

JSC “ELECTRICITY SYSTEM COMMERTIAL OPERATOR”

***ACTIVITY REPORT
YEAR 2016***



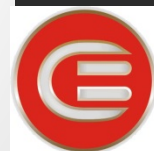
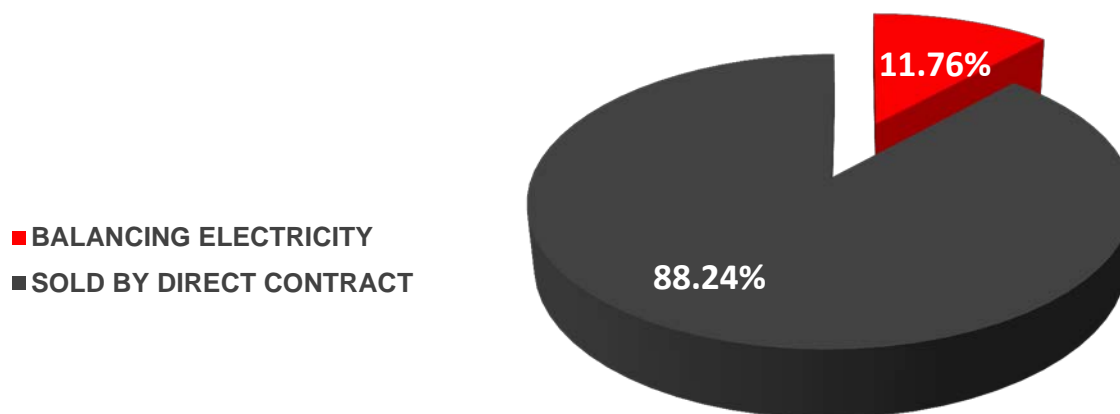
MAIN DIRECTIONS OF THE ACTIVITY

- **BALANCING ELECTRICITY TRADE**
- **GUARANTEED CAPACITY TRADE**
- **ELECTRICITY IMPORT AND EXPORT**
- **SUPPORT OF CONSTRUCTION OF NEW HYDRO POWER PLANTS**
- **METERING CONTROL**



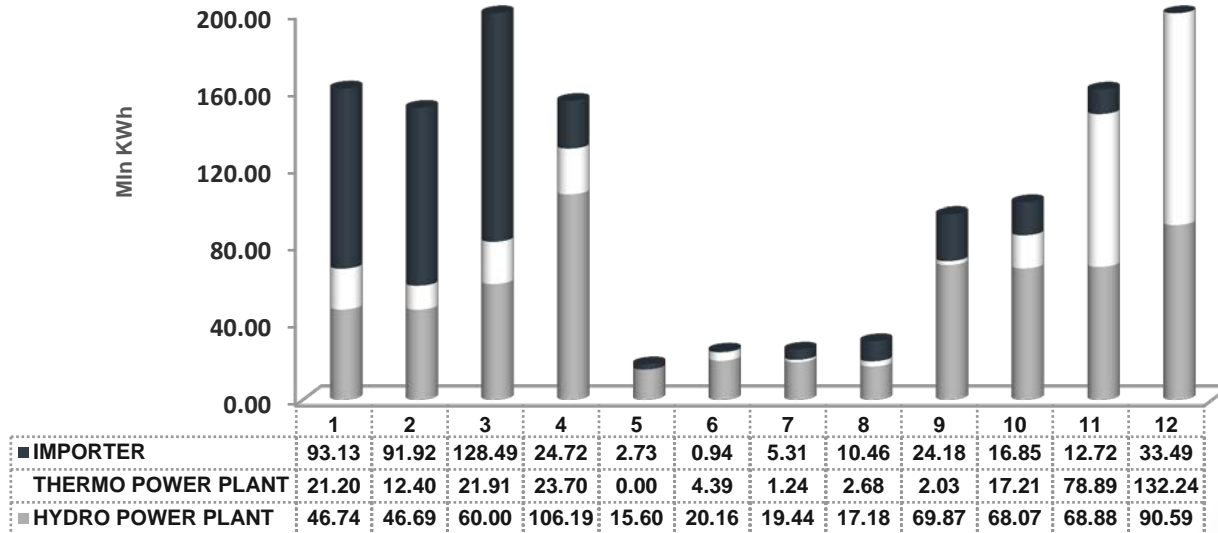
BALANCING ELECTRICITY TRADE

- BALANCING ELECTRICITY TRADE REMAINS AS ONE OF THE MAIN DIRECTIONS OF THE ESCO'S ACTIVITIES;
- IN 2016, THE SHARE OF BALANCING ELECTRICITY IN THE WHOLESALE TRADE WAS 11.76%.



BALANCING ELECTRICITY SUPPLIERS

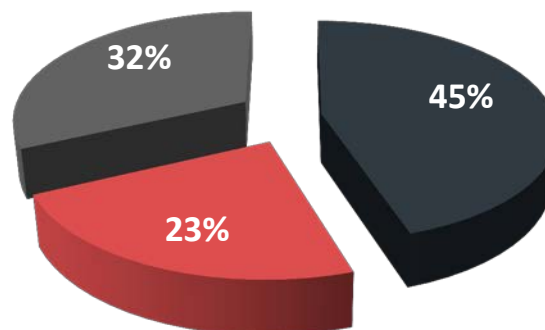
IN 2016, THE BALANCING ELECTRICITY, PURCHASED BY THE ESCO CONSISTED OF THE ENERGY, GENERATED BY THE THERMAL AND HYDRO POWER PLANTS AS WELL AS THE ELECTRICITY, IMPORTED BY THE ESCO. THEIR QUANTITATIVE INDICATOR (BY MONTHS) IS GIVEN IN THE DIAGRAM.



