
The Implementation Of Drinking Water Rates Of Perumda Tirta Tuah Benua East Kutai Based On Full Cost Recovery Principles

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Abstract

The purpose of this study was to determine the application of drinking water tariff from Perumda Air Minum Tirta Tuah Benua Kutai Timur, whether the water tariff have the full cost recovery. The full cost recovery rate is one of the main aspects in order to create a healthy and independent company. Full cost recovery to cover operational needs and development of water services. The calculation of the cost of production based on full cost recovery is Rp. 8,432.02 with NRW 25% while the cost of production based on the Real NRW of 19.86% is Rp. 7,891.40. From the data above, the average selling price of water per m³ is 90.94% of the cost of production per m³ or 9.06% lower than the break-even point. Based on the calculation, the basic rate is Rp. 8,717.72, low tariff is Rp. 7,845.95, full tariff is Rp. 12. 118.70 and the agreement rate is Rp. 16.966.18.

Keywords: *Cost of Production, Water Tariff, Full Cost Recovery*

INTRODUCTION

Economic growth is a process of increasing the production capacity of an economy which is manifested in the form of an increase in national income and an indication of the success of economic development. The magnitude of the role of a sector to other sectors in East Kutai Regency can be seen from the distribution of the percentage of a sector to the total of all sectors in forming the GRDP of East Kutai. The development of the Regional Original Income (PAD) of East Kutai Regency shows a fluctuating condition. One of the significant developments is the increase in local taxes, namely the existence of tax objects from the center that are transferred to the regions. An example of a local tax is the surface water tax, where one of the users of surface water is a Regional Drinking Water Company that uses surface water as a raw material for production. The Tirta Tuah Benua Regional Drinking Water Company (PDAM) of East Kutai Regency is a Business Entity Owned by the Regional Government of East Kutai Regency in accordance with East Kutai Regency Regional Regulation Number 1 of 2021

concerning Regional Public Water Supply Company Tirta Tuah Benua East Kutai. Perumda Drinking Water adheres to the Financial Accounting Standards for Entities Without Public Accountability (SAK-ETAP). The financial report of Perumda Airminum aims to provide information on the financial position, financial performance, and cash flow reports of Perumda Water Drinking that are useful for users in making economic decisions, and demonstrate management accountability. In preparing the tariff structure of the Tirta Tuah Benua Kutai Timur Perumda Drinking Water, referring to the Minister of Home Affairs Regulation Number 71 of 2016 concerning the Calculation and Determination of Drinking Water Tariffs. Tariff determination is carried out with reference to cost calculations and projections that are carried out in a fair, accountable, auditable manner, and consider cost aspects. Based on the results of the performance evaluation by the BPKP Representative of the Province of East Kalimantan for the fiscal year 2020, the average water tariff at the Tirta Tuah Benua East Kutai Water Company has not been able to cover the full cost (full cost recovery) because the cost structure is higher than the average water tariff. apply. Tariffs that do not cover full cost recovery will have an impact on the performance of Perumda Water Drinking. Based on the description of the background, the authors set the title "Implementation of Drinking Water Tariffs by Perumda Water Drinking Tirta Tuah Benua East Kutai Based on Full st Recovery Principles".

METHOD

The place of this research is at the head office of Perumda Water Drinking Tirta Tuah Benua East Kutai, which is located at Jalan Papa Charlie No. 3 RT 4, Kabo Jaya-Swarga Bara, North Sangatta, East Kutai. The object of research in this thesis is the financial report of the results of the financial audit by the Public Accounting Firm (KAP) and the report on the results of the performance evaluation from the Financial and Development Supervisory Agency of East Kalimantan Province at Perumda Water Drinking Tirta Tuah Benua East Kutai for the fiscal year 2020. To obtain data on the object research, the authors conducted quantitative research. The data collection techniques are interviews and documentation. The data analysis tool used in this research is quantitative. Descriptive quantitative research method aims to explain a phenomenon using numbers that describe the characteristics of the object under study. Quantitative descriptive is a type of research that is used to analyze data by describing or describing the data that has been collected.

RESULTS AND DISCUSSION

Calculation of Cost of Production Based on Full Cost Recovery

Beban Usaha / Operasional

1.	Beban Pegawai	Rp 34.331.376.644,00
2.	Beban Listrik	Rp 7.752.463.359,00
3.	Beban Bahan Bakar Minyak	Rp 3.549.336.179,00
4.	Beban Pemakaian Bahan Kimia	Rp 6.725.493.912,00
5.	Beban Pemeliharaan	Rp 8.331.672.331,00
6.	Beban Pemakaian Bahan Pembantu	Rp 66.087.769,00

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7. Beban Penyisihan Piutang	Rp 1.224.374.286,00
8. Beban Penyusutan	Rp 12.135.683.224,00
Jumlah Beban Usaha	Rp 87.551.206.075,00
Volume Produksi Air	13.844.242 m ³
%NRW	19,86%
%NRW Standar	25%

