions for the entire Moldova system As has been mentioned elsewhere, in the near future the generation business will be open to competition and discos and even large customers will make their own arrangements for power purchase and MTE would simply dispatch and transmit the power With that in mind, the relevant costs of MTE are a) the fixed expenses of owning the transmission system including the substations, HT lines, metering system dispatch and controls etc must be recovered as regulated tariff The fixed costs should include annual depreciation and return as described previously The variable operation and maintenance expenses will be the direct and indirect expenses necessary for maintenance of the transmission system, dispatch and controls, metering and reading billing etc These have been categorized and itemized above system Under the current licensing scheme the transmission and dispatch are classified as two separate services and separate licenses are required even though both are issued to MTE In future however the two could be under separate ownership Therefore the MTE should keep separate accounting and cost/tariff development for each service This will require some allocation of common expenses such as Administrative and General The tariff for dispatch should be a simple charge per kWh delivered to the Disco or the customer The transmission tariff (TT) is a bit more complicated First the transmission service is essentially capacity restricted The size of the transmission system determines how much power (MW) can be transmitted across the system at any given moment Thus to best utilize the system it should discourage the peak usage and encourage off-peak use in order to maximize the diversity (similar to the power plant capacity utilization) Thus the tariff design should provide incentives to reduce the MW demand on the system per kWh received This means the customers should be encouraged to maintain a high load factor Further since typically the electric systems peak during the daytime hours, incentives should discourage the system on-peak loads This can be best achieved by designing a monthly demand-related tariff (Lei / kw of maximum system peak demand) There are a number of variations on how to measure the system peak-demand (single annual peak, average of 12 monthly peaks etc) Because each Disco has a different load factor profile, their contribution to the system peak per mwh usage, will vary For example the rural Discos may have poor load factor than urban or industry-dominated ones Thus it is conceivable that the transmission tariff, TT will vary for each Disco Furthermore the TT should distinguish the service at transmission level, 110kv from the sub-transmission, 35kv The Discos and customers served at the higher voltage should not be charged for the sub-transmission investments Thus, in order to design tariffs that are more cost- based, the company must perform

somewhat more sophisticated cost and allocation studies It is recommended that ANRE work with MTE towards this end

In addition to recovering its own fixed and variable expenses the MTE must fully recover the purchased power costs including losses, procurement and selling expenses from its customers This should clearly be a strict passthrough Ideally the design of the tariffs for the purchased power component should reflect the tariff design of the suppliers (two-part tariffs, time-of- use, seasonal rates etc) there is no incentive for the MTE to resort to the tariff refinements it simply wants to recover its power costs This is one more reason that the MTE should exit the buy/sell function The distributors as direct buyers would have better understanding of the supplier tariffs and design the retail tariffs that better reflect costs

At any rate, the MTE tariffs as currently designed have a per kWh uniform charge As discussed above for CHPs the most important component of the MTE operation is the buying and selling power MTE must have a full flow- thru power cost recovery clause that allows timely recovery of the changes in the total power costs For even if without change in the unit prices of the different supply components, any change in relative mix of these components would create a different average price for the MTE Therefore a power cost recovery mechanism is essential for the MTE The current contracts of MTE do not clearly reflect this cost recovery on a timely basis It is recommended that ANRE address this issue at once It should be pointed out, and is discussed later, that the retail service licensees do have a well-defined power cost recovery clause as part of their tariffs The retail power recovery clause however is not meaningful without similar provision in CHPs and the MTE tariffs In recovering its power costs from Discos the MTE must adjust for the estimated losses incurred in transmission As discussed above it could also distinguish loss factors between 35kv vs 110kv But that kind of refinement is not warranted at this time

Finally, any mandated taxes, e g VAT, are clearly a pass- thru and not subject to the ANRE review The MTE contracts must provide that all applicable (government-imposed) taxes would be recoverable from the buyer and separately identified on the invoices

As regards the billing and revenue collection procedures, the same comments are applicable here as described in the discussion on the CHPs

10 3 Distribution And Supply (Customer Service)

The cost analysis for distribution function is analogous to the transmission system in that the primary component, over 80 %, of the costs are due to the purchased power Under the licensing arrangement designed for Moldova the Discos have two distinct functions

a) Installation, operation and maintenance of the distribution lines, transformers, meters and related equipment (so-called the wires business) The cost structure for the distribution function basically includes the fixed and variable components as

discussed previously This includes O & M expenses depreciation and return The distribution costs are allocated to various customer classes on a rational basis according to the consumption profiles and cost incurrence

b) The retail supply cost component This is similar to the customer-related cost component which includes customer metering billing collection and customer accounting services

In addition to the Distribution and supply tariffs the Disco must fully recover its purchased power costs including losses The tariff design for purchased power should reflect the tariff applied by its supplier MTE To the extent the supplier utilizes the time of day tariffs, seasonal tariffs or two- part (energy/ demand) tariffs the retail tariffs should reflect that structure

We noticed that in the proposed tariffs ANRE order # 5 the customers with appropriate meters may receive service under the special time of day / seasonal rates There are three rate periods, normal, on-peak and off-peak Further these time periods vary for winter and summer It is an attempt to track the tariff structure currently applied by Ukraine in its power sales to Moldova While this effort is well-intended, it does not acheive the purpose intended Because the MTE rolls its purchase power cost tariff to the discos into a uniform kwh charge any price signals disappear in its tariffs to the discos As Discos have no incentives to buy its power efficiently according to the cost structure of MTE it is meaningless to have time- differentiated tariffs for the retail customers In other words in order to design efficient pricing each stage of supply must reflect its cost structure in its pricing structure, down to the retail level Moreover it points out further flaw in the organizational structure where MTE is the sole buyer and seller of electric energy It makes a good case for eliminating the supplier function of the MTE

Finally as has been discussed elsewhere, it is critical for the Disco and retail supply licensee to have a full flow –through purchase power cost recovery clause Design of such a clause should ensure timely recovery of its power costs over which it has no control The Retail Supply license allows for this clause The design and application of this clause is illustrated in this report

11 Class Cost Of Service Study And Allocation Methods

It is a fundamental principle of rate making that, to the extent practicable each class of service (residential, commercial, industrial, transport, street-light etc) should pay according to the rate structure that is proportional and reflects the cost structure created by that class of service This requires a periodic class cost of service study performed by the utility Although such studies have many elements of subjectivity assumptions and judgement, it is a useful tool in determining the relative cost burden created by the various customer classes It is an important check against undue subsidization of one class by the other

A class cost of service can use historic accounting or marginal costs using current or proposed class revenues The load studies are performed every few years using customer sampling data to estimate the allocation matrix Using allocation methods the analyst basically determines the resulting the rates of return being produced by various customer classes under the current and the proposed tariffs The object is to roughly equalize returns from all classes In order to estimate class cost of service various cost elements fixed and variable must be identified These cost elements are then allocated to various classes as per the previously established allocation studies For example typically fuel will be assigned according to the kWh use, the generation unit investment may be assigned on Kw/kWh combined basis Any directly assignable costs to a class will be so assigned Considerable analyst judgement and knowledge of consumption patterns and cost analysis is required to do these studies This approach is called the fully distributed or fully allocated cost method It is advisable that the ANRE develop staff expertise to understand and learn these cost and tariff design ideas As the new structure matures in Moldova, customers are going to demand that they pay their fair share of the energy costs It should be a stated goal of ANRE to reduce subsidization of utility services This will encourage more efficient utilization of resources

12 Summary

The cost components identified above result in tariffs for each functional service It is fully unbundled tariff approach Each unbundled entity charges approved tariff to the succeeding entity, which then adds on its own approved tariff adjusting for the appropriate losses The final retail tariff then becomes the summation of all individual service components For ease of billing and customer understanding the tariff may be recombined for small or residential customers For larger more sophisticated customers the bills may actually indicate components of service The final tariff formula incorporating the concepts outlined in this report and included in the Retail Service license is attached in this report

ANNEX A

CALCULATION OF RETAIL TARIFFS

RETAIL ELECTRICITY TARIFF

The Retail Tariff (RT) for electricity consumed shall be calculated by the following formula

$$RTij = [\frac{PP \pm R + T + D}{(1-LF_1)*(1-LF_2)* \quad (1-LF_i)} + NT_i + ST_j][\frac{1}{(1-U_{j)}}]$$

Where

RT_{ij}	=	Retail Tariff
PP	=	The weighted average cost per KWh of electricity (the "Purchase Price) from all sources delivered to the Licensee in the relevant accounting period,
R	=	Amount per kilowatt-hour required to reconcile differences between actual and estimated computation factors as determined in accordance with methodologies approved by ANRE,
T	=	The weighted average cost per kWh delivered to the Licensee in the relevant accounting period for transmission services provided on the HVTG,
D	=	The weighted average cost per kWh delivered to the Licensee in the relevant accounting period for services provided by the National Dispatch Center
LF_1	=	Loss Factor at the specific voltage class i,
i	=	Voltage class at which electricity is supplied to consumers,
j	=	Customer group as set forth in Annex B,
NT_1	=	Low Voltage Network Tariff applicable to voltage class i,
ST_j	=	Supply Tariff applicable to customer group j as set out in Annex B,
U_j	=	Amount allowed by ANRE for uncollected consumer bills as a percentage of revenues by customer group j

For purposes of calculating the Retail Tariff the relevant accounting period is the period over which customer consumption has been measured Residential Retail Tariffs determined in accordance with the provisions of this paragraph shall be modified as required by the legislation of Moldova for application to consumers eligible for Privileged Tariffs

CHISINAU DC
RETAIL TARIFFS BY CALENDAR QUARTER 1998
(Bani per KWh)

1998 ANRE

RETAIL TARIFFS	Factor	Q1	Q2	Q3	Q4
Delivered at the Grid					(Budget)
Purchased Power	PP	16 17	16 30	16 44	16 29
Reconciliation Factor	R	-	2 49	(0 99)	0 23
Transmission Services	T	1 16	1 16	1 16	1 16
Dispatch Services	D	0 50	0 50	0 50	0 50
Service at 10 Kv					
[Non-residential only]					
Loss Factor	LF_{10Kv}	4 00%	4 00%	4 00%	4 00%
Purchased Power	PP_{10Kv}	16 85	16 98	17 12	16 97
Reconciliation Factor	R_{10Kv}	-	2 59	(1 03)	0 23
Transmission Services	T_{10Kv}	1 21	1 21	1 21	1 21
Dispatch Services	D_{10Kv}	0 52	0 52	0 52	0 52
Distribution Services	NT_{10Kv}	3 24	3 24	3 24	3 24
Regulated Supply Fee	ST_{NR}	0 22	0 22	0 22	0 22
Uncollected Percentage Allowed	U_{NR}				
RETAIL TARIFF	$RT_{0\,4Kv\ NR}$	**22 04**	**24 76**	**21 28**	**22 39**
Service at 0 4 Kv					
Non-residential					
Loss Factor	$LF_{0\,4Kv}$	7 00%	7 00%	7 00%	7 00%
Purchased Power	$PP_{0\,4Kv}$	18 11	18 26	18 41	18 25
Reconciliation Factor	$R_{0\,4Kv}$	-	2 79	(1 11)	0 25
Transmission Services	$T_{0\,4Kv}$	1 21	1 21	1 21	1 21
Dispatch Services	$D_{0\,4Kv}$	0 52	0 52	0 52	0 52
Distribution Services	$NT_{0\,4Kv}$	5 11	5 11	5 11	5 11
Regulated Supply Fee	ST_{NR}	0 22	0 22	0 22	0 22
Uncollected Percentage Allowed	U_{NR}	-			
RETAIL TARIFF	$RT_{0\,4Kv\ NR}$	**25 17**	**28 11**	**24 37**	**25 56**
Residential					
Loss Factor	$LF_{0\,4Kv}$	7 00%	7 00%	7 00%	7 00%
Purchased Power	$PP_{0\,4Kv}$	18 11	18 26	18 41	18 25
Reconciliation Factor	$R_{0\,4Kv}$	-	2 79	(1 11)	0 25
Transmission Services	$T_{0\,4Kv}$	1 21	1 21	1 21	1 21
Dispatch Services	$D_{0\,4Kv}$	0 52	0 52	0 52	0 52
Distribution Services	$NT_{0\,4Kv}$	5 11	5 11	5 11	5 11
Regulated Supply Fee	ST_{R}	1 17	1 17	1 17	1 17
Uncollected Percentage Allowed	U_{R}	-			
RETAIL TARIFF					
Regular Residential	$RT_{0\,4Kv\ R\ Reg}$	**26 12**	**29 06**	**25 32**	**26 51**
Average discount for privileges		20%	20%	20%	20%
Privileged Customers	$RT_{0\,4Kv\ R\ Priv}$	**20 90**	**23 24**	**20 25**	**21 21**

Pu chased Power Costs
Chisinau DC
ANNUAL BUDGET 1998 ANRE

		Units	Notes	JAN	FEB	MAR	Total Q1	APR	MAY	JUN	Total Q2	JUL	AUG	SEP	Total Q3	OCT	NOV	DEC	Total Q4	Total
	PURCHASED POWER (PP)			Plan	Plan	Plan		Plan	Plan	Plan		Plan	Plan	Plan		Plan	Plan	Plan		
1	Power purchased during the p riod	MWh		[illegible]	143 441	[illegible]	450 581	[illegible]	[illegible]	[illegible]	317 172	[illegible]	[illegible]	[illegible]	292 477	[illegible]	[illegible]	[illegible]	461 770	1 522 000
2	Cost of Power Purchased	th lei		[illegible]	23 011	[illegible]	72 869	[illegible]	[illegible]	[illegible]	51 706	[illegible]	[illegible]	[illegible]	48 081	[illegible]	[illegible]	[illegible]	75 232	247 889
3	Average cost of power	bani/KWh	(2)/(1)	16 23	16 04	16 24		16 34	16 22	16 34		16 52	16 44	16 36		16 45	16 19	16 25		16 29
4	A rag t by al ndar quarte (PP)	bani/KWh	PP				16 17				16 30				16 44				16 29	
5	**RECONCILIATION FACTOR (R)**																			
#	Reconciliation Amount	th lei									1 284				(2 249)				1 040	
#	Reconciliation fa t r	bani/KWh	R								0 40				(0 77)				0 23	
8	**TOTAL COSTS FOR THE QUARTER**																			
9	Cost of P w r Pur hased	th lei					72 869				51 706				48 081				75 232	247 889
10	Reconciliation Amount	th lei									1 284				(2 249)				1 040	75
11	**Total Costs**	th lei					72 869				52 990				45 833				76 272	247 964
12																				
13	**REVENUES**																			
14	*Servi e at 10 Kv*																			
15	Loss Fact r		4 0 %																	
16	PP Adjusted f r Loss	bani/KWh					16 85				16 98				17 12				16 97	
17	R Adju t d f r L	bani/KWh					0 00				0 42				(0 60)				0 23	
18	PP plu R per KWh	bani/KWh		16 85	16 85	16 85	16 85	17 40	17 40	17 40	17 40	16 32	16 32	16 32	16 32	17 21	17 21	17 21	17 21	
19	Sales to consumers (NR)	MWh		36 522	33 674	34 694	105 090	29 882	26 991	23 637	80 511	24 988	24 231	22 383	71 601	28 663	3 585	35 747	98 994	354 196
20	Revenues(NR)	th lei		6 152	5 706	5 845	17 704	5 200	4 697	4 114	14 011	4 079	3 955	3 654	11 688	4 932	5 606	6 150	16 688	60 091
21	S rv e at 0 4 K																			
22	Los Fa t r		7 00 %																	
23	PP Adju t d f r L	bani/KWh					18 11				18 26				18 41				18 25	
24	R Adjusted f r L ses	bani/KWh					0 00				0 45				(0 86)				0 25	
25	PP plus R per KWh	bani/KWh		18 1	18 1	18 1	18 11	18 7	18 7	18 7	18 71	17 6	17 6	17 6	17 56	18 5	18 5	18 5	18 50	
26	Sales to consumers	MWh		105 922	100 545	96 903	303 369	83 611	69 223	71 365	224 199	62 197	62 300	66 867	191 364	88 892	97 348	107 131	293 371	1 012 304
27	Non residential			50 969	51 274	48 148	150 391	44 251	38 545	40 790	123 585	39 885	40 092	40 059	120 036	56 321	58 665	82 841	197 828	
28	Residential regular			44 336	39 753	39 336	123 425	31 757	24 752	24 668	81 177	18 001	17 918	21 630	57 549	26 279	31 210	19 597	77 085	
29	Residential privileged			10 616	9 519	9 419	29 553	7 604	5 927	5 907	19 437	4 310	4 290	5 179	13 780	6 292	7 473	4 692	18 456	
30	R v nu s	th lei		18 802	17 868	17 212	53 882	15 362	12 732	13 133	41 227	10 766	10 784	11 555	33 105	16 213	17 734	19 646	53 593	181 806
31	Non residential			9 233	9 288	8 722	27 242	8 281	7 213	7 633	23 127	7 001	7 037	7 031	21 069	10 420	10 854	15 326	36 599	108 037
32	Re idential regular			8 031	7 201	7 125	22 357	5 943	4 632	4 616	15 191	3 160	3 145	3 796	10 101	4 862	5 774	3 626	14 261	61 910
33	Residential privileged		8 %	1 538	1 379	1 365	4 283	1 138	887	864	2 910	605	602	727	1 935	931	1 106	694	2 732	11 859
34	Total Sales																			
35	Sales to consumers	MWh		142 443	134 419	131 527	408 459	113 434	[illegible]	[illegible]	304 710	87 183	[illegible]	[illegible]	262 965	117 555	[illegible]	142 877	390 365	1 366 500
36	Rev nu s	th lei		24 955	23 574	23 056	71 585	20 562	17 429	17 247	55 239	14 844	14 740	15 209	44 792	21 144	23 340	25 797	70 281	241 897
37	Losses	MWh																		
38	At 10 Kv			6 267	5 916	5 787	17 971	4 991	4 226	4 182	13 399	3 828	3 801	3 928	11 557	5 177	5 719	6 289	17 185	60 112
39	At 0 4 Kv			7 973	7 588	7 294	22 834	6 293	5 210	5 372	16 875	4 681	4 689	5 033	14 404	6 691	7 327	8 064	22 082	76 195
40	Commercial & Unaccounted For			(1 474)	(4 462)	7 252	1 316	5 448	(11 696)	(11 565)	(17 813)	192	(1 258)	4 618	3 551	7 942	9 239	14 957	32 138	19 193
41	Total Loss			12 766	9 022	20 333	42 121	16 732	(2 259)	(2 011)	12 461	8 701	7 232	13 579	29 512	19 809	22 286	29 310	71 405	155 500
42				8 2%	6 3%	13 4%		12 8%	2 4%	2 2%		9 1%	7 7%	13 2%		14 4%	14 6%	17 0%		10 2
43	TOTAL SALES PLUS LOSSES			155 210	143 441	151 930	450 581	130 226	93 955	92 991	317 172	95 885	93 762	102 830	292 477	137 364	152 219	172 187	461 770	1 522 000
44																				
45	**RECONCILIATION**																			
46	Total Costs						72 869				52 990				45 833				76 272	247 964
47	Total Revenues						(71 585)				(55 239)				(44 792)				(70 281)	(241 897)
48	R n ili ti n Am unt						1 284				(2 249)				1 040				5 991	6 067

Purchased Power Costs
Chisinau DC
SECOND QUARTER 1998 ANRE$_R$
RECONCILIATION OF PRIOR PERIODS

				QUARTER ONE INITIAL RECONCILIATION											
				BUDGET PLAN				ACTUAL				DIFFERENCES			
		Units	Not	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL
	PURCHASED POWER (PP)			Plan	Plan	Plan		Actual	Actual	Plan					
1	P w r pur hased during the period	MWh		155 210	143 441	151 930	450 581	160 900	148 688	151 930	461 518	5 690	5 247		10 938
2	Cost of Pow r Pur hased	th lei		25 186	23 011	24 672	72 869	[illegible]	[illegible]	[illegible]	79 601	4 108	2 534		6 732
3	*Average cost of power*	*bani/KWh*	*(2)/(1)*	16 23	16 04	16 24		18 26	17 18	16 24		2 03	1 14	0 00	
4	Average cost by calendar quarter (PP)	bani/KWh	PP				16 17				17 25				1 08
5	**RECONCILIATION FACTOR (R)**														
6	Prior Period Reconciliation Amount	th lei													
7	*Re oncilia tion fa tor*	*bani/KWh*	*R*												
8	**TOTAL COSTS FOR THE QUARTER**														
9	Co t of Pow Purchased	th lei					72 869				79 601				6 732
10	R oncilia tion Am unt	th lei													
11	**Total Costs**	th lei					72 869				79 601				6 732
12															
13	**REVENUES**														
14	Service at 10 Kv														
15	Loss Factor		1												
16	PP Adjusted for Losses	bani/KWh					16 85								
17	R Adjusted for Losses	bani/KWh													
18	PP plus R per KWh	bani/KWh		16 85	16 85	16 85	16 85	16 85	16 85	16 85					
19	Sales to n um rs (NR)	MWh		36 522	33 874	34 694	105 090	7 8[illegible]	35 113	34 [illegible]	107 668	1 339	1 239		2 578
20	Rev nu (NR)	th lei		6 152	5 706	5 845	17 704	6 378	5 915	5 845	18 138	226	209		434
21	Serv ce at 0 4 Kv														
22	Loss Factor		7												
23	PP Adjusted for Losses	bani/KWh					18 11								
24	R Adjusted for Losses	bani/KWh													
25	PP plus R per KWh	bani/KWh		18 11	18 11	18 11	18 11	18 11	18 11	18 11					
26	Sales to consumers	MWh		105 922	100 545	96 903	303 369	104 223	100 435	96 903	301 560	(1 698)	(111)		(1 809)
27	Non r ident al			50 969	51 274	48 148	150 391	53 150	[illegible]	48 148	151 200	2 181	(1 371)		809
28	Residential regular			44 336	39 753	39 336	123 425	[illegible]	[illegible]	[illegible]	121 312	(3 129)	1 017		(2 112)
29	Residential privil g d			10 616	9 519	9 419	29 553	[illegible]	[illegible]	9 419	29 048	(749)	244		(506)
30	R v nues	th Lei		18 802	17 868	17 212	53 882	18 522	17 839	17 212	53 572	(280)	(29)		(309)
31	Non residential			9 233	9 288	8 722	27 242	9 628	9 039	8 722	27 388	395	(248)		147
32	R s dential regular			8 031	7 201	7 125	22 357	7 464	7 385	7 125	21 975	(567)	184		(383)
33	R sid ntial privileged		%	1 538	1 379	1 365	4 283	1 430	1 415	1 365	4 209	(109)	35		(73)
34	Total Sales														
35	Sales to consum r	MWh		142 443	134 410	131 537	408 459	142 084	135 548	131 537	409 229	(359)	1 128		769
36	Revenues	th lei		24 955	23 574	23 056	71 585	24 900	23 754	23 056	71 710	(55)	180		125
37	L s	MWh													
38	At 10 Kv			6 267	5 916	5 787	17 971	6 247	5 963	5 787	17 997	(20)	47		26
39	At 0 4 kv			7 973	7 568	7 294	22 834	7 845	7 560	7 294	22 698	(128)	(8)		(136)
40	Commercial & Unaccounted F r			(1 474)	(4 462)	7 252	1 316	4 724	(382)	7 252	11 595	6 198	4 080		10 278
41	Total Losses			12 766	9 022	20 333	42 121	18 816	13 140	20 333	52 290	6 050	4 119		10 168
42				8 2%	6 3%	13 4%		11 7%	8 8%	13 4%		3 5%	2 5%	0 0%	
43	TOTAL SALES PLUS LOSSES			155 210	143 441	151 930	450 581	160 900	148 688	151 930	461 518	5 690	5 247		10 938
44															
45	**RECONCILIATION**														
46	Total Costs						72 869				79 601				6 732
47	Total Revenues						(71 585)				(71 710)				(125)
48	R oncilia tion Amount						1 284				7 890				6 607
49	C mp n nt f R Fa t r														
50	Chang in P w Costs														6 732
51	Chang in R v nues														(125)
52	Prior P ri d R ncil at n Amount														1,284
53	TOTAL														7 890

Purchased Power Costs
Chisinau DC
SECOND QUARTER 1998 ANRE$_R$
CALCULATION OF PURCHASED POWER COSTS AND RECONCILIATION FACTORS

		Units	Notes	JAN	FEB	MAR	Total Q1	APR	MAY	JUN	Total Q2
	PURCHASED POWER (PP)			Actual	Actual	PLAN		PLAN	PLAN	PLAN	
1	Power purchased during the period	MWh		160 900	148 688	151 930	461 518	130 [illegible]	[illegible]	[illegible]	317 172
2	Cost of Power Purchased	th lei		29 384	25 545	24 672	79 601	[illegible]	[illegible]	[illegible]	51 706
3	Average cost of power	bani/KWh	(2)/(1)	18 26	17 18	16 24		16 34	16 22	16 34	
4	Average cost by calendar quarter (PP)	bani/KWh	PP								16 30
5	**RECONCILIATION FACTOR (R)**										
6	Prior Period Reconciliation Amount	th lei									7 890
7	Reconciliation factor	bani/KWh	R								2 49
8	**TOTAL COSTS FOR THE QUARTER**										
9	*Cost of Power Purchased*	th lei					79 601				51 706
10	Reconciliation Amount	th lei									7 890
11	**Total Costs**	th lei					79 601				59 597
12											
13	**REVENUES**										
14	Service at 10 Kv										
15	Loss Factor		4 00								
16	PP Adjusted for Losses	bani/KWh									16 98
17	R Adjusted for Losses	bani/KWh									2 59
18	PP plus R per kWh	bani/KWh		16 85	16 85	16 85		19 57	19 57	19 57	19 57
19	Sales to consumers	MWh		37 801	35 113	34 604	107 668	[illegible]	[illegible]	[illegible]	80 511
20	Revenues	th lei		6 378	5 915	5 845	18 138	5 849	5 283	4 627	15 758
21	Service at 0 4 kv										
22	Loss Factor		7 00								
23	PP Adjusted for Losses	bani/KWh									18 26
24	R Adjusted for Losses	bani/KWh									2 79
25	PP plus R per KWh	bani/KWh		*18 11*	*18 11*	*18 11*		*21 05*	*21 05*	*21 05*	*21 05*
26	Sales to consumers	MWh		104 223	100 435	96 903	301 560	83 611	69 223	71 365	224 199
27	Non residential			53 150	49 903	48 148	151 200	[illegible]	38 545	40 700	123 585
28	Residential regular			41 207	40 770	39 336	121 312	[illegible]	[illegible]	[illegible]	81 177
29	Residential privileged			9 867	9 762	9 419	29 048	7 604	5 027	5 007	19 437
30	Revenues	th lei		18 522	17 839	17 212	53 572	17 597	14 569	15 020	47 186
31	Non residential			9 628	9 039	8 722	27 388	395	(248)		147
32	Residential regular			7 464	7 385	7 125	21 975	(567)	184		(383)
33	Residential privileged		80 [illegible]	1 430	1 415	1 365	4 209	(109)	35		(73)
34	Total Sales										
35	Sales to consumers	MWh		142 084	135 548	131 597	409 229	[illegible]	[illegible]	3 087	244 205
36	**Revenues**	th lei		24 900	23 754	23 056	**71 710**	23 446	19 852	19 646	**62 944**
37	Losses										
38	At 10 kv			6 247	5 963	5 787	17 997	4 991	4 226	4 182	13 399
39	At 0 4 k			7 845	7 560	7 294	22 698	6 293	5 210	5 372	16 875
40	Commercial & Unaccounted For			4 724	(382)	7 252	11 595	5 448	(11 696)	(11 565)	(17 813)
41	Total Losses			18 816	13 140	20 333	52 290	16 732	(2 259)	(2 011)	12 461
42				11 7%	8 8%	13 4%		12 8%	2 4%	2 2%	
43	TOTAL SALES PLUS LOSSES			160 900	148 688	151 930	461 518	130 226	93 955	92 991	317 172
44											
45	**RECONCILIATION**										
46	*Total Costs*						79 601				59 597
47	Total Revenues						(71 710)				(62 944)
48	Reconciliation Amount						7 890				(3 347)

Pu hased Power Co ts
Chisinau DC
THIRD QUARTER 1998 ANRE$_R$
RECONCILIATION OF PRIOR PERIODS

				QUARTER ONE FINAL RECONCILIATION											
				BUDGET PLAN				ACTUAL				DIFFERENCES			
		Units		JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL
	PURCHASED POWER (PP)			Plan	Plan	Plan		Actual	Actual	Actual					
1	Power purchased during the p riod	MWh		155 210	143 441	151 930	450 581	160 900	148 688	157 468	467 056	5 690	5 247	5 538	16 475
2	Cost of Power Purchased	th lei		25 186	23 011	24 672	72 869	3 384	25 545	28 730	83 658	4 198	2 534	4 058	10 789
3	Average cost of power	bani/KWh	(2)/(1)	16 23	16 04	16 24		18 26	17 18	18 24		2 03	1 14	2 01	
4	Av rage cost by cal ndar quart r (PP)	bani/KWh	PP				16 17				17 91				1 74
5	**RECONCILIATION FACTOR (R)**														
6	Pri r P r od Reconciliation Amount	th lei					0								
7	Reconciliation factor	bani/KWh	R												
8	**TOTAL COSTS FOR THE QUARTER**														
9	Cost of Power Purchased	th lei					72 869				83 658				10 789
10	Reconciliation Amount	th lei													
11	**Total Costs**	th lei					72 869				83 658				10 789
12															
13	**REVENUES**														
14	Serv at 10 Kv														
15	Lo Fa tor		1												
16	PP Adjusted for Loss s	bani/KWh					16 85								
17	R Adjusted for Losses	bani/KWh													
18	PP plus R per KWh	bani/KWh		16 85	16 85	16 85	16 85	16 85	16 85	16 85					
19	Sal s t n um (NR)	MWh		36 522	33 874	34 694	105 090	37 8[illegible]	35 113	35 [illegible]	108 933	1 339	1 239	1 265	3 843
20	R venu s(NR)	th lei		6 152	5 706	5 845	17 704	6 378	5 915	6 058	18 351	226	209	213	647
21	Serv e at 0 4 Kv														
22	Loss Factor		7 %												
23	PP Adjusted for Losses	bani/KWh					18 11								
24	R Adjusted for Losses	bani/KWh					0 00								
25	PP plus R per KWh	bani/KWh		18 11	18 11	18 11	18 11	18 11	18 11	18 11					
26	Sal t c n um r	MWh		105 922	100 545	96 903	303 369	109 805	104 223	100 435	314 463	3 883	3 678	3 532	11 093
27	Non r id nt al			50 969	51 274	48 148	150 391	2 838	53 153	49 903	155 890	1 869	1 876	1 755	5 499
28	R sid ntial egular			44 336	39 753	39 336	123 425	4 [illegible]	41 307	40 770	127 938	1 625	1 454	1 434	4 513
29	R id ntial priv l ged			10 616	9 519	9 419	29 553	11 805	9 867	9 762	30 634	389	348	343	1 081
30	Revenues	th lei		18 802	17 868	17 212	53 882	19 491	18 522	17 839	55 852	689	654	627	1 970
31	Non residential			9 233	9 288	8 722	27 242	9 571	9 628	9 039	28 238	338	340	318	996
32	Residential regular			8 031	7 201	7 125	22 357	8 326	7 464	7 385	23 175	294	263	260	818
33	Residential privileged			1 538	1 379	1 365	4 283	1 595	1 430	1 415	4 439	56	50	50	157
34	Total Sal														
35	Sales to consum r	MWh		142 447	134 410	131 507	408 459	147 [illegible]	139 337	136 303	423 396	5 222	4 917	4 797	14 936
36	**Revenu**	th lei		24 955	23 574	23 056	71 585	25 869	24 437	23 897	74 203	915	862	840	2 618
37	Losses	MWh													
38	At 10 kv			6 267	5 916	5 787	17 971	6 497	6 133	5 998	18 628	230	216	211	657
39	At 0 4 Kv			7 973	7 568	7 294	22 834	8 265	7 845	7 560	23 669	292	277	266	835
40	C mm al & Una unt d For			(1 474)	(4 462)	7 252	1 316	(1 528)	(4 626)	7 517	1 364	(54)	(163)	264	47
41	Total Los e			12 766	9 022	20 333	42 121	13 234	9 352	21 074	43 660	468	330	741	1 539
42				8 2%	6 3%	13 4%		8 2%	6 3%	13 4%					
43	TOTAL SALES PLUS LOSSES			155 210	143 441	151 930	450 581	160 900	148 688	157 468	467 056	5 690	5 247	5 538	16 475
44															
45	**RECONCILIATION**														
46	T tal C t						72 869				83 658				10 789
47	Total R v nu						(71 585)				(74 203)				(2 618)
48	Re oncil at on Amount						1 284				9 455				8 172
	Components of R Factor														
	Change in Power Costs														10 789
	Chang in R enu s														(2 618)
	Prior Pe d R n liati n Am unt														1 284
	TOTAL														9 455

Purchased Power Co ts
Chisinau DC
THIRD QUARTER 1998 ANRE$_R$
RECONCILIATION OF PRIOR PERIODS

				QUARTER TWO INITIAL RECONCILIATION											
				BUDGET PLAN				ACTUAL				DIFFERENCES			
		Units	Notes	APR	MAY	JUN	Total	APR	MAY	JUN	Total	APR	MAY	JUN	Total
	PURCHASED POWER (PP)			Plan	Plan	Plan		Actual	Actual	Plan					
1	Pow r pur has d during th p riod	MWh		130 226	93 955	92 991	317 172	109 818	105 760	92 991	308 569	(20 407)	11 805		(8 603)
2	Cost of Po ver Purchas d	th lei		21 277	15 238	15 121	51 706	16 187	17 341	15 121	48 618	(5 091)	2 103		(3 088)
3	Averag cost of power	bani/KWh	(2)/(1)	16 34	16 22	16 34		14 74	16 30	16 34		(1 60)	0 08		
4	Av rag c t by cal ndar quarter (PP)	bani/KWh	PP				16 30				15 76				(0 55)
5	**RECONCILIATION FACTOR (R)**														
6	*Prior Period Reconciliation Amount*	th lei					7 890				9 455				
7	Recon iliation fa tor	bani/KWh	R				2 49								
8	**TOTAL COSTS FOR THE QUARTER**														
9	C st of Power Purchas d	th lei					51 706				48 618				(3 088)
10	R ncil ati n Amount	th lei					7 890				9 455				
11	**Total Costs**	th lei					59 597				58 074				(1 523)
12															
13	**REVENUES**														
14	Service at 10 kv														
15	Loss Factor		1												
16	PP Adju t d f Lo	bani/KWh					16 98								
17	R Adju t d f r Lo	bani/KWh					2 59								
18	PP plus R per KWh	bani/KWh		19 57	19 57	19 57	19 57	19 57	19 57	19 57					
19	Sales to consumers (NR)	MWh		23 882	26 991	23 637	80 511	5 133	30 383	23 637	79 219	(4 683)	3 391		(1 292)
20	Revenues(NR)	th lei		5 843	5 283	4 627	15 758	4 932	5 947	4 627	15 506	(917)	664		(253)
21	Service at 0 4 Kv														
22	Loss Factor		7												
23	PP Adju t d f r Los	bani/KWh					18 26								
24	R Adju t d f r L e	bani/KWh					2 79								
25	PP plu R p r KWh	bani/KWh		21 05	21 05	21 05	21 05	21 05	21 05	21 05					
26	Sal t on um r	MWh		83 611	69 223	71 365	224 199	70 509	77 921	71 365	219 794	(13 103)	8 697		(4 405)
27	Non r id ntial			44 251	38 545	40 790	123 585	37 316	43 388	40 790	121 494	(6 934)	4 843		(2 092)
28	Residential regular			31 757	24 752	24 668	81 177	26 780	27 861	24 668	79 310	(4 977)	3 110		(1 867)
29	Residential privileged			7 604	5 927	5 907	19 437	6 412	6 671	5 907	18 990	(1 192)	745		(447)
30	Revenues	th lei		17 277	14 319	14 771	46 367	14 570	16 119	14 771	45 459	(2 707)	1 799		(908)
31	Non residential			9 313	8 112	8 585	26 010	7 854	9 132	8 585	25 570	(1 459)	1 019		(440)
32	R id nt al gular			6 684	5 209	5 192	17 085	5 636	5 864	5 192	16 692	(1 047)	654		(393)
33	R id ntial pri il ged		8 %	1 280	998	995	3 273	1 080	1 123	995	3 197	(201)	125		(75)
34	T tal Sales														
35	Sales to consumer	MWh		113 434	96 215	95 002	304 710	95 708	108 303	95 002	299 014	(17 785)	12 089		(5 697)
36	**Revenues**	th lei		23 126	19 602	19 397	62 126	19 502	22 065	19 397	60 965	(3 624)	2 463		(1 161)
37	Losses	MWh													
38	At 10 Kv			4 991	4 226	4 182	13 399	4 209	4 757	4 182	13 148	(782)	531		(251)
39	At 0 4 kv			6 293	5 210	5 372	16 875	5 307	5 865	5 372	16 544	(986)	655		(332)
40	Comm r ial & Unac ounted For			5 448	(11 696)	(11 565)	(17 813)	4 594	(13 165)	(11 565)	(20 136)	(854)	(1 469)		(2 323)
41	Total Losses			16 732	(2 259)	(2 011)	12 461	14 110	(2 543)	(2 011)	9 555	(2 622)	(284)		(2 906)
42				12 8%	2 4%	2 2%		12 8%	2 4%	2 2%					
43	TOTAL SALES PLUS LOSSES			130 226	93 955	92 991	317 172	109 818	105 760	92 991	308 569	(20 407)	11 805		(8 603)
44															
45	**RECONCILIATION**														
46	Total Costs						59 597				58 074				(1 523)
47	Total Re enues						(62 126)				(60 965)				1 161
48	R n liat n Am unt						(2 529)				(2 891)				(362)
	C mponents of R Factor														
	Chang in P wer Cost														(1 523)
	Chang n R venu														1 161
	Prior Period Recon iliation Amount														(2 529)
	TOTAL														(2 891)

Purchased Power Costs
Chisinau DC
THIRD QUARTER 1998 ANRE$_R$
CALCULATION OF PURCHASED POWER COSTS AND RECONCILIATION FACTORS

		Units	Notes	APR	MAY	JUN	Total Q1	JUL	AUG	SEP	Total Q2
	PURCHASED POWER (PP)			Actual	Actual	Plan		PLAN	PLAN	PLAN	
1	Power purchased during the period	MWh		109 818	105 760	[illegible]	308 569	[illegible] 885	[illegible] 7	102 830	292 477
2	Cost of Power Purchased	th lei		16 187	17 41	[illegible]	48 618	15 841	15 416	16 8 4	48 081
3	Average cost of power	bani/KWh	(2)/(1)	14 74	16 30	16 34		16 52	16 44	16 36	
4	Average cost by calendar quarter (PP)	bani/KWh	PP								**16 44**
5	**RECONCILIATION FACTOR (R)**										
6	Prior Period Reconciliation Amount	th lei					9 455				(2 891)
7	Reconciliation factor	bani/KWh	R								**(0 99)**
8	**TOTAL COSTS FOR THE QUARTER**										
9	Cost of Power Purchased	th lei					48 618				48 081
10	Reconciliation Amount	th lei					9 455				(2 891)
11	**Total Costs**	th lei					**58 074**				**45 190**
12											
13	**REVENUES**										
14	Service at 10 kv										
15	Loss Factor		4 00%								
16	PP Adjusted for Losses	bani/KWh									**17 12**
17	R Adjusted for Losses	bani/KWh									**(1 03)**
18	PP plus R per kWh	bani/KWh		**19 57**	**19 57**	**19 57**		**16 09**	**16 09**	**16 09**	**16 09**
19	Sales to consumers	MWh		25 199	30 383	[illegible]	79 219	[illegible]	[illegible]	[illegible]	80 511
20	Revenues	th lei		4 932	5 947	4 627	15 506	4 809	4 344	3 804	12 958
21	Service at 0 4 Kv										
22	Loss Factor		7 00%								
23	PP Adjusted for Losses	bani/KWh									**18 41**
24	R Adjusted for Losses	bani/KWh									**(1 11)**
25	PP plus R per kWh	bani/KWh		**21 05**	**21 05**	**21 05**		**17 31**	**17 31**	**17 31**	**17 31**
26	Sales to consumers	MWh		70 509	77 921	71 365	219 794	83 611	69 223	71 365	224 199
27	Non residential			37 316	43 388	40 790	121 494	[illegible]	[illegible]	40 790	123 585
28	Residential regular			26 780	27 861	[illegible]	79 310	[illegible]	[illegible]	[illegible]	81 177
29	Residential privileged			6 412	6 671	[illegible]	18 990	[illegible]	[illegible]	[illegible]	19 437
30	Revenues	th lei		14 570	16 119	14 771	45 459	14 470	11 980	12 350	38 800
31	Non residential			7 854	9 132	8 585	25 570	395	(748)		147
32	Residential regular			5 636	5 864	5 192	16 692	(567)	184		(383)
33	Residential privileged		80%	1 080	1 123	995	3 197	(109)	35		(73)
34	Total Sales										
35	Sales to consumers	MWh		95 708	108 303	95 002	299 014	[illegible]	[illegible]	53 087	244 205
36	**Revenues**	th lei		19 502	22 065	19 397	**60 965**	19 279	16 324	16 155	**51 758**
37	Losses										
38	At 10 Kv			4 209	4 757	4 182	13 148	4 991	4 226	4 182	13 399
39	At 0 4 Kv			5 307	5 865	5 372	16 544	6 293	5 210	5 372	16 875
40	Commercial & Unaccounted For			4 594	(13 165)	(11 565)	(20 136)	(28 893)	(11 889)	(1 726)	(42 508)
41	Total Losses			14 110	(2 543)	(2 011)	9 555	(17 609)	(2 452)	7 828	(12 233)
42				12 8%	2 4%	2 2%		18 4%	2 6%	7 6%	
43	TOTAL SALES PLUS LOSSES			109 818	105 760	92 991	308 569	95 885	93 762	102 830	292 477
44											
45	**RECONCILIATION**										
46	Total Costs						**58 074**				**45 190**
47	Total Revenues						**(60 965)**				**(51 758)**
48	Reconciliation Amount						**(2 891)**				**(6 568)**

Chisinau Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998 Company plan	1998 ANRE	1998 ANREr
1	2	3	4	5	6	7	8	8
	COST ALLOCATION							
	Total Network Expenses		mln Lei		27 9	60 4	62 6	70 2
	Distribution Services							
	Total							
	Sales to consumers		mill kWh	1398	1323	1442	1442	1367
	Costs	90%			25 1	54 3	56 4	63 2
	Service at 10 Kv							
	Sales to consumers		mill kWh		343	374	374	354
	Costs	18%	mln Lei		4 6	9 9	10 2	11 5
	Cost per KWh		Bani/KWh		**1 33**	**2 64**	**2 74**	**3 24**
	Service at 0 4 Kv							
	Sales to consumers		mill kWh		980	1068	1068	1012
	Non-Residential				573	625	624	592
	Residential				407	444	444	420
	Costs		mln Lei		20 5	44 5	46 1	51 7
	Cost per KWh		Bani/KWh		**2 10**	**4 16**	**4 32**	**5 11**
	Regulated Supply Fee							
	Total							
	Sales to consumers		mill kWh	1398	1323	1442	1442	1367
	Costs	10%	mln Lei		2 8	6 0	6 3	7 0
	Non-residential							
	Sales to consumers		mill kWh		916	998	998	946
	Costs	30%	mln Lei		0 8	1 8	1 9	2 1
	Cost per KWh		Bani/KWh		**0 09**	**0 18**	**0 19**	**0 22**
	Residential							
	Sales to consumers		mill kWh		407	444	444	420
	Costs	70%	mln Lei		2 0	4 2	4 4	4 9
	Cost per KWh		Bani/KWh		**0 48**	**0 95**	**0 99**	**1 17**
	TOTAL COSTS		mln Lei		27 9	60 4	62 6	70 2

TARIFF SUMMARY					
Distribution Services					
Service at 10 Kv		1 33	2 64	2 74	**3 24**
Service at 0 4 Kv		2 10	4 16	4 32	**5 11**
Regulated Supply Fee					
Non-residential		0 09	0 18	0 19	**0 22**
Residential		0 48	0 95	0 99	**1 17**

MTE Cost Analysis

			1996 actual	1997 actual	1998 MTE plan	1998 ANREr	Adjustments (7) (5)	Δ %	(7) (6)	Δ %
1	2	3	4	5	6	7	8	9	10	11
2	***Purchased Energy***	mln kWh								
3										
4	**Total purchased incl**		**5038**	**4632**	**5854**	**4693**	61	1	(1161)	(20)
5										
6	Domestic Production		1100	1137	1288	1389	252	22	102	8
7	Imported		3938	3495	4566	3304	(192)	(5)	(1262)	(28)
8										
9	Transmission Losses		460	281 248	217 5	200 9	(80)	(29)	(17)	(8)
10										
11	**Delivered to DC s**		**4578**	**4351**	**5636**	**4492**	141	3	(1144)	(20)
12										
13	***Cost of Energy***	mln lei								
14										
15	**Total cost of PP incl**		**545**	**684**	**723**	**732**	48	7	9	1
16	Domestic Production		82	131	158	170	39	29	12	7
17	Imported		463	552	564	562	9	2	(3)	(1)
18										
19	***O&M Costs***	mln lei								
20	O&M		1 9	1 1	28 5	17 2	16	1437	(11)	(40)
21	Transit Services					6 6				
22	Salaries		2 9	5 5	14 7	5 9	0 4	8	(9)	(60)
23	Social Fund		1 1	1 7	4 6	1 8	0 2	11	(3)	(60)
24	Depreciation		12 7	55 8	28 2	27 4	(28)	(51)	(1)	(3)
25	Other		1 3	1 2	114 4	12 1	11	895	(102)	(89)
26	**Total O&M Costs**		**19 8**	**65 3**	**190 3**	**71 0**	**6**	**9**	**(119)**	**(63)**
27	Profit Margin 5%				9 52	3 55	4		(6)	(63)
28										
29	**Total O&M Costs incl PM**		**19 8**	**65 3**	**199 9**	**74 6**	**9**	**14**	**(125)**	**(63)**
30										
33	**TC of energy delivered to DC s**	mln lei	**564 7**	**749 0**	**922 6**	**806 2**	**57**	**8**	**(116)**	**(13)**
34										
35	**Total Average Cost**	bani/kWh	**12 34**	**17 21**	**16 37**	**17 95**	**0 7**	**4**	**1 6**	**10**
36	including									
37	Purchased Energy		11 90	15 71	12 82	16 29	0 6	4	3 5	27
38	O&M Costs		0 43	1 50	3 55	1 66	0 2	11	(2)	(53)

COST ALLOCATION

Total MTE Expenses		mln Lei	65 34	199 86	74 57
Transmission Services					
Disco Purchases		mill kWh	4 351	5 636	4 492
Costs	70%	mln Lei	45 74	139 90	52 20
Cost per KWh		Bani/KWh	1 05	2 48	1 16
Dispatch Services					
Disco Purchases		mill kWh	4 351	5 636	4 492
Costs	30%	mln Lei	19 60	59 96	22 37
Cost per KWh		Bani/KWh	0 45	1 06	0 50

TARIFUL CU AMĂNUNTUL LA ENERGIA ELECTRICĂ

Tarıful cu amănuntul la energıa electrıcă consumată va fi calculat în conformıtate cu următoarea formulă

Unde,

$$RTij = [\frac{PP \pm R + T + D}{(1-LF_1)*(1-LF_2)* \quad (1-LF_i)} + NT_i \ + ST_j][\frac{1}{1-U_j}]$$

RT_{ij} = Tarıful cu amănuntul

PP = Costul mediu ponderat pentru o unıtate de kWh de energıe electrıcă (Pretul de procurare) achızıtıonată de la toate sursele şı lıvrată detınătorulıı de lıcentă în perıoada de gestıune corespunzătoare,