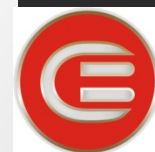
PARTICIPATION OF THE ELECTRICITY SUPPLIERS IN THE PROCESS OF BALANCING ELECTRICITY FORMATION

ELECTRICITY SELLERS	YEAR 2016	
	KWH	SHARE, %
HYDRO POWER PLANT	629 401 999	45%
THERMAL POWER PLANT	317 890 574	23%
IMPORTER	444 946 121	32%
TOTAL	1 392 238 694	100%

SHARE OF HPPS, TPPS AND IMPORT IN BALANCING ELECTRICITY IN 2016

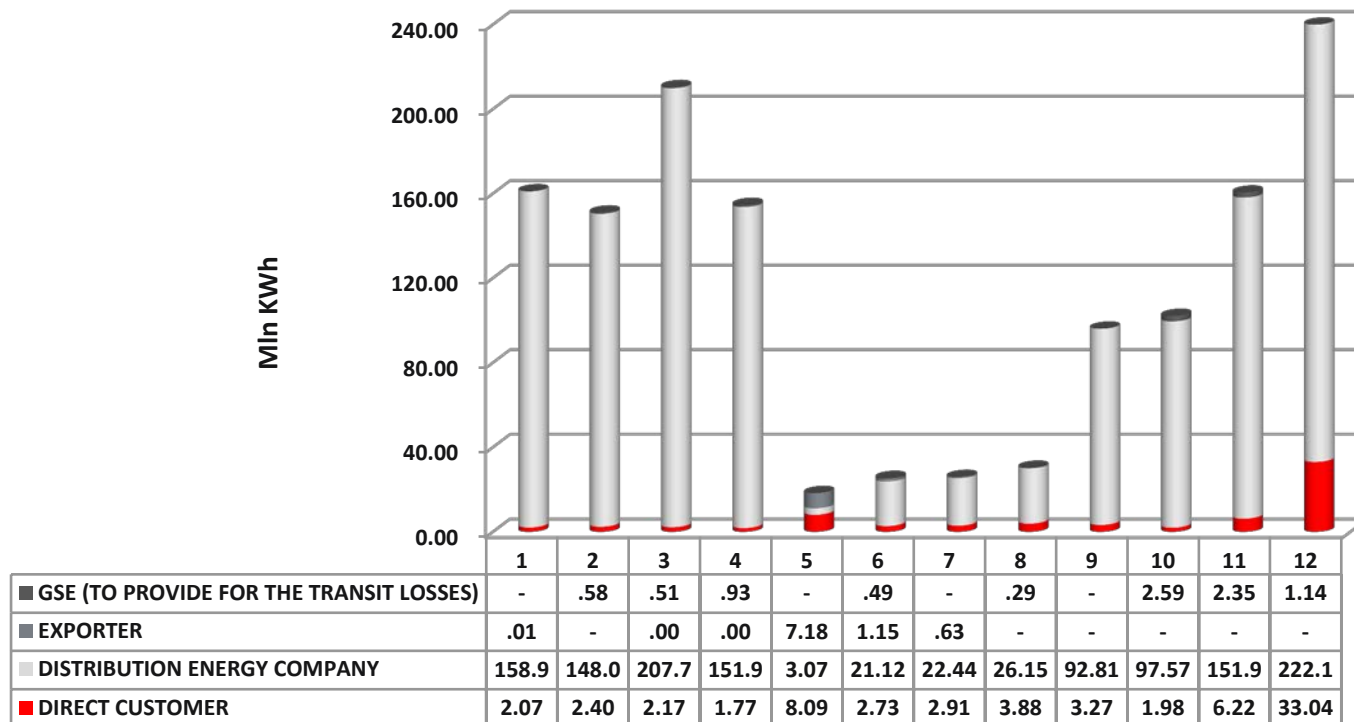


■ HYDRO POWER PLANTS ■ THERMAL POWER PLANTS ■ IMPORTER



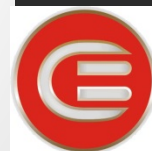
BALANCING ELECTRICITY BUYERS

- IN 2016, THE DISTRIBUTION ENERGY COMPANIES, DIRECT CUSTOMERS AND EXPORTERS WERE THE MAIN BUYERS OF BALANCING ELECTRICITY FROM THE ESCO. BESIDES, IN 2016, THE LOSSES HAVE BEEN BOUGHT BY THE DISPATCH LICENSEE (ITS SHARE IN BALANCING ELECTRICITY PURCHASE IS 0.6%) FOR THE PURPOSE OF ENSURING TRANSIT.
- QUANTITATIVE INDICATORS (BY MONTHS) OF BALANCING ELECTRICITY BUYERS ARE GIVEN IN THE DIAGRAM.

