

IENIEIRGY TARIFIF REGULATION IN ARMENIA

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June 14-17, 2010. Yerevan, Armenia

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REGULATION OF THE ELECTRIC POWER SYSTEM

STATE POLICY IN THE SPHERE OF ELECTRIC POWER IS IMPLEMENTED BY THE GOVERNMENT OF THE REPUBLIC OF ARMENIA AS REPRESENTED BY THE MINISTRY OF ENERGY AND NATURAL RESOURCES AND THE PUBLIC SERVICES REGULATORY COMMISSION.





REGULATION IN THE SPHERE OF ELECTRIC POWER IS IMPLEMENTED BY THE PUBLIC SERVICES REGULATORY COMMISSION, WHICH ACTS BASED ON AUTHORITIES PRESCRIBED BY THE LAW AND IS AN INDEPENDENT BODY WITHIN THE SCOPE OF THESE AUTHORITIES

LEGAL ACTS OF THE COMMISSION CAN BE APPEALED JUDICIALLY

WHILE APPEALING JUDICIALLY THE TARIFFS ESTABLISHED BY THE COMMISSION, A COURT CHECKS THE TARIFFS' CONFORMITY WITH THE REQUIREMENTS OF THE LAWS, AND IF BREACH ES ARE REVEALED, COURT OBLIGES THE COMMISSION TO REVISE THE LEGAL ACT ON ESTABLISHING TABLES

LEGAL ACT ON ESTABLISHING TARIFFS.



AS A RESULT OF RESTRUCTURING THE VERTICALLY INTEGRATED STATE ENTERPRISE, FIELDS OF POWER GENERATION, TRANSMISSION AND DISTRIBUTION WERE SEPARATED, CLOSED JOINT STOCK COMPANIES THAT GENERATE POWER, TRANSMISSION COMPANY AND DISTRIBUTION COMPANY WERE ESTABLISHED.

FOR THE PURPOSES OF PROVIDING SERVICES IN WHOLESALE MARKET, COMPANIES WERE ESTABLISHED: OPERATOR OF ELECTRICAL POWER SYSTEM, SETTLEMENT CENTER.

"ELECTRIC NETWORKS OF ARMENIA" CJSC POWER DISTRIBUTION COMPANY WAS PRIVATIZED.



ECONOMIC RELATIONS THAT CURRENTLY EXIST BETWEEN THE PARTIES INVOLVED IN THE SYSTEM OF ELECTRIC POWER OF ARMENIA ARE ALIGNED IN THE FOLLOWING CHART:

"SOLE BUYER - SELLER"

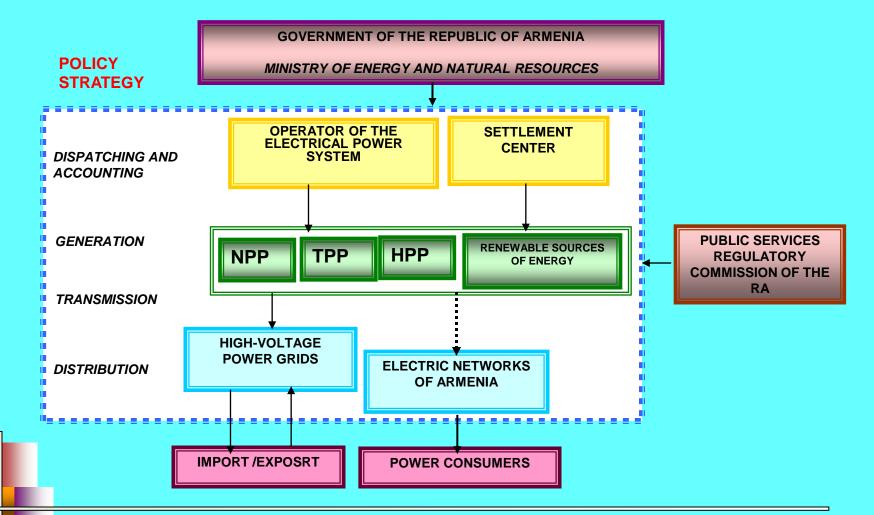
THIS IS THE ROLE OF "ELECTRIC NETWORKS OF ARMENIA" CJSC.