R = Mărımea exprımată pe o unıtate de kWh necesară pentru a ajusta dıferentele între mărımıle reale şı estımate în conformıtate cu metodologıa aprobată de ANRE,

T = Costul mediu ponderat pe o unıtate de kWh lıvrată detınătorulıı de lıcentă în perıoada de gestıune corespunzătoare al serviciilor de transportare oferite pe reteaua electrıcă de tensıune înaltă,

D = Costul mediu ponderat pe o unıtate de kWh lıvrată detınătorulıı de lıcentă în perıoada de gestıune corespunzătoare al serviciilor propuse de către Centrul Natıonal de Dıspetcerat,

LF_i = Coeficıentul de pıerderı la un anumıt nıvel de tensıune de clasa ı,

ı = Nıvelul de tensıune la care se lıvrează energıe electrıcă consumatorılor,

J = Grup de consumatorı după cum este ındıcat în anexa B,

NT_i = Tarıf pentru nıvelul de tensıune joasă aferent nıvelulıı de tensıune ı,

ST_j = Tarıful de lıvrare aferent consumatorılor dın grupul J, după cum este ındıcat în Anexa B,

U_j = Mărımea care este ındıcată de ANRE reflectând neplătıle pentru energıa consumată exprımată în procente fată de venıturı pentru grupul de consumatorı J

În scopul calculărıı tarıfulıı cu amănuntul perıoada de gestıune corespunzătoare ste perıoada în decursul căreıa consumul de energıe este măsurat În cazul consumatorılor prıvelegıatı cărora lı se vor acorda tarıfe prıvılegıate, tarıfele cu amănuntul pentru consumatorıı casnıcı care sunt determınate în conformıtate cu prevederıle acestuı alıneat se vor modıfica în conformıtate cu cerıntele legıslatıeı Republıcıı Moldova

RETELE ELECTRICE CHISINAU
TARIFE CU AMANUNTUL TRIMESTRIALE, 1998
(Bani / KWh)

1998 ANRE

TARIFE CU AMANUNTUL	Simbol	Tr I	Tr II	Tr III	Tr IV
Livrat în retea					(prognoza)
Energie procurare	PP	16 17	16 30	16 44	16 29
Coeficient ajustare	R	-	2 49	(0 99)	0 23
Servicii transportare	T	1 16	1 16	1 16	1 16
Servicii dispetcerat	D	0 50	0 50	0 50	0 50
Nivelul de tensiune 10 kV [în afara de populatie]					
Coeficient pierderi	LF_{10Kv}	4 00%	4 00%	4 00%	4 00%
Energie achizitionata	PP_{10Kv}	16 85	16 98	17 12	16 97
Coeficient ajustare	R_{10Kv}	-	2 59	(1 03)	0 23
Servicii transportare	T_{10Kv}	1 21	1 21	1 21	1 21
Servcii dispetcerat	D_{10Kv}	0 52	0 52	0 52	0 52
Servcii distributie	NT_{10Kv}	3 24	3 24	3 24	3 24
Comision pentru livrari reglementate	ST_{NR}	0 22	0 22	0 22	0 22
Coeficient ajustare neplata	U_{NR}	-			
TARIF CU AMANUNTUL	$RT_{0\,4Kv\ NR}$	**22 04**	**24 76**	**21 28**	**22 39**
Nivelul de tensiune 0 4 kV					
Consumatori (cu exceptia populatiei)					
Coeficient pierderi	$LF_{0\,4Kv}$	7 00%	7 00%	7 00%	7 00%
Energie procurata	$PP_{0\,4Kv}$	18 11	18 26	18 41	18 25
Coeficient ajustare	$R_{0\,4Kv}$	-	2 79	(1 11)	0 25
Servicii transportare	$T_{0\,4Kv}$	1 21	1 21	1 21	1 21
Servcii dispetcerat	$D_{0\,4Kv}$	0 52	0 52	0 52	0 52
Servcii distributie	$NT_{0\,4Kv}$	5 11	5 11	5 11	5 11
Comision pentru livrari reglementate	ST_{NR}	0 22	0 22	0 22	0 22
Coeficient ajustare neplata	U_{NR}	-			
TARIF CU AMANUNTUL	$RT_{0\,4Kv\ NR}$	**25 17**	**28 11**	**24 37**	**25 56**
Populatie					
Coeficient pierderi	$LF_{0\,4Kv}$	7 00%	7 00%	7 00%	7 00%
Energie procurata	$PP_{0\,4Kv}$	18 11	18 26	18 41	18 25
Coeficient ajustare	$R_{0\,4Kv}$	-	2 79	(1 11)	0 25
Servicii transportare	$T_{0\,4Kv}$	1 21	1 21	1 21	1 21
Servcii dispetcerat	$D_{0\,4Kv}$	0 52	0 52	0 52	0 52
Servcii distributie	$NT_{0\,4Kv}$	5 11	5 11	5 11	5 11
Comision pentru livrari reglementate	ST_{R}	1 17	1 17	1 17	1 17
Coeficient ajustare neplata	U_{R}	-			
TARIF CU AMANUNTUL					
Consumatori casnici ordinari	$RT_{0\,4Kv\ R\ Reg}$	**26 12**	**29 06**	**25 32**	**26 51**
Reducere de pret datorita înlesnirilor (medie)		20%	20%	20%	20%
Consumatori privilegiati	$RT_{0\,4Kv\ R\ Priv}$	**20 90**	**23 24**	**20 25**	**21 21**

Nota cifrele aratate în paranteze reprezinta valori negative

COSTUL ENERGIEI PROCURATE
Retele electrice Chisinau
BUGET ANUAL 1998 ANRE

		Unitati de masura	Note	JAN	FEB	MAR	Total Tr I	APR	MAY	JUN	Total Tr II	JUL	AUG	SEP	Total Tr III	OCT	NOV	DEC	Total Tr IV	Total
	ENERGIE PROCURATA (PP)			Plan	Plan	Plan		Plan	Plan	Plan		Plan	Plan	Plan		Plan	Plan	Plan		
1	Energie procurata in decursul perioadei	MWh		155 210	143 441	151 930	450 581	130 226	93 955	92 991	317 172	95 885	93 762	102 830	292 477	137 364	152 219	172 187	461 770	**1 522 000**
2	Costul energiei procurate	mii lei		25 186	23 011	24 672	72 869	21 277	15 238	15 191	51 706	15 841	15 416	16 824	48 081	22 602	24 649	27 982	75 232	**247 889**
3	Costul mediu al energiei	bani/KWh	(2)/(1)	16 23	16 04	16 24		16 34	16 22	16 34		16 52	16 44	16 36		16 45	16 19	16 25		16 29
4	Costul mediu trimestrial (PP)	bani/KWh	PP				**16 17**				**16 30**				**16 44**				**16 29**	
5	**COEFICIENT AJUSTARE (R)**																			
6	Marime ajustare	mii lei									**1 284**				**(2 249)**				**1 040**	
7	Coeficient ajustare	bani/KWh	R								**0 40**				**(0 77)**				**0 23**	
8	**COSTUL TOTAL TRIMESTRU**																			
9	*Costul energiei procurate*	*mii lei*					*72 869*				*51 706*				*48 081*				*75 232*	**247 889**
10	Marime ajustare	mii lei									**1 284**				**(2 249)**				**1 040**	**75**
11	**Costul total**	mii lei					**72 869**				**52 990**				**45 833**				**76 272**	**247 964**
12																				
13	**VENITURI**																			
14	**Nivelul de tensiune 10 kV**																			
15	Coeficient pierderi		4 00%																	
16	PP ajustata la pierderi	bani/KWh					**16 85**				**16 98**				**17 12**				**16 97**	
17	Marimea de ajustat inclusiv pierderi	bani/KWh					**0 00**				**0 42**				**(0 80)**				**0 23**	
18	PP plus R pe 1 kWh	bani/KWh		**16 85**	**16 85**	**16 85**	**16 85**	17 40	17 40	17 40	**17 40**	16 32	16 32	16 32	**16 32**	17 21	17 21	17 21	**17 21**	
19	Vanzari consumatorilor (fara populatie)	MWh		36 522	33 874	34 694	105 090	29 882	26 991	23 637	80 511	24 986	24 231	22 383	71 601	28 663	32 585	35 747	96 994	**354 196**
20	Venitum (fara populatie)	mii lei		6 152	5 706	5 845	17 704	5 200	4 697	4 114	14 011	4 079	3 955	3 654	11 688	4 932	5 606	6 150	16 688	**60 091**
21	**Nivelul de tensiune 0 4 kV**																			
22	Coeficient pierderi		7 00%																	
23	PP ajustata la pierderi	bani/KWh					**18 11**				**18 26**				**18 41**				**18 25**	
24	Marimea ajustare inclusiv pierderi	bani/KWh					**0 00**				**0 45**				**(0 86)**				**0 25**	
25	PP plus R pe 1 kWh	bani/KWh		**18 1**	**18 1**	**18 1**	**18 11**	18 7	18 7	18 7	**18 71**	17 6	17 6	17 6	**17 55**	18 5	18 5	18 5	**18 50**	
26	Vanzari consumatorilor	MWh		105 922	100 545	96 903	303 369	83 611	69 223	71 365	224 199	62 197	62 300	66 867	191 364	88 892	97 348	107 131	293 371	**1 012 304**
27	Consumatori (fara populatie)			50 969	51 274	48 148	150 391	44 251	38 545	40 790	123 585	39 885	40 092	40 059	120 036	56 321	58 665	82 841	197 828	
28	Consumatori casnici ordinari			44 336	39 753	39 336	123 425	31 757	24 752	24 668	81 177	18 001	17 918	21 630	57 549	26 279	31 210	19 597	77 085	
29	Consumatori casnici privilegiati			10 616	9 519	9 419	29 553	7 604	5 927	5 907	19 437	4 310	4 290	5 179	13 780	6 292	7 473	4 692	18 458	
30	Venitum	mii lei		18 802	17 868	17 212	53 882	15 362	12 732	13 133	41 227	10 766	10 784	11 555	33 105	16 213	17 734	19 646	53 593	**181 806**
31	Consumatori (fara populatie)			9 233	9 288	8 722	27 242	8 281	7 213	7 633	23 127	7 001	7 037	7 031	21 069	10 420	10 854	15 326	36 599	**108 037**
32	Consumatori casnici ordinari			8 031	7 201	7 125	22 357	5 943	4 632	4 616	15 191	3 160	3 145	3 786	10 101	4 862	5 774	3 626	14 261	**61 910**
33	Consumatori casnici privilegiati		80%	1 538	1 379	1 365	4 283	1 138	887	884	2 910	605	602	727	1 935	931	1 106	694	2 732	**11 859**
34	Total vanzari																			
35	Vanzari consumatorilor	MWh		142 443	134 419	131 597	408 459	113 494	96 215	95 002	304 710	87 183	86 531	89 251	262 965	117 555	129 933	142 877	390 365	**1 366 500**
36	Venituri	mii lei		24 955	23 574	23 056	71 585	20 562	17 429	17 247	55 239	14 844	14 740	15 209	44 792	21 144	23 340	25 797	70 281	**241 897**
37	*Pierderi*	MWh																		
38	La nivelul de 10 kV			6 287	5 916	5 787	17 971	4 991	4 226	4 182	13 399	3 828	3 801	3 928	11 557	5 177	5 719	6 289	17 185	**60 112**
39	La nivelul de 0 4 kV			7 973	7 568	7 294	22 834	6 293	5 210	5 372	16 875	4 681	4 689	5 033	14 404	6 691	7 327	8 064	22 082	**76 195**
40	Comerciale si energie lipsa			(1 474)	(4 462)	7 252	1 316	5 448	(11 696)	(11 565)	(17 813)	192	(1 258)	4 618	3 551	7 942	9 239	14 957	32 138	**19 193**
41	Total pierderi			12 766	9 022	20 333	42 121	16 732	(2 259)	(2 011)	12 461	8 701	7 232	13 579	29 512	19 809	22 286	29 310	71 405	**155 500**
42				8 2%	6 3%	13 4%		12 8%	2 4%	2 2%		9 1%	7 7%	3 2%		14 4%	14 6%	17 0%		10 2%
43	TOTAL VANZARI PLUS PIERDERI			155 210	143 441	151 930	450 581	130 226	93 955	92 991	317 172	95 885	93 762	102 830	292 477	137 364	152 219	172 187	461 770	**1 522 000**
44																				
45	**AJUSTARE**																			
46	Costuri totale						**72 869**				**52 990**				**45 833**				**76 272**	**247 964**
47	Venitum totale						**(71 585)**				**(55 239)**				**(44 792)**				**(70 281)**	**(241 897)**
48	Marime ajustare						**1 284**				**(2 249)**				**1 040**				**5 991**	**6 067**

Costul energiei procurate
Retele electrice Chisinau
TRIMESTRUL 1998 ANRE$_R$
AJUSTAREA MARIMILOR DIN PERIOADELE PRECEDENTE

				TRIMESTRUL ONE AJUSTAREA INITIALA											
				BUGET/PLAN				EFECTIV				DIFERENTA			
		Unitati de masura	Note	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL
	ENERGIE PROCURATA (PP)			Plan	Plan	Plan		Efectiv	Efectiv	Plan					
1	Energie procurata in decursul perioadei	MWh		155 210	143 441	151 930	450 581	160 900	148 688	151 930	461 518	5 690	5 247		10 938
2	Costul energiei procurate	mii lei		25 186	23 011	24 672	72 869	29 384	25 545	24 672	79 601	4 198	2 534		6 732
3	Costul mediu al energiei	bani/KWh	(2)/(1)	16 23	16 04	16 24		18 26	17 18	16 24		2 03	1 14	0 00	
4	Costul mediu trimestrial (PP)	bani/KWh	PP				**16 17**				17 25				1 08
5	**COEFICIENT AJUSTARE (R)**														
6	Marimea de ajustat din perioadele precedente	mii lei													
7	Coeficient ajustare	bani/KWh	R												
8	**TOTAL COSTURI TRIMESTRU**														
9	Costul energiei procurate	mii lei					72 869				79 601				6 732
10	Marimea de ajsutat	mii lei													
11	**Total costuri**	mii lei					**72 869**				**79 601**				**6 732**
12															
13	**VENITURI**														
14	**Nivelul de tensiune 10 kV**														
15	Coeficient pierderi		4 00%												
16	PP ajustata la pierderi	bani/KWh					**16 85**								
17	Marimea ajustare inclusiv pierderi	bani/KWh													
18	PP plus R pe 1 kWh	bani/KWh		**16 85**	**16 85**	**16 85**	**16 85**	**16 85**	**16 85**	**16 85**					
19	Vanzari consumatorilor (fara populatie)	MWh		36 522	33 874	34 694	105 090	37 861	35 113	34 694	107 668	1 339	1 239		2 578
20	Venituri (fara populatie)	mii lei		6 152	5 706	5 845	17 704	6 378	5 915	5 845	18 138	226	209		434
21	**Nivelul de tensiune 0 4 kV**														
22	Coeficient pierderi		7 00%												
23	PP ajustata la pierderi	bani/KWh					**18 11**								
24	Marimea de ajustat inclusiv pierderi	bani/KWh													
25	PP plus R pe 1 kWh	bani/KWh		**18 11**	**18 11**	**18 11**	**18 11**	**18 11**	**18 11**	**18 11**					
26	Vanzari consumatorilor	MWh		105 922	100 545	96 903	303 369	104 223	100 435	96 903	301 560	(1 698)	(111)		(1 809)
27	Consumatori (fara populatie)			50 969	51 274	48 148	150 391	53 150	49 903	48 148	151 200	2 181	(1 371)		809
28	Consumatori casnici ordinari			44 336	39 753	39 336	123 425	41 207	40 770	39 336	121 312	(3 129)	1 017		(2 112)
29	Consumatori casnici privilegiati			10 616	9 519	9 419	29 553	9 867	9 762	9 419	29 048	(749)	244		(506)
30	Venituri	mii lei		18 802	17 868	17 212	53 882	18 522	17 839	17 212	53 572	(280)	(29)		(309)
31	Consumatori (fara populatie)			9 233	9 288	8 722	27 242	9 628	9 039	8 722	27 388	395	(248)		147
32	Consumatori casnici ordinari			8 031	7 201	7 125	22 357	7 464	7 385	7 125	21 975	(567)	184		(383)
33	Consumatori casnici privilegiati		80%	1 538	1 379	1 365	4 283	1 430	1 415	1 365	4 209	(109)	35		(73)
34	Total vanzari														
35	Vanzari consumatorilor	MWh		142 443	134 419	131 597	408 459	142 084	135 548	131 597	409 229	(359)	1 128		769
36	Venituri	mii lei		24 955	23 574	23 056	**71,585**	24 900	23 754	23 056	**71 710**	(55)	180		**125**
37	Pierderi	MWh													
38	La nivelul de 10 kV			6 267	5 916	5 787	17 971	6 247	5 963	5 787	17 997	(20)	47		26
39	La nivelul de 0 4 kV			7 973	7 568	7 294	22 834	7 845	7 560	7 294	22 698	(128)	(8)		(136)
40	Comerciale si energie lipsa			(1 474)	(4 462)	7 252	1 316	4 724	(382)	7 252	11 595	6 198	4 080		10 278
41	Total pierderi			12 766	9 022	20 333	42 121	18 816	13 140	20 333	52 290	6 050	4 119		10 168
42				8 2%	6 3%	13 4%		11 7%	8 8%	13 4%		3 5%	2 5%	0 0%	
43	TOTAL SALES PLUS LOSSES			155 210	143 441	151 930	450 581	160 900	148 688	151 930	461 518	5 690	5 247		10 938
44															
45	**AJUSTARE**														
46	Total costuri						**72 869**				**79 601**				**6 732**
47	Total venituri						**(71 585)**				**(71 710)**				**(125)**
48	Marimea de ajustat						**1 284**				**7 890**				**6 607**
49	Componentele factorului R														
50	Modificarea costului energiei														**6 732**
51	Modificarea veniturilor														**(125)**
52	Marimea de ajustat din perioadele precedente														**1,284**
53	TOTAL														**7 890**

Costul energiei procurate
Retele electrice Chisinau
TRIMESTRUL DOI 1998 ANRE$_R$
CALCULAREA COSTURILOR ENERGIEI PROCURATE SI A MARIMILOR DE AJUSTARE

		Unitati de masura	Note	JAN	FEB	MAR	Total Tr I	APR	MAY	JUN	Total Tr II
	ENERGIE PROCURATA (PP)			Efectiv	Efectiv	PLAN		PLAN	PLAN	PLAN	
1	Energia procurata in decursul perioadei	MWh		160 900	148 688	151 930	461 518	130 226	93 955	92 991	317 172
2	Costul energiei procurate	mii lei		29 384	25 545	24 672	79 601	21 277	15 238	15 191	51 706
3	Costul mediu al energiei	bani/KWh	(2)/(1)	18 26	17 18	16 24		16 34	16 22	16 34	
4	Costul mediu trimestrial (PP)	bani/KWh	PP								**16 30**
5	**COEFICIENT AJUSTARE (R)**										
6	Marimea de ajustat din perioadele precedente	mii lei									7 890
7	Coeficient ajustare	bani/KWh	R								**2 49**
8	**TOTAL COSTURI TRIMESTRIALE**										
9	Costul energiei procurate	mii lei					79 601				51 706
10	Marimea de ajustat	mii lei									7 890
11	**Total costuri**	mii lei					**79 601**				**59 597**
12											
13	**VENITURI**										
14	**Nivelul de tensiune 10 kV**										
15	Coeficient pierderi		4 00 /								
16	PP ajustata la pierderi	bani/KWh									**16 98**
17	Marimea ajustare inclusiv pierderi	bani/KWh									**2 59**
18	PP plus R pe 1 kWh	bani/KWh		**16 85**	**16 85**	**16 85**		**19 57**	**19 57**	**19 57**	**19 57**
19	Vanzari consumatorilor (fara populatie)	MWh		37 861	35 113	34 694	107 668	29 882	26 991	23 637	80 511
20	Venituri (fara populatie)	mii lei		6 378	5 915	5 845	18 138	5 849	5 283	4 627	15 758
21	**Nivelul de tensiune 0 4 kV**										
22	Coeficient pierderi		7 00 %								
23	PP ajustata la pierderi	bani/KWh									**18 26**
24	Marimea de ajustat inclusiv pierderi	bani/KWh									**2 79**
25	PP plus R pe 1 kWh	bani/KWh		**18 11**	**18 11**	**18 11**		**21 05**	**21 05**	**21 05**	**21 05**
26	Vanzari consumatorilor	MWh		104 223	100 435	96 903	301 560	83 611	69 223	71 365	224 199
27	Consumatori (fara populatie)			53 150	49 903	48 148	151 200	44 251	38 545	40 790	123 585
28	Consumatori casnici ordinari			41 207	40 770	39 336	121 312	31 757	24 752	24 668	81 177
29	Consumatori casnici privilegiati			9 867	9 762	9 419	29 048	7 604	5 927	5 907	19 437
30	Venituri	mii lei		18 522	17 839	17 212	53 572	17 597	14 569	15 020	47 186
31	Consumatori (fara populatie)			9 628	9 039	8 722	27 388	395	(248)		147
32	Consumatori casnici ordinari			7 464	7 385	7 125	21 975	(567)	184		(383)
33	Consumatori casnici privilegiati		80 /	1 430	1 415	1 365	4 209	(109)	35		(73)
34	Total vanzari										
35	Vanzari consumatorilor	MWh		142 084	135 548	131 597	409 229	129 889	61 229	53 087	244 205
36	Venituri	mii lei		24 900	23 754	23 056	**71 710**	23 446	19 852	19 646	**62 944**
37	Pierderi										
38	La nivelul de 10 kV			6 247	5 963	5 787	17 997	4 991	4 226	4 182	13 399
39	La nivelul de 0 4 kV			7 845	7 560	7 294	22 698	6 293	5 210	5 372	16 875
40	Comerciale si energie lipsa			4 724	(382)	7 252	11 595	5 448	(11 696)	(11 565)	(17 813)
41	Total pierderi			18 816	13 140	20 333	52 290	16 732	(2 259)	(2 011)	12 461
42				11 7 /	8 8 %	13 4 /		12 8 %	2 4 /	2 2 /	
43	TOTAL VÂNZARI PLUS PIERDERI			160 900	148 688	151 930	461 518	130 226	93 955	92 991	317 172
44											
45	**AJUSTARE**										
46	Total costuri						**79 601**				**59 597**
47	Total venituri						**(71 710)**				**(62 944)**
48	Marime de ajustat						**7 890**				**(3 347)**

Costul energiei procurate
Retele electrice Chisinau
TRIMESTRUL TREI 1998 ANRE$_R$
AJUSTAREA DIN PERIOADELE PRECEDENTE

				TRIMESTRUL UNU AJUSTAREA FINALA											
				BUGET/PLAN				EFECTIV				DIFERENTA			
		Unitati de masura		JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	TOTAL
	ENERGIA PROCURATA (PP)			Plan	Plan	Plan		Efectiv	Efectiv	Efectiv					
1	Energia procurata în decursul perioadei	MWh		155 210	143 441	151 930	450 581	160 900	148 688	157 468	467 056	5 690	5 247	5 538	16 475
2	Costul energiei procurate	mii lei		25 186	23 011	24 672	72 869	29 384	25 545	28 730	83 658	4 198	2 534	4 058	10 789
3	Costul mediu al energiei	bani/KWh	(2)/(1)	16 23	16 04	16 24		18 26	17 18	18 24		2 03	1 14	2 01	
4	Costul mediu trimestrial (PP)	bani/KWh	PP				16 17				17 91				1 74
5	**COEFICIENT AJUSTARE (R)**														
6	Marime de ajustat pentru perioadele precedente	mii lei					0								
7	Coeficient de ajustare	bani/KWh	R												
8	**TOTAL COSTURI TRIMESTRIALE**														
9	Costul energiei procurate	mii lei					72 869				83 658				10 789
10	Marimea de ajustat	mii lei													
11	**Total costuri**	mii lei					**72 869**				**83 658**				**10 789**
12															
13	**VENITURI**														
14	Nivelul de tensiune 10 kV														
15	Coeficient pierderi		4 00%												
16	PP ajustata la pierderi	bani/KWh					**16 85**								
17	Marimea ajustare inclusiv pierderi	bani/KWh													
18	PP plus R pe 1 kWh	bani/KWh		**16 85**	**16 85**	**16 85**	**16 85**	**16 85**	**16 85**	**16 85**					
19	Vanzari consumatorilor (fara populatie)	MWh		36 522	33 874	34 694	105 090	37 861	35 113	35 959	108 933	1 339	1 239	1 265	3 843
20	Venituri (fara populatie)	mii lei		6 152	5 706	5 845	17 704	6 378	5 915	6 058	18 351	226	209	213	647
21	Nivelul de tensiune 0 4 kV														
22	Coeficient pierderi		7 00%												
23	PP ajustata la pierderi	bani/KWh					**18 11**								
24	Marimea de ajustat inclusiv pierderi	bani/KWh					**0 00**								
25	PP plus R pe 1 kWh	bani/KWh		**18 11**	**18 11**	**18 11**	**18 11**	**18 11**	**18 11**	**18 11**					
26	Vanzari consumatorilor	MWh		105 922	100 545	96 903	303 369	109 805	104 223	100 435	314 463	3 883	3 678	3 532	11 093
27	Consumatori (fara populatie)			50 969	51 274	48 148	150 391	52 838	53 150	49 903	155 890	1 869	1 876	1 755	5 499
28	Consumatori casnici ordinari			44 336	39 753	39 336	123 425	45 962	41 207	40 770	127 938	1 625	1 454	1 434	4 513
29	Consumatori casnici privilegiati			10 616	9 519	9 419	29 553	11 005	9 867	9 762	30 634	389	348	343	1 081
30	Venituri	mii lei		18 802	17 868	17 212	53 882	19 491	18 522	17 839	55 852	689	654	627	1 970
31	Consumatori (fara populatie)			9 233	9 288	8 722	27 242	9 571	9 628	9 039	28 238	338	340	318	996
32	Consumatori casnici ordinari			8 031	7 201	7 125	22 357	8 326	7 464	7 385	23 175	294	263	260	818
33	Consumatori casnici privilegiati		80%	1 538	1 379	1 365	4 283	1 595	1 430	1 415	4 439	56	50	50	157
34	Total vanzari														
35	Vanzari consumatorilor	MWh		142 443	134 419	131 597	408 459	147 666	139 337	136 393	423 396	5 222	4 917	4 797	14 936
36	Venituri	mii lei		24 955	23 574	23 056	71,585	25 869	24 437	23 897	**74 203**	915	862	840	**2 618**
37	Pierderi	MWh													
38	La nivelul de 10 kV			6 267	5 916	5 787	17 971	6 497	6 133	5 998	18 628	230	216	211	657
39	La nivelul de 0 4 kV			7 973	7 568	7 294	22 834	8 265	7 845	7 560	23 669	292	277	266	835
40	Comerciale si energie lipsa			(1 474)	(4 462)	7 252	1 316	(1 528)	(4 626)	7 517	1 364	(54)	(163)	264	47
41	Total pierderi			12 766	9 022	20 333	42 121	13 234	9 352	21 074	43 660	468	330	741	1 539
42				8 2%	6 3%	13 4%		8 2%	6 3%	13 4%					
43	TOTAL VÂNZARI PLUS PIERDERI			155 210	143 441	151 930	450 581	160 900	148 688	157 468	467 056	5 690	5 247	5 538	16 475
44															
45	**AJUSTARE**														
46	Total costuri						**72 869**				**83 658**				**10 789**
47	Total venituri						**(71 585)**				**(74 203)**				**(2 618)**
48	Marime de ajustat						**1 284**				**9 455**				**8 172**
49	Componentele factorului R														
50	Modificarea costului energiei														**10 789**
51	Modificarea veniturilor														**(2 618)**
52	Marimea de ajustat din perioadele precedente														**1,284**
53	TOTAL														**9 455**

Costul energiei procurate
Chisinau DC
TRIMESTRUL TREI 1998 ANRE$_R$
AJUSTAREA DIN PERIOADELE PRECEDENTE

				TRIMESTRUL TREI AJUSTAREA INITIALA											
				BUGET / PLAN				EFECTIV				DIFERENTA			
		Unitati de masura	Note	APR	MAY	JUN	Total	APR	MAY	JUN	Total	APR	MAY	JUN	Total
	ENERGIA PROCURATA (PP)			Plan	Plan	Plan		Efectiv	Efectiv	Plan					
1	Energia procurata in decursul perioadei	MWh		130 226	93 955	92 991	317 172	109 818	105 760	92 991	308 569	(20 407)	11 805		(8 603)
2	Costul energiei procurate	mii lei		21 277	15 238	15 191	51 706	16 187	17 241	15 191	48 618	(5 091)	2 003		(3 088)
3	Costul mediu al energiei	bani/KWh	(2)/(1)	16 34	16 22	16 34		14 74	16 30	16 34		(1 60)	0 08		
4	Costul mediu trimestrial (PP)	bani/KWh	PP				**16 30**				15 76				(0 55)
5	**COEFICIENT AJUSTARE (R)**														
6	Marime de ajustat pentru perioadele prec	mii lei					7 890				9 455				
7	Coeficient de ajustare	bani/KWh	R				**2 49**								
8	**TOTAL COSTURI TRIMESTRIALE**														
9	Costul energiei procurate	mii lei					51 706				48 618				(3 088)
10	Marimea de ajustat	mii lei					7 890				9 455				
11	**Total costuri**	mii lei					**59 597**				**58 074**				**(1 523)**
12															
13	**VENITURI**														
14	Nivelul de tensiune 10 kV														
15	Coeficient pierderi		4 00 %												
16	PP ajustata la pierderi	bani/KWh					**16 98**								
17	Marimea ajustare inclusiv pierderi	bani/KWh					**2 59**								
18	PP plus R pe 1 kWh	bani/KWh		**19 57**	**19 57**	**19 57**	**19 57**	**19 57**	**19 57**	**19 57**					
19	Vanzari consumatorilor (fara populatie)	MWh		29 882	26 991	23 637	80 511	25 199	30 383	23 637	79 219	(4 683)	3 391		(1 292)
20	Venituri (fara populatie)	mii lei		5 849	5 283	4 627	15 758	4 932	5 947	4 627	15 506	(917)	664		(253)
21	Nivelul de tensiune 0 4 kV														
22	Coeficient pierderi		7 00 %												
23	PP ajustata la pierderi	bani/KWh					**18 26**								
24	Marimea de ajustat inclusiv pierderi	bani/KWh					**2 79**								
25	PP plus R pe 1 kWh	bani/KWh		**21 05**	**21 05**	**21 05**	**21 05**	**21 05**	**21 05**	**21 05**					
26	Vanzari consumatorilor	MWh		83 611	69 223	71 365	224 199	70 509	77 921	71 365	219 794	(13 103)	8 697		(4 405)
27	Consumatori (fara populatie)			44 251	38 545	40 790	123 585	37 316	43 388	40 790	121 494	(6 934)	4 843		(2 092)
28	Consumatori casnici ordinari			31 757	24 752	24 668	81 177	26 780	27 861	24 668	79 310	(4 977)	3 110		(1 867)
29	Consumatori casnici privilegiati			7 604	5 927	5 907	19 437	6 412	6 671	5 907	18 990	(1 192)	745		(447)
30	Venituri	mii lei		17 277	14 319	14 771	46 367	14 570	16 119	14 771	45 459	(2 707)	1 799		(908)
31	Consumatori (fara populatie)			9 313	8 112	8 585	26 010	7 854	9 132	8 585	25 570	(1 459)	1 019		(440)
32	Consumatori casnici ordinari			6 684	5 209	5 192	17 085	5 636	5 864	5 192	16 692	(1 047)	654		(393)
33	Consumatori casnici privilegiati		80 %	1 280	998	995	3 273	1 080	1 123	995	3 197	(201)	125		(75)
34	Total vanzari														
35	Vanzari consumatorilor	MWh		113 494	96 215	95 002	304 710	95 708	108 303	95 002	299 014	(17 785)	12 089		(5 697)
36	Venituri	mii lei		23 126	19 602	19 397	**62,126**	19 502	22 065	19 397	**60 965**	(3 624)	2 463		**(1 161)**
37	Pierderi	MWh													
38	La nivelul de 10 kV			4 991	4 226	4 182	13 399	4 209	4 757	4 182	13 148	(782)	531		(251)
39	La nivelul de 0 4 kV			6 293	5 210	5 372	16 875	5 307	5 865	5 372	16 544	(986)	655		(332)
40	Comerciale si energie lipsa			5 448	(11 696)	(11 565)	(17 813)	4 594	(13 165)	(11 565)	(20 136)	(854)	(1 469)		(2 323)
41	Total pierderi			16 732	(2 259)	(2 011)	12 461	14 110	(2 543)	(2 011)	9 555	(2 622)	(284)		(2 906)
42				12 8%	2 4%	2 2 %		12 8 %	2 4 %	2 2 %					
43	TOTAL VÂNZARI PLUS PIERDERI			130 226	93 955	92 991	317 172	109 818	105 760	92 991	308 569	(20 407)	11 805		(8 603)
44															
45	**AJUSTARE**														
46	Total costuri						**59 597**				**58 074**				**(1 523)**
47	Total venituri						**(62 126)**				**(60 965)**				**1 161**
48	Marime de ajustat						**(2 529)**				**(2 891)**				**(362)**
49	Componentele factorului R														
50	Modificarea costului energiei														**(1 523)**
51	Modificarea veniturilor														**1 161**
52	Marimea de ajustat din perioadele precedente														**(2,529)**
53	TOTAL														**(2 891)**

Costul energiei procurate
Retele electrice Chisinau
TRIMESTRUL TREI 1998 ANRE$_R$
CALCULAREA COSTULUI ENERGIEI PROCURATE SI A MARIMILOR DE AJUSTAT

		Unitati de masura	Note	APR	MAY	JUN	Total Tr I	JUL	AUG	SEP	Total Tr II
	ENERGIE PROCURATA (PP)			Efectiv	Efectiv	Plan		PLAN	PLAN	PLAN	
1	Energie procurata in decursul perioadei	MWh		109 818	105 760	92 991	308 569	95 885	93 762	102 830	292 477
2	Costul energiei procurate	mii lei		16 187	17 241	15 191	48 618	15 841	15 416	16 824	48 081
3	Costul mediu al energiei procurate	bani/KWh	(2)/(1)	14 74	16 30	16 34		16 52	16 44	16 36	
4	*Costul mediu pe trimestru (PP)*	*bani/KWh*	PP								**16 44**
5	**COEFICIENT AJSUTARE (R)**										
6	Marimi de ajustat din perioade precedente	mii lei					9 455				(2 891)
7	Coeficient ajustare	bani/KWh	R								**(0 99)**
8	**TOTAL COSTURI PE TRIMESTRU**										
9	*Costul energiei procurate*	*mii lei*					48 618				48 081
10	Marimea de ajustat	mii lei					9 455				(2 891)
11	**Total costuri**	mii lei					**58 074**				**45 190**
12											
13	**VENITURI**										
14	**Nivelul de tensiune 10 kV**										
15	Coeficient pierderi		4 00%								
16	PP ajustata la pierderi	bani/KWh									**17 12**
17	Marimea ajustare inclusiv pierderi	bani/KWh									**(1 03)**
18	PP plus R pe 1 kWh	bani/KWh		**19 57**	**19 57**	**19 57**		**16 09**	**16 09**	**16 09**	**16 09**
19	Vanzari consumatorilor (fara populatie)	MWh		25 199	30 383	23 637	79 219	29 882	26 991	23 637	80 511
20	Venituri (fara populatie)	mii lei		4 932	5 947	4 627	15 506	4 809	4 344	3 804	12 958
21	**Nivelul de tensiune 0 4 kV**										
22	Coeficient pierderi		7 00%								
23	PP ajustata la pierderi	bani/KWh									**18 41**
24	Marimea de ajustat inclusiv pierderi	bani/KWh									**(1 11)**
25	PP plus R pe 1 kWh	bani/KWh		**21 05**	**21 05**	**21 05**		**17 31**	**17 31**	**17 31**	**17 31**
26	Vanzari consumatorilor	MWh		70 509	77 921	71 365	219 794	83 611	69 223	71 365	224 199
27	Consumatori (fara populatie)			37 316	43 388	40 790	121 494	44 251	38 545	40 790	123 585
28	Consumatori casnici ordinari			26 780	27 861	24 668	79 310	31 757	24 752	24 668	81 177
29	Consumatori casnici privilegiati			6 412	6 671	5 907	18 990	7 604	5 927	5 907	19 437
30	*Venituri*	*mii lei*		*14 570*	*16 119*	*14 771*	*45 459*	*14 470*	*11 980*	*12 350*	*38 800*
31	Consumatori (fara populatie)			7 854	9 132	8 585	25 570	395	(248)		147
32	Consumatori casnici ordinari			5 636	5 864	5 192	16 692	(567)	184		(383)
33	Consumatori casnici privilegiati		80%	1 080	1 123	995	3 197	(109)	35		(73)
34	Total vanzari										
35	Vanzari consumatorilor	MWh		95 708	108 303	95 002	299 014	129 889	61 229	53 087	244 205
36	Venituri	mii lei		19 502	22 065	19 397	**60 965**	19 279	16 324	16 155	**51 758**
37	Pierderi										
38	La nivelul de 10 kV			4 209	4 757	4 182	13 148	4 991	4 226	4 182	13 399
39	La nivelul de 0 4 kV			5 307	5 865	5 372	16 544	6 293	5 210	5 372	16 875
40	Comerciale si energie lipsa			4 594	(13 165)	(11 565)	(20 136)	(28 893)	(11 889)	(1 726)	(42 508)
41	Total pierderi			14 110	(2 543)	(2 011)	9 555	(17 609)	(2 452)	7 828	(12 233)
42				12 8%	2 4%	2 2%		18 4%	2 6%	7 6%	
43	TOTAL VÂNZARI PLUS PIERDERI			109 818	105 760	92 991	308 569	95 885	93 762	102 830	292 477
44											
45	**AJUSTARE**										
46	Total costuri						**58 074**				**45 190**
47	Total venituri						**(60 965)**				**(51 758)**
48	Marime de ajustat						**(2 891)**				**(6 568)**

Analiza cheltuielilor la Retele electrice Chisinau

		Nr de cont		1996 Efectiv	1997 Efectiv	1998 Planul companiei	1998 ANREr
1	2	3	4	5	6	7	8
	ALOCAREA CHELTUIELILOR						
	Total cheltuieli		mil Lei		27 9	60 4	70 2
	Servicii distributie						
	Total						
	Vânzari consumatorilor		mil kWh	1398	1323	1442	1367
	Cheltuieli	90%			25 1	54 3	63 2
	Nivelul de tensiune de 10 kV						
	Vânzari consumatorilor		mil kWh		343	374	354
	Cheltuieli	18%	mil Lei		4 6	9 9	11 5
	Costul pe kWh		Bani/KWh		**1 33**	**2 64**	**3 24**
	Nivelul de tensiune de 0 4 kV						
	Vânzari consumatorilor		mil kWh		980	1068	1012
	Necasnici				573	625	592
	Populatie				407	444	420
	Cheltuieli		mil Lei		20 5	44 5	51 7
	Costul pe kWh		Bani/KWh		**2 10**	**4 16**	**5 11**
	Comisionul pentru livrari reglementate						
	Total						
	Vânzari consumatorilor		mil kWh	1398	1323	1442	1367
	Cheltuieli	10%	mil Lei		2 8	6 0	7 0
	Necasnici						
	Vânzari consumatorilor		mil kWh		916	998	946
	Cheltuieli	30%	mil Lei		0 8	1 8	2 1
	Custul pe kWh		Bani/KWh		**0 09**	**0 18**	**0 22**
	Populatie						
	Vânzari consumatorilor		mil kWh		407	444	420
	Cheltuieli	70%	mil Lei		2 0	4 2	4 9
	Costul pe KWh		Bani/KWh		**0 48**	**0 95**	**1 17**
	TOTAL CHELTUIELI		mil Lei		27 9	60 4	70 2

SUMAR TARIFE				
Servicii distributie				
Nivelul de 10 kV		1 33	2 64	**3 24**
Nivelul de 0 4 kV		2 10	4 16	**5 11**
Comisionul pentru livrari reglementate				
Necasnici		0 09	0 18	**0 22**
Populatie		0 48	0 95	**1 17**

Analiza costurilor Moldtranselectro

			1996	1997	1998		Ajustari			
			actual	actual	MTE plan	ANREr	(7)-(5)	D %	(7)-(6)	D %
1	2	3	4	5	6	7	8	9	10	11
2	***Energie procurata***	mln kWh								
3										
4	**Total procurat, inclusiv**		**5038**	**4632**	**5854**	**4693**	61	*1*	(1161)	*(20)*
5										
6	Generare autohtona		1100	1137	1288	1389	252	*22*	102	*8*
7	Import		3938	3495	4566	3304	(192)	*(5)*	(1262)	*(28)*
8										
9	Pierderi la transportare		460	281 248	217 5	200 9	(80)	*(29)*	(17)	*(8)*
10										
11	**Livrat retelelor de distributie**		**4578**	**4351**	**5636**	**4492**	141	*3*	(1144)	*(20)*
12										
13	***Costul energiei***	mln lei								
14										
15	**Total cost energie procurata, incl**		**545**	**684**	**723**	**732**	48	*7*	9	*1*
16	Generare autohtona		82	131	158	170	39	*29*	12	*7*
17	Import		463	552	564	562	9	*2*	(3)	*(1)*
18										
19	***Cheltuieli de exploatare***	mln lei								
20	Exploatare si reparatii		1 9	1 1	28 5	17 2	16	*1437*	(11)	*(40)*
21	Servicii tranzit					6 6				
22	Salarii		2 9	5 5	14 7	5 9	0 4	*8*	(9)	*(60)*
23	Fondul social		1 1	1 7	4 6	1 8	0 2	*11*	(3)	*(60)*
24	Amortizarea activelor fixe		12 7	55 8	28 2	27 4	(28)	*(51)*	(1)	*(3)*
25	Alte cheltuieli		1 3	1 2	114 4	12 1	11	*895*	(102)	*(89)*
26	**Total Cheltuieli de expl si repara**		**19 8**	**65 3**	**190 3**	**71 0**	**6**	*9*	**(119)**	*(63)*
27	Marja de profit 5%				9 52	3 55	4		(6)	*(63)*
28										
29	**Total expl si reparatii, incl marja**		**19 8**	**65 3**	**199 9**	**74 6**	**9**	*14*	**(125)**	*(63)*
30										
33	**Costul total al energiei**	mln lei	**564 7**	**749 0**	**922 6**	**806 2**	**57**	*8*	**(116)**	*(13)*
34										
35	**Costul total mediu**	bani/kWh	**12 34**	**17 21**	**16 37**	**17 95**	**0 7**	*4*	**1 6**	*10*
36	inclusiv									
37	Energie procurata		11 90	15 71	12 82	16 29	0 6	*4*	3 5	*27*
38	Cheltuieli de expl si repar		0 43	1 50	3 55	1 66	0 2	*11*	(2)	*(53)*

ALOCAREA CHELTUIELILOR

Cheltuielile totale ale Moldtranselectro		mln Lei	**65 34**	**199 86**	**74 57**
Servicii transportare					
Procurarea energiei de catre retele		mill kWh	4 351	5 636	4 492
Costuri	70%	mln Lei	45 74	139 90	52 20
Costul pe KWh		Bani/KWh	1 05	2 48	**1 16**
Servicii dispetcerat					
Procurarea energiei de catre retele		mill kWh	4 351	5 636	4 492
Costuri	30%	mln Lei	19 60	59 96	22 37
Costul pe KWh		Bani/KWh	0 45	1 06	**0 50**

ANNEX B

COST DATA AND ANALYSIS

Table of Contents

1 Costs analysis

1 1 Power Generators

CHP-1 cost analysis
CHP-2 cost analysis
CHP-North cost analysis

1 2 Moldtranselectro cost analysis

1 3 Power Distributors

Central DC cost analysis
Chisinau DC cost analysis
North DC cost analysis
North-West DC cost analysis
South DC cost analysis

2 Power System Analysis Summary

3 Monthly Power Sales Data (1997)

3 1 Power Production by Sources
3 2 Power Sales to Disco's
3 3 Power Sales to customers by Disco's

4 Monthly Sales Figures by Customer Class (1997)

4 1 Central DC
4 2 Chisinau DC
4 3 North DC
4 4 North-West DC
4 5 South DC

5 Monthly Power Sales Data (1998)

5 1 Power Production by Sources
5 2 Power Sales to Disco's

CHP-1 Electricity Cost Analysis

			1996	1997	1998			
			actual	actual	CHP-1 plan	**ANRE**	**ANREr**	**Δ ANRE**
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	[Mln KWh]	115	93	128	160	160	0 0
4	Own use	[Mln KWh]	27	21	31	39	39	0 0
5	Delivered to the system	[Mln KWh]	88	73	97	121	121	0 0
6								
7	Heat Rate	gce/kWh	159	156	163	300	300	0 0
8	Fuel Consumption	ths tce	14	11	16	36	36	0 0
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	11	10	12 5	28 7	28 7	0 0
12	Price	lei/1000 cm	346	398	454	406	370	(36 0)
13	Amount	mln lei	3 8	3 9	5 7	11 7	10 6	(1 0)
14								
15	# 6 oil	ths tons	1 2	0 1	1 2	2 6	2 6	0 0
16	Price	lei/ton	345	481	529	480	480	0 0
17	Amount	mln lei	0 43	0 06	0 61	1 3	1 3	0 0
18								
19	**Total fuel costs**	**mln lei**	**4 22**	**3 97**	**6 27**	**12 9**	**11 9**	(1 0)
20								
21	*Operating Costs*							
22	Materials & Services costs		2 1	2 5	2 6	1 59	1 78	0 2
23	Water		0 6	0 6	0 6	0 3	0 3	0 0
24	Reimbursed water costs					0	0	0 0
25	Total Water		0 6	0 6	0 6	0 3	0 3	0 0
26	Other M&S		1 5	1 9	2 0	1 2	1 4	0 2
27	Salaries		0 2	0 3	0 4	0 5	0 5	0 0
28	Social fund		0 1	0 1	0 1	0 1	0 1	0 0
29	Depreciation		0 1	0 0	0 4	0 44	0 44	0 0
30	Other costs		0 2	0 1	1 0	0 41	0 39	(0 0)
31	**All costs except fuel**		**2 6**	**3 0**	**4 5**	**3 1**	**3 2**	0 2
32								
33	**Total before profit margin**		**6 8**	**7 0**	**10 8**	**16 0**	**15 1**	(0 9)
34								
35	**Profit margin**	**5%**			**0 5**	**0 8**	**0 8**	(0 0)
36								
37	**Total Excluding Fuel**	**mln lei**	**2 6**	**3 0**	**5 1**	**3 8**	**4 0**	0 1
38								
39	**Total Costs**	**mln lei**	**6 85**	**7 0**	**11 3**	**16 8**	**15 9**	(0 9)
40								
41	**Average Cost**	**bani/kWh**	**7 8**	**9 6**	**11 7**	**13 9**	**13 1**	(0 8)
42	including							
43	**Fuel**		**4 8**	**5 5**	**6 5**	**10 7**	**9 8**	(0 9)
44	**Other**		**3 0**	**4 2**	**5 2**	**3 2**	**3 3**	0 1