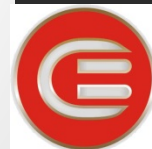
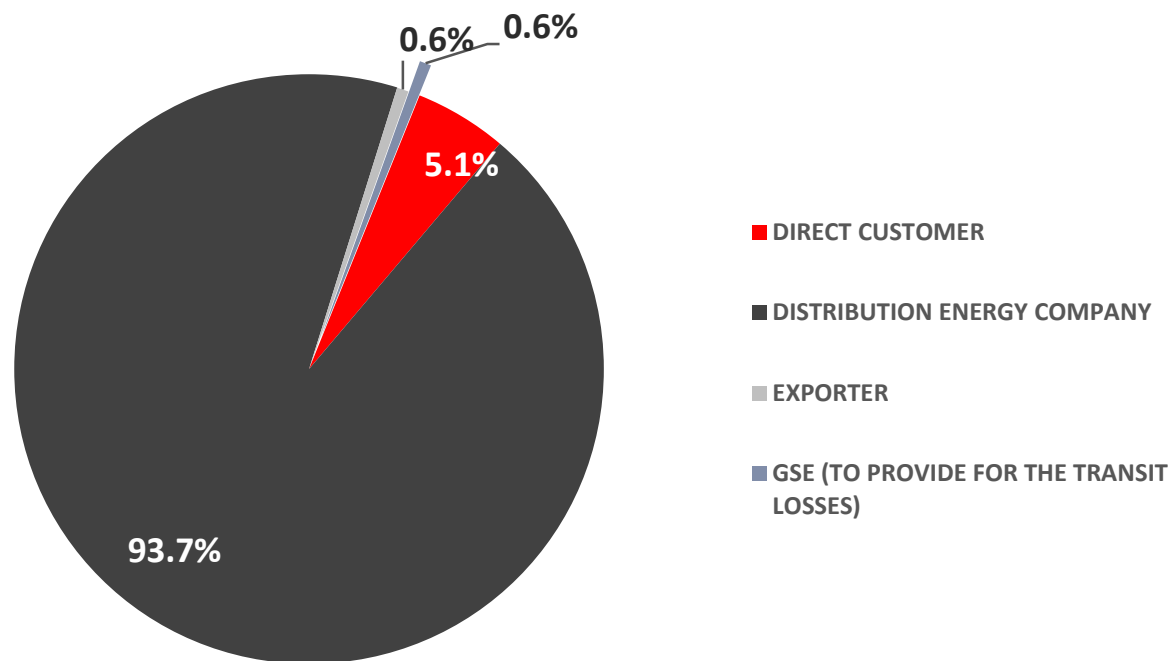


PARTICIPATION OF ELIGIBLE ENTERPRISES IN THE PURCHASE OF BALANCING ELECTRICITY

ELECTRICITY BUYERS	YEAR 2016	
	KWH	SHARE, %
DIRECT CUSTOMER	70 515 961	5.1%
DISTRIBUTION ENERGY COMPANY	1 303 864 489	93.7%
EXPORTER	8 975 018	0.6%
GSE (TO PROVIDE FOR THE TRANSIT LOSSES)	8 883 226	0.6%
TOTAL	1 392 238 694	100.0%