A SYSTEM OF STRAIGHT SALES CONTRACTS MADE BETWEEN THE POWER GENERATING COMPANIES AND DISTRIBUTION COMPANY IS

INTRODUCED.



STRUCTURE CHART OF ENERGY MANAGEMENT IN THE REPUBLIC OF ARMENIA



June 14-17, 2010. Yerevan, Armenia



ESTABLISHMENT AND APPLICATION OF REGULATED TARIFFS IN ENERGY SECTOR

ONE OF THE PRINCIPAL FUNCTIONS OF THE COMMISSION IS

ESTABLISHMENT OF REGULATED TARIFFS AND PAYMENT FOR SERVICES.

PROCEDURE FOR ESTABLISHMENT AND REVISION OF TARIFFS, FORMS AND LIST OF NECESSARY DOCUMENTS TO BE PRESENTED (APPLICATION DACKAGE) ADDITION DATED DATED ON THE COMMISSION

PACKAGE) ARE ESTABLISHED BY THE COMMISSION.

APPLICATION PACKAGE INCLUDES:

1. APPLICATION FOR ESTABLISHMENT (REVISION) OF TARIFFS (see page 8),

2. ANNOUNCEMENT IN 3 REPUBLICAN NEWSPAPERS (WITH AT LEAST 3 THOUS. NUMBER OF COPIES) WITH A PURPOSE OF INFORMING PUBLIC ABOUT AN INTENTION OF REVISING THE TARIFF BY A LICENSEE

3. REQUIRED INFORMATION (FORECAST FOR DESIGNED YEAR) IN A FORMAT ESTABLISHED BY THE COMMISSION.



APPLICATION FORM

заявление

Прошу установить (пересмотреть)

(имя заявителя) -	
(географическая местность, область, город))	
(электрической энергии, тепловой энергии, природн	oro rasa)
(вид лицензионной деятельности)	(тариф (ставка))
(вид лицензионной деятельности)	(месячная плпта)

Утверждаю, что материалы, представленные нами содержат достоверную информацию, необходимые обосновывающие документы и расчеты согласно порядку, установленному комиссией по регулированию общественных услуг РА.

К заявлению прилагаются:

(наименования документов, количество экзепляров и страниц)

June 14-17, 2010. Yerevan, Armenia

2.	
5.	
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5.	
	(адрес заявителя)
ſe:	лефон Электронная почта
	(код заявителя, номер регистрации в госрегистре)
	(банковые реквизиты)
	(должность заявителя, имя, фамилия, подпись)
	(дата, печать заявителя)

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ESTABLISHED TARIFFS ENTER INTO FORCE IN 30 DAYS AFTER ADOPTION OF THE RESOLUTION.

TERM OF TARIFFS CAN NOT BE LESS THAN SIX MONTHS, EXCEPT THE CASES, WHEN A LICENSEE BREACHES CONDITIONS OF THE ACTIVITIES LICENSE. IN THIS CASE, COMMISSION HAS A RIGHT TO CHANGE TARIFFS OF THE LICENSEE EARLIER OF THE TERM STATED, WHICH WILL APPLY UNTIL THE LICENSEE ELIMINATES THE BREACHES.

COMMISSION MAY ESTABLISH A LONG-TERM TARIFF FOR A LICENSEE'S ACTIVITIES.

TARIFF ESTABLISHED MAY EXPRESS BOTH DEFINED NUMERICAL VALUE AND DESIGN FORMULA THAT DEPENDS ON SPECIFIC VALUES.



ESTABLISHED TARIFF MAY BE REVISED BOTH ON AN INITIATIVE OF THE LICENSEE AND COMMISSION.

COMMISSION REVISES (RE-ESTABLISHES OR CHANGES) THE TARIFF AND ADOPTS A RESOLUTION WITHIN 90-DAYS AFTER ACCEPTING THE LICENSEE'S APPLICATION PACKAGE FOR REVISION.

COMMISSION MAY REVISE THE EXISTING TARIFF ON ITS OWN INITIATIVE AND ESTABLISH A NEW TARIFF ACCORDING TO A PROCEDURE APPROVED BY THE COMMISSION AND BASED ON THE RESULTS OF ECONOMIC ACTIVITY OF THE LICENSEE, IMPLEMENTATION OF INVESTMENT PROGRAMS AND REQUIREMENTS ON QUALITY OF SERVICES PROVIDED TO THE CUSTOMERS.