CHP-1 Heat Cost Analysis

			1996	1997	1998			
					CHP-1 plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	ths Gcal	913	450	624	783	783	0 0
4	Own use	ths Gcal	54	54	54	31	31	0 0
5	Delivered to the system	ths Gcal	859	396	570	752	752	0 0
6								
7	Heat Rate	kgce/Gcal	165 7	164 6	165	142	142	0 0
8	Fuel Consumption	ths tce	142	65	94	107	107	0 0
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	108	56	74	85	85	0 0
12	Price	lei/1000 cm	346	404	454	406	370	(36 0)
13	Amount	mln lei	37	23	34	34	31	(3 1)
14								
15	# 6 oil	ths tons	12	0 7	6 9	8	8	0 0
16	Price	lei/ton	347	481	529	480	480	0 0
17	Amount	mln lei	4	0 34	3 7	4	4	0 0
18								
19	**Total fuel costs**	**mln lei**	**41**	**23**	37 4	**38 2**	**35 1**	(3 1)
20								
21	*Operating Costs*							
22	Materials & Services costs		8 0	6 2	8 1	4 6	6 1	1 5
23	Water		3 8	3 7	8 1	3 6	3 6	0 0
24	Reimbursed water costs					(3 0)	(2 0)	1 0
25	Total Water		3 8	3 7	8 1	0 5	1 5	1 0
26	Other M&S		4 1	2 4	0	4 0	4 6	0 5
27	Salaries		1 7	1 7	1 5	1 4	1 4	0 0
28	Social fund		0 6	0 5	0 5	0 4	0 4	0 0
29	Depreciation		0 7	0 4	1 4	1 3	1 3	0 0
30	Other costs		1 0	0 4	2 8	1 1	1 1	0 0
31	**All costs except fuel**		**11.9**	**9 2**	**14 3**	**8 8**	**10 3**	1 5
32								
33	**Total before profit margin**		**53.3**	**32 3**	**51 6**	**47 0**	**45 4**	(1 5)
34								
35	**Profit margin**	**5%**			**2 6**	**2 3**	**2 3**	(0 1)
36								
37	**Total Excluding Fuel**	**mln lei**	**11.9**	**9 2**	**16 9**	**11 1**	**12 6**	1 5
38								
39	**Total Costs**		**53.3**	**32 3**	**54 2**	**49 3**	**47 7**	(1 6)
40								
41	**Average Cost**	**lei/Gcal**	**62.1**	**81 7**	**95 1**	**65 6**	**63 5**	(2 1)
42	including							
43	**Fuel**		48 2	58 5	65 5	50 8	46 7	(4 1)
44	**Other**		13 9	23 2	29 6	14 8	16 7	2 0

Do not have separate costs for Sculeni Boiler House

Total Electircity & Heat Costs

			1996	1997	1998			
			actual	actual	CHP-1 plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced							
4	Own use							
5	Delivered to the system							
6								
7	*Fuels used in Production*							
8	Gas	Mil cm	119	66	87	114	114	0 0
9	Price	lei/1000 cm	0	404	454	406	370	(36 0)
10	Amount	mln lei	41	27	39	46	42	(4 1)
11								
12	# 6 oil	ths tons	13	0 8	8 1	10	10	0 0
13	Price	lei/ton	0	481	529	480	480	0 0
14	Amount	mln lei	5	0 4	4 27	4 98	4 98	0 0
15								
16	**Total fuel costs**	**mln lei**	**46**	**27**	**44**	**51**	**47**	(4 1)
17								
18	*Operating Costs*	mln lei						
19	Materials & Services costs		10 0	8 6	10 7	6 1	7 9	1 7
20	Water		4 4	4 3	8 7	3 9	3 9	0 0
21	Reimbursed water costs					(3 0)	(2 0)	1 0
22	Total Water		4 4	4 3	8 7	0 9	1 9	1 0
23	Other M&S		5 7	4 3	2 0	5 3	6 0	0 7
24	Salaries		1 9	2 0	1 9	1 9	1 9	0 0
25	Social fund		0 7	0 6	0 6	0 6	0 6	0 0
26	Depreciation		0 9	0 4	1 8	1 7	1 7	0 0
27	Other costs		1 1	0 6	3 8	1 5	1 5	0 0
28	**All costs except fuel**		**14 6**	**12 2**	**18 8**	**11 8**	**13 5**	1 7
29								
30	**Total before profit margin**		**60.2**	**39 3**	**62 4**	**62 9**	**60 5**	(2 4)
31								
32	**Profit margin**	**5%**			**3 1**	**3 1**	**3 0**	(0 1)
33								
34	**Total Excluding Fuel**		**14.6**	**12 2**	**21 9**	**15 0**	**16 6**	1 6
35								
36	**Total Costs**		**60 2**	**39 3**	**65 5**	**66 1**	**63 6**	(2 5)

ANREr 98 costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					160	783 1
4	Own use					39 4	31 3
5	Delivered to the system					120 6	751 8
6							
7	Heat Rate					300	142
8	Fuel Consumption	tce	143236	25%	75%	36180	107056
9							
10	*Fuels used in Production*						
11	Gas	mln cm	114	25%	75%	29	85
12	Price	lei/1000 cm	370			370	370
13	Amount	mln lei	42	25%	75%	11	31
14							
15	# 6 oil	ths tons	10	25%	75%	3	8
16	Price	lei/ton	480			480	480
17	Amount	mln lei	5	25%	75%	1	4
18							
19	**Total fuel costs**	**mln lei**	**47**	**25%**	**75%**	**12**	**35**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		7 9	23%	77%	1 8	6 1
23	Water		3 9	9%	91%	0 3	3 6
24	Reimbursed water costs		(2 0)	0%	100%	0 0	(2 0)
25	Total Water		1 9	18%	82%	0 3	1 5
26	Other M&S		6 0	24%	76%	1 4	4 6
27	Salaries		1 9	25%	75%	0 5	1 4
28	Social fund		0 6	25%	75%	0 1	0 4
29	Depreciation		1 7	25%	75%	0 4	1 3
30	Other costs		1 5	26%	74%	0 4	1 1
31	**All costs except fuel**		**13 5**	**24%**	**76%**	**3 2**	**10 3**
32							
33	**Total before PM**		**60 5**	**25%**	**75%**	**15 1**	**45 4**
34							
35	Profit margin (PM)	5/	3 0	25%	75%	0 8	2 3
36							
37	**Total Excluding Fuel**		**16 6**	24%	76%	**4 0**	**12 6**
38							
39	**Total Costs**		**63 6**	**25%**	**75%**	**15 9**	**47 7**
40							
41	**Average Cost**	**banl/kWh**				**13 1**	
42		**lei/Gcal**					**63 5**

CHP 1 98 Plan costs data (initial company plan)

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					128	624
4	Own use					31	54
5	Delivered to the system					97	570
6							
7	Heat Rate					163	165
8	Fuel Consumption	tce	109765	14%	86%	15772	93993
9							
10	*Fuels used in Production*						
11	Gas	mln cm	87	14%	86%	12	74
12	Price	lei/1000 cm	454			454	454
13	Amount	mln lei	39	14%	86%	6	34
14							
15	# 6 oil	ths tons	8	14%	86%	1	7
16	Price	lei/ton	529			529	529
17	Amount	mln lei	4	14%	86%	1	4
18							
19	**Total fuel costs**	**mln lei**	**44**	**14%**	**86%**	**6**	**37**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		10 7	24%	76%	2 6	8 1
23	Water		8 7	7%	93%	0 6	8 1
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		8 7	7%	93%	0 6	8 1
26	Other M&S		2 0	100%	0%	2 0	0 0
27	Salaries		1 9	21%	79%	0 4	1 5
28	Social fund		0 6	21%	79%	0 1	0 5
29	Depreciation		1 8	23%	77%	0 4	1 4
30	Other costs		3 8	26%	74%	1 0	2 8
31	**All costs except fuel**		**18 8**	**24%**	**76%**	**4 5**	**14 3**
32							
33	**Total before PM**		**62 4**	**17%**	**83%**	**10 8**	**51 6**
34							
35	Profit margin (PM)	5%	3 1	17%	83%	0 5	2 6
36							
37	**Total Excluding Fuel**		21 9	23%	77%	5 1	16 9
38							
39	**Total Costs**		**65 5**	**17%**	**83%**	**11 3**	**54 2**
40							
41	**Average Cost**	**banl/kWh**				**11 7**	
42		**lei/Gcal**					**95 1**

CHP 1 97 actual costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					93	450
4	Own use					21	54
5	Delivered to the system					73	396
6							
7	Heat Rate					155 8	164 6
8	Fuel Consumption	tce	76421	15%	85%	11305	65116
9							
10	*Fuels used in Production*						
11	Gas	mln cm	66	15%	85%	10	56
12	Price	lei/1000 cm	404			398	404
13	Amount	mln lei	27	15%	85%	4	23
14							
15	# 6 oil	ths tons	0 8	15%	85%	0 12	0 7
16	Price	lei/ton	481			481	481
17	Amount	mln lei	0 4	15%	85%	0 06	0 34
18							
19	**Total fuel costs**	mln lei	**27**	**15%**	**85%**	**4**	**23**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		8 6	29%	71%	2 5	6 2
23	Water		4 3	13%	87%	0 6	3 7
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		4 3	13%	87%	0 6	3 7
26	Other M&S		4 3	44%	56%	1 9	2 4
27	Salaries		2 0	15%	85%	0 3	1 7
28	Social fund		0 6	15%	85%	0 1	0 5
29	Depreciation		0 4	9%	91%	0 0	0 4
30	Other costs		0 6	25%	75%	0 1	0 4
31	**All costs except fuel**		**12 2**	**25%**	**75%**	**3 0**	**9 2**
32							
33	**Total before PM**		**39 3**	**18%**	**82%**	**7 0**	**32 3**
34							
35	Profit margin (PM)	5 %					
36							
37	**Total Excluding Fuel**		**12 2**	**25%**	**75%**	**3 0**	**9 2**
38							
39	**Total Costs**		**39 3**	**18%**	**82%**	**7 0**	**32 3**
40							
41	**Average Cost**	bani/kWh				**9 6**	
42		lei/Gcal					**81 7**

CHP 1 96 actual costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					115	913
4	Own use					27	54
5	Delivered to the system					88	859
6							
7	Heat Rate					159 0	165 7
8	Fuel Consumption	tce	156225	9%	91%	13949	142276
9							
10	*Fuels used in Production*						
11	Gas	mln cm	119	9%	91%	11	108
12	Price	lei/1000 cm	0			346	346
13	Amount	mln lei	41	9%	91%	4	37
14							
15	# 6 oil	ths tons	13	10%	90%	1	12
16	Price	lei/ton	0			345	347
17	Amount	mln lei	5	9%	91%	0	4
18							
19	**Total fuel costs**	**mln lei**	**46**	**9%**	**91%**	**4**	**41**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		10 0	21%	79%	2 1	8 0
23	Water		4 4	13%	87%	0 6	3 8
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		4 4	13%	87%	0 6	3 8
26	Other M&S		5 7	27%	73%	1 5	4 1
27	Salaries		1 9	11%	89%	0 2	1 7
28	Social fund		0 7	11%	89%	0 1	0 6
29	Depreciation		0 9	14%	86%	0 1	0 7
30	Other costs		1 1	13%	87%	0 2	1 0
31	**All costs except fuel**		**14 6**	**18%**	**82%**	**2 6**	**11 9**
32							
33	**Total before PM**		**60 2**	**11%**	**89%**	**6 8**	**53 3**
34							
35	Profit margin (PM)	5%					
36							
37	**Total Excluding Fuel**		**60 2**	**18%**	**82%**	**2 6**	**11 9**
38							
39	**Total Costs**		**60 2**	**11%**	**89%**	**6 8**	**53 3**
40							
41	**Average Cost**		**bani/kWh**			**7 81**	
42			**lei/Gcal**				**62 1**

CHP-2 Electricity Cost Analysis

			1996	1997	1998			
			actual	actual	CHP-2 plan	ANREr	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	[Mln KWh]	960	1057	1159	1353	1353	0 0
4	Own use	[Mln KWh]	121	138	56	140	140	0 0
5	Delivered to the system	[Mln KWh]	839	896	1022	1213	1213	0 0
6								
7	Heat Rate	gce/kWh	241	266	261	300	300	0 0
8	Fuel Consumption	ths tce	202	239	266	364	364	0 0
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	149	189	197	257	257	0 0
12	Price	lei/1000 cm	276	408	454	406	370	(36 0)
13	Amount	mln lei	41	77	90	104	95	(9 2)
14								
15	# 6 oil	ths tons	24	22	30	53	53	0 0
16	Price	lei/ton	435	493	490	480	480	0 0
17	Amount	mln lei	10	11	15	25	25	0 0
18								
19	**Total fuel costs**	**mln lei**	**51**	**88**	**104**	**129**	**120**	(9 2)
20								
21	*Operating Costs*							
22	Materials & Services costs		9 1	11 8	37 0	12 3	11 7	(0 5)
23	Water		5 0	6 3	4 0	4 5	4 5	0 0
24	Reimbursed water costs							0 0
25	Total Water		5 0	6 3	4 0	4 5	4 5	0 0
26	Other M&S		4 1	5 5	33 0	7 7	7 2	(0 5)
27	Salaries		1 4	1 6	2 5	1 8	1 8	0 0
28	Social fund		0 5	0 5	0 8	0 6	0 6	0 0
29	Depreciation		1 7	1 5	5 0	9 7	8 8	(0 9)
30	Other costs		2 5	2 0	2 6	4 4	4 5	0 1
31	**All costs except fuel**		**15 1**	**17 3**	**47 9**	**28 7**	**27 3**	(1 4)
32								
33	**Total before profit margin**		**66 6**	**105 1**	**152 3**	**158 2**	**147 5**	(10 6)
34								
35	**Profit margin**	**5%**			**7 6**	**7 9**	**7 4**	(0 5)
36								
37	**Total Excluding Fuel**	**mln lei**	**15 1**	**17 3**	**55 5**	**36 6**	**34 7**	(1 9)
38								
39	**Total Costs**	**mln lei**	**66 6**	**105 1**	**159 9**	**166 1**	**154 9**	(11 1)
40								
41	**Average Cost**	**bani/kWh**	**7 9**	**11 7**	**15 6**	**13 7**	**12 8**	(0 9)
42	including							
43	**Fuel**		**6 1**	**9 8**	**10 2**	**10 7**	**9 9**	(0 8)
44	**Other**		**1 8**	**1 9**	**5 4**	**3 0**	**2 9**	(0 2)

CHP-2 Heat Cost Analysis

			1996	1997	1998			
					CHP-2 plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	ths Gcal	1569	1579	1575	1629	1575	(54 0)
4	Own use	ths Gcal	54	54	54	54	54	0 0
5	Delivered to the system	ths Gcal	1515	1525	1521	1575	1521	(54 0)
6								
7	Heat Rate	kgce/Gcal	170	173	173	151	151	(0 3)
8	Fuel Consumption	ths tce	258	263	263	238	229	(8 5)
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	174	197	184	167	162	(5 8)
12	Price	lei/1000 cm	319	373	454	406	370	(36 0)
13	Amount	mln lei	56	74	84	68	60	(8 2)
14								
15	# 6 oil	ths tons	44	28	39	34	33	(1 1)
16	Price	lei/ton	436	494	490	480	480	0 0
17	Amount	mln lei	19	14	19	16	16	(0 5)
18								
19	**Total fuel costs**	**mln lei**	**75**	**88**	**103**	**84**	**75 74**	(8 7)
20								
21	*Operating Costs*							
22	Materials & Services costs		9 9	9 7	36 5	8 4	7 0	(1 4)
23	Water		6 0	6 9	12 0	10 0	10 04	0 0
24	Reimbursed water costs					(6 6)	(8 5)	(1 9)
25	Total Water		6 0	6 9	12 0	3 4	1 5	(1 9)
26	Other M&S		3 9	2 8	24 6	5 0	5 5	0 5
27	Salaries		1 0	1 4	2 2	1 1	1 1	0 0
28	Social fund		0 4	0 4	0 7	0 3	0 3	0 0
29	Depreciation		1 4	1 7	5 4	4 6	5 6	0 9
30	Other costs		1 8	2 5	3 3	2 9	2 8	(0 1)
31	**All costs except fuel**		**14 5**	**15 6**	**48 1**	**17 4**	**16 8**	(0 6)
32								
33	**Total before profit margin**		**89 1**	**103 2**	**150 8**	**101 8**	**92 6**	(9 3)
34								
35	**Profit margin**	**5%**			**7 5**	**5 1**	**4 6**	(0 5)
36								
37	**Total Excluding Fuel**	**mln lei**	**14 5**	**15 6**	**55 7**	**22 5**	**21 4**	(1 0)
38								
39	**Total Costs**		**89 1**	**103 2**	**158 4**	**106 9**	**97 2**	(9 7)
40								
41	**Average Cost**	**lei/Gcal**	**58 8**	**67 7**	**104 1**	**67 9**	**63 9**	(4 0)
42	including							
43	**Fuel**		49 3	57 4	67 5	53 6	49 8	(3 8)
44	**Other**		9 6	10 3	36 6	14 3	14 1	(0 2)

Total Electircity & Heat Costs

			1996 actual	1997 actual	1998			
					CHP-2 plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced							
4	Own use							
5	Delivered to the system							
6								
7	*Fuels used in Production*							
8	Gas	Mil cm	323	386	381	424	418	(5 8)
9	Price	lei/1000 cm	299	390	454	406	370	(36 0)
10	Amount	mln lei	97	151	173	172	155	(17 4)
11								
12	# 6 oil	ths tons	68	50	69	87	86	(1 1)
13	Price	lei/ton	435	493	490	480	480	0 0
14	Amount	mln lei	29	25	34	42	41	(0 5)
15								
16	**Total fuel costs**	**mln lei**	**126**	**175**	**207**	**214**	**196**	(17 9)
17								
18	*Operating Costs*	mln lei						
19	Materials & Services costs		19 0	21 4	73 5	20 7	18 7	(1 9)
20	Water		11 0	13 2	15 9	14 5	14 5	0 0
21	Reimbursed water costs					(6 6)	(8 5)	(1 9)
22	Total Water		11 0	13 2	15 9	7 9	6 0	(1 9)
23	Other M&S		8 0	8 3	57 5	12 7	12 7	0 0
24	Workers Salaries		2 4	2 9	4 8	2 9	2 9	0 0
25	Social fund		0 9	0 9	1 5	0 9	0 9	0 0
26	Depreciation		3 1	3 2	10 5	14 4	14 4	0 0
27	Other costs		4 2	4 5	5 8	7 3	7 3	0 0
28	**All costs except fuel**		**29 6**	**33 0**	**96 0**	**46 1**	**44 1**	(1 9)
29								
30	**Total before profit margin**		**155 7**	**208 4**	**303 1**	**260 0**	**240 1**	(19 9)
31								
32	**Profit margin**	**5%**			**15 2**	**13 0**	**12 0**	(1 0)
33								
34	**Total Excluding Fuel**		**29 6**	**33 0**	**111 2**	**59 1**	**56 2**	(2 9)
35								
36	**Total Costs**		**155 7**	**208 4**	**318 3**	**273 0**	**252 1**	(20 9)

ANREr 98 costs data

			Total	Allocation factor Electricity	Allocation factor Heat	Electricity	Heat
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					1353	1575
4	Own use					140	54
5	Delivered to the system					1213	1521
6							
7	Heat Rate					300	151
8	Fuel Consumption	tce	593191	61%	39%	363900	229291
9							
10	*Fuels used in Production*						
11	Gas	mln cm	418	61%	39%	256	162
12	Price	lei/1000 cm	370			370	370
13	Amount	mln lei	155	61%	39%	95	60
14							
15	# 6 oil	ths tons	86	61%	39%	53	33
16	Price	lei/ton	480			480	480
17	Amount	mln lei	41	61%	39%	25	16
18							
19	**Total fuel costs**	mln lei	**196**	**61%**	**39%**	**120**	**76**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		18 7	63%	37%	11 7	7 0
23	Water		14 5	31%	69%	4 5	10 0
24	Reimbursed water costs		(8 5)	0%	100%	0 0	(8 5)
25	Total Water		6 0	75%	25%	4 5	1 5
26	Other M&S		12 7	57%	43%	7 2	5 5
27	Workers Salaries		2 9	62%	38%	1 8	1 1
28	Social fund		0 9	62%	38%	0 6	0 3
29	Depreciation		14 4	68%	32%	9 7	4 6
30	Other costs		7 3	61%	39%	4 5	2 8
31	**All costs except fuel**		**44 1**	**64%**	**36%**	**28 2**	**15 9**
32							
33	**Total before PM**		**240 1**	**62%**	**38%**	**148 5**	**91 6**
34							
35	Profit margin (PM)	5%	12 0	62%	38%	7 4	4 6
36							
37	**Total Excluding Fuel**		**56 2**	64%	36%	**35 7**	**20 5**
38							
39	**Total Costs**		**252 1**	**62%**	**38%**	**155 9**	**96 2**
40							
41	**Average Cost**	banl/kWh				**12 9**	
42		lei/Gcal					**63 3**

CHP 2 98 Plan costs data (initial company plan)

				Allocation factor			
			Total	Electricity	Heat	Electricity	Heat
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					1159	1575
4	Own use					56	54
5	Delivered to the system					1022	1521
6							
7	Heat Rate					260 6	173
8	Fuel Consumption	tce	529587	50%	50%	266302	263285
9							
10	*Fuels used in Production*						
11	Gas	mln cm	381	52%	48%	197	184
12	Price	lei/1000 cm	454			454	454
13	Amount	mln lei	173	52%	48%	90	84
14							
15	# 6 oil	ths tons	69	44%	56%	30	39
16	Price	lei/ton	490			490	490
17	Amount	mln lei	34	44%	56%	15	19
18							
19	**Total fuel costs**	**mln lei**	**207**	**50%**	**50%**	**104**	**103**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		73 5	50%	50%	37 0	36 5
23	Water		15 9	25%	75%	4 0	12 0
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		15 9	25%	75%	4 0	12 0
26	Other M&S		57 5	57%	43%	33 0	24 6
27	Workers Salaries		4 8	54%	46%	2 5	2 2
28	Social fund		1 5	54%	46%	0 8	0 7
29	Depreciation		10 5	48%	52%	5 0	5 4
30	Other costs		5 8	44%	56%	2 6	3 3
31	**All costs except fuel**		**96 0**	**50%**	**50%**	**47 9**	**48 1**
32							
33	**Total before PM**		**303 1**	**50%**	**50%**	**152 3**	**150 8**
34							
35	Profit margin (PM)	5%	15 2	50%	50%	7 6	7 5
36							
37	**Total Excluding Fuel**		111 2	50%	50%	55 5	55 7
38							
39	**Total Costs**		**318 3**	**50%**	**50%**	**159 9**	**158 4**
40							
41	**Average Cost**	**bani/kWh**				**15 6**	
42		**lei/Gcal**					**104 1**

CHP 2 97 actual costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					1057	1579
4	Own use					138	54
5	Delivered to the system					896	1525
6							
7	Heat Rate					266 2	172 5
8	Fuel Consumption	tce	501577	48%	52%	238579	262999
9							
10	*Fuels used in Production*						
11	Gas	mln cm	386	49%	51%	189	197
12	Price	lei/1000 cm	390			408	373
13	Amount	mln lei	151	51%	49%	77	74
14							
15	# 6 oil	ths tons	50	43%	57%	22	28
16	Price	lei/ton	493			493	494
17	Amount	mln lei	25	43%	57%	11	14
18							
19	**Total fuel costs**	**mln lei**	**175**	**50%**	**50%**	**88**	**88**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		21 4	55%	45%	11 8	9 7
23	Water		13 2	48%	52%	6 3	6 9
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		13 2	48%	52%	6 3	6 9
26	Other M&S		8 3	66%	34%	5 5	2 8
27	Workers Salaries		2 9	54%	46%	1 6	1 4
28	Social fund		0 9	53%	47%	0 5	0 4
29	Depreciation		3 2	48%	52%	1 5	1 7
30	Other costs		4 5	44%	56%	2 0	2 5
31	**All costs except fuel**		**33 0**	**53%**	**47%**	**17 3**	**15 6**
32							
33	**Total before PM**		**208 4**	**50%**	**50%**	**105 1**	**103 2**
34							
35	Profit margin (PM)	5%					
36							
37	**Total Excluding Fuel**		**33 0**	**53%**	**47%**	**17 3**	**15 6**
38							
39	**Total Costs**		**208 4**	**50%**	**50%**	**105 1**	**103 2**
40							
41	**Average Cost**	**bani/kWh**				**11 7**	
42		**lei/Gcal**					**67 7**

CHP 2 96 actual costs data

			Total	Allocation factor Electricity	Allocation factor Heat	Electricity	Heat
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					960	1569
4	Own use					121	54
5	Delivered to the system					839	1515
6							
7	Heat Rate					241 1	170 2
8	Fuel Consumption	tce	460064	44%	56%	202211	257853
9							
10	*Fuels used in Production*						
11	Gas	mln cm	323	46%	54%	149	174
12	Price	lei/1000 cm	299			276	319
13	Amount	mln lei	97	43%	57%	41	56
14							
15	# 6 oil	ths tons	68	35%	65%	24	44
16	Price	lei/ton	435			435	436
17	Amount	mln lei	29	35%	65%	10	19
18							
19	**Total fuel costs**	**mln lei**	**126**	**41%**	**59%**	**51**	**75**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		19 0	48%	52%	9 1	9 9
23	Water		11 0	45%	55%	5 0	6 0
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		11 0	45%	55%	5 0	6 0
26	Other M&S		8 0	51%	49%	4 1	3 9
27	Workers Salaries		2 4	57%	43%	1 4	1 0
28	Social fund		0 9	56%	44%	0 5	0 4
29	Depreciation		3 1	54%	46%	1 7	1 4
30	Other costs		4 2	58%	42%	2 5	1 8
31	**All costs except fuel**		**29 6**	**51%**	**49%**	**15 1**	**14 5**
32							
33	**Total before PM**		**155 7**	**43%**	**57%**	**66 6**	**89 1**
34							
35	Profit margin (PM)	5%					
36							
37	**Total Excluding Fuel**		**155 7**	**51%**	**49%**	**15 1**	**14 5**
38							
39	**Total Costs**		**155 7**	**43%**	**57%**	**66 6**	**89 1**
40							
41	**Average Cost**		**bani/kWh**			**7 94**	
42			**lei/Gcal**				**58 8**

CHP-North Electricity Cost Analysis

			1996	1997	1998			
			actual	actual	CHP-N plan	**ANRE**	**ANREr**	**Δ ANRE**
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	[Mln KWh]	100	96	106	95	95	0 0
4	Own use	[Mln KWh]	35	31	44	33	33	0 0
5	Delivered to the system	[Mln KWh]	65	65	62	62	62	0 0
6								
7	Heat Rate	gce/kWh	194	325	226	320	320	0 0
8	Fuel Consumption	ths tce	13	21	14	19 7	19 7	0 0
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	11	18	12 6	16 5	16 5	0 0
12	Price	lei/1000 cm	347	424	454	406	370	(36 0)
13	Amount	mln lei	3 8	7 8	5 7	6 7	6 1	(0 6)
14								
15	# 6 oil	ths tons	0 1	0 4	0 0	0 7	0 7	0 0
16	Price	lei/ton	350	400	0	480	480	0 0
17	Amount	mln lei	0 05	0 16	0 00	0 3	0 3	0 0
18								
19	**Total fuel costs**	**mln lei**	**3 86**	**7 92**	**5 72**	**7 04**	**6 45**	(0 6)
20								
21	*Operating Costs*							
22	Materials & Services costs		2 2	3 8	3 5	1 33	1 33	0 0
23	Water		0 9	1 8	1 9	0 6	0 6	0 0
24	Reimbursed water costs		(0 02)			0	0	0 0
25	Total Water		0 8	1 8	1 9	0 6	0 6	0 0
26	Other M&S		1 3	2 1	1 6	0 7	0 7	0 0
27	Salaries		0 2	0 4	0 4	0 3	0 3	0 0
28	Social fund		0 1	0 1	0 1	0 1	0 1	0 0
29	Depreciation		0 2	0 2	0 2	0 99	0 99	0 0
30	Other costs		0 1	1 4	0 3	0 24	0 24	0 0
31	**All costs except fuel**		**2 7**	**5 9**	**4 5**	**2 9**	**2 9**	0 0
32								
33	**Total before profit margin**		**6 56**	**13 8**	**10 3**	**10 0**	**9 4**	(0 6)
34								
35	**Profit margin**	**5%**			**0 5**	**0 5**	**0 5**	(0 0)
36								
37	**Total Excluding Fuel**	**mln lei**	**2 7**	**5 9**	**5 0**	**3 4**	**3 4**	(0 0)
38								
39	**Total Costs**	**mln lei**	**6 56**	**13 8**	**10 8**	**10 5**	**9 866**	(0 6)
40								
41	**Average Cost**	**bani/kWh**	**10 1**	**21 1**	**17 5**	**17 0**	**16 0**	(1 0)
42	including							
43	**Fuel**		**5 9**	**12 1**	**9 3**	**11 4**	**10 5**	(1 0)
44	**Other**		**4 1**	**9 0**	**8 2**	**5 6**	**5 5**	(0 0)

CHP North Heat Cost Analysis

			1996	1997	1998			
					CHP N plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced	ths Gcal	696	554		640	640	0 0
4	Own use	ths Gcal	54	54		35	35	0 0
5	Delivered to the system	ths Gcal	642	500	605	605	605	0 0
6								
7	Heat Rate	kgce/Gcal	171 6	172 5	174 2	157 5	157 5	0 0
8	Fuel Consumption	ths tce	110	86	105	95	95	0 0
9								
10	*Fuels used in Production*							
11	Gas	Mil cm	96	75	92	80	80	0 0
12	Price	lei/1000 cm	347	400	454	406	370	(36 0)
13	Amount	mln lei	33	30	42	32	30	(2 9)
14								
15	# 6 oil	ths tons	1	0 7	0 0	3	3	0 0
16	Price	lei/ton	350	400	0	480	480	0 0
17	Amount	mln lei	0	0 26	0 0	2	2	0 0
18								
19	**Total fuel costs**	**mln lei**	**34**	**30**	**41 6**	**34 1**	**31 2**	(2 9)
20								
21	*Operating Costs*							
22	Materials & Services costs		10 0	9 0	8 4	6 6	8 2	1 6
23	Water		8 0	5 5	5 9	7 2	7 2	0 0
24	Reimbursed water costs		(0 2)			(4 1)	(2 55)	1 6
25	Total Water		7 8	5 5	5 9	3 0	4 6	1 6
26	Other M&S		2 2	3 5	3	3 6	3 6	0 0
27	Salaries		1 2	1 3	1 3	1 4	1 4	0 0
28	Social fund		0 4	0 4	0 4	0 4	0 4	0 0
29	Depreciation		2 0	1 9	5 6	4 8	4 8	0 0
30	Other costs		0 7	1 3	1 0	1 2	1 2	0 0
31	**All costs except fuel**		**14 3**	**13 8**	**16 8**	**14 4**	**16 0**	1 6
32								
33	**Total before profit margin**		**48 0**	**44 2**	**58 5**	**48 5**	**47 2**	(1 3)
34								
35	**Profit margin**	**5%**			**2 9**	**2 4**	**2 4**	(0 1)
36								
37	**Total Excluding Fuel**	**mln lei**	**14 3**	**13 8**	**19 8**	**16 9**	**18 4**	1 5
38								
39	**Total Costs**		**48 0**	**44 2**	**61 4**	**50 9**	**49 6**	(1 4)
40								
41	Losses in heat transmission system	Gcal		72 3	95 7	68 3	68 3	0 0
42	**Delivered to distribution system**	**Gcal**		**427 4**	**509 3**	**536 7**	**536 7**	0 0
43								
44	**Average Cost**	**lei/Gcal**	**74 8**	**88 6**	**120 5**	**94 9**	**92 3**	(2 5)
45	including							
46	**Fuel**		52 6	60 9	68 8	56 3	51 5	(4 7)
47	**Other**		22 3	27 7	32 7	27 9	30 4	2 5

Total Electircity & Heat Costs

			1996	1997	1998			
			actual	actual	CHP-N plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	*Production*							
3	Total Produced							
4	Own use							
5	Delivered to the system							
6								
7	*Fuels used in Production*							
8	Gas	Mil cm	107	94	104	96	96	0 0
9	Price	lei/1000 cm	347	405	454	406	370	(36 0)
10	Amount	mln lei	37	38	47	39	36	(3 5)
11								
12	# 6 oil	ths tons	1 36	1 1	0 0	4	4	0 0
13	Price	lei/ton	350	400	0	480	480	0 0
14	Amount	mln lei	0 48	0 4	0 00	2 00	2 00	0 0
15								
16	**Total fuel costs**	**mln lei**	**38**	**38**	**47**	**41**	**38**	(3 5)
17								
18	*Operating Costs*	mln lei						
19	Materials & Services costs		12 2	12 9	11 9	7 9	9 5	1 6
20	Water		8 8	7 3	7 7	7 7	7 7	0 0
21	Reimbursed water costs		(0 21)			(4 1)	(2 55)	1 6
22	Total Water		8 6	7 3	7 7	3 6	5 2	1 6
23	Other M&S		3 5	5 6	4 2	4 3	4 3	0 0
24	Salaries		1 3	1 6	1 7	1 7	1 7	0 0
25	Social fund		0 5	0 4	0 5	0 5	0 5	0 0
26	Depreciation		2 3	2 2	5 8	5 8	5 8	0 0
27	Other costs		0 8	2 6	1 4	1 4	1 4	0 0
28	**All costs except fuel**		**17 0**	**19 7**	**21 4**	**17 4**	**19 0**	1 6
29								
30	**Total before profit margin**		**54 6**	**58 1**	**68 7**	**58 5**	**56 6**	(1 9)
31								
32	**Profit margin**	**5%**			**3 4**	**2 9**	**2 8**	(0 1)
33								
34	**Total Excluding Fuel**		**17 0**	**19 7**	**24 8**	**20 3**	**21 8**	1 5
35								
36	**Total Costs**		**54 6**	**58 1**	**72 2**	**61 4**	**59 4**	(2 0)

ANREr 98 costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					*mln kWh*	*ths Gcal*
3	Total Produced					95	640
4	Own use					33 4	35
5	Delivered to the system					61 6	605
6							
7	Heat Rate					320	158
8	Fuel Consumption	tce	115000	17%	83%	19712	95288
9							
10	*Fuels used in Production*						
11	Gas	mln cm	96	17%	83%	16 5	79 8
12	Price	lei/1000 cm	370			370	370
13	Amount	mln lei	36	17%	83%	6 1	30
14							
15	# 6 oil	ths tons	4	17%	83%	0 7	3 45
16	Price	lei/ton	480			480	480
17	Amount	mln lei	2	17%	83%	0 34	2
18							
19	**Total fuel costs**	**mln lei**	**38**	**17%**	**83%**	**6 45**	**31 18**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		9 5	14%	86%	1 3	8 2
23	Water		7 7	8%	92%	0 6	7 2
24	Reimbursed water costs		(2 6)	0%	100%	0 0	(2 6)
25	Total Water		5 2	11%	89%	0 6	4 6
26	Other M&S		4 3	17%	83%	0 7	3 6
27	Salaries		1 7	17%	83%	0 3	1 4
28	Social fund		0 5	17%	83%	0 09	0 4
29	Depreciation		5 8	17%	83%	1 0	4 8
30	Other costs		1 4	17%	83%	0 2	1 2
31	**All costs except fuel**		**19 0**	**16%**	**84%**	**2 9**	**16 0**
32							
33	**Total before PM**		**56 6**	**17%**	**83%**	**9 4**	47 2
34							47 2
35	Profit margin (PM)	5 %	2 8	17%	83%	0 5	2 4
36							
37	**Total Excluding Fuel**		**21 8**	16%	84%	**3 4**	**18 4**
38							
39	**Total Costs**		**59 4**	**17%**	**83%**	**9 9**	**49 6**
40							
41	Losses in heat transmission system	Gcal					68 3
42	**Delivered to distribution system**	**Gcal**					**536 7**
43							
44	**Average Cost**	**bani/kWh**				**16 02**	
45		**lei/Gcal**					**92 3**

CHP North 98 Plan costs data (initial company plan)

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					106	
4	Own use					44	
5	Delivered to the system					62	605
6							
7	Heat Rate					260 6	173
8	Fuel Consumption	tce	120778	13%	87%	16053	104726
9							
10	*Fuels used in Production*						
11	Gas	mln cm	104	12%	88%	13	92
12	Price	lei/1000 cm	454			454	454
13	Amount	mln lei	47	12%	88%	6	42
14							
15	# 6 oil	ths tons	0	#DIV/0!	#DIV/0!	0	0
16	Price	lei/ton	0			0	0
17	Amount	mln lei	0	#DIV/0!	#DIV/0!	0	0
18							
19	**Total fuel costs**	**mln lei**	**47**	**12%**	**88%**	**6**	**42**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		11 9	29%	71%	3 5	8 4
23	Water		7 7	24%	76%	1 9	5 9
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		7 7	24%	76%	1 9	5 9
26	Other M&S		4 2	38%	62%	1 6	2 6
27	Salaries		1 7	22%	78%	0 4	1 3
28	Social fund		0 5	22%	78%	0 1	0 4
29	Depreciation		5 8	3%	97%	0 2	5 6
30	Other costs		1 4	25%	75%	0 3	1 0
31	**All costs except fuel**		**21 4**	**21%**	**79%**	**4 5**	**16 8**
32							
33	**Total before PM**		**68 7**	**15%**	**85%**	**10 3**	**58 5**
34							
35	Profit margin (PM)	5%	3 4	15%	85%	0 5	2 9
36							
37	**Total Excluding Fuel**		24 8	20%	80%	5 0	19 8
38							
39	**Total Costs**		**72 2**	**15%**	**85%**	**10 8**	**61 4**
40							
41	Losses in heat transmission system	Gcal					95 7
42	**Delivered to distribution system**	**Gcal**					**509 3**
43							
44	**Average Cost**	**bani/kWh**				**17 48**	
45		**lei/Gcal**					**120 5**

CHP North 97 actual costs data

			Total	Allocation factor		Electricity	Heat
				Electricity	Heat		
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					96	554
4	Own use					31	54
5	Delivered to the system					65	500
6							
7	Heat Rate					266 2	172 5
8	Fuel Consumption	tce	103605	17%	83%	17412	86194
9							
10	*Fuels used in Production*						
11	Gas	mln cm	94	20%	80%	18	75
12	Price	lei/1000 cm	405			424	400
13	Amount	mln lei	38	20%	80%	8	30
14							
15	# 6 oil	ths tons	1 1	38%	62%	0 40	0 7
16	Price	lei/ton	400			400	400
17	Amount	mln lei	0 4	38%	62%	0 16	0 26
18							
19	**Total fuel costs**	**mln lei**	**38**	**21%**	**79%**	**8**	**30**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		12 9	30%	70%	3 8	9 0
23	Water		7 3	24%	76%	1 8	5 5
24	Reimbursed water costs		0 0			0 0	0 0
25	Total Water		7 3	24%	76%	1 8	5 5
26	Other M&S		5 6	37%	63%	2 1	3 5
27	Salaries		1 6	22%	78%	0 4	1 3
28	Social fund		0 4	12%	88%	0 1	0 4
29	Depreciation		2 2	11%	89%	0 2	1 9
30	Other costs		2 6	52%	48%	1 4	1 3
31	**All costs except fuel**		**19 7**	**30%**	**70%**	**5 9**	**13 8**
32							
33	**Total before PM**		**58 1**	**24%**	**76%**	**13 8**	**44 2**
34							
35	Profit margin (PM)	5%					
36							
37	**Total Excluding Fuel**		**19 7**	**30%**	**70%**	**5 9**	**13 8**
38							
39	**Total Costs**		**58 1**	**24%**	**76%**	**13 8**	**44 2**
40							
41	Losses in heat transmission system	Gcal					72 3
42	**Delivered to distribution system**	**Gcal**					**427 4**
43							
44	**Average Cost**	**bani/kWh**				**21 1**	
45		**lei/Gcal**					**103 5**

CHP North 96 actual costs data

				Allocation factor			
			Total	Electricity	Heat	Electricity	Heat
1	2	3	4	5	6	7	8
2	*Production*					mln kWh	ths Gcal
3	Total Produced					100	696
4	Own use					35	54
5	Delivered to the system					65	642
6							
7	Heat Rate					241 1	170 2
8	Fuel Consumption	tce	124915	13%	87%	15701	109214
9							
10	*Fuels used in Production*						
11	Gas	mln cm	107	10%	90%	11	96
12	Price	lei/1000 cm	347			347	347
13	Amount	mln lei	37	10%	90%	4	33
14							
15	# 6 oil	ths tons	1	10%	90%	0	1
16	Price	lei/ton	350			350	350
17	Amount	mln lei	0	10%	90%	0	0
18							
19	**Total fuel costs**	**mln lei**	**38**	**10%**	**90%**	**4**	**34**
20							
21	*Operating Costs*	mln lei					
22	Materials & Services costs		12 2	18%	82%	2 2	10 0
23	Water		8 8	10%	90%	0 9	8 0
24	Reimbursed water costs		0 2			0 0	0 2
25	Total Water		8 6	10%	90%	0 8	7 8
26	Other M&S		3 5	37%	63%	1 3	2 2
27	Salaries		1 3	12%	88%	0 2	1 2
28	Social fund		0 5	12%	88%	0 1	0 4
29	Depreciation		2 3	10%	90%	0 2	2 0
30	Other costs		0 8	11%	89%	0 1	0 7
31	**All costs except fuel**		**17 0**	**16%**	**84%**	**2 7**	**14 3**
32							
33	**Total before PM**		**54 6**	**12%**	**88%**	**6 6**	**48 0**
34							
35	Profit margin (PM)	5%					
36							
37	**Total Excluding Fuel**		**54 6**	**16%**	**84%**	**2 7**	**14 3**
38							
39	**Total Costs**		**54 6**	**12%**	**88%**	**6 6**	**48 0**
40							
41	**Average Cost**		**bani/kWh**			**10 07**	
42			**lei/Gcal**				**74 8**

MTE Costs Data Analysis

			1996	1997	1998			
			actual	actual	MTE plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9
2	***Purchased Energy***	mln kWh						
3	Domestic Production							
4	CHP-1		88 7	72 6	98 0	120 6	120 6	0 0
5	CHP-2		838 7	896 2	1021 8	1100 0	1100 0	0 0
6	CHP-North		64 9	65 0	61 6	62 4	62 4	0 0
7	Costesti HPP		86 6	87 0	85 0	85 0	85 0	0 0
8	Sugar Factories		21 1	16 2	21 1	21 1	21 1	0 0
9	**Subtotal**		**1099 9**	**1136 9**	**1287 5**	**1389 1**	**1389 1**	0 0
10	Imported							
11	Ukraine		1606	1750	1752	1752	1752	0 0
12	MGRAS		2328	1772	1527	1819	1352	(467 0)
13	Romania		4	(26 8)	0	0	0	0 0
14	Independent Suppliers		0	0	0	200	200	0 0
15	**Subtotal**		**3938**	**3495**	**3279**	**3771**	**3304**	(467 0)
16	**Total purchased**		**5037 6**	**4632 3**	**4566 3**	**5160 0**	**4693 0**	(467 0)
17								
18	Transmission Losses		460 0	281 2	217 5	220 7	200 9	(19 8)
19								
20	**Delivered to DC s**		**4577 6**	**4351 1**	**4348 8**	**4939 3**	**4492 1**	(447 2)
21								
22	***Cost of Energy***	mln lei						
23	Domestic Production							
24	CHP-1		6 9	7 0	10 1	16 8	15 9	(0 8)
25	CHP-2		66 6	105 1	136 6	150 6	140 8	(9 8)
26	CHP-North		6 5	13 8	7 8	10 6	9 984	(0 6)
27	Costesti HPP		0 2	4 2	1 5	1 0	1 0	0 0
28	Sugar Factories		1 6	1 2	2 4	2 3	2 3	0 0
29	**Subtotal**		**81 8**	**131 4**	**158 3**	**181 4**	**170 1**	(11 3)
30	**Average Cost of Domestic Production**	bani/kWh	**7 4**	**11 6**	**12 3**	**13 1**	**12 2**	(0 8)
31	Imported							
32	Ukraine		155 6	265 0	290 8	290 8	290 8	0 0
33	MGRAS		307 2	287 3	273 6	323 2	240 2	(83 0)
34	Romania		0 3	0	0	0	0	0 0
35	Independent Suppliers		0	0	0	30 4	30 4	0 0
36	**Subtotal**		**463 1**	**552 3**	**564 4**	**644 5**	**561 5**	(83 0)
37	**Average Cost of Imported Energy**	bani/kWh	**11 8**	**15 8**	**17 2**	**17 1**	**17 0**	(0 1)
38	**Total Energy Costs**		**544 8**	**683 7**	**722 7**	**825 8**	**731 6**	(94 3)
39	**Average Cost of Delivered Energy**	bani/kWh	**11 9**	**15 7**	**16 6**	**16 7**	**16 29**	(0 4)
40								
41	***Other O&M Costs***	mln lei						
42	O&M		1 9	1 1	28 5	17 2	17 2	0 0
43	Transit Services						6 6	6 6
44	Salaries		2 9	5 5	14 7	5 9	5 9	0 0
45	Social Fund		1 1	1 7	4 6	1 8	1 8	0 0
46	Depreciation		12 7	55 8	28 2	27 4	27 4	0 0
47	Other		1 3	1 2	114 4	13 7	12 1	(1 6)
48	**Total Other O&M Costs**		**19 8**	**65 3**	**190 3**	**66 0**	**71 0**	5 0
49	Profit Margin 5%				9 52	3 30	3 55	0 3
50	**O&M Total Costs incl PM**		**19 8**	**65 3**	**199 9**	**69 3**	**74 6**	5 3
51	**Average Cost of O&M w/ PM**	bani/kWh	**0 43**	**1 50**	**4 60**	**1 40**	**1 66**	0 3
52	**TC of energy delivered to DC's**	mln lei	**564 7**	**749 0**	**922 6**	**895 1**	**806 1**	(89 0)
53	**Total Average Cost**	bani/kWh	**12 34**	**17 21**	**21 22**	**18 12**	**17 95**	(0 2)

Central Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998 Company plan	1998 ANRE	1998 ANREr	1998 Δ ANRE
1	2	3	4	5	6	7	8	9	10
2	Purchased energy		mill kWh	**851**	**804**	**980**	**980**	**875**	(105 0)
3	Losses			145	180	106	106	95	(11 4)
4									
5	Delivered to customers			**706**	**624**	**874**	**874**	**780**	(93 6)
6									
7	**Cost of purchased electricity**	035	mln Lei		**109**	**178**	**178**	**157**	(20 5)
8									
9	*Operational Costs*								
10	**Materials, incl**	**030**			**7 44**	**24 47**	**13 20**	**13 50**	0 3
11	Supplies	031			1 27	2 19			
12	Fuel	032			1 19	1 10			
13	Services	034			4 32	20 50			
14	Water	038			0 04	0 05			
15	Energy for own use				0 62	0 64			
16	Electricity				0 32	0 34			
17	Other				0 30	0 30			
18									
19	Salary	040			4 55	7 00	4 89	4 89	0 0
20									
21	Social fund	050			1 51	2 17	1 52	1 52	0 0
22									
23	Depreciation 100%	060			5 31	15 14	15 14	15 14	(0 0)
24									
25	Maintanance of in house network					0 00	1 13	1 63	0 5
26									
27	Other	070			5 09	11 50	2 94	2 94	0 0
28									
29	**Total Network Expenses**				**23 90**	**60 28**	**38 81**	**39 61**	0 8
30									
31	Profit Margin		**5%**			3 01	1 94	1 98	0 04
32									
33	**Total**				**24**	**63**	**41**	**41 59**	0 8
34									
35	**Cost of delivered energy**	150			**132**	**241**	**218**	**198 65**	(19 7)
36									
37	**Average Costs**		bani/kWh		**21 19**	**27 52**	**24 98**	**25 46**	0 5
38	including								
39	Purchased electricity		bani/kWh		**17 42**	**20 32**	**20 32**	**20 13**	(0 2)
40	Operational Costs		bani/kWh		**3 83**	**7 24**	**4 66**	**5 33**	0 7