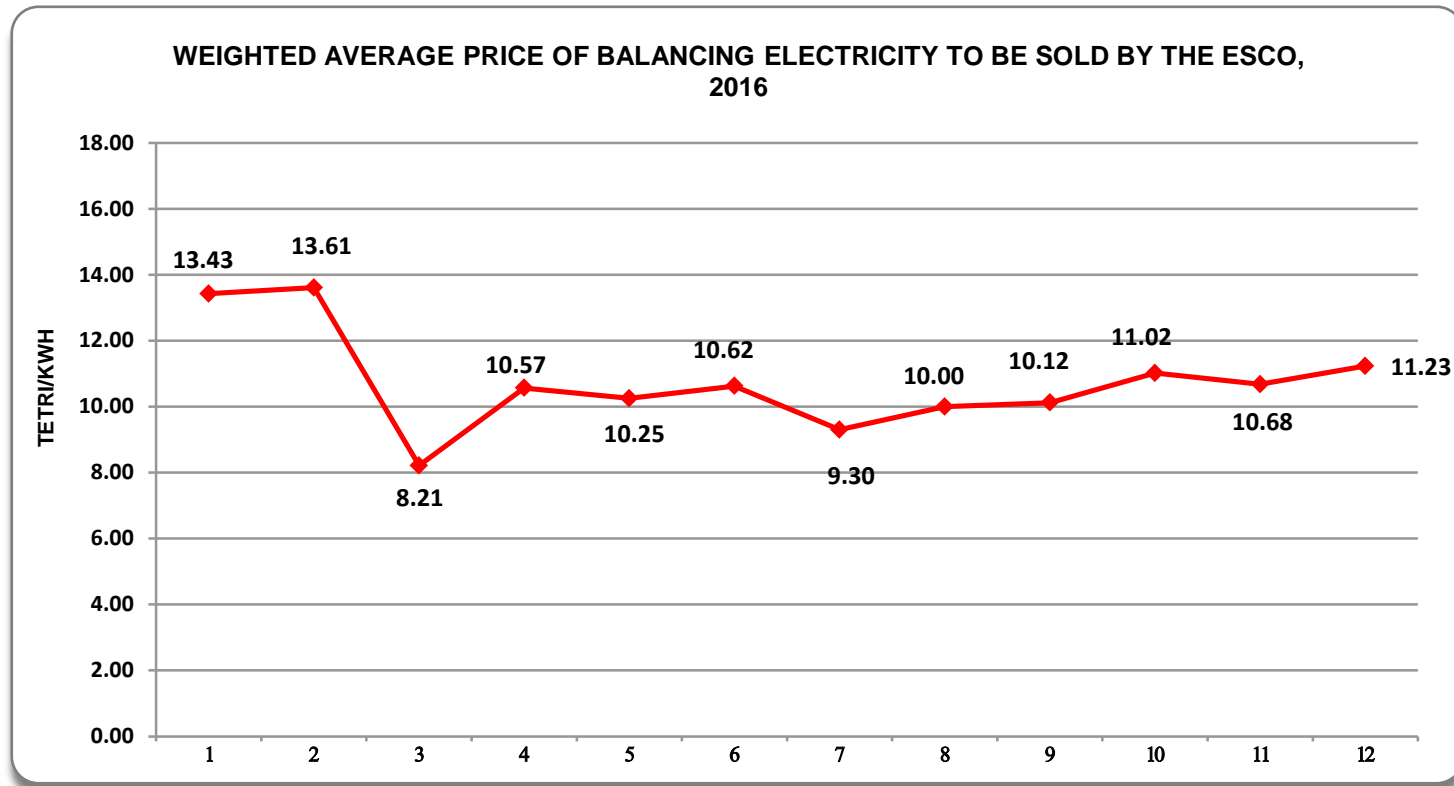


EQUITY ENDICES OF DIRECT CUSTOMERS, DISTRIBUTION LICENSEES AND EXPORTERS IN BALANCING ELECTRICITY PURCHASE, 2016



PRICE FORMATION OF BALANCING ELECTRICITY FOR SALE

BALANCING ELECTRICITY SALE PRICE (ESCO WILL PURCHASE) IS FORMED BASED ON **THE WEIGHTED AVERAGE PRICE.**

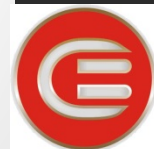
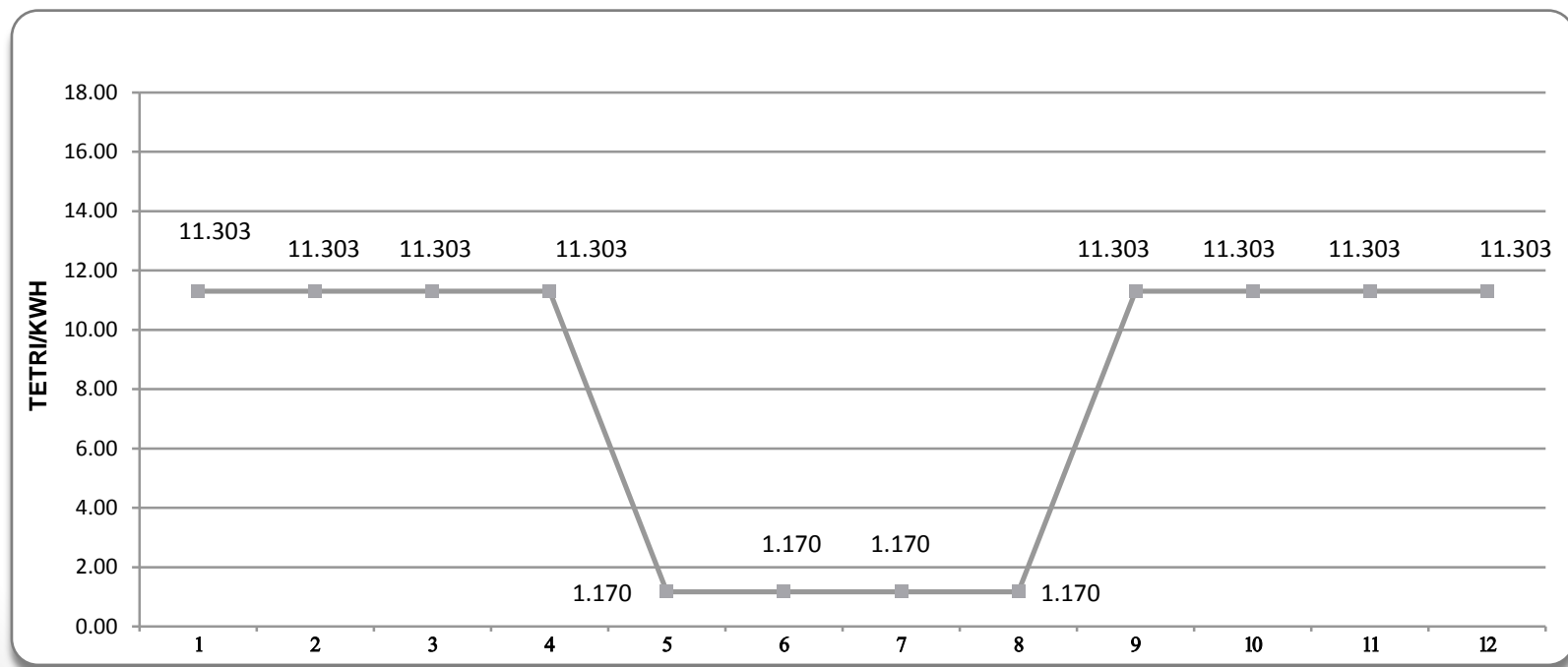


BALANCING ELECTRICITY PRICE OF DEREGULATED SMALL CAPACITY HYDRO POWER PLANTS, 2016

ESCO BUYS THE BALANCING ELECTRICITY FROM THE DEREGULATED SMALL CAPACITY HYDRO POWER PLANTS:

-THE UPPER MARGIN TARIFF OF TPPS, FOR WHICH THE COMMISSION HAS ESTABLISHED THE HIGHEST TARIFF SHALL APPLY DURING THE PERIOD BETWEEN SEPTEMBER AND MAY;

-THE TARIFF (1.17 TETRI/KWH) OF REGULATORY HYDRO POWER PLANTS, WHICH HAVE THE LOWEST GENERATION TARIFF SHALL APPLY DURING THE PERIOD BETWEEN MAY - SEPTEMBER.