A PERSON HAVING A LICENSE FOR ACTIVITIES MAY SELL ELECTRIC AND THERMAL POWER, NATURAL GAS OR PROVIDE LICENSED SERVICES AT A TARIFF THAT IS LOWER THAN ONE ESTABLISHED BY THE COMMISSION UNDER THE STIPULATION THAT:

- > LICENSED ACTIVITY DOES NOT OR WILL NOT INCUR A DANGER,
- > IT DOES NOT AIMED AT ATTAINMENT OF A MONOPOLISTIC STATUS AT MARKET,
- > WHEN THIS LOWERING IS MADE AT THE EXPENSE OF THE LICENSEE'S PROFIT

IN CASE OF A SUCH LOWERING OF TARIFFS, THE COMMISSION, WHILE ESTABLISHING NEW TARIFFS, DOES NOT TAKE INTO ACCOUNT THE POTENTIAL LOSSES OF THE LICENSEE AS A RESULT OF THE LOWERING OF TARIFFS.



THE FOLLOWING METHODOLOGIES FOR CALCULATING TARIFFS FOR THE POWER INDUSTRY WERE DEVELOPED BY THE COMMISSION:

1. METHODOLOGY FOR CALCULATING TARIFFS FOR ELECTRICITY SUPPLIED BY COMPANIES THAT PRODUCE ELECTRIC POWER,

2. METHODOLOGY FOR CALCULATING TARIFF MARGIN,

3. METHODOLOGIES FOR CALCULATING TARIFFS FOR PROVIDING POWER TRANSMISSION SERVICES TO THE ELECTRIC POWER SYSTEM, AS WELL AS SERVICES PROVIDED TO THE ELECTRIC POWER MARKET BY LICENSED ENTITIES.

ABOVE MENTIONED METHODOLOGIES ARE BASED ON THE PRINCIPLE OF ENSURING NECESSARY INCOME (INCOME OF THE COMPANY GAINED THROUGH TARIFFS), WHICH SHALL COVER ALL THE COSTS THAT ARE REQUIRED FOR RELIABLE, SAFE AND CONTINUOUS FUNCTIONING OF THE COMPANY, AS WELL AS SHALL SECURE REASONABLE PROFIT FROM INVESTMENTS.



METHODOLOGY FOR CALCULATING TARIFFS FOR ELECTRICITY (POWER), SUPPLIED BY LARGE POWER PLANTS

THIS METHODOLOGY ESTABLISHES THE PRINCIPLES OF FORMATION OF TARIFFS FOR ELECTRICITY (POWER) THAT IS SOLD IN THE WHOLESALE ELECTRICITY MARKET BY LARGE (WITH MORE THAN 10 MEGAWATT INSTALLED CAPACITY) HYDROPOWER PLANTS (CASCADES), THERMAL AND NUCLEAR POWER PLANTS OF THE ELECTRIC POWER SYSTEM.



1. DETERMINATION OF NECESSARY INCOME

NECESSARY INCOME IS CALCULATED BY USING THE FOLLOWING FORMULA:

WHERE:

NI – NECESSARY INCOME;

- AC ANNUAL COSTS AUTHORIZED FOR ENSURING THE RELIABLE AND SAFE FUNCTIONING OF THE COMPANY;
- **D** ANNUAL DEPRECIATION OF EFFECTIVE AND USABLE CAPITAL ASSETS OF THE COMPANY;

P – PERMISSIBLE PROFIT FOR ENSURING SUFFICIENT PROFITABILITY OF INVESTMENTS



1.1. AUTHORIZED COSTS

AUTHORIZED COSTS INCLUDE THOSE COSTS ONLY THAT ARE JUSTIFIED AND NECESSARY FOR ENSURING NORMAL FUNCTIONING OF THE COMPANY DURING THE DESIGNED YEAR.

THE FOLLOWING CLASSIFICATION OF COSTS IS USED FOR A PURPOSE OF REGULATION:

- OPERATION AND MAINTENANCE COSTS,
- FUEL COSTS (FOR NUCLEAR AND THERMAL POWER PLANTS),
- MAINTENANCE COSTS FOR USED NUCLEAR FUEL, FOR ESTABLISHMENT OF A FUND FOR DECOMMISSIONING OF THE NUCLEAR POWER PLANT, COSTS FOR IMPLEMENTATION OF MEASURES FOR INCREASING SAFETY OF THE NUCLEAR POWER PLANT,
- TAXES (EXCEPT OF A PROFIT TAX AND VAT),
- OTHER JUSTIFIED AND NECESSARY COSTS, ENVISIONED BY LEGISLATION OF THE REPUBLIC OF ARMENIA.