Table 1. Calculation of Cost of Production

Jumlah Beban Usaha	
Volume Produksi - (% NRW X Volume Produksi)	
Menggunakan NRW Standar 25 %	Menggunakan NRW Riil
87.551.206.075,00	87.551.206.075,00
13.844.242,00 - (25,00% X 13.844.242,00)	13.844.242,00 - (19,86% X 13.844.242,00)
Rp8.432,02	Rp7.891,40

Source : Processed data, 2022

Table 2. Tariff Calculation Table Based on Full Cost Recovery Principle

No	Cabang/Unit	Air Terjual (m ³)	Pendapatan	Tarif Rata-rata
1	2	3	4	5=4/3
1	Sangatta Utara	7.649.559,00	Rp 59.139.387.050,00	Rp 7.731,08
2	Sangatta Selatan	666.022,00	Rp 4.688.526.600,00	Rp 7.039,60
3	Bengalon	429.745,00	Rp 3.990.622.300,00	Rp 9.286,02
4	Teluk Pandan	30.462,00	Rp 214.544.050,00	Rp 7.043,01
5	Muara Bengkal	324.707,00	Rp 2.250.349.550,00	Rp 6.930,40
6	Muara Ancalong	344.060,00	Rp 2.375.040.600,00	Rp 6.902,98
7	Batu Ampar	130.517,00	Rp 900.141.800,00	Rp 6.896,74
8	Long Mesangat	51.496,00	Rp 353.149.850,00	Rp 6.857,81
9	Kongbeng	137.287,00	Rp 982.976.550,00	Rp 7.160,01
10	Muara Wahau	488.854,00	Rp 3.840.351.850,00	Rp 7.855,83
11	Karangan	85.379,00	Rp 633.418.300,00	Rp 7.418,90
12	Telen	101.566,00	Rp 727.585.850,00	Rp 7.163,68
13	Busang	88.284,00	Rp 603.009.300,00	Rp 6.830,34
14	Kaubun	117.233,00	Rp 914.227.250,00	Rp 7.798,38
15	Rantau Pulung	140.446,00	Rp 1.164.393.900,00	Rp 8.290,69
16	Sandaran	15.820,00	Rp 103.359.550,00	Rp 6.533,47
17	Kaliorang	123.897,00	Rp 904.377.950,00	Rp 7.299,43
Jumlah		10.925.334,00	Rp 83.785.462.300,00	Rp 7.668,92

Table 3. Drinking Water Tariff Calculation Formula

No.	Uraian	Satuan	Periode	Notasi	Formula	Nilai Masukan
1	BIAYA DASAR					
a.	Beban sumber air	Rp/Thn	2020	BSA	Jml. Beban sumber air	3.413.173.278,00
b.	Beban pengolahan air	Rp/Thn	2020	BPA	Jml. Beban pengolahan air	26.452.877.801,00
c.	Beban transmisi dan distribusi	Rp/Thn	2020	BTD	Jml. Beban trans dan distr.	12.741.326.950,00
d.	Beban kemitraan	Rp/Thn	2020	BK	Jml. Beban kemitraan	-
e.	Beban umum dan administrasi	Rp/Thn	2020	BUA	Jml. Beban umum dan adm.	44.943.828.046,00
f.	Beban Keuangan	Rp/Thn	2020	BKEU	Jml. Beban keuangan	-
	Eliminasi Beban Penyusutan	Rp/Thn	2020	BSUT	Jml. Eliminasi Beban Penyusutan	-
g.	Total biaya usaha	Rp/Thn	2020	TBU	$TBU=BSA+BPA+BTD+BK+BUA+BKEU$	87.551.206.075,00
h.	Faktor inflasi	%/Thn		I	$(1+I)$	1,68
i.	Perkiraan TBU pada periode tarif	Rp/Thn	2022	YTBU	$YTBU=TBU \times (1+I)^{Y-X}$	90.517.637.051,52
j.	Volume Air Terproduksi	m3/Thn	2020	VAP	Data Historis (audit)	13.844.242,00
k.	Tingkat kehilangan air standar	%/Thn	2020	TKAS	TKAS = sesuai	25
l.	Volume kehilangan air standar	m3/Thn	2020	VKAS	$VKAS = TKAS \times VAP$	3.461.060,50
m.	Biaya dasar	Rp/m3	2022	BD	$BD = (YTBU) / (VAP-VKAS)$	8.717,72
2.	TARIF DASAR					
a.	Biaya dasar	Rp/m3	2022	BD	Data dari (1.m)	8.717,72
b.	Tarif dasar	Rp/m3	2022	TD	$TD = BD$	8.717,72
3.	TARIF RENDAH					
a.	Tarif dasar	Rp/m3	2022	TD	Data dari (2.b)	8.717,72
b.	Volume air terjual kepada kelompok pelanggan tarif rendah	m3/Thn	2020	VTTR	\Rightarrow Sosial \Rightarrow HU/MCK/TA	410.755,00 2.274,00
					Jumlah	413.029,00
c.	Subsidi	Rp/m3	2022	Sb	$Sb = \dots\% \times TD$	871,77
d.	Total subsidi	Rp/m3	2022	TSb	$TSb = Sb \times VTTR$	360.066.990,20
e.	Rata-rata subsidi	Rp/m3	2022	RSb	$RSb = TSb / VTTR$	871,77
f.	Tarif rendah	Rp/m3	2022	TR	$TR = TD - RSb$	7.845,95
4.	TARIF PENUH					
a.	Tarif dasar	Rp/m3	2022	TD	Data dari (2.b)	8.717,72
b.	Aktiva lancar	Rp/Thn	2020	AL	Jml. Aktiva lancar	28.354.723.071,81
c.	Investasi jangka panjang	Rp/Thn	2020	IJP	Jml. Investasi jangka panjang	-
d.	Aktiva tetap (nilai buku)	Rp/Thn	2020	AT	Jml. Aktiva tetap + depresiasi	108.776.589.434,06
e.	Aktiva produktif	Rp/Thn	2020	AP	$AP = AL + IJP + AT$	137.131.312.505,87
f.	Tingkat keuntungan	Rp/Thn	2022	TK	$TK = 10\% \times AP$	13.713.131.250,59
g.	Volume air terjual kepada kelompok pelanggan tarif penuh dan khusus	m3/Thn	2020	VTTPK	\Rightarrow Rumah tangga \Rightarrow Niaga kecil \Rightarrow Niaga besar I \Rightarrow Niaga Besar II \Rightarrow Niaga Besar III	3.765.250,00 187.256,00 175.621,00 5.531,00 4.321,00
					Jumlah	4.137.979,00
h.	Rata-rata tingkat keuntungan	Rp/m3	2022	RTK	$RTK = TK / VTTPK$	3.313,97
i.	Total subsidi	Rp/m3	2022	TSb	Data dari (2.d)	360.066.990,20
j.	Rata-rata subsidi silang	Rp/m3	2022	RSBs	$RSBs = TSb / VTTPK$	87,02
k.	Tarif penuh	Rp/m3	2022	TP	$TP = TD + RTK + RSbs$	12.118,70
5.	TARIF KHUSUS					
a.	Tarif penuh	Rp/m3	2022	TP	Data dari (4.k)	12.118,70
b.	Tarif khusus	Rp/m3	2022	TK	TK = sesuai asumsi, min = TP	16.966,18