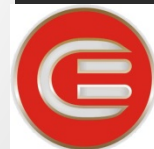
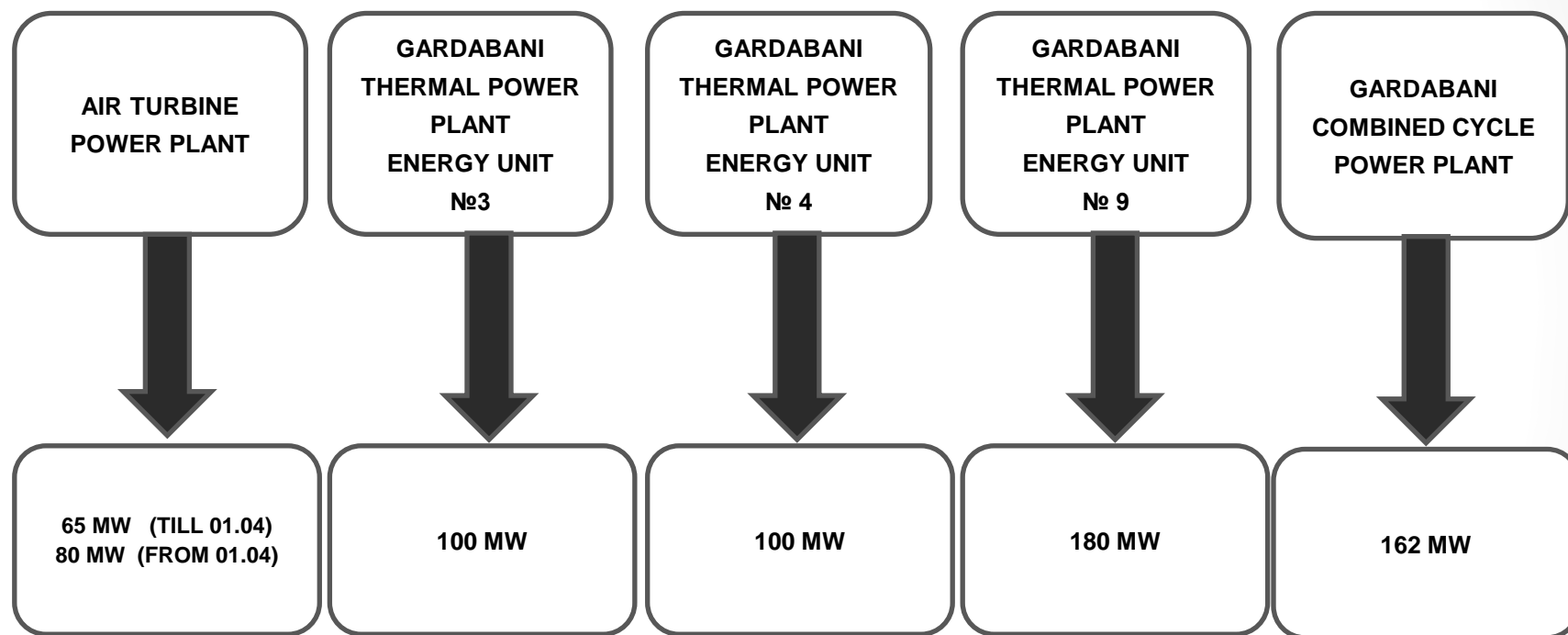


GUARANTEED CAPACITY

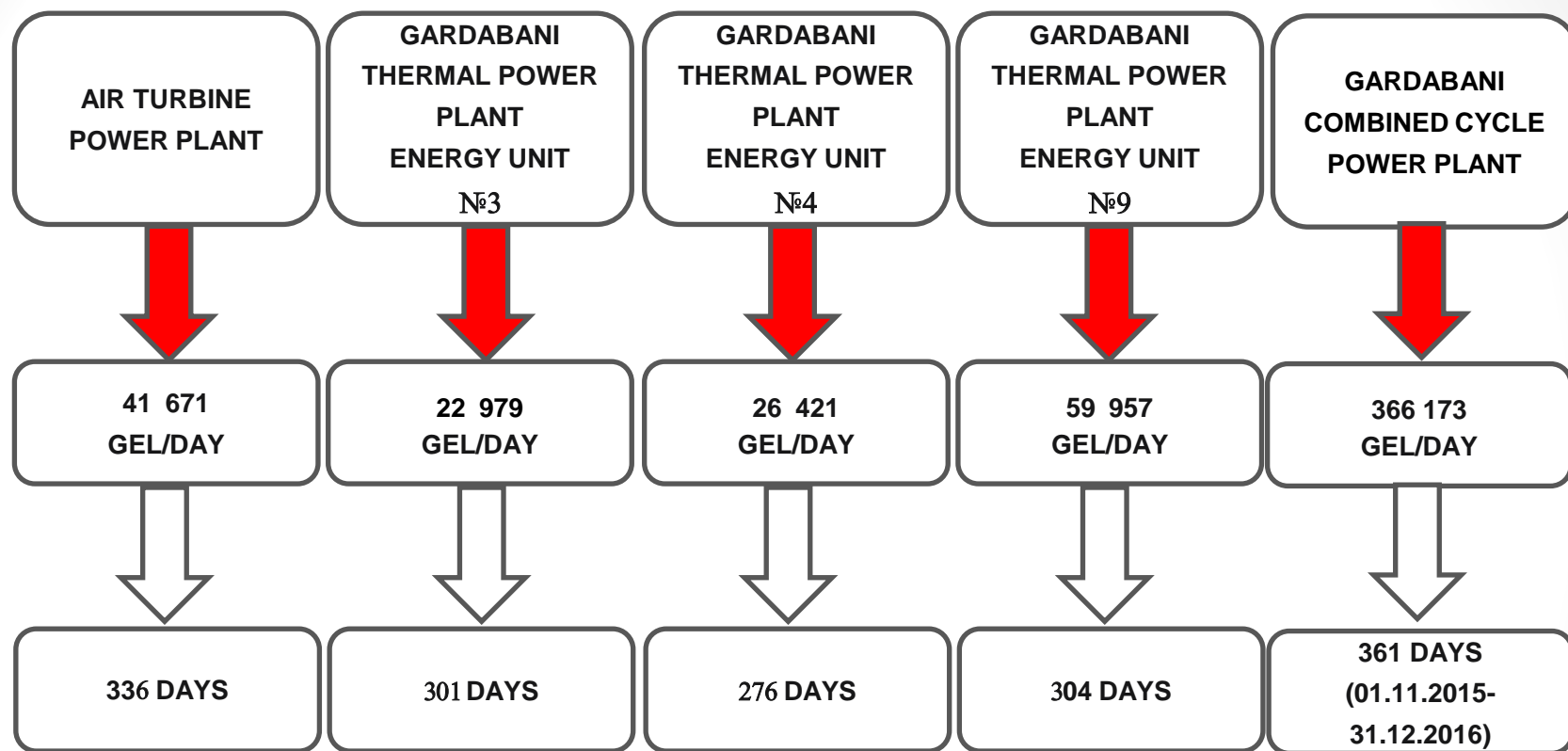
- *GUARANTEED CAPACITY SERVES TO THE STABILITY, SAFETY AND RELIABLE FUNCTIONING OF THE COUNTRY'S UNIFIED ENERGY SYSTEM;*
- *GEORGIAN GOVERNMENT DETERMINES THE GUARANTEE CAPACITY SOURCE AND MINIMUM QUANTITY OF GUARANTEED CAPACITY, FOR EACH GUARANTEED CAPACITY SOURCE;*
- *GEORGIAN NATIONAL ENERGY AND WATER REGULATORY COMMISSION DETERMINES PROVISION PERIODS AND PRICE OF GUARANTEED CAPACITY, FOR EACH GUARANTEED CAPACITY SOURCE ON DAILY BASIS;*
- *GUARANTEED CAPACITY TRADE IS TAKING PLACE ONLY THROUGH THE ESCO, BASED ON THE STANDARD CONDITIONS OF DIRECT CONTRACT.*