AUTHORIZED COSTS INCLUDE THOSE COSTS ONLY THAT PERTAIN TO LICENSED ACTIVITY.



1.1.1. OPERATION AND MAINTENANCE COSTS

OPERATION AND MAINTENANCE COSTS INCLUDE THE FOLLOWING GROUPS OF COSTS OF THE COMPANIES:

 > SALARY OF OPERATING PERSONNEL, INCLUDING PAYMENTS TO THE SOCIAL SECURITY FUND,
> TANGIBLE COSTS THAT ARE NECESSARY FOR OPERATION,
> MAINTENANCE COSTS, INCLUDING COST OF MAINTENANCE/ REPAIR WORKS

IMPLEMENTED BOTH BY OWN POWERS AND OTHER CONTRACTORS,

> OTHER OPERATIONAL COSTS.

1.1.2. FUEL COSTS

FUEL COSTS FOR NUCLEAR AND THERMAL POWER PLANTS ARE DETERMINED IN ACCORDANCE TO METHODOLOGIES DEVELOPED BY COMPANIES AND APPROVED BY THE COMMISSION.



1.2. DEPRECIATION

ANNUAL DEPRECIATION OF CAPITAL ASSETS IS CALCULATED BY A LINEAR METHODOLOGY BASED ON AN INITIAL COST (COST OF ACQUISITION) OF CAPITAL ASSETS THAT ARE RECOGNIZED BY THE **COMMISSION AS EFFECTIVE AND USABLE CAPITAL ASSETS** FOR PROVIDING SERVICES, AND DURATION OF THEIR USEFUL SERVICE.



1.3. PERMISSIBLE PROFIT

SIZE OF THE PERMISSIBLE PROFIT IS CALCULATED BY USING THE FOLLOWING FORMULA:

PROFIT = BASIS OF PROFIT CALCULATION X PROFITABILITY RATE OF THE ASSETS

BASIS OF PROFIT CALCULATION FOR HYDROPOWER PLANTS IS THE COST OF NET ASSETS, PRESENTING A DIFFERENCE BETWEEN THE COST OF EFFECTIVE AND USABLE NON-OPERATING ASSETS (BEING DETERMINED BY THE COMMISSION) THAT ARE NECESSARY FOR IMPLEMENTATION OF LICENSED ACTIVITIES, AND DEPRECIATION ACCUMULATED PLUS THE SIZE OF CIRCULATING CAPITAL ALLOWED BY THE COMMISSION.

BASIS OF PROFIT CALCUALTION IS RECALCULATED NO FREQUENTLY THAN ONCE A YEAR WITH A PURPOSE OF TAKING INTO ACCOUNT INVESTMENTS MADE IN EFFECTIVE AND USABLE ASSETS, CHANGES OF THE SIZE OF ACCUMULATED DEPRECIATION AND PERMISSIBLE CIRCULATING CAPITAL, CHANGES OF THE EXCHANGE RATE ETC.

> SIZE OF THE PERMISSIBLE PROFIT RATE IS DETERMINED EQUALLY TO THE AVERAGE WEIGHTED SIZE OF THE COMPANY'S CAPITAL, WHICH IS THE AVERAGE COST OF LOAN AND OWN CAPITAL, CALCULATED BASED ON THEIR SHARE IN THE CAPITAL STRUCTURE.



2. COSTS ANALYSIS

COSTS ANALYSIS OF THE COMPANY AND THEIR DISTRIBUTION DEPENDING ON THE TYPE OF LICENSED ACTIVITIES, TYPE OF THE COSTS AND SERVICE PROVIDED IS THE NEXT STAGE IN THE PROCESS OF DEVELOPING TARIFFS.