Chisinau Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998 Company plan	1998 ANRE	1998 ANREr	1998 Δ ANRE
1	2	3	4	5	6	7	8	9	10
2	Purchased energy		mill kWh	**1583**	**1576**	**1614**	**1597**	**1522**	(75 3)
3	Losses			185	253	172	156	156	0 0
4									
5	Delivered to customers			**1398**	**1323**	**1442**	**1442**	**1367**	(75 3)
6									
7	**Cost of purchased electricity**	035	mln Lei		**197**	**292**	**289**	**273**	(16 2)
8									
9	*Operational Costs*								
10	**Materials, incl**	**030**			**3 40**	**5 82**	**12 20**	**14 20**	2 0
11	Supplies	031			2 72	5 57			
12	Fuel	032			0 54	0 00			
13	Services	034			0 06	0 06			
14	Water	038			0 08	0 00			
15	Energy for own use				0 00	183			
16	Electricity				0 00	0 12			
17	Other				0 00	0 06			
18									
19	Salary	040			3 04	5 90	3 66	3 66	0 0
20									
21	Social fund	050			0 87	1 77	1 13	1 13	0 0
22									
23	Depreciation 100%	060			12 34	21 60	32 92	32 92	0 0
24									
25	Maintanance of in-house network					0 58	6 25	8 52	2 3
26									
27	Other	070			8 23	21 82	6 46	6 46	0 0
28									
29	**Total Network Expenses**				**27 88**	**57 49**	**62 61**	**66 89**	4 3
30									
31	Profit Margin		**5%**			2 87	3 13	3 34	0 2
32									
33	**Total**				**27 88**	**60 36**	**66**	**70 23**	4 5
34									
35	**Cost of delivered energy**	150			**225**	**353**	**355**	**343**	(11 7)
36									
37	**Average Costs**		bani/kWh		**17 01**	**24 46**	**24 63**	**25 13**	0 5
38	including								
39	Purchased electricity		bani/kWh		**14 90**	**20 28**	**20 07**	**19 99**	(0 1)
40	Operational Costs		bani/kWh		**2 11**	**4 19**	**4 56**	**5 14**	0 6

North Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998 Company plan	1998 ANRE	1998 ANREr	1998 Δ ANRE
1	2	3	4	5	6	7	8	9	10
2	Purchased energy		mill kWh	**937**	**851**	**1010**	**1010**	**890**	(120 0)
3	Losses			229	194	100	100	88	(11 9)
4									
5	Delivered to customers			**708**	**657**	**910**	**910**	**802**	(108 1)
6									
7	**Cost of purchased electricity**	035	mln Lei		**146**	**183**	**183**	**160**	(23 3)
8									
9	*Operational Costs*								
10	**Materials, incl**	**030**			**12 08**	**18 46**	**13 96**	**13 96**	0 0
11	Supplies	031			4 64	18 00			
12	Fuel	032			0 49	0 00			
13	Services	034			0 00	0 00			
14	Water	038			6 95	0 04			
15	Energy for own use		th kWh		0 00	423			
16	Electricity				0 00	0 25			
17	Other				0 00	0 17			
18									
19	Salary	040			3 96	6 40	4 47	4 47	0 0
20									
21	Social fund	050			1 25	1 92	1 38	1 38	0 0
22									
23	Depreciation 100%	060			4 69	14 24	15 79	15 79	0 0
24									
25	Maintanance of in-house network					0 00	2 65	2 75	0 1
26									
27	Other	070			8 53	3 76	2 78	2 78	0 0
28									
29	**Total Network Expenses**				**30 51**	**44 77**	**41 02**	**41 12**	0 1
30									
31	Profit Margin		**5%**			2 24	2 05	2 06	0 005
32									
33	**Total**				**30 51**	**47 012**	**43**	**43**	0 1
34									
35	**Cost of delivered energy**	150			**177**	**230**	**226**	**203**	(23 2)
36									
37	**Average Costs**		bani/kWh		**26 93**	**25 25**	**24 84**	**25 30**	0 5
38	including								
39	Purchased electricity		bani/kWh		**22 29**	**20 11**	**20 10**	**19 91**	(0 2)
40	Operational Costs		bani/kWh		**4 64**	**5 17**	**4 73**	**5 38**	0 7

North West Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998			
						Company plan	ANRE	ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9	10
2	Purchased energy		mill kWh	624	545	647	647	585	(62 0)
3	Losses			119	97	70	70	63	(6 7)
4									
5	Delivered to customers			505	448	577	577	522	(55 3)
6									
7	**Cost of purchased electricity**	035	mln Lei		94	117	117	105	(12 2)
8									
9	*Operational Costs*								
10	**Materials, incl**	030			2 70	10 37	7 12	7 12	0 0
11	Supplies	031			1 62	6 74			
12	Fuel	032			0 00	0 00			
13	Services	034			0 03	0 05			
14	Water	038			0 04	0 08			
15	Energy for own use		th kWh		0 00				
16	Electricity				0 00	2 10			
17	Other				1 01	1 41			
18									
19	Salary	040			2 58	3 89	3 02	3 02	0 0
20									
21	Social fund	050			0 81	1 26	0 94	0 94	0 0
22									
23	Depreciation, 100%	060			3 24	12 35	11 95	11 95	0 0
24									
25	Maintanance of in-house network					0 00	1 00	1 12	0 1
26									
27	Other	070			2 40	3 33	1 71	1 91	0 2
28									
29	**Total Network Expenses**				11 73	31 20	25 73	26 05	0 3
30									
31	Profit Margin		5%			1 56	1 29	1 30	0 0
32									
33	**Total**				11 73	32 764	27	27	0 3
34									
35	**Cost of delivered energy**	150			105	148	144	132	(11 9)
36									
37	**Average Costs**		bani/kWh		23 54	25 63	25 00	25 37	0 4
38	including								
39	Purchased electricity		bani/kWh		20 92	20 32	20 31	20 12	(0 2)
40	Operational Costs		bani/kWh		2 62	5 68	4 68	5 24	0 6

South Network Costs Data Analysis

		Account No		1996 Actual	1997 Actual	1998 Company plan	1998 ANRE	1998 ANREr	Δ ANRE
1	2	3	4	5	6	7	8	9	10
2	Purchased energy		mill kWh	582	534	705	705	620	(85 0)
3	Losses			103	13	69	69	60	(8 3)
4									
5	Delivered to customers			479	403	636	636	560	(76 7)
6									
7	**Cost of purchased electricity**	035	mln Lei		92	128	128	111	(16 5)
8									
9	*Operational Costs*								
10	**Materials incl**	030			2 09	7 45	7 45	7 45	0 0
11	Supplies	031			2 07	6 76			
12	Fuel	032			0 00	0 00			
13	Services	034			0 00	0 00			
14	Water	038			0 02	0 22			
15	Energy for own use		th kWh		0 00	463			
16	Electricity				0 00	0 28			
17	Other				0 00	0 18			
18									
19	Salary	040			2 59	3 80	3 80	3 80	0 0
20									
21	Social fund	050			0 83	1 18	1 18	1 18	0 0
22									
23	Depreciation 100 %	060			3 85	12 79	12 79	12 79	0 0
24									
25	Maintanance of in-house network					2 03	2 03	1 38	(0 6)
26									
27	Other	070			5 00	2 52	2 52	2 52	0 0
28									
29	**Total Network Expenses**				14 36	29 75	29 75	29 11	(0 6)
30									
31	Profit Margin		5 %			1 49	1 49	1 46	(0 032)
32									
33	**Total**				14 36	31 24	31 24	30 56	(0 7)
34									
35	**Cost of delivered energy**	150			106	159	159	142	(17 1)
36									
37	**Average Costs**		bani/kWh		26 36	24 95	24 98	25 34	0 4
38	including								
39	Purchased electricity		bani/kWh		22 79	20 09	20 07	19 88	(0 2)
40	Operational Costs		bani/kWh		3 56	4 91	4 91	5 46	0 6

COST ALLOCATION

Total Network Expenses		mln Lei		14 4	31 2	31 2	30 6
Distribution Services							
Total							
Sales to consumers		mill kWh	479	403	636	636	560
Costs	90 %			12 9	28 1	28 1	27 5
Service at 10 kv							
Sales to consumers		mill kWh		19	30	30	27
Costs	3 %	mln Lei		0 4	0 9	0 9	0 9
Cost per KWh		Bani/KWh		2 25	3 09	3 09	3 44
Service at 0 4 Kv							
Sales to consumers		mill kWh		383	606	606	533
Non Residential				218	344	344	302
Residential				166	262	262	231
Costs		mln Lei		12 5	27 2	27 2	26 6
Cost per KWh		Bani/KWh		3.26	4 49	4 48	4 99
Regulated Supply Fee							
Total							
Sales to consumers		mill kWh	479	403	636	636	560
Costs	10 %	mln Lei		1 4	3 1	3 1	3 1
Non residential							
Sales to consumers		mill kWh		237	373	374	329
Costs	30 %	mln Lei		0 4	0 9	0 9	0 9
Cost per KWh		Bani/KWh		0 18	0 25	0 25	0 28
Residential							
Sales to consumers		mill kWh		166	263	263	231
Costs	70 %	mln Lei		1 0	2 2	2 2	2 1
Cost per KWh		Bani/KWh		0 60	0 83	0 83	0 93
TOTAL COSTS		mln Lei		14 4	31 2	31 2	30 6

TARIFF SUMMARY					
Distribution Services					
Service at 10 kv		2 25	3 09	3 09	3 44
Service at 0 4 Kv		3 26	4 49	4 48	4 99
Regulated Supply Fee					
Non-residential		0 18	0 25	0 25	0 28
Residential		0 60	0 83	0 83	0 93

Electric Cost Data Analysis

			1996 actual	1997 actual	1998 MTE	1998 ANRE	1998 ANRE r	Δ ANRE
1	2	3	4	5	6	7	8	9
2	***Purchased Energy by MTE***	mln kWh						
3	Domestic Production							
4	CHP-1		89	73	98 0	121	121	0
5	CHP-2		839	896	1022	1100	1100	0
6	CHP North		65	65	62	62	62	0
7	Costesti HPP		87	87	85	85	85	0
8	Sugar Factories		21	16	21	21	21	0
9	**Subtotal**		**1100**	**1137**	**1288**	**1389**	**1389**	**0**
10								
11	Imported							
12	Ukraine		1606	1750	1752	1752	1752	0
13	MGRAS		2328	1772	1527	1819	1352	-467
14	Romania		4	(26 8)	0	0	0	0
15	Independent Suppliers		0	0	0	200	200	0
16	**Subtotal**		**3938**	**3495**	**3279**	**3771**	**3304**	**-467**
17								
18	**Total purchased**		**5038**	**4632**	**4566**	**5160**	**4693**	**-467**
19								
20	Transmission Losses		460	281	218	221	201	20
21								
22	**Delivered to DC s**		**4578**	**4351**	**4349**	**4939**	**4492**	**-447**
23								
24	Chisinau DC							
25	Purchased Energy		1583	1576	1577 8	1597	1522	75
26	Distribution Losses		185	233	172	156	156	0
27	Delivered to customers		1398	1343	1405 8	1442	1367	75
28								
29	Central DC							
30	Purchased Energy		851	900	834 4	980	875	-105
31	Distribution Losses		145	276	106	106	94 6	11
32	Delivered to customers		706	624	728 4	874	780 4	94
33								
34	North DC							
35	Purchased Energy		937	848	826 6	1010	890	120
36	Distribution Losses		229	226	100	100	88	12
37	Delivered to customers		708	622	726 6	910	802	108
38								
39	North West DC							
40	Purchased Energy		624	545	558 8	647	585	62
41	Distribution Losses		119	97	70	70	63	7
42	Delivered to customers		505	448	488 8	577	522	55
43								
44	Southern DC							
45	Purchased Energy		582	534	551 2	705	620	85
46	Distribution Losses		103	131	69	69	60	8
47	Delivered to customers		479	403	482 2	636	560	77
48								
49	Total DCs							
50	Purchased Energy		4577	4403	4349	4939	4492	-447
51	Distribution Losses		781	963	517	500	462	38
52	Delivered to customers		3796	3440	3832	4440	4031	-409
53								

1	2	3	4	5	6	7	8	9
54	***Cost of Energy***	mln lei						
55	Domestic Production							
56								
59	CHP 1		6 9	7 0	10 1	16 8	15 9	0 8
60								
61								
64	CHP-2		66 6	105 1	136 6	150 6	140 8	9 8
65								
66								
69	CHP North		6 5	13 8	7 8	10 6	10 0	0 6
70								
71								
74	Costesti HPP		0 2	4 2	1 5	1 0	1 0	0 0
75								
76	Sugar Factories		1 6	1 2	2 3	2 3	2 3	0 0
77								
78	**Subtotal**		**81 7**	**131 4**	**158 3**	**181 4**	**170 1**	**-11 3**
82								
83	Imported							
84	Ukraine		155 6	265 0	290 8	290 8	290 8	0 0
85	MGRAS		307 2	287 3	273 6	323 2	240 2	83 0
86	Romania		0 3	0 0	0 0	0 0	0 0	0 0
87	Independent Suppliers		0	0	0	30 4	30 4	0 0
88	**Subtotal**		**463 1**	**552 3**	**564 3**	**644 5**	**561 5**	**83 0**
89								
90	**Total Purchased Power Costs by MTE**		**544 8**	**683 7**	**722 7**	**825 8**	**731 6**	**94 3**
91								
92	***Other MTE O&M Costs***	mln lei	19 8	65 3	199 9	69 3	74 6	5 3
93								
95	**TC of energy delivered to DC s**	mln lei	**564 7**	**749 0**	**922 5**	**895 1**	**806 1**	**89 0**
95								
96	**Average Costs** (delivered to DC s)							
97	MTE		12 34	17 01	21 21	18 12	17 95	0 18
98								
99	Chisinau DC							
100	Cost of Purchased Energy			268 1	334 7	289 5	273 13	16 3
101	Other O&M Costs			27 5	59 8	65 7	72 7	6 9
102	Total Cost			295 6	394 5	355 2	345 8	9 4
103								
104	Central DC							
105	Cost of Purchased Energy			153 1	177 0	177 6	157 0	20 6
106	Other O&M Costs			23 9	63 3	40 7	41 9	1 1
107	Total Cost			177 0	240 3	218 3	198 9	-19 4
108								
109	North DC							
110	Cost of Purchased Energy			144 3	175 3	183 0	159 7	23 3
111	Other O&M Costs			30 5	47 0	43 1	44 1	1 0
112	Total Cost			174 8	222 4	226 1	203 8	-22 3
113								
114	North West DC							
115	Cost of Purchased Energy			92 7	118 5	117 2	105 0	-12 3
116	Other O&M Costs			11 7	32 4	27 0	27 6	0 6
117	Total Cost			104 4	150 9	144 3	132 6	11 7
118								
119	Southern DC							
120	Cost of Purchased Energy			90 8	116 9	127 8	111 3	16 5
121	Other O&M Costs			14 0	34 4	31 2	30 9	0 4
122	Total Cost			104 9	151 4	159 0	142 1	16 9
123								
124	Total DCs							
125	Cost of Purchased Energy			749 0	922 5	895 1	806 1	89 0
126	Other O&M Costs			107 7	236 9	207 8	217 1	9 3
127	Total Cost of Energy Delivered to Customers			856 7	1159 4	1102 9	1023 2	-79 7

1	2	3	4	5	6	7	8	9
128	**Average Costs** (delivered to grid)							
129	CHP 1		7 7	9 6	10 3	13 9	13 2	0 7
130	CHP 2		7 9	11 7	13 37	13 7	12 8	0 9
131	CHP North		10 0	21 2	12 6	17 0	16 0	1 0
132	Costesti HPP		0 2	4 9	1 76	1 2	1 2	0 0
133	Sugar Factories		7 8	7 6	11 13	11 1	11 1	0 0
134								
135	Ukraine		9 7	15 1	16 6	16 6	16 6	0 0
136	MGRAS		13 2	16 2	17 92	17 8	17 8	0 0
137	Romania		7 5	0				0 0
138	Independent Suppliers					15 2	15 2	0 0
139								
140	**Average Costs** (delivered to DC s)							
141	MTE		12 34	17 2	21 21	18 12	17 95	0 18
142								
143	**Average Costs** (delivered to customers)							
144								
145	Chisinau DC			22 01	28 06	24 64	25 31	0 67
146	Central DC			28 37	32 99	24 98	25 49	0 51
147	North DC			28 10	30 60	24 84	25 40	0 56
148	North-West DC			23 31	30 87	25 00	25 41	0 41
149	Southern DC			26 02	31 39	24 98	25 40	0 41

Central Distribution Networks

Table 1 Monthly consumption figures by customer class for 1997 (mill kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	1 6	1 5	1 5	1 0	0 9	1 0	0 9	1 0	0 9	1 1	1 2	1 4	**14 0**
Subtotal	1 6	1 5	1 5	1 0	0 9	1 0	0 9	1 0	0 9	1 1	1 2	1 4	**14 0**
Service at the level of 0 4 kV													
Residential total	32 9	31 6	31 4	22 2	20 1	22 6	24 1	16 5	21 7	22 7	18 3	23 0	**287 2**
Residential priveleged	7 5	7 3	7 2	5 1	4 6	5 2	5 5	3 8	5 0	5 2	4 2	5 3	**65 9**
Residential regular	25 3	24 4	24 2	17 1	15 5	17 4	18 6	12 7	16 8	17 5	14 1	17 7	**221.3**
Non residential	32 8	31 5	31 3	22 1	20 1	21 3	21 5	38 7	23 1	27 0	25 0	28 6	**323 0**
Subtotal	65 7	63 2	62 7	44 3	40 2	43 9	45 6	55 2	44 8	49 7	43 3	51 6	**610 2**
TOTAL													
Residential total	32 9	31 6	31 4	22 2	20 1	22 6	24 1	16 5	21 7	22 7	18 3	23 0	**287 2**
Residential priveleged	7 5	7 3	7 2	5 1	4 6	5 2	5 5	3 8	5 0	5 2	4 2	5 3	**65 9**
Residential regular	25 3	24 4	24 2	17 1	15 5	17 4	18 6	12 7	16 8	17 5	14 1	17 7	**221 3**
Non residential	34 3	33 0	32 8	23 2	21 0	22 2	22 4	39 7	24 0	28 1	26 2	30 0	**337 0**
Total	**67 2**	**64 7**	**64 2**	**45 4**	**41 1**	**44 8**	**46 5**	**56 2**	**45 7**	**50 8**	**44 5**	**53 1**	**624 2**

Tabel 2 Accrued monthly revenues by customer class for 1997 (mill lei)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	0 4	0 3	0 3	0 2	0 2	0 2	0 2	0 2	0 2	0 3	0 3	0 3	**3 2**
Subtotal	0 4	0 3	0 3	0 2	0 2	0 2	0 2	0 2	0 2	0 3	0 3	0 3	**3 2**
Service at the level of 0 4 kV													
Residential	2 1	2 0	2 0	1 4	1 3	1 9	2 8	2 2	3 2	2 7	2 5	4 6	**28 7**
Residential priveleged	1 0	1 0	1 0	0 7	0 6	0 7	0 7	0 5	0 7	0 7	0 6	0 7	**8 8**
Residential regular	1 1	1 0	1 0	0 7	0 7	1 2	2 0	1 7	2 5	2 0	1 9	3 9	**19 9**
Non residential	7 5	7 2	7 2	5 1	4 6	5 0	5 1	5 3	4 3	6 5	6 0	6 8	**70 7**
Subtotal	9 6	9 2	9 2	6 5	5 9	6 9	7 9	7 5	7 5	9 2	8 5	11 5	**99 4**
TOTAL													
Residential total	2 1	2 0	2 0	1 4	1 3	1 9	2 8	2 2	3 2	2 7	2 5	4 6	**28 7**
Residential priveleged	1 0	1 0	1 0	0 7	0 6	0 7	0 7	0 5	0 7	0 7	0 6	0 7	**8 8**
Residential regular	1 1	1 0	1 0	0 7	0 7	1 2	2 0	1 7	2 5	2 0	1 9	3 9	**19 9**
Non residential	7 9	7 6	7 5	5 3	4 8	5 2	5 3	5 5	4 6	6 7	6 3	7 2	**73 9**
Total	**10 0**	**9 6**	**9 5**	**6 7**	**6 1**	**7 1**	**8 1**	**7 8**	**7 7**	**9 5**	**8 7**	**11 8**	**102 6**

Tabel 3 Calculated average monthly electricity retail tariffs (bani/kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	**22 86**
Subtotal	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	22 86	**22 86**
Service at the level of 0 4 kV													
Residential	6 34	6 34	6 34	6 34	6 34	8 58	11 46	13 50	14 50	12 05	13 60	20 12	**10 0**
Residential priveleged	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	**13 4**
Residential regular	4 24	4 24	4 24	4 24	4 24	7 14	10 88	13 53	14 83	11 64	13 65	22 11	**[illegible] 0**
Non residential	22 97	22 97	22 97	22 97	22 97	23 41	23 81	13 71	18 81	23 99	23 95	23 89	**21 9**
Subtotal	14 64	14 64	14 64	14 64	14 64	15 78	17 29	13 64	16 72	18 54	19 57	22 21	**16 2[illegible]**
TOTAL													
Residential total	6 34	6 34	6 34	6 34	6 34	8 58	11 46	13 50	14 50	12 05	13 60	20 12	**9 99**
Residential priveleged	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	13 41	**13 41**
Residential regular	4 24	4 24	4 24	4 24	4 24	7 14	10 88	13 53	14 83	11 64	13 65	22 11	**8 [illegible]8**
Non residential	22 96	22 96	22 96	22 96	22 96	23 38	23 77	13 93	18 97	23 95	23 [illegible]0	23 84	**21 93**
Total	**14 83**	**14 83**	**14 83**	**14 83**	**14 83**	**15 93**	**17 39**	**13 80**	**16 84**	**18 63**	**19 66**	**22 23**	**1[illegible] 44**

Note Sale figures for the first five months are estimates

Chisinau Distribution Networks

Tabel 1 Monthly consumption figures by customer class for 1997 (mill kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	**0 0**
Residential priveleged													
Residential, regular													
Non residential	35 4	32 8	33 6	28 9	26 1	22 9	24 2	23 5	21 7	27 7	31 5	34 6	**342 9**
Subtotal	35 4	32 8	33 6	28 9	26 1	22 9	24 2	23 5	21 7	27 7	31 5	34 6	**342 9**
Service at the level of 0 4 kV													
Residential total	53 2	47 7	47 2	38 1	29 7	29 6	21 6	21 5	26 0	31 5	37 4	23 5	**407 1**
Residential priveleged	10 3	9 2	9 1	7 4	5 7	5 7	4 2	4 2	5 0	6 1	7 2	4 5	**78 6**
Residential regular	42 9	38 5	38 1	30 7	24 0	23 9	17 4	17 3	20 9	25 4	30 2	19 0	**328 4**
Non residential	49 3	49 6	46 6	42 8	37 3	39 5	38 6	38 8	38 8	54 5	56 8	80 2	**573 0**
Subtotal	102 5	97 3	93 8	80 9	67 0	69 1	60 2	60 3	64 7	86 1	94 2	103 7	**980 0**
TOTAL													
Residential total	53 2	47 7	47 2	38 1	29 7	29 6	21 6	21 5	26 0	31 5	37 4	23 5	**407 1**
Residential priveleged	10 3	9 2	9 1	7 4	5 7	5 7	4 2	4 2	5 0	6 1	7 2	4 5	**78 6**
Residential regular	42 9	38 5	38 1	30 7	24 0	23 9	17 4	17 3	20 9	25 4	30 2	19 0	**328 4**
Non residential	84 7	82 4	80 2	71 8	63 4	62 4	62 8	62 3	60 5	82 3	88 3	114 8	**915 9**
Total	**137 9**	**130 1**	**127 4**	**109 9**	**93 1**	**92 0**	**84 4**	**83 8**	**86 4**	**113 8**	**125 8**	**138 3**	**1322 9**

Tabel 2 Accrued monthly revenues by customer class for 1997 (mill lei)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	**0 0**
Residential priveleged													
Residential, regular													
Non residential	7 4	6 9	7 7	6 6	6 0	5 5	5 8	5 6	5 1	6 6	7 5	8 3	**79 0**
Subtotal	7 4	6 9	7 7	6 6	6 0	5 5	5 8	5 6	5 1	6 6	7 5	8 3	**79 0**
Service at the level of 0 4 kV													
Residential	5 6	5 2	5 2	4 0	3 9	4 3	4 3	4 3	5 4	6 5	7 5	4 8	**60 9**
Residential priveleged	1 0	0 9	0 9	0 7	0 6	0 6	0 4	0 4	0 5	0 6	0 7	0 4	**7 6**
Residential regular	4 6	4 3	4 3	3 3	3 4	3 8	3 9	3 9	4 9	5 9	6 8	4 3	**53 3**
Non residential	10 0	9 9	9 9	9 9	8 3	9 3	9 2	9 4	9 5	12 8	13 5	18 7	**129 8**
Subtotal	15 6	15 0	15 1	13 9	12 2	13 6	13 6	13 7	14 8	19 2	21 0	22 9	**190 7**
TOTAL													
Residential total	5 6	5 2	5 2	4 0	3 9	4 3	4 3	4 3	5 4	6 5	7 5	4 8	**60 9**
Residential priveleged	1 0	0 9	0 9	0 7	0 6	0 6	0 4	0 4	0 5	0 6	0 7	0 4	**7 6**
Residential regular	4 6	4 3	4 3	3 3	3 4	3 8	3 9	3 9	4 9	5 9	6 8	4 3	**53 3**
Non residential	17 4	16 7	17 6	16 5	14 3	14 8	15 0	15 0	14 6	19 4	21 0	26 4	**208 7**
Total	**23 0**	**21 9**	**22 8**	**20 5**	**18 2**	**19 1**	**19.3**	**19 3**	**20 0**	**25 9**	**28 5**	**31 2**	**269 6**

Tabel 3 Calculated average monthly electricity retail tariffs (bani/kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	20 96	20 95	22 88	22 87	22 89	23 83	23 91	23 91	23 73	23 87	23 84	23 90	**23 03**
Subtotal	20 96	20 95	22 88	22 87	22 89	23 83	23 91	23 91	23 73	23 87	23 84	23 90	**23 03**
Service at the level of 0 4 kV													
Residential	10 53	10 81	11 01	10 39	13 23	14 56	20 01	19 96	20 65	20 52	20 11	20 31	**15 0**
Residential, priveleged	9 64	9 64	9 64	9 64	9 64	9 64	9 64	9 64	9 64	9 64	9 64	9 64	**9 6**
Residential regular	10 75	11 09	11 34	10 57	14 09	15 73	22 49	22 43	23 29	23 12	22 62	22 87	**16 2**
Non residential	20 22	19 85	21 71	23 16	22 30	23 65	23 93	24 17	24 41	23 40	23 69	22 66	**22 6**
Subtotal	15 19	15 42	16 08	17 15	18 28	19 75	22 52	22 64	22 91	22 34	22 27	22 13	**19 45**
TOTAL													
Residential total	10 5	10 8	11 0	10 4	13 2	14 6	20 0	20 0	20 7	20 5	20 1	20 3	**15 0**
Residential priveleged	9 6	9 6	9 6	9 6	9 6	9 6	9 6	9 6	9 6	9 6	9 6	9 6	**9 6**
Residential regular	10 7	11 1	11 3	10 6	14 1	15 7	22 5	22 4	23 3	23 1	22 6	22 9	**16 2**
Non residential	20 5	20 3	21 9	23 0	22 5	23 7	23 9	24 0	24 2	23 6	23 7	23 0	**22 8**
Total	**16 7**	**16 8**	**17 9**	**18 7**	**19 6**	**20 8**	**22 9**	**23 0**	**23 1**	**22 7**	**22 7**	**22 6**	**20 4**

North Distribution Networks

Tabel 1 Estimated monthly consumption figures by customer class for 1997 (mill kWh) actual annual figures

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													
Residential regular													
Non residential	17 4	16 2	16 6	14 3	12 9	11 3	11 9	11 6	10 7	13 7	15 5	17 1	169 0
Subtotal	17 4	16 2	16 6	14 3	12 9	11 3	11 9	11 6	10 7	13 7	15 5	17 1	169 0
Service at the level of 0 4 kV													
Residential, total	26 7	23 9	23 7	19 1	14 9	14 9	10 8	10 8	13 0	15 8	18 8	11 8	204 2
Residential priveleged	6 6	6 0	5 9	4 8	3 7	3 7	7	2 7	3 2	3 9	4 7	2 9	50 9
Residential, regular	20 0	18 0	17 8	14 4	11 2	11 2	8 1	8 1	9 8	11 9	14 1	8 9	153 4
Non residential	24 4	24 6	23 1	21 2	18 5	19 6	19 1	19 2	19 2	27 0	8 1	33 7	283 8
Subtotal	51 1	48 5	46 8	40 3	33 4	34 4	30 0	30 0	32 2	42 8	46 9	51 5	488 0
TOTAL													
Residential total	26 7	23 9	23 7	19 1	14 9	14 9	10 8	10 8	13 0	15 8	18 8	11 8	204 2
Residential priveleged	6 6	6 0	5 9	4 8	3 7	3 7	2 7	2 7	3 2	3 9	4 7	2 9	50 9
Residential regular	20 0	18 0	17 8	14 4	11 2	11 2	8 1	8 1	9 8	11 9	14 1	8 9	153 4
Non residential	41 9	40 7	39 6	35 5	31 4	30 8	31 0	30 8	29 9	40 7	43 7	56 8	452 8
Total	**68 6**	**64 7**	**63 3**	**54 6**	**46 3**	**45 7**	**41 9**	**41 6**	**42 9**	**56 5**	**62 5**	**68 6**	**657 0**

Note Annual figures represent actuals Monthly figures are estimated based on kWh sales pattern exhibited by Chisinau Disco (a utility also serving mostly urban customers)

Tabel 2 Accrued monthly revenues by customer class for 1997 (mill lei)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAl
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													
Residential regular													
Non residential	4 3	3 9	4 0	3 5	3 1	2 8	2 9	2 8	2 6	3 3	3 8	4	41 3
Subtotal	4 3	3 9	4 0	3 5	3 1	2 8	2 9	2 8	2 6	3 3	3 8	4 2	41 3
Service at the level of 0 4 kV													
Residential total	4 3	3 9	3 8	3 1	2 4	2 4	1 8	1 7	2 1	2 6	3 0	1 9	33 1
Residential priveleged	0 6	0 5	0 5	0 4	0 3	0 3	0	0	0 3	0 3	0 4	0	4 2
Residential regular	3 8	3 4	3 3	2 7	2 1	2 1	1 5	1 5	1 8	2 2	2 7	1 7	28 9
Non residential	5	5	4 9	4 5	3 9	4 1	4 0	4 1	4 1	5 7	5 9	8 4	60 0
Subtotal	9 5	9 1	8 7	7 6	6 3	6 5	5 8	5 8	6 2	8 3	9 0	10 3	93 1
TOTAL													
Residential total	4 3	3 9	3 8	3 1	2 4	2 4	1 8	1 7	2 1	2 6	3 0	1 9	33 1
Residential priveleged	0 6	0 5	0 5	0 4	0 3	0 3	0 2	0 2	0 3	0 3	0 4	0 2	4 2
Residential regular	3 8	3 4	3 3	2 7	2 1	2 1	1 5	1 5	1 8	2 2	2 7	1 7	28 9
Non residential	9 4	9 1	8 9	8 0	7 1	6 9	7 0	6 9	6 7	9 0	9 7	12 6	101 3
Total	**13 8**	**13 0**	**12 8**	**11 1**	**9 5**	**9 3**	**8 7**	**8 6**	**8 8**	**11 6**	**12 8**	**14 5**	**134 4**

Note Annual figures represent actuals Monthly figures are estimated based on kWh sales pattern exhibited by Chisinau Disco (a utility also serving mostly urban customers)

Tabel 3 Calculated average monthly electricity retail tariffs (bani/kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAl
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42
Subtotal	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42	24 42
Service at the level of 0 4 kV													
Residential	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 22	16 2
Residential priveleged	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 35	8 3
Residential regular	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 83	18 8
Non residential	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 14	21 1
Subtotal	18 57	18 72	18 65	18 81	18 95	19 02	19 36	19 37	19 16	19 33	19 17	20 02	19 08
TOTAL													
Residential total	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2	16 2
Residential priveleged	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3	8 3
Residential regular	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8	18 8
Non residential	22 5	22 4	22 5	22 5	22 5	22 3	22 4	22 4	22 3	22 2	22 3	22 1	22 4
Total	**20 1**	**20 1**	**20 2**	**20 3**	**20 5**	**20 4**	**20 8**	**20 8**	**20 5**	**20 6**	**20 5**	**21 1**	**20 5**

North Western Distribution Networks

Tabel 1 Monthly consumption figures by customer class for 1997 (mill kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													
Residential regular													
Non residential	10 0	8 3	9 7	7 9	7 4	7 0	8 1	7 9	7 6	6 6	7 8	2 7	91 1
Subtotal	10 0	8 3	9 7	7 9	7 4	7 0	8 1	7 9	7 6	6 6	7 8	2 7	91 1
Service at the level of 0 4 kV													
Residential, total	22 6	17 2	20 6	16 0	14 8	13 6	11 5	9 2	9 8	14 8	15 2	26 5	191 7
Residential priveleged	8 3	6 3	7 6	5 9	5 4	5 0	4 2	3 4	3 6	5 4	5 6	9 7	70 6
Residential, regular	14 3	10 8	13 0	10 1	9 3	8 6	7 3	5 8	6 2	9 3	9 6	16 7	121 1
Non residential	20 2	18 2	16 1	13 6	9 4	8 8	9 2	10 0	10 1	11 1	12 2	22 1	161 1
Subtotal	42 8	35 4	36 7	29 6	24 1	22 3	20 7	19 2	19 9	25 9	27 4	48 6	352 7
TOTAL													
Residential total	22 6	17 2	20 6	16 0	14 8	13 6	11 5	9 2	9 8	14 8	15 2	26 5	191 7
Residential priveleged	8 3	6 3	7 6	5 9	5 4	5 0	4 2	3 4	3 6	5 4	5 6	9 7	70 6
Residential regular	14 3	10 8	13 0	10 1	9 3	8 6	7 3	5 8	6 2	9 3	9 6	16 7	121 1
Non residential	30 3	26 5	25 8	21 5	16 8	15 8	17 3	18 0	17 7	17 7	20 0	24 8	252 2
Total	52 9	43 7	46 4	37 5	31 6	29 4	28 8	27 2	27 5	32 5	35 2	51 3	443 9

Tabel 2 Accrued monthly revenues by customer class for 1997 (mill lei)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													
Residential regufar													
Non residential	2 0	1 6	2 0	1 6	1 6	1 6	1 8	1 8	1 7	1 5	1 8	1 2	20 2
Subtotal	2 0	1 6	2 0	1 6	1 6	1 6	1 8	1 8	1 7	1 5	1 8	1 2	20 2
Service at the level of 0 4 kV													
Residential	2 1	1 6	1 9	1 6	1 6	1 6	1 6	1 3	1 4	2 1	2 1	3 7	22 9
Residential priveleged	1 1	0 8	1 0	0 7	0 7	0 6	0 5	0 4	0 5	0 7	0 7	1 2	8 9
Residential regular	1 1	0 8	1 0	0 9	0 9	1 0	1 1	0 9	1 0	1 4	1 4	2 5	13 9
Non residential	3 8	3 4	3 2	3 0	2 1	2 0	2 1	2 3	2 3	2 8	2 8	4 4	34 4
Subtotal	5 9	5 0	5 1	4 6	3 7	3 6	3 7	3 6	3 8	4 9	5 0	8 2	57 2
TOTAL													
Residential total	2 1	1 6	1 9	1 6	1 6	1 6	1 6	1 3	1 4	2 1	2 1	3 7	22 9
Residential priveleged	1 1	0 8	1 0	0 7	0 7	0 6	0 5	0 4	0 5	0 7	0 7	1 2	8 9
Residential regular	1 1	0 8	1 0	0 9	0 9	1 0	1 1	0 9	1 0	1 4	1 4	2 5	13 9
Non residential	5 7	5 0	5 2	4 6	3 7	3 6	3 9	4 1	4 0	4 3	4 6	5 7	54 6
Total	**7 9**	**6 7**	**7 1**	**6 2**	**5 4**	**5 2**	**5 5**	**5 4**	**5 4**	**6 4**	**6 7**	**9 4**	**77 4**

Tabel 3 Calculated average monthly electricity retail tariffs (bani/kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total													
Residential, priveleged													
Residential regular													
Non residential	19 50	19 52	20 53	20 44	22 04	22 90	22 28	22 04	22 12	22 91	22 62	45 87	22 14
Subtotal	19 50	19 52	20 53	20 44	22 04	22 90	22 28	22 04	22 12	22 91	22 62	45 87	22 14
Service at the level of 0 4 kV													
Residential	9 49	9 43	9 45	10 07	11 06	11 89	13 88	14 25	14 38	14 09	14 16	14 10	11 9
Residential priveleged	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 63	12 6
Residential regular	7 67	7 57	7 60	8 58	10 16	11 46	14 61	15 20	15 41	14 94	15 06	14 95	11 5
Non residential	18 58	18 76	19 88	22 18	22 20	23 06	23 11	23 19	23 20	25 52	23 00	20 07	21 3
Subtotal	13 79	14 23	14 02	15 64	15 39	16 28	17 97	18 92	18 86	18 99	18 11	16 82	16 22
TOTAL													
Residential total	9 5	9 4	9 4	10 1	11 1	11 9	13 9	14 2	14 4	14 1	14 2	14 1	11 9
Residential priveleged	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6	12 6
Residential regular	7 7	7 6	7 6	8 6	10 2	11 5	14 6	15 2	15 4	14 9	15 1	15 0	11 5
Non residential	18 9	19 0	20 1	21 5	22 1	23 0	22 7	22 7	22 7	24 5	22 9	22 9	21 6
Total	**14 9**	**15 2**	**15 4**	**16 6**	**17 0**	**17 9**	**19 2**	**19 8**	**19 8**	**19 8**	**19 1**	**18 3**	**17 4**

Notes North Western Network is composed of six administrative districts The tables above show actual monthly sales data for 1997 except for two districts Bricem and Edinet For these two districts the actual annual figures have been spread over the twelve months based on the exhibited pattern of kWh sales to similar customer groups from the Soroca district served by North Western

Southern Distribution Networks

Tabel 1 Monthly consumption figures by customer class for 1997 (mill kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													
Residential regular	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Non residential	1 6	1 6	1 5	1 4	2 7	2 4	1 6	1 6	1	1 2	1 4	1 1	19 1
Subtotal	1 6	1 6	1 5	1 4	2 7	2 4	1 6	1 6	1 0	1 2	1 4	1 1	19 1
Service at the level of 0 4 kV													
Residential total	17 0	14 9	18 2	10 6	10 9	13 8	10 3	9 9	11 1	15 5	14 0	19 6	165 8
Residential priveleged													
Residential regular	17 0	14 9	18 2	10 6	10 9	13 8	10 3	9 9	11 1	15 5	14 0	19 6	165 8
Non residential	26 0	26 4	22 9	18 1	13 7	11 2	13 2	16	15 2	15 6	18 4	20 8	217 5
Subtotal	43 0	41 3	41 1	28 7	24 6	25 0	23 5	25 9	26 3	31 1	32 4	40 4	383 3
TOTAL													
Residential total	17 0	14 9	18 2	10 6	10 9	13 8	10 3	9 9	11 1	15 5	14 0	19 6	165 8
Residential priveleged	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential regular	17 0	14 9	18 2	10 6	10 9	13 8	10 3	9 9	11 1	15 5	14 0	19 6	165 8
Non residential	27 6	28 0	24 4	19 5	16 4	13 6	14 8	17 6	16 2	16 8	19 8	21 9	236 6
Total	**44 6**	**42 9**	**42 6**	**30 1**	**27 3**	**27 4**	**25 1**	**27 5**	**27 3**	**32 3**	**33 8**	**41 5**	**402 4**

Tabel 2 Accrued monthly revenues by customer class for 1997 (mill lei)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAI
Service at the level of 6 10 kV													
Residential total	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential priveleged													0 0
Residential regular	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Non residential	0 2	0 2	0 1	0 1	0 6	0 5	0 6	0 6	0 1	0 2	0 1	0 3	3 6
Subtotal	0 2	0 2	0 1	0 1	0 6	0 5	0 6	0 6	0 1	0 2	0 1	0 3	3 6
Service at the level of 0 4 kV													
Residential	1 1	1	1 2	0 7	0 7	1 2	1 4	1 2	1 5	1 7	1 7	2 9	16 3
Residential priveleged													0 0
Residential regular	1 1	1 0	1 2	0 7	0 7	1 2	1 4	1 2	1 5	1 7	1 7	2 9	16 3
Non residential	4 1	4 2	4	3 9	3 1	2 4	2 7	3 2	3 5	3 8	4 3	4 5	43 7
Subtotal	5 2	5 2	5 2	4 6	3 8	3 6	4 1	4 4	5 0	5 5	6 0	7 4	60 0
TOTAL													
Residential total	1 1	1 0	1 2	0 7	0 7	1 2	1 4	1 2	1 5	1 7	1 7	2 9	16 3
Residential priveleged	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Residential regular	1 1	1 0	1 2	0 7	0 7	1 2	1 4	1 2	1 5	1 7	1 7	2 9	16 3
Non residential	4 3	4 4	4 1	4 0	3 7	2 9	3 3	3 8	3 6	4 0	4 4	4 8	47 3
Total	**5 4**	**5 4**	**5 3**	**4 7**	**4 4**	**4 1**	**4 7**	**5 0**	**5 1**	**5 7**	**6 1**	**7 7**	**63 6**

Tabel 3 Calculated average monthly electricity retail tariffs (bani/kWh)

Customer class	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAI
Service at the level of 6 10 kV													
Residential total													
Residential priveleged													
Residential regular													
Non residential	12 50	12 50	6 67	7 14	22 22	20 83	37 50	37 50	10 00	16 67	7 14	27 27	18 85
Subtotal	12 50	12 50	6 67	7 14	22 22	20 83	37 50	37 50	10 00	16 67	7 14	27 27	18 85
Service at the level of 0 4 kV													
Residential	6 47	6 71	6 59	6 60	6 42	8 70	13 59	12 12	13 51	10 97	12 14	14 80	9 8
Residential priveleged													
Residential regular	6 47	6 71	6 59	6 60	6 42	8 70	13 59	12 12	13 51	10 97	12 14	14 80	9 8
Non residential	15 77	15 91	17 47	21 55	22 63	21 43	20 45	20 00	23 03	24 36	23 37	21 63	20 1
Subtotal	12 09	12 59	12 65	16 03	15 45	14 40	17 45	16 99	19 01	17 68	18 52	18 32	15 65
TOTAI													
Residential total	6 5	6 7	6 6	6 6	6 4	8 7	13 6	12 1	13 5	11 0	12 1	14 8	9 8
Residential priveleged													
Residential regular	6 5	6 7	6 6	6 6	6 4	8 7	13 6	12 1	13 5	11 0	12 1	14 8	9 8
Non residential	15 6	15 7	16 8	20 5	22 6	21 3	22 3	21 6	22 2	23 8	22 2	21 9	20 0
Total	**12 1**	**12 6**	**12 4**	**15 6**	**16 1**	**15 0**	**18 7**	**18 2**	**18 7**	**17 6**	**18 0**	**18 6**	**15 8**

Power production by sources in 1997

Source	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Chp 1	mln kWh	19 546	14 167	5 138	0 227	0 131	(0 193)	(0 029)	(0 285)	(0 252)	1 564	9 379	21 387	70 064
Chp 2	mln kWh	88 037	82 671	90 593	99 771	61 696	50 956	52 794	27 458	32 150	97 780	106 648	105 462	896 015
Chp North	mln kWh	10 499	9 514	7 654	4 027	4 597	2 057	3 251	1 922	2 193	3 261	8 314	8 117	65 406
HPP Costesti	mln kWh	4 165	5 134	3 829	6 245	11 978	9 921	9 123	11 091	10 766	4 588	5 017	5 107	86 964
Sugar refineries	mln kWh	2 295	1 222	0 684	0 537	0	0	0	0	0 118	5 867	3 827	1 626	16 176
MGRAS	mln kWh	250 074	178 378	149 253	83 282	64 433	67 830	66 409	108 372	104 417	168 355	229 816	301 615	1 772 234
Ukraine	mln kWh	195 138	159 719	187 701	182 211	132 626	143 482	159 762	145 558	175 333	116 000	70 302	82 148	1 749 980
Total	mln kWh	569 754	450 804	444 852	375 846	275 199	274 053	291 310	294 117	324 726	397 415	433 303	525 462	4 656 839

Power sales to Discos in 1997 (Figures are calculated)

Disco	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Central	miln kWh	96 892	93 287	92 566	65 460	59 260	64 595	67 046	81 032	65 892	73 246	64 162	76 562	900 000
Chisinau	miln kWh	164 283	154 991	151 774	130 926	110 912	109 602	100 548	99 833	102 930	135 572	149 868	164 760	1 576 000
North	miln kWh	88 543	83 509	81 702	70 473	59 760	58 986	54 081	53 694	55 372	72 925	80 670	88 543	848 000
North West	miln kWh	62 948	51 653	54 968	46 041	38 797	36 096	35 359	33 395	33 763	39 902	48 014	64 164	545 000
South	miln kWh	59 186	56 930	56 532	39 944	36 228	36 361	33 309	36 494	36 228	42 863	44 854	55 072	534 000
Total	miln kWh	471 852	440 370	437 543	352 844	304 957	305 639	290 342	304 447	294 186	364 509	387 568	449 101	4 403 000

Power sales to customers by Discos in 1997

Disco	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Central	mln kWh	67 2	64 7	64 2	45 4	41 1	44 8	46 5	56 2	45 7	50 8	44 5	53 1	624 2
Chisinau	mln kWh	137 9	130 1	127 4	109 9	93 1	92 0	84 4	83 8	86 4	113 8	125 8	138 3	1 322 9
North	mln kWh	68 6	64 7	63 3	54 6	46 3	45 7	41 9	41 6	42 9	56 5	62 5	68 6	657 2
North West	mln kWh	52 9	43 7	46 4	37 5	31 6	29 4	28 8	27 2	27 5	32 5	35 2	51 3	444 0
South	mln kWh	44 6	42 9	42 6	30 1	27 3	27 4	25 1	27 5	27 3	32 3	33 8	41 5	402 4
Total	mln kWh	371 2	346 1	343 9	277 5	239 4	239 3	226 7	236 3	229 8	285 9	301 8	352 8	3 450 7

Power production by sources in 1998

Source	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Chp 1	mln kWh	20 718	22 259	20 112	5 828	4 672	1 826							75 414
Chp 2	mln kWh	122 061	118 982	113 234	72 083	68 409	36 650							531 419
Chp North	mln kWh	10 829	9 160	8 525	3 124	4 140	1 047							36 825
HPP Costesti	mln kWh	4 056	3 038	0 951	1 866	9 880	11 369							31 160
Sugar refineries	mln kWh	0 978	0 835	0 746	0	0	0 594							3 152
MGRAS	mln kWh	242 420	192 646	145 301	142 040	119 240	80 172							921 819
Ukraine	mln kWh	101 455	93 829	182 103	104 255	95 460	114 507							691 608
Romania	mln kWh	0	0	3 146	0	0	12 552							
Total	mln kWh	502 516	440 748	474 118	329 196	301 801	258 717							2 291 398

Power sales to Discos in 1998

Disco	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Central	mln kWh	93 283	78 759	85 875	56 701	52 149	42 564							409 332
Chisinau	mln kWh	160 900	148 688	157 468	109 818	105 760	100 509							783 143
North	mln kWh	92 948	82 161	86 576	74 596	56 706	45 936							438 924
North West	mln kWh	64 002	56 688	60 806	40 978	36 322	28 573							287 370
South	mln kWh	68 061	57 974	61 480	37 987	37 081	27 444							290 027
Total	mln kWh	479 194	424 271	452 206	320 081	288 018	245 027							2 208 796