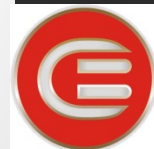
GUARANTEED CAPACITY SOURCES AND MINIMUM QUANTITY OF GUARANTEED CAPACITY, DETERMINED BY THE GOVERNMENT OF GEORGIA, 2016



PRICE AND PROVISION PERIODS DETERMINED FOR THE GUARANTEED CAPACITY SOURCES BY THE NATIONAL REGULATORY COMMISSION



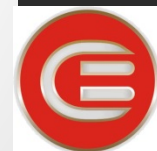
ACCORDING TO THE REGULATORY COMMISSION RESOLUTION, THE PROVISION PERIODS (NUMBER OF DAYS) FOR AIR TURBINE POWER PLANT AND GARDABANI THERMAL POWER PLANT UNITS №3, 4 AND 9 WERE DETERMINED BASED ON THE CALENDAR YEAR, FOR 12 MONTH: FROM JANUARY 1, 2016 TILL DECEMBER 31, 2016 (INCLUDING), WHEREAS FOR THE GARDABANI COMBINED CYCLE POWER PLANT, THIS PERIOD WAS DETERMINED FOR 14 MONTHS: FROM NOVEMBER 1, 2015 TILL DECEMBER 31, 2016 (INCLUDING).