COSTS ANALYSIS CONSISTS OF THE FOLLOWING STAGES:

2.1. FUNCTIONALIZATION OF THE COSTS 2.2. CLASSIFICATION OF THE COSTS.



2.1. FUNCTIONALIZATION OF THE COSTS

THIS STAGE OF THE COSTS ANALYSIS IS CONDUCTED AT <u>THERMAL PLANTS</u> ONLY WHEN ELECTRIC AND THERMAL ENERGY ARE JOINTLY GENERATED.

AT THIS STAGE EACH COMPONENT OF THE COMPANY'S COSTS IS DIVIDED INTO FUNCTIONAL SECTORS OF ELECTRIC AND THERMAL ENERGY.



2.2. CLASSIFICATION OF THE COSTS

COSTS ARE CLASSIFIED INTO FIXED AND VARIABLE COSTS.

FIXED COSTS – ARE THOSE COSTS THAT ARE MADE BY THE COMPANY IRRESPECTIVELY OF THE VOLUMES OF ELECTRICITY SUPPLIED.

THESE ARE MOSTLY THOSE COSTS THAT ARE CONNECTED WITH OPERATION AND MAINTENANCE OF FIXED ASSETS OF THE COMPANY, AS WELL AS THOSE COSTS THAT ARE SUBJECT OT COMPENSATION IRRESPECTIVELY OF THE VOLUMES OF ELECTRICITY SUPPLIED.

> <u>VARIABLE COSTS</u> – ARE THOSE COSTS THAT CHANGE DEPENDING ON THE VOLUME OF ELECTRICITY SUPPLIED.

THESE COSTS INCLUDE FUEL COST FOR THERMAL AND NUCLEAR POWER PLANTS, A PART OF MAINTENANCE COSTS FOR PRIMARY EQUIPMENT.

IN SOME CASES, WHEN THE COMPANY APPLIES A BONUS SYSTEM OF LABOR REMUNERATION, A PART OF SALARIES IS ALSO INCLUDED ON VARIABLE COSTS.



<u>DEPRECIATION COSTS</u> OF THE COMPANY'S FIXED ASSETS MAY ALSO TO A CERTAIN EXTENT BE INCLUDED IN VARIABLE COSTS WITH CONSIDERATION OF RELATION OF THE TERM OF CAPITAL ASSETS OPERATION AND THE NUMBER OF WORKING HOURS, I.E. PRODUCTION OF ELECTRIC POWER.

> THE COMPANY'S <u>PERMISSIBLE PROFIT</u> FOR LOAN CAPITAL PERTAINS TO THE FIXED COSTS.

<u>PERMISSIBLE PROFIT</u> IN THE AREAS OF ENSURING THE PROFITABILITY OF OWN CAPITAL, INCOME TAX IS PARTIALLY OR FULLY PERTAINS TO THE VARIABLE COSTS.



3. SELECTION OF TARIFFS STRUCTURE

SELECTION OF TARIFFS STRUCTURE DEPENDS ON REQUIREMENTS OF THE ELECTRIC POWER SYSTEM, AS WELL AS POSSIBILITIES OF PROVIDING NECESSARY SERVICES, SPECIFICALLY ELECTRICITY PRODUCTION, PROVISION OF RESERVE CAPACITIES, WORK IN THE SYNCHRONOUS COMPENSATION MODE, FREQUENCY REGULATION ETC.

IT IS POSSIBLE TO APPLY ONE-PART AND MULTIPART TARIFFS DEPENDING ON THE TYPES OF SERVICES PROVIDED IN THE ELECTRIC POWER SYSTEM, POSSIBILITIES AND PRACTICABILITY OF THEIR ACCOUNTABILITY.

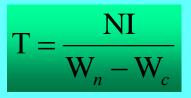
> STRUCTURE OF TARIFFS, TYPES OF SERVICES WHICH ARE PAID BY MEANS OF TARIFF RATES, AS WELL AS PRINCIPLES OF COSTS DISTRIBUTION ARE APPROVED BY THE COMMISSION (BY SUBMISSION OF THE COMPANY).



4. CALCULATION OF TARIFF RATES 4.1 ONE-PART TARIFFS SYSTEM

ONE-PART TARIFFS ARE ESTABLISHED FOR THOSE GENERATING COMPANIES, OPERATION MODE OF WHICH IS NOT DISPATCHED BY THE SYSTEM OPERATOR. THESE ARE MOSTLY SMALL HYDROPOWER PLANTS, WIND POWER PLANTS, AS WELL AS OTHER PLANTS THAT PRODUCE ELECTRICITY FROM RENEWABLE SOURCES OF ENERGY.