Power sales to customers by Disco s in 1998

Disco	Unit	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Central	mln kWh													
Chisinau	mln kWh													
North	mln kWh													
North West	mln kWh													
South	mln kWh													
Total	mln kWh													

ANNEX C

AN EVALUATION OF ANRE COST AND TARIFF ANALYSIS FOR 1998 (ELECTRIC)

CONTENTS

1 CHP-2 *1*

1 1 1996 actual vs 1997 actual 1

1 2 1997 actual vs 1998 company (CHP2) budget 1

1 3 1998 Budget vs ANRE proposed 1

2 CHP-1 *3*

2 1 1996 vs 1997 actual 3

2 2 1997 actual vs 1998 Budget 3

2 3 1998 Budget vs ANRE 3

3 CHP- North *4*

4 Discussions with ANRE and Mr Saracuta *4*

5 Discussion with Moldtranselectro (MTE) *5*

6 Discussion with CHP-2 *6*

7 Discussions with CHP-1 *7*

8 Imported power and other power sources *9*

9 Distribution companies *10*

10 Post-script *10*

11 Summary *11*

12 Rate Schedule billed kw/kwh applicable tariff expected revenue *14*

13 Purchased Power and Fuel Adjustment Procedure *15*

This report analyses the 1998 electric cost projections and tariffs for generation transmission and the distribution systems We begin by comparing the actual 1996 1997 and company budget (plan) 1998 with the ANRE 1998 approved or proposed tariff calculation First we analysed each generation unit (CHP) separately then the purchased power and transmission and finally each of the Discos The final retail tariff is the sum of these components

1 CHP-2

For 1998, the CHP-2 submitted a plan (budget) cost analysis based on 1159 mwh (megawatthours) output with 137 mwh station use, net 1022 mwh to be delivered to the system The total cost was calculated at 152 mill lei with unit cost of 15 65 bani/kwh This compares with the 839 mwh and 919 mwh net actual delivered in 1996 and 1997 at unit cost of 11 41 and 11 44 bani, respectively The ANRE, after its review arrived at net system output of 1213 mwh at a total cost 158 mill Lei and busbar cost of 13 69 bani/kwh This analysis will reconcile the differences between actual company budget and ANRE proposals

1 1 1996 actual vs 1997 actual

The basic cost per kWh in 1996 was reported as 7 94 bani There was additional overhead expense of 29 mill Lei by Moldoenergo assigned to CHP-2, resulting in unit cost of 11 41 bani The unit cost reported in 1997 was 11 44, excluding any ME charges When comparing the 1996 and 1997, the major cost increase, of 44 %, resulted from gas price increase, 276 lei/1000 cm to 408, or 48 % This almost fully explains the 97 over 96 cost changes

1 2 1997 actual vs 1998 company (CHP2) budget

Company assumed or proposed for 1998

- gas price of 454 lei/1000cm vs 408 (12 % incr)
- 25 million increase in material and services (300 % change)
- 3 5 million increase in depreciation expense
- 7 6 mill in profit margin, compared to zero in 1997
- 1 5 million misc increases (salaries, social fund)
- historic allocation method bet heat & electric

1 3 1998 Budget vs ANRE proposed

ANRE assumed or allowed

- higher levels of output and sales, 1159 vs 1353 mwh (13 7 %)
- increase in heat rate (i e lower efficiency for elec) 300 g c c vs 261
- reduction in gas price from 454 lei to 406 lei

- allowed only 12 3 million lei in mat & serv vs 25 mill proposed by the company

ANRE made a policy decision to allocate more fuel and other costs to the electric system Historically, under the Soviet system , the CHPs have been treated as primarily heating plants with electricity as a bye-product Thus the efficiency benefits of cogeneration have been assigned to the electric business (presumably to demonstrate that they were able to produce cheap electricity !) ANRE approach in our opinion appears to be more realistic Their basic concern is that the heating tariff at CHP was not competitive with the boiler heat and customers may leave the CHP's heating system With less heat produced, the unit will operate in less efficient condensing mode rather than in the co-generation mode Therefore it makes sense to reduce the heating tariff to encourage more heat production as it would improve the overall plant efficiency For CHP-2, the net electric heat rate (grams coal equivalent per kwh delivered to the system) was increased from 260 g c c to 300, a 13 % increase Corresponding heat rate for heating business was reduced from 173 to 150 kg c c As ANRE explained it wants to bring the cost of heating system in line with the boiler heaters, to 70 lei from 90 lei per Gcal We estimated that each 1 bani increase in cost of CHP-2 power reduces the heating cost by 7 lei per Gcal Similar allocation changes were made in the other CHPs If this indeed this decision is market- oriented then it is appropriate and positive However we should note that heating efficiency is artificially raised to beyond the theoretical levels Under the previous allocation the heating system efficiency is calculated at 85-90% Under revised allocation the calculated efficiency would be unrealistically high This means that the reason the heating business cannot compete with the boiler heat is that the overheads at CHP-2 are too high in comparison to the boilers

ANRE also allocates the entire cost of electricity produced (140 mwh) for the station use to the electric business Typically, one would assign the station use in proportion to the relative energy content of the joint production unless a more more direct assignment could be estimated In case of CHP-2 it should be about 40 %, or 56 mwh allocated to electric business

ANRE also reduced the gas cost for CHP-2 from the company estimate of 454 to 408 lei/ 1000 cm because ANRE is proposing a lower gas tariff under its Tariff order #4 These tariffs will be effective on July 1, if cleared by the GoM According to Mr Saracuta it appears doubtful If so ANRE numbers will be off the mark for 1998 ANRE also included a profit margin on the entire cost including fuel purchased One would question this approach as improper Other companies, distributors and MTE could also claim this basis for profit margin When discussed with Saracuta, he indicated that CHP needs more money for maintenance If so we believe that such expenses should be directly allowed Theoretically profit margin is for the company to keep and it is not obligated to spend on maintenance etc On the other hand if you allow specific amounts for maintenance, the company must spend on that item If the revised tariffs go in effect in July then the company will receive higher revenues from electric and lower gas costs,

but will not suffer a loss of heating revenues until the winter The net effect will be very positive for the company in 1998

To analyze the impact of ANRE policy changes we recalculated what the electric system costs would be without those changes We also allocated only a portion of plant use to electric service and assumed that 5% profit margin should be applicable to the CHP s own costs not the total including fuel It shows that the electric costs would be significantly lower at CHP-2, from 13 69 to 10 9 bani The results are illustrated in the cost comparison spreadsheets prepared by Romeo and Andrei

2 CHP-1

For 1998, the company proposed the budget (plan) output of 128 mwh, delivering net 97 mwh into the system at an average cost of 13 38 bani/kwh The ANRE proposed 160 mwh gross output delivering net 121 mwh In both cases the station use is assigned to the electric business, which has a bigger impact due to the relative small size of the facility ANRE proposed unit cost is 13 9 bani

2 1 1996 vs 1997 actual

Unit costs increased from 7 72 to 9 62 bani mainly due to the gas fuel cost increases from 346 lei to 398 lei Also the production levels dropped from 115 to 93 mwh, adversely impacting unit cost

2 2 1997 actual vs 1998 Budget

Company predicts a sharp rise in the unit cost , 9 62 to 13 38 bani (39 %)
Assumptions

- Increase in output level, 93 to 128 mwh (38 %)
- fuel (gas) price increase from 398 to 454 lei (16 %)
- 1 5 million increase in non-fuel costs
- historic allocation method bet heat and electric
- 0 6 million in profit margin based on total costs, incl fuel

2 3 1998 Budget vs ANRE

- ANRE increased output level to 160 mwh
- ANRE changed the historic allocation method assigning more fuel to electric as explained in CHP-2 and assigned all station use to the electric
- lowered the fuel (gas) costs from 454 to 406 lei/ th cm
- disallowed the non-fuel increase of 1 5 million proposed by the company
- allowed 0 8 million in profit margin on the total cost

The impact of changing the allocation method is very significant for CHP-1 First the heat rate increase from 160 to 300 g c c results in doubling of the unit cost of electric production Because the CHP-1 operates mostly in a co-generation mode i e it produces electric only when it produces heat, it has higher efficiency and is a true by- product Setting the HR at 300 g c c is purely a policy decision and seems to be designed to lower the corresponding heating cost Also station use takes a significant portion of the output 25 %

We performed analysis similar to CHP-2 assuming no change in allocation method prorating station use and allowing profit margin only on the owner s costs The result shows drop in unit cost to 5 72 bani from ANRE's 13 9 bani (See details on the spreadsheet)

3 CHP- North

Analysis explained in the spread sheet

4 Discussions with ANRE and Mr Saracuta

We discussed with Mr Saracuta, Gen Director, ANRE how it performs its cost analysis to determine tariffs He briefly described his analysis process and as an example he took us through line by line cost calculations for CHP-2

- -First, obtain kwh sales estimates for the budget year from each of the Discos Using the estimated technical T& D losses (not necessarily the reported actual losses) project how much total power is needed into the system

- Maximize the domestic production from CHPs as the cheapest source For example, both MTE and CHP-2 projected 1022 mwh net output for 1998, compared to 1100 by ANRE

- Assume maximum available from Ukraine as the next cheapest power over Moldovagras (C E R S) In essence, he said that ANRE is doing the minimum cost planning as MTE does not per se perform economic dispatch and have only recently started considering it

- Mr Saracuta explained his allocation adjustments for CHPs between heat and fuel and the need to bring heat cost below the boiler heat CHP-2 proposed the old method but ANRE rejected it

- Fuel mix is assumed at 80 20 as optimal, although actual 1997 is 88 12 Effect is about 0 1 bani/ kWh

- ANRE pared down company request of 37 million for material and supplies to 12 3 mill because now the full depreciation expenses are permitted and

generate more funds for capital item maintenance Previously with lower depreciation the company was including capital expenses in the material and supplies category CHPs argue that they have neglected maintenance and capital improvements for too long and need to catch up

- ANRE allows 5% profit margin on the total cost, including fuel which gives about 10 million lei more to CHP-2 This makes up for deficient maintenance allowance according to Mr Saracuta In our opinion there should be direct recognition of all allowable expenses Allowed as a profit margin the utility has no obligation to spend any of its profits unless specifically compensated for those expenses

- Wages and salaries were also pared down because company wants to give two pay increases to employees (30%) CHP-2 confirmed this but said it has reduced its employee count and operates more efficiently

- Company accepted ANRE's depreciation expenses

We met with MTE and CHP-2 to understand and evaluate their budget process, underlying assumptions and how it was presented to ANRE Also wanted to obtain actual 1998 data to compare with the projections

5 Discussion with Moldtranselectro (MTE)

Met with Mr Cusinev, Dep Dir of sales and Oleinik, Dir of planning at MTE
The budget process starts with sales forecasts from the Discos After preliminary estimates the contracts are signed with Ukraine and C E R S then only the real budget process begins According to MTE, new contracts are signed each year Company does annual budgets twice a year, in summer and winter (January and June) Then they prepare detailed costs (they provided the copies of latest budget plans) Both managers were highly critical of ANRE, alleging that it was ignoring the real costs, not allowing enough for maintenance and upgrades, were forcing MTE to sign contracts with Dscos that do not provide for late fee or shutoffs Acording to the managers MTE was on the verge of bankruptcy and have no money to fight legal battle with ANRE Min of finance may freeze their accounts They said that as Gen Director Saracuta was acting arbitrary and not following the normatives permitted by the law, that he is affecting the financial situation of the entire company There should be an open public hearing process The managers again complained that ANRE did not allow 93 million lei for VAT on imported power even though law requires us to pay They had discussed it with Mr Saracuta who believes that the law will be changed but this is almost July and law still on the books Saracuta or ministry of finance cannot unilaterally change it, must be done by the parliament So MTE feels it will be stuck with the VAT unless law changes retroactively

In our opinion the since VAT i s a mandatory obligation of all businesses, it does not require the ANRE approval Typically the contracts provide that all legally imposed taxes

shall apply to the transactions It is not a utility cost of service and therefore not within the ANRE jurisdiction We further were advised that the residential customers were exempt from VAT and therefore there is an issue of appropriate settlements and credit to the Discos from the GOM for the VAT paid We shall address and analyse the VAT issue in a separate paper

Regarding the tariff development process we explained that it is the utility s obligation to maintain a detailed cost accounting system, identify and document all its costs prepare a detailed budget with backup work papers and present these to ANRE Also they should provide quarterly and annual financial and accounting reports to ANRE so that it is fully apprised of their operations and the actual costs That should be the basis of tariff making Adjustments to actual costs should be made only for known changes, e g changes in power costs, scheduled maintenance etc Also periodic- monthly or quarterly tariff adjustments for power costs changes may be necessary The primary obligation to support and justify costs is on the utility Although ANRE has wide ratemaking authority and discretion, it cannot ignore legitimate cost of doing business or act arbitrary Further there is an appeal process However the utility should not complain about tariffs if they are unwilling or difficult in providing the data They must open up their process and information for legitimate use by the regulators It is unwritten rule that if utility withholds data then the costs are routinely disallowed

Mr Oleinik said that they provide all requested data to ANRE (Mr Saracuta) but difficult to make him accept our expenses, that he acts arbitrary and other commissioner should have more input Also he suggested that I work with him to convince ANRE because sometimes an independent opinion has more effect Also that there should be a third party review of the process He also mentioned that in the past there have been many consultants who come and gather data and then leave without follow –ups and we get nothing in return He suggested that a permanent consultant should be assigned to act as advisor to ANRE and who can work with the companies on tariffs There is definite need for better communication and relationship

List of documents received

- 1998 actual use data, Jan – May, purchases and sales by sources
- Current budget June 1998- May 1999
- Current payment and balances due from Discos Shows that Chisinau has been current on payments for 1998 and has a credit Over 59% payments were in barter or mutual cancellations
- Debt position amongst all the energy entities as of April
- A detailed line by line variances between costs projected by MTE vs costs allowed by ANRE It's a very useful document that we should encourage other entities to prepare similar analysis

Excluding the 93 million for VAT, the company requested 107 million (2 46 bani/kwh) but received only 64 million (1 3 bani / kwh) in total expenses about the same as its 1997 actual

6 Discussion with CHP-2

Met with Mrs Cuzimina chief of planning at CHP-2 Purpose of the visit was to understand their budget process and to cross check the data received from MTE and discos Also wanted to gather actual 1998 data to compare against the estimates by CHP-2, MTE and ANRE

She explained that they plan their output for maximum efficiency ' We tell RAPDET and Thermocom how much heat we will produce " Based on heat rates calculated from technical formula (they have curves based on historic performance for different combinations of heat/ electric output levels), the fuel requirement is calculated and procured She recognized that Saracuta used 1100 mwh net output while company projects 1022 According to her this means they will be operating under sub-optimal envoirnment Also she mentioned that there is a penalty for non performance if CHP-2 cannot provide MTE the contracted quantity " Therefore overestimation can hurt us But ANRE does not recognize it " We discussed the argument behind the change in allocation methods ANRE has changed the net heat rate from 260 to 300 She said she has no explanation of how ANRE came up with that number

CHP2 however continues to use the old allocation method on its books She also expressed the need for more repairs They asked for 78 million in M & S and provided details but received only 27 million Have reduced employees by 20% (current roll is 580 plus 60 Adm) and raised salaries by 30% to improve efficiency But ANRE considers the wages in the entire industrial sector, not energy sector So we get shortchanged She said that surplus from the higher tariff will be used to cover higher wages and maintenance She complained that they had no cash Payments from MTE were in mutual cancellations Only heating system provides cash to pay our wages etc

She wanted to know how to approach ANRE to obtain tariff change to do major repairs on cooling towers Also need bricks for chimney repairs which are only available from Ukraine I explained that they should prepare a technical review, justification and detail budget for the repairs and present to ANRE along with expert testimony It could be treated as an extraordinary and necessary expenditure Regulator has the authority and obligation to review the request

7 Discussions with CHP-1

We met with CHP-1 managers, Mr Belinski , Chief of finance, accounting and planning and Ms Litviniuk -- to discuss their planning process and the question of allocation between heat and electricity The company appeared very confused on the allocation issues Historically they were given the calculation method and the allocation procedure by the soviet system and the plant operators had no discretion nor did they feel anxiety over the issue Until 1997 they were still using the old system where 20% of fuel was

allocated to the electric business In 1998 ANRE modified the allocation method assigning more fuel and associated costs to the electric business As we mentioned earlier the ANRE explanation is that the CHP s should compete in the heating business with the RAPDET and Sceleuni boilers in order to keep the heating business because without the heating load the CHP's cannot operate efficiently in co-generation cycle CHP-1 wanted to know what was the correct allocation method I explained that there was no single correct method but rather combination of factors should be taken into consideration including ,

- overall system efficiency and total cost recovery
- optimum and theoretical efficiencies of electric and heat systems
- when operating under similar conditions for plants of similar design vintage etc
- business consideration and market conditions

We emphasized that the business consideration should be the primary criteria when making allocation decisions The company should take advantage of and adjust to the needs of its customers to provide competitive service and prices It is particularly important to the CHPs since their business will likely be subject to open access and competition in the near future It is unnecessary to get hung up on the technical formulas and historic approach Basically it should make business sense

The other important issue that CHP-1 raised was how to reach the steam customers that were receiving their steam but indirectly through RAPDET Currently RAPDET purchases steam for customers who are only across the street from CHP-1 at 84 lei/ gcal and sells it to the end users at 165 lei CHP could sell the steam at much cheaper tariff, however they are prohibited because a) they must sell all its output to Tanselectro or RAPDET, under the license conditions and b) the steam pipe is owned and maintained by RAPDET CHP-1 would like to lease this line and make a direct sell to the customers Similarly it would like to make electric sells to RAPDET at 17 bani rather than 25 bani that it pays thru Moldtranselectro We believe that the CHP concerns have validity and should be reviewed by ANRE It appears inefficient to have a middleman to sell steam across the street to the industrial customers The system is too localised to worry about wider consumer impact The direct sale should be permitted and should be of great benefit to the customers The problem can be mitigated for the customer however, if the tariff for the pipeline and delivery service is cost based We advised CHP-1 that they should approach the customers and explain to them the cost saving opportunity if a direct sale was permitted by ANRE Ultimately I believe that if the customers see a benefit, they would exert pressure on ANRE and the government to modify the license restrictions and permit the direct sale of steam In this context we asked if the RAPDET had any other alternate sources to supply steam to these customers We were told that there was none unless the customer installed its own steam system, which was unlikely in light of the capital expenditures required Thus we advised CHP-1 that they had considerable leverage with the RAPDET and the steam customers so that they should receive reasonable prices for its service We also advised them that they should formally and

informally petition to the ANRE on this issue From our discussions and ANRE s own analysis it appears that operation of CHP-1 is cost effective in both winter and even during parts of summer when compared to other power sources CHP-1 also wanted to know how to separate the hot water cost allocation from steam We had no clear response to that question but again responded that the business needs of all parties should be considered

A third issue that CHP-1 wanted to discuss was how to adjust the tariffs when gas/fuel prices change We advised them that typically they should have a fuel cost adjustment provision in their contract which would automatically adjust for changes in fuel and production cost changes The adjustment factor could be calculated each month and reflected in invoice to its customers We provided a simple illustration of how it could be calculated They pointed out that there is such a provision in their existing contracts approved by ANRE However we noticed that it does not clearly provide for the automatic type adjustment clause There is rather a vague provision that electric tariffs of CHP can be adjusted to reflect changes in costs etc We believe that CHPs should negotiate a clear and practical contractual provision At the level and size of their operations, even small changes in fuel costs can significantly impact their financial health Our main advice to them was that they should act more aggressively and make hard business decisions and negotiate terms that protect their business interests We carried the feeling that their thinking was businesslike but were afraid to challenge the ANRE or government decisions and felt helpless They expressed frustration that even though they were considered independent corporate entity they were still owned by the state under their control and not free to make their own decisions All in all it was a very fruitful meeting

8 Imported power and other power sources

We made no independent verification of the reasonableness of the quantities and prices for power purchased from various sources ANRE assumes that 1998 purchases from Ukraine will be about the same levels as in 1997 and MGRAS will be the source of last resort, it being the most expensive power on the system

ANRE also assumes that 200 mill Kwh will be served by independent suppliers into the Moldova system during 1998 at 15 2 bani/kwh This will make it cheaper than other imported power To our knowledge, thus far there has been no actual third party sales although several licenses for independent power supply have been issued According to Mr Saracuta the contracts have been signed with MTE where 200 Mw power from Ladijinski power plant will be supplied at 3 2 cents per kWh fixed price

Our main concern for the imported power analysis is that the purchases are not made on the basis of hour- by- hour economic dispatch, for the Moldova system Further the tariffs at all levels are based on yearly average costs This is highly inefficient and unfair system when all products and services are priced at a single tariff Electricity delivered

during peak periods is a different service than at say night time Similarlt summer/ winter costs are not the same It gives no incentive and wrong signal to the customers at any level as to the true value of the service There is no legitimate reason why large customers and wholesalers, including the Discos, should not be charged on a time of use or seasonal basis Further there is the need to consider two-part tariffs that includes demand (capacity) and energy rates In the long run it is an efficient and unavoidable tariff design

9 Distribution companies

- All Discos adopt as their budget the same kWh purchases, losses and net delivered as approved by ANRE It appears that the Discos prepare initial budget and then revise it after review by ANRE and adopt final budget after negotiations with ANRE The total power costs are then computed by applying the average power cost tariff calculated by ANRE According to ANRE, the Disco estimates should are more reliable than from MTE and form the basis of ANRE forecasts

- Significant differences appear between their own- costs (non-fuel) budgeted by Discos and that approved by ANRE Taking the example of the largest disco, Chisinau we found that company increased its request from actual of 27 5 million lei in 1997 to 59 8 mill in 1998 The largest increase was in depreciation expense, from 12 3 to 21 6 million ANRE increased it by another 9 3 million to total of 32 9 million Salaries and wages were cut from a requested 5 9 million to 3 65 million

Central network increased its 1998 budget from 23 million actual 1997 to 60 million This included about 10 million depreciation increase (which ANRE accepted) and over 32 million increase in services and supplies which was rejected by ANRE Wage increase of 2 5 mill lei was entirely rejected ANRE also disallows misc expenses such as insurance, interest, banking services, plant security etc and believes that it should come from profit margins I disagree these are legitimate costs of doing business and must be recognized

The net increase in non fuel expenses were as follows

	Actual 1997	Co plan/budget	ANRE approved
Chisinau	27 54 million	56 9 million	65 7 million
Central	23 9	63 3	40 7
North	30 5	47 0	43 1
North-West	11 7	32 4	27
Southern	14	34 4	31 2

Other Discos show that ANRE approved about 90% of their projected expenses The Discos detail costs have been analysed in the spreadsheets

10 Post-script

In August 1998 ANRE significantly revised its sales projections, fuel costs and made small changes in transportation and distribution costs

- the sales forecasts were revised downwards by 450 mill kwh heeding the concerns of MTE (letter from Ciobotari to that effect), and actual experience for the seven months Separately we had expressed concern regarding

optimistic sales assumption for which there was no proper economic justification

- the purchases from C E R S were revised downwards by the same amount
- the gas prices were substantively reduced from 408 to 370 lei / 1000 m3
- the net effect was a 92 5 mill lei reduction in total power costs and unit cost decrease from 18 2 to 17 95 bani / kwh
- Introduced an adjustment factor to recover revenue loss from 6 bani discount in electric- stove tariffs, of approx 4 million lei (0 1 bani/kwh)
- Mr Saracuta estimates that there are approx 18,600 units receiving disount based on 300 kwh monthly usage for electric stove based on normatives To our knowledge there is no separate metering to validate this usage
- The final retail tariff applicable is proposed to be 25 5 bani for all retail service Although the costs are developed by ANRE for each Disco individually, the final costs result in minimal differences, all within 25 bani range

On September 9, ANRE issued order # 5 adopting the new retail electric tariffs of 25 5 bani / kwh and gas tariffs of 370 lei / 1000 Cm Tariffs were also adopted for CHPs, MTE transportation, etc

11 Summary

Based on our analysis and discussions we have the following evaluation and comments on the tariff development process

1 ANRE commissioners specially Mr Saracuta is deeply involved in the cost development and tariff calculation process It essentially dictates the sales and cost assumptions and use of normatives that the companies must follow and that take precedence over the actual performance and costs

In normal regulatory process the utility has the obligation and burden to properly book all costs, identify and document them and make them available to the regulator The proper basis for tariff computations is the actual costs incurred by the company, adjusted for known changes, extraordinary occurrences eg major unforeseen repairs, storm damage etc

While the regulator has broad discretion, it cannot ignore or disallow legitimate cost of doing business The licensee has an implicit contract with ANRE that it will accept regulated tariffs that fully recover all its costs including the return on investment necessary to provide utility service

Costs based on unrealistic assumptions, outdated normatives or pure guesses is not acceptable It has to relate to the actual costs faced by utility in the marketplace For

example if the wage rate for energy industry is higher than workers in general then it should be so recognized Shortchanging a utility of its legitimate expenses will result in financially weak utility and poor quality of service Only the company is in the best position to know its operational and financial constraints market conditions and managerial capabilities ANRE should not substitute its own judgement or second- guess the utility It should act only on exception basis

2 Commissioners (Mr Saracuta) personally performs all the computations and negotiates tariffs

The ANRE should employ technical staff and assign it the task of developing the tariff methodology, data collection and perform the tariff calculation Staff should be the primary contact with the utilities, prescribing accounting and financial data negotiations It would be considered pre-judicial for commissioners to tell companies how to develop budget assumptions, or tariffs First it could interfere with the management prerogative Second, intervenors and other interested parties may complain of the ex-parte communications by the commissioners This threatens open, transparent regulatory process Even allowing for lack of experience and transition phase, the current practice is not conducive to efficient regulatory process

3 Rules of practice and procedures

ANRE should develop detailed rules of practice and procedures that should clearly specify how rate matters shall be handles, filings requirements and hearings procedures based on evidentiary hearings, right of parties to discovery, legal rights, prohibition against ex-parte communications and improper conduct, appeal procedures etc The book of rules should be published Generally, the rate making is a two step process The company would file a rate case, furnish all the necessary documentation and data to support its proposals for tariff changes These documents are made available to all parties to examine A hearing officer would hear the arguments from all interested parties Based on evidence he/she will summarize the case and make recommendations to the commission The commission based on the evidence then makes a finding The commission must follow the law, license agreements and its own rules and the evidence presented The commission findings are subject to appeal by any party In a nutshell this is how a rate case works This procedure is consistent with the licenses issued by ANRE and the proposed electric and gas laws

4 Recognition of all elements of cost and Tariff calculation method

All components of cost of service must be recognized including

- Operations and maintenance expenses
- fuel and purchased power
- Depreciation and amortization
- Taxes other than income taxes
- Income taxes

- Return requirement

Extraordinary expenditures which are not of recurring nature may also be included in this equation on an amortized basis For example a large debt payment unusual loss from natural disaster, cancellation of a significant project etc

ANRE has wide discretion in prescribing accounting system and filing requirements for the licensees With this authority, ANRE should elaborate and clearly indicate what elements of costs and expenditures will be allowed in the tariffmaking An early establishment of policy and clearly established rules can make the process more efficient and less confrontational

Sum of all allowable cost components forms the Revenue Requirements,

Rev Req = [Operation & maint exp + depreciation + other taxes] + [Rate Base x Rate of return / (1 – Tax rate)]

where, rate base is the net book value of the plant and rate of return is the authorized cost of capital (profit level) considered reasonable by the regulator and based on market conditions

We recognize that currently the Moldova tariff system cannot apply the rate of return approach to tariff calculation It would require further development of l valuation of assets appropriate estimation of cost of money invested and detailed evaluation of the depreciation component of costs etc ANRE has proposed a fixed 5% margin for profits as substitute for return It seems to be adequate approach for the time being, although one could quibble about the level of margins allowed However there ought to be a uniformity of application For example the CHP's are allowed the so-called profit margin on the total costs including purchased fuel, but the Discos are not allowed PM on the purchased power component of their costs Furthermore, the PM is a gross margin, which means all taxes have to be paid from these margins ANRE should clearly define the purpose of the profit margin and whether it is a proxy for the return on investment

The revenue requirements are compared to the actual annual revenues generated by the kwh billed by the utility which is typically the existing tariffs times the billing kwh These revenues are adjusted for any changes in tariffs, customer usage changes, other revenues etc This is called the proforma revenues The difference between the revenue requirements and the proforma revenues is the revenue deficiency or surplus The deficiency is made up with a rate increase and if a surplus should result in rate decrease

Rev Def = Rev Req - proforma Rev
Rate increase = Rev Def / Kwh delivered

This is calculated for each component in the chain of supply, generation, transmission and distribution The retail tariff is the sum of all these components

Development of proforma revenues is an essential part of the tariff process Typically the accounting department records the consumption (kwh) data for each customer class and by rate schedule on continuous basis because the meters are read or estimated on a billing cycle The billing data is available on monthly, quarterly and annual basis The annual proforma revenue is calculated by multiplying the current tariff for each rate schedule to the annual kwh estimated to be billed under that schedule These are called the billing determinants Generally the tariff schedules may not coincide with the customer classes The calculation of proforma revenues becomes important as in the future ANRE develops differentiated tariffs or multi-part tariffs for different electric services

12 Rate Schedule	billed kw/kwh	applicable tariff	expected revenue
Residential			
Urban			
Rural			
privileged			
Agriculture			
Commercial			
Industrial			
Transport			
Street lighting etc			
Total			

If any tariff discounts are mandated by ANRE then the revenue reduction should be recognized in calculating the proforma revenues Similarly late fees, other charges collected become part of the revenues if they are of a recurring nature

Unfortunately, in Moldova there is no established method of reporting the billing revenues In fact the revenues do not enter in the tariff computations As a utility the licensee has to ensure whether the tariffs approved will infact produce the expected revenues and sufficient to meet all the costs Utility also may be entitled to collect a reasonable amount of revenue loss due to uncollectibles if they can demonstrate to the ANRE that it is necessary and prudent business loss In any case we recommend that the ANRE require that the licensees properly account for the revenues on prescribed format and periodically report these to ANRE

Typically, the base tariff should be fixed for 1,2 or 3 year period Changes should be made only for exrtraordinary circumstances such as unforeseen repairs, catastrophic events like storm, floods etc Also an automatic indexing mechanism such as CPI maybe used to adjust rates between major tariff revisions However, the fuel and purchased power cost changes should be reflected by periodic adjustment formula called fuel and purchased power clause This adjustment should be made monthly or quarterly with annual reconciliation of actual costs with billed amounts (true up) Similarly to protect importers from exchange rate risks an exchange rate adjustment may be incorporated in

the fuel / PP clause Next we briefly describe the mechanics of a fuel/ purchased power adjustment clause

13 Purchased Power and Fuel Adjustment Procedure

The retail service tariff provides that the licensee is entitled to adjust the retail tariff periodically to recognize changes in the purchased power costs incurred by the Disco Although no explicit provision exists in license conditions of other entities (CHPs or MTE) , it is understood and imperative that a similar provision will be permitted for them For example, over 92% of the MTE and almost 80% of CHP costs are in purchased power and fuel, respectively Even small changes in their input prices would be financially unsustainable without timely recovery Moreover these entities have no control over these costs as they are primarily from imports of fuel from Gazprom or power from Ukraine, CERS etc We recommend that ANRE explicitly permit and establish the Power / Fuel cost recovery procedures for the CHPs and MTE Indeed without a parallel adjustment clause for the suppliers, the clause for the retail tariffs will not be meaningful The following is an outline for the retail power adjustment clause procedure

Although the intent of the clause is to recover the changes in the costs as soon they occur as a practical matter one cannot recover any sooner or more often than the billing period i e monthly To maintain tariff stability a quarterly application may be more appropriate Further even with stable fuel and purchased power prices the overall purchase power costs tend to change due to seasonable pattern of demand and operation of CHPs In other words during summer months the CHPs output is reduced thereby increasing the imports, which are more expensive Therefore a quarterly application of the power clause will tend to capture the seasonal cost pattern If a similar power cost adjustment clause is designed for CHPs or MTE, it should be on a monthly or a quarterly basis Finally the mechanics of the clause should be simple enough to be understandable by the customers and consistent with the license provision The retail tariff formula in the Disco license is defined as,

$$RTS = [\mathbf{PP} + \mathbf{R} + T + D / [(1 - LF1)^* (1-LF2)^* \quad (1-Lfi)]] + NT + ST$$

(See attached RTS formulation)

It is the **PP** and **R** factors in this formula that need to be re-calculated each quarter

Step 1 Establish a 12 –month projection of kWh sales, purchases and total and unit purchase power cost by month (and for each quarter) for the calendar year

Step 2 For Jan, Feb and March (Quarter 1), apply the average Q1 power cost factor (PPo) projected above and adjusted for the loss factor applicable to the appropriate voltage level [PPa = PPo x 1/ (1- LFi)] , to the customer bills In other words the established tariff should be broken into two components

a) power cost factor and
b) non- power cost factor For billing purpose however it may be recombined into a single tariff for ease of billing and customer understanding

Step 3 At the end of the first quarter, i e sometimes in end of March the actual total costs (ATC) incurred are calculated for the quarter using the two months (Jan Feb) actual and third month (March) estimate data The revenue billed (not necessarily collected) for service rendered in that quarter (Q1) is computed by applying the PPa factor to the actual kwh billed or billable during the quarter Typically the kwh sales to end-users should be equal to the total purchases minus the distribution losses However in Moldova the experience shows that there is currently 10 to 15 % unaccounted kwh (unmetered, theft, misapplication of normatives etc) It would be a policy question for ANRE to decide whether the Discos should be made whole for the cost of these unaccounted for losses through the PP adjustment clause or adopt a different mechanism for such a recovery An automatic recovery leaves little incentive for the licensee to reduce or eliminate such unaccounted losses On the other hand, the size of the losses is significant enough for the financial survival of the Discos For now, we shall ignore these losses for the PP adjustment computation Thus, for the purpose of illustration we are assuming that sales plus technical losses constitute total power purchases

The revenues calculated above are then compared to the actual total costs (ATC) incurred The difference results in the revenues over or under- collected, in lei

The reconciliation adjustment factor is then calculated for the application to the following quarter, Q2 for recovery by dividing the unrecovered amounts by the kWh purchases estimated for the second quarter This factor R, is then added to the previously projected factor, PPa for Q2 This then becomes the new PP factor applicable to the customer billings in Q2 Also the uncollected costs are added to the Q2 actual costs as total recoverable amounts at the end of Q2 At the end of Q2 once again the total actual costs plus any uncollected balances are matched against the revenues produced for Q2 based on application of the new PPa and the Q2 sales Thus there will be a continual reconciliation and true-up of costs against revenues, thereby allowing the utility the opportunity to stay current with its power cost recovery

Special adjustment for the third-month

Step 4 As mentioned earlier, this mechanism will be satisfactory if we can obtain the timely information for the entire quarter prior to the beginning of the billing period for the next quarter As a practical matter however, the March actual data will not be available until end of April or later, too late for calculating the factor for the second quarter Therefore as a compromise, we will assume that the data projected for the third-month, i e March is same as actual, when calculating the

reconciliation amounts and the factor for Q2 We call this Initial reconciliation for Q1

When the March actual data becomes available say in April or May the costs and revenues are once again computed and compared with the assumed costs purchases and consumption Now a new final reconciliation is performed for the first quarter, using all actual data Essentially the new reconciliation amount calculated would be added to the power adjustment factor, R normally computed for the third quarter The net effect is to essentially discard the initial reconciliation computation and replace with the final one for the relevant quarter Similarly the adjustment for June will be reconciled during third quarter and applied to the Q4 recovery period, etc The procedure is illustrated in the attached spread -sheets As an alternative the utility may defer this final modification to initial reconciliation factors until the end of the calendar year and may do one final annual true -up

Although the procedure outlined above provides timely and reasonable opportunity for the purchase power cost recovery, it is recognized that the procedure may be somewhat cumbersome and too intricate to be understandable by the customers Even the utilities may at first find it too complicated for a practical tariff application The procedure becomes unworkable if the cost and consumption data is not available in a timely manner For instance we have noted that currently the Discos and the other entities are able to provide monthly information after at least two- month lag Until such data problems are resolved it may be advisable to devise a simpler PP recovery method One simple approach would be to apply estimated quarterly PP factors based on the projections and planned budgets developed by the entities and, approved by ANRE At the end of the year when actual annual data is available, a reconciliation can be performed Since the fuel prices are fixed by ANRE and the Ukraine/ CERS tariffs are generally known in advance, the main concern would be to accurately project the relative outputs from each source by month or by quarter Under this procedure, the under or over recoveries will be applied through a tariff adjustment factor to the succeeding period Depending on the size of mismatch the amounts may be recovered (or refunded) over shorter periods It is also conceivable that a nominal interest may be applied to the adjustment amounts

Generally it is the obligation of the licensee to compute each quarterly adjustment factor and provide detailed calculations with supporting documents to the ANRE The ANRE staff would then verify the computations and recommend to ANRE its approval Since the RTS formula has already been approved by ANRE it need not formally approve the specific quarterly factors but may require an annual review

ANNEX D

ANRE TARIFF METHODOLOGY

AND NOTES WITH TARIFF SCHEDULES

ANRE
December 1997

METHODOLOGY OF CALCULATION OF COST PRICE AND TARIFFS FOR PRODUCTION, TRANSPORT AND DISTRIBUTION OF ELECTRICITY

I. GENERAL PROVISIONS

1 1 The present methodology has been elaborated in accordance with the Decisions of the Government of the Republic of Moldova ¹ 628 from 8 July 1997 "Regarding the approval of the plan for power system restructuring", ¹ 767 from 11 August 1997 "Regarding the National Agency for Energy Regulation" and ¹ 340 from June 1993 "About the approval of the basic Regulations concerning the costs of production and realization of goods (works, services) included in the cost price and the method of financial results formation", taking into account the sector peculiarities for transferring the expenses to the cost price of goods (services)

1 2 The present methodology stipulates the definition of cost price for calculation of the basic tariffs and formulae for direct calculation of tariffs of electricity and thermal energy produced in combined heat and power plants (CHP), production of electric energy in hydro power plants (HPP) transport and distribution of electricity

1 3 Cost price of the production, transport and distribution of energy, calculated on the bases of the least costs principle (hereinafter cost price), includes the calculation of costs of consumed fuel water, raw materials, manpower, fuel consumption, assets and other expenditures that are necessary in the process of production, transport and distribution of energy

1 4 The principle of least costs stipulates the inclusion in the cost price only of those expenditures that are directly connected to the process of production transport dispatching and distribution of energy, calculated by applying the norms and rations that are set up in accordance with the laws and standards of the Republic of Moldova and of the present methodology

1 5 The expenditures included in the cost price of production transport and distribution of energy are grouped according to the following elements

expenditures for materials,
labor costs,
social insurance contributions,
assets depreciation (amortization),
other costs

1 6 The distribution of expenditures by different elements and items of calculation at the enterprises of the power sector, is performed according to the basic Regulations concerning the structure of costs, for manufacturing and realization of goods (works, services), included in the cost price and the procedure of formation of the financial results of the enterprises

II. METHODOLOGY OF CALCULATION OF COST PRICE AND TARIFFS FOR PRODUCTION, TRANSPORT AND DISTRIBUTION OF ELECTRICITY

Taking into account the particularities of the combined production of electricity and heat in CHP, in the co-generation mode, the present methodology stipulates the principle of calculation and sharing of costs for electricity and heat production in conformity with the most optimal regime of

operation of the power plants and of the economically grounded method for minimization of costs for heat production The costs of energy production are determined by items of expenditures indicated in point 1 5 of the present methodology

2 1 CALCULATION OF COSTS FOR MATERIALS

In the costs of materials are included the expenditures for

all types of fuel used for production of electricity and heat,

water used with the technological purpose and housekeeping necessities,

materials procured and used in the process of energy production in order to ensure a normal performance of the technological process (filtering materials, chemical reagents etc) or which are consumed production and maintenance necessities (repairs and operation of the equipment buildings and constructions, other type of assets, to carry out experiments, control, etc) spare parts for repairing of the equipment as well as the depreciation of the objects of low costs and short life

works and services of the production character performed by third parties or by the enterprise s subdivisions that are not related to the main type of activity (transport services repairing of the assets, etc),

other material costs related to the production of energy and servicing of production process

CALCULATION OF FUEL COST

Expenditure for fuel is the main element of the cost price for the production of electricity and heat at CHP The present methodology stipulates the method of calculation used for determination of the minimal costs of fuel in conformity with the optimal regime of operation of the power plant The technical and economic indicators and norms of the optimal regimes of operation of CHPs are presented in Annex 1

The calculation of fuel costs is carried out in the following way

1 Knowing the amount of electric energy and heat to be produced in the optimal regime of operation of CHP and the norms of energy consumption for own use, it is determined the amount of electricity and heat to be delivered at the bus-bars of the power plant and into the thermal networks (in kWh, Gcal)
2 Taking into account the norms of specific fuel consumption (in conventional units) for production of 1 kWh (1Gcal) of energy and the amount of energy to be delivered at the bas-bars (and into the thermal networks), it is calculated the rationed fuel consumption (in tons of coal equivalent) for the production of the whole quantity of energy
3 It is calculated the absolute rationed quantity of conventional fuel by different types of fuel (natural gas, heavy fuel oil) taking into account the known share of different types of fuel in the fuel mix
4 It is calculated the absolute rationed quantity of different types of fuel in natural units (natural gas-thousand cubic meters, heavy fuel oil-tons) The rationed fuel consumption in natural units is calculated by dividing the absolute rationed quantity of a given fuel to the conversion factor of this type of fuel The conversion factor for transformation of a concrete type of fuel into conventional units is determined taking into consideration the low calorific value of fuel (the conversion factor of gas is equal to 1 14 and of heavy fuel oil-1 35)
5 The fuel expenditures are calculated separately for the quantity of fuel used for production of electricity and separately for the quantity of fuel utilized for production of heat, taking into account the rationed consumption of fuel (in natural units of different types of fuel), purchase

price of natural gas supplied at regulated tariffs and purchase price of heavy fuel oil that is based on the results of the tender At the same time the purchase price of heavy fuel oil should not exceed the price of the same type of fuel sold by the joint-stock company "TIREX' PETROL"

The expenditures for fuel include all kinds of expenses related to the procurement and storage of fuel (including the expenses for transport and acquisition additional charges custom duties and losses within the limits of inherent losses)

CALCULATION OF COSTS FOR WATER CONSUMPTION

To calculate the expenditures for consumed water it is taken into account the norms for consumption of the additional quantity of water (subject to chemical treatment) that is necessary to feed the boilers and the district heating system networks, water that is necessary for cooling of the equipment and condensers and water for housekeeping and production necessities (to wash the filters staff's necessities, canteens, etc)

In the norms of water consumption it is included the losses of water in the process of chemical treatment of water and for performing of other technological processes The norms for water consumption at CHPs are presented in Annex 2

The expenditures for consumed water is calculated taking into account the rationed quantity of water consumption at CHPs and the tariff (in force) of water per 1 cubic meter of water The expenditures for consumed water is split between the produced electricity and heat in the following way

the expenditures for additional quantity of water that is necessary to feed into the district heating system networks are fully attributed to the production of heat,

the expenditures for additional quantity of water that is necessary to feed into the boilers to cool the equipment and condensers and for housekeeping and production necessities are split between the produced electricity and heat, proportionally to the amount of fuel utilized to produce the respective form of energy

There are not included in the cost price of produced electricity and heat the expenditures for water that is consumed by residential buildings, social-cultural ones and other objects that are not relevant to the production activity of the enterprise

THE CALCULATION OF EXPENDITURES FOR PROCURED MATERIAL, WORKS AND SERVICES OF THE PRODUCTION CHARACTER, DEPRECIATION OF LOW COST AND SHORT LIFE OBJECTS AND OTHER MATERIAL COSTS

The calculation of expenditures for procured materials, works and services of a production character, depreciation of objects of low cost and short life and other material costs it is carried out by taking into account the expenses for procurement of chemical reagents and filtering materials, materials and spare parts that are necessary for maintenance, operation and repairing of the technological equipment, transport facilities, computing machinery, assets for environmental protection, controlling devices and other installations that are considered as assets (including the buffets, canteens and medical centers that serve the staff of the enterprise), material costs for maintenance, operation and repairing of the buildings and constructions of production nature, buildings and constructions that serve the production process and of the administrative ones, the depreciation of instruments, accessories, apparatuses, laboratory equipment and of other means of production that are not considered as assets, depreciation of the overalls and other objects of low cost

and short life (including ones from buffets, canteens medical centers) the expenses for works and services of the production character carried out by the third parties or bv subdivisions of the enterprise the duties of which are not directly related to the main production activitv (repairing of production assets transport services, experimentation control etc) expenses for all forms of energv and other material costs The expenses for works and services of production nature performed bv the subdivisions of the enterprise that are not engaged in the main activity are calculated without 'the labor cost' 'social insurance contributions", 'assets depreciation' and other costs which are transferred in the respective elements of the production costs

In the cost price of energy it is not included the expenditures related to maintenance operation and repairing of residential buildings, social-cultural objects and other ones that are not related to the production activity of the enterprise In the said item of costs there is not included the expenditures for own use of electric energy and heat (these expenditures are stipulated in the norms of own use of energy presented in Annex 1) and the expenses related to the utilization of thermal energy to heat heavy fuel oil, feed water and air which are compensated in the production process

The expenses for chemical reagents and filtering materials are calculated in accordance with the norms of their consumption (presented in Annex 2) and the market prices for their procurement

The expenses for depreciation of objects of low cost and short life are calculated taking into account their initial balance sheet value and the method of their depreciation

The other material expenses, including the procurements of lubricants and other materials spare parts for repairing of the equipment as well as services of the production nature performed by the third parties or the subdivisions of the plant, are calculated in accordance with the norms of consumption, approved plans of equipment repairing and of the estimate of production costs

The present methodology stipulates that for the calculation of the cost price in order to set up the basic tariffs, total expenditures of the said item cannot exceed 4 0% of the balance sheet value of assets (taking into account the real indexation) in case of CHP –1 and CHP North and 3 0% in the case of CHP-2

The material costs, with the exception of expenses for procurement of chemical reagents and filtering materials, are split - between the produced electricity and heat – proportionally to the amount of consumed fuel utilized for their production The expenses for chemical reagents and filtering materials relevant to additional water treatment that is necessary to feed the network of the district heating system are totally transferred to the production of heat, the other expenses for procurements of chemical reagents and filtering materials are shared – between the produced electricity and heat - proportionally to the fuel consumption for their production

2.2 CALCULATION OF LABOUR COSTS

The calculation of labor costs, that are included in the cost price of energy production in order to set up the basic tariffs is based on the determination of the number of production personnel that is necessary to normally operate, maintain and manage the power plant and on the average salary of an employee

The number of the production personnel is calculated taking into account the staff's rate per MW of installed capacity of the plant and the capacity of the plant in MW The value of the staff rate of the power plant is calculated taking into account the type of power plant, its installed capacity, units' capacities, type of fuel utilized and the production staff of CHPs The value of the staff rate is 6 55 persons/MW for CHP-1, 2 45 persons/MW for CHP-2, 11 0 persons/MW for CHP North (with the exception of the staff that serve the equipment relevant to the operation of the district heating system networks and boiler houses) The calculation of the personnel, that operate the equipment

relevant to district heating system networks and boiler houses is carried out in accordance with the existing norms for the production personnel of such kind of enterprises (organizations)

In accordance with the present methodology it is established that the average salary of an employee of CHP that is included in the minimal level of costs for calculation of the basic tariffs is calculated taking into account the level of the average salary per employee in the Republic of Moldova on the whole and applying the coefficient 1 9 This coefficient is determined taking into account the importance of the power sector, the necessary level of the staff qualification regime and working conditions of the personnel and other factors

Labor costs are split - between the produced electricity and heat – proportionally to the fuel consumed for their production, exception being the remuneration of the personnel that operate the installations for treatment of additional quantity of water to feed the district heating system networks that is totally attributed to the production of heat