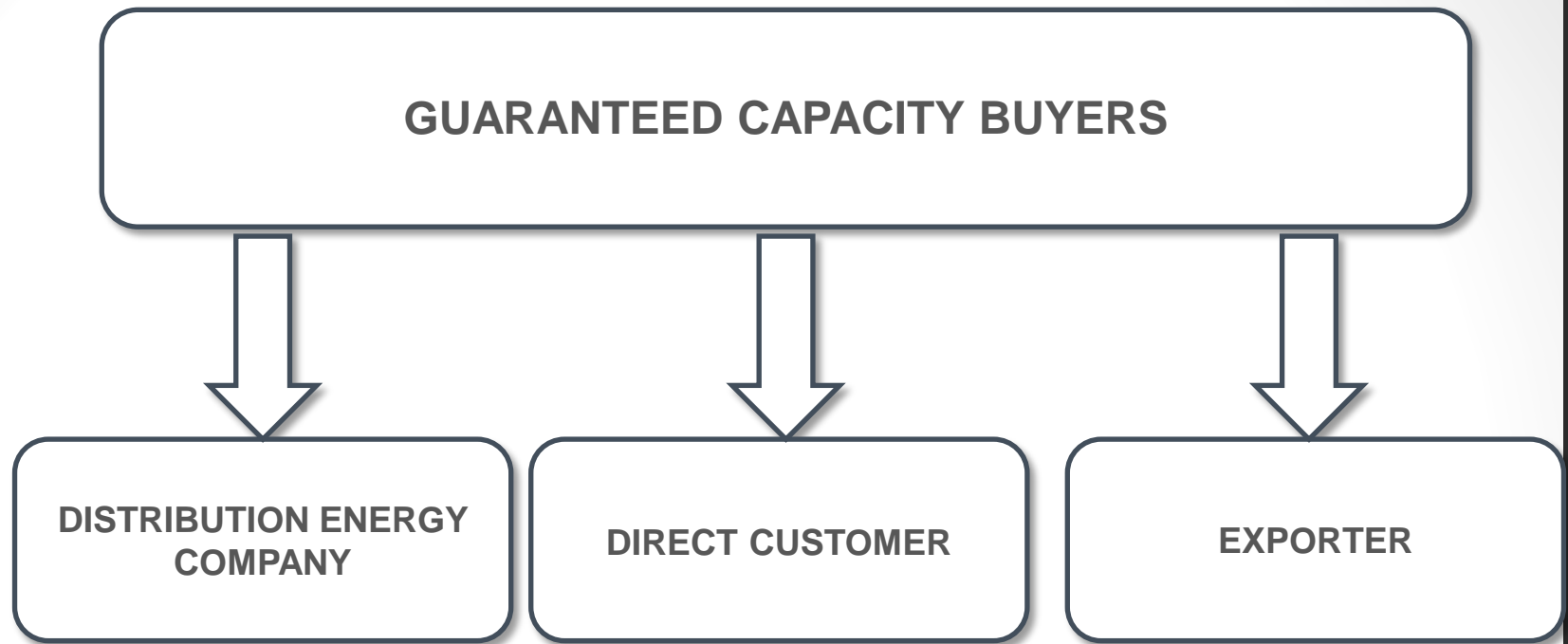


FUNDS RECEIVED FOR THE GUARANTEED CAPACITY PROVIDED BY THE SOURCES, 2016

ESCO COMPENSATES THE COST OF GUARANTEED CAPACITY ONLY TO THOSE SOURCES OF GUARANTEED CAPACITY, READINESS AND STANDBY PERIOD OF WHICH IS CONFIRMED BY THE DISPATCH LICENSEE.

THE COST OF PROVIDED GUARANTEED CAPACITY, 2016	LTD "MTKVARI ENERGY"	LTD "GEORGIAN INTERNATIONAL ENERGY CORPORATION"			LTD "G-POWER"	LTD "GARDABANI TPP"
	ENERGY UNIT №9	ENERGY UNIT №3	ENERGY UNIT №4	AIR TURBINE POWER PLANT	COMBINED CYCLE POWER PLANT	
PROVISION PERIOD (NUMBER OF DAYS)	304	301	276	336	300	
GUARANTEED CAPACITY COST (MLN GEL)	18.23	6.92	7.29	14.00	109.85	

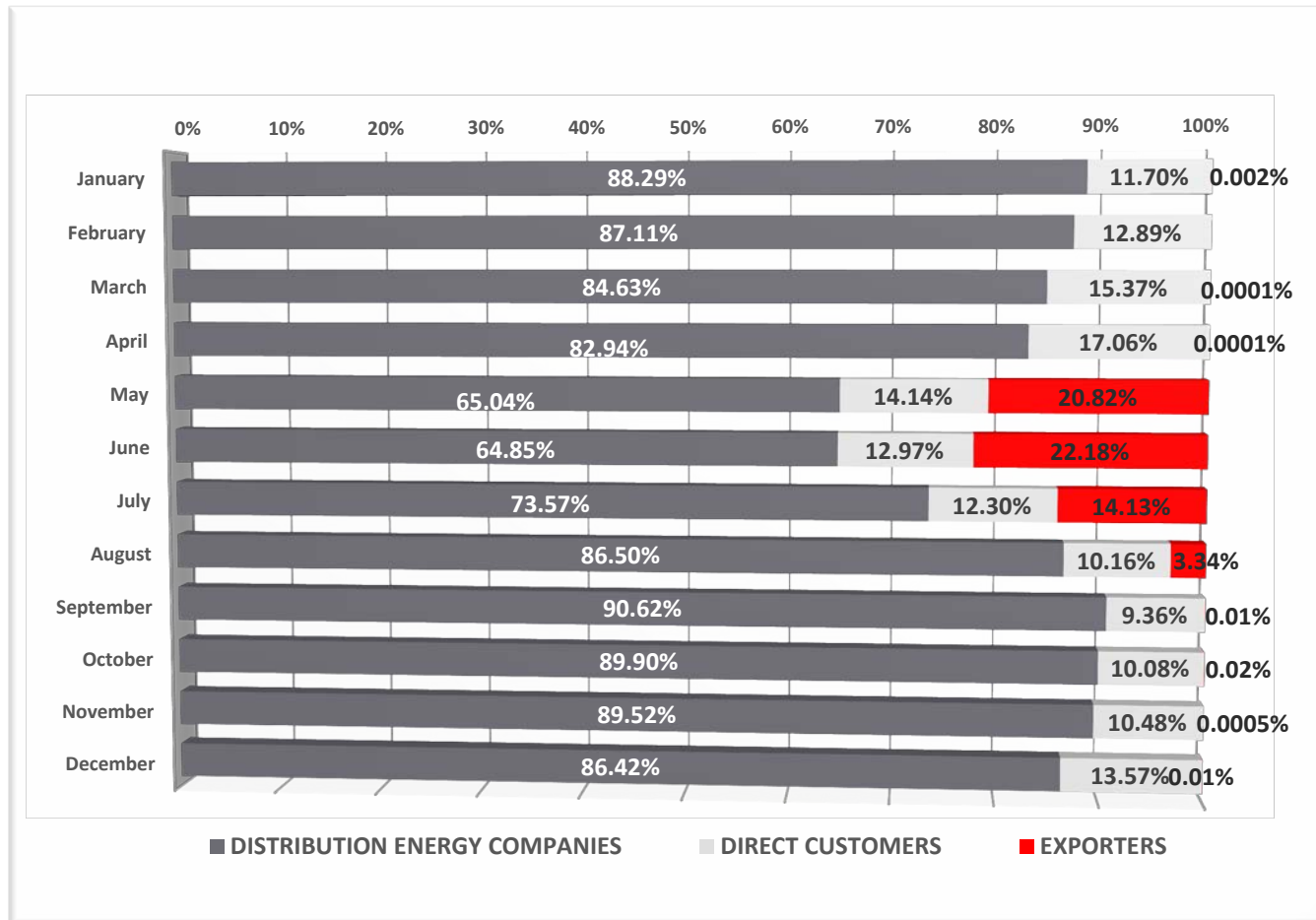




THE GUARANTEED CAPACITY BUYER ELIGIBLE ENTREPRICE IS LIABLE FOR THE COMPENSATION OF GUARANTEED CAPACITY COST, IN PROPORTION WITH ITS ACTUAL SHARE OF CONSUMPTION AND EXPORT IN TOTAL ACTUAL CONSUMPTION OR EXPORT.