Source : Processed data, 2022

Based on the above calculation, the cost of production based on full cost recovery is Rp. 8,432.02 with NRW 25%, while the cost of production based on

Real NRW 19.86% is Rp. 7,891.40. From the data above, the average selling price of water per m³ is 90.94% of the cost of production per m³ or 9.06% lower than the break-even point, which means the company still suffers a loss of Rp. 763.10. per m³ of water sold. Thus, the selling price of water is below the cost of production so that the prevailing average tariff has not been able to fully cover costs (full cost recovery). The average selling price of water per m³ compared to the cost of water with Real NRW is 97.18% or 2.82% lower than the break even point, which means the company still suffers a loss of Rp.222.29 per m³ of water. sold. The average tariff has not yet covered full cost recovery due to an increase in operating expenses from personnel expenses, chemicals, electricity and depreciation.

CONCLUSION

Based on the results of research conducted on the application of drinking water tariffs by Perumda Water Drinking Water Company, Tirta Tuah Benua, East Kutai, it can be concluded that the implementation of the current drinking water tariff has not covered the full cost recovery. The calculation of the cost of production in 2020 based on Standard NRW 25% is Rp. 8,432.02, while based on Real NRW 19.86% is Rp. 7,891.40 with an average water tariff of Rp. 7,668.92. So there is a loss of Rp. 763.10/m³ based on the Standard NRW of 25% or Rp.222.29/m³ if it is calculated based on the Real NRW of 19.86%. In order for the drinking water tariff to be able to cover the full cost (full cost recovery), tariff adjustments can be made in accordance with the performance evaluation report data by the BPKP Representative of East Kalimantan Province in 2020 with a basic tariff of Rp. 8,717.72, low tariff of Rp. 7,845.95, full tariff. IDR 12,118,70 and the tariff for the agreement is IDR 16,966.18. After simulating the calculation of the water tariff based on the standard basic needs for drinking water, it is still affordable, which is Rp. 105,180.00.

Suggestion

Based on the conclusions in this study, it can be suggested that Perumda Water Drinking Tirta Tuah Benua East Kutai immediately make tariff adjustments, if no tariff adjustments are made, it will reduce financial performance every year and will affect the smooth running of clean water services to the community, especially customers. In addition, Perumda Water Drinking Tirta Tuah Benua East Kutai is also advised to make more concrete efforts by controlling or efficiency of operational costs and increasing the number of customers by increasing the number of new house connections. And for further researchers, the results of this study are expected to add to the literature or scientific information materials that can be used to conduct studies and further research.

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