In the labor costs there are not included the expenses for remuneration of the staff the activity of which is not related to the production process (canteens, medical centers residential buildings social-cultural buildings, etc)

2 3 CONTRIBUTIONS FOR STATE SOCIAL INSUARANCE

The expenses related to social insurance contributions are calculated taking into account the labor costs and taxes for the fund of the social budget established in accordance with the legislation in force

2 4 ASSETS DEPRECIATION (AMORTIZATION)

In the item of costs "assets depreciation (amortization)" it is included the sum of depreciation deduction for complete recovery of the assets of the enterprise (including those procured according to leasing contract) that is determined taking into account the initial average annual balance sheet value of production assets (taking into consideration the reevaluation), rate of depreciation in force and the method of calculation of depreciation deductions that are included in the cost price In the depreciation deductions there are also included the amortization of the assets (buildings and inventory) put at the disposal of public alimentation and medical institutions that serve the staff directly on the territory of the enterprise The depreciation of the assets that are not relevant to the process of production (residential buildings, social-cultural ones, etc) is not included in costs of energy production

2 5 OTHER COSTS

The other expenditures relevant to the production activity of the enterprise and that are not included in the previous items of costs are attributed to other costs They include

all taxes (with the exception of income tax, excise duties, VAT, property tax, road tax, taxes and fees of local administration), collections and other obligatory payments stipulated by the legislation in force,

payment of interests for bank credits used for completion of current assets To determine the payments for credit interests by the present methodology is established that for a CHP it is necessary to credit the current heavy fuel oil reserves and to ensure the amount of heavy fuel oil for a period of 10 days as well as to assure the total fuel consumption for a period of 15 days The value of the bank

interests it is determined taking into account the norms of fuel consumption mentioned fuel reserves and the minimal interests for credits,

the payments for obligatory insurance of the property and insurance of some categories of employees working in dangerous conditions are calculated on the base of the insurance contracts property inventory and the list of employees that must obligatory be insured in accordance with the legislation in force,

the expenses for business trips, presentations advertisement training and improvement of staff's skill within the established limits of norms, the expenditures for depreciation of non-material assets (right for utilization of land, licensing, registration and re-registration of the enterprise etc) annual taxes for license, payments for paramilitary guarding and fire protection payments for leasing of assets and low cost and short life objects, trade-union transfers in the value of 0 15% of the labor costs as well as other production expenses (bank services, telecommunications information and computing services, etc)

Taking into account the absence of the norms that are necessary to concretely calculate the expenses included in the item of costs "other costs", the present methodology stipulates the inclusion in the cost price of energy (electricity and heat) - in order to calculate the basic tariffs – an amount of 0 055 bani/kWh of delivered energy (with the exception of taxes and payments of bank s interests which are calculated separately) In this case the delivered heat is transformed into kWh taking into account that the heat equivalent 1Gcal equals 1163 kWh

The "other costs" are split – between the produced electricity and heat – proportionally to fuel consumed for production of each form of energy

2.6 THE PARTICULARITIES OF THE DISTRIBUTION OF COSTS FOR PRODUCTION OF ELECTRICITY AND HEAT RELATED TO THE CHEMICAL TREATMENT OF WATER TO ADDITIONALLY FEED THE DISTYRICT HEATING SYSTEM NETWORKS

Taking into account the specific nature of the process of thermal energy production and distribution and the necessity to determine and correctly split, between the producers and distributors of thermal energy, the expenditures relevant to additionally feed the district heating system networks with chemically treated water because of large losses of water in the district heating system in the present methodology is stipulated

that the expenditures for water, chemical reagents, filtering materials, manpower social insurance contributions, assets depreciation, the expenses for operation, maintenance and repairing of the equipment as well as other expenses that are necessary in order to treat the additional quantity of water and feed it into the thermal networks are calculated taking into account the norms and are included in the overall costs for production of thermal energy However, these expenditures are excluded from the overall costs while determining the cost price of thermal energy production in order to set up the basic tariffs,

these costs will be recovered to the thermal energy producer by the enterprises which own the thermal networks (resellers of thermal energy) in accordance with the contracts of supply-and-purchase of thermal energy In this case, at the enterprises, in the costs used for determination of tariffs there are included only the expenses related to additionally feed the boilers and thermal networks according to the established norms of additional water consumption, the expenses related to

the water consumption over the norms are transferred to the results of the economic activity of the enterprises

III THE CALCULATION OF THE COST PRICE OF THE PRODUCTION OF ELECTRICITY AT HYDRO POWER PLANTS (HPP)

The structure of the cost price of electricity produced at HPP consists of the same elements as of the CHP one with the exception of the expenditures for fuel The main components of the cost price of electricity produced at HPP are production assets depreciation (amortization) costs of materials for maintenance and operation of the equipment and labor costs

The production assets depreciation (amortization) is determined in accordance with the norms of depreciation in force, initial annual average balance sheet value of production assets (taking into consideration the re-evaluation) and the existing method of the inclusion of assets depreciation in the cost price

The costs for materials relevant to the maintenance repairing and operation of equipment buildings and constructions, depreciation of low cost and low life objects and other material costs including the services of the production nature, are calculated according to the estimate of production costs The present methodology establishes that the costs for materials included in the cost price of energy production in order to determine the basic tariff, may not exceed 0 3% of the initial annual average balance sheet value of production assets (taking into consideration the re-evaluation)

The labor cost is determined taking into account the number of the production personnel calculated in accordance with the norms of servicing and average salary per employee To calculate the basic tariff it is taken into consideration the average salary per employee of the power plant that is 1 35 times higher than the average salary per employee in the Republic of Moldova on the whole

The contributions to the state social insurance are determined taking into account the labor costs and the social insurance rate according to the legislation in force

In the item "other costs" there are included the same expenditures as for CHP with the exception of payment for bank interests and they are determined in conformity with the established estimate of production costs The mentioned costs, for HPP, are established at the level of 0 1 bani per kWh

IV. DETERMINATION OF THE COST PRICE OF TRANSPORT (TRANSMISSION) AND DISTRIBUTION OF ELECTRIC ENERGY

In the energy sector, unlike the other activities, the process of transport and distribution of electric energy takes place in the same time with the process of production Therefore, the cost for transport and distribution of electric energy is a component part of the price cost of electricity in the whole power system The calculation of the cost price of electric energy transport and distribution, via the electric network, is performed according to the same items of costs as for CHP with the exception of expenditures for fuel and water In this case, practically, all expenses are directly related to maintenance and operation of the electric networks and they depend less on the load and the amount of electricity transmitted The expenditures for transport and distribution of electricity are calculated in accordance with the norms and taking into account the capacity of the transformer substations and the length of the electric lines, number of personnel, level of technical power losses relevant to the process of transmission and distribution of electric energy as well as the expenses

related to the finding the solutions to some problems of power systems interconnections (dispatching activity, improvement of reliability power system stability and economic performance of the power system on the whole etc) In the cost price of transport and distribution of electric energy there are not included the expenditures for maintenance of the transformer substations and distribution installations owned by the power plants and consumers (industrial transport etc) as well as the maintenance of the networks within the residential and other type of buildings

4 1 THE CALCULATION OF MATERIAL COSTS

The material costs of the enterprise for transport of electricity and the electricity distribution enterprises includes the expenditures for materials, spare parts, fuel lubricants and other procured materials that are necessary for maintenance operation and repairing of the overhead high voltage lines and cable ones transformer substations, distribution boards, compensation installations transport facilities, computing machinery, dispatching equipment, controlling and measure devices and other equipment used in the process of production, buildings and constructions and other production assets, including the canteens, medical centers that serve the staff of the enterprise materials procured and utilized to ensure a proper performance of the enterprise services of the production character that are provided by the third parties or by the subdivisions of the enterprise the duties of which are not related to the main activity (repairing of production assets transport services, tests etc), all forms of energy and types of fuel utilized for own production and housekeeping needs, depreciation of the objects of low value and short life and also the other material costs related to the production activity of the enterprise These expenditures are calculated on the base of norms, quantitative estimations of the performed works for different objects of electric networks, estimates of production costs, market prices in force and other factors

The present methodology establishes that the maximum level of the material costs which are included in the basic tariffs For the electric energy transport enterprise it is not higher than__% of the initial balance sheet value of production assets (taking into consideration the re-evaluation) of the enterprise and the same indicator for distribution enterprises is not higher than 1 73% of the initial balance sheet value of production assets

4 2 LABOR COSTS

Labor costs are calculated taking into account the staff's rate, including the administrative personnel, personnel engaged in the dispatching activity and control and the average salary established per employee The average salary per employee to be included in the basic tariff is taken as the average salary per employee in the Republic of Moldova on the whole and multiplied by the coefficient 1 7 for employees of the transport company and 1 55 for employees of the distribution enterprises In labor costs there are not included the expenses for remuneration labor of non-production personnel

4 3 PAYMENTS FOR STATE SOCIAL INSUARANCE

The expenses related to state social insurance payments are calculated taking into account the labor costs and contribution for the fund of the social budget established in accordance with the legislation in force

4 4 ASSETS DEPRECIATION (AMORTIZATION)

The expenses for assets depreciation (amortization) are determined taking into account the initial average annual balance sheet value of assets (taking into consideration the re-evaluation) rate of depreciation in force and the method the depreciation deductions are attributed to the cost price of production (works, services) The depreciation of residential, social-cultural buildings and other non-production facilities is not included in assets depreciation

4.5 OTHER COSTS

To other costs there are attributed the expenses, related to the activity of the enterprises for transport and distribution of electric energy, which are not included in the previous items of costs They include

all kind of taxes (with the exception of the tax on income, excises VAT, property tax road tax taxes and fees of local administration), charges and other obligatory payments attributed to the cost price of production (works, services) in accordance with the legislation in force,

the payments for obligatory insurance of property, insurance of some categories of employees engaged in dangerous production processes The said expenses are determined on the base of property inventory and the list of the employees that should obligatory be insured legislation and standard in force and insurance contracts

the expenses, within the limits of established norms, for business trips, presentations advertisement, training and improvement of staff's skill, the expenditures for depreciation of non-material assets (right for utilization of land, licensing, registration and re-registration of the enterprise, etc), annual taxes for license, payments for paramilitary guarding and fire protection, bank and telecommunication services, payment for leasing of assets and low cost and short life objects payments of interests for bank's credit that are necessary to purchase working assets as well as other expenses attributed to the cost price of production (works, services) that are not included in other elements of costs

All elements of "other costs' cannot be calculated on the base of norms (because of their absence) and in order to set up the basic tariffs they are calculated taking into account the estimate of production costs approved at the enterprises by analyzing in depth the real costs and substantiating the attribution of these expenses to cost price of production (works, services) The present methodology establishes the following values of these expenses in order to calculate the basic tariffs (with the exception of bank's interests)

for the enterprise of electricity transport – 0 11 bani per kWh of delivered electricity,

for the enterprises of electricity distribution – 0 25 bani per kWh of electricity supplied to consumers

The expenses related to payments of bank's interests, for credits that are necessary for working assets, are calculated taking into account the necessity and economic substantiation of credits

V THE EXPENDITURES THAT ARE NOT INCLUDED IN THE COST PRICE OF THE PRODUCTION, TRANSPORT AND DISTRIBUTION OF ELECTRIC ENERGY

In the cost price of the production transport and distribution of electric energy there are not included the following expenditures

the expenses that are necessary to carry out the construction, reconstruction of enterprises production units and sections, procurements, modernization to assemble and test the equipment in order to check the quality of mounting, the expenses for mastering the use of the up-to-date enterprises, units, sections and equipment, the expenses for development mastering the use of new technologies and improvement of the existing technologies (that necessitate lump-sum capital investment) the expenses that are necessary to support the divisions (groups) of technical supervision of enterprises being in the process of construction and the construction department within the existing enterprises, the expenses for commissioning of new enterprises (units) and designer s supervision the expenses for elimination of shortcomings of the design, construction and erection revision (dismantling) elimination of equipment defects and damages caused by faults of producers suppliers and transport organizations, the expenses for research and development and experimental design

the expenses for creation and improvement of the systems and means of control, measure devices and management of energy consumption,

the expenses for design construction, equipment procurement, repairing and maintenance (including amortization, labor costs, contributions to the state social insurance fund, costs for material and other expenses) of residential buildings and social-cultural ones and other objects that are at the balance of the enterprise (with the exception of expenses for the maintenance of medical centers buffets, canteens that serve the staff and that are stipulated in the respective chapters of the present methodology), as well as the works carried out as a help and the participation in the activity of other enterprises and organizations or the allocation of resources for the mentioned purposes,

the expenses that are necessary to carry out or to pay for the works (services) which are not related to production, transport and distribution of electric energy,

the expenses related to maintenance, free of charge services, allocation of financial resources to educational establishments and institutions, medical, sport organizations and other ones,

the expenses for audits that exceed the sums stipulated in the contracts for audit services,

the expenses related to liquidation of material resources the validity of which has expired thefts, losses and deficits over the norms of inherent losses

VI THE METHODOLOGY FOR DETERMINATION AND REGULATION OF TARIFFS FOR PRODUCTION, TRANSPORT AND DISTRIBUTION OF ELECTRIC ENERGY.

The mechanism for determination and regulation of tariffs for production, transport and distribution of electric energy is based on the following basic principles

the tariffs of production, transport and distribution of electric energy should recover the operational costs and include a definite rate of profit that are necessary for a proper operation of the enterprises,

when setting up the tariffs it should be taken into account the expenses for maintenance of reserve capacities that are necessary to ensure a reliable supply of electric energy and the guaranteed expenditures for environmental protection

the system of tariffs regulation should be oriented to the reliable supply of electric energy to consumers at minimal costs taking into consideration the efficient utilization of electricity generating capacities,

in order to eliminate cross subsidization, the tariffs for different categories of final consumers should not include any deviation (privileges or overstating),

to set up the tariffs it should be taken into account the energy security of our state environmental protection and market situation

The present methodology stipulates the determination and approval of the basic tariffs and to subsequently adjust them each year taking into account the fuel price index imported energy inflation and other factors

6 1 THE DETERMINATION OF THE BASIC TARIFFS

The basic tariffs are determined at the date of March 1st 1998 for each type of activity (production, transport, distribution and supply) taking into account the cost price determined on the base of the least cost principle in accordance with the requirements of the present methodology The basic tariff for 1 kWh of electricity is determined as follows

$$T = \frac{C + P}{V}$$

where C are the costs of production (transport and distribution) of electric energy These costs are determined for each type of activity When determining the costs of transport and distribution of electricity there is not taken into consideration the expenses for transported (distributed) electricity

P – profit It is established in proportion of 5 % of costs

V– the amount of delivered electricity (by the producer at the bas-bars, by the transporter-electric energy delivered into the distribution networks or to consumers, by the distributor – electric energy delivered to consumers)

6.2 THE MECHANISM FOR TARIFFS REGULATION DURING A THREE YEARS PERIOD

The present methodology stipulates the regulation of tariffs during a three years period by revising and correcting them each year in conformity with the following formulae

Production of electric energy

TP = TPo * W + Q/VP

Transport of electric energy

TT = (TTo * I/Ie)/Kt

Distribution of electricity·

TD = (T Do * I/Ie)/Kd

Wholesale supply of electric energy:

TF = TFo * I/Ie

Tariff that is established for final consumers:

$$TA = \frac{[PC + TT\ (1 - VPt\ )]\ /[(1 - VPd\ )] + TD + TF}{1 - PN}$$

The coefficient used to adjust the tariffs for electric energy production

W = Wt * [Rt *t +(1-Rt) * I/Ie]

Index of fuel price modification

t = Mg * tg + Mp * tp

Inflation rate

I = Ie * [1+(Y/Ye – 1) * K]

Average price (tariff) per kWh of purchased electric energy

$$PC = \frac{PP * VP + PI * VI * CV}{VP + VI}$$

where **CV** is the average balanced coefficient that takes into account the fluctuation of national currency exchange rate during the period of tariffs' regulation It is determined on the base of data of the National Bank,

I-inflation rate,

Ie-the inflation rate used for previous adjustment of tariffs When adjusting the tariffs for the first time, after 1998, **Ie** = 1,

Ke-coefficient of effectiveness (**Ke**<1 0) The concrete value of the said coefficient it is established by the National Agency for Energy Regulation (NAER) at the beginning of each year of tariffs' regulation,

Kd and Kt are the coefficients that take into account the change of the amount of electric energy transported and distributed in comparison with the amount of electricity used while calculating the basic tariffs,

Mg- the share of natural gas costs in the total costs of fuel utilized for production of electric energy,

Mp- the share of heavy fuel oil costs in the total costs of fuel utilized for production of electric energy,

PC- average price (tariff) per kWh of electricity purchased from local producers, wholesale suppliers and import during the period of tariffs' regulation,

PI- average price per kWh of electric energy import at the date of tariffs' determination,

PN- the share of uncollected electricity bills (0=**PN**<0 05) The exact value of uncollected electricity bills is established by the NAER at the beginning of each year of tariffs' regulation,

PP- the average price (tariff) per kWh of electric energy purchased from local producers,

Q- the increase of costs for electricity production relevant to tightened environmental protection requirements imposed by the state,

Rt- the share of fuel costs in the total costs of electricity production (it is determined at the initial checking of tariffs and is valid up to the end of the 3 year period),

t- fuel price index (for the month when the tariffs were previously adjusted **t**=1),

TA- regulated tariff that is established for the final consumers of electric energy

TD- the tariff for distribution of electric energy,

TDo- the basic tariff for distribution of electric energy

TF- the average tariff (charge) for wholesale supply of electric energy

tg- index of regulated tariff for natural gas (for the month when the tariffs of natural gas were previously adjusted **tg**=1),

TP- tariff for electricity production,

tp- price index for heavy fuel oil It is determined on the base of the tender prices (for the month when the tariffs were previously adjusted **tp**=1),

TPo- basic tariff for production of electric energy,

TT- the tariff for electricity transport,

TTo- basic tariff for electricity transport,

VI- the amount of imported electricity,

VP- the amount of electric energy delivered at the bas-bars of the power plant (producer)

VPd- the share of power losses in the distribution networks,

VPt- the share of power losses in the electric networks of the transporter,

W- coefficient of adjustment of tariff for electric energy production,

We- coefficient of adjustment of tariff for electric energy production calculated at the previous adjustment of tariffs (at the first adjustment of tariffs **We**=1),

Y- price index of industrial production (without taking into consideration the production of food industry) during the period that stretches from the month when the basic tariffs are set up to the next adjustment of tariffs It is determined on the base of official statistical data concerning the Republic of Moldova on the whole,

Ye- price index of industrial production (without taking into consideration the production of food industry) taken into account for calculation performed at the previous adjustment of tariffs (at the first adjustment of tariffs that followed after the setting up of the basic tariffs **Ye**=1)

6.3 FINAL PROVISIONS

By present methodology there are established the following supplementary conditions

1 The period of tariffs' regulation is considered the time from January 1st to December 31st of the current year,

2 The tariffs are adjusted ones a year as a rule at the beginning of the year and are approved by the National Agency for Energy Regulation,

3 During the year in course the tariff can be adjusted by the National Agency for Energy Regulation only in case

when there has penetrated a large producer in the electricity market that consequently means the setting up of new tariffs,

significant unforeseen changes of electricity generating capacities that result in tariffs' change by more than 2 0%,

of significant unforeseen increase (reduction) of price (tariff) of main fuel used for electricity generation or imported electric energy that results in tariffs' change by more than 2 /0%

4 The tariffs for production transport distribution and wholesale supply of electric energy calculated by using the formulae presented above should be approved and published by the National Agency for Energy Regulation The said tariffs are the permissible limits and the base for calculation of final consumers tariffs and for concluding the bilateral contracts However this does not automatically mean the application of these tariffs during the whole period of regulation

5 The tariffs for final consumers calculated on the base of presented formulae are approved and published by the National Agency for Energy Regulation and are obligatory for all supplies and consumers

6 In case when at the end of the regulatory year the tariffs calculated by using the formulae presented above differ from the tariffs calculated at the beginning of the year by more than 2 0% then the National Agency for Energy Regulation should take into consideration the respective difference while calculating the tariffs for the next year

Annex 1

Technical and economic indicator and norms of the optimal regime of operation of CHPs

INDICATOR	Measure unit	Value of indicator		
COMBINED HEAT AND POWER PLANT		CHP-1	CHP-2	CHP North
1 Capacity of power plant	MW	54	240	28 4
2 Electricity production	10^6 kWh	128	1353	95
3 Total own use of electric energy	% of production	22	10 3	35
of which for electricity production		4 4	4 7	5
for thermal energy production		17 6	5 6	30
4 Delivered electric energy	10^6 kWh	99 8	1213	61 6
5 Thermal energy production	10^3 Gcal	594	1629	640
6 Own use of thermal energy, total	% of production	3 38	3 4	2 01
of which for electricity production		1 83	2 43	0 55
for thermal energy production		1 55	0 97	1 46
7 Delivered thermal energy	10^3 Gcal	570	1575	605
8 Norm of specific fuel consumption for				
Delivered electric energy	gce/kWh	333	300	320
Delivered thermal energy	kgce/Gcal	133 5	150 75	157 5
9 Low calorific value of				
Natural gas	kcal/m^3	7956	7943	7895
Heavy fuel oil	kcal/kg	9480	9687	9461
10 Fuel mix				
Natural gas	%	90	80	95
Heavy fuel oil	%	10	20	5
Boiler house belonging to CHP				
1 Thermal energy delivered	10^3 Gcal	445	280	
2 Specific fuel consumption for thermal energy generation	kgce/Gcal	154 6	164 9	
3 Low calorific value of				
Natural gas	kcal/m^3	7956	7943	
Heavy fuel oil	kcal/kg	9480	9687	
4 Fuel mix				
Natural gas	%	87 4	90 3	
Heavy fuel oil	%	12 6	9 7	

Annex 2

Norms utilized for water supply and its chemical treatment at CHP

INDICATOR	Measure unit	CHP-1		CHP-2		CHP North	
		Boiler	Thermal network	Boiler	Thermal network	Boiler	Thermal network
1 Maximal capacity of installation	tons/h	100	200	200	360		
2 Annual productivity of the installation	10^3 tons	200	700	400	2100	150	600
3 Water losses during treatment	%	28	8	30	10	30	13
4 Number of treatment steps		5	3	2	2	5	3
5 Quantity of additional water consumption	10^3 tons	256	756	520	2310	195	680
6 Water consumed for cooling	10^3 tons	160		1850		90	
7 Housekeeping water needs	10^3 tons		44		55		35
8 Total water consumption	10^3 tons	460	756	2425	2310	320	680
9 Average inlet temperature of water	°C	8	8	10 5	10 5	11	11
10 Average temperature of treated water	°C	30	30	30	30	35	35
11 Annual heat consumption, total	Gcal	1113	1890	2445	6357	1455	2385
of which for heating and ventilation	Gcal	78	133	225	687	75	110
with washing water	Gcal	660	1232	117	4095	1080	1875
losses by installations	Gcal	375	525	1050	1575	300	400
12 Electricity consumption	10^3 kWh	330	408	500	1700	300	500
13 Norms of loading and consumption of filtering materials							
anthracite	tons	16 3	61 8			2 3	1
sulphonated coal	tons	1 7	4 7	6	5 5	3	3
resin AH-31	tons	1 2	3	4			
resin AB-17	tons			2 7			
cationite	tons			5 1	3 6	3	
14 Norms of chemical reagents consumption							
NaCl	tons	134	816		1100	45	600
NaOH	tons	10		185			
H_2SO_4	tons	67		285		38	
CaO	tons			130	590	300	300
$FeSO_4$	tons			18	80	15	25
PAA	tons			1 7	8		

PROIECT

METODOLOGIA
DE CALCULARE ŞI STABILIRE A TARIFELOR LA PRODUCEREA, TRANSPORTUL ŞI DISTRIBUŢIA ENERGIEI ELECTRICE ŞI ENERGIEI TERMICE

I PREVEDERI GENERALE

1 1 Prezenta Metodologie este elaborată în corespundere cu Hotărârea Guvernului Republicii Moldova nr 767 din 11 august 1997 "Cu privire la Agenţia Naţională pentru Reglementare în Energetică" şi Standardele Naţionale de Contabilitate

1 2 Prezenta metodologie are ca obiective determinarea preţului de cost pentru producerea, transportul şi distribuţia energiei electrice şi termice pentru calcularea tarifelor de bază, stabilirea formulelor de calculare a tarifelor pentru o perioadă de 3 ani

1 3 Determinarea preţului de cost pentru producerea, transportul şi distribuţia energiei electrice şi termice, părţii componente a tarifului de bază, se efectuează de către întreprinderile respective şi Agenţia Naţională pentru Reglementare în Energetică în baza analizei detailate a tuturor veniturilor şi cheltuielilor întreprinderilor de producere, transport şi distribuţie a energiei electrice şi termice purtate în perioada ultimilor 2-3 ani

1 4 Structura cheltuielilor la producerea, transportul şi distribuţia energiei electrice şi termice este stabilită în conformitate cu prevederile Standardului Naţional de Contabilitate 3 "Componenţa consumurilor şi cheltuielilor întreprinderii" şi a altor standarde naţionale de contabilitate

1 5 Prezenta Metodologie va fi aplicată de agenţii economici a sectorului energetic, care activează pe teritoriul Republicii Moldova în domeniul producerii, transportării, distribuţiei şi furnizării energiei electrice şi termice în scopuri publice (Centralele electrice de termoficare, Hidrocentralele, Reţelele electrice de distribuţie, Întreprinderea de Stat "Moldtranselectro", Asociaţia Republicană de Producţie "Termocomenergo", S A "Termocom" şi "Rapdet")

134

II DETERMINAREA PREŢULUI DE COST PENTRU PRODUCEREA ENERGIEI ELECTRICE ŞI TERMICE LA CENTRALELE ELECTRICE DE TERMOFICARE (CET)

Metodologia de determinare a cheltuielilor necesare pentru producerea energiei electrice şi termice la centralele electrice de termoficare se bazează pe două principii fundamentale, reieşite din specificul funcţionării centralelor în cauză

- cheltuielile pentru producerea energiei electrice şi termice se determină pentru regimul optim de funcţionare a centralei,
- repartizarea cheltuielilor totale suportate de centrală între cele două tipuri de energie (electrică şi termică) va fi efectuată prin utilizarea metodei centralei termice cele mai eficiente

Structura cheltuielilor incluse în preţul de cost cuprinde următoarele articole cheltuieli directe de materiale, cheltuieli directe pentru retribuirea muncii, cheltuieli de amortizare (uzură) a mijloacelor fixe de producţie, cheltuieli indirecte de producţie, cheltuieli comerciale, cheltuieli generale şi administrative, alte cheltuieli operaţionale, cheltuieli ale activităţii de investiţii şi financiare, pierderi excepţionale

2 1 DETERMINAREA CHELTUIELILOR DIRECTE DE MATERIALE

Cheltuielile directe de materiale , care se includ în preţul de cost a energiei electrice şi termice cuprind cheltuielile pentru

- combustibilul utilizat pentru producerea energiei electrice şi termice,
- apa utilizată pentru producerea, transportarea şi distribuţia energiei,
- materiale, utilizate nemijlocit în procesul de producere a energiei (materiale de filtrare, reagenţi chimici, etc), efectuarea de lucrări servicii cu caracter de producţie prestate de terţi şi energia de toate tipurile, consumată în scopuri tehnologice, de transport şi aferente altor necesităţi de producţie

135

2 1 1 DETERMINAREA CHELTUIELILOR PENTRU COMBUSTIBIL

La CET cheltuielile pentru combustibil alcătuiesc partea cea mai esenţială a preţului de cost a energiei electrice şi termice Din aceste considerente prezenta Metodologie prevede calcularea cheltuielilor pentru combustibil reieşind din regimul optim de funcţionare a centralei , căruí îi corespunde randamentul maxim de utilizare a combustibilului Indicatorii tehnico-economici a regimului optim de funcţionare al centralelor electrice de termoficare sunt prezentaţi în anexa nr 1

Determinarea cheltuielilor pentru combustibil se efectuează în felul următor

1 Reieşind din volumul şi standardele de calitate a energiei electrice (termice), urmată a fi produsă şi normele de utilizare a energiei pentru necesităţile proprii, se determină cantitatea de energie electrică (termică) ce urmează să fie livrată de la barele (colectoarele) centralei (în kWh, Gcal)

2 În baza normelor de consum specific de combustibil, măsurat în grame combustibil convenţional (g c c) pentru producerea 1 kwh (kg c c pentru producerea 1Gcal) de energie şi cantitatea de energie ce urmează să fie livrată de la bare (colectoare), se determină cantitatea de combustibil în unităţi convenţionale (tone combustibil convenţional -t c c) separat pentru producerea întregii cantităţi de energie electrică şi de energie termică

3 Se calculează consumul de combustibil exprimat în t c c pe tipuri de combustibil (gaze, păcură, cărbune, etc), reieşind din structura consumului de combustibil prevăzută pentru centrală

4 Se determină consumul de combustibil în unităţi naturale (pe tipuri de combustibil gaze - mii metri cubi, păcură, cărbune – tone) Consumul de combustibil în unităţi naturale se calculează prin împărţirea consumului de combustibil exprimat în t c c (pe tipuri de combustibil) la coeficientul de transformare a unităţilor respective de măsură pe tip de combustibil Coeficienţii de transformare se calculează reieşind din puterea calorifică a tipului dat de combustibil

5 Cheltuielile pentru combustibil (pe tipuri) se calculează separat pentru producerea energiei electrice şi producerea energiei termice, reieşind din consumul de combustibil în expresie naturală şi cheltuielile de achiziţionare a combustibilului apreciate în conformitate cu prevederile Standardului Naţional de Contabilitate 2

136

"Stocurile de mărfuri şi materiale" La calcularea tarifului de bază preţurile de procurare a gazelor naturale nu pot să depăşească preţurile reglementate iar pentru alte tipuri de combustibil - preţurile minime de piaţă (obţinute în urma concursurilor publice)

2 1 2 DETERMINAREA CHELTUIELILOR PENTRU APA UTILIZATĂ LA PRODUCEREA ENERGIEI

Prezenta Metodologie prevede luarea în calculul cheltuielilor a următoarelor consumuri de apă (măsurate în m^3)

- apă de adaos, supuse tratării chimice şi ulterior utilizată pentru alimentarea cazanelor şi a reţelelor termice,
- apă pentru răcirea mecanismelor şi condensatoarelor,
- apă pentru necesităţile de producţie (spălarea filtrelor, etc),
- apă pierdută la tratarea ei chimică, conform normativelor,
- apă folosită la alte procese tehnologice

Consumurile respective de apă la centralele electrice de termoficare sunt prezentate în anexa nr 2

Cheltuielile pentru apa consumată de centrală se calculează prin înmulţirea volumului (în m^3) de apă utilizată la tariful în vigoare al acestea

Cheltuielile pentru apa utilizată la centrală se include în preţul de cost a energiei electrice şi separat energiei termice după cum urmează

- cheltuielile, legate de alimentarea reţelelor termice cu apă de adaos se include integral în costul pentru producerea energiei termice,

- cheltuielile, legate de alimentarea cu apă de adaos a cazanelor, consumul apei pentru răcirea mecanismelor şi condensatoarelor, cît şi alte necesităţi de producţie se include în preţul de cost a energiei electrice şi separat termice proporţional ponderii cheltuielilor pentru combustibilul utilizat la producerea tipului dat de energie în cheltuielile totale pentru combustibilul utilizat la producerea ambelor tipuri de energie

2 1.3. DETERMINAREA CHELTUIELILOR PENTRU MATERIALE, SERVICII CU CARACTER DE PRODUCŢIE SI ENERGIA CONSUMATĂ ÎN PROCESUL TEHNOLOGIC

În cheltuielile pentru materiale, lucrări, servicii si energia consumată în procesul tehnologic de producere a energiei se include cheltuielile care sunt legate de

- consumurile de reagenţi chimici şi materiale de filtrare, altor materiale, care constituie o componentă indispensabilă la producerea energiei electrice şi termice,

- serviciile pentru efectuarea probelor privind calitatea combustibilului, reagenţilor chimici, materialelor de filtrare şi altor servicii, care nemijlocit sunt legate de producerea energiei,

- toate tipurile de energie, care nu sunt prevăzute în normele de consum propriu tehnologic

Nu se include în preţul de cost cheltuielile legate de utilizarea energiei termice pentru încălzirea păcurii, apei şi aerului, care urmează ulterior să fie compensate în procesul de producere a energiei

Cheltuielile pentru utilizarea reagenţilor chimici şi materialelor de filtrare se determină conform normelor de consum (redate în anexa nr 2) şi a preţurilor de procurare a acestora de pe piaţă

Celelalte cheltuieli pentru materiale, servicii prestate de terţi, energia de toate tipurile se calculează conform normelor şi normativelor de consum a acestora, devizele de cheltuieli, rezultatele analizei profunde a cheltuielilor menţionate şi argumentate privind necesitatea utilizării lor pentru producerea energiei

Cheltuielile pentru energia de toate tipurile, reagenţi chimici şi materiale de filtrare legate de pregătirea apei pentru alimentarea suplimentară a reţelelor termice se includ integral în costurile pentru producerea energiei termice, iar celelalte cheltuieli se includ în costul producerii energiei electrice şi separat termice proporţional ponderii cheltuielilor pentru combustibilul utilizat la producerea tipului dat de energie in cheltuielile totale pentru combustibilul utilizat la producerea ambelor tipuri de energie

2 2 DETERMINAREA CHELTUIELILOR DIRECTE PENTRU RETRIBUIREA MUNCII

La cheltuielile ditrecte pentru retribuirea muncii se raportă cheltuielile pentru retribuirea muncii în conformitate cu Standardul Naţional de Contabilitate 3 " Componenţa consumurilor şi cheltuielilor întreprinderii" Determinarea cheltuielilor pentru retribuirea muncii, care se includ în preţul de cost pentru calcularea tarifelor de bază se efectuează reieşind din numărul personalului de producţie, necesar pentru activitatea normală a întreprinderii şi salariului mediu al unui lucrător

În prezenta Metodologie este stabilit , că salariu mediu al unui lucrător CET, care se ia drept bază la calcularea tarifelor de bază, este egal cu salariu mediu al unui lucrător pe republică cu aplicarea coeficientului 1 9 Coeficientul în cauză este determinat reieşind din importanţa ramurii electroenergetice, necesitatea asigurării nivelului corespunzător de calificare a personalului, regimul şi condiţiile de muncă cît şi de alţi factori

Divizarea cheltuielilor pentru retribuirea muncii între cele două tipuri de energie (electrică şi termică) se efectuează proporţional ponderii cheltuielilor pentru combustibilul utilizat la producerea tipului dat de energie în cheltuielile totale pentru combustibilul utilizat la producerea ambelor tipuri de energie , cu excepţia cheltuielilor pentru remunerarea muncii personalului antrenat în pregătirea apei pentru alimentarea suplimentară a reţelelor termice, care se includ integral în preţul de cost pentru producerea energiei termice

2.3 AMORTIZAREA MIJLOACELOR FIXE DE PRODUCŢIE .

Valoarea amortizării mijloacelor fixe de producţie integral pe CET se determină în conformitate cu prevederile Standardului Naţional de Contabilitate 16 "Contabilitatea activelor materiale pe termen lung " iar modul de includere a lor în costul producţiei în conformitate cu Standardul Naţional de Contabilitate 3 "Componenţa consumurilor şi cheltuielilor întreprinderii" Nu se include în preţul de cost al energiei

136

pentru calcularea tarifelor de bază , valoarea amortizării mijloacelor fixe care nu sunt destinate utilizării în procesul tehnologic de producţie şi necesităţi economice, mijloacelor fixe date în arendă, obiectelor locative, de menire social - culturală, etc

Divizarea valorii totale a amortizării mijloacelor fixe de producţie între cele două tipuri de energie , se efectuează analogic cheltuielilor pentru retribuirea muncii

2.4 CHELTUIELILE INDIRECTE DE PRODUCŢIE

Cheltuielile indirecte de producţie cuprind

- cheltuielile de întreţinere a mijloacelor fixe de producţie în stare de lucru (asistenţă tehnică şi de întreţinere, efectuarea reparaţiilor curente, medii şi capitale), inclusiv mijloacelor tehnice de dirijare, comandă, comunicaţie şi semnalizare referitoare la procesul de producţie,
- cheltuielile pentru îndeplinirea normelor de sanitarie şi igienă , menţinerea curăţeniei şi ordinii în unitatea de producţie,
- cheltuielile de întreţinere şi exploatare a mijloacelor destinate protecţiei mediului ambiant legate de producerea energiei, plăţile pentru evacuarea substanţelor poluante în mediul înconjurător,
- valoarea amortizării activelor nemateriale, obiectelor de mică valoare şi scurtă durată utilizate în procesul de producţie,
- cheltuielile aferente perfecţionării tehnologiilor şi organizării producţiei, precum şi îmbunătăţirii calităţii produselor, sporiri fiabilităţii, durabilităţii şi altor proprietăţi de exploatare a acestora în cadrul procesului de producţie,
- uzura mijloacelor de mică valoare şi scurtă durată,
- costul materialelor utilizate în procesul de producţie pentru asigurarea unui proces tehnologic normal, sau consumate pentru alte necesităţi de producţie, care nu pot fi raportate direct la tipul concret de energie,
- cheltuielile pentru retribuirea muncii salariaţilor auxiliari încadraţi în procesul de producţie, personalului administrativ, de conducere, etc , inclusiv toate tipurile de premii şi adaosuri, sumele plătite sub formă de stimulare salariaţilor încadraţi în procesul de producţie,

- cheltuieli necesare asigurării condiţiilor normale de lucru şi a tehnicii de securitate ce ţin de procesul de producţie şi sunt prevăzute de legislaţia în vigoare,

- cheltuielile de asigurare a pazei întreprinderii, inclusiv a celei antiincendiare,

- cheltuieli legate de deplasări a salariaţilor, asigurarea obligatorie a salariaţilor, mijloacelor de transport şi a altor active de producţie în conformitate cu legislaţia în vigoare,

- alte cheltuieli în conformitate cu legislaţia în vigoare

Determinarea tuturor cheltuielilor incluse în articolul " Cheltuieli indirecte de producţie" se efectuează de către întreprinderi şi sunt supuse monitorizării din partea Agenţiei Naţionale pentru Reglementare în Energetică, care în baza analizei detaliate şi argumentării tehnico - economice stabileşte oportunitatea includerii lor în preţul de cost a energiei electrice şi termice pentru calcularea tarifelor de bază

Divizarea cheltuielilor indirecte de producţie între cele două tipuri de energie se efectuează analogic repartizării cheltuielilor pentru retribuirea muncii

2.5 CHELTUIELILE COMERCIALE, GENERALE ŞI ADMINISTRATIVE, ALTE CHELTUIELI OPERAŢIONALE, CHELTUIELILE ACTIVITĂŢII DE INVESTIŢII ŞI FINANCIARE, PIERDERI EXCEPŢIONALE

Cheltuielile comerciale, generale şi administrative , alte cheltuieli operaţionale, cheltuielile activităţii de investiţii şi pierderile excepţionale se determină de către întreprinderi în conformitate cu prevederile Standardului Naţional de contabilitate 3 "Componenţa consumurilor şi cheltuielilor întreprinderii" şi sunt supuse monitorizării din parte Agenţiei Naţionale pentru Reglementare în Energetică, care în baza analizei detaliate şi argumentării tehnico - economice stabileşte oportunitatea includerii lor în preţul de cost a energiei electrice şi termice pentru calcularea tarifelor de bază

În cheltuielile comerciale se includ cheltuielile, care nemijlocit sunt legate de vânzarea energiei electrice şi termice, iar cheltuielile generale şi adminisrative cuprind

- cheltuielile privind retribuire muncii personalului de conducere şi gospodăresc, premiile şi adaosurile de orice tip,
- contribuţiile pentru asigurările sociale şi cele medicale, fondul de pensii şi de plasare în câmpul muncii,

- plăţile suplimentare, indemnizaţiile, sporurile, compensaţiile, ajutorul material acordat salariaţilor întreprinderii,

- întreţinerea, amortizarea şi reparaţia mijloacelor fixe cu destinaţie administrativă, gospodărească şi de protecţie a naturii, amortizarea activelor nemateriale cu destinaţie generală a întreprinderii,

- valoarea, uzura şi reparaţia obiectelor de mică valoare şi scurtă durată, plata pentru arenda curentă a mijloacelor fixe, activelor nemateriale şi obiectelor de mică valoare şi scurtă durată,

- cheltuielile pentru întreţinerea mijloacelor fixe conservate în conformitate cu actele normative în vigoare,

- cheltuielile pentru întreţinerea şi deservirea mijloacelor tehnice de comandă, semnalizare telecomunicaţii şi de calcul, care nu se referă direct la producţie,

- cheltuielile poştale şi telegrafice, de întreţinere şi exploatare a staţiilor de telefoane, comutatoarelor, faxurilor, instalaţiilor de dispecerat, radio şi alte tipuri de telecomunicaţii utilizate pentru administrare,

- cheltuielile tipografice, pentru procurare rechizitelor de birou, formularelor de evidenţă, de dări de seamă, etc ,

- plata serviciilor pentru dirijarea producţiei efectuată de terţe organizaţii, cheltuielile pentru paza obiectelor administrativ- gospodăreşti şi asigurarea securităţii antiincediare,

- cheltuielile pentru întreţinerea transportului auto de serviciu, pentru deplasările personalului de conducere, cheltuieli de reprezentare,

- cheltuielile de întreţinere a subdiviziunilor de producţie şi de deservire,

- cheltuielile pentru asigurarea salariaţilor şi a bunurilor cu destinaţie generală şi administrativă prevăzute de actele normative în vigoare,

- cheltuielile aferente angajării forţei de muncă, pentru serviciile bancare, burselor de mărfuri, organizaţiilor consultative, juridice, informaţionale de publicitate şi audit,

- cheltuielile pentru pregătirea şi reciclarea personalului, cercetări ştiinţifice, invenţii şi raţionalizări cu caracter de producţie,

- impozitele şi taxele, conform legislaţiei în vigoare, cheltuielile de judecată, arbitraj şi taxele de stat,

- cheltuielile pentru ocrotirea sănătăţii, procurare literaturii speciale, actelor normative şi instructive, abonarea la ediţii speciale necesare în activitatea de producţie,
- alte cheltuieli aferente activităţii de producţie a întreprinderii

Cheltuielile care nu pot fi raportate nici la cheltuielile comerciale nici la cheltuielile generale şi administrative se include în alte cheltuieli operaţionale Din ele fac parte

- plata dobânzilor filialelor, întreprinderilor filiere şi asociate,
- plata dobânzilor aferente creditelor bancare şi împrumuturilor primite pe termen scurt şi pe termen lung cu excepţia cazurilor de capitalizare a acestora, prevăzute în Standardul naţional de contabilitate 23 " Cheltuielile privind împrumuturile" Prezentul Regulament prevede, că în preţul de cost la calcularea tarifelor de bază pentru producerea energiei electrice şi termice este admisă creditarea rezervelor de combustibil (păcură, cărbune, etc) pe o perioadă medie de 45 zile în perioada întregului an Plata dobânzilor aferente creditelor bancare pentru procurarea rezervelor de combustibil sus-menţionate se determină reieşind din consumul normativ de combustibil pentru producerea energiei, rezervele stabilite şi rata minimă a dobânzilor bancare în vigoare

Cheltuielile activităţii de investiţii cuprind următoarele cheltuielile legate de ieşire activelor nemateriale ieşirea activelor materiale şi financiare pe termen lung, din reevaluarea activelor pe termen lung, aferente participanţilor în alte întreprinderi, privind operaţiile cu părţile legate şi alte cheltuieli ale activităţii de investiţii

La cheltuielile activităţii financiare se referă cheltuielile privind plata redevenţelor, arenda finanţată a activelor materiale pe termen lung, diferenţele de curs valutar şi alte cheltuieli ale activităţii financiare

Pierderile excepţionale cuprind pierderile provocate de calamităţile naturale, rezultate din perturbaţiile politice, ocazionate de modificarea legislaţiei republicii Moldova

Divizare cheltuielilor comerciale, generale şi administrative , altor cheltuieli operaţionale, cheltuielilor activităţii de investiţii şi pierderilor excepţionale între cele două tipuri de energie se efectuează analogic cheltuielilor pentru retribuire muncii

143

2.6. REPARTIZAREA CHELTUIELILOR PENTRU APA DE ADAOS TRATATĂ CHIMIC ŞI UTILIZATĂ PENTRU ALIMENTAREA REŢELELOR TERMICE

Luând în consideraţie necesitatea alimentării permanente de către CET a reţelelor termice cu apă de adaos tratată chimic (cît din cauza pierderilor tehnice normative atât şi pierderilor de apă în reţelele termice supra normă), necesitatea raportării corecte între producători şi distribuitori de energie termica a cheltuielilor legate de alimentarea reţelelor termice cu apă de adaos prezenta Metodologie stabileşte următoarele reguli de includere în preţul de cost şi tarife a cheltuielilor pentru apa de adaos

- cheltuielile pentru apă, reagenti chimici, materiale de filtrare şi energia de toate tipurile suportate de CET pentru tratarea chimică a apei de adaos, care ulterior se utilizează pentru alimentarea reţelelor termice, se calculează la CET reieşind din normativele existente şi se include în cheltuielile totale de producere a energiei termice Însă în tariful la producerea energiei termice aceste cheltuieli nu se includ,

- aceste cheltuieli urmează să fie recuperate producătorilor de către întreprinderile de transport şi distribuţie a energiei termice (revânzători de energie termică) în conformitate cu contractele bilaterale de livrare – procurare a energiei termice şi a apei de adaos

Tariful de livrare a 1 m^3 de apă de adaos tratată chimic se aprobă de către Agenţia Naţională pentru Reglementare în Energetică,

În tariful întreprinderilor de transport şi distribuţie a energiei termice vor fi incluse doar cheltuielile corespunzătoare alimentării reţelelor termice cu apă de adaos la nivel normativ Cheltuielile pentru alimentarea reţelelor termice cu apă de adaos supra normă vor fi suportate de întreprinderile date

III DETERMINAREA CHELTUIELILOR PENTRU PRODUCEREA ENERGIEI TERMICE LA CENTRALELE TERMICE

Pentru centralele termice (CT) structura şi metoda de determinare a cheltuielilor corespunde celei stabilite la CET Ca şi la CET la CT cheltuielile necesare pentru

producerea energiei termice se determină reieşind din normele şi normativele existente de consum pentru combustibil, apă, reagenţi chimici, caracteristicile tehnice şi economice a utilajului, tehnologiilor de producere a energiei termice, analizei detaliate a tuturor cheltuielilor suportate la centrală pe parcursul ultimilor 2-3 ani cu argumentări asupra necesităţii suportării lor pentru producerea energiei termice, etc Atât preţul de cost cît şi tariful de bază ce calculează pe fiecare centrală în parte

Monitorizarea corectitudinii determinării cheltuielilor, calculării preţului de cost şi stabilirea tarifelor la energia termică produsă de CT va fi efectuată de Agenţia Naţională pentru Reglementare în Energetică

Racordarea cheltuielilor pentru apa de adaos utilizată pentru alimentarea reţelelor termice se efectuează conform aceleaşi reguli ca şi la CET

IV DETERMINAREA CHELTUIELILOR PENTRU PRODUCEREA ENERGIEI ELECTRICE LA CENTRALE HIDROELECTRICE (CHE)

Structura cheltuielilor pentru producerea energiei electrice la CHE corespunde celeia stabilite la CET, cu excepţia cheltuielilor pentru combustibil, apă, reagenţi chimici şi materiale de filtrare, utilizarea cărora lipseşte în procesul producerii energiei electrice la CHE Cheltuielile de bază suportate de CHE la producerea energiei sunt amortizarea mijloacelor fixe de producţie, cheltuieli directe pentru retribuirea muncii, cheltuieli indirecte de producţie, cheltuieli comerciale, cheltuieli generale şi administrative, alte cheltuieli operaţionale, cheltuielile activităţii de investiţii, activităţii financiare şi pierderi excepţionale