PURCHASE SHARE OF GUARANTEED CAPACITY BUYER ELIGIBLE ENTREPRICES IN TOTAL PURCHASE, 2016



IMPORT AND EXPORT CARRIED OUT BY THE ESCO

- IN 2016, THE QUANTITY OF ELECTRICITY IMPORTED BY THE ESCO WAS 478.96 MLN KWH, WHICH IS 100% OF THE ENERGY TOTALLY IMPORTED INTO THE COUNTRY. THE ELECTRICITY WAS IMPORTED FROM RUSSIAN FEDERATION (369.16 MLN KWH) AS WELL AS THE REPUBLIC OF AZERBAIJAN (109.8 MLN KWH). SIGNIFICANT SHARE IN THE IMPORT CARRIED OUT BY THE ESCO WAS THROUGH THE ELECTRICITY TRANSMISSION LINES CONNECTED WITH RUSSIAN FEDERATION.
- IN 2016, THE ESCO EXPORTED 222.1 MLN KWH OF ELECTRICITY, WHICH IS 39.7%-OF ACTUAL EXPORT (559.01 MLN KWH) FROM THE COUNTRY. THE EXPORT WAS CARRIED OUT TO THREE NEIGHBOURING COUNTRIES: RUSSIAN FEDERATION (147.6 MLN KWH), TURKEY (69.0 MLN KWH) AND REPUBLIC OF AZERBAIJAN (5.5 MLN KWH).



MONITORING OF METERING SYSTEMS

- In 2016, the auditors of Metering Control Department (in cooperation with the parties concerned according to the approved schedule) have inspected 1049 electricity settlement metering nodes, aimed at the monitoring of electricity settlement metering points. They have drawn up the inspection act of wholesale (commercial) metering per each metering node;
- When registering an eligible enterprise or amending its registration as the participant of wholesale trade, the Commission had inspected and put into service 54 new settlement metering nodes (intended for the wholesale trade) and drawn up the inspection acts of metering nodes, intended for the wholesale trade;
- Business trip was organized to Gardabani 500kV Substation together with the representatives of JSC “Georgian State Electricity System”. This trip was dedicated to giving the settlement status to the electricity trans-border meter of “Gardabani” 330 kV interstate (intersystem) Energy Transmission Line and the Customs Department sealing this meter.
- Another business trip was arranged with the representatives of JSC “Georgian State Electricity System” to 500 kV “Samukhi” Substation (Azerbaijan) and 500 kV “Gardabani” Substation, dedicated to the connection of 500kV Intersystem Energy Transmission Line “Mukhranis veli” and putting into operation the metering nodes.



- Settlement metering nodes of the Ltd “Georgian Water & Power” have been inspected in cooperation with the parties concerned (EPG and GSE) and appropriate acts have been composed;
- In 2016, totally, 45 business trips have been carried out, including the following: 14 business trips were carried out based on the schedule of electricity settlement metering points inspection, approved by the JSC “Electricity System Commercial Operator” for the Year 2016; 27 business trips were dedicated to the registration or amendments introduced to the registration of eligible enterprises to participate in wholesale trade; one business trip was aimed at the inspection of settlement metering nodes of Ltd “Georgian Water & Power”; one business trip carried out at 500 kV “Gardabani” Substation was dedicated to giving the settlement status to the electricity trans-border meter of “Gardabani” 330 kV Substation and the Customs Department sealing this meter; one business trip was arranged to visit 500 kV “Samukhi” Substation (Azerbaijan) and one business trip was aimed at launching 500kV Intersystem Energy Transmission Line “Mukhranis veli” and putting into operation the metering nodes at 500 kV Gardabani Substation;
- The JSC “Electricity System Commercial Operator” has reacted according to the legislation, with regards to every error, discovered during the inspection;
- The Unified database of metering nodes, intended for the wholesale trade has been updated.



SUPPORT OF CONSTRUCTION OF NEW POWER PLANTS

COMMENSURATE TO THE MEMORANDUM CONCLUDED BETWEEN THE GOVERNMENT AND THE INVESTOR, IN 2016 SEVEN CONTRACTS WERE SIGNED BETWEEN THE MARKET OPERATOR AND THE INVESTOR ON THE OBLIGATORY POWER PURCHASE:

- *GOVERNMENT – ESCO – LTD “MTKVARIHESI”*
- *GOVERNMENT – ESCO – JCS “ONI CASCADE”*
- *GOVERNMENT – ESCO – LTD “GEORGIAN INVESTMENT GROUP”*
- *GOVERNMENT – ESCO – LTD “ENERGO-ARAGVI”*
- *GOVERNMENT – ESCO – LTD “SAKNAKSHIRI (GIG GROUP)”*
- *GOVERNMENT – ESCO – LTD “KARTLI WIND POWER PLANT”*
- *GOVERNMENT – ESCO – LTD “ERA GEORGIA”*



WWW.ESCO.GE