WHEN APPLYING ONE-PART TARIFFS, NO CLASSIFICATION OF COSTS IS CONDUCTED AND THE TARIFF (T IN DRAMS/kW/H) IS CALCULATED BY THE FOLLOWING FORMULA:



WHERE IN - INCOME NECESSARY (IN DRAMS),

W, - ESTIMATED VALUE OF ANNUAL PRODUCTION OF ELECTRIC POWER (kW/H),

W_c - AMOUNT OF ELECTRICITY USED FOR OWN NEEDS, AS WELL AS LOSSES IN PARTS OF TRANSFORMERS (kW/H).

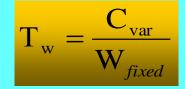
> ESTIMATED VALUE OF ANNUAL PRODUCTION OF ELECTRIC POWER IS CONSIDERED AS EQUAL TO AN AVERAGE VALUE OF MULTIYEAR PRODUCTION OF ELECTRIC POWER.



4.2 TWO-PART TARIFFS SYSTEM

RATES BASED ON THE AMOUNT OF ELECTRIC POWER AND AGREED CAPACITY AVAILABLE ARE PAID SERVICES IN THE SYSTEM OF TWO-PART TARIFFS SYSTEM. TWO-PART TARIFFS ARE ESTABLISHED FOR THOSE GENERATING COMPANIES, WHOSE PARTICIPATION IN THE BALANCE OF ELECTRIC ENERGY (POWER) IS REGULATED BY THE SYSTEM OPERATOR.

A RATE BASED ON THE AMOUNT OF ELECTRIC POWER (IN DRAMS/kW/H) IS CALCULATED BY THE FOLLOWING FORMULA:



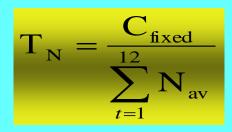
WHERE C . VARIABLE COSTS OF THE COMPANY (IN DRAMS),

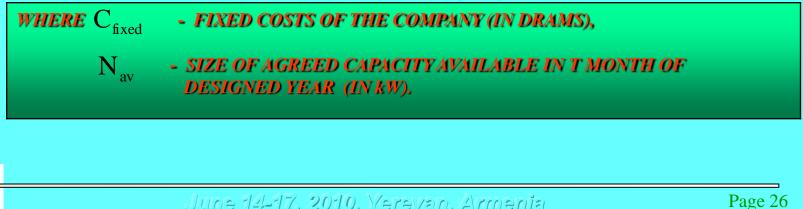
W_{fixed} Amount of supplied electric power in designed year (kW/H).

AMOUNT OF ELECTRICITY SUPPLIED DEPENDS FROM THE COMPANY'S PARTICIPATION IN THE ANNUAL BALANCE OF ELECTRIC ENERGY (POWER) AND IS CALCULATED BY THE SYSTEM OPERATOR IN THE PROCESS OF PLANNING THE ANNUAL MODES/REGIMES.



A MONTHLY RATE BASED ON CAPACITY AVAILABLE IS CALCULATED BY THE **FOLLOWING FORMULA:**







4.3 MULTIPART TARIFFS SYSTEM

GENERATING COMPANIES THAT EXCEPT OF ELECTRIC ENERGY (POWER) SUPPLY SERVICES PROVIDE OTHER SERVICES, PROVIDE FOR A STABLE WORK OR QUALITY OF THE SYSTEM OF POWER SUPPLY MAY HAVE SEPARATE TARIFF RATES FOR THE APPROPRIATE SERVICES.

A NEED OCCURS IN THIS CASE FOR DISTRIBUTION OF FIXED AND VARIABLE COSTS FOR ALL THE SERVICES PROVIDED ACCORDING TO A METHODOLOGY APPROVED BY THE COMMISSION, BY TAKING INTO ACCOUNT COSTS OF THE COMPANY IN APPROPRIATE DIRECTIONS.

THE TARIFF RATE FOR EACH TYPE OF THE SERVICE IS DETERMINED AS A RATIO FROM DIVISION OF PLANNED ANNUAL COSTS ON SIZE OF ANNUAL SERVICES PROVIDED.



THANK YOU FOR YOUR ATTENTION !