Valoarea amortizării mijloacelor fixe de producţie se determină în conformitate cu prevederile Standardului naţional de contabilitate 16 "Contabilitate activelor materiale pe termen lung"

Cheltuielile pentru retribuirea muncii la stabilirea tarifului de bază se determină reieşind din numărul personalului de producere şi salariul mediu al unui lucrător Salariu mediu al unui lucrător CHE pentru calcularea tarifelor de bază se stabileşte la nivel de 1 35 din salariului mediu în republică

Cheltuielile indirecte de producţie, comerciale, generale şi administrative şi a altor cheltuieli se determină după aceleaşi reguli aplicate în cazul CET

145

V DETERMINAREA CHELTUIELILOR DE PRODUCŢIE PENTRU TRANSPORTAREA ŞI DISTRIBUŢIA ENERGIEI ELECTRICE ŞI TERMICE

În energetică spre deosebire de alte ramuri procesul de producere, transport, distribuţie şi consum a energiei electrice şi termice coincide în timp De aceia cheltuielile pentru transportarea şi distribuţia energiei se examinează ca parte componentă a preţului de cost a energiei electrice şi termice pe întregul sistem energetic

Cheltuielile pentru transportarea şi distribuţia energiei electrice şi termice sunt legate de întreţinerea, exploatarea reţelelor şi furnizarea energiei consumatorilor şi puţin depind de cantitatea energiei transportate (livrate) Din componenţa cheltuielilor, care se includ în preţul de cost pentru transportul şi distribuţia energiei electrice şi termice fac parte următoarele articole valoarea amortizării mijloacelor fixe de producţie, cheltuielile privind retribuirea muncii, cheltuielile de materiale, cheltuielile indirecte de producţie, cheltuielile comerciale, generale şi administrative, cheltuielile activităţii de investiţii, activităţii financiare, alte cheltuieli operaţionale şi pierderile excepţionale

Determinarea cheltuielilor, care se includ în preţul de cost la transportarea şi distribuţia energiei electrice şi termice se efectuează de întreprinderi în conformitate cu prevederile Standardelor naţionale de contabilitate şi sunt supuse analizei detaliate de către Agenţia Naţională pentru Reglementare în Energetică în vederea determinării oportunităţii includerii lor în preţul de cost pentru calcularea tarifelor de bază

La determinarea cheltuielilor şi calcularea tarifelor de bază pentru transportul şi distribuţia energiei electrice şi termice se ţine cont de numărul şi puterea staţiilor de transformare, staţiilor de pompare a apei, lungimea liniilor de transport (distribuţie) a energiei electrice, volumul mediu anual de apă în reţelele termice, numărul personalului necesar pentru exploatarea reţelelor electrice şi termice, nivelul pierderilor tehnice normative de energie în reţele electrice şi termice, pierderile normative de apă de adaos pentru alimentarea reţelelor termice, precum şi cheltuielile legate de efectuare unor activităţi în sistem (activitatea de dispecerat, ridicarea fiabilităţii, stabilităţii şi activităţii economice a sistemului electroenergetic şi sistemului termoenergetic, etc) În preţul de cost la transportarea şi distribuţia energiei electrice (termice) se includ toate cheltuielile pentru întreţinerea reţelelor instalate până la contorul (inclusiv contorul) la

care este conectat consumatorul În preţul de cost şi tarife nu vor fi incluse cheltuielile pentru întreţinerea staţiilor de transformare, staţiilor de pompare a apei şi a instalaţiilor de distribuţie a centralelor electrice (termice) sau a consumatorilor (industriali, agricoli, de construcţii, transport, servicii comunale, etc), care sunt instalate după contor

Prin prezenta Metodologie la stabilirea tarifelor de bază pentru activităţile de transport şi distribuţie a energiei electrice şi termice se stabilesc nivelul pierderilor tehnice a energiei electrice în reţelele de transport şi distribuţie conform anexelor 3 şi 4, pierderilor tehnice a energiei termice în reţelele S A "Termocom" - 18 3 % şi 14 5 % la ARP "Termocomenergo", pentru apa de adaos în reţelele termice - 0 25% din volumul orar de apă în reţelele termice calculat mediu pe an , salariul mediu al unui lucrător–1 8 din salariul mediu pe republică

VI CHELTUIELILE, STABILITE ÎN AFARA COSTURILOR, INCLUSE ÎN TARIFELE DE BAZĂ LA PRODUCEREA, TRANSPORTAREA ŞI DISTRIBUŢIA ENERGIEI ELECTRICE ŞI TERMICE

În preţul de cost şi corespunzător în tarifele de bază a energie electrice (termice) produse cît şi serviciilor de transport şi distribuţie a energiei electrice şi termice nu se includ următoarele cheltuieli

cheltuielile pentru efectuarea lucrărilor de construcţie, reconstrucţie, procurarea, modernizarea, montarea şi probarea utilajului în scopul verificării calităţii montajului,

cheltuielile pentru punerea în acţiuni a noilor întreprinderi, secţii şi agregate, pentru predarea în exploatare a noilor întreprinderi (obiecte) şi supravegherea de autor a organizaţiilor de proiectare,

cheltuielile pentru înlăturarea nefinisărilor în lucrările de proiectare, construcţie şi montaj, revizie (demontare), înlăturarea defectelor utilajului şi deteriorărilor, provocate din vina producătorilor, furnizorilor şi organizaţiilor de transport,

alte cheltuieli ce ţin de investiţii capitale,

cheltuielile pentru executarea lucrărilor de proiectare şi construcţie, pentru procurarea utilajului, repararea şi întreţinerea obiectelor de locuinţă, de menire social - culturală şi altor obiecte, ce nu se referă la producţie (cu excepţia cheltuielilor pentru întreţinerea punctelor medicale, bufetelor şi cantinelor, aflate pe teritoriul întreprinderii

149

ce deservesc colectivele de muncă), precum şi pentru lucrările calificate ca ajutor pentru alte întreprinderi şi organizaţii atât în formă de servicii, cît şi sprijin material sau financiar,

cheltuielile pentru executarea sau plata lucrărilor (serviciilor) ce nu sunt legate de sfera producerii, transportării, distribuţiei şi furnizării energiei electrice şi termice

VII. METODOLOGIA DETERMINĂRII ŞI RERLEMENTĂRII TARIFELOR LA PRODUCEREA, TRANSPORTAREA ŞI DISTRIBUŢIA ENERGIEI ELECTRICE ŞI TERMICE

Mecanismul aplicat la determinarea şi reglementarea tarifelor pentru energia electrică şi termică produsă , transportată şi distribuită se bazează pe următoarele principii

tarifele vor acoperi cheltuielile operaţionale şi o anumită rată de profit, necesară pentru activitatea normală a întreprinderilor şi recuperarea investiţiilor,

la stabilirea tarifelor se va ţine cont de cheltuielile pentru întreţinerea capacităţilor de rezervă, necesare pentru alimentarea fiabilă a consumatorilor cu energie electrică şi termică cît şi pentru acoperirea cheltuielilor garantate pentru protecţia mediului ambiant,

sistemul de reglementare a tarifelor va fi orientat astfel ca alimentarea consumatorilor cu energie electrică şi termică să se facă cu cheltuieli minime prin utilizarea eficientă a capacităţilor de generare,

tarifele pentru consumatorii finali nu trebuie să conţină oarecare devieri de la costul real al energiei (înlesniri sau supraevaluări) aplicate diferitor categorii de consumatori, care ar duce la subvenţionări încrucişate,

la stabilirea tarifelor se va ţină cont de securitatea energetică a statului, protecţia mediului ambiant şi conjunctura pieţei

Prezenta metodologie prevede determinarea şi aprobarea tarifelor de bază cu precizarea lor ulterioară reieşind din indicii preţurilor la combustibil, energiei importate, inflaţiei şi altor factori

148

7.1 DETERMINAREA TARIFELOR DE BAZĂ

Tarifele de bază se determinate la data de 1 august 1998 pentru fiecare tip de activitate (producere, transportare, distribuţie şi furnizare) reieşind din preţul de cost , determinat în baza prezentei Metodologii Tarifele de bază sunt calculate la 1 kWh de energie electrică şi 1 Gcal energie termică livrată după formula

$$T = \frac{C + P}{V}$$

unde **C** - cheltuielile totale pentru producerea, transportarea, distribuţia energiei electrice (termice) La determinarea cheltuielilor de transportare şi distribuţie a energiei nu se iau în consideraţie costurile energiei transportate (distribuite)

P – beneficiul La calcularea tarifului de bază beneficiul este stabilit în mărime de 5% din cheltuieli Odată cu privatizarea întreprinderilor marja concretă a beneficiului (rata de recuperare a investiţiilor) va fi determinată şi stabilită pentru fiecare tip de activitate de către Agenţia Naţională pentru Reglementare în Energetică reieşind din valoarea actualizată de piaţă a întreprinderilor şi a investiţiilor efectuate

V - cantitatea energiei electrice (termice) livrate (la producător - de la barele, colectoarele centralei, la transportator - energia livrată reţelelor de distribuţie sau consumatorilor, la distribuitor - energia livrată consumatorilor)

7 2 MECANISMUL DE REGLEMENTARE A TARIFELOR PE O PERIOADĂ DE 3 ANI

Prezenta metodologie prevede reglementarea tarifelor pe o perioadă de 3 ani cu precizarea lor anuală Calcularea tarifelor se va efectua conform următoarelor formule

Pentru energia electrică (termică) produsă:

$$TP = T\,Po \times W + Q : V$$

unde $W = We \times [Rt \times t + (1 - Rt) \times I : Ie]$;

t=Mc x tc + Mg x tg+Mp x tp +Mn x tn ,

I= Ie x[1+(Y·Ye-1) · K]

Pentru serviciile de transport a energiei electrice.

TT = (TTo x I : Ie) : Kt

Pentru serviciile de distribuţie a energiei electrice şi termice ·

TD = (T Do x I : Ie)· Kd

Pentru energia electrică livrată consumatorilor finali·

$$TA = \frac{[PC + TT(1 - VPt)]\ [(1 - VPt)(1 - VPd)] + TD}{1 - PN}$$

unde

$$PC = \frac{Pp * Vp + Pf * Vf + Pt * Vt * Cv}{Vp + Vf + Vt}$$

Pentru energia termică livrată consumatorilor finali.

$$TA = \frac{PCt \quad (1 - V\ \mathrm{Pr}) + TD}{1 - PN}$$

Unde **Cv-** coeficientul mediu ponderat, ce determină fluctuaţia cursului de schimb al valutei naţionale pe perioada reglementării tarifelor Se determina în baza datelor Băncii Naţionale,

I- rata (coeficientul) inflaţiei ,

Ie –rata inflaţiei aplicată la precizarea anterioare a tarifelor calculate anterior La prima precizare a tarifelor urmată după 1 august 1998, **Ie** =1,

150

K- coeficientul eficacităţii (**K**< 1 0) Mărimea concretă a coeficientului dat se stabileşte de Agenţia Naţională pentru Reglementare în Energetică (ANRE) la începutul fiecărui an de reglementare a tarifelor,

Kd şi **Kt-** coeficienţii, care iau în consideraţie devierea volumelor de energie efectiv distribuită şi transportată faţă de volumele energiei electrice (termice) iniţial stabilite în calcularea tarifelor de bază,

Mc - ponderea cheltuielilor pentru cărbune în cheltuielile totale pentru combustibilul, consumat la producerea energiei electrice (termice),

Mg- ponderea cheltuielilor pentru gazul natural în cheltuielile totale pentru combustibilul, consumat la producerea energiei electrice (termice),

Mn - ponderea cheltuielilor pentru alte tipuri de combustibil (motorină, lemne, etc) în cheltuielile totale pentru combustibilul, consumat la producerea energiei electrice (termice),

Mp- ponderea cheltuielilor pentru produsele petroliere (păcură) în cheltuielile totale pentru combustibilul, consumat la producerea energiei electrice (termice),

PC- preţul (tariful) mediu de procurare a 1kWh de energie electrică de la producătorii locali, de la furnizorii angrosişti şi din import calculat pentru perioada concretă de reglementare a tarifelor,

PCt –preţul (tariful) mediu de procurare (livrare) a 1Gcal energie termică de la CET şi centrale termice ,

Pf – preţul mediu de procurare a energiei electrice de la furnizori independenţi,

Pi – preţul mediu de procurare a 1kWh de energie electrică din import la data determinării tarifelor,

PN- ponderea neplăţilor pentru energia consumată (0=**PN**<0 05)
Mărimea concretă a neplăţilor se stabileşte de ANRE la începutul fiecărui an de reglementare a tarifelor, separat pentru energia electrică şi termică,

Pp – preţul mediu (tariful) de procurare a 1 kWh de energie electrică de la producătorii locali,

Q- sporul de cheltuielilor pentru producerea energiei în legătură cu ridicarea cerinţelor din partea statului referitoare la protecţia mediului ambiant,

151

Rt- ponderea cheltuielilor pentru combustibil în cheltuielile totale purtate la producerea energiei (se determină la calcularea inițială a tarifelor și este valabilă până la finele perioadei de 3 ani),

t- indicele modificării prețurilor la combustibil față de prețurile stabilite la calcularea tarifelor de bază,

TA- tariful reglementat, care se stabilește pentru consumatorii finali de energie electrică (energie termică),

tc - indicele modificării prețurilor la cărbune față de prețurile stabilite la calcularea tarifelor de bază Se determină în baza prețurilor de piață (tender public),

ТД- tariful pentru distribuția energiei electrice (termice),

ТДо - tariful de bază pentru distribuția energiei electrice (termice),

tg – indicele modificării tarifului reglementat la gazul natural ,

tn - indicele modificării prețurilor la alte tipuri de combustibil utilizați pentru producerea energiei față de prețurile stabilite la calcularea tarifelor de bază Se determină în baza prețurilor de piață (tender public),

TP- tariful pentru energia electrică (termică) producă,

tp- indicele modificării prețurilor la produsele petroliere (păcură) față de prețurile stabilite la calcularea tarifelor de bază Se determină în baza prețurilor de piață (tender public),

TPo- tariful de bază pentru energia electrică (termică) produsă,

TT- tariful pentru transportarea energiei electrice,

TTo- tariful de bază pentru transportarea energiei electrice,

Vi- cantitatea de energie electrică procurată din import,

V - cantitatea de energie electrică (termică) livrată de la barele (colectoarele) centralei electrice (termice),

Vf –cantitatea de energie electrică procurată de la furnizori independenți,

Vp – cantitatea de energie electrică procurată de la producătorii locali,

VPd - ponderea pierderilor normate de energie electrică în rețelele de distribuție,

VPr – ponderea pierderilor normate de energie termică în rețelele termice,

VPt - ponderea pierderilor normate de energie electrică în rețelele de tensiune înaltă (rețelele de transport),

152

W - coeficientul de precizare a tarifului pentru producerea energiei electrice (termice),

We - coeficientul de precizare a tarifului pentru producerea energiei electrice (termice) calculat la precizarea precedentă a tarifelor (la prima precizare a tarifelor, **We** = 1),

Y - indicele preţurilor la producţia industrială (fără a lua în consideraţie producţia industriei alimentare) pe perioada dintre luna stabilirii tarifelor de bază şi luna fixată pentru precizarea următoare a tarifelor Se determină în baza datelor statistice oficiale pe republică,

Ye - indicele preţurilor la producţia industrială (fără a lua în consideraţie producţia industriei alimentare) luat în consideraţie la efectuarea precizării precedente a tarifelor La prima precizare a tarifelor urmată după stabilirea tarifelor de bază, **Ye**=1

Dacă energia electrică se livrează de la producători, furnizori sau din import direct în reţelele de distribuţie, la calcularea tarifului pentru consumatorii finali nu se iau în consideraţie pierderile în reţelele de transport a energiei electrice, iar preţul mediu de procurare a energiei electrice se determină reieşind din preţul de livrare a energiei în reţelele de distribuţie

Pentru consumatorii conectaţi la reţelele de transport valoarea indicilor **TD** şi **VPd** = 0

În componenţa tarifului pentru transportarea energiei electrice fac parte şi cheltuielile pentru activitatea de dispecerat , iar în componenţa tarifului pentru distribuţia energiei termice se includ şi cheltuielile pentru transportarea energiei

VIII. DISPOZIŢII FINALE

Prin prezenta metodologie se stabilesc următoarele condiţii suplimentare

1 În perioada de tranziţie pentru toţi consumatorii se stabileşte un tarif unic indiferent la ce nivel de tensiune sunt conectaţi

2 Perioada de reglementare a tarifelor se consideră perioada de la 1 aprilie a anului curent până la 1 aprilie a anului viitor

3 Tarifele se precizează o dată în an, de regulă la 1 aprilie şi se aprobă de Agenţia Naţională pentru Reglementare în Energetică

4 Reexaminarea tarifelor pe parcursul anului va constitui obiectul de discuţie pentru Agenţia Naţională pentru Reglementare în Energetică numai în situaţia când acestea în noile condiţii create (schimbarea preţului la combustibil sau la energia electrică importată, apariţia noilor producători, furnizori, schimbări neprevăzute în capacităţile de generare a energiei etc) ar putea înregistra devieri mai mult de 3 0% faţă de valoarea lor stabilită

5 Tarifele calculate conform Metodologiei în cauză vor vi aprobate şi publicate de către Agenţia Naţională pentru Reglementare în Energetică Tarife pentru producerea, transportarea şi distribuţia energiei electrice şi termice vor servi drept palieră, care nu poate fi depăşită la calcularea tarifelor pentru consumatorii finali şi pentru încheierea contractelor bilaterale

6 În cazul când la sfârşitul anului de reglementare tarifele (din nou calculate) vor înregistra devieri mai mult de 3 0% faţă de cele calculate la începutul anului Agenţia Naţională pentru Reglementare în Energetică va introduce diferenţa respectivă în tarifele anului următor

154

Notă informativă
privind politica tarifară şi autorizarea activităţilor în sectorul energetic prin eliberarea licenţelor

I. Politica tarifară

O precondiţie importantă pentru succesul procesului de restructurare şi privatizare a complexului energetic o reprezintă restructurarea financiară a companiilor energetice, în caz contrar ele vor continua să fie entităţi generatoare de pierderi şi arierate Pentru a realiza această restructurare şi a efectua un proces de privatizare cu succes, a incita interesul potenţialilor investitori strategici în această ramură şi a mări atractivitatea ei prin asigurarea recuperării investiţiilor efectuate unul din instrumentele financiare de bază îl reprezintă politica tarifară

Reieşind din funcţiile sale şi în conformitate cu prevederile Hotărârilor Guvernului Republicii Moldova nr 547 din 12 iunie 1997 "Cu privire la Planul de restructurare a datoriilor sectorului energetic al Republicii Moldova", nr 628 din 8 iulie 1997 "Cu privire la aprobarea Planului de restructurare a sectorului electroenergetic" , nr 41 din 16 ianuarie 1998 "Cu privire la modificarea şi completarea Hotărârii Guvernului Republicii moldova nr 547 din 4 august 1995" şi condiţionalităţile stipulate în Memorandumul SALII, Agenţia Naţională pentru Reglementare în Energetică a efectuat o analiză detaliată a activităţii economico-financiare a întreprinderilor sectorului energetic, tuturor cheltuielilor şi consumurilor pentru producerea, transportarea, distribuţia şi furnizarea gazelor naturale, energiei electrice şi termice în perioada anilor 1996-1998 cu calcularea respectivă a tarifelor Calculele respective au fost efectuate în baza principiului costurilor minime cu aprecierea costurilor economice reale, metodei economice de alocare a costurilor între energia electrică şi termica la centralele electrice de termoficare şi totodată în baza prevederilor Standardelor naţionale de contabilitate Stabilirea tarifelor preconizate va da posibilitate de a acoperi costurile operaţionale, elimina subvenţionările încrucişate între diferite categorii de consumatori şi ca rezultat va avea un impact pozitiv asupra situaţiei financiare a întreprinderilor sectorului energetic şi aprovizionării fiabile cu resurse energetice a tuturor consumatorilor Tarifele respective, după aprobarea lor, vor sta ca bază pentru ajustarea tarifelor la energia electrică, termică şi gazele naturale pe viitor în conformitate cu Metodologia de calculare a tarifelor, care deja este elaborată şi va fi pusă în aplicare în timpul apropiat

Preţul la gaze naturale:

Ajustarea preconizată a tarifului de livrare a gazelor naturale prevede reducerea tarifului existent pentru toate categoriile de consumatori de 454 lei/1000 m3 la nivelul de 406 lei/1000 m3 pentru consumatorii complexului

energetic şi la nivelul de 420 lei/1000 m3 pentru menaje şi alte categorii de consumatori Reducerea în valori relative pentru consumatorii complexului energetic şi industrial constituie 10 6% şi respectiv pentru populaţie – 7 5% Astfel diminuarea tarifului de livrare pentru consumatorii complexului energetic şi industrial are un efect benefic asupra tarifelor finale la energia electrică şi energia termică, ţinând cont de faptul că în structura costurilor totale la producerea energiei electrice şi termice componenta gazului reprezintă mai mult de 70 la sută

Micşorarea tarifului la gazele naturale s-a datorat următoarelor momente esenţiale schimbarea principiului de calculare a beneficiului, excluderea cheltuielilor nejustificate şi a cheltuielilor prevăzute pentru formarea "fondului de rezervă", menit pentru acordarea înlesnirilor, etc

Astfel în cazul funcţiei de distribuţie la calcularea marjei de beneficiu s-a reieşit din rentabilitatea de 10% aplicată la cheltuielile aferente întreprinderilor de distribuţie a gazului, fără includerea costului gazului procurat Numai acest fapt a dus la diminuarea tarifului existent cu 31 lei/ 1000m3,

Excluderea poziţiei "înlesniri" s-a efectuat în baza articolului 50 al Legii bugetului pe anul 1998, care prevede alocarea tuturor înlesnirilor din contul bugetelor locale Aceasta a dus la micşorarea tarifului cu 14 5 lei/1000 m3,

Totodată a avut loc majorarea componentei de transport în structura tarifului reieşind din faptul micşorării volumele transportate a 3 miliarde m3 destinate pentru Ucraina În aşa mod costul pentru transport constituie 48 9 lei/1000 m3 în comparaţie cu 40 lei/1000 m3 actualmente,

Diferenţierea între tarifele pentru consumatorii complexului energetic şi alţi consumatori (inclusiv pentru populaţie) se bazează pe principiul proporţionalităţii cheltuielilor (costurile marginale pe termen lung), legate de întreţinerea reţelelor de presiune medie şi joasă şi a pierderilor normative în aceste reţele, la care este conectată această categorie de consumatori Calculile detaliate a tarifului pentru gazele naturale se anexează

ANRE consideră că tarifele la gazele naturale pot fi micşorate şi mai mult în cazul excluderii din tarif a marjei de 39 lei pentru deservuâire datoriilor sau includerea acestei marge calculată pe o perioadă de 7 ani faţă de 5 ani actualmente

Tarifele la energia electrică şi energie termică

a) *Producerea de energie electrică şi termică*

Principiul de bază aplicat la calculaţia tarifelor reglementate la producerea de energie electrică şi termică a constat în determinarea consumurilor specifice de combustibil convenţional (regimul optim de funcţionare a centralelor) şi alocarea corectă după metoda economică a costurilor între energia electrică şi termică Acest fapt a cauzat diminuarea costului energiei termice produse cu circa 22 lei/Gcal (25%) şi din altă parte majorarea neînsemnată a costului energiei electrice cu 0 82 bani/kWh (6 1%) Obiectivul economic al alocării

corecte a costurilor între energia electrică şi termică este de a transforma energia termică într-un produs competitiv pe piaţa locală, preţul căreia nu trebuie să depăşească preţul de cost de la cea mai bună centrală termică existentă în municipii şi în acelaşi timp tariful de producere a energiei electrice să nu depăşească preţul de procurare a energiei electrice din Ucraina şi CERS Moldova Competitivitatea energiei termice produse la centralele autohtone va stopa procesul de construcţie a cazangeriilor proprii de către agenţii economici din republică, ceea ce le imobilizează investiţii considerabile, va permite într-o anumită măsură ca mărfurile produse în republică să devină mai competitive pe piaţă , va duce la mărirea volumelor de livrare a energiei termice agenţilor economici şi implicit la diminuarea ulterioară a costurilor pe 1 Gcal datorită efectului de scară Livrarea energiei termice de la producători la revânzătorii-angrosişti (S A "Termocom", ARP "Termocomenergo") la un preţ real de transfer (pentru S A "Termocom" – 67 lei/Gcal, pentru ARP "Termocomenergo" – 88 9 lei/Gcal) va permite eliminarea pierderilor financiare la producători şi îmbunătăţirea calităţii energiei livrate Preţul de transfer mai înalt pentru ARP "Termocomenergo" este cauzat de faptul că Termocomenergo procură energie termică de la Centrala electrică de termoficare Nord (Bălţi), care are cheltuieli suplimentare pentru întreţinerea reţelelor termice din m Bălţi (48 km) şi preţul existent pentru apă la nivel de 7 98 lei faţă de 2 8-3 1 lei/ m3 şi procurarea energiei termice de la fabricile de zahăr cu un preţ mai înalt decât la CET (95 lei/Gcal)

Componentele majore în structura cheltuielilor de producere a energiei electrice şi termice sunt combustibilul (81-83%), amortizarea mijloacelor fixe şi cheltuielile de reparaţie (8 5-10 5%) La calcularea tarifelor la energia electrică şi termică rata beneficiului a fost luată la nivelul de 5% de la costuri Preţul mediu de transfer a energiei electrice de la centralele locale este de 13 87 bani/kWh Calculile detaliate a tarifelor pentru producerea energiei electrice şi termice se anexează

b) *Transport şi distribuţie de energie electrică*

Componentele principale în structura serviciilor de transport şi distribuţie sunt cheltuielile pentru amortizare şi întreţinere a reţelelor electrice (transportare – 64 3% şi distribuţie – 74 8%) Pierderile tehnice normative în reţelele de tensiune înaltă sunt stabilite la nivelul de 4 74% de la livrarea în sistem şi cele din reţelele de tensiune joasă de 9 3% de la livrarea în reţeaua de distribuţie Ponderea pierderilor tehnice de energie incluse în tariful final sunt la nivelul de 2 76 bani/kWh sau 11% din tariful final (faţă de mai mult de 25% de facto) Tariful pentru serviciile de transport va fi 1 4 bani/kWh, pentru serviciile de distribuţie – în mediu 4 68 bani/kWh Aceste tarife pot fi diminuate odată cu creşterea volumelor de livrare a energiei electrice

Tariful unic pentru toţi consumatorii finali este calculat la nivelul de 25 bani/kWh, având următoarea structură

- Preţul mediu de procurare a energiei este de 16 1 bani/kWh [Ucraina – 16 6 bani/kWh, ponderea – 34%, CERS Moldova – 17 77 bani/kWh, ponderea – 39%, producătorii locali – 13 06 bani/kWh (ponderea – 27%)],
- Transportul şi distribuţia – 6 01 bani/kWh,
- Pierderile tehnice – 2 76 bani/kWh

Cauza majorării tarifului final existent de 24 bani/kWh la 25 bani/kWh se datorează măririi tarifului în cazul producătorilor, după cum s-a menţionat mai sus, măririi poziţiei "diferenţa de curs valutar" în cazul importului de energie din cauza deprecierii monedei naţionale (4 68 lei/1 $ S U A la calcularea tarifelor în 1997 ⇒ 4 716 lei/1 $ S U A la calcularea tarifelor în 1998), măririi fondului de amortizare a mijloacelor fixe (la stabilirea tarifelor în 1997 acest fond a fost luat la nivelul de numai 25% de la cel calculat)

La calcularea tarifului final de 25 bani/kWh nu s-a inclus marja pentru deservirea datoriilor istorice, estimată la un nivel de circa 3 bani/kWh pe o perioadă de 5 ani Soluţionarea problemei în cauză necesită stabilirea şi implementarea unor modalităţi de rambursare a acestor datorii cu luarea deciziilor de rigoare de către Guvern

Reiişind din faptul că actualmente a apărut problemă plăţii pentru tranzitul energiei electrice prin Transnistria tariful va fi de 25 5- 26 bani/ kWh

c) *Distribuţia de energie termică*

Tariful unic de livrare a energiei termice pentru toţi consumatorii finali în cazul S A "Termocom" este de 116 lei/Gcal, iar în cazul ARP "Termocomenergo" – 146 lei/Gcal Este de menţionat că a avut loc o reducere substanţială a tarifelor pentru consumatorii bugetari şi industriali de la nivelul existent de 215 lei/Gcal şi respectiv 165 lei/Gcal la 116 lei/Gcal în cazul SA "Termocom" şi 146 lei în cazul ARP "Termocomenergo" Reducerile constituie 46%- 32% şi respectiv 30%- 12% Pentru populaţie tariful preconizat prevede o majorare cu 67 6% în cazul "Termocom" şi de 2 1 ori în cazul "Termocomenergo"

Structura tarifului final de la S A "Termocom" de 116 lei/Gcal este următoarea

- Preţul energiei procurate este de 67 07 lei/Gcal (57 8%),
- Pierderile tehnice normative – 11 5 lei/Gcal (9 9%),
- Combustibi- 3 7 lei/ Gcal (3 2%)
- Cheltuielile de amortizare şi întreţinere a reţelelor termice – 13 7 lei/Gcal (11 8%),
- Alimentarea reţelelor cu apă de adaos, tratată chimic – 4 3 lei/Gcal (3 7%),
- Energia electrică utilizată în procesul tehnologic şi la staţiile de pompare – 4 5 lei/Gcal (3 9%),
- Restul poziţiilor (9 7%) sunt formate din cheltuielile pentru remunerarea muncii şi asigurarea socială (3 8%), beneficiul la nivel de 5% din cheltuielile

158

proprii (1 4%), dobînda pentru plata creditului Băncii Europene pentru Reconstrucţie şi Dezvoltare (2 7%) şi alte cheltuieli (1 3%) Calculile detaliate se anexază

Structura tarifului final de la ARP "Termocomenergo" de 146 lei/Gcal este următoarea

- Energia produsă şi procurată – circa 89 lei/Gcal (61 0%),
- Pierderile tehnice- 15 9 lei/Gcal (10 9%),
- Energia electrică – 8 3 lei/Gcal (5 7%),
- Cheltuielile de amortizare şi reparaţie –19 4 lei/Gcal (13 3%),
- Restul poziţiilor (9 1%) sunt formate din cheltuielile pentru remunerarea muncii, asigurarea socială, beneficiul la nivel de 5%din cheltuielile proprii şi alte cheltuieli Calculile detaliate a tarifului sunt anexate

Bineînţeles, în cazul ajustării tarifelor la energia termică se cere luarea unor măsuri adecvate de protecţie socială prin acordarea subvenţiilor respective categoriilor realmente vulnerabile ale populaţiei

Este de menţionat că la calcularea tarifului la gazele naturale de 406 şi respectiv 420 lei sunt incluse 39 lei/ 1000 m3 pentru deservire datoriilor în sumă de 140 mil dolari SUA reeşalonate de Gazprom cu rata dobînzii de 7 5% anual În cazul excluderii acestei sume din tarif, tariful de bază poate fi micşorat până la 367 lei/1000 m3 pentru companiile energetice şi 381 lei pentru alţi consumatori La rândul său micşorarea tarifului la gaze naturale va da posibilitatea de a reduce tariful la energia termică livrată de SA "Termocom" de la 116 lei/Gcal la 110 lei şi la energia termică livrată de ARP "Termocomenergo" de la 146 lei/Gcal la 142 lei Însă în acest caz se cer surse suplimentare pentru plata a 7 5% anual pentru datoriilor reeşalonate

Principiile de stabilire şi aplicare a tarifelor pe viitor

Mecanismul aplicat la determinarea şi reglementarea tarifelor pentru viitor se va baza pe următoarele principii

asigurarea consumatorilor cu energie fiabilă la tarife transparente şi justificate,

tarifele vor acoperi cheltuielile operaţionale şi vor include o rată rezonabilă de profit, necesară pentru activitatea normală a întreprinderilor şi recuperarea investiţiilor efectuate,

la stabilirea tarifelor se va ţine cont de cheltuielile pentru întreţinerea capacităţilor de rezervă, necesare pentru alimentarea fiabilă a consumatorilor cu energie electrică şi termică cît şi pentru acoperirea cheltuielilor pentru protecţia mediului ambiant,

sistemul de reglementare a tarifelor va fi orientat astfel ca alimentarea consumatorilor cu energie electrică şi termică să se facă cu cheltuieli minime prin utilizarea eficientă a capacităţilor de generare, transport şi distribuţie,

tarifele pentru consumatorii finali nu trebuie să conţină oarecare devieri de la costul real al energiei (înlesniri sau supraevaluări) aplicate diferitor categorii de consumatori, care ar duce la subvenţionări încrucişate,

la stabilirea tarifelor se va ţină cont de securitatea energetică a statului şi conjunctura pieţei

Politica tarifară promovată de ANRE se va baza pe Metodologia privind alocarea costurilor şi calcularea tarifelor, care în timpul apropriat va fi prezentată Guvernului spre examinare şi aprobare Metodologia dată prevede reglementarea tarifelor de bază pe o perioadă de 3 ani cu ajustarea lor anuală reieşind din următorii indici fluctuaţia preţurilor la combustibilii unilizaţi pentru producerea energiei, fluctuaţia preţurilor la energia importată, rata inflaţiei, sporirea eficienţei şi altor factori Precizarea tarifelor se prevede de a efectua conform următoarele formule

Tariful pentru energia electrică(termică) produsă:

$$TP = Tpo \times W + Q:V;$$

$$W = We \times [Rt \times t + (1-Rt) \times I: Ie];$$

$$t = Mg \times tg + Mp \times tp + Mc \times tc;$$

$$I = Ie \times [1 + (Y:Ye - 1) : K],$$

unde **TP** – tariful pentru energia electrică (termică) produsă,

Tpo –tariful de bază pentru energia electrică (termică) produsă,

W – coeficientul de precizare a tarifului,

We – coeficientul de precizare a tarifului, calculat la precizarea precedentă a tarifului,

Rt - ponderea cheltuielilor pentru combustibil în cheltuielile totale pentru producerea energiei,

t - indicile modificării preţurilorla combustibil faţă de preţurile existente la data calculării tarifelor de bază,

I - rata (coeficientul) inflaţiei,

Ie - rata inflaţiei calculată la precizarea anterioară a tarifelor,

Mg, Mp şi Mc - ponderea cheltuielilor pentru gaz, păcură şi cărbune în cheltuielile totale pentru combustibilul consumat la producerea energiei,

tg, tp şi tc - indicii modificării preţurilor la gaz, păcură şi cărbune faţă de preţurile existente la data calculării tarifelor de bază,

Y - indicile preţurilor la producţia industrială (fără producţia alimentară) pe perioada dintre data stabilirii tarifelor de bază şi data fixată pentru precizarea tarifelor,

160

Ye - indicile preţurilor la producţia industrială luat în consideraţie la precizarea anterioară a tarifelor,
K - coeficientul eficienţei

Tariful pentru serviciile de transport a energiei electrice şi a gazelor naturale

TT = (TTo x I . Ie) : Kt

unde **TT** – tariful pentru serviciile de transport,
TTo – tariful de bază pentru serviciile de transport,
Kt - coeficientul diviziei volumelor de energie (gaze) transportate faţă de volumele luate la calcularea tarifelor de bază

Tariful pentru serviciile de distribuţie a energiei electrice (termice) şi a gazelor naturale

TD = (TDo x I: Ie) · Kd

unde **TD** – tariful pentru serviciile de distribuţie,
TDo – tariful de bază pentru serviciile de distribuţie,
Kd - coeficientul diviziei volumelor de energie (gaze) distribuite faţă de volumele luate la calcularea tarifelor de bază

Tariful pentru energia termică livrată consumatorilor finali·

$$TAt = \frac{PCt \quad (1 - V\,\mathrm{Pr}) + TD}{1 - PN}$$

unde **TAt** – tariful de livrare a energiei termice consumatorilor finali,
PCt – preţul mediu de procurare (livrare) a 1 Gcal energie termică

161

de la producători,
VPr – ponderea pierderilor normative de energie termică în reţele,
TD – tariful de distribuţie a energiei termice,
PN – ponderea neplăţilor pentru energia consumată (0=PN< 0 05)

Tariful pentru energia electrică şi gazele naturale livrate consumatorilor finali

$$TA = \frac{[PC + TT(1 - VPt)]\ [(1 - VPt)(1 - VPd)] + TD}{1 - PN}$$

unde **TA** - tariful de livrarea a energiei electrice (gazelor naturale) consumatorilor finali,
PC – preţul mediu de procurare a 1kWh energiei electrice (1000m3 gaze naturale) de la producătorii locali, furnizori sau din import,
TT – tariful pentru serviciile de transport,
VPt – ponderea pierderilor tehnice normative de energie electrică (gaze naturale) în reţelele de transport,
VPd – ponderea pierderilor tehnice normative de energie electrică (gaze naturale) în reţelele de distribuţie,
TD – tariful pentru serviciile de distribuţie a energiei electrice (gazelor naturale),
PN – ponderea neplăţilor pentru energia (gazele naturale) consumată (0=PN< 0 05)

Remarcă

La calcularea tarifelor de bază profitul este calculat la nivel de 5% din cheltuieli Odată cu privatizarea sectorului electroenergetic şi în conformitate cu condiţiile economiei de piaţă profitul se va calcula reieşind din rata recuperării investiţiilor efectuate

II. Autorizarea activităţilor în sectorul energetic prin eliberarea licenţelor

O altă funcţie de promovare a eficienţei economice, de reglementare şi supraveghere efectivă a sectorului energetic şi care nemijlocit ţine de activitatea Agenţiei Naţionale pentru Reglementare în Energetică constă în autorizarea activităţilor în sectorul energetic prin intermediul eliberării licenţelor şi monitorizării respectării condiţiilor licenţelor Eliberarea licenţelor operaţionale întreprinderilor sectorului energetic şi implementarea unui cadru de reglementare transparent este o condiţie cheie pentru realizarea cu succes a procesului de restructurare şi privatizare a acestei infrastructuri strategice

În acest context Agenţia Naţională pentru Reglementare în Energetică a elaborat 6 tipuri de licenţe pentru practicarea activităţilor din sectorul electroenergetic (producere, transport, distribuţie, dispecerat, furnizare a energiei electrice la tarife reglementate şi furnizare a energiei electrice la tarife nereglementate), 6 tipuri de licenţe pentru practicarea activităţilor din sectorul de gaze (producere, stocare, transport, distribuţie, furnizare a gazelor naturale la tarife reglementate şi furnizare la tarife nereglementate) şi 2 tipuri de licenţe pentru activităţile sectorului termoenergetic (producere, distribuţie şi furnizare a energiei termice la tarife reglementate) În conformitate cu Hotărârea Guvernului Republicii Moldova nr 110 din 2 februarie 1998 "Cu privire la reglementarea unor genuri de activitate în Republica Moldova " Agenţia a elaborat Regulamentele respective cu privire la modul de eliberare a licenţelor Regulamentul cu privire la modul de eliberare a licenţelor pentru activităţile din sectorul electroenergetic a fost coordonat cu Ministerul Economiei şi Reformelor, Ministerul Finanţelor, înregistrat la Ministerul Justiţiei şi publicat în Monitorul oficial La şedinţele publice deschise organizate de Agenţie pe data de 4 şi 9 iunie curent cu participarea reprezentanţilor ministerelor, departamentelor, întreprinderilor, mass- media şi publicului au fost examinate cererile de eliberare a licenţelor Au fost eliberate licenţe la 3 întreprinderi de producere a energiei (CET-1,CET-2, CET Nord), la toate 5 întreprinderi de distribuţie (licenţe pentru activitatea de distribuţie şi pentru activitate de furnizare a energiei electrice la tarife reglementate) şi la 4 firme particulare (licenţe de furnizare a energiei electrice la tarife nereglementate) În sectorul electroenergetic actualmente activează fără licenţă numai o singură întreprindere –întreprinderea de stat "Moldtranselectro", care încă nu a prezentat documentele necesare pentru eliberarea licenţelor pentru activitatea de dispecerat şi de transport a energiei electrice (din cauza neînregistrării întreprinderii)

În sectorul de gaze şi sectorul termoenergetic procedura de eliberare a licenţelor va începe după coordonarea şi aprobarea regulamentelor cu privire la modul de eliberare a licenţelor pentru aceste ramuri, care actualmente sunt prezentate spre examinare şi coordonare întreprinderilor din aceste ramuri şi ministerelor respective

Calculul tarifului la gaze naturale

Denumirea indicilor	Unitatea de măsură	1996 de facto		1997 de facto		1998 Moldovagaz		1998 calculat ANRE	
		total	1000 m3	total	1000m3	total	1000m3	total	1000 m3
Gazul procurat	mil m3	2049 06		2079 44		2150		2150	
inclusiv CERS	mil m3	514 95		438 27		404		404	
Vsemirnîi Dom	mil m3	81 96							
pentru malul drept	mil m3	1452 15		1641 17		1746		1746	
Pierderi şi consum tehno-									
logic în reţelele de transport	mil m3	167 48		128 15		68		68	
inclusiv transmise deTiraspolgaz	mil m3	94 2		73 12		41		41	
Livrat pentru aliment auto	mil m3	8 42		10 47		8		8	
Gazul livrat în reţelele de									
distribuţie	mil m3	1276 25		1502 55		1670		1670	
Pierderile tehnice în RD	mil m3	111 98		68 26		68 5		68 5	
Gaz livrat util	mil m3	1164 27		1434 29		1601 5		1601 5	
Volumul gaz tranzit	mil m3	22396 76		16933 7		20267		20267	
Transportul de gaze.									
Cheltuieli materiale	mii lei	2137 6	1 67	2854 9	1 9	5500	3 29	4500	2 69
Reparaţii curente şi capitale	mii lei	1898	1 49	2381 1	1 58	2700	1 62	2700	1 62
Energia electrică	mii lei	433 1	0 34	380 6	0 25	469	0 28	469	0 28
Costul pierderilor de gaz	mii lei	41430 8	32 46	31051 5	20 67	18774	11 24	18774	11 24
inclusiv de la Tiraspoltransgaz	mii lei			19654	13 08	11319	6 78	11319	6 78
Serviciile Tiraspoltransgaz	mii lei	9022 7	7 07	7209 7	4 80	7686	4 60	7686	4 60
Servicii transport	mii lei	107 4	0 08	391 4	0 26	200	0 12	200	0 12
Remunerarea muncii	mii lei	1633 1	1 28	2025 8	1 35	2600	1 56	2250	1 35
Asigurarea socială	mii lei	582 1	0 46	607 7	0 40	806	0 48	698	0 42
Amortizarea mijloacelor fixe	mii lei	15095 5	11 83	7793 2	5 19	29670	17 77	27539	16 49
Alte cheltuieli	mii lei	8011 7	6 28	2111 3	1 41	2782	1 67	2321	1 39
inclusiv									
dobînzi bancare	mii lei	6349 2	4 97	313 9	0 21	0		0	
deplasări	mii lei	268 2	0 21	392 5	0 26	400	0 24	350	0 21
servicii telecomunicaţii, inf ,calcul	mii lei	115 9	0 09	165 7	0 11	180 7	0 11	180	0 11
servicii bancare	mii lei	131 1	0 10	84 2	0 06	100	0 06	89	0 05
întreţinerea organului suprem	mii lei	491 4	0 39	622 4	0 41	400		0	
taxa vamală	mii lei			0		1465 2	0 88	1465	0 88
reserve de concediu	mii lei			466 1	0 31		0 00	22	0 01
alte cheltuieli	mii lei	655 9	0 51	66 5	0 04	237	0 14	215	0 13
Total cheltuieli	mii lei	80352	62 96	56807 2	37 81	71186 7	42 63	67136	40 0
Beneficiu 10% din cheltuieli	mii lei					7118 7	4 26	6714	4 0
Tariful pentru transport gaz	lei /1000m3		**39 8**		**40**		**46 89**	**73850**	**44 0**

1	2	3	4	5	6	7	8	9	10
Preţul de procurare gaz natural	lei /1000m3		247 66		271 44		273 57		275 5
Diferenţa de curs	lei /1000m3		18 71		19 97		4 77		2 33
Total tarif de livrare a gazului	lei /1000m3		**306 17**		**331 41**		**325 23**	**537505 84**	**322**
Distribuţia									
Cheltuieli materiale	mii lei	7451 3	6 4	10267 4	7 16	11499 5	7 18	13490	8 42
Pierderi gaze	mii lei	28886	24 81	21069	14 69	22268 5	13 90	22057	13 77
Remunerarea muncii	mii lei	4889 9	4 2	8290 7	5 78	12355 2	7 71	12355	7 71
Asigurarea socială	mii lei	1746 4	1 5	3003 3	2 09	3830 1	2 39	3830	2 39
Amortizarea mijloacelor fixe	mii lei	6019 3	5 17	10980 1	7 66	12825	8 01	12825	8 01
Alte cheltuieli	mii lei	4633 4	3 98	4804 4	3 35	5380 9	3 36	5231	3 27
inclusiv	mii lei								
credite bancare	mii lei	791 3	0 68	197 5	0 14	240	0 15	240	0 15
deplasări	mii lei	309 1	0 27	498 2	0 35	500	0 31	450	0 28
impozite	mii lei	18 1	0 02	6 3	0 00	8	0 00	8	0 00
servicii telecomun ,inform, calcul	mii lei	1013 8	0 87	1397 8	0 97	1619 1	1 01	1619	1 01
servicii bancare	mii lei	223 4	0 19	292 7	0 20	350	0 22	350	0 22
paza	mii lei	37 9	0 03	84	0 06	100	0 06	100	0 06
pregătirea cadrelor	mii lei	86 6	0 07	165 1	0 12	180	0 11	180	0 11
reclamă şi audit	mii lei	41 3	0 04	133 2	0 09	150	0 09	135	0 08
servicii comunale	mii lei	18 8	0 02	20 2	0 01	40	0 02	25	0 02
plata de arendă	mii lei	75 3	0 06	199 7	0 14	270	0 17	200	0 12
plata pentru asigurare	mii lei	165 5	0 14	172 5	0 12	130	0 08	130	0 08
alte cheltuieli	mii lei	1852 3	1 59	1637 2	1 14	1793 8	1 12	1794	1 12
Fodul de rezervă pentru înlesniri	mii lei	16131	13 86	27466 6	19 15	35390	22 10	0	
Total cheltuieli	mii lei	69757 3	59 92	85881 5	59 88	103549	64 66	69788	43 58
Beneficiu 10% din cheltuieli	mii lei		-48 81		0 99/19 43	31270	19 81	6979	4 36
Tariful pentru distribuţie	lei/ 1000m3		11 11		60 87/83 59		**84 47**	**76767**	**47 9**
Deservirea datoriilor reeşalonate	lei/ 100M3		0		18 43 / 39		39 00		0 0
Tariful mediu de livrare a gazului	lei/ 1000 m3		317 28		383 05/ 454		**448 70**	**633874**	**370**

Calculul tarifului pentru distribuţia energiei electrice

Indicii	unittat de măsură	RED Nord	RED Nord-V	RED SUD	RED Centru	RED Chişinău	Total RED
Energia procurată	mil kWh	890	585	620	875	1522	4492
Pierderile tehnice normative	mil kWh	87 8	63 2	60 3	94 6	155 5	461 4
Energia livrată consum	mil kWh	802 2	521 8	559 7	780 41	1366 5	4030 6
Costul energiei procurate	**mii lei**	**159755**	**105008**	**111290**	**157063**	**273199**	**806314**
	bani/kWh	**17 95**	**17 95**	**17 95**	**17 95**	**17 95**	**17 95**
Cheltuielile intreprinderilor							
Cheltuieli materiale	mii lei	13956	7120	7446	13500	14200	56222
Remunerarea muncii	mii lei	4465	3017	3795	4888	3655	19820
Asigurarea socială	mii lei	1384	935	1176	1515	1133	6144 2
Amortizarea mijloacelor fixe	mii lei	15789	11952	12788	15137	32916	88582
Întreţinerea reţelelor interne	mii lei	2747	1121	1380	1629	8522	15399
Alte cheltuieli	mii lei	2780	1905	2522	2940	6460	16607
Total cheltuieli	**mii lei**	**41121**	**26050**	**29107**	**39609**	**66886**	**202774**
	bani/kWh	**5 1**	**4 99**	**5 20**	**5 08**	**4 89**	**5 03**
Beneficiu 5%	mii lei	2056	1303	1455	1980	3344	10139
	bani/kWh	0 26	0 25	0 26	0 25	0 24	0 25
Total cost	**mii lei**	**43177**	**27353**	**30563**	**41590**	**70230**	**212913**
	bani/kWh	**5 38**	**5 24**	**5 46**	**5 33**	**5 14**	**5 28**
Costul energiei livrate	**mii lei**	**202932**	**132360**	**141853**	**198652**	**343429**	**1019227**
	bani/kWh	**25 30**	**25 37**	**25 35**	**25 45**	**25 13**	**25 29**
inclusiv pierderile normative	mii lei	15767 8	11340 8	10828 52	16978 5	27912 3	82827 9
	bani/kWh	1 97	2 17	1 93	2 18	2 04	2 05
Reducerea la plite electrice	mii lei	890	246	317	299	2440	4192
	bani/kWh	0 11	0 05	0 06	0 04	0 18	0 10
Tarif	bani/kWh	25 41	25 41	25 40	25 49	25 31	25 39

Calculul tarifului pentru transportul energiei electrice

Denumirea indicilor	Unitate de măsură	1997 trim IV		1998 Transelectro		1998 ANRE	
		total	1 kWh	total	1kWh	total	1 kWh
1	2	3	4	5	6	7	8
1 Energia procurată	mil kWh	1356 1		4566 3		4693	
inclusiv							
CET-1	mil kWh	32 3		98		120 6	
CET-2	mil kWh	309 9		1021 8		1100	
CET Nord	mil kWh	19 7		61 6		62 4	
CHE Costeşti	mil kWh	14 7		85		85	
CERS Moldova	mil kWh	699 8		1526 8		1351 9	
CND Ucraina	mil kWh	268 4		1752		1752	
Furnizori independenţi	mil kWh					200	
Uzinele de zahăr	mil kWh	11 3		21 1		21 1	
2 Pierderile tehnice de energie	mil kWh	73 9		217 5		200 9	
3 Energia livrată RED	mil kWh	1282 2		4348 8		4492 1	
4 Preţul mediu de procurare	bani/ kWh	16 00		15 83		15 59	
inclusiv							
CET-1	bani/ kWh	10 3		10 3		13 2	
CET-2	bani/ kWh	13 37		13 37		12 8	
CET Nord	bani/ kWh	12 6		12 6		16	
CHE Costeşti	bani/ kWh	1 26		1 76		1 22	
CERS Moldova	bani/ kWh	17 71		17 92		17 77	
CND Ucraina	bani/ kWh	16 54		16 6		16 6	
Furnizori independenţi	bani/ kWh					15 2	
Uzinele de zahăr	bani/ kWh	11 13		11 13		11 13	
5 Costul energiei procurate	mii lei	217013 6	16 93	722749 3	16 62	731553 3	16 29
inclusiv	mii lei						
CET-1	mii lei	3326 9		10094		15919 2	
CET-2	mii lei	41433 6		136614 7		140800	
CET Nord	mii lei	2482 2		7761 6		9984	
CHE Costeşti	mii lei	185 2		1496		1037	
CERS Moldova	mii lei	123934 6		273602 6		240232 6	
CND Ucraina	mii lei	44393 36		290832		290832	
Furnizori independenţi	mii lei					30400	
Uzinele de zahăr	mii lei	1257 7		2348 4		2348 4	
6 Cheltuieli de transport şi dispecer	mii lei						
Materiale şi servicii	mii lei	7513 3	0 59	23133 1	0 53	17164	0 35
Servicii de tranzit						6600	0 15
Amortizarea mijloacelor fixe	mii lei	2029 4	0 16	28175 7	0 65	27393	0 55
Remunerarea muncii	mii lei	1169 4	0 09	14742 3	0 34	5920	0 12
Asigurarea socială	mii lei	316	0 02	4570	0 11	1835 2	0 04
Alte cheltuieli	mii lei	3596 9	0 28	114392 8	2 63	12106 6	0 25
inclusiv	mii lei						
asigurarea obligatorie	mii lei	0	0 00	5819 1	0 13	700	0 01
dobînzi bancare	mii lei	3002 8	0 23	9928	0 23	7500	0 15
deplasări	mii lei	130 6	0 01	691 8	0 02	600	0 01
impozite	mii lei	12 5	0 00	93783 5	2 16	620 8	0 01
servicii telecomunicaţii şi de calcul	mii lei	128 2	0 01	735 2	0 02	612	0 01
servicii bancare	mii lei	1 8	0 00	276 8	0 01	277	0 01
paza	mii lei	102 9	0 01	530	0 01	441	0 01

1	2	3	4	5	6	7	8
pregătirea cadrelor	mii lei	6 7	0 00	737 1	0 02	245 8	0 00
reclamă şi audit	mii lei	1 6	0 00	80	0 00	80	0 00
servicii comunale	mii lei	188	0 01	380	0 01	380	0 01
cheltuieli de protocol	mii lei		0 00	532 9	0 01	100	0 00
alte cheltuieli	mii lei	21 8	0 00	550	0 01	550	0 01
Total cheltuieli de transport	mii lei	14625	1 14	190346 3	4 38	71018 8	1 58
Beneficiu 5 %	mii lei	1658 9	0 13	9517 3	0 22	3550 9	0 07
Tarif pentru transport	**mii lei**	**16283 9**	**1 27**	**199863 6**	**4 6**	**74569 7**	1 66
Total cost transport şi energie	mii lei	233297 5	18 20	922612 9	21 22	806123 0	17 95
inclusiv pierderile de energie	mii lei	11826 0	0 92	34425 7	0 79	32710 5	0 73
Tariful de livrare RED			**17 76**		**21 22**		17 95
Tariful de livrare a energiei de la Transelectro RED							
în cazul livr□rii energiei de la CET direct RED						618122 0	19 26
Transportul energiei de la CET						21298	1 66

Calculul tarifului la energia termică livrată de ARP "Termocomenergo"

Denumirea indicatorilor	Unitate de măsură	1996 de facto		1997 de facto		1998 Termocomenergo		1998 calculat ANRE	
		total	1 Gcal livr util	total	1 Gcal livr util	total	1 Gcal livr util	total	1 Gcal livr util
1	2	3	4	5	6	7	8	9	10
1 Energia produsă	mii Gcal	1054 1		975 1		1037		1100	
2 Consum propriu	mii Gcal	47 4		44 5		46		48	
3 Energia procurată	mii Gcal	650 7		505 2		520		620	
inclusiv CET Nord	mii Gcal			364 3		370		470	
alţi producatori	mii Gcal			140 9		150		150	
4 Peirderi în reţele	mii Gcal	193 4		197 2		211		242	
5 Energia livrată util	mii Gcal	1464		1238 6		1300		1430	
inclusiv abur	mii Gcal	10 7		29 7		30		30	
6 Tariful de procurare	lei/Gcal	40 97		49 89				87 1	
inclusiv CET Nord	lei/Gcal					51		84 6	
alti producatori	lei/Gcal					135		95	
Cheltuieli									
7 Costul energiei procurate	mii lei	26661 5	18 21	25205	20 35	39120	30 09	54012	37 77
8 Combustibil	mii lei	63645 7	43 47	68094 6	54 98	74569 7	57 36	64408	45 04
9 Apă	mii lei	7067 9	4 83	9342 3	7 54	14875 4	11 44	9817 1	6 87
10 Reagenţi chimici	mii lei	1311 6	0 90	1214 2	0 98	1134 4	0 87	1040 4	0 73
11 Materiale şi servucii	miilei	13920 4	9 51	18137 9	14 64	19010	14 62	7890	5 52
12 Energia electrică	mii lei	8219 9	5 61	11382	9 19	10560	8 12	12034	8 42
13 Amortizarea mijl fixe	mii lei	4449 9	3 04	4956 9	4 00	5204 7	4 00	19828	13 87
14 Remunerarea muncii	mii lei	9594 4	6 55	13856 4	11 19	18672	14 36	17556	12 28
15 Asigurarea socială	mii lei	4952 2	3 38	5038 5	4 07	5601 6	4 31	5442 4	3 81
16 Alte cheltuieli	mii lei	15396 4	10 52	20056 7	16 19	18876	14 52	8275 3	5 79
inclusiv									0 00
impozite	mii lei	299 3	0 20	318 8	0 26	320	0 25	320	0 22
TVA	mii lei	914 7	0 62	853 4	0 69				
dobinzi bancare	mii lei	11088 6	7 57	14378	11 61	14000	10 77	4000	2 80
asigurarea obligatorie	mii lei	575 5	0 39	523 2	0 42	524	0 40	524	0 37
servicii telecomunicaţii şi de calcul	mii lei	399 9	0 27	378 1	0 31	350	0 27	350	0 24
servicii bancare	mii lei	258	0 18	225 4	0 18	225	0 17	225	0 16
deplasări, pregăt cadrelor	mii lei	447 7	0 31	356 3	0 29	356 3	0 27	356 3	0 25

1	2	3	4	5	6	7	8	9	10
plata de arendă	mii lei	55	0 04	64 7	0 05	65	0 05	65	0 05
servicii comunale	mii lei	7 8	0 01	33 7	0 03	35	0 03	35	0 02
alte cheltuieli	mii lei	1349 9	0 92	2925 1	2 36	3000 7	2 31	2400	1 68
Total cheltuieli	mii lei	155219 9	106 02	177284 5	143 13	207623 8	159 71	200303 2	140 07
Beneficiu 5 % din cheltuieli									0 00
fără energia procurată	mii lei	-12510 3	-8 55	-51156 1	-41 30	10381 2	7 99	7314 6	5 12
Tarif de livrare	lei/Gcal	142709 6	97 48	126128 4	101 83	218005 0	167 70	207617 7	145 2
inclusiv abur	lei/Gcal							4500 0	150 00
apă caldă	lei/Gcal							203117 7	145 1

Calculul tarifului la energia termică livrată de S.A. "Termocom"

Denumirea indicilor	Unitatea de măsură	1996 de facto		1997 de facto		1998 Termocom		1998 ANRE	
		total	1 Gcal livr util	total	1 Gcal livr util	total	1 Gcal livr util	total	1 Gcal livr util
1	2	3	4	5	6	7	8	9	10
Energia termică produsă	mii Gcal	47 5		58 7		150		150	
Consum propriu	mii Gcal	8 4		9 2		10		10	
Energia termică procurată	mii Gcal	2600 4		2528 3		3156		2976	
inclusiv CET-1	mii Gcal							535	
CT Sculeni	mii Gcal							400	
CET-2	mii Gcal							1441	
CT Est	mii Gcal							320	
RAPDET	mii Gcal							280	
Moldenergo	mii Gcal	2597 2		2525 8		2600		0	
Pierderi de energie	mii Gcal	617 3		600 3		725		592	
Energa livrată	mii Gcal	2022 2		1977 5		2571		2524	
Tarifful mediu de procurare a energiei termice-total	**lei/ Gcal**	**22 00**		**39 80**		**66 27**		**63 86**	
inclusiv CET-1	lei/ Gcal							55	
CT Sculeni	lei/ Gcal							66 8	
CET-2	lei/ Gcal							62 7	
CT Est	lei/ Gcal							73	
RAPDET	lei/ Gcal							72 1	
Costul energiei procurate	**mii lei**	**57220 5**	**28 30**	**100614**	**50 88**	**209164**	**81 36**	**190044**	**75 29**
inclusiv CET-1	mii lei							29425	**11 7**
CT Sculeni	mii lei							26720	**10 6**
CET-2	mii lei							90350 7	**35 8**
CT Est	mii lei							23360	**9 3**
RAPDET	mii lei							20188	**8 0**
Combustibil	mii lei	3455 2	1 71	4799 3	2 43	11016	**4 28**	9000	**3 6**
Apă tehnologică	mii lei	585 5	0 29	857 9	0 43	1593	**0 62**	1408	**0 6**
Apă de adaos	mii lei	0	0 00	0	0 00	18916	**7 36**	11509	**4 6**
Energia electrică	mii lei	4280 7	2 12	10357 6	5 24	14118	**5 49**	12910	**5 1**
Materiale	mii lei	3361 2	1 66	6029 6	3 05	6105	**2 37**	6105	**2 4**

1	2	3	4	5	6	7	8	9	0 0
Cheltuieli de reparaţii	mii lei	8583 6	4 24	12077 8	6 11	18131	**7 05**	8500	**3 4**
Cheltuieli pentru deservirea									**0 0**
reţelelor interne	mii lei	2525	1 25	2786	1 41	5615	**2 18**	3000	**1 2**
Uzura mijlocelor fixe	mii lei	7605	3 76	6622 4	3 35	19345	**7 52**	19345	**7 7**
Remunerarea muncii	mii lei	6027	2 98	8880 4	4 49	9083	**3 53**	9083	**3 6**
Asigurarea socială	mii lei	3096	1 53	3946 1	2 00	2816	**1 10**	2816	**1 1**
Alte cheltuieli -total	mii lei	10023 6	4 96	3009 1	1 52	5473	**2 13**	4145 4	**1 6**
inclusiv									**0 0**
impozite	mii lei	7080	3 50	855 6	0 43	1070	**0 42**	386	**0 2**
credite bancare	mii lei			220	0 11	769	**0 30**	769	**0 3**
servicii telecomunicaţii, informatică şi de calcul	mii lei	437	0 22	431 7	0 22	483	**0 19**	393	**0 2**
paza, preg cadrelor, deplasări	mii lei	190	0 09	237 3	0 12	247	**0 10**	247	**0 1**
servicii bancare	mii lei	147	0 07	254	0 13	254	**0 10**	254	**0 1**
reclamă şi audit	mii lei			292 6	0 15	218	**0 08**	218	**0 1**
rezerve pentru concediu	mii lei	988 8	0 49	276 3	0 14	79	**0 03**	79	**0 0**
alte cheltuieli	mii lei	1180 8	0 58	441 6	0 22	2353	**0 92**	1800	**0 7**
Total cheltuieli	**mii lei**	**106763 3**	**52 80**	**159980**	**80 90**	**321375**	**125 00**	**277865**	**110 1**
Total cheltuieli fără enrgia proc	mii lei	49542 6	24 50	59366 2	30 02	112211	**43 64**	87821 5	**34 8**
Beneficiu 5 % din cheltuieli fără costul energiei procurate	mii lei					5611	**2 18**	4391	**1 7**
Beneficiu (rambursarea creditului)	mii lei					8300	**3 23**	8300	**3 3**
Total beneficiu energiei livrate	**mii lei**	**54467 2**	**26 93**	**9381 2**	**4 74**	**13911**	**5 41**	**12691**	**5 0**
Tarif de livrare a energiei	**lei / Gcal**	**161230 5**	**79 73**	**169361**	**85 64**	**335286**	**130 41**	**290556**	**115 1**

Calculul tarifului la energia termică produsă şi transport abur de S A RAPDET

Denumirea indicatorilor	Unitate de măsură	1997 de facto		1998									
				CT Sud		CT Munceşti		Total energie produsă		Transport abur		Total	
		total	1 Gcal	total	1 Gcal	total	1 Gcal	total	1 Gcal	total	1 Gcal	calculat ANRE	calculat RAPDET
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Energia termică podusă	mii Gcal	262 8		307 3		10 5		317 8				317 8	262 8
inclusiv abur	mii Gcal	22 8		27 3		10 5		37 8				37 8	9 5
2 Energia procurată	mii Gcal	244 5								296		296	296
inclusiv abur	mii Gcal	244 5								296		296	296
3 Consumul specific													
de combustibil	kg c c		159 2		158 9		172 5		159 35			159 35	159 2
4 Structura combust	%												
Păcură		4 53		5				4 82					
Gaze		95 47		95		100 0		95 18					
5 Consum comb conv	t c c	41829		48830		1811		50641				63353	41829
Păcură	t c c	1895		2441				2441					
Gaze	t c c	39934		46388		1811		48200					
6 Coef de transform													
La pacură		1 31		1 38		1 38		1 38				1 38	1 35
La gaze		1 13		1 135		1 135		1 135				1 135	1 14
7 Consumul natural													
Păcură	tone	1446		1769				1769				2230	1404
Gaze	mil m3	35 3		40 9		1 6		42 5				53 1	35 03
8 Preţul de achiziţie													
Păcură	lei/tona	588		480				480				480	588
Gaze	lei/1000 m3	398 1		370		370		370				370	454
9 Costul combustib	mii lei	14904	56 71	15971	51 97	590	56 23	16562	52 11			16562	16729
incl Păcură	mii lei	851	3 24	849	2 76			849	2 67			849	825
Gaze	mii lei	14053	53 47	15122	49 21	590	56 23	15713	49 44			15713	15904
10 Materiale şi servicii	mii lei	22211	43 78	6107	19 87	205	19 52	6312	19 86	26103	88 2	32415	30049
inclusiv													
apă	mii lei	1439	5 48	2171	7 06	86	8 19	2257	7 10	9	0 03	2409	2409
1	2	3	4	5	6	7	8	9	10	11	12	13	14
reagente chimice	mii lei	147	0 56	146	0 48	11	1 05	167	0 53			167	167
materiale şi servicii	mii lei	2858	5 63	1226	3 99	48	4 57	1274	4 01	886	2 99	2160	2313
energia termică procurată	mii lei	16438	67 23		0 00					25160	85	25160	25160
energia electrică	mii lei	1329	2 62	2564	8 34	60	5 71	2624	8 26	48	0 16	2672	2672
11 Remuner muncii	mii lei	965	1 90	778	2 53	87	8 29	865	2 72	107	0 36	972	1193
12 Asigurarea socială	mii lei	295	0 58	241	0 78	27	2 57	268	0 84	33	0 11	301	370
13 Uzura mijloacelor fixe	mii lei	366	0 72	811	2 64	152	14 48	963	3 03	748	2 53	1711	1711
14 Cheltuieli diverse,	mii lei	4165	8 21	874	2 84	61	5 81	935	2 94	54	0 18	989	1249
incusiv					0 00								
asigurarea transp , salar	mii lei	375	0 74	8	0 03	1	0 10	9	0 03	2	0 01	11	10
impozite	mii lei	130	0 26	317	1 03	19	1 81	336	1 06	7	0 02	343	343
plata dobinzilor bancare	mii lei	3052	6 02	261	0 85	9	0 86	270	0 85	0		270	549
deplasări, paza, preg					0 00								

cadrelor şi alte cheltuieli	mii lei	608	1 20	288	0 94	32	3 05	320	1 01	45	0 15	365	431
Total cheltuieli	**mii lei**	**42906**	**84 58**	**24783**	80 65	**1122**	**106 90**	**25905**	**81 514**	**27045**	**91 37**	**52950**	**51301**
15 Chelt care trebuiesc					0 00								
restituite	mii lei			2400	7 81			2400	7 6			2560	2981
Total cheltuieli	**mii lei**	**42906**	**84 58**	**22383**	72 84	**1122**	**106 90**	**23505**	**74 0**	**27045**	**91 37**	**50390**	**48320**
Pierderile în reţele term	mii Gcal	171	43 01	5 2	0 02	2	25 15	7 2	1 7	115	58 05	122 2	187 1
Energia term Livrată	mii Gcal	336 3	127 58	302 1	74 09	8 5	132 05	310 6	75 7	181	149 42	491 6	371 7
Beneficiu 5%				1119	3 64	56	6 60	1175 3	3 8	95	0 52	2446	1100 00
Tarif				**23502**	77 73	**1179**	**138 65**	**24680**	**79 5**		**149 95**	**117 00**	**132 96**
inclusiv abur					**150 00**	**1179**	**138 65**	**4494**	**145 23**		**149 95**	**149 50**	**217 30**
apă caldă					**72 0**				**72 0**			**72 0**	**85 30**
Tariful calculat de RAPDET					96 7		143 85		98 6		229 5		133 45
Tariful apă de adaos	lei/tona				4 9				4 9			4 9	

Calculul tarifului la energia electrică şi termică produsă la CET Nord

Denumirea indicatorilor	Unitate de masură	1996 de facto				1997 de facto				1998								Energia termică fără reţelele termice	
		energia electrică		energia termică		energia electrică		energia termică		energia electrică				energia termica					
										existent		optim		existent		optim			
		total	1kWh	total	1Gcal	total	1kWh	total	1Gcal	total	1kWh	total	1 kWh	total	1Gcal	total	1 Gcal	total	1 Gcal
1	2	3	4	5	6	7	8	9	10	11	12	13	14						
1 Energia produsă	mil kWh	100 3				96 3				106		95				640		640	
	mii Gcal																		
2 Consumul propriu	mil kWh	35 2				30 9				43 7		33 4							
	mii Gcal															35		35	
3 Energia livrată	mil kWh	65 1				65 4				62 3		61 6							
	mii Gcal			641 7				499 7						605		605		605	
4 Consumul specific	g c c		193 7				325 4				225 5		320						
de combustibil	kg c c				171 6				172 5						174 2		157 5		157 5
5 Structura combust	%																		
Păcură		1 5		1 5		2 6						5				5		5	
Gaze		98 5		98 5		97 4				100		95		100		95		95	
6 Consum comb conv	t c c	12616		110098		21280		86198		14049		19712		103600		95288		95287 5	
Păcură		189 2		1651		558		901				986				4764		4764	
Gaze		12427		108447		20722		85297		14049		18726		103600		90523		90523	
7 Coef de transform																			
La păcură		1 35		1 35		1 39		1 38				1 38				1 38		1 38	
La gaze		1 13		1 13		1 132		1 132		1 13		1 135		1 13		1 135		1 135	
8 Consumul natural																			
Păcură	tone	140 2		1223		401		651 0				714				3452		3452	
Gaze	mil m3	11 0		96 0		18 3		75 4		12 6		16 5		91 7		79 8		79 8	
9 Preţul de achiziţie																			
Păcură	lei/tona											480				480		480	
Gaze	lei/1000 m3									454		370		454		370		370	
10 Costul combustib	mii lei	3865	5 94	33731	52 57	7921	12 11	30429	60 895	5720	9 18	6447	10 47	41632	68 81	31167	51 52	31167	51 52
incl Păcură	mii lei	60	0 09	525	0 82							343	0 56			1657	2 74	1657	2 74
Gaze	mii lei	385	5 84	33206	51 75					5720	9 18	6105	9 91	41632	68 81	29510	48 78	29509 7	48 78
11 Materiale şi servicii,	mii lei	2091	3 21	10193	15 88	3844	5 88	9018	18 05	3596	5 8	1329	2 16	8447	13 96	10714	17 71	9974	17 71
inclusiv																			
apă	mii lei	870	1 34	7966	12 41	1777	2 72	5513	11 03	1890	3 03	594	0 96	5854	9 68	7150	11 82	7150	11 82
reagente chimice	mii lei	48	0 07	431	0 67	60	0 09	545	1 09	110	0 18	76	0 12	334	0 55	368	0 61	368	0 61
materiale şi servicii	mii lei	1273	1 95	1796	2 80	2007	3 07	2960	5 92	1596	2 56	659	1 07	2259	3 73	3196	5 28	2456	4 06
12 Remuner muncii	mii lei	160	0 25	1163	1 81	364	0 56	1254	2 51	388	0 62	295	0 48	1337	2 21	1430	2 36	1221	2 02
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
13 Asigurarea soc	mii lei	54	0 08	410	0 64	50	0 08	375	0 75	120	0 19	91	0 15	414	0 69	443	0 73	379	0 63
14 Uzura mijl fixe	mii lei	228	0 35	2039	3 18	240	0 37	1912	3 83	198	0 32	991	1 61	5600	9 26	4807	7 95	4267	7 05

75

15 Cheltuieli diverse,	mii lei	80	0 12	677	1 06	1383	2 11	1260	2 52	345	0 55	242	0 39	1033	1 71	1173	1 94	1173	1 94
incusiv																			
asigurarea transp , salar	mii lei	1	0 00	11	0 02					5	0 01	3	0 005	15	0 02	17	0 03	17	0 03
impozite	mii lei	25	0 04	216	0 34	67	0 10	125	0 25	156	0 25	86	0 14	360	0 60	416	0 69	416	0 69
plata dobinzilor bancare	mii lei		0 00		0 00	1142	1 75	810	1 62	61	0 10	84	0 14	445	0 74	404	0 67	404	0 67
deplasări, paza, preg	mii lei																		
cadrelor şi alte cheltuieli	mii lei	54	0 08	450	0 70	174	0 27	325	0 65	123	0 20	69	0 11	213	0 35	336	0 56	336	0 56
Total cheltuieli	**mii lei**	**6478**	**9 95**	**48213**	**75 13**	**13802**	**21 10**	**44248**	**88 549**	**10368**	**16 6**	**9396**	**15 25**	**58463**	**96 63**	**49734**	**82 21**	**48180**	**79 6371**
16 Chelt care treb																			
restituite	mii lei	21	0 03	187	0 29											2550		4640	7 67
Total cheltuieli	**mii lei**	**6457**	**9 92**	**48026**	**74 84**	**13802**	**21 10**	**44248**	**88 549**	**10368**	**16 64**	**9396**	**15 25**	**58463**	**96 63**	**47184**	**77 99**	**43540**	**71 97**
17 Chelt Moldenergo	mii lei	2259	3 47																
Total cheltuieli	**mii lei**	**8716**	**13 39**	**48026**	**74 84**	**13802**	**21 10**	**44248**	**88 549**	**10368**	**16 64**	**9396**	**15 25**	**58463**	**96 63**	**47184**	**77 99**	**43540**	**71 97**
Pierderile in reţele term	mii Gcal							72 3	14 979					95 7	18 84	59 3	8 48	0	
Energia term Livrată	mii Gcal							427 4	103 53					499 3	117 1	545 7	86 5	605	71 97
Beneficiu 5%										518	0 832	470	0 76	2923	4 8	2359	3 9	2177 02	3 60
Tarif											**17 47**		**16 02**		**121 92**		**90 4**		**75 57**
inclusiv abur																**1545**	**150 0**	**1545**	**150 00**
apă caldă T E																**39758**	**84 6**	**35932**	**66 75**
apă caldă consumat																**8240**	**126 0**	**8240**	**145 50**
Tariful calculat de CET											21 53				130 3		93 65		77 8

Calculul tarifului la energia electrică şi termică producă la CET-2

Denumirea indicatorilor	Unit de măsură	1996 de facto				1997 de facto				1998								Energia termica Centr Term	
		energia electrică		energia termica		energia electrică		energia termica		energia electrica				energia termica					
										existent		optim		eăistent		optim			
		total	1kWh	total	1Gcal	total	1kWh	total	1 Gcal	total	1kWh	total	1kWh	total	1Gcal	total	1Gcal	total	1Gcal
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Energia produsă	mil kWh	959 8				1057 3				1159		1353							
	mii Gcal													1575		1575			
2 Consumul propriu	mil kWh	121				138 2				137		140							
	mii Gcal													54		54			
3 Energia livrata	mil kWh	838 8				919 1				1022		1213							
	mii Gcal			1751				1769 7						1521		1521		320	
4 Consumul specific	g c c		241 1				266 2				260 6		300						
de combustibil	kg c c				170 2				171 3						173 1		150 75		164 9
5 Structura combust	%																		
Păcură		20 3		20 3		12 2		13 1		15 6		20		20		20		10	
Gaze		79 7		79 7		87 8		86 9		84 4		80		80		80		90	
6 Consum comb conv	mii t c c	202234		298081		244630		303110		266333		363900		263285		229291		52768	
păcură		41053		60492		29947		39721		41548		72780		52657		45858		5277	
Gaze		161181		237589		214683		263389		224785		291120		210628		183433		47491	
7 Coef de transform																			
La păcură		1 38		1 38		1 38		1 38		1 37		1 38		1 37		1 38		1 38	
La gaze		1 14		1 14		1 135		1 135		1 14		1 135		1 135		1 135		1 135	
8 Consumul natural																			
Păcua	tone	29749		43712		21701		28783		30327		52739 1		38435 8		33231		3823 8	
Gaze	mil m3	142		209 8		189 1		232 1		197 2		256 5		185 6		161 6		41 8	
9 Preţul de achiziţie																			
Păcură	lei/tona	434 65		434 5		433 6		433 6		490		480		490		480		480	
Gaze	lei/mie m3	282 58		319 2		414 3		380 7		454		370		454		370		370	
10 Costul combustib	mii lei	52850	6 3	84646	48 3	87780	9 55	100801	56 959	104380	10 21	120217	9 9107	103085	67 77	75748	49 80	17317	54 12
incl Păcură		12873	1 53	17705	10 1	9409	1 02	12453	7 04	14860	1 454	25314 8	2 09	18834	12 38	15951	10 49	1835	5 74
Gaze		39977	4 77	66941	38 2	78371	8 53	88348	49 923	89520	8 759	94902 6	7 8238	84251 2	55 392	59797 4	39 315	15482	48 38
11 Materiale şi serv	mii lei	9601	1 14	14274	8 15	10337	1 125	15597	8 81	10186	1 00	11737	0 97	18086	11 89	15535	10 21	4911	15 35
inclusiv																			
apă, canalizare	mii lei	3596	0 42	6021	3 44	3937	0 43	6982	3 95	3746	0 37	4506	0 37	10801	7 10	10041	6 60	1078	3 37
reagente chimice	mii lei	653	0 08	982	0 56	478	0	752	0 42	237	0 02	284	0 02	1155	0 76	1108	0 73	516	1 61
materiale şi servicii	mii lei	5352	0 64	7271	4 15	5922	0 64	6468	3 65	6203	0 61	6947	0 57	6130	4 03	4386	2 88	1247	3 90
energia	mii lei							1395	0 79		0 00				0 00		0 00	2070	6 47
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
12 Remuner muncii	mii lei	1221	0 15	1456	0 83	1573	0 17	2081	1 18	1419	0 14	1785	0 15	1403	0 92	1115	0 73	505	1 58
13 Asigurarea soc	mii lei	434	0 05	524	0 3	478	0 05	636	0 36	440	0 03	553	0 05	435	0 29	346	0 23	157	0 49
14 Uzura mijl fixe	mii lei	1230	0 15	4158	2 37	2977	0 32	1438	0 81	2213	0 22	8797	0 73	2187	1 44	5553	3 65	700	2 19
15 Cheltuieli diverse	mii lei	1347	0 16	1842	1 05	1981	0 22	3189	1 802	3527	0 35	4455	0 37	3496	2 30	2813	1 85	742	2 319
incusiv																			

asigurarea transp																			
salariaţilor etc	mii lei	21	0 003	29	0 02	24	0 003	36	0 0203	24	0 003	**36**	**0 003**	36	0 024	**24**	**0 016**	16	**0 05**
impozite	mii lei	802	0 096	1104	0 63	1056	0 115	1792	1 013	1700	0 166	**2072**	**0 17**	1680	1 1045	**1308**	**0 86**	238	**0 74**
plata dobinzelor bancare	mii lei	0	0	0	0					1115	0 109	**1508**	**0 12**	1100	0 723	**952**	**0 626**	220	**0 69**
deplasări, paza, preg şi perf cadrelor, alte cheltuieli	mii lei	523	0 062	809	0 462	901	0 1	1361	0 769	688	0 067	**839**	**0 07**	680	0 4	**529**	**0 348**	268	**0 84**
Total cheltuieli	**mii lei**	**66683**	**7 95**	**106900**	**61 05**	**105126**	**11 44**	**123742**	**69 92**	122165	12 0	**147545**	**12 16**	**128692**	**84 61**	**101110**	**66 48**	**24332**	**76 04**
16 Chelt care treb																			
restituite	mii lei	59	0 01	81	0 05											**8541**	**5 62**	2076	**6 49**
Total cheltuieli	**mii lei**	**66624**	**7 94**	**106819**	**61 0**	**105126**	**11 44**	**123742**	**69 92**	122165	12 0	**147545**	**12 16**	**128692**	**84 61**	**92569**	**60 86**	**22256**	**69 5**
Cheltuieli Moldenergo	mii lei	29047	3 46																
Total cheltuieli	**mii lei**	**95671**	**11 41**	**106819**	**61 0**	**105126**	**11 44**	**123742**	**69 92**	122165	12 0	**147545**	**12 16**	**128692**	**84 61**	**92569**	**60 86**	**22256**	**69 5**
Beneficiu 5%	mii lei									6108	0 598	**7377**	**0 61**	6435	4 2305	**4628**	**3 04**	1113	**3 5**
Tarif											12 6		**12 77**	**135126**	**88 84**	**97197**	**63 90**	**23368**	**73 0**
inclusiv abur															**107 0**	**6800**	**85 0**		
apă caldă															**79 0**		**62 7**		**73 0**

Calculul tarifului la energia electrică şi termică produsă la CET-1

Denumirea indicatorilor	Unitate de măsura	1996 de facto				1997 de facto				1998								Energia termică	
		energia electrică		energia termică		energia electrică		energia termica		energia electrică				energia termica					
										existent		optim		existent		optim		Centr Term	
		total	1kWh	total	1Gcal	total	1kWh	total	1Gcal	total	1kWh	total	1 kWh	total	1Gcal	total	1Gcal	total	1Gcal
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Energia produsa	mil kWh	114 6				93 2				160		**160**							
	mii Gcal													783 1		**783 1**			
2 Consumul propriu	mil kWh	25 9				20 64				39 4		**39 4**							
	mii Gcal													31 3		**31 3**			
3 Energia livrată	mil kWh	88 7				72 56				120 6		**120 6**							
	mii Gcal			858 6				762 4						751 8		**751 8**		400	
4 Consumul specific	g c c		159				155 8				163 5		**300**						
de combustibil	kg c c				160 7				159 4						164 3		**142 4**		154 6
5 Structura combust	%																		
Păcură		10 9		11 6		1 5		3		3		**10**		3		**10**		10	
Gaze		89 1		88 4		98 5		97		97		**90**		97		**90**		90	
6 Consum comb conv	mii t c c	14106		137995		11305		121527		19718 1		**36180**		123521		**107056**		61840	
Păcură		1538		16013		170		3646		592		**3618**		3706		**10706**		6184	
Gaze		12568		121982		11135		117881		19127		**32562**		119815		**96351**		55656	
7 Coef de transform																			
La pacură		1 36		1 36		1 38		1 36		1 36		**1 38**		1 36		**1 38**		1 38	
La gaze		1 137		1 137		1 14		1 14		1 14		**1 135**		1 14		**1 135**		1 135	
8 Consumul natural																			
Păcură	tone	1131		11774		122		2660		435 0		**2622**		2725		**7758**		4481	
Gaze	mil m3	11 1		107 3		9 8		103 6		16 78		**28 7**		105 1		**84 9**		49 0	
9 Preţul de achiziţie																			
Păcură	lei/tona	351 5		351 5		481 3		487 7		529		**480**		529		**480**		480	
Gaze	lei/mie m3	346 9		346 9		398 44		403		454		**370**		454		**370**		370	
10 Costul combustib	mii lei	4220	4 76	41392	48 21	3960	5 46	43047	56 46	7847	6 51	**11873**	**9 85**	49157	65 39	**35133**	**46 73**	20294	50 74
incl Pacură		397	0 45	4139	4 82	59	0 08	1296	1 70	230	0 19	**1258**	**1 04**	1441	1 92	**3724**	**4 46**	2151	5 38
Gaze		3823	4 31	37253	43 39	3901	5 38	41751	54 76	7617	6 32	**10615**	**8 80**	47716	63 47	**31409 5**	**41 78**	18143	45 36
11 Materiale şi serv	mii lei	2074	2 34	7962	9 27	2466	3 40	10399	13 64	2559	2 12	**1842**	**1 53**	7843	10 43	**8065**	**10 73**	6078	15 20
inclusiv																			
apă	mii lei	556	0 63	3829	4 46	865	1 19	3640	4 77	539	0 45	**341**	**0 28**	3366	4 48	**3564**	**4 74**	1795	4 49
reagente chimice	mii lei	45	0 05	214	0 25	68	0 09	288	0 38	69	0 06	**46**	**0 04**	410	0 55	**441**	**0 59**	373	0 93
materiale şi servicii	mii lei	1473	1 66	3919	4 56	1240	1 71	5238	6 87	1913	1 59	**1455**	**1 21**	3841	5 11	**4060**	**5 40**	1321	3 30
energie						293		1233	1 62	38	0 03		**0 00**	226	0 30		**0 00**	2589	6 47
1	2	3	4	5	6	7	8	9	10	11	12	**13**	**14**	15	16	**17**	**18**	19	20
12 Remuner muncii	mii lei	212	0 24	1678	1 95	291	0 40	1995	2 62	404	0 33	**468**	**0 39**	1542	2 05	**1382**	**1 84**	250	0 63
13 Asigurarea soc	mii lei	74	0 08	588	0 68	88	0 12	598	0 78	125	0 10	**145**	**0 12**	478	0 64	**428**	**0 64**	77 5	0 19
14 Uzura mijl fixe	mii lei	117	0 13	736	0 86	40	0 06	493	0 65	413	0 34	**438**	**0 36**	1399	1 86	**1292**	**1 72**	483	1 21
15 Cheltuieli diverse	mii lei	153	0 17	979	1 14	140	0 19	935	1 23	969	0 80	**388**	**0 32**	2802	3 73	**1123**	**1 49**	599	1 50
incusiv																			

asigurarea transp , salariaţilor,etc	mii lei	11	0 01	71	0 08	6	0 01	38	0 050	68	0 06	**14**	**0 012**	428	0 57	**31**	**0 04**	5	
Impozite	mii lei	88	0 10	512	0 60	58	0 080	386	0 532	70	0 06	**117**	**0 10**	436	0 58	**348**	**0 46**	216	0 54
plata dobinzelor bancare	mii lei	0	0 00	0	0 00	0	0 00	0	0 00	299	0 25	**151**	**0 13**	1870	2 49	**430**	**0 57**	288	0 72
deplasări, paza,preg şi perf cadrelor,alte cheltuieli	mii lei	54	0 06	396	0 46	76	0 105	511	0 67	532	0 44	**106**	**0 09**	68	0 09	**314**	**0 42**	90	0 225
Total cheltuieli	**mii lei**	**6850**	**7 72**	**53335**	**62 12**	**6985**	**9 63**	**57467**	**75 38**	12317	10 21	**15154**	**12 57**	**63221**	**84 09**	**47424**	**63 08**	**27782**	**69 45**
16 Chelt care treb																			
restituite	mii lei															**2047**	**2 72**	2343	5 86
Total cheltuieli	**mii lei**	**6850**	**7 72**	**53335**	**62 12**	**6985**	**9 63**	**57467**	**75 38**	12317	10 21	**15154**	**12 57**	**63221**	**84 09**	**45377**	**60 36**	**25439**	**63 6**
17 Chelt Moldenergo	mii lei	3078	3 47																
Total cheltuieli	**mii lei**	**9928**	**11 19**	**53335**	**62 12**	**6985**	**9 63**	**57467**	**75 38**	12317	10 21	**15154**	**12 57**	**63221**	**84 09**	**45377**	**60 36**	**25439**	**63 6**
Beneficiu 5 %	mii lei									616	0 51	**758**	**0 63**	3161	4 20	**2269**	**3 02**	1271 9	3 18
Tarif										**12933**	**10 72**	**15912**	**13 19**	**66382**	**88 30**	**47645**	**63 38**	**26711**	**66 78**
inclusiv abur																**18360**	**85**		
apă caldă																**55**	**55**		**66 78**
Tariful calculat de CET													**10 93**				**89 86**		**87**
Tarif apă de adaos	lei/ tona																4 0		4 9

Structura tarifelor

Cheltuieli	Gaze naturale		Energia electrică		Energia termică	
	lei/1000m3	% din total	bani/kWh	% din total	lei/Gcal	% din total
Energia, gazele procurate	277 83	76 9	12 02	47 8	2 72	2 21
Energia produsă			3 57	14 2	66 69	54 30
inclusiv apa, reagenti			0 13	0 5	6 64	5 41
combustibil			2 95	11 7	51 93	42 28
Pierderile tehnice	23 34	6 5	2 56	10 2	16 61	13 52
Materiale şi servicii	17 84	4 9	1 98	7 9	5 7	4 64
Energia electrică	0 57	0 2		0 0	6 3	5 13
Amortizarea	25 2	7 0	2 88	11 4	9 9	8 06
Remunerarea muncii	9 12	2 5	0 64	2 5	6 7	5 46
Asigurarea socială	2 83	0 8	0 2	0 8	2 1	1 71
Întreţinerea reţelelor int		0 0	0 38	1 5	0 8	0 65
Alte cheltuieli	4 72	1 3	0 93	3 7	5 3	4 32
inclusiv dobînzi bancare	0 15	0 0	0 19	0 8	3 3	2 69
deplasări, preg cadrelor	0 61	0 2	0 05	0 2	0 2	0 16
servicii telec, calcul	1 12	0 3	0 18	0 7	0 2	0 16
servicii bancare	0 27	0 1	0 03	0 1	0 1	0 08
taxa vamală	0 92	0 3	0 03	0 1		0 00
asigurarea obligatorie	0 08	0 0	0 04	0 2	0 2	0 16
reducer plite electrice		0 0	0 1	0 4		0 00
impozite		0 0	0 02	0 1	0 2	0 16
alte	1 57	0 4	0 29	1 2	1 1	0 90
Total cheltuieli	361 45	100 0	25 16	100 0	122 82	100 00
beneficiu	8 55	2 4	0 34	1 4	3	2 44
Total tarif	370	102 4	25 5	101 4	125 82	102 44

Analiza costului energiei termice

Denumirea indicilor	Unitate de măsură	1996			1997			1998 calculat la tarif propus			1998 la tarif existent	
		total	1 Gcal	% din total	total	1 Gcal	% din total	total	1 Gcal	% din total	total	1Gcal
1	2	3	4	5	6	7	8	9	10	11		
1 Energia livrată de la centrale	mii Gcal	4538 2			4274 7			5096			5096	
2 Energia procurată de la alţi produc	mii Gcal	198 1			143 4			150			150	
3 Pierderile tehnice de energie	mii Gcal	1070 2			1040 8			1013			1013	
	%	22 6			23 6			19 3			19 3	
4 Livrarea utilă de energie	mii Gcal	3666 1			3377 3			4233			4233	
5 Consumul specific de combustibil	g c c		168 5			168 8			161 5			168 5
6 Consumul de combustibil convenţ	t c c	764691			721472			823004			858676	
inclusiv Gaze naturale	t c c	606054			604012			663506			692265	
Păcură	t c c	153151			112541			151104			158164	
Cărbune	t c c	5365			4674			6449			6449	
Motorină	t c c	122			245			1975			1798	
7 Structura combustibilului												
Gaze naturale	%	79 3			83 7			80 62			80 62	
Păcură	%	20 0			15 6			18 36			18 42	
Cărbune	%	0 7			0 6			0 78			0 75	
Motorină	%	0 0			0 0			0 24			0 21	
8 Coeficientul de transformare												
Gaze naturale		1 135			1 135			1 135			1 135	
Păcură		1 36			1 36			1 38			1 38	
Cărbune		0 73			0 73			0 73			0 73	
Motorină		1 5			1 5			1 5			1 5	
9 Consum combustibil natural												
Gaze naturale	mil m3	534 0			532 2			584 6			609 9	
Păcură	tone	112611			82750 7			109495			114611 89	
Cărbune	tone	7349 0			6403 0			8834 2			8834 2	
Motorină	tone	81 0			163 0			1264 0			1264 0	
10 Preţul mediu de procurare												
Gaze naturale	lei/1000m3	344 0			405 9			370			454	
Păcură	lei/tona	497 4			535 8			480			480	
Cărbune	lei/tona	270 2			242 2			220			220	
1	2	3	4	5	6	7	8	9	10	11	12	13
Motorină	lei/tona	1100			1172			1300			1300	

11 Costul combustibilului- total	**mii lei**	**241774**	**65 95**	**56 8**	**262075**	**77 60**	**55 15**	**272442**	**64 36**	**51 06**	**333050**	**78 68**
Gaze naturale	mii lei	183683		0 0	215999			216297			276906	
Păcură	mii lei	56016		0 0	44334			52558			55014	
Cărbune	mii lei	1986		0 0	1551			1944			1944	
Motorină	mii lei	89		0 0	191 0			1643			1643	
12 Apă	mii lei	27187	7 42	6 4	27776	8 22	5 85	31835	7 52	5 97	31835	7 52
13 Materiale şi servicii	mii lei	45520	12 42	10 7	51995	15 40	16 04	38925	9 20	7 30	43093	10 18
14 Energia electrică	mii lei	12539	3 42	2 9	25697	7 61	5 41	32278	7 63	6 05	32556	7 69
15 Amortizarea mijloacelor fixe	mii lei	19703	5 37	4 6	19087	5 65	4 02	52008	12 29	9 75	50353	11 90
16 Remunerarea muncii	mii lei	20681	5 64	4 9	29031	8 60	6 11	32293	7 63	6 05	31248	7 39
17 Asigurarea socială	mii lei	9842	2 68	2 3	10889	3 22	2 29	10011	2 37	1 88	9687	2 29
18 Alte cheltuieli	mii lei	32112	8 76	7 5	35441	10 49	7 46	22860	5 40	4 29	23519	5 56
inclusiv												
TVA	mii lei	915	0 25	0 2	853	0 25	0 18					
Impozite	mii lei	9368	2 56	2 2	3608	1 07	0 76	3923	0 93	0 74	3923	0 93
Dobînzi bancare	mii lei	11089	3 02	2 6	18460	5 47	3 88	7333	1 73	1 37	7481	1 77
Asigurarea obligatorie	mii lei	726	0 20	0 2	972	0 29	0 20	640	0 15	0 12	640	0 15
Servicii telecomunicaţii şi de calcul	mii lei	863	0 24	0 2	810	0 24	0 17	743	0 18	0 14	743	0 18
Servicii bancare	mii lei	405	0 11	0 1	479	0 14	0 10	479	0 11	0 09	479	0 11
Deservirea reţelelor interne	mii lei	2525	0 69	0 6	2786	0 82	0 59	3000	0 71	0 56	3000	0 71
Rezerve pentru concediu	mii lei	989	0 27	0 2	276	0 08	0 06	79	0 02	0 01	79	0 02
Paza, pregătirea cadrelor, arenda,												
deplasări, servicii comunale, alte chelt	mii lei	5232	1 43	1 2	7197	2 13	1 51	6663	1 57	1 25	7174	1 70
19 Energia procurată de la alţi produc	mii lei	16001	4 36	3 8	13200	3 91	2 78	14250	3 37	2 67	14250	3 37
20 Rambursarea creditului EBRD	mii lei			0 0			0 00	8300	1 96	1 56	8300	1 96
Total cheltuieli	**mii lei**	**425359**	**116 02**	**100 0**	**475191**	**140 70**	**100 00**	**515201**	**121 71**	**100 00**	**577891**	**136 58**
Venitul la tarif stabilit	**mii lei**	**342151**	**93 33**	**80 4**	**324113**	**95 97**	**68 21**	**541006**	**127 81**	**105**	**450800**	**106 54**
Beneficiu (+), pierderi (-)	**mii lei**	**83208**	**-22 70**		**-151078**	**-44 73**		**25805**	**6 10**		**-127091**	
Inclusiv Termocom	mii lei	54467			9381			4391			19564	
Termocomenergo	mii lei	-12510			-51156			7315			-38293	
CET-1	mii lei				-12134			3554			-23083	
CET-2	mii lei				-6880			5741			-55616	
CET Nord	mii lei	-21989			-19083			2359			-9385	
RAPDET	mii lei	-103176			-71206			2445			-23